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Automated Report

Technical Report for

Arcadis

National Grid, Philly Coke, Philadelphia PA

B0036790.0001.00002

SGS Job Number: JC67003

Sampling Date: 05/30/18

Report to:

Arcadis

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ATTN: Lawrence Healy

Total number of pages in report: 1259



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.

A handwritten signature in black ink that reads "Nancy Cole".

Nancy Cole
Laboratory Director

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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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Test results relate only to samples analyzed.

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Sample Summary

Arcadis

Job No: JC67003

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

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
JC67003-1	05/30/18	11:20 AW	05/30/18	AQ	Ground Water	MW-104
JC67003-2	05/30/18	13:20 AW	05/30/18	AQ	Ground Water	MW-101
JC67003-3	05/30/18	09:52 AW	05/30/18	AQ	Ground Water	MW-105
JC67003-4	05/30/18	13:10 AW	05/30/18	AQ	Ground Water	PCMW-06
JC67003-5	05/30/18	12:05 AW	05/30/18	AQ	Ground Water	PCMW-05
JC67003-6	05/30/18	11:10 AW	05/30/18	AQ	Ground Water	PCMW-04
JC67003-7	05/30/18	08:50 AW	05/30/18	AQ	Ground Water	MW-107
JC67003-8	05/30/18	13:20 AW	05/30/18	AQ	Trip Blank Water	TRIP BLANK

CASE NARRATIVE / CONFORMANCE SUMMARY

2

Client: Arcadis

Job No JC67003

Site: National Grid, Philly Coke, Philadelphia PA

Report Date 6/13/2018 11:37:33 A

On 05/30/2018, 7 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2.6 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC67003 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: AQ

Batch ID: V2B7179

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC67003-2MS, JC67003-3DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for Dichlorodifluoromethane are outside control limits. High percent recoveries and no associated positive reported in the QC batch.
- Matrix Spike Recovery(s) for Dichlorodifluoromethane are outside control limits. Outside control limits due to matrix interference.
- JC67003-2 for Dichlorodifluoromethane: Associated CCV outside of control limits high, sample was ND. This compound in BS is outside in house QC limits bias high.
- JC67003-7 for Dichlorodifluoromethane: Associated CCV outside of control limits high, sample was ND. This compound in BS is outside in house QC limits bias high.
- JC67003-8 for Chloroethane: Associated CCV outside of control limits high, sample was ND.
- JC67003-8 for Chloromethane: Associated CCV outside of control limits high, sample was ND.
- JC67003-8 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.
- JC67003-8 for Dichlorodifluoromethane: Associated CCV outside of control limits high, sample was ND. This compound in BS is outside in house QC limits bias high.
- JC67003-2 for Chloroethane: Associated CCV outside of control limits high, sample was ND.
- JC67003-2 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.
- JC67003-3 for Chloromethane: Associated CCV outside of control limits high, sample was ND.
- JC67003-3 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.
- JC67003-3 for Dichlorodifluoromethane: Associated CCV outside of control limits high, sample was ND. This compound in BS is outside in house QC limits bias high.
- JC67003-7 for Chloroethane: Associated CCV outside of control limits high, sample was ND.
- JC67003-7 for Chloromethane: Associated CCV outside of control limits high, sample was ND.
- JC67003-7 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.
- JC67003-2 for Chloromethane: Associated CCV outside of control limits high, sample was ND.
- JC67003-3 for Chloroethane: Associated CCV outside of control limits high, sample was ND.

Matrix: AQ

Batch ID: V4B3421

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC66969-2MS, JC66969-2MSD were used as the QC samples indicated.
- Matrix Spike / Matrix Spike Duplicate Recovery(s) for Tetrachloroethene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

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MS Semi-volatiles By Method SW846 8270D

Matrix: AQ **Batch ID:** OP12443

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- JC67003-7 for 2,4-Dinitrophenol: Associated CCV outside of control limits high, sample was ND.
- JC67003-3 for 2,4-Dinitrophenol: Associated CCV outside of control limits high, sample was ND.
- JC67003-2 for 2,4-Dinitrophenol: Associated CCV outside of control limits high, sample was ND.
- JC67003-1 for 2,4-Dinitrophenol: Associated CCV outside of control limits high, sample was ND.

GC/LC Semi-volatiles By Method SW846 8081B

Matrix: AQ **Batch ID:** OP12449

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67110-4MS, JC67110-4MSD, OP12449-MSMSD were used as the QC samples indicated.
- JC67003-1: Confirmation run.
- JC67003-1 for Tetrachloro-m-xylene: Outside control limits due to matrix interference with the internal standard.
- JC67003-1 for Decachlorobiphenyl: Outside control limits due to matrix interference with the internal standard.

GC/LC Semi-volatiles By Method SW846 8082A

Matrix: AQ **Batch ID:** OP12448

- All samples were extracted within the recommended method holding time.
- Sample(s) JC67110-4MS, JC67110-4MSD, OP12448-MSMSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Metals Analysis By Method SW846 6010C

Matrix: AQ **Batch ID:** MP7493

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67110-4MS, JC67110-4MSD, JC67110-4SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Aluminum, Chromium, Cobalt, Nickel, Vanadium, Zinc are outside control limits for sample MP7493-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- Samples(s) JC67003-1, JC67003-2, JC67003-3, JC67003-4, JC67003-5, JC67003-6, JC67003-7: New York does not offer 3010A certification for antimony and silver. The laboratory is certified for method 3010A (Acid Digestion for Total Metals) for all other metals and is certified for the associated analytical methods of 6010C (ICP Analysis) and 6020A (ICP-MS Analysis). New York does certify for method 3005A (Acid Digestion for Total Recoverable or Dissolved Metals) for antimony and silver and the laboratory holds that certification, but that provides total recoverable rather than total metals results.
- JC67003-3 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JC67003-3 for Thallium: Elevated detection limit due to dilution required for high interfering element.

Metals Analysis By Method SW846 7470A

Matrix: AQ **Batch ID:** MP7430

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC66971-2MS, JC66971-2MSD were used as the QC samples for metals.

General Chemistry By Method EPA 335.4/LACHAT

Matrix: AQ

Batch ID: GP13492

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC66897-15DUP, JC66897-15MS 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

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Summary of Hits

Job Number: JC67003
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Collected: 05/30/18



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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JC67003-1 MW-104

Acenaphthene		0.92 J	0.95	0.18	ug/l	SW846 8270D
Fluoranthene		0.57 J	0.95	0.16	ug/l	SW846 8270D
Fluorene		0.48 J	0.95	0.16	ug/l	SW846 8270D
Pyrene		0.57 J	0.95	0.21	ug/l	SW846 8270D
Aluminum		1080	200		ug/l	SW846 6010C
Arsenic		4.1	3.0		ug/l	SW846 6010C
Calcium		60200	5000		ug/l	SW846 6010C
Iron		2900	100		ug/l	SW846 6010C
Lead		7.7	3.0		ug/l	SW846 6010C
Magnesium		10800	5000		ug/l	SW846 6010C
Manganese		639	15		ug/l	SW846 6010C
Zinc		34.1	20		ug/l	SW846 6010C
Cyanide		0.67	0.010		mg/l	EPA 335.4/LACHAT

JC67003-2 MW-101

Benzene		3.8	0.50	0.17	ug/l	SW846 8260C
Ethylbenzene		0.23 J	1.0	0.22	ug/l	SW846 8260C
m,p-Xylene		0.59 J	1.0	0.43	ug/l	SW846 8260C
o-Xylene		1.7	1.0	0.22	ug/l	SW846 8260C
Xylene (total)		2.3	1.0	0.22	ug/l	SW846 8260C
Acenaphthene		0.76 J	1.0	0.19	ug/l	SW846 8270D
Carbazole		0.70 J	1.0	0.23	ug/l	SW846 8270D
Dibenzofuran		0.44 J	5.0	0.22	ug/l	SW846 8270D
Fluoranthene		0.44 J	1.0	0.17	ug/l	SW846 8270D
Fluorene		0.85 J	1.0	0.17	ug/l	SW846 8270D
Naphthalene		1.9	1.0	0.23	ug/l	SW846 8270D
Phenanthrene		1.1	1.0	0.18	ug/l	SW846 8270D
Aluminum		508	200		ug/l	SW846 6010C
Barium		543	200		ug/l	SW846 6010C
Calcium		112000	5000		ug/l	SW846 6010C
Copper		12.2	10		ug/l	SW846 6010C
Iron		2600	100		ug/l	SW846 6010C
Lead		60.7	3.0		ug/l	SW846 6010C
Magnesium		63000	5000		ug/l	SW846 6010C
Manganese		156	15		ug/l	SW846 6010C
Sodium		37000	10000		ug/l	SW846 6010C
Zinc		54.5	20		ug/l	SW846 6010C
Cyanide		0.20	0.010		mg/l	EPA 335.4/LACHAT

JC67003-3 MW-105

Acenaphthene		1.3	0.95	0.18	ug/l	SW846 8270D
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Summary of Hits

Job Number: JC67003
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Collected: 05/30/18



Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method	
		Fluoranthene	0.45 J	0.95	0.16	ug/l	SW846 8270D
		Pyrene	0.47 J	0.95	0.21	ug/l	SW846 8270D
		Calcium	242000	5000		ug/l	SW846 6010C
		Iron	42600	100		ug/l	SW846 6010C
		Magnesium	42500	5000		ug/l	SW846 6010C
		Manganese	2330	15		ug/l	SW846 6010C
		Sodium	14600	10000		ug/l	SW846 6010C
		Cyanide	0.11	0.010		mg/l	EPA 335.4/LACHAT
JC67003-4	PCMW-06						
		Barium	227	200		ug/l	SW846 6010C
		Calcium	82900	5000		ug/l	SW846 6010C
		Iron	912	100		ug/l	SW846 6010C
		Lead	24.1	3.0		ug/l	SW846 6010C
		Magnesium	8650	5000		ug/l	SW846 6010C
		Manganese	45.4	15		ug/l	SW846 6010C
		Zinc	117	20		ug/l	SW846 6010C
JC67003-5	PCMW-05						
		Arsenic	4.2	3.0		ug/l	SW846 6010C
		Barium	318	200		ug/l	SW846 6010C
		Calcium	159000	5000		ug/l	SW846 6010C
		Copper	28.4	10		ug/l	SW846 6010C
		Iron	2990	100		ug/l	SW846 6010C
		Lead	80.1	3.0		ug/l	SW846 6010C
		Magnesium	14600	5000		ug/l	SW846 6010C
		Manganese	360	15		ug/l	SW846 6010C
		Nickel	524	10		ug/l	SW846 6010C
		Zinc	2070	20		ug/l	SW846 6010C
JC67003-6	PCMW-04						
		Arsenic	3.7	3.0		ug/l	SW846 6010C
		Calcium	97200	5000		ug/l	SW846 6010C
		Copper	14.9	10		ug/l	SW846 6010C
		Iron	8270	100		ug/l	SW846 6010C
		Lead	9.0	3.0		ug/l	SW846 6010C
		Magnesium	33900	5000		ug/l	SW846 6010C
		Manganese	593	15		ug/l	SW846 6010C
		Potassium	13700	10000		ug/l	SW846 6010C

Summary of Hits

Job Number: JC67003
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Collected: 05/30/18



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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JC67003-7 MW-107

Methyl Tert Butyl Ether	20.7	1.0	0.25	ug/l	SW846 8260C
Acenaphthylene	0.46 J	1.1	0.14	ug/l	SW846 8270D
Benzo(a)anthracene	1.3	1.1	0.21	ug/l	SW846 8270D
Benzo(a)pyrene	1.2	1.1	0.22	ug/l	SW846 8270D
Benzo(b)fluoranthene	1.7	1.1	0.22	ug/l	SW846 8270D
Benzo(g,h,i)perylene	0.95 J	1.1	0.36	ug/l	SW846 8270D
Benzo(k)fluoranthene	0.53 J	1.1	0.22	ug/l	SW846 8270D
Chrysene	1.1	1.1	0.19	ug/l	SW846 8270D
Fluoranthene	2.6	1.1	0.18	ug/l	SW846 8270D
Indeno(1,2,3-cd)pyrene	0.74 J	1.1	0.35	ug/l	SW846 8270D
Phenanthrene	0.98 J	1.1	0.18	ug/l	SW846 8270D
Pyrene	2.0	1.1	0.23	ug/l	SW846 8270D
Aluminum	1570	200		ug/l	SW846 6010C
Arsenic	9.4	3.0		ug/l	SW846 6010C
Barium	242	200		ug/l	SW846 6010C
Calcium	104000	5000		ug/l	SW846 6010C
Copper	16.8	10		ug/l	SW846 6010C
Iron	17100	100		ug/l	SW846 6010C
Lead	206	3.0		ug/l	SW846 6010C
Magnesium	44200	5000		ug/l	SW846 6010C
Manganese	1120	15		ug/l	SW846 6010C
Potassium	16400	10000		ug/l	SW846 6010C
Sodium	12000	10000		ug/l	SW846 6010C
Zinc	135	20		ug/l	SW846 6010C

JC67003-8 TRIP BLANK

No hits reported in this sample.

Sample Results

Report of Analysis

SGS LabLink@1003731 16:45 15-Jun-2018

Report of Analysis

Page 1 of 2

Client Sample ID: MW-104	Date Sampled: 05/30/18
Lab Sample ID: JC67003-1	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: National Grid, Philly Coke, Philadelphia PA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	4B82374.D	1	06/01/18 12:07	HT	n/a	n/a	V4B3421

Run #1	Purge Volume
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.38	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.63	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.9	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-104	Date Sampled:	05/30/18
Lab Sample ID:	JC67003-1	Date Received:	05/30/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	National Grid, Philly Coke, Philadelphia PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.25	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	1.8	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.25	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		80-120%
17060-07-0	1,2-Dichloroethane-D4	111%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	96%		80-120%

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

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Report of Analysis

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Client Sample ID: MW-104	Date Sampled: 05/30/18
Lab Sample ID: JC67003-1	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: National Grid, Philly Coke, Philadelphia PA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	6P473601.D	1	06/08/18 05:15	GS	06/01/18 16:00	OP12443	E6P2238

Run #1	Initial Volume	Final Volume
Run #2	1050 ml	1.0 ml

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	4.8	0.78	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	0.85	ug/l	
120-83-2	2,4-Dichlorophenol	ND	1.9	1.2	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	2.3	ug/l	
51-28-5	2,4-Dinitrophenol ^a	ND	4.8	1.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	4.8	1.2	ug/l	
95-48-7	2-Methylphenol	ND	1.9	0.85	ug/l	
	3&4-Methylphenol	ND	1.9	0.84	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.91	ug/l	
100-02-7	4-Nitrophenol	ND	9.5	1.1	ug/l	
87-86-5	Pentachlorophenol	ND	3.8	1.3	ug/l	
108-95-2	Phenol	ND	1.9	0.37	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	4.8	1.4	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	1.3	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.88	ug/l	
83-32-9	Acenaphthene	0.92	0.95	0.18	ug/l	J
208-96-8	Acenaphthylene	ND	0.95	0.13	ug/l	
98-86-2	Acetophenone	ND	1.9	0.20	ug/l	
120-12-7	Anthracene	ND	0.95	0.20	ug/l	
1912-24-9	Atrazine	ND	1.9	0.43	ug/l	
100-52-7	Benzaldehyde	ND	4.8	0.28	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.95	0.19	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.95	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.95	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.95	0.32	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.95	0.20	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	1.9	0.38	ug/l	
85-68-7	Butyl benzyl phthalate	ND	1.9	0.44	ug/l	
92-52-4	1,1'-Biphenyl	ND	0.95	0.20	ug/l	
91-58-7	2-Chloronaphthalene	ND	1.9	0.22	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.32	ug/l	
86-74-8	Carbazole	ND	0.95	0.22	ug/l	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-104	Date Sampled:	05/30/18
Lab Sample ID:	JC67003-1	Date Received:	05/30/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	National Grid, Philly Coke, Philadelphia PA		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	1.9	0.62	ug/l	
218-01-9	Chrysene	ND	0.95	0.17	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	1.9	0.26	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.9	0.24	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	1.9	0.38	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1.9	0.35	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.95	0.53	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.95	0.45	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	1.9	0.48	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.95	0.32	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.21	ug/l	
84-74-2	Di-n-butyl phthalate	ND	1.9	0.47	ug/l	
117-84-0	Di-n-octyl phthalate	ND	1.9	0.22	ug/l	
84-66-2	Diethyl phthalate	ND	1.9	0.25	ug/l	
131-11-3	Dimethyl phthalate	ND	1.9	0.21	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	1.9	1.6	ug/l	
206-44-0	Fluoranthene	0.57	0.95	0.16	ug/l	J
86-73-7	Fluorene	0.48	0.95	0.16	ug/l	J
118-74-1	Hexachlorobenzene	ND	0.95	0.31	ug/l	
87-68-3	Hexachlorobutadiene	ND	0.95	0.47	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.5	2.6	ug/l	
67-72-1	Hexachloroethane	ND	1.9	0.37	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.95	0.32	ug/l	
78-59-1	Isophorone	ND	1.9	0.26	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.95	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	4.8	0.26	ug/l	
99-09-2	3-Nitroaniline	ND	4.8	0.37	ug/l	
100-01-6	4-Nitroaniline	ND	4.8	0.42	ug/l	
91-20-3	Naphthalene	ND	0.95	0.22	ug/l	
98-95-3	Nitrobenzene	ND	1.9	0.61	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	1.9	0.46	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.21	ug/l	
85-01-8	Phenanthrene	ND	0.95	0.17	ug/l	
129-00-0	Pyrene	0.57	0.95	0.21	ug/l	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	1.9	0.35	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	33%		10-110%
4165-62-2	Phenol-d5	23%		10-110%

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-104	Date Sampled: 05/30/18
Lab Sample ID: JC67003-1	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: National Grid, Philly Coke, Philadelphia PA	

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	82%		36-151%
4165-60-0	Nitrobenzene-d5	69%		34-128%
321-60-8	2-Fluorobiphenyl	71%		38-119%
1718-51-0	Terphenyl-d14	76%		26-129%

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

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

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Report of Analysis

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Client Sample ID: MW-104	Date Sampled: 05/30/18
Lab Sample ID: JC67003-1	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8081B SW846 3510C	
Project: National Grid, Philly Coke, Philadelphia PA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G56983.D	1	06/06/18 11:41	RK	06/01/18 19:40	OP12449	G6G1701
Run #2 ^a	8G15850.D	5	06/12/18 13:27	DS	06/01/18 19:40	OP12449	G8G513

Run #	Initial Volume	Final Volume
Run #1	300 ml	2.0 ml
Run #2	300 ml	2.0 ml

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.0067	0.0034	ug/l	
319-84-6	alpha-BHC	ND	0.0067	0.0035	ug/l	
319-85-7	beta-BHC	ND	0.0067	0.0053	ug/l	
319-86-8	delta-BHC	ND	0.0067	0.0044	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.0067	0.0040	ug/l	
5103-71-9	alpha-Chlordane	ND	0.0067	0.0033	ug/l	
5103-74-2	gamma-Chlordane	ND	0.0067	0.0028	ug/l	
60-57-1	Dieldrin	ND	0.0067	0.0051	ug/l	
72-54-8	4,4'-DDD	ND	0.0067	0.0038	ug/l	
72-55-9	4,4'-DDE	ND	0.0067	0.0034	ug/l	
50-29-3	4,4'-DDT	ND	0.0067	0.0046	ug/l	
72-20-8	Endrin	ND	0.0067	0.0040	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.0067	0.0036	ug/l	
7421-93-4	Endrin aldehyde	ND	0.0067	0.0045	ug/l	
53494-70-5	Endrin ketone	ND	0.0067	0.0041	ug/l	
959-98-8	Endosulfan-I	ND	0.0067	0.0035	ug/l	
33213-65-9	Endosulfan-II	ND	0.0067	0.0033	ug/l	
76-44-8	Heptachlor	ND	0.0067	0.0030	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.0067	0.0040	ug/l	
72-43-5	Methoxychlor	ND	0.013	0.0045	ug/l	
8001-35-2	Toxaphene	ND	0.17	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	3% ^b	85%	13-153%
877-09-8	Tetrachloro-m-xylene	60%	89%	13-153%
2051-24-3	Decachlorobiphenyl	1% ^b	55%	10-138%
2051-24-3	Decachlorobiphenyl	38%	54%	10-138%

(a) Confirmation run.

(b) Outside control limits due to matrix interference with the internal standard.

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID: MW-104	Date Sampled: 05/30/18
Lab Sample ID: JC67003-1	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8082A SW846 3510C	
Project: National Grid, Philly Coke, Philadelphia PA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX229852.D	1	06/03/18 05:02	EAL	06/01/18 19:40	OP12448	GXX6375
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	2.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.33	0.13	ug/l	
11104-28-2	Aroclor 1221	ND	0.33	0.28	ug/l	
11141-16-5	Aroclor 1232	ND	0.33	0.17	ug/l	
53469-21-9	Aroclor 1242	ND	0.33	0.15	ug/l	
12672-29-6	Aroclor 1248	ND	0.33	0.084	ug/l	
11097-69-1	Aroclor 1254	ND	0.33	0.28	ug/l	
11096-82-5	Aroclor 1260	ND	0.33	0.10	ug/l	
11100-14-4	Aroclor 1268	ND	0.33	0.12	ug/l	
37324-23-5	Aroclor 1262	ND	0.33	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	63%		11-166%
877-09-8	Tetrachloro-m-xylene	60%		11-166%
2051-24-3	Decachlorobiphenyl	34%		10-150%
2051-24-3	Decachlorobiphenyl	36%		10-150%

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: MW-104	Date Sampled: 05/30/18
Lab Sample ID: JC67003-1	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: National Grid, Philly Coke, Philadelphia PA	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	1080	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Antimony	< 6.0	6.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Arsenic	4.1	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Barium	< 200	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Beryllium	< 1.0	1.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Cadmium	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Calcium	60200	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Chromium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Cobalt	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Copper	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Iron	2900	100	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Lead	7.7	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ³ SW846 3010A ⁵
Magnesium	10800	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Manganese	639	15	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Mercury	< 0.20	0.20	ug/l	1	06/01/18	06/01/18	DP	SW846 7470A ¹ SW846 7470A ⁴
Nickel	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Potassium	< 10000	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Selenium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Silver	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Sodium	< 10000	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Thallium	< 2.0	2.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ³ SW846 3010A ⁵
Vanadium	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Zinc	34.1	20	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵

- (1) Instrument QC Batch: MA44562
- (2) Instrument QC Batch: MA44612
- (3) Instrument QC Batch: MA44616
- (4) Prep QC Batch: MP7430
- (5) Prep QC Batch: MP7493

RL = Reporting Limit

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Report of Analysis

Client Sample ID: MW-104	Date Sampled: 05/30/18
Lab Sample ID: JC67003-1	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: National Grid, Philly Coke, Philadelphia PA	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	0.67	0.010	mg/l	1	06/05/18 14:08	BM	EPA 335.4/LACHAT

RL = Reporting Limit

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Client Sample ID: MW-101	Date Sampled: 05/30/18
Lab Sample ID: JC67003-2	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: National Grid, Philly Coke, Philadelphia PA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	2B160775.D	1	06/01/18 02:25	DG	n/a	n/a	V2B7179

Run #1	Purge Volume
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	3.8	0.50	0.17	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.38	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane ^a	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane ^a	ND	1.0	0.53	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.63	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane ^b	ND	2.0	1.9	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	0.23	1.0	0.22	ug/l	J
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-101	Date Sampled:	05/30/18
Lab Sample ID:	JC67003-2	Date Received:	05/30/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	National Grid, Philly Coke, Philadelphia PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.25	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	1.8	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.25	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
75-01-4	Vinyl chloride ^a	ND	1.0	0.62	ug/l	
	m,p-Xylene	0.59	1.0	0.43	ug/l	J
95-47-6	o-Xylene	1.7	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	2.3	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	118%		80-120%
17060-07-0	1,2-Dichloroethane-D4	107%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	103%		80-120%

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

(b) Associated CCV outside of control limits high, sample was ND. This compound in BS is outside in house QC limits bias high.

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

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

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Report of Analysis

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Client Sample ID:	MW-101	Date Sampled:	05/30/18
Lab Sample ID:	JC67003-2	Date Received:	05/30/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	National Grid, Philly Coke, Philadelphia PA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	6P473602.D	1	06/08/18 05:40	GS	06/01/18 16:00	OP12443	E6P2238

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	0.82	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	0.89	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.3	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	2.4	ug/l	
51-28-5	2,4-Dinitrophenol ^a	ND	5.0	1.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	5.0	1.3	ug/l	
95-48-7	2-Methylphenol	ND	2.0	0.89	ug/l	
	3&4-Methylphenol	ND	2.0	0.88	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	0.96	ug/l	
100-02-7	4-Nitrophenol	ND	10	1.2	ug/l	
87-86-5	Pentachlorophenol	ND	4.0	1.4	ug/l	
108-95-2	Phenol	ND	2.0	0.39	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	1.5	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.3	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.92	ug/l	
83-32-9	Acenaphthene	0.76	1.0	0.19	ug/l	J
208-96-8	Acenaphthylene	ND	1.0	0.14	ug/l	
98-86-2	Acetophenone	ND	2.0	0.21	ug/l	
120-12-7	Anthracene	ND	1.0	0.21	ug/l	
1912-24-9	Atrazine	ND	2.0	0.45	ug/l	
100-52-7	Benzaldehyde	ND	5.0	0.29	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.21	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.21	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.34	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.21	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.40	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.46	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.21	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.24	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.34	ug/l	
86-74-8	Carbazole	0.70	1.0	0.23	ug/l	J

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E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-101	Date Sampled:	05/30/18
Lab Sample ID:	JC67003-2	Date Received:	05/30/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	National Grid, Philly Coke, Philadelphia PA		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.0	0.65	ug/l	
218-01-9	Chrysene	ND	1.0	0.18	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.28	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.25	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	2.0	0.40	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.37	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.55	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.48	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	0.51	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.33	ug/l	
132-64-9	Dibenzofuran	0.44	5.0	0.22	ug/l	J
84-74-2	Di-n-butyl phthalate	ND	2.0	0.50	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.23	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.26	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.22	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	1.7	ug/l	
206-44-0	Fluoranthene	0.44	1.0	0.17	ug/l	J
86-73-7	Fluorene	0.85	1.0	0.17	ug/l	J
118-74-1	Hexachlorobenzene	ND	1.0	0.33	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.49	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.8	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.39	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.33	ug/l	
78-59-1	Isophorone	ND	2.0	0.28	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.39	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.44	ug/l	
91-20-3	Naphthalene	1.9	1.0	0.23	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.64	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.22	ug/l	
85-01-8	Phenanthrene	1.1	1.0	0.18	ug/l	
129-00-0	Pyrene	ND	1.0	0.22	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	39%		10-110%
4165-62-2	Phenol-d5	27%		10-110%

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

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B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-101		Date Sampled: 05/30/18
Lab Sample ID: JC67003-2		Date Received: 05/30/18
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8270D SW846 3510C		
Project: National Grid, Philly Coke, Philadelphia PA		

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	74%		36-151%
4165-60-0	Nitrobenzene-d5	68%		34-128%
321-60-8	2-Fluorobiphenyl	71%		38-119%
1718-51-0	Terphenyl-d14	64%		26-129%

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

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

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Report of Analysis

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Client Sample ID: MW-101	Date Sampled: 05/30/18
Lab Sample ID: JC67003-2	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8081B SW846 3510C	
Project: National Grid, Philly Coke, Philadelphia PA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G56984.D	1	06/06/18 11:59	RK	06/01/18 19:40	OP12449	G6G1701
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	2.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.0067	0.0034	ug/l	
319-84-6	alpha-BHC	ND	0.0067	0.0035	ug/l	
319-85-7	beta-BHC	ND	0.0067	0.0053	ug/l	
319-86-8	delta-BHC	ND	0.0067	0.0044	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.0067	0.0040	ug/l	
5103-71-9	alpha-Chlordane	ND	0.0067	0.0033	ug/l	
5103-74-2	gamma-Chlordane	ND	0.0067	0.0028	ug/l	
60-57-1	Dieldrin	ND	0.0067	0.0051	ug/l	
72-54-8	4,4'-DDD	ND	0.0067	0.0038	ug/l	
72-55-9	4,4'-DDE	ND	0.0067	0.0034	ug/l	
50-29-3	4,4'-DDT	ND	0.0067	0.0046	ug/l	
72-20-8	Endrin	ND	0.0067	0.0040	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.0067	0.0036	ug/l	
7421-93-4	Endrin aldehyde	ND	0.0067	0.0045	ug/l	
53494-70-5	Endrin ketone	ND	0.0067	0.0041	ug/l	
959-98-8	Endosulfan-I	ND	0.0067	0.0035	ug/l	
33213-65-9	Endosulfan-II	ND	0.0067	0.0033	ug/l	
76-44-8	Heptachlor	ND	0.0067	0.0030	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.0067	0.0040	ug/l	
72-43-5	Methoxychlor	ND	0.013	0.0045	ug/l	
8001-35-2	Toxaphene	ND	0.17	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	70%		13-153%
877-09-8	Tetrachloro-m-xylene	69%		13-153%
2051-24-3	Decachlorobiphenyl	53%		10-138%
2051-24-3	Decachlorobiphenyl	53%		10-138%

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

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Report of Analysis

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Client Sample ID:	MW-101	Date Sampled:	05/30/18
Lab Sample ID:	JC67003-2	Date Received:	05/30/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8082A SW846 3510C		
Project:	National Grid, Philly Coke, Philadelphia PA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX229853.D	1	06/03/18 05:18	EAL	06/01/18 19:40	OP12448	GXX6375
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	2.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.33	0.13	ug/l	
11104-28-2	Aroclor 1221	ND	0.33	0.28	ug/l	
11141-16-5	Aroclor 1232	ND	0.33	0.17	ug/l	
53469-21-9	Aroclor 1242	ND	0.33	0.15	ug/l	
12672-29-6	Aroclor 1248	ND	0.33	0.084	ug/l	
11097-69-1	Aroclor 1254	ND	0.33	0.28	ug/l	
11096-82-5	Aroclor 1260	ND	0.33	0.10	ug/l	
11100-14-4	Aroclor 1268	ND	0.33	0.12	ug/l	
37324-23-5	Aroclor 1262	ND	0.33	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	69%		11-166%
877-09-8	Tetrachloro-m-xylene	73%		11-166%
2051-24-3	Decachlorobiphenyl	52%		10-150%
2051-24-3	Decachlorobiphenyl	53%		10-150%

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: MW-101	Date Sampled: 05/30/18
Lab Sample ID: JC67003-2	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: National Grid, Philly Coke, Philadelphia PA	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	508	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Antimony	< 6.0	6.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Arsenic	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Barium	543	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Beryllium	< 1.0	1.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Cadmium	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Calcium	112000	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Chromium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Cobalt	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Copper	12.2	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Iron	2600	100	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Lead	60.7	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ³ SW846 3010A ⁵
Magnesium	63000	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Manganese	156	15	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Mercury	< 0.20	0.20	ug/l	1	06/01/18	06/01/18	DP	SW846 7470A ¹ SW846 7470A ⁴
Nickel	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Potassium	< 10000	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Selenium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Silver	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Sodium	37000	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Thallium	< 2.0	2.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ³ SW846 3010A ⁵
Vanadium	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Zinc	54.5	20	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵

- (1) Instrument QC Batch: MA44562
- (2) Instrument QC Batch: MA44612
- (3) Instrument QC Batch: MA44616
- (4) Prep QC Batch: MP7430
- (5) Prep QC Batch: MP7493

RL = Reporting Limit

4.2
4

Report of Analysis

Client Sample ID: MW-101	Date Sampled: 05/30/18
Lab Sample ID: JC67003-2	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: National Grid, Philly Coke, Philadelphia PA	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	0.20	0.010	mg/l	1	06/05/18 14:12	BM	EPA 335.4/LACHAT

RL = Reporting Limit

4.2
4

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Report of Analysis

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Client Sample ID: MW-105	Date Sampled: 05/30/18
Lab Sample ID: JC67003-3	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: National Grid, Philly Coke, Philadelphia PA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B160776.D	1	06/01/18 02:54	DG	n/a	n/a	V2B7179
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.38	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane ^a	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane ^a	ND	1.0	0.53	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.63	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane ^b	ND	2.0	1.9	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-105	Date Sampled:	05/30/18
Lab Sample ID:	JC67003-3	Date Received:	05/30/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	National Grid, Philly Coke, Philadelphia PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.25	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	1.8	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.25	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
75-01-4	Vinyl chloride ^a	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	119%		80-120%
17060-07-0	1,2-Dichloroethane-D4	106%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%

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

(b) Associated CCV outside of control limits high, sample was ND. This compound in BS is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

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Report of Analysis

Page 1 of 3

Client Sample ID: MW-105	Date Sampled: 05/30/18
Lab Sample ID: JC67003-3	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: National Grid, Philly Coke, Philadelphia PA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	6P473603.D	1	06/08/18 06:04	GS	06/01/18 16:00	OP12443	E6P2238

Run #1	Initial Volume	Final Volume
Run #2	1050 ml	1.0 ml

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	4.8	0.78	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	0.85	ug/l	
120-83-2	2,4-Dichlorophenol	ND	1.9	1.2	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	2.3	ug/l	
51-28-5	2,4-Dinitrophenol ^a	ND	4.8	1.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	4.8	1.2	ug/l	
95-48-7	2-Methylphenol	ND	1.9	0.85	ug/l	
	3&4-Methylphenol	ND	1.9	0.84	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.91	ug/l	
100-02-7	4-Nitrophenol	ND	9.5	1.1	ug/l	
87-86-5	Pentachlorophenol	ND	3.8	1.3	ug/l	
108-95-2	Phenol	ND	1.9	0.37	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	4.8	1.4	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	1.3	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.88	ug/l	
83-32-9	Acenaphthene	1.3	0.95	0.18	ug/l	
208-96-8	Acenaphthylene	ND	0.95	0.13	ug/l	
98-86-2	Acetophenone	ND	1.9	0.20	ug/l	
120-12-7	Anthracene	ND	0.95	0.20	ug/l	
1912-24-9	Atrazine	ND	1.9	0.43	ug/l	
100-52-7	Benzaldehyde	ND	4.8	0.28	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.95	0.19	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.95	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.95	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.95	0.32	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.95	0.20	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	1.9	0.38	ug/l	
85-68-7	Butyl benzyl phthalate	ND	1.9	0.44	ug/l	
92-52-4	1,1'-Biphenyl	ND	0.95	0.20	ug/l	
91-58-7	2-Chloronaphthalene	ND	1.9	0.22	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.32	ug/l	
86-74-8	Carbazole	ND	0.95	0.22	ug/l	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-105	Date Sampled:	05/30/18
Lab Sample ID:	JC67003-3	Date Received:	05/30/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	National Grid, Philly Coke, Philadelphia PA		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	1.9	0.62	ug/l	
218-01-9	Chrysene	ND	0.95	0.17	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	1.9	0.26	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.9	0.24	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	1.9	0.38	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1.9	0.35	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.95	0.53	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.95	0.45	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	1.9	0.48	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.95	0.32	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.21	ug/l	
84-74-2	Di-n-butyl phthalate	ND	1.9	0.47	ug/l	
117-84-0	Di-n-octyl phthalate	ND	1.9	0.22	ug/l	
84-66-2	Diethyl phthalate	ND	1.9	0.25	ug/l	
131-11-3	Dimethyl phthalate	ND	1.9	0.21	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	1.9	1.6	ug/l	
206-44-0	Fluoranthene	0.45	0.95	0.16	ug/l	J
86-73-7	Fluorene	ND	0.95	0.16	ug/l	
118-74-1	Hexachlorobenzene	ND	0.95	0.31	ug/l	
87-68-3	Hexachlorobutadiene	ND	0.95	0.47	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	9.5	2.6	ug/l	
67-72-1	Hexachloroethane	ND	1.9	0.37	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.95	0.32	ug/l	
78-59-1	Isophorone	ND	1.9	0.26	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.95	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	4.8	0.26	ug/l	
99-09-2	3-Nitroaniline	ND	4.8	0.37	ug/l	
100-01-6	4-Nitroaniline	ND	4.8	0.42	ug/l	
91-20-3	Naphthalene	ND	0.95	0.22	ug/l	
98-95-3	Nitrobenzene	ND	1.9	0.61	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	1.9	0.46	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.21	ug/l	
85-01-8	Phenanthrene	ND	0.95	0.17	ug/l	
129-00-0	Pyrene	0.47	0.95	0.21	ug/l	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	1.9	0.35	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	39%		10-110%
4165-62-2	Phenol-d5	27%		10-110%

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-105 Lab Sample ID: JC67003-3 Matrix: AQ - Ground Water Method: SW846 8270D SW846 3510C Project: National Grid, Philly Coke, Philadelphia PA	Date Sampled: 05/30/18 Date Received: 05/30/18 Percent Solids: n/a
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ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	75%		36-151%
4165-60-0	Nitrobenzene-d5	70%		34-128%
321-60-8	2-Fluorobiphenyl	70%		38-119%
1718-51-0	Terphenyl-d14	65%		26-129%

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

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

4.3
4

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Report of Analysis

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Client Sample ID: MW-105	Date Sampled: 05/30/18
Lab Sample ID: JC67003-3	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8081B SW846 3510C	
Project: National Grid, Philly Coke, Philadelphia PA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G56985.D	1	06/06/18 12:17	RK	06/01/18 19:40	OP12449	G6G1701
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	2.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.0067	0.0034	ug/l	
319-84-6	alpha-BHC	ND	0.0067	0.0035	ug/l	
319-85-7	beta-BHC	ND	0.0067	0.0053	ug/l	
319-86-8	delta-BHC	ND	0.0067	0.0044	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.0067	0.0040	ug/l	
5103-71-9	alpha-Chlordane	ND	0.0067	0.0033	ug/l	
5103-74-2	gamma-Chlordane	ND	0.0067	0.0028	ug/l	
60-57-1	Dieldrin	ND	0.0067	0.0051	ug/l	
72-54-8	4,4'-DDD	ND	0.0067	0.0038	ug/l	
72-55-9	4,4'-DDE	ND	0.0067	0.0034	ug/l	
50-29-3	4,4'-DDT	ND	0.0067	0.0046	ug/l	
72-20-8	Endrin	ND	0.0067	0.0040	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.0067	0.0036	ug/l	
7421-93-4	Endrin aldehyde	ND	0.0067	0.0045	ug/l	
53494-70-5	Endrin ketone	ND	0.0067	0.0041	ug/l	
959-98-8	Endosulfan-I	ND	0.0067	0.0035	ug/l	
33213-65-9	Endosulfan-II	ND	0.0067	0.0033	ug/l	
76-44-8	Heptachlor	ND	0.0067	0.0030	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.0067	0.0040	ug/l	
72-43-5	Methoxychlor	ND	0.013	0.0045	ug/l	
8001-35-2	Toxaphene	ND	0.17	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	62%		13-153%
877-09-8	Tetrachloro-m-xylene	68%		13-153%
2051-24-3	Decachlorobiphenyl	34%		10-138%
2051-24-3	Decachlorobiphenyl	38%		10-138%

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

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Report of Analysis

Page 1 of 1

Client Sample ID: MW-105	Date Sampled: 05/30/18
Lab Sample ID: JC67003-3	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8082A SW846 3510C	
Project: National Grid, Philly Coke, Philadelphia PA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX229854.D	1	06/03/18 05:35	EAL	06/01/18 19:40	OP12448	GXX6375
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	2.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.33	0.13	ug/l	
11104-28-2	Aroclor 1221	ND	0.33	0.28	ug/l	
11141-16-5	Aroclor 1232	ND	0.33	0.17	ug/l	
53469-21-9	Aroclor 1242	ND	0.33	0.15	ug/l	
12672-29-6	Aroclor 1248	ND	0.33	0.084	ug/l	
11097-69-1	Aroclor 1254	ND	0.33	0.28	ug/l	
11096-82-5	Aroclor 1260	ND	0.33	0.10	ug/l	
11100-14-4	Aroclor 1268	ND	0.33	0.12	ug/l	
37324-23-5	Aroclor 1262	ND	0.33	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	76%		11-166%
877-09-8	Tetrachloro-m-xylene	83%		11-166%
2051-24-3	Decachlorobiphenyl	46%		10-150%
2051-24-3	Decachlorobiphenyl	45%		10-150%

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: MW-105	Date Sampled: 05/30/18
Lab Sample ID: JC67003-3	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: National Grid, Philly Coke, Philadelphia PA	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 200	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Antimony	< 6.0	6.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Arsenic	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Barium	< 200	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Beryllium	< 1.0	1.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Cadmium	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Calcium	242000	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Chromium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Cobalt	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Copper	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Iron	42600	100	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Lead ^a	< 15	15	ug/l	5	06/05/18	06/08/18	ND	SW846 6010C ³ SW846 3010A ⁵
Magnesium	42500	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Manganese	2330	15	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Mercury	< 0.20	0.20	ug/l	1	06/01/18	06/01/18	DP	SW846 7470A ¹ SW846 7470A ⁴
Nickel	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Potassium	< 10000	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Selenium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Silver	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Sodium	14600	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Thallium ^a	< 10	10	ug/l	5	06/05/18	06/08/18	ND	SW846 6010C ³ SW846 3010A ⁵
Vanadium	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Zinc	< 20	20	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵

- (1) Instrument QC Batch: MA44562
- (2) Instrument QC Batch: MA44612
- (3) Instrument QC Batch: MA44616
- (4) Prep QC Batch: MP7430
- (5) Prep QC Batch: MP7493

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

RL = Reporting Limit

4.3
4

Report of Analysis

Client Sample ID: MW-105		Date Sampled: 05/30/18
Lab Sample ID: JC67003-3		Date Received: 05/30/18
Matrix: AQ - Ground Water		Percent Solids: n/a
Project: National Grid, Philly Coke, Philadelphia PA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	0.11	0.010	mg/l	1	06/05/18 14:13	BM	EPA 335.4/LACHAT

RL = Reporting Limit

4.3
4

Report of Analysis

Client Sample ID: PCMW-06	Date Sampled: 05/30/18
Lab Sample ID: JC67003-4	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: National Grid, Philly Coke, Philadelphia PA	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 200	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Antimony	< 6.0	6.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Arsenic	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Barium	227	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Beryllium	< 1.0	1.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Cadmium	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Calcium	82900	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Chromium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Cobalt	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Copper	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Iron	912	100	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Lead	24.1	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ³ SW846 3010A ⁵
Magnesium	8650	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Manganese	45.4	15	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Mercury	< 0.20	0.20	ug/l	1	06/01/18	06/01/18	DP	SW846 7470A ¹ SW846 7470A ⁴
Nickel	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Potassium	< 10000	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Selenium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Silver	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Sodium	< 10000	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Thallium	< 2.0	2.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ³ SW846 3010A ⁵
Vanadium	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Zinc	117	20	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵

- (1) Instrument QC Batch: MA44562
- (2) Instrument QC Batch: MA44612
- (3) Instrument QC Batch: MA44616
- (4) Prep QC Batch: MP7430
- (5) Prep QC Batch: MP7493

RL = Reporting Limit

4.4
4

Report of Analysis

Client Sample ID: PCMW-05 Lab Sample ID: JC67003-5 Matrix: AQ - Ground Water Project: National Grid, Philly Coke, Philadelphia PA	Date Sampled: 05/30/18 Date Received: 05/30/18 Percent Solids: n/a
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Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 200	200	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Antimony	< 6.0	6.0	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Arsenic	4.2	3.0	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Barium	318	200	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Beryllium	< 1.0	1.0	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Cadmium	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Calcium	159000	5000	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Chromium	< 10	10	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Cobalt	< 50	50	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Copper	28.4	10	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Iron	2990	100	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Lead	80.1	3.0	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ³	SW846 3010A ⁵
Magnesium	14600	5000	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Manganese	360	15	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Mercury	< 0.20	0.20	ug/l	1	06/01/18	06/01/18	DP SW846 7470A ¹	SW846 7470A ⁴
Nickel	524	10	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Potassium	< 10000	10000	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Selenium	< 10	10	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Silver	< 10	10	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Sodium	< 10000	10000	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Thallium	< 2.0	2.0	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ³	SW846 3010A ⁵
Vanadium	< 50	50	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Zinc	2070	20	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵

- (1) Instrument QC Batch: MA44562
- (2) Instrument QC Batch: MA44612
- (3) Instrument QC Batch: MA44616
- (4) Prep QC Batch: MP7430
- (5) Prep QC Batch: MP7493

RL = Reporting Limit

4.5
4

Report of Analysis

Client Sample ID: PCMW-04	Date Sampled: 05/30/18
Lab Sample ID: JC67003-6	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: National Grid, Philly Coke, Philadelphia PA	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 200	200	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Antimony	< 6.0	6.0	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Arsenic	3.7	3.0	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Barium	< 200	200	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Beryllium	< 1.0	1.0	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Cadmium	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Calcium	97200	5000	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ³	SW846 3010A ⁵
Chromium	< 10	10	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Cobalt	< 50	50	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Copper	14.9	10	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Iron	8270	100	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ³	SW846 3010A ⁵
Lead	9.0	3.0	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ³	SW846 3010A ⁵
Magnesium	33900	5000	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ³	SW846 3010A ⁵
Manganese	593	15	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Mercury	< 0.20	0.20	ug/l	1	06/01/18	06/01/18	DP SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 10	10	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Potassium	13700	10000	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Selenium	< 10	10	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Silver	< 10	10	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Sodium	< 10000	10000	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Thallium	< 2.0	2.0	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ³	SW846 3010A ⁵
Vanadium	< 50	50	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵
Zinc	< 20	20	ug/l	1	06/05/18	06/08/18	ND SW846 6010C ²	SW846 3010A ⁵

- (1) Instrument QC Batch: MA44562
- (2) Instrument QC Batch: MA44612
- (3) Instrument QC Batch: MA44616
- (4) Prep QC Batch: MP7430
- (5) Prep QC Batch: MP7493

RL = Reporting Limit

4.6
4

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Report of Analysis

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Client Sample ID: MW-107	Date Sampled: 05/30/18
Lab Sample ID: JC67003-7	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: National Grid, Philly Coke, Philadelphia PA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	2B160777.D	1	06/01/18 03:24	DG	n/a	n/a	V2B7179

Run #1	Purge Volume
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.38	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane ^a	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane ^a	ND	1.0	0.53	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.63	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane ^b	ND	2.0	1.9	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-107	Date Sampled:	05/30/18
Lab Sample ID:	JC67003-7	Date Received:	05/30/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	National Grid, Philly Coke, Philadelphia PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.25	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	1.8	ug/l	
1634-04-4	Methyl Tert Butyl Ether	20.7	1.0	0.25	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
75-01-4	Vinyl chloride ^a	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	118%		80-120%
17060-07-0	1,2-Dichloroethane-D4	107%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%

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

(b) Associated CCV outside of control limits high, sample was ND. This compound in BS is outside in house QC limits bias high.

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

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

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Report of Analysis

Page 1 of 3

Client Sample ID:	MW-107	Date Sampled:	05/30/18
Lab Sample ID:	JC67003-7	Date Received:	05/30/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	National Grid, Philly Coke, Philadelphia PA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	6P473604.D	1	06/08/18 06:29	GS	06/01/18 16:00	OP12443	E6P2238

Run #1	Initial Volume	Final Volume
Run #2	950 ml	1.0 ml

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.3	0.86	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.3	0.94	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.1	1.3	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.3	2.6	ug/l	
51-28-5	2,4-Dinitrophenol ^a	ND	5.3	1.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	5.3	1.4	ug/l	
95-48-7	2-Methylphenol	ND	2.1	0.93	ug/l	
	3&4-Methylphenol	ND	2.1	0.93	ug/l	
88-75-5	2-Nitrophenol	ND	5.3	1.0	ug/l	
100-02-7	4-Nitrophenol	ND	11	1.2	ug/l	
87-86-5	Pentachlorophenol	ND	4.2	1.5	ug/l	
108-95-2	Phenol	ND	2.1	0.41	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.3	1.5	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.3	1.4	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.3	0.97	ug/l	
83-32-9	Acenaphthene	ND	1.1	0.20	ug/l	
208-96-8	Acenaphthylene	0.46	1.1	0.14	ug/l	J
98-86-2	Acetophenone	ND	2.1	0.22	ug/l	
120-12-7	Anthracene	ND	1.1	0.22	ug/l	
1912-24-9	Atrazine	ND	2.1	0.47	ug/l	
100-52-7	Benzaldehyde	ND	5.3	0.30	ug/l	
56-55-3	Benzo(a)anthracene	1.3	1.1	0.21	ug/l	
50-32-8	Benzo(a)pyrene	1.2	1.1	0.22	ug/l	
205-99-2	Benzo(b)fluoranthene	1.7	1.1	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.95	1.1	0.36	ug/l	J
207-08-9	Benzo(k)fluoranthene	0.53	1.1	0.22	ug/l	J
101-55-3	4-Bromophenyl phenyl ether	ND	2.1	0.43	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.1	0.48	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.1	0.22	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.1	0.25	ug/l	
106-47-8	4-Chloroaniline	ND	5.3	0.36	ug/l	
86-74-8	Carbazole	ND	1.1	0.24	ug/l	

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:	MW-107	Date Sampled:	05/30/18
Lab Sample ID:	JC67003-7	Date Received:	05/30/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	National Grid, Philly Coke, Philadelphia PA		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.1	0.68	ug/l	
218-01-9	Chrysene	1.1	1.1	0.19	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.1	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.1	0.26	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	2.1	0.42	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.1	0.39	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.1	0.58	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.1	0.50	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.1	0.53	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.1	0.35	ug/l	
132-64-9	Dibenzofuran	ND	5.3	0.23	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.1	0.52	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.1	0.25	ug/l	
84-66-2	Diethyl phthalate	ND	2.1	0.28	ug/l	
131-11-3	Dimethyl phthalate	ND	2.1	0.23	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	1.7	ug/l	
206-44-0	Fluoranthene	2.6	1.1	0.18	ug/l	
86-73-7	Fluorene	ND	1.1	0.18	ug/l	
118-74-1	Hexachlorobenzene	ND	1.1	0.34	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.1	0.52	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.9	ug/l	
67-72-1	Hexachloroethane	ND	2.1	0.41	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.74	1.1	0.35	ug/l	J
78-59-1	Isophorone	ND	2.1	0.29	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.1	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	5.3	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	5.3	0.41	ug/l	
100-01-6	4-Nitroaniline	ND	5.3	0.46	ug/l	
91-20-3	Naphthalene	ND	1.1	0.24	ug/l	
98-95-3	Nitrobenzene	ND	2.1	0.68	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.1	0.51	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.23	ug/l	
85-01-8	Phenanthrene	0.98	1.1	0.18	ug/l	J
129-00-0	Pyrene	2.0	1.1	0.23	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.1	0.39	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	39%		10-110%
14165-62-2	Phenol-d5	27%		10-110%

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-107 Lab Sample ID: JC67003-7 Matrix: AQ - Ground Water Method: SW846 8270D SW846 3510C Project: National Grid, Philly Coke, Philadelphia PA	Date Sampled: 05/30/18 Date Received: 05/30/18 Percent Solids: n/a
---	---

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	75%		36-151%
4165-60-0	Nitrobenzene-d5	72%		34-128%
321-60-8	2-Fluorobiphenyl	72%		38-119%
1718-51-0	Terphenyl-d14	66%		26-129%

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

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

4.7
4

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Report of Analysis

Page 1 of 1

Client Sample ID: MW-107	Date Sampled: 05/30/18
Lab Sample ID: JC67003-7	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8081B SW846 3510C	
Project: National Grid, Philly Coke, Philadelphia PA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G56986.D	1	06/06/18 12:35	RK	06/01/18 19:40	OP12449	G6G1701
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	2.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.0067	0.0034	ug/l	
319-84-6	alpha-BHC	ND	0.0067	0.0035	ug/l	
319-85-7	beta-BHC	ND	0.0067	0.0053	ug/l	
319-86-8	delta-BHC	ND	0.0067	0.0044	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.0067	0.0040	ug/l	
5103-71-9	alpha-Chlordane	ND	0.0067	0.0033	ug/l	
5103-74-2	gamma-Chlordane	ND	0.0067	0.0028	ug/l	
60-57-1	Dieldrin	ND	0.0067	0.0051	ug/l	
72-54-8	4,4'-DDD	ND	0.0067	0.0038	ug/l	
72-55-9	4,4'-DDE	ND	0.0067	0.0034	ug/l	
50-29-3	4,4'-DDT	ND	0.0067	0.0046	ug/l	
72-20-8	Endrin	ND	0.0067	0.0040	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.0067	0.0036	ug/l	
7421-93-4	Endrin aldehyde	ND	0.0067	0.0045	ug/l	
53494-70-5	Endrin ketone	ND	0.0067	0.0041	ug/l	
959-98-8	Endosulfan-I	ND	0.0067	0.0035	ug/l	
33213-65-9	Endosulfan-II	ND	0.0067	0.0033	ug/l	
76-44-8	Heptachlor	ND	0.0067	0.0030	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.0067	0.0040	ug/l	
72-43-5	Methoxychlor	ND	0.013	0.0045	ug/l	
8001-35-2	Toxaphene	ND	0.17	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	71%		13-153%
877-09-8	Tetrachloro-m-xylene	65%		13-153%
2051-24-3	Decachlorobiphenyl	38%		10-138%
2051-24-3	Decachlorobiphenyl	40%		10-138%

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

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Report of Analysis

Page 1 of 1

Client Sample ID: MW-107	Date Sampled: 05/30/18
Lab Sample ID: JC67003-7	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8082A SW846 3510C	
Project: National Grid, Philly Coke, Philadelphia PA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX229855.D	1	06/03/18 05:51	EAL	06/01/18 19:40	OP12448	GXX6375
Run #2							

Run #	Initial Volume	Final Volume
Run #1	300 ml	2.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.33	0.13	ug/l	
11104-28-2	Aroclor 1221	ND	0.33	0.28	ug/l	
11141-16-5	Aroclor 1232	ND	0.33	0.17	ug/l	
53469-21-9	Aroclor 1242	ND	0.33	0.15	ug/l	
12672-29-6	Aroclor 1248	ND	0.33	0.084	ug/l	
11097-69-1	Aroclor 1254	ND	0.33	0.28	ug/l	
11096-82-5	Aroclor 1260	ND	0.33	0.10	ug/l	
11100-14-4	Aroclor 1268	ND	0.33	0.12	ug/l	
37324-23-5	Aroclor 1262	ND	0.33	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	65%		11-166%
877-09-8	Tetrachloro-m-xylene	73%		11-166%
2051-24-3	Decachlorobiphenyl	35%		10-150%
2051-24-3	Decachlorobiphenyl	38%		10-150%

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: MW-107 Lab Sample ID: JC67003-7 Matrix: AQ - Ground Water Project: National Grid, Philly Coke, Philadelphia PA	Date Sampled: 05/30/18 Date Received: 05/30/18 Percent Solids: n/a
---	---

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	1570	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Antimony	< 6.0	6.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Arsenic	9.4	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Barium	242	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Beryllium	< 1.0	1.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Cadmium	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Calcium	104000	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Chromium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Cobalt	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Copper	16.8	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Iron	17100	100	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Lead	206	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ³ SW846 3010A ⁵
Magnesium	44200	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Manganese	1120	15	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Mercury	< 0.20	0.20	ug/l	1	06/01/18	06/01/18	DP	SW846 7470A ¹ SW846 7470A ⁴
Nickel	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Potassium	16400	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Selenium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Silver	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Sodium	12000	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Thallium	< 2.0	2.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ³ SW846 3010A ⁵
Vanadium	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵
Zinc	135	20	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C ² SW846 3010A ⁵

- (1) Instrument QC Batch: MA44562
- (2) Instrument QC Batch: MA44612
- (3) Instrument QC Batch: MA44616
- (4) Prep QC Batch: MP7430
- (5) Prep QC Batch: MP7493

RL = Reporting Limit

4.7
4

Report of Analysis

Client Sample ID: MW-107	Date Sampled: 05/30/18
Lab Sample ID: JC67003-7	Date Received: 05/30/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: National Grid, Philly Coke, Philadelphia PA	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.010	0.010	mg/l	1	06/05/18 14:15	BM	EPA 335.4/LACHAT

RL = Reporting Limit

4.7
4

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Report of Analysis

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Client Sample ID:	TRIP BLANK	Date Sampled:	05/30/18
Lab Sample ID:	JC67003-8	Date Received:	05/30/18
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	National Grid, Philly Coke, Philadelphia PA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B160773.D	1	06/01/18 01:25	DG	n/a	n/a	V2B7179
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.38	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane ^a	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane ^a	ND	1.0	0.53	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.63	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane ^b	ND	2.0	1.9	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK	Date Sampled:	05/30/18
Lab Sample ID:	JC67003-8	Date Received:	05/30/18
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	National Grid, Philly Coke, Philadelphia PA		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.25	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	1.8	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.25	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
75-01-4	Vinyl chloride ^a	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	120%		80-120%
17060-07-0	1,2-Dichloroethane-D4	107%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%

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

(b) Associated CCV outside of control limits high, sample was ND. This compound in BS is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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



GW
WTS

CHAIN OF CUSTODY

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

FED-EX Tracking #	Order Control #
SGS Quote #	DK-052218-49
	SGS Job #
	JC67003

Client / Reporting Information		Project Information										Requested Analysis (see TEST CODE sheet)										Matrix Codes									
Company Name Arcadis		Project Name Philly Coke										ASB070TCL20-14DX V8200TCL20 MTRAL CN HG P8081PESTCL P8082RCL1										DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank									
Street Address 824 N. Market St. Suite 824		Street Address Richmond St & Lafayette St.																													
City Wilmington DE		City bridesburg PA																													
State DE		State PA																													
Zip 19801		Billing Information (if different from Report to)																													
Project Contact Caroly Kealy		Company Name																													
E-mail caroly.kealy@arcadis.com		Street Address																													
Phone # 302-350-3044 315-671-9338		City																													
Fax #		State																													
Client Purchase Order #		Zip																													
Sampler(s) Name(s) Adam Wissner; Dan Labell		Project Manager										Attention:										LAB USE ONLY ES E75 AZO G2272 V598									
Phone # 302-350-3044		Collection										Number of preserved bottles																			
Field ID / Point of Collection		MEOH/DI Vial #	Date		Time		Sampled by	Matrix	# of bottles	HCl	NH3	NH4	HNO3	H2SO4	NONE	DI Water	MEOH	ENCLOSURE													
1	MW-104		5/30/18		1120		AW	GW	12	3	1	2	6																		
2	MW-101		↓		1320		AW	GW	12	3	1	2	6																		
3	MW-105		↓		0952		AW	GW	12	3	1	2	6																		
4	PCMW-06		↓		1310		IC	GW	1																						
5	PCMW-05		↓		1205		IC	GW	1																						
6	PCMW-04		↓		1110		IC	GW	1																						
7	MW-107		↓		0850		IC	GW	12	3	1	2	6																		
8	Trip Blank		-		-		-	-	2	2																					
Turnaround Time (Business days)		Data Deliverable Information										Comments / Special Instructions																			
<input type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day RUSH <input type="checkbox"/> other _____		Approved by (SGS Project Manager)/Date: _____ _____ _____ _____										<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> NYASP Category A <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> NYASP Category B <input type="checkbox"/> FULLT1 (Level 3+4) <input type="checkbox"/> State Forms <input type="checkbox"/> NJ Reduced <input type="checkbox"/> EDD Format <input type="checkbox"/> Commercial "C" <input type="checkbox"/> Other _____ <input type="checkbox"/> NJ Data of Known Quality Protocol Reporting Commercial "A" = Results Only; Commercial "B" = Results + QC Summary NJ Reduced = Results + QC Summary + Partial Raw data										INITIAL ASSESSMENT <u>ZA</u> LABEL VERIFICATION _____ Sample inventory is verified upon receipt in the Laboratory									
Emergency & Rush T/A data available via LabLink		Sample custody must be documented below each time samples change possession, including courier delivery.										Sample inventory is verified upon receipt in the Laboratory																			
Relinquished By: Adam Wissner	Date Time: 5/30/18 1400	Received By: [Signature]	Date Time: 5/30/18 1600	Relinquished By: [Signature]	Date Time: 5/30/18 1600	Received By: [Signature]	Date Time: 5/30/18 2100	Relinquished By: [Signature]	Date Time: 5/30/18 2100	Received By: [Signature]	Date Time: 5/30/18 2100	Relinquished By: [Signature]	Date Time: 5/30/18 2100	Received By: [Signature]	Date Time: 5/30/18 2100	Relinquished By: [Signature]	Date Time: 5/30/18 2100	Received By: [Signature]	Date Time: 5/30/18 2100												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20												
Custody Seal #	Intact	Not Intact	Preserved where applicable	On lot	26, 27, 28																										

5.1
5

SGS Sample Receipt Summary

Job Number: JC67003

Client: ARCADIS U.S.

Project: NATIONAL GRID, PHILLY COKE, PHILADELPHI

Date / Time Received: 5/30/2018 9:00:00 PM

Delivery Method:

Airbill #s:

Cooler Temps (Raw Measured) °C: Cooler 1: (2.6); Cooler 2: (2.1);

Cooler Temps (Corrected) °C: Cooler 1: (2.6); Cooler 2: (2.1);

Cooler Security

- | | <u>Y or N</u> | | | <u>Y or N</u> | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

- | | <u>Y or N</u> | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | IR Gun | |
| 3. Cooler media: | Ice (Bag) | |
| 4. No. Coolers: | 2 | |

Quality Control Preservation

- | | <u>Y or N</u> | | <u>N/A</u> |
|---------------------------------|-------------------------------------|--------------------------|--------------------------|
| 1. Trip Blank present / cooler: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Trip Blank listed on COC: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Documentation

- | | <u>Y or N</u> | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

- | | <u>Y or N</u> | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions

- | | <u>Y or N</u> | | <u>N/A</u> |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Test Strip Lot #s:	pH 1-12: 216017	pH 12+: 208717	Other: (Specify) _____
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Comments

SM089-03
Rev. Date 12/7/17

JC67003: Chain of Custody

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5.1
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Internal Sample Tracking Chronicle

Arcadis

Job No: JC67003

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

5.2
5

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC67003-1 Collected: 30-MAY-18 11:20 By: AW Received: 30-MAY-18 By: AS						
MW-104						
JC67003-1	SW846 8260C	01-JUN-18 12:07	HT			V8260TCL20
JC67003-1	SW846 7470A	01-JUN-18 12:51	DP	01-JUN-18	DP	HG
JC67003-1	SW846 8082A	03-JUN-18 05:02	EAL	01-JUN-18	AF	P8082PCB11
JC67003-1	EPA 335.4/LACHAT	05-JUN-18 14:08	BM	04-JUN-18	FO	CN
JC67003-1	SW846 8081B	06-JUN-18 11:41	RK	01-JUN-18	RG	P8081PESTTCL
JC67003-1	SW846 6010C	08-JUN-18 02:46	ND	05-JUN-18	CH	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,SB,SE, V,ZN
JC67003-1	SW846 8270D	08-JUN-18 05:15	GS	01-JUN-18	RC	AB8270TCL20-14DX
JC67003-1	SW846 6010C	08-JUN-18 14:49	ND	05-JUN-18	CH	PB,TL
JC67003-1	SW846 8081B	12-JUN-18 13:27	DS	01-JUN-18	RG	P8081PESTTCL
JC67003-2 Collected: 30-MAY-18 13:20 By: AW Received: 30-MAY-18 By: AS						
MW-101						
JC67003-2	SW846 8260C	01-JUN-18 02:25	DG			V8260TCL20
JC67003-2	SW846 7470A	01-JUN-18 12:52	DP	01-JUN-18	DP	HG
JC67003-2	SW846 8082A	03-JUN-18 05:18	EAL	01-JUN-18	AF	P8082PCB11
JC67003-2	EPA 335.4/LACHAT	05-JUN-18 14:12	BM	04-JUN-18	FO	CN
JC67003-2	SW846 8081B	06-JUN-18 11:59	RK	01-JUN-18	AF	P8081PESTTCL
JC67003-2	SW846 6010C	08-JUN-18 02:48	ND	05-JUN-18	CH	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,SB,SE, V,ZN
JC67003-2	SW846 8270D	08-JUN-18 05:40	GS	01-JUN-18	RC	AB8270TCL20-14DX
JC67003-2	SW846 6010C	08-JUN-18 14:52	ND	05-JUN-18	CH	PB,TL
JC67003-3 Collected: 30-MAY-18 09:52 By: AW Received: 30-MAY-18 By: AS						
MW-105						
JC67003-3	SW846 8260C	01-JUN-18 02:54	DG			V8260TCL20
JC67003-3	SW846 7470A	01-JUN-18 12:53	DP	01-JUN-18	DP	HG
JC67003-3	SW846 8082A	03-JUN-18 05:35	EAL	01-JUN-18	AF	P8082PCB11
JC67003-3	EPA 335.4/LACHAT	05-JUN-18 14:13	BM	04-JUN-18	FO	CN
JC67003-3	SW846 8081B	06-JUN-18 12:17	RK	01-JUN-18	AF	P8081PESTTCL
JC67003-3	SW846 6010C	08-JUN-18 02:51	ND	05-JUN-18	CH	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,SB,SE, V,ZN

Internal Sample Tracking Chronicle

Arcadis

Job No: JC67003

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

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC67003-3	SW846 8270D	08-JUN-18 06:04	GS	01-JUN-18	RC	AB8270TCL20-14DX
JC67003-3	SW846 6010C	08-JUN-18 14:55	ND	05-JUN-18	CH	PB,TL
JC67003-4 Collected: 30-MAY-18 13:10 By: AW Received: 30-MAY-18 By: AS						
JC67003-4	SW846 7470A	01-JUN-18 12:58	DP	01-JUN-18	DP	HG
JC67003-4	SW846 6010C	08-JUN-18 03:00	ND	05-JUN-18	CH	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,SB,SE, V,ZN
JC67003-4	SW846 6010C	08-JUN-18 14:58	ND	05-JUN-18	CH	PB,TL
JC67003-5 Collected: 30-MAY-18 12:05 By: AW Received: 30-MAY-18 By: AS						
JC67003-5	SW846 7470A	01-JUN-18 12:59	DP	01-JUN-18	DP	HG
JC67003-5	SW846 6010C	08-JUN-18 03:03	ND	05-JUN-18	CH	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,SB,SE, V,ZN
JC67003-5	SW846 6010C	08-JUN-18 15:01	ND	05-JUN-18	CH	PB,TL
JC67003-6 Collected: 30-MAY-18 11:10 By: AW Received: 30-MAY-18 By: AS						
JC67003-6	SW846 7470A	01-JUN-18 13:00	DP	01-JUN-18	DP	HG
JC67003-6	SW846 6010C	08-JUN-18 03:06	ND	05-JUN-18	CH	AG,AL,AS,BA,BE,CD,CO,CR,CU, K,MN,NA,NI,SB,SE,V,ZN
JC67003-6	SW846 6010C	08-JUN-18 15:04	ND	05-JUN-18	CH	CA,FE,MG,PB,TL
JC67003-7 Collected: 30-MAY-18 08:50 By: AW Received: 30-MAY-18 By: AS						
JC67003-7	SW846 8260C	01-JUN-18 03:24	DG			V8260TCL20
JC67003-7	SW846 7470A	01-JUN-18 13:01	DP	01-JUN-18	DP	HG
JC67003-7	SW846 8082A	03-JUN-18 05:51	EAL	01-JUN-18	AF	P8082PCB11
JC67003-7	EPA 335.4/LACHAT	05-JUN-18 14:15	BM	04-JUN-18	FO	CN
JC67003-7	SW846 8081B	06-JUN-18 12:35	RK	01-JUN-18	AF	P8081PESTTCL
JC67003-7	SW846 6010C	08-JUN-18 03:09	ND	05-JUN-18	CH	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,SB,SE, V,ZN

5.2
5

Internal Sample Tracking Chronicle

Arcadis

Job No: JC67003

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

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC67003-7	SW846 8270D	08-JUN-18 06:29	GS	01-JUN-18	RC	AB8270TCL20-14DX
JC67003-7	SW846 6010C	08-JUN-18 15:07	ND	05-JUN-18	CH	PB,TL
JC67003-8 Collected: 30-MAY-18 13:20 By: AW Received: 30-MAY-18 By: AS TRIP BLANK						
JC67003-8	SW846 8260C	01-JUN-18 01:25	DG			V8260TCL20

5.2
5

SGS Internal Chain of Custody

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA
 Received: 05/30/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67003-1.2	Secured Storage	Matthew Robbins	05/31/18 22:53	Retrieve from Storage
JC67003-1.2	Matthew Robbins	Secured Staging Area	05/31/18 22:53	Return to Storage
JC67003-1.2	Secured Staging Area	Ryan Callaghan	06/01/18 09:18	Retrieve from Storage
JC67003-1.2	Ryan Callaghan		06/01/18 18:29	Depleted
JC67003-1.2.1	Ryan Callaghan	Organics Prep	06/01/18 09:18	Extract from JC67003-1.2
JC67003-1.2.1	Organics Prep	Ryan Callaghan	06/01/18 18:29	Extract from JC67003-1.2
JC67003-1.2.1	Ryan Callaghan	Extract Storage	06/01/18 18:29	Return to Storage
JC67003-1.2.1	Extract Storage	George Sleem	06/08/18 02:42	Retrieve from Storage
JC67003-1.2.1	George Sleem	GCMS6P	06/08/18 02:42	Load on Instrument
JC67003-1.2.1	GCMS6P	John Boudreau	06/08/18 16:00	Unload from Instrument
JC67003-1.2.1	John Boudreau	Extract Freezer	06/08/18 16:00	Return to Storage
JC67003-1.4	Secured Storage	Dave Hunkele	06/08/18 11:04	Retrieve from Storage
JC67003-1.4	Dave Hunkele	Secured Staging Area	06/08/18 11:04	Return to Storage
JC67003-1.4	Secured Staging Area	Naisha Torres	06/08/18 15:56	Retrieve from Storage
JC67003-1.4	Naisha Torres		06/08/18 22:11	Depleted
JC67003-1.4.1	Naisha Torres	Organics Prep	06/08/18 15:56	Extract from JC67003-1.4
JC67003-1.4.1	Organics Prep	Naisha Torres	06/08/18 21:49	Extract from JC67003-1.4
JC67003-1.4.1	Naisha Torres	Extract Storage	06/08/18 21:49	Return to Storage
JC67003-1.4.1	Extract Storage	Mailisi Heshuote	06/11/18 10:31	Retrieve from Storage
JC67003-1.4.1	Mailisi Heshuote	GC1G	06/11/18 10:31	Load on Instrument
JC67003-1.5	Secured Storage	Todd Shoemaker	06/01/18 13:59	Retrieve from Storage
JC67003-1.5	Todd Shoemaker	Secured Staging Area	06/01/18 13:59	Return to Storage
JC67003-1.5	Secured Staging Area	Amanda Furka	06/01/18 15:26	Retrieve from Storage
JC67003-1.5	Amanda Furka		06/01/18 18:38	Depleted
JC67003-1.5.1	Amanda Furka	Organics Prep	06/01/18 15:27	Extract from JC67003-1.5
JC67003-1.5.1	Organics Prep	Amanda Furka	06/02/18 00:06	Extract from JC67003-1.5
JC67003-1.5.1	Amanda Furka	Extract Storage	06/02/18 00:06	Return to Storage
JC67003-1.5.1	Extract Storage	Edouard Adrian Lee	06/02/18 22:23	Retrieve from Storage
JC67003-1.5.1	Edouard Adrian Lee	GCXX	06/02/18 22:23	Load on Instrument
JC67003-1.5.1	GCXX	Tianwei Ruan	06/05/18 08:22	Unload from Instrument
JC67003-1.5.1	Tianwei Ruan	Extract Freezer	06/05/18 08:22	Return to Storage
JC67003-1.5.2	Amanda Furka	Organics Prep	06/01/18 15:28	Extract from JC67003-1.5
JC67003-1.5.2	Organics Prep	Amanda Furka	06/02/18 00:10	Extract from JC67003-1.5
JC67003-1.5.2	Amanda Furka	Extract Storage	06/02/18 00:10	Return to Storage
JC67003-1.5.2	Extract Storage	Rebecca Krug	06/06/18 10:23	Retrieve from Storage
JC67003-1.5.2	Rebecca Krug	GC6G	06/06/18 10:23	Load on Instrument
JC67003-1.7	Secured Storage	Todd Shoemaker	06/05/18 10:52	Retrieve from Storage

5.3
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SGS Internal Chain of Custody

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA
 Received: 05/30/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67003-1.7	Todd Shoemaker	Secured Staging Area	06/05/18 10:53	Return to Storage
JC67003-1.7	Secured Staging Area	Colleen Hill	06/05/18 18:29	Retrieve from Storage
JC67003-1.7	Colleen Hill	Secured Storage	06/05/18 18:38	Return to Storage
JC67003-1.7.1	Colleen Hill	Metals Digestion	06/05/18 18:30	Digestate from JC67003-1.7
JC67003-1.7.1	Metals Digestion	Colleen Hill	06/05/18 18:30	Digestate from JC67003-1.7
JC67003-1.7.1	Colleen Hill	Metals Digestate Storage	06/05/18 18:30	Return to Storage
JC67003-1.8	Secured Storage	Luis Villanueva	05/31/18 16:28	Retrieve from Storage
JC67003-1.8	Luis Villanueva	Secured Staging Area	05/31/18 16:29	Return to Storage
JC67003-1.8	Secured Staging Area	Deval Patel	06/01/18 07:28	Retrieve from Storage
JC67003-1.8	Deval Patel	Secured Storage	06/01/18 09:09	Return to Storage
JC67003-1.9	Secured Storage	Sahara Feliciano	06/03/18 14:44	Retrieve from Storage
JC67003-1.9	Sahara Feliciano	Secured Staging Area	06/03/18 14:44	Return to Storage
JC67003-1.9	Secured Staging Area	Faraja Ombwayo	06/04/18 09:31	Retrieve from Storage
JC67003-1.9	Faraja Ombwayo	Secured Storage	06/04/18 15:43	Return to Storage
JC67003-1.10	Secured Storage	Toan Pham	05/31/18 19:06	Retrieve from Storage
JC67003-1.10	Toan Pham	GCMS2B	05/31/18 19:06	Load on Instrument
JC67003-1.10	GCMS2B	Sydney Scelfo	06/06/18 09:00	Unload from Instrument
JC67003-1.10	Sydney Scelfo	Secured Storage	06/06/18 09:00	Return to Storage
JC67003-1.11	Secured Storage	Hueanh Tran	06/01/18 10:24	Retrieve from Storage
JC67003-1.11	Hueanh Tran	GCMS4B	06/01/18 10:24	Load on Instrument
JC67003-1.11	GCMS4B	Hueanh Tran	06/04/18 10:47	Unload from Instrument
JC67003-1.11	Hueanh Tran	Secured Storage	06/04/18 10:47	Return to Storage
JC67003-2.2	Secured Storage	Matthew Robbins	05/31/18 22:53	Retrieve from Storage
JC67003-2.2	Matthew Robbins	Secured Staging Area	05/31/18 22:53	Return to Storage
JC67003-2.2	Secured Staging Area	Ryan Callaghan	06/01/18 09:18	Retrieve from Storage
JC67003-2.2	Ryan Callaghan		06/01/18 18:29	Depleted
JC67003-2.2.1	Ryan Callaghan	Organics Prep	06/01/18 09:18	Extract from JC67003-2.2
JC67003-2.2.1	Organics Prep	Ryan Callaghan	06/01/18 18:29	Extract from JC67003-2.2
JC67003-2.2.1	Ryan Callaghan	Extract Storage	06/01/18 18:29	Return to Storage
JC67003-2.2.1	Extract Storage	George Sleem	06/08/18 02:42	Retrieve from Storage
JC67003-2.2.1	George Sleem	GCMS6P	06/08/18 02:42	Load on Instrument
JC67003-2.2.1	GCMS6P	John Boudreau	06/08/18 16:00	Unload from Instrument
JC67003-2.2.1	John Boudreau	Extract Freezer	06/08/18 16:00	Return to Storage
JC67003-2.5	Secured Storage	Todd Shoemaker	06/01/18 13:59	Retrieve from Storage
JC67003-2.5	Todd Shoemaker	Secured Staging Area	06/01/18 13:59	Return to Storage
JC67003-2.5	Secured Staging Area	Amanda Furka	06/01/18 15:26	Retrieve from Storage

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SGS Internal Chain of Custody

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA
 Received: 05/30/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67003-2.5	Amanda Furka		06/01/18 18:38	Depleted
JC67003-2.5.1	Amanda Furka	Organics Prep	06/01/18 15:27	Extract from JC67003-2.5
JC67003-2.5.1	Organics Prep	Amanda Furka	06/02/18 00:06	Extract from JC67003-2.5
JC67003-2.5.1	Amanda Furka	Extract Storage	06/02/18 00:06	Return to Storage
JC67003-2.5.1	Extract Storage	Edouard Adrian Lee	06/02/18 22:23	Retrieve from Storage
JC67003-2.5.1	Edouard Adrian Lee	GCXX	06/02/18 22:23	Load on Instrument
JC67003-2.5.1	GCXX	Tianwei Ruan	06/05/18 08:22	Unload from Instrument
JC67003-2.5.1	Tianwei Ruan	Extract Freezer	06/05/18 08:22	Return to Storage
JC67003-2.5.2	Amanda Furka	Organics Prep	06/01/18 15:28	Extract from JC67003-2.5
JC67003-2.5.2	Organics Prep	Amanda Furka	06/02/18 00:10	Extract from JC67003-2.5
JC67003-2.5.2	Amanda Furka	Extract Storage	06/02/18 00:10	Return to Storage
JC67003-2.5.2	Extract Storage	Rebecca Krug	06/06/18 10:23	Retrieve from Storage
JC67003-2.5.2	Rebecca Krug	GC6G	06/06/18 10:23	Load on Instrument
JC67003-2.7	Secured Storage	Luis Villanueva	05/31/18 16:28	Retrieve from Storage
JC67003-2.7	Luis Villanueva	Secured Staging Area	05/31/18 16:29	Return to Storage
JC67003-2.7	Secured Staging Area	Deval Patel	06/01/18 07:28	Retrieve from Storage
JC67003-2.7	Deval Patel	Secured Storage	06/01/18 09:09	Return to Storage
JC67003-2.8	Secured Storage	Todd Shoemaker	06/05/18 10:52	Retrieve from Storage
JC67003-2.8	Todd Shoemaker	Secured Staging Area	06/05/18 10:53	Return to Storage
JC67003-2.8	Secured Staging Area	Colleen Hill	06/05/18 18:29	Retrieve from Storage
JC67003-2.8	Colleen Hill	Secured Storage	06/05/18 18:38	Return to Storage
JC67003-2.8.1	Colleen Hill	Metals Digestion	06/05/18 18:30	Digestate from JC67003-2.8
JC67003-2.8.1	Metals Digestion	Colleen Hill	06/05/18 18:30	Digestate from JC67003-2.8
JC67003-2.8.1	Colleen Hill	Metals Digestate Storage	06/05/18 18:30	Return to Storage
JC67003-2.9	Secured Storage	Sahara Feliciano	06/03/18 14:44	Retrieve from Storage
JC67003-2.9	Sahara Feliciano	Secured Staging Area	06/03/18 14:44	Return to Storage
JC67003-2.9	Secured Staging Area	Faraja Ombwayo	06/04/18 09:31	Retrieve from Storage
JC67003-2.9	Faraja Ombwayo	Secured Storage	06/04/18 15:43	Return to Storage
JC67003-2.10	Secured Storage	Bridget Kelly	06/01/18 12:03	Retrieve from Storage
JC67003-2.10	Bridget Kelly	GCMS2B	06/01/18 12:03	Load on Instrument
JC67003-2.10	GCMS2B	Sydney Scelfo	06/06/18 09:00	Unload from Instrument
JC67003-2.10	Sydney Scelfo	Secured Storage	06/06/18 09:00	Return to Storage
JC67003-2.11	Secured Storage	Toan Pham	05/31/18 19:06	Retrieve from Storage
JC67003-2.11	Toan Pham	GCMS2B	05/31/18 19:06	Load on Instrument
JC67003-2.11	GCMS2B	Sydney Scelfo	06/06/18 09:00	Unload from Instrument
JC67003-2.11	Sydney Scelfo	Secured Storage	06/06/18 09:00	Return to Storage

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SGS Internal Chain of Custody

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA
 Received: 05/30/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67003-3.2	Secured Storage	Matthew Robbins	05/31/18 22:53	Retrieve from Storage
JC67003-3.2	Matthew Robbins	Secured Staging Area	05/31/18 22:53	Return to Storage
JC67003-3.2	Secured Staging Area	Ryan Callaghan	06/01/18 09:18	Retrieve from Storage
JC67003-3.2	Ryan Callaghan		06/01/18 18:29	Depleted
JC67003-3.2.1	Ryan Callaghan	Organics Prep	06/01/18 09:18	Extract from JC67003-3.2
JC67003-3.2.1	Organics Prep	Ryan Callaghan	06/01/18 18:29	Extract from JC67003-3.2
JC67003-3.2.1	Ryan Callaghan	Extract Storage	06/01/18 18:29	Return to Storage
JC67003-3.2.1	Extract Storage	George Sleem	06/08/18 02:42	Retrieve from Storage
JC67003-3.2.1	George Sleem	GCMS6P	06/08/18 02:42	Load on Instrument
JC67003-3.2.1	GCMS6P	John Boudreau	06/08/18 16:00	Unload from Instrument
JC67003-3.2.1	John Boudreau	Extract Freezer	06/08/18 16:00	Return to Storage
JC67003-3.5	Secured Storage	Todd Shoemaker	06/01/18 13:59	Retrieve from Storage
JC67003-3.5	Todd Shoemaker	Secured Staging Area	06/01/18 13:59	Return to Storage
JC67003-3.5	Secured Staging Area	Amanda Furka	06/01/18 15:26	Retrieve from Storage
JC67003-3.5	Amanda Furka		06/01/18 18:38	Depleted
JC67003-3.5.1	Amanda Furka	Organics Prep	06/01/18 15:27	Extract from JC67003-3.5
JC67003-3.5.1	Organics Prep	Amanda Furka	06/02/18 00:06	Extract from JC67003-3.5
JC67003-3.5.1	Amanda Furka	Extract Storage	06/02/18 00:06	Return to Storage
JC67003-3.5.1	Extract Storage	Edouard Adrian Lee	06/02/18 22:23	Retrieve from Storage
JC67003-3.5.1	Edouard Adrian Lee	GCXX	06/02/18 22:23	Load on Instrument
JC67003-3.5.1	GCXX	Tianwei Ruan	06/05/18 08:22	Unload from Instrument
JC67003-3.5.1	Tianwei Ruan	Extract Freezer	06/05/18 08:22	Return to Storage
JC67003-3.5.2	Amanda Furka	Organics Prep	06/01/18 15:28	Extract from JC67003-3.5
JC67003-3.5.2	Organics Prep	Amanda Furka	06/02/18 00:10	Extract from JC67003-3.5
JC67003-3.5.2	Amanda Furka	Extract Storage	06/02/18 00:10	Return to Storage
JC67003-3.5.2	Extract Storage	Rebecca Krug	06/06/18 10:23	Retrieve from Storage
JC67003-3.5.2	Rebecca Krug	GC6G	06/06/18 10:23	Load on Instrument
JC67003-3.7	Secured Storage	Todd Shoemaker	06/05/18 10:52	Retrieve from Storage
JC67003-3.7	Todd Shoemaker	Secured Staging Area	06/05/18 10:53	Return to Storage
JC67003-3.7	Secured Staging Area	Colleen Hill	06/05/18 18:29	Retrieve from Storage
JC67003-3.7	Colleen Hill	Secured Storage	06/05/18 18:38	Return to Storage
JC67003-3.7.1	Colleen Hill	Metals Digestion	06/05/18 18:30	Digestate from JC67003-3.7
JC67003-3.7.1	Metals Digestion	Colleen Hill	06/05/18 18:30	Digestate from JC67003-3.7
JC67003-3.7.1	Colleen Hill	Metals Digestate Storage	06/05/18 18:30	Return to Storage
JC67003-3.8	Secured Storage	Luis Villanueva	05/31/18 16:28	Retrieve from Storage
JC67003-3.8	Luis Villanueva	Secured Staging Area	05/31/18 16:29	Return to Storage

5.3
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SGS Internal Chain of Custody

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA
 Received: 05/30/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67003-3.8	Secured Staging Area	Deval Patel	06/01/18 07:28	Retrieve from Storage
JC67003-3.8	Deval Patel	Secured Storage	06/01/18 09:09	Return to Storage
JC67003-3.9	Secured Storage	Sahara Feliciano	06/03/18 14:44	Retrieve from Storage
JC67003-3.9	Sahara Feliciano	Secured Staging Area	06/03/18 14:44	Return to Storage
JC67003-3.9	Secured Staging Area	Faraja Ombwayo	06/04/18 09:31	Retrieve from Storage
JC67003-3.9	Faraja Ombwayo	Secured Storage	06/04/18 15:43	Return to Storage
JC67003-3.10	Secured Storage	Toan Pham	05/31/18 19:06	Retrieve from Storage
JC67003-3.10	Toan Pham	GCMS2B	05/31/18 19:06	Load on Instrument
JC67003-3.10	GCMS2B	Sydney Scelfo	06/06/18 09:00	Unload from Instrument
JC67003-3.10	Sydney Scelfo	Secured Storage	06/06/18 09:00	Return to Storage
JC67003-3.11	Secured Storage	Bridget Kelly	06/01/18 12:03	Retrieve from Storage
JC67003-3.11	Bridget Kelly	GCMS2B	06/01/18 12:03	Load on Instrument
JC67003-3.11	GCMS2B	Sydney Scelfo	06/06/18 09:00	Unload from Instrument
JC67003-3.11	Sydney Scelfo	Secured Storage	06/06/18 09:00	Return to Storage
JC67003-4.1	Secured Storage	Luis Villanueva	05/31/18 16:28	Retrieve from Storage
JC67003-4.1	Luis Villanueva	Secured Staging Area	05/31/18 16:29	Return to Storage
JC67003-4.1	Secured Staging Area	Deval Patel	06/01/18 07:28	Retrieve from Storage
JC67003-4.1	Deval Patel	Secured Storage	06/01/18 09:09	Return to Storage
JC67003-4.1	Secured Storage	Todd Shoemaker	06/05/18 10:52	Retrieve from Storage
JC67003-4.1	Todd Shoemaker	Secured Staging Area	06/05/18 10:53	Return to Storage
JC67003-4.1	Secured Staging Area	Colleen Hill	06/05/18 18:29	Retrieve from Storage
JC67003-4.1	Colleen Hill	Secured Storage	06/05/18 18:38	Return to Storage
JC67003-4.1.1	Colleen Hill	Metals Digestion	06/05/18 18:30	Digestate from JC67003-4.1
JC67003-4.1.1	Metals Digestion	Colleen Hill	06/05/18 18:30	Digestate from JC67003-4.1
JC67003-4.1.1	Colleen Hill	Metals Digestate Storage	06/05/18 18:30	Return to Storage
JC67003-5.1	Secured Storage	Luis Villanueva	05/31/18 16:28	Retrieve from Storage
JC67003-5.1	Luis Villanueva	Secured Staging Area	05/31/18 16:29	Return to Storage
JC67003-5.1	Secured Staging Area	Deval Patel	06/01/18 07:28	Retrieve from Storage
JC67003-5.1	Deval Patel	Secured Storage	06/01/18 09:09	Return to Storage
JC67003-5.1	Secured Storage	Todd Shoemaker	06/05/18 10:52	Retrieve from Storage
JC67003-5.1	Todd Shoemaker	Secured Staging Area	06/05/18 10:53	Return to Storage
JC67003-5.1	Secured Staging Area	Colleen Hill	06/05/18 18:29	Retrieve from Storage
JC67003-5.1	Colleen Hill	Secured Storage	06/05/18 18:38	Return to Storage
JC67003-5.1.1	Colleen Hill	Metals Digestion	06/05/18 18:30	Digestate from JC67003-5.1
JC67003-5.1.1	Metals Digestion	Colleen Hill	06/05/18 18:30	Digestate from JC67003-5.1
JC67003-5.1.1	Colleen Hill	Metals Digestate Storage	06/05/18 18:30	Return to Storage

5.3
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SGS Internal Chain of Custody

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA
 Received: 05/30/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67003-6.1	Secured Storage	Luis Villanueva	05/31/18 16:28	Retrieve from Storage
JC67003-6.1	Luis Villanueva	Secured Staging Area	05/31/18 16:29	Return to Storage
JC67003-6.1	Secured Staging Area	Deval Patel	06/01/18 07:28	Retrieve from Storage
JC67003-6.1	Deval Patel	Secured Storage	06/01/18 09:09	Return to Storage
JC67003-6.1	Secured Storage	Todd Shoemaker	06/05/18 10:52	Retrieve from Storage
JC67003-6.1	Todd Shoemaker	Secured Staging Area	06/05/18 10:53	Return to Storage
JC67003-6.1	Secured Staging Area	Colleen Hill	06/05/18 18:29	Retrieve from Storage
JC67003-6.1	Colleen Hill	Secured Storage	06/05/18 18:38	Return to Storage
JC67003-6.1.1	Colleen Hill	Metals Digestion	06/05/18 18:30	Digestate from JC67003-6.1
JC67003-6.1.1	Metals Digestion	Colleen Hill	06/05/18 18:30	Digestate from JC67003-6.1
JC67003-6.1.1	Colleen Hill	Metals Digestate Storage	06/05/18 18:30	Return to Storage
JC67003-7.1	Secured Storage	Matthew Robbins	05/31/18 22:53	Retrieve from Storage
JC67003-7.1	Matthew Robbins	Secured Staging Area	05/31/18 22:53	Return to Storage
JC67003-7.1	Secured Staging Area	Ryan Callaghan	06/01/18 09:18	Retrieve from Storage
JC67003-7.1	Ryan Callaghan		06/01/18 18:29	Depleted
JC67003-7.1.1	Ryan Callaghan	Organics Prep	06/01/18 09:18	Extract from JC67003-7.1
JC67003-7.1.1	Organics Prep	Ryan Callaghan	06/01/18 18:29	Extract from JC67003-7.1
JC67003-7.1.1	Ryan Callaghan	Extract Storage	06/01/18 18:29	Return to Storage
JC67003-7.1.1	Extract Storage	George Sleem	06/08/18 02:42	Retrieve from Storage
JC67003-7.1.1	George Sleem	GCMS6P	06/08/18 02:42	Load on Instrument
JC67003-7.1.1	GCMS6P	John Boudreau	06/08/18 16:00	Unload from Instrument
JC67003-7.1.1	John Boudreau	Extract Freezer	06/08/18 16:00	Return to Storage
JC67003-7.5	Secured Storage	Todd Shoemaker	06/01/18 13:59	Retrieve from Storage
JC67003-7.5	Todd Shoemaker	Secured Staging Area	06/01/18 13:59	Return to Storage
JC67003-7.5	Secured Staging Area	Amanda Furka	06/01/18 15:26	Retrieve from Storage
JC67003-7.5	Amanda Furka		06/01/18 18:38	Depleted
JC67003-7.5.1	Amanda Furka	Organics Prep	06/01/18 15:27	Extract from JC67003-7.5
JC67003-7.5.1	Organics Prep	Amanda Furka	06/02/18 00:06	Extract from JC67003-7.5
JC67003-7.5.1	Amanda Furka	Extract Storage	06/02/18 00:06	Return to Storage
JC67003-7.5.1	Extract Storage	Edouard Adrian Lee	06/02/18 22:23	Retrieve from Storage
JC67003-7.5.1	Edouard Adrian Lee	GCXX	06/02/18 22:23	Load on Instrument
JC67003-7.5.1	GCXX	Tianwei Ruan	06/05/18 08:22	Unload from Instrument
JC67003-7.5.1	Tianwei Ruan	Extract Freezer	06/05/18 08:22	Return to Storage
JC67003-7.5.2	Amanda Furka	Organics Prep	06/01/18 15:28	Extract from JC67003-7.5
JC67003-7.5.2	Organics Prep	Amanda Furka	06/02/18 00:10	Extract from JC67003-7.5
JC67003-7.5.2	Amanda Furka	Extract Storage	06/02/18 00:10	Return to Storage
JC67003-7.5.2	Extract Storage	Rebecca Krug	06/06/18 10:23	Retrieve from Storage
JC67003-7.5.2	Rebecca Krug	GC6G	06/06/18 10:23	Load on Instrument

5.3
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SGS Internal Chain of Custody

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Received: 05/30/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67003-7.7	Secured Storage	Luis Villanueva	05/31/18 16:28	Retrieve from Storage
JC67003-7.7	Luis Villanueva	Secured Staging Area	05/31/18 16:29	Return to Storage
JC67003-7.7	Secured Staging Area	Deval Patel	06/01/18 07:28	Retrieve from Storage
JC67003-7.7	Deval Patel	Secured Storage	06/01/18 09:09	Return to Storage
JC67003-7.7	Secured Storage	Todd Shoemaker	06/05/18 10:52	Retrieve from Storage
JC67003-7.7	Todd Shoemaker	Secured Staging Area	06/05/18 10:53	Return to Storage
JC67003-7.7	Secured Staging Area	Colleen Hill	06/05/18 18:29	Retrieve from Storage
JC67003-7.7	Colleen Hill	Secured Storage	06/05/18 18:38	Return to Storage
JC67003-7.7.1	Colleen Hill	Metals Digestion	06/05/18 18:30	Digestate from JC67003-7.7
JC67003-7.7.1	Metals Digestion	Colleen Hill	06/05/18 18:30	Digestate from JC67003-7.7
JC67003-7.7.1	Colleen Hill	Metals Digestate Storage	06/05/18 18:30	Return to Storage
JC67003-7.9	Secured Storage	Sahara Feliciano	06/03/18 14:44	Retrieve from Storage
JC67003-7.9	Sahara Feliciano	Secured Staging Area	06/03/18 14:44	Return to Storage
JC67003-7.9	Secured Staging Area	Faraja Ombwayo	06/04/18 09:31	Retrieve from Storage
JC67003-7.9	Faraja Ombwayo	Secured Storage	06/04/18 15:43	Return to Storage
JC67003-7.10	Secured Storage	Toan Pham	05/31/18 19:06	Retrieve from Storage
JC67003-7.10	Toan Pham	GCMS2B	05/31/18 19:06	Load on Instrument
JC67003-7.10	GCMS2B	Sydney Scelfo	06/06/18 09:00	Unload from Instrument
JC67003-7.10	Sydney Scelfo	Secured Storage	06/06/18 09:00	Return to Storage
JC67003-8.1	Secured Storage	Toan Pham	05/31/18 19:06	Retrieve from Storage
JC67003-8.1	Toan Pham	GCMS2B	05/31/18 19:06	Load on Instrument
JC67003-8.1	GCMS2B	Sydney Scelfo	06/06/18 09:00	Unload from Instrument
JC67003-8.1	Sydney Scelfo	Secured Storage	06/06/18 09:00	Return to Storage

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MS Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B7179-MB	2B160761.D	1	05/31/18	DG	n/a	n/a	V2B7179

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67003-2, JC67003-3, JC67003-7, JC67003-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.38	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.63	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.9	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.25	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	1.8	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.25	ug/l	

Method Blank Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B7179-MB	2B160761.D	1	05/31/18	DG	n/a	n/a	V2B7179

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67003-2, JC67003-3, JC67003-7, JC67003-8

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	110% 80-120%
17060-07-0	1,2-Dichloroethane-D4	102% 81-124%
2037-26-5	Toluene-D8	99% 80-120%
460-00-4	4-Bromofluorobenzene	105% 80-120%

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

6.1.1
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Method Blank Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B3421-MB	4B82371.D	1	06/01/18	HT	n/a	n/a	V4B3421

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67003-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.38	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.63	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.9	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.25	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	1.8	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.25	ug/l	

Method Blank Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B3421-MB	4B82371.D	1	06/01/18	HT	n/a	n/a	V4B3421

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67003-1

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	106%	80-120%
17060-07-0	1,2-Dichloroethane-D4	109%	81-124%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	95%	80-120%

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

Method Blank Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B7179-MB2	2B160788.D	1	06/01/18	DG	n/a	n/a	V2B7179

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67003-3DUP, JC67003-2MS

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.38	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.63	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.9	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.25	ug/l	
79-20-9	Methyl Acetate	ND	5.0	3.1	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	1.8	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.25	ug/l	

Method Blank Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B7179-MB2	2B160788.D	1	06/01/18	DG	n/a	n/a	V2B7179

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67003-3DUP, JC67003-2MS

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	113%	80-120%
17060-07-0	1,2-Dichloroethane-D4	103%	81-124%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	104%	80-120%

Blank Spike Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B7179-BS	2B160759.D	1	05/31/18	DG	n/a	n/a	V2B7179

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67003-2, JC67003-3, JC67003-7, JC67003-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	195	98	42-150
71-43-2	Benzene	50	50.6	101	80-120
74-97-5	Bromochloromethane	50	51.6	103	84-121
75-27-4	Bromodichloromethane	50	50.0	100	83-120
75-25-2	Bromoform	50	47.9	96	76-129
74-83-9	Bromomethane	50	57.6	115	57-138
78-93-3	2-Butanone (MEK)	200	197	99	64-137
75-15-0	Carbon disulfide	50	55.9	112	64-137
56-23-5	Carbon tetrachloride	50	48.6	97	75-135
108-90-7	Chlorobenzene	50	46.9	94	84-117
75-00-3	Chloroethane	50	60.1	120	63-132
67-66-3	Chloroform	50	48.7	97	80-119
74-87-3	Chloromethane	50	63.6	127	46-136
110-82-7	Cyclohexane	50	56.3	113	64-137
96-12-8	1,2-Dibromo-3-chloropropane	50	52.5	105	72-127
124-48-1	Dibromochloromethane	50	47.2	94	80-123
106-93-4	1,2-Dibromoethane	50	50.0	100	84-117
95-50-1	1,2-Dichlorobenzene	50	50.5	101	84-119
541-73-1	1,3-Dichlorobenzene	50	48.5	97	81-117
106-46-7	1,4-Dichlorobenzene	50	49.9	100	82-117
75-71-8	Dichlorodifluoromethane	50	78.9	158* a	36-149
75-34-3	1,1-Dichloroethane	50	51.6	103	79-120
107-06-2	1,2-Dichloroethane	50	45.2	90	78-126
75-35-4	1,1-Dichloroethene	50	51.8	104	69-126
156-59-2	cis-1,2-Dichloroethene	50	52.0	104	80-120
156-60-5	trans-1,2-Dichloroethene	50	51.8	104	76-120
78-87-5	1,2-Dichloropropane	50	50.7	101	82-121
10061-01-5	cis-1,3-Dichloropropene	50	49.6	99	83-120
10061-02-6	trans-1,3-Dichloropropene	50	46.1	92	82-121
100-41-4	Ethylbenzene	50	45.7	91	80-120
76-13-1	Freon 113	50	55.3	111	62-182
591-78-6	2-Hexanone	200	182	91	65-132
98-82-8	Isopropylbenzene	50	45.0	90	83-120
79-20-9	Methyl Acetate	50	42.7	85	67-129
108-87-2	Methylcyclohexane	50	54.2	108	71-134
1634-04-4	Methyl Tert Butyl Ether	50	44.1	88	80-119

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B7179-BS	2B160759.D	1	05/31/18	DG	n/a	n/a	V2B7179

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67003-2, JC67003-3, JC67003-7, JC67003-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	191	96	71-131
75-09-2	Methylene chloride	50	54.2	108	77-120
100-42-5	Styrene	50	45.9	92	82-122
79-34-5	1,1,2,2-Tetrachloroethane	50	53.9	108	76-119
127-18-4	Tetrachloroethene	50	43.2	86	70-131
108-88-3	Toluene	50	46.6	93	80-120
87-61-6	1,2,3-Trichlorobenzene	50	60.0	120	76-134
120-82-1	1,2,4-Trichlorobenzene	50	59.1	118	79-132
71-55-6	1,1,1-Trichloroethane	50	48.1	96	81-128
79-00-5	1,1,2-Trichloroethane	50	48.5	97	83-118
79-01-6	Trichloroethene	50	49.5	99	80-120
75-69-4	Trichlorofluoromethane	50	55.9	112	64-136
75-01-4	Vinyl chloride	50	62.9	126	51-135
	m,p-Xylene	100	89.7	90	80-120
95-47-6	o-Xylene	50	46.1	92	80-120
1330-20-7	Xylene (total)	150	136	91	80-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	80-120%
17060-07-0	1,2-Dichloroethane-D4	96%	81-124%
2037-26-5	Toluene-D8	96%	80-120%
460-00-4	4-Bromofluorobenzene	105%	80-120%

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

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B3421-BS	4B82369.D	1	06/01/18	HT	n/a	n/a	V4B3421

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67003-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	195	98	42-150
71-43-2	Benzene	50	51.5	103	80-120
74-97-5	Bromochloromethane	50	53.3	107	84-121
75-27-4	Bromodichloromethane	50	54.7	109	83-120
75-25-2	Bromoform	50	58.8	118	76-129
74-83-9	Bromomethane	50	45.7	91	57-138
78-93-3	2-Butanone (MEK)	200	205	103	64-137
75-15-0	Carbon disulfide	50	52.8	106	64-137
56-23-5	Carbon tetrachloride	50	58.3	117	75-135
108-90-7	Chlorobenzene	50	51.5	103	84-117
75-00-3	Chloroethane	50	49.9	100	63-132
67-66-3	Chloroform	50	51.5	103	80-119
74-87-3	Chloromethane	50	48.8	98	46-136
110-82-7	Cyclohexane	50	51.1	102	64-137
96-12-8	1,2-Dibromo-3-chloropropane	50	53.8	108	72-127
124-48-1	Dibromochloromethane	50	56.8	114	80-123
106-93-4	1,2-Dibromoethane	50	50.9	102	84-117
95-50-1	1,2-Dichlorobenzene	50	51.3	103	84-119
541-73-1	1,3-Dichlorobenzene	50	51.2	102	81-117
106-46-7	1,4-Dichlorobenzene	50	50.5	101	82-117
75-71-8	Dichlorodifluoromethane	50	51.6	103	36-149
75-34-3	1,1-Dichloroethane	50	51.1	102	79-120
107-06-2	1,2-Dichloroethane	50	52.8	106	78-126
75-35-4	1,1-Dichloroethene	50	55.4	111	69-126
156-59-2	cis-1,2-Dichloroethene	50	50.0	100	80-120
156-60-5	trans-1,2-Dichloroethene	50	52.5	105	76-120
78-87-5	1,2-Dichloropropane	50	51.3	103	82-121
10061-01-5	cis-1,3-Dichloropropene	50	54.2	108	83-120
10061-02-6	trans-1,3-Dichloropropene	50	54.6	109	82-121
100-41-4	Ethylbenzene	50	51.4	103	80-120
76-13-1	Freon 113	50	61.8	124	62-182
591-78-6	2-Hexanone	200	204	102	65-132
98-82-8	Isopropylbenzene	50	55.9	112	83-120
79-20-9	Methyl Acetate	50	48.3	97	67-129
108-87-2	Methylcyclohexane	50	57.4	115	71-134
1634-04-4	Methyl Tert Butyl Ether	50	50.2	100	80-119

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B3421-BS	4B82369.D	1	06/01/18	HT	n/a	n/a	V4B3421

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67003-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	204	102	71-131
75-09-2	Methylene chloride	50	50.6	101	77-120
100-42-5	Styrene	50	54.4	109	82-122
79-34-5	1,1,2,2-Tetrachloroethane	50	49.4	99	76-119
127-18-4	Tetrachloroethene	50	54.9	110	70-131
108-88-3	Toluene	50	51.3	103	80-120
87-61-6	1,2,3-Trichlorobenzene	50	54.9	110	76-134
120-82-1	1,2,4-Trichlorobenzene	50	53.8	108	79-132
71-55-6	1,1,1-Trichloroethane	50	56.8	114	81-128
79-00-5	1,1,2-Trichloroethane	50	51.6	103	83-118
79-01-6	Trichloroethene	50	53.5	107	80-120
75-69-4	Trichlorofluoromethane	50	52.2	104	64-136
75-01-4	Vinyl chloride	50	47.8	96	51-135
	m,p-Xylene	100	105	105	80-120
95-47-6	o-Xylene	50	53.4	107	80-120
1330-20-7	Xylene (total)	150	159	106	80-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	80-120%
17060-07-0	1,2-Dichloroethane-D4	103%	81-124%
2037-26-5	Toluene-D8	101%	80-120%
460-00-4	4-Bromofluorobenzene	95%	80-120%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC67003-2MS	2B160789.D	1	06/01/18	DG	n/a	n/a	V2B7179
JC67003-2	2B160775.D	1	06/01/18	DG	n/a	n/a	V2B7179

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67003-2, JC67003-3, JC67003-7, JC67003-8

CAS No.	Compound	JC67003-2 ug/l	Spike Q	MS ug/l	MS %	Limits
67-64-1	Acetone	ND	200	221	111	34-149
71-43-2	Benzene	3.8	50	56.4	105	54-136
74-97-5	Bromochloromethane	ND	50	52.7	105	79-124
75-27-4	Bromodichloromethane	ND	50	54.5	109	79-124
75-25-2	Bromoform	ND	50	51.2	102	71-130
74-83-9	Bromomethane	ND	50	63.8	128	53-142
78-93-3	2-Butanone (MEK)	ND	200	222	111	54-142
75-15-0	Carbon disulfide	ND	50	44.7	89	59-145
56-23-5	Carbon tetrachloride	ND	50	51.7	103	70-143
108-90-7	Chlorobenzene	ND	50	50.8	102	78-123
75-00-3	Chloroethane	ND	50	69.4	139	57-141
67-66-3	Chloroform	ND	50	53.0	106	76-123
74-87-3	Chloromethane	ND	50	67.9	136	43-141
110-82-7	Cyclohexane	ND	50	62.6	125	51-155
96-12-8	1,2-Dibromo-3-chloropropane	ND	50	58.7	117	66-130
124-48-1	Dibromochloromethane	ND	50	50.4	101	76-125
106-93-4	1,2-Dibromoethane	ND	50	52.0	104	78-119
95-50-1	1,2-Dichlorobenzene	ND	50	55.1	110	77-123
541-73-1	1,3-Dichlorobenzene	ND	50	53.0	106	76-122
106-46-7	1,4-Dichlorobenzene	ND	50	54.4	109	76-122
75-71-8	Dichlorodifluoromethane	ND	50	85.8	172* a	31-159
75-34-3	1,1-Dichloroethane	ND	50	53.3	107	73-126
107-06-2	1,2-Dichloroethane	ND	50	47.5	95	72-131
75-35-4	1,1-Dichloroethene	ND	50	44.7	89	63-136
156-59-2	cis-1,2-Dichloroethene	ND	50	53.4	107	60-136
156-60-5	trans-1,2-Dichloroethene	ND	50	51.2	102	70-126
78-87-5	1,2-Dichloropropane	ND	50	55.4	111	78-124
10061-01-5	cis-1,3-Dichloropropene	ND	50	54.1	108	79-123
10061-02-6	trans-1,3-Dichloropropene	ND	50	48.2	96	77-123
100-41-4	Ethylbenzene	0.23	J 50	50.6	101	51-140
76-13-1	Freon 113	ND	50	48.3	97	60-192
591-78-6	2-Hexanone	ND	200	219	110	56-139
98-82-8	Isopropylbenzene	ND	50	49.7	99	75-129
79-20-9	Methyl Acetate	ND	50	44.7	89	55-131
108-87-2	Methylcyclohexane	ND	50	57.3	115	57-155
1634-04-4	Methyl Tert Butyl Ether	ND	50	43.1	86	72-123

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC67003-2MS	2B160789.D	1	06/01/18	DG	n/a	n/a	V2B7179
JC67003-2	2B160775.D	1	06/01/18	DG	n/a	n/a	V2B7179

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67003-2, JC67003-3, JC67003-7, JC67003-8

CAS No.	Compound	JC67003-2 ug/l	Spike Q	MS ug/l	MS %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		200	234	117 66-136
75-09-2	Methylene chloride	ND		50	53.0	106 73-125
100-42-5	Styrene	ND		50	49.4	99 75-129
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	60.7	121 71-122
127-18-4	Tetrachloroethene	ND		50	48.5	97 61-139
108-88-3	Toluene	ND		50	50.1	100 60-135
87-61-6	1,2,3-Trichlorobenzene	ND		50	65.6	131 70-138
120-82-1	1,2,4-Trichlorobenzene	ND		50	63.8	128 72-137
71-55-6	1,1,1-Trichloroethane	ND		50	51.0	102 74-138
79-00-5	1,1,2-Trichloroethane	ND		50	52.3	105 78-121
79-01-6	Trichloroethene	ND		50	52.8	106 62-141
75-69-4	Trichlorofluoromethane	ND		50	65.4	131 57-149
75-01-4	Vinyl chloride	ND		50	70.9	142 43-146
	m,p-Xylene	0.59	J	100	98.6	98 50-144
95-47-6	o-Xylene	1.7		50	52.5	102 63-134
1330-20-7	Xylene (total)	2.3		150	151	99 56-139

CAS No.	Surrogate Recoveries	MS	JC67003-2	Limits
1868-53-7	Dibromofluoromethane	107%	118%	80-120%
17060-07-0	1,2-Dichloroethane-D4	98%	107%	81-124%
2037-26-5	Toluene-D8	97%	101%	80-120%
460-00-4	4-Bromofluorobenzene	105%	103%	80-120%

(a) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC66969-2MS	4B82378.D	4	06/01/18	HT	n/a	n/a	V4B3421
JC66969-2MSD	4B82379.D	4	06/01/18	HT	n/a	n/a	V4B3421
JC66969-2	4B82376.D	4	06/01/18	HT	n/a	n/a	V4B3421

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67003-1

CAS No.	Compound	JC66969-2	Spike	MS	MS	Spike	MSD	MSD	RPD	Limits
		ug/l	Q	ug/l	ug/l	%	ug/l	ug/l		%	Rec/RPD
67-64-1	Acetone	ND	800	757	95	800	750	94	1	34-149/17
71-43-2	Benzene	ND	200	196	98	200	199	100	2	54-136/10
74-97-5	Bromochloromethane	ND	200	210	105	200	210	105	0	79-124/11
75-27-4	Bromodichloromethane	ND	200	213	107	200	214	107	0	79-124/11
75-25-2	Bromoform	ND	200	234	117	200	236	118	1	71-130/11
74-83-9	Bromomethane	ND	200	152	76	200	165	83	8	53-142/14
78-93-3	2-Butanone (MEK)	ND	800	878	110	800	878	110	0	54-142/15
75-15-0	Carbon disulfide	ND	200	180	90	200	184	92	2	59-145/17
56-23-5	Carbon tetrachloride	ND	200	204	102	200	207	104	1	70-143/12
108-90-7	Chlorobenzene	ND	200	203	102	200	206	103	1	78-123/10
75-00-3	Chloroethane	ND	200	170	85	200	178	89	5	57-141/14
67-66-3	Chloroform	ND	200	199	100	200	200	100	1	76-123/11
74-87-3	Chloromethane	ND	200	167	84	200	176	88	5	43-141/16
110-82-7	Cyclohexane	ND	200	158	79	200	158	79	0	51-155/16
96-12-8	1,2-Dibromo-3-chloropropane	ND	200	202	101	200	207	104	2	66-130/13
124-48-1	Dibromochloromethane	ND	200	221	111	200	224	112	1	76-125/11
106-93-4	1,2-Dibromoethane	ND	200	209	105	200	209	105	0	78-119/11
95-50-1	1,2-Dichlorobenzene	ND	200	194	97	200	195	98	1	77-123/11
541-73-1	1,3-Dichlorobenzene	ND	200	198	99	200	199	100	1	76-122/11
106-46-7	1,4-Dichlorobenzene	ND	200	196	98	200	197	99	1	76-122/11
75-71-8	Dichlorodifluoromethane	ND	200	176	88	200	183	92	4	31-159/16
75-34-3	1,1-Dichloroethane	ND	200	189	95	200	191	96	1	73-126/11
107-06-2	1,2-Dichloroethane	ND	200	208	104	200	205	103	1	72-131/11
75-35-4	1,1-Dichloroethene	ND	200	202	101	200	205	103	1	63-136/14
156-59-2	cis-1,2-Dichloroethene	25.1	200	210	92	200	215	95	2	60-136/11
156-60-5	trans-1,2-Dichloroethene	ND	200	190	95	200	193	97	2	70-126/11
78-87-5	1,2-Dichloropropane	ND	200	197	99	200	198	99	1	78-124/10
10061-01-5	cis-1,3-Dichloropropene	ND	200	206	103	200	212	106	3	79-123/11
10061-02-6	trans-1,3-Dichloropropene	ND	200	218	109	200	217	109	0	77-123/11
100-41-4	Ethylbenzene	ND	200	199	100	200	201	101	1	51-140/20
76-13-1	Freon 113	ND	200	219	110	200	222	111	1	60-192/14
591-78-6	2-Hexanone	ND	800	792	99	800	792	99	0	56-139/14
98-82-8	Isopropylbenzene	ND	200	207	104	200	208	104	0	75-129/11
79-20-9	Methyl Acetate	ND	200	191	96	200	190	95	1	55-131/15
108-87-2	Methylcyclohexane	ND	200	193	97	200	194	97	1	57-155/13
1634-04-4	Methyl Tert Butyl Ether	8.0	200	190	91	200	193	93	2	72-123/11

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC66969-2MS	4B82378.D	4	06/01/18	HT	n/a	n/a	V4B3421
JC66969-2MSD	4B82379.D	4	06/01/18	HT	n/a	n/a	V4B3421
JC66969-2	4B82376.D	4	06/01/18	HT	n/a	n/a	V4B3421

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67003-1

CAS No.	Compound	JC66969-2 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	800	793	99	800	808	101	2	66-136/13
75-09-2	Methylene chloride	ND	200	183	92	200	184	92	1	73-125/13
100-42-5	Styrene	ND	200	213	107	200	218	109	2	75-129/11
79-34-5	1,1,2,2-Tetrachloroethane	ND	200	196	98	200	194	97	1	71-122/11
127-18-4	Tetrachloroethene	945	E 200	910	-18* a	200	915	-15* a	1	61-139/11
108-88-3	Toluene	ND	200	201	101	200	202	101	0	60-135/10
87-61-6	1,2,3-Trichlorobenzene	ND	200	184	92	200	186	93	1	70-138/13
120-82-1	1,2,4-Trichlorobenzene	ND	200	186	93	200	187	94	1	72-137/13
71-55-6	1,1,1-Trichloroethane	ND	200	198	99	200	201	101	2	74-138/12
79-00-5	1,1,2-Trichloroethane	ND	200	205	103	200	206	103	0	78-121/11
79-01-6	Trichloroethene	17.6	200	224	103	200	226	104	1	62-141/10
75-69-4	Trichlorofluoromethane	ND	200	184	92	200	187	94	2	57-149/14
75-01-4	Vinyl chloride	ND	200	163	82	200	175	88	7	43-146/15
	m,p-Xylene	ND	400	407	102	400	415	104	2	50-144/20
95-47-6	o-Xylene	ND	200	201	101	200	203	102	1	63-134/10
1330-20-7	Xylene (total)	ND	600	607	101	600	617	103	2	56-139/20

CAS No.	Surrogate Recoveries	MS	MSD	JC66969-2	Limits
1868-53-7	Dibromofluoromethane	106%	104%	107%	80-120%
17060-07-0	1,2-Dichloroethane-D4	106%	102%	113%	81-124%
2037-26-5	Toluene-D8	101%	100%	99%	80-120%
460-00-4	4-Bromofluorobenzene	96%	96%	96%	80-120%

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC67003-3DUP	2B160791.D	1	06/01/18	DG	n/a	n/a	V2B7179
JC67003-3	2B160776.D	1	06/01/18	DG	n/a	n/a	V2B7179

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67003-2, JC67003-3, JC67003-7, JC67003-8

CAS No.	Compound	JC67003-3 DUP		Q	RPD	Limits
		ug/l	ug/l			
67-64-1	Acetone	ND	ND		nc	20
71-43-2	Benzene	ND	ND		nc	20
74-97-5	Bromochloromethane	ND	ND		nc	20
75-27-4	Bromodichloromethane	ND	ND		nc	20
75-25-2	Bromoform	ND	ND		nc	20
74-83-9	Bromomethane	ND	ND		nc	20
78-93-3	2-Butanone (MEK)	ND	ND		nc	20
75-15-0	Carbon disulfide	ND	ND		nc	20
56-23-5	Carbon tetrachloride	ND	ND		nc	20
108-90-7	Chlorobenzene	ND	ND		nc	20
75-00-3	Chloroethane	ND	ND		nc	20
67-66-3	Chloroform	ND	ND		nc	20
74-87-3	Chloromethane	ND	ND		nc	20
110-82-7	Cyclohexane	ND	ND		nc	20
96-12-8	1,2-Dibromo-3-chloropropane	ND	ND		nc	20
124-48-1	Dibromochloromethane	ND	ND		nc	20
106-93-4	1,2-Dibromoethane	ND	ND		nc	20
95-50-1	1,2-Dichlorobenzene	ND	ND		nc	20
541-73-1	1,3-Dichlorobenzene	ND	ND		nc	20
106-46-7	1,4-Dichlorobenzene	ND	ND		nc	20
75-71-8	Dichlorodifluoromethane	ND	ND		nc	20
75-34-3	1,1-Dichloroethane	ND	ND		nc	20
107-06-2	1,2-Dichloroethane	ND	ND		nc	20
75-35-4	1,1-Dichloroethene	ND	ND		nc	20
156-59-2	cis-1,2-Dichloroethene	ND	ND		nc	20
156-60-5	trans-1,2-Dichloroethene	ND	ND		nc	20
78-87-5	1,2-Dichloropropane	ND	ND		nc	20
10061-01-5	cis-1,3-Dichloropropene	ND	ND		nc	20
10061-02-6	trans-1,3-Dichloropropene	ND	ND		nc	20
100-41-4	Ethylbenzene	ND	ND		nc	20
76-13-1	Freon 113	ND	ND		nc	20
591-78-6	2-Hexanone	ND	ND		nc	20
98-82-8	Isopropylbenzene	ND	ND		nc	20
79-20-9	Methyl Acetate	ND	ND		nc	20
108-87-2	Methylcyclohexane	ND	ND		nc	20
1634-04-4	Methyl Tert Butyl Ether	ND	ND		nc	20

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC67003-3DUP	2B160791.D	1	06/01/18	DG	n/a	n/a	V2B7179
JC67003-3	2B160776.D	1	06/01/18	DG	n/a	n/a	V2B7179

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67003-2, JC67003-3, JC67003-7, JC67003-8

CAS No.	Compound	JC67003-3		Q	RPD	Limits
		ug/l	DUP ug/l			
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	ND		nc	20
75-09-2	Methylene chloride	ND	ND		nc	20
100-42-5	Styrene	ND	ND		nc	20
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND		nc	20
127-18-4	Tetrachloroethene	ND	ND		nc	20
108-88-3	Toluene	ND	ND		nc	20
87-61-6	1,2,3-Trichlorobenzene	ND	ND		nc	20
120-82-1	1,2,4-Trichlorobenzene	ND	ND		nc	20
71-55-6	1,1,1-Trichloroethane	ND	ND		nc	20
79-00-5	1,1,2-Trichloroethane	ND	ND		nc	20
79-01-6	Trichloroethene	ND	ND		nc	20
75-69-4	Trichlorofluoromethane	ND	ND		nc	20
75-01-4	Vinyl chloride	ND	ND		nc	20
	m,p-Xylene	ND	ND		nc	20
95-47-6	o-Xylene	ND	ND		nc	20
1330-20-7	Xylene (total)	ND	ND		nc	20

CAS No.	Surrogate Recoveries	DUP	JC67003-3	Limits
1868-53-7	Dibromofluoromethane	113%	119%	80-120%
17060-07-0	1,2-Dichloroethane-D4	105%	106%	81-124%
2037-26-5	Toluene-D8	100%	101%	80-120%
460-00-4	4-Bromofluorobenzene	104%	104%	80-120%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7119-BFB	Injection Date: 04/16/18
Lab File ID: 2B159788.D	Injection Time: 16:23
Instrument ID: GCMS2B	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	14.99 - 40.0% of mass 95	15923	19.1	Pass
75	30.0 - 60.0% of mass 95	40069	48.1	Pass
95	Base peak, 100% relative abundance	83314	100.0	Pass
96	5.0 - 9.0% of mass 95	5375	6.45	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	82794	99.4	Pass
175	5.0 - 9.0% of mass 174	6307	7.57 (7.62) ^a	Pass
176	95.0 - 101.0% of mass 174	81144	97.4 (98.0) ^a	Pass
177	5.0 - 9.0% of mass 176	5380	6.46 (6.63) ^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
V2B7119-IC7119	2B159789.D	04/16/18	16:59	00:36	Initial cal 0.5
V2B7119-IC7119	2B159790.D	04/16/18	17:29	01:06	Initial cal 1
V2B7119-IC7119	2B159791.D	04/16/18	17:59	01:36	Initial cal 2
V2B7119-IC7119	2B159792.D	04/16/18	18:29	02:06	Initial cal 5
V2B7119-IC7119	2B159793.D	04/16/18	18:59	02:36	Initial cal 10
V2B7119-IC7119	2B159794.D	04/16/18	19:29	03:06	Initial cal 20
V2B7119-ICC7119	2B159795.D	04/16/18	19:59	03:36	Initial cal 50
V2B7119-IC7119	2B159796.D	04/16/18	20:29	04:06	Initial cal 100
V2B7119-IC7119	2B159797.D	04/16/18	20:59	04:36	Initial cal 200
V2B7119-ICV7119	2B159800.D	04/16/18	22:29	06:06	Initial cal verification 50
V2B7119-ICV7119	2B159801.D	04/16/18	22:59	06:36	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7119-BFB2	Injection Date: 04/17/18
Lab File ID: 2B159804.D	Injection Time: 08:07
Instrument ID: GCMS2B	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	14.99 - 40.0% of mass 95	15038	18.0	Pass
75	30.0 - 60.0% of mass 95	39826	47.7	Pass
95	Base peak, 100% relative abundance	83509	100.0	Pass
96	5.0 - 9.0% of mass 95	5384	6.45	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	84722	101.5	Pass
175	5.0 - 9.0% of mass 174	6226	7.46 (7.35) ^a	Pass
176	95.0 - 101.0% of mass 174	82720	99.1 (97.6) ^a	Pass
177	5.0 - 9.0% of mass 176	5365	6.42 (6.49) ^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
V2B7119-ICV7119	2B159805.D	04/17/18	09:01	00:54	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample:	V2B7179-BFB	Injection Date:	05/31/18
Lab File ID:	2B160758.D	Injection Time:	17:45
Instrument ID:	GCMS2B		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	14.99 - 40.0% of mass 95	14233	17.4	Pass
75	30.0 - 60.0% of mass 95	37997	46.4	Pass
95	Base peak, 100% relative abundance	81827	100.0	Pass
96	5.0 - 9.0% of mass 95	5535	6.76	Pass
173	Less than 2.0% of mass 174	555	0.68 (0.75) ^a	Pass
174	50.0 - 120.0% of mass 95	74405	90.9	Pass
175	5.0 - 9.0% of mass 174	5649	6.90 (7.59) ^a	Pass
176	95.0 - 101.0% of mass 174	72067	88.1 (96.9) ^a	Pass
177	5.0 - 9.0% of mass 176	4786	5.85 (6.64) ^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
V2B7179-CC7119	2B160758.D	05/31/18	17:45	00:00	Continuing cal 50
V2B7179-BS	2B160759.D	05/31/18	18:26	00:41	Blank Spike
V2B7179-MB	2B160761.D	05/31/18	19:26	01:41	Method Blank
ZZZZZZ	2B160762.D	05/31/18	19:56	02:11	(unrelated sample)
ZZZZZZ	2B160763.D	05/31/18	20:26	02:41	(unrelated sample)
ZZZZZZ	2B160764.D	05/31/18	20:56	03:11	(unrelated sample)
ZZZZZZ	2B160765.D	05/31/18	21:26	03:41	(unrelated sample)
ZZZZZZ	2B160766.D	05/31/18	21:56	04:11	(unrelated sample)
ZZZZZZ	2B160767.D	05/31/18	22:26	04:41	(unrelated sample)
ZZZZZZ	2B160768.D	05/31/18	22:56	05:11	(unrelated sample)
ZZZZZZ	2B160769.D	05/31/18	23:26	05:41	(unrelated sample)
ZZZZZZ	2B160770.D	05/31/18	23:55	06:10	(unrelated sample)
ZZZZZZ	2B160771.D	06/01/18	00:25	06:40	(unrelated sample)
ZZZZZZ	2B160772.D	06/01/18	00:55	07:10	(unrelated sample)
JC67003-8	2B160773.D	06/01/18	01:25	07:40	TRIP BLANK
JC67003-2	2B160775.D	06/01/18	02:25	08:40	MW-101
JC67003-3	2B160776.D	06/01/18	02:54	09:09	MW-105
JC67003-7	2B160777.D	06/01/18	03:24	09:39	MW-107
ZZZZZZ	2B160779.D	06/01/18	04:24	10:39	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample:	V2B7179-BFB2	Injection Date:	06/01/18
Lab File ID:	2B160784.D	Injection Time:	09:15
Instrument ID:	GCMS2B		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	14.99 - 40.0% of mass 95	13586	17.3	Pass
75	30.0 - 60.0% of mass 95	36867	47.0	Pass
95	Base peak, 100% relative abundance	78507	100.0	Pass
96	5.0 - 9.0% of mass 95	5286	6.73	Pass
173	Less than 2.0% of mass 174	209	0.27 (0.29) ^a	Pass
174	50.0 - 120.0% of mass 95	71480	91.0	Pass
175	5.0 - 9.0% of mass 174	5417	6.90 (7.58) ^a	Pass
176	95.0 - 101.0% of mass 174	69064	88.0 (96.6) ^a	Pass
177	5.0 - 9.0% of mass 176	4676	5.96 (6.77) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2B7179-CC7119	2B160785.D	06/01/18	09:56	00:41	Continuing cal 20
V2B7180-BS	2B160786.D	06/01/18	10:47	01:32	Blank Spike
V2B7179-BS2	2B160786.D	06/01/18	10:47	01:32	Blank Spike
V2B7179-MB2	2B160788.D	06/01/18	11:46	02:31	Method Blank
JC67003-2MS	2B160789.D	06/01/18	12:25	03:10	Matrix Spike
JC67003-3DUP	2B160791.D	06/01/18	13:25	04:10	Duplicate

Instrument Performance Check (BFB)

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V4B3370-BFB	Injection Date: 04/25/18
Lab File ID: 4B81321.D	Injection Time: 15:08
Instrument ID: GCMS4B	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	16281	17.9	Pass
75	30.0 - 60.0% of mass 95	41533	45.8	Pass
95	Base peak, 100% relative abundance	90725	100.0	Pass
96	5.0 - 9.0% of mass 95	6121	6.75	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 150.0% of mass 95	86293	95.1	Pass
175	5.0 - 9.0% of mass 174	6714	7.40 (7.78) ^a	Pass
176	95.0 - 101.0% of mass 174	84002	92.6 (97.3) ^a	Pass
177	5.0 - 9.0% of mass 176	5433	5.99 (6.47) ^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
V4B3370-IC3370	4B81323.D	04/25/18	16:54	01:46	Initial cal 0.5
V4B3370-IC3370	4B81324.D	04/25/18	17:22	02:14	Initial cal 1
V4B3370-IC3370	4B81325.D	04/25/18	17:50	02:42	Initial cal 2
V4B3370-IC3370	4B81326.D	04/25/18	18:18	03:10	Initial cal 5
V4B3370-IC3370	4B81327.D	04/25/18	18:46	03:38	Initial cal 10
V4B3370-IC3370	4B81328.D	04/25/18	19:14	04:06	Initial cal 20
V4B3370-ICC3370	4B81329.D	04/25/18	19:42	04:34	Initial cal 50
V4B3370-IC3370	4B81330.D	04/25/18	20:10	05:02	Initial cal 100
V4B3370-IC3370	4B81331.D	04/25/18	20:38	05:30	Initial cal 200
V4B3370-ICV3370	4B81334.D	04/25/18	22:03	06:55	Initial cal verification 50
V4B3370-ICV3370	4B81335.D	04/25/18	22:31	07:23	Initial cal verification 50
ZZZZZZ	4B81337.D	04/25/18	23:27	08:19	(unrelated sample)
ZZZZZZ	4B81338.D	04/25/18	23:56	08:48	(unrelated sample)
ZZZZZZ	4B81339.D	04/26/18	00:24	09:16	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V4B3421-BFB	Injection Date: 06/01/18
Lab File ID: 4B82368.D	Injection Time: 09:04
Instrument ID: GCMS4B	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	13701	18.7	Pass
75	30.0 - 60.0% of mass 95	33957	46.4	Pass
95	Base peak, 100% relative abundance	73123	100.0	Pass
96	5.0 - 9.0% of mass 95	4941	6.76	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 150.0% of mass 95	75341	103.0	Pass
175	5.0 - 9.0% of mass 174	6051	8.28 (8.03) ^a	Pass
176	95.0 - 101.0% of mass 174	72941	99.8 (96.8) ^a	Pass
177	5.0 - 9.0% of mass 176	4712	6.44 (6.46) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4B3421-CC3370	4B82368.D	06/01/18	09:04	00:00	Continuing cal 20
V4B3421-BS	4B82369.D	06/01/18	09:37	00:33	Blank Spike
V4B3421-MB	4B82371.D	06/01/18	10:34	01:30	Method Blank
ZZZZZZ	4B82372.D	06/01/18	11:10	02:06	(unrelated sample)
ZZZZZZ	4B82373.D	06/01/18	11:39	02:35	(unrelated sample)
JC67003-1	4B82374.D	06/01/18	12:07	03:03	MW-104
ZZZZZZ	4B82375.D	06/01/18	12:36	03:32	(unrelated sample)
JC66969-2	4B82376.D	06/01/18	13:04	04:00	(used for QC only; not part of job JC67003)
ZZZZZZ	4B82377.D	06/01/18	13:33	04:29	(unrelated sample)
JC66969-2MS	4B82378.D	06/01/18	14:01	04:57	Matrix Spike
JC66969-2MSD	4B82379.D	06/01/18	14:29	05:25	Matrix Spike Duplicate
ZZZZZZ	4B82381.D	06/01/18	15:26	06:22	(unrelated sample)
ZZZZZZ	4B82382.D	06/01/18	15:54	06:50	(unrelated sample)
ZZZZZZ	4B82383.D	06/01/18	16:22	07:18	(unrelated sample)
ZZZZZZ	4B82384.D	06/01/18	16:50	07:46	(unrelated sample)
ZZZZZZ	4B82385.D	06/01/18	17:18	08:14	(unrelated sample)
ZZZZZZ	4B82386.D	06/01/18	17:46	08:42	(unrelated sample)
ZZZZZZ	4B82387.D	06/01/18	18:15	09:11	(unrelated sample)
ZZZZZZ	4B82388.D	06/01/18	18:43	09:39	(unrelated sample)

Internal Standard Area Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	V2B7179-CC7119	Injection Date:	05/31/18
Lab File ID:	2B160758.D	Injection Time:	17:45
Instrument ID:	GCMS2B	Method:	SW846 8260C

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	78660	8.30	251207	10.75	323841	11.70	327621	15.04	174226	17.52
Upper Limit ^a	157320	8.80	502414	11.25	647682	12.20	655242	15.54	348452	18.02
Lower Limit ^b	39330	7.80	125604	10.25	161921	11.20	163811	14.54	87113	17.02

Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
V2B7179-BS	74584	8.30	249803	10.75	319880	11.70	322803	15.04	170470	17.52
V2B7179-MB	80882	8.30	270704	10.76	348164	11.70	337713	15.04	173166	17.52
ZZZZZZ	81657	8.30	256007	10.75	330795	11.70	323717	15.04	170019	17.52
ZZZZZZ	76721	8.30	256016	10.75	332611	11.70	329340	15.04	170888	17.52
ZZZZZZ	75439	8.29	244410	10.75	319163	11.70	308890	15.04	161356	17.52
ZZZZZZ	78691	8.30	246645	10.76	325139	11.70	315784	15.04	163446	17.52
ZZZZZZ	74985	8.30	247790	10.76	325227	11.70	317281	15.04	164391	17.52
ZZZZZZ	73287	8.30	249843	10.76	328672	11.70	317970	15.04	162611	17.52
ZZZZZZ	75516	8.29	253750	10.75	333123	11.70	326626	15.04	167782	17.52
ZZZZZZ	75550	8.29	241327	10.75	317926	11.70	309393	15.04	160362	17.52
ZZZZZZ	72533	8.30	241088	10.75	323474	11.70	315833	15.04	162396	17.52
ZZZZZZ	71319	8.30	245674	10.76	324881	11.70	316007	15.04	162999	17.52
ZZZZZZ	69935	8.30	243543	10.76	323371	11.70	315798	15.04	162303	17.52
JC67003-8	71288	8.30	244627	10.76	326289	11.70	319379	15.04	164076	17.52
JC67003-2	70086	8.30	243081	10.76	324866	11.70	317028	15.04	168803	17.52
JC67003-3	69153	8.30	242272	10.76	323518	11.70	313135	15.04	162282	17.52
JC67003-7	66877	8.30	243549	10.76	326570	11.70	316260	15.04	164268	17.52
ZZZZZZ	64906	8.30	236999	10.76	318169	11.70	310410	15.04	158385	17.52

- 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.

6.7.1

6

Internal Standard Area Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	V2B7179-CC7119	Injection Date:	06/01/18
Lab File ID:	2B160785.D	Injection Time:	09:56
Instrument ID:	GCMS2B	Method:	SW846 8260C

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	76033	8.29	243207	10.75	310579	11.70	316136	15.04	166408	17.52
Upper Limit ^a	152066	8.79	486414	11.25	621158	12.20	632272	15.54	332816	18.02
Lower Limit ^b	38017	7.79	121604	10.25	155290	11.20	158068	14.54	83204	17.02

Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
V2B7180-BS	78035	8.30	248167	10.76	321677	11.70	318991	15.04	166954	17.52
V2B7179-BS2	78035	8.30	248167	10.76	321677	11.70	318991	15.04	166954	17.52
V2B7179-MB2	80205	8.30	245321	10.75	316878	11.70	307531	15.04	159742	17.52
JC67003-2MS	73652	8.30	225848	10.76	292177	11.70	299130	15.04	156925	17.52
JC67003-3DUP	84112	8.30	246099	10.76	320280	11.70	312574	15.04	162519	17.52

- 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.

6.7.2
6

Internal Standard Area Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	V4B3421-CC3370	Injection Date:	06/01/18
Lab File ID:	4B82368.D	Injection Time:	09:04
Instrument ID:	GCMS4B	Method:	SW846 8260C

	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
	AREA		AREA		AREA		AREA		AREA	
Check Std	116240	6.78	208646	8.77	266586	9.64	270961	12.83	181621	15.40
Upper Limit ^a	232480	7.28	417292	9.27	533172	10.14	541922	13.33	363242	15.90
Lower Limit ^b	58120	6.28	104323	8.27	133293	9.14	135481	12.33	90811	14.90

Lab Sample ID	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
	AREA		AREA		AREA		AREA		AREA	
V4B3421-BS	112439	6.76	216438	8.77	276355	9.65	276333	12.83	187667	15.40
V4B3421-MB	127129	6.77	228529	8.77	301431	9.65	295589	12.83	202009	15.40
ZZZZZZ	106554	6.77	204558	8.77	261912	9.65	262699	12.83	179529	15.40
ZZZZZZ	113592	6.77	228888	8.77	305965	9.65	297701	12.83	203195	15.40
JC67003-1	116090	6.77	225230	8.77	296372	9.65	296928	12.83	202630	15.40
ZZZZZZ	121150	6.78	217555	8.77	288605	9.65	291946	12.83	201052	15.40
JC66969-2	119598	6.77	225677	8.77	298492	9.65	292157	12.83	198051	15.40
ZZZZZZ	120290	6.76	222630	8.77	296383	9.65	297230	12.83	198914	15.40
JC66969-2MS	117783	6.77	238861	8.77	319862	9.65	309554	12.83	214941	15.40
JC66969-2MSD	120324	6.77	244242	8.77	325436	9.65	320180	12.83	220396	15.40
ZZZZZZ	125042	6.77	239688	8.77	314375	9.65	305063	12.83	205843	15.40
ZZZZZZ	131762	6.75	240616	8.77	324083	9.65	316820	12.83	223714	15.40
ZZZZZZ	133109	6.77	259469	8.77	344183	9.65	334375	12.83	229865	15.40
ZZZZZZ	139994	6.77	249493	8.77	326175	9.65	316347	12.83	214909	15.40
ZZZZZZ	126417	6.77	236519	8.77	312023	9.65	297545	12.83	203124	15.40
ZZZZZZ	125939	6.77	237930	8.77	315143	9.65	302421	12.83	208444	15.40
ZZZZZZ	126583	6.77	228143	8.77	304351	9.65	296685	12.83	201782	15.40
ZZZZZZ	126076	6.77	233939	8.77	309632	9.65	301166	12.83	206908	15.40

- 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.

6.7.3

6

Surrogate Recovery Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Method: SW846 8260C	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JC67003-1	4B82374.D	107	111	98	96
JC67003-2	2B160775.D	118	107	101	103
JC67003-3	2B160776.D	119	106	101	104
JC67003-7	2B160777.D	118	107	101	104
JC67003-8	2B160773.D	120	107	100	104
JC66969-2MS	4B82378.D	106	106	101	96
JC66969-2MSD	4B82379.D	104	102	100	96
JC67003-2MS	2B160789.D	107	98	97	105
JC67003-3DUP	2B160791.D	113	105	100	104
V2B7179-BS	2B160759.D	105	96	96	105
V2B7179-MB	2B160761.D	110	102	99	105
V4B3421-BS	4B82369.D	103	103	101	95
V4B3421-MB	4B82371.D	106	109	99	95
V2B7179-MB2	2B160788.D	113	103	99	104

Surrogate Compounds	Recovery Limits
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S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	81-124%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	80-120%

6.8.1
6

Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7119-ICC7119
 Lab FileID: 2B159795.D

Response Factor Report MS2B

Method : C:\MSDCHEM\1\METHODS\M2B7119.M (RTE Integrator)
 Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 Last Update : Tue Apr 17 14:14:07 2018
 Response via : Initial Calibration

Calibration Files

1 =2B159790.D 0.5 =2B159789.D 100 =2B159796.D 50 =2B159795.D
 20 =2B159794.D 200 =2B159797.D 5 =2B159792.D 2 =2B159791.D
 10 =2B159793.D =

Compound	1	0.5	100	50	20	200	5	2	10	Avg	%RSD
1) tert butyl alcohol-d9	-----ISTD-----										
2) tertiary butyl alcohol	0.990		1.085	1.028	1.030	1.036	1.084	0.964	1.028	1.031	4.01
3) ethanol	0.045		0.046	0.045	0.044	0.045	0.043	0.043	0.045	0.044	2.53
4) 1,4-dioxane			0.075	0.072	0.071	0.083	0.069	0.052	0.074	0.071	13.20
5) I pentafluorobenzene	-----ISTD-----										
6) chlorodifluoromethane	0.546	0.606	0.536	0.564	0.557	0.480	0.545	0.485	0.541	0.540	7.15
7) dichlorodifluoromethane	0.490	0.463	0.544	0.555	0.549	0.520	0.526	0.474	0.535	0.517	6.50
8) freon 114										0.000#	-1.00
9) freon 142b										0.000#	-1.00
10) chloromethane	0.722	0.873	0.662	0.680	0.648	0.609	0.660	0.653	0.647	0.684	11.24
11) vinyl chloride	0.580	0.553	0.604	0.618	0.605	0.570	0.603	0.545	0.597	0.586	4.34
12) 1,3-butadiene										0.000#	-1.00
13) bromomethane	0.396	0.440	0.366	0.370	0.367	0.339	0.376	0.374	0.368	0.377	7.32
14) chloroethane	0.314	0.321	0.317	0.322	0.320	0.295	0.326	0.303	0.324	0.316	3.27
15) trichlorofluoromethane	0.583	0.527	0.625	0.638	0.637	0.594	0.644	0.586	0.642	0.608	6.46
16) vinyl bromide	0.338	0.339	0.373	0.372	0.369	0.354	0.357	0.335	0.363	0.355	4.22
17) ethyl ether	0.208	0.179	0.228	0.224	0.226	0.212	0.219	0.218	0.223	0.215	6.93
18) acrolein			0.081	0.083	0.089	0.074	0.113		0.092	0.089	15.13
19) freon 113	0.242		0.274	0.285	0.295	0.265	0.292	0.267	0.290	0.276	6.53
20) 1,1-dichloroethene	0.387	0.484	0.335	0.346	0.355	0.310	0.359	0.358	0.358	0.366	13.40
21) acetone	0.031		0.029	0.028	0.028	0.025	0.031	0.027	0.028	0.028	5.87
22) acetonitrile			0.050	0.049	0.053	0.045	0.061		0.048	0.051	10.98
23) iodomethane											

Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7119-ICC7119
 Lab FileID: 2B159795.D

24)	carbon disulfide	0.561	0.512	0.577	0.585	0.578	0.532	0.575	0.530	0.557	0.556	4.65
		1.093	1.180	1.031	1.066	1.067	0.963	1.028	0.975	1.040	1.049	6.15
25)	methylene chloride	0.406	0.430	0.398	0.396	0.394	0.374	0.394	0.382	0.391	0.396	3.97
26)	methyl acetate			0.306	0.300	0.293	0.282	0.323	0.303	0.296	0.301	4.14
27)	methyl tert butyl ether	1.181	1.161	1.106	1.100	1.126	1.002	1.133	1.110	1.102	1.113	4.50
28)	trans-1,2-dichloroethene	0.423	0.427	0.369	0.377	0.380	0.343	0.391	0.376	0.381	0.385	6.77
29)	di-isopropyl ether	1.513	1.669	1.358	1.384	1.432	1.249	1.452	1.495	1.423	1.442	8.05
30)	2-butanone	0.033		0.039	0.037	0.036	0.037	0.036	0.034	0.036	0.036	5.06
31)	1,1-dichloroethane	0.703	0.753	0.712	0.715	0.729	0.663	0.734	0.712	0.710	0.715	3.45
32)	chloroprene	0.666	0.709	0.592	0.608	0.622	0.562	0.636	0.624	0.628	0.627	6.69
33)	acrylonitrile	0.114		0.133	0.128	0.125	0.126	0.125	0.115	0.122	0.123	5.13
34)	hexane	0.320		0.258	0.265	0.277	0.254	0.290	0.276	0.281	0.278	7.47
35)	vinyl acetate			0.066	0.064	0.063	0.063	0.058		0.060	0.062	4.99
36)	ethyl tert-butyl ether	1.364	1.331	1.316	1.317	1.335	1.214	1.367	1.307	1.318	1.319	3.38
37)	ethyl acetate			0.050	0.048	0.056	0.045	0.051		0.053	0.051	7.60
38)	2,2-dichloropropane	0.600		0.501	0.530	0.552	0.471	0.569	0.558	0.560	0.543	7.53
39)	cis-1,2-dichloroethene	0.439	0.452	0.411	0.414	0.417	0.384	0.433	0.417	0.421	0.421	4.57
40)	methyl acrylate			0.052	0.051	0.052	0.050	0.049	0.042	0.049	0.049	7.15
41)	propionitrile	0.056	0.056	0.053	0.053	0.054	0.049	0.056	0.054	0.054	0.054	4.60
42)	bromochloromethane	0.209	0.162	0.211	0.205	0.207	0.200	0.209	0.195	0.203	0.200	7.62
43)	tetrahydrofuran			0.045	0.043	0.044	0.042	0.039	0.035	0.043	0.041	8.78
44)	chloroform	0.485	0.530	0.419	0.423	0.426	0.398	0.444	0.445	0.436	0.445	8.92
45)	t-butyl formate	0.356		0.409	0.407	0.408	0.386	0.380	0.334	0.380	0.383	7.02
46)	dibromofluoromethane (s)	0.386	0.383	0.396	0.390	0.393	0.389	0.390	0.390	0.387	0.389	0.98
47)	methacrylonitrile	0.132		0.149	0.141	0.140	0.141	0.142	0.156	0.145	0.143	4.84
48)	1,1,1-trichloroethane	0.589	0.628	0.592	0.593	0.582	0.571	0.582	0.584	0.564	0.587	3.06
49)	cyclohexane			0.463	0.481	0.497	0.449	0.511		0.489	0.482	4.67
50)	1,1-dichloropropene	0.532	0.503	0.488	0.491	0.502	0.473	0.500	0.476	0.502	0.496	3.51
51)	iso-butyl alcohol			0.016	0.015	0.015	0.015	0.016		0.015	0.015	3.50
52)	carbon tetrachloride	0.500	0.510	0.494	0.501	0.508	0.479	0.514	0.479	0.500	0.498	2.53
53)	tert amyl alcohol											

6.9.1
6

Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7119-ICC7119
 Lab FileID: 2B159795.D

	0.013	0.013	0.013	0.012	0.017		0.014	0.014	14.25		
54) I 1,4-difluorobenzene	-----ISTD-----										
55) 1,2-dichloroethane-d4 (s)	0.365	0.364	0.342	0.350	0.351	0.338	0.363	0.364	0.360	0.355	2.91
56) n-butyl alcohol	0.007	0.008	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007#	6.89
57) 2,2,4-trimethylpentane	1.161	1.233	0.948	0.989	1.047	0.907	1.095	1.062	1.041	1.054	9.63
58) benzene	1.172	1.262	1.062	1.089	1.111	1.006	1.131	1.132	1.131	1.122	6.35
59) tert-amyl methyl ether	0.222	0.201	0.202	0.201	0.212	0.187	0.216	0.205	0.210	0.206	4.85
60) heptane	0.241	0.213	0.204	0.206	0.214	0.203	0.217	0.217	0.215	0.214	5.36
61) isopropyl acetate	0.057	0.054	0.053	0.053	0.054	0.042	0.053			0.052	9.36
62) 1,2-dichloroethane	0.465		0.386	0.386	0.389	0.360	0.416	0.423	0.406	0.404	7.79
63) trichloroethene	0.307	0.316	0.316	0.317	0.315	0.304	0.312	0.295	0.318	0.311	2.50
64) ethyl acrylate	0.351	0.340	0.340	0.321	0.378	0.412	0.348			0.356	8.43
65) 2-nitropropane	0.074	0.071	0.070	0.073	0.082		0.077			0.075	5.76
66) 2-chloroethyl vinyl ether	0.192	0.185	0.190	0.188	0.191	0.176	0.194	0.190	0.191	0.188	2.89
67) methyl methacrylate	0.070	0.069	0.069	0.066	0.072	0.055	0.071			0.067	8.80
68) 1,2-dichloropropane	0.321	0.321	0.305	0.305	0.306	0.287	0.315	0.312	0.311	0.309	3.35
69) dibromomethane	0.174	0.159	0.174	0.170	0.172	0.165	0.176	0.172	0.173	0.171	3.08
70) methylcyclohexane	0.557	0.579	0.497	0.514	0.539	0.473	0.541	0.517	0.532	0.528	6.02
71) bromodichloromethane	0.413	0.459	0.402	0.397	0.392	0.388	0.403	0.405	0.401	0.407	5.13
72) epichlorohydrin	0.037		0.028	0.027	0.028	0.027	0.031	0.033	0.028	0.030	12.24
73) cis-1,3-dichloropropene	0.530	0.491	0.503	0.501	0.500	0.484	0.503	0.513	0.503	0.503	2.55
74) 4-methyl-2-pentanone	0.105	0.117	0.105	0.103	0.105	0.097	0.110	0.107	0.106	0.106	5.02
75) 3-methyl-1-butanol	0.007	0.007	0.007	0.006	0.007	0.006	0.007	0.006	0.007	0.007#	4.61
76) I chlorobenzene-d5	-----ISTD-----										
77) toluene-d8 (s)	1.226	1.228	1.262	1.229	1.224	1.291	1.236	1.220	1.229	1.239	1.87
78) toluene	0.734	0.792	0.757	0.739	0.739	0.746	0.751	0.716	0.745	0.746	2.76
79) trans-1,3-dichloropropene	0.468	0.451	0.494	0.471	0.461	0.482	0.466	0.465	0.466	0.469	2.62
80) ethyl methacrylate	0.431	0.401	0.390	0.370	0.376	0.378	0.394	0.397	0.381	0.391	4.66
81) 1,1,2-trichloroethane	0.218	0.263	0.233	0.220	0.221	0.227	0.229	0.221	0.225	0.229	6.06
82) tetrachloroethene	0.290	0.323	0.281	0.278	0.285	0.271	0.298	0.281	0.290	0.288	5.28
83) 1,3-dichloropropane											

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Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7119-ICC7119
 Lab FileID: 2B159795.D

84)	2-hexanone	0.459	0.466	0.467	0.448	0.445	0.452	0.465	0.452	0.452	0.456	1.80
85)	butyl acetate	0.100	0.099	0.104	0.099	0.101	0.098	0.112	0.106	0.102	0.102	4.20
86)	dibromochloromethane	0.228	0.225	0.199	0.187	0.190	0.196	0.206	0.211	0.196	0.204	7.29
87)	1,2-dibromoethane	0.315	0.291	0.348	0.324	0.317	0.347	0.323	0.316	0.316	0.322	5.39
88)	n-butyl ether	0.294	0.272	0.314	0.294	0.290	0.309	0.304	0.292	0.292	0.296	4.16
89)	chlorobenzene	1.648		1.505	1.479	1.492	1.463	1.473	1.479	1.488	1.503	3.98
90)	1,1,1,2-tetrachloroethane	0.877	0.926	0.840	0.821	0.823	0.819	0.844	0.808	0.825	0.842	4.43
91)	ethylbenzene	0.315	0.297	0.326	0.316	0.317	0.319	0.321	0.317	0.320	0.316	2.47
92)	m,p-xylene	1.496	1.579	1.367	1.363	1.411	1.331	1.435	1.394	1.428	1.423	5.34
93)	o-xylene	0.591	0.623	0.552	0.543	0.556	0.544	0.575	0.556	0.562	0.567	4.59
94)	styrene	0.614	0.628	0.580	0.571	0.578	0.567	0.583	0.569	0.586	0.586	3.57
95)	bromoforn	1.010	1.080	0.972	0.950	0.977	0.943	1.002	0.987	0.995	0.991	4.07
96)	butyl acrylate	0.206	0.215	0.253	0.229	0.220	0.254	0.223	0.211	0.221	0.226	7.64
97)	isopropylbenzene	0.820		0.667	0.627	0.632	0.655	0.666	0.690	0.646	0.676	9.15
98)	cis-1,4-dichloro-2-butene	1.608	1.745	1.539	1.521	1.552	1.486	1.551	1.499	1.560	1.562	4.95
99)	I 1,4-dichlorobenzene-d	0.120	0.099	0.135	0.126	0.128	0.133	0.133	0.127	0.130	0.126	8.86
100)	4-bromofluorobenzene (s)	-----ISTD-----										
101)	bromobenzene	0.830	0.830	0.847	0.842	0.827	0.853	0.833	0.839	0.830	0.837	1.06
102)	1,1,2,2-tetrachloroethane	0.760	0.760	0.723	0.716	0.719	0.685	0.740	0.708	0.738	0.728	3.38
103)	trans-1,4-dichloro-2-butene	0.642	0.670	0.646	0.611	0.607	0.608	0.620	0.612	0.614	0.626	3.50
104)	1,2,3-trichloropropane	0.159		0.179	0.165	0.165	0.170	0.166	0.156	0.163	0.165	4.27
105)	n-propylbenzene	0.156		0.176	0.165	0.167	0.164	0.172	0.141	0.168	0.164	6.61
106)	4-Ethyltoluene	3.160	3.357	2.864	2.918	3.000	2.680	3.060	2.949	3.057	3.005	6.33
107)	2-chlorotoluene										0.000#	-1.00
108)	4-chlorotoluene	0.670	0.665	0.658	0.653	0.654	0.629	0.653	0.655	0.658	0.655	1.71
109)	1,3,5-trimethylbenzene	1.951	2.054	1.795	1.781	1.824	1.716	1.867	1.912	1.849	1.861	5.42
110)	tert-butylbenzene	2.379	2.485	2.142	2.148	2.207	1.981	2.232	2.244	2.253	2.230	6.44
111)	1,2,4-trimethylbenzene	0.470	0.466	0.500	0.491	0.483	0.474	0.493	0.462	0.485	0.480	2.75
112)	sec-butylbenzene	2.343	2.494	2.194	2.202	2.273	2.037	2.347	2.289	2.309	2.276	5.55
113)	1,3-dichlorobenzene	2.966	3.102	2.872	2.877	2.891	2.664	2.882	2.797	2.903	2.884	4.08

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Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7119-ICC7119
 Lab FileID: 2B159795.D

114)	p-isopropyltoluene	1.429	1.525	1.328	1.317	1.349	1.255	1.391	1.415	1.367	1.375	5.64
115)	1,4-dichlorobenzene	2.563	2.707	2.484	2.472	2.501	2.297	2.483	2.425	2.539	2.497	4.39
116)	benzyl chloride	1.374	1.430	1.346	1.304	1.295	1.286	1.301	1.273	1.315	1.325	3.79
117)	1,2-dichlorobenzene	1.297	1.448	1.347	1.279	1.260	1.258	1.273	1.299	1.247	1.301	4.81
118)	p-Diethylbenzene	1.351	1.408	1.376	1.348	1.353	1.283	1.370	1.343	1.347	1.353	2.47
119)	n-butylbenzene										0.000#	-1.00
120)	hexachloroethane	1.152	1.180	1.249	1.230	1.232	1.165	1.199	1.171	1.206	1.198	2.81
121)	1,2,4,5-Tetramethylbenzene	0.449	0.399	0.520	0.498	0.485	0.491	0.472	0.434	0.470	0.469	7.82
122)	1,2-dibromo-3-chloropropane										0.000#	-1.00
123)	1,3,5-trichlorobenzene	0.125		0.180	0.165	0.156	0.170	0.154	0.121	0.148	0.152	13.72
124)	2-ethylhexyl acrylate	1.150	1.245	1.304	1.298	1.281	1.185	1.214	1.145	1.238	1.229	4.89
125)	1,2,4-trichlorobenzene	0.729	0.662	0.559	0.732	0.485			0.507		0.612	17.98
126)	hexachlorobutadiene	0.935	0.963	1.128	1.102	1.063	1.020	0.970	0.923	1.012	1.013	7.16
127)	naphthalene	0.524	0.526	0.551	0.563	0.562	0.508	0.551	0.527	0.558	0.541	3.70
128)	1,2,3-trichlorobenzene	1.682	1.727	2.145	2.038	1.976	1.949	1.835	1.636	1.870	1.873	9.10
129)	2-methylnaphthalene	0.809	0.779	0.992	0.959	0.910	0.903	0.844	0.771	0.871	0.871	8.90
		1.186	1.041	0.881	1.150				0.752		1.002	18.30

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

M2B7119.M

Tue Apr 17 14:15:45 2018

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7119-ICV7119
 Lab FileID: 2B159800.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V2B7119\2B159800.D Vial: 12
 Acq On : 16 Apr 2018 10:29 pm Operator: sydney
 Sample : icv7119-50 Inst : MS2B
 Misc : MS25548,V2B7119,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2B7119.M (RTE Integrator)
 Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 Last Update : Tue Apr 17 14:14:07 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	97	0.00	8.30
2 M	tertiary butyl alcohol	1.031	1.189	-15.3	112	0.00	8.44
3	ethanol	0.044	0.051	-15.9	109	0.00	6.87
4 M	1,4-dioxane	0.071	0.082	-15.5	110	0.00	12.44
5 I	pentafluorobenzene	1.000	1.000	0.0	102	0.00	10.76
6 M	chlorodifluoromethane	0.540	0.361	33.1#	65	0.02	4.53
7 M	dichlorodifluoromethane	0.517	0.533	-3.1	98	0.02	4.51
8	freon 114			-----NA-----			
9	freon 142b			-----NA-----			
10 M	chloromethane	0.684	0.692	-1.2	103	0.02	4.95
11 M	vinyl chloride	0.586	0.590	-0.7	97	0.01	5.21
12	1,3-butadiene			-----NA-----			
13 M	bromomethane	0.377	0.379	-0.5	104	0.02	5.92
14 M	chloroethane	0.316	0.326	-3.2	103	0.02	6.10
15 M	trichlorofluoromethane	0.608	0.602	1.0	96	0.02	6.66
16	vinyl bromide	0.355	0.428	-20.6	117	0.02	6.51
17 M	ethyl ether	0.215	0.220	-2.3	100	0.01	7.11
18 M	acrolein	0.089	0.107	-20.2	132	0.00	7.33
19	freon 113	0.276	0.308	-11.6	110	0.01	7.57
20 M	1,1-dichloroethene	0.366	0.299	18.3	88	0.00	7.56
21 M	acetone	0.028	0.030	-7.1	108	0.00	7.58
22 M	acetonitrile			-----NA-----			
23 M	iodomethane	0.556	0.632	-13.7	110	0.00	7.85
24 M	carbon disulfide	1.049	1.025	2.3	98	0.01	8.00
25 M	methylene chloride	0.396	0.382	3.5	98	0.00	8.33
26 M	methyl acetate	0.301	0.288	4.3	97	0.01	8.14
27 M	methyl tert butyl ether	1.113	1.108	0.4	103	0.00	8.77
28 M	trans-1,2-dichloroethene	0.385	0.346	10.1	94	0.01	8.78
29 M	di-isopropyl ether	1.442	1.437	0.3	106	0.00	9.45
30 M	2-butanone	0.036	0.040	-11.1	109	0.00	10.14
31 M	1,1-dichloroethane	0.715	0.714	0.1	102	0.00	9.39
32 M	chloroprene	0.627	0.614	2.1	103	0.00	9.52
33 M	acrylonitrile	0.123	0.136	-10.6	108	0.00	8.67
34	hexane	0.278	0.228	18.0	88	0.00	9.18
35 M	vinyl acetate	0.062	0.073	-17.7	115	0.00	9.39
36 M	ethyl tert-butyl ether	1.319	1.367	-3.6	106	0.00	9.94
37 M	ethyl acetate	0.051	0.052	-2.0	110	0.00	10.19
38 M	2,2-dichloropropane	0.543	0.516	5.0	99	0.00	10.21
39 M	cis-1,2-dichloroethene	0.421	0.423	-0.5	104	0.00	10.17
40	methyl acrylate	0.049	0.054	-10.2	108	0.00	10.26
41 M	propionitrile	0.054	0.055	-1.9	107	0.00	10.21

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7119-ICV7119
 Lab FileID: 2B159800.D

42	M	bromochloromethane	0.200	0.214	-7.0	106	0.00	10.49
43	M	tetrahydrofuran	0.041	0.045	-9.8	106	0.00	10.56
44	M	chloroform	0.445	0.441	0.9	106	0.00	10.56
45	M	t-butyl formate	0.383	0.296	22.7	74	0.00	10.64
46	S	dibromofluoromethane (s)	0.389	0.391	-0.5	102	0.00	10.77
47	M	methacrylonitrile	0.143	0.152	-6.3	110	0.00	10.43
48	M	1,1,1-trichloroethane	0.587	0.581	1.0	100	0.00	10.87
49		cyclohexane	0.482	0.626	-29.9	132	0.00	10.97
50		1,1-dichloropropene	0.496	0.498	-0.4	103	0.00	11.05
51		iso-butyl alcohol	0.015	0.017	-13.3	120	0.00	11.03
52		carbon tetrachloride	0.498	0.496	0.4	101	0.00	11.09
53		tert amyl alcohol	0.014	0.014	0.0	110	0.00	11.18
54	I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	11.70
55	S	1,2-dichloroethane-d4 (s)	0.355	0.346	2.5	100	0.00	11.21
56	M	n-butyl alcohol	0.007	0.007#	0.0	112	0.00	11.81
57		2,2,4-trimethylpentane	1.054	0.905	14.1	93	0.00	11.40
58	M	benzene	1.122	1.123	-0.1	105	0.00	11.32
59	M	tert-amyl methyl ether	0.206	0.213	-3.4	107	0.00	11.40
60	M	heptane	0.214	0.215	-0.5	106	0.00	11.56
61	M	isopropyl acetate	0.052	0.058	-11.5	109	0.00	11.26
62	M	1,2-dichloroethane	0.404	0.409	-1.2	107	0.00	11.30
63	M	trichloroethene	0.311	0.335	-7.7	107	0.00	12.06
64		ethyl acrylate	0.356	0.376	-5.6	112	0.00	12.08
65	M	2-nitropropane	0.075	0.076	-1.3	109	0.00	12.83
66	M	2-chloroethyl vinyl ether	0.188	0.208	-10.6	112	0.00	12.88
67	M	methyl methacrylate	0.067	0.073	-9.0	108	0.00	12.36
68	M	1,2-dichloropropane	0.309	0.304	1.6	101	0.00	12.32
69	M	dibromomethane	0.171	0.185	-8.2	110	0.00	12.47
70	M	methylcyclohexane	0.528	0.448	15.2	88	0.00	12.34
71	M	bromodichloromethane	0.407	0.416	-2.2	106	0.00	12.61
72		epichlorohydrin	0.030	0.029	3.3	110	0.00	12.98
73	M	cis-1,3-dichloropropene	0.503	0.542	-7.8	110	0.00	13.11
74	M	4-methyl-2-pentanone	0.106	0.111	-4.7	110	0.00	13.23
75	M	3-methyl-1-butanol	0.007	0.007#	0.0	112	0.00	13.23
76	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	15.04
77	S	toluene-d8 (s)	1.239	1.227	1.0	100	0.00	13.44
78		toluene	0.746	0.793	-6.3	108	0.00	13.52
79		trans-1,3-dichloropropene	0.469	0.489	-4.3	104	0.00	13.70
80		ethyl methacrylate	0.391	0.399	-2.0	108	0.00	13.73
81		1,1,2-trichloroethane	0.229	0.242	-5.7	110	0.00	13.92
82	M	tetrachloroethene			-----NA-----			
83	M	1,3-dichloropropane	0.456	0.501	-9.9	112	0.00	14.12
84		2-hexanone	0.102	0.108	-5.9	109	0.00	14.13
85	M	butyl acetate	0.204	0.211	-3.4	113	0.00	14.23
86	M	dibromochloromethane	0.322	0.366	-13.7	113	0.00	14.39
87	M	1,2-dibromoethane	0.296	0.329	-11.1	113	0.00	14.56
88		n-butyl ether	1.503	1.574	-4.7	107	0.00	15.03
89	M	chlorobenzene	0.842	0.894	-6.2	109	0.00	15.08
90	M	1,1,1,2-tetrachloroethane	0.316	0.350	-10.8	111	0.00	15.14
91	M	ethylbenzene	1.423	1.480	-4.0	109	0.00	15.15
92	M	m,p-xylene	0.567	0.592	-4.4	110	0.00	15.27
93	M	o-xylene	0.586	0.621	-6.0	109	0.00	15.72
94	M	styrene	0.991	1.051	-6.1	111	0.00	15.72
95	M	bromoform	0.226	0.263	-16.4	115	0.00	15.97
96		butyl acrylate	0.676	0.697	-3.1	112	0.00	15.53
97		isopropylbenzene	1.562	1.641	-5.1	108	0.00	16.09
98		cis-1,4-dichloro-2-butene	0.126	0.134	-6.3	107	0.00	16.12

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Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7119-ICV7119
 Lab FileID: 2B159800.D

99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	99	0.00	17.53
100	S	4-bromofluorobenzene (s)	0.837	0.850	-1.6	100	0.00	16.28
101	M	bromobenzene	0.728	0.798	-9.6	111	0.00	16.49
102	M	1,1,2,2-tetrachloroethane	0.626	0.686	-9.6	112	0.00	16.36
103	M	trans-1,4-dichloro-2-bute	0.165	0.203	-23.0	122	0.00	16.41
104	M	1,2,3-trichloropropane	0.164	0.188	-14.6	113	0.00	16.44
105	M	n-propylbenzene	3.005	3.205	-6.7	109	0.00	16.52
106		4-Ethyltoluene			-----NA-----			
107	M	2-chlorotoluene	0.655	0.705	-7.6	107	0.00	16.66
108	M	4-chlorotoluene	1.861	2.026	-8.9	113	0.00	16.77
109	M	1,3,5-trimethylbenzene	2.230	2.361	-5.9	109	0.00	16.68
110	M	tert-butylbenzene	0.480	0.543	-13.1	110	0.00	17.06
111	M	1,2,4-trimethylbenzene	2.276	2.481	-9.0	112	0.00	17.11
112	M	sec-butylbenzene	2.884	3.138	-8.8	108	0.00	17.29
113	M	1,3-dichlorobenzene	1.375	1.472	-7.1	111	0.00	17.47
114	M	p-isopropyltoluene	2.497	2.741	-9.8	110	0.00	17.42
115	M	1,4-dichlorobenzene	1.325	1.462	-10.3	111	0.00	17.56
116		benzyl chloride	1.301	1.154	11.3	90	0.00	17.67
117	M	1,2-dichlorobenzene	1.353	1.505	-11.2	111	0.00	17.98
118		p-Diethylbenzene			-----NA-----			
119	M	n-butylbenzene	1.198	1.356	-13.2	110	0.00	17.87
120		hexachloroethane	0.469	0.563	-20.0	112	0.00	18.30
121		1,2,4,5-Tetramethylbenzen			-----NA-----			
122	M	1,2-dibromo-3-chloropropa	0.152	0.183	-20.4	110	0.00	18.80
123		1,3,5-trichlorobenzene	1.229	1.439	-17.1	110	0.00	19.04
124		2-ethylhexyl acrylate	0.612	0.756	-23.5	114	0.00	19.71
125	M	1,2,4-trichlorobenzene	1.013	1.237	-22.1	112	0.00	19.73
126	M	hexachlorobutadiene	0.541	0.590	-9.1	104	0.00	19.88
127	M	naphthalene	1.873	2.335	-24.7	114	0.00	20.03
128	M	1,2,3-trichlorobenzene	0.871	1.061	-21.8	110	0.00	20.29
129		2-methylnaphthalene	1.002	1.037	-3.5	99	0.00	21.29

(#) = Out of Range
 2B159795.D M2B7119.M

SPCC's out = 0 CCC's out = 0
 Tue Apr 17 14:15:56 2018

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7119-ICV7119
 Lab FileID: 2B159801.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V2B7119\2B159801.D Vial: 13
 Acq On : 16 Apr 2018 10:59 pm Operator: sydney
 Sample : icv7119-50 Inst : MS2B
 Misc : MS25548,V2B7119,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2B7119.M (RTE Integrator)
 Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 Last Update : Tue Apr 17 14:06:37 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	117	0.00	8.30
2 M	tertiary butyl alcohol			NA			
3	ethanol			NA			
4 M	1,4-dioxane			NA			
5 I	pentafluorobenzene	1.000	1.000	0.0	114	0.00	10.76
6 M	chlorodifluoromethane			NA			
7 M	dichlorodifluoromethane			NA			
8	freon 114			NA			
9	freon 142b			NA			
10 M	chloromethane			NA			
11 M	vinyl chloride			NA			
12	1,3-butadiene			NA			
13 M	bromomethane			NA			
14 M	chloroethane			NA			
15 M	trichlorofluoromethane			NA			
16	vinyl bromide			NA			
17 M	ethyl ether			NA			
18 M	acrolein			NA			
19	freon 113			NA			
20 M	1,1-dichloroethene			NA			
21 M	acetone			NA			
22 M	acetonitrile	0.051	0.052	-2.0	120	0.01	8.04
23 M	iodomethane			NA			
24 M	carbon disulfide			NA			
25 M	methylene chloride			NA			
26 M	methyl acetate			NA			
27 M	methyl tert butyl ether			NA			
28 M	trans-1,2-dichloroethene			NA			
29 M	di-isopropyl ether			NA			
30 M	2-butanone			NA			
31 M	1,1-dichloroethane			NA			
32 M	chloroprene			NA			
33 M	acrylonitrile			NA			
34	hexane			NA			
35 M	vinyl acetate			NA			
36 M	ethyl tert-butyl ether			NA			
37 M	ethyl acetate			NA			
38 M	2,2-dichloropropane			NA			
39 M	cis-1,2-dichloroethene			NA			
40	methyl acrylate			NA			
41 M	propionitrile			NA			

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7119-ICV7119
 Lab FileID: 2B159801.D

42	M	bromochloromethane							-----NA-----
43	M	tetrahydrofuran							-----NA-----
44	M	chloroform							-----NA-----
45	M	t-butyl formate							-----NA-----
46	S	dibromofluoromethane (s)	0.389	0.392	-0.8	115	0.00	10.77	
47	M	methacrylonitrile							-----NA-----
48	M	1,1,1-trichloroethane							-----NA-----
49		cyclohexane							-----NA-----
50		1,1-dichloropropene							-----NA-----
51		iso-butyl alcohol							-----NA-----
52		carbon tetrachloride							-----NA-----
53		tert amyl alcohol							-----NA-----
54	I	1,4-difluorobenzene	1.000	1.000	0.0	111	0.00	11.70	
55	S	1,2-dichloroethane-d4 (s)	0.355	0.361	-1.7	114	0.00	11.21	
56	M	n-butyl alcohol							-----NA-----
57		2,2,4-trimethylpentane							-----NA-----
58	M	benzene							-----NA-----
59	M	tert-amyl methyl ether							-----NA-----
60	M	heptane							-----NA-----
61	M	isopropyl acetate							-----NA-----
62	M	1,2-dichloroethane							-----NA-----
63	M	trichloroethene							-----NA-----
64		ethyl acrylate							-----NA-----
65	M	2-nitropropane							-----NA-----
66	M	2-chloroethyl vinyl ether							-----NA-----
67	M	methyl methacrylate							-----NA-----
68	M	1,2-dichloropropane							-----NA-----
69	M	dibromomethane							-----NA-----
70	M	methylcyclohexane							-----NA-----
71	M	bromodichloromethane							-----NA-----
72		epichlorohydrin							-----NA-----
73	M	cis-1,3-dichloropropene							-----NA-----
74	M	4-methyl-2-pentanone							-----NA-----
75	M	3-methyl-1-butanol							-----NA-----
76	I	chlorobenzene-d5	1.000	1.000	0.0	108	0.00	15.04	
77	S	toluene-d8 (s)	1.239	1.250	-0.9	110	0.00	13.44	
78		toluene							-----NA-----
79		trans-1,3-dichloropropene							-----NA-----
80		ethyl methacrylate							-----NA-----
81		1,1,2-trichloroethane							-----NA-----
82	M	tetrachloroethene	0.288	0.298	-3.5	116	0.00	14.15	
83	M	1,3-dichloropropane							-----NA-----
84		2-hexanone							-----NA-----
85	M	butyl acetate							-----NA-----
86	M	dibromochloromethane							-----NA-----
87	M	1,2-dibromoethane							-----NA-----
88		n-butyl ether							-----NA-----
89	M	chlorobenzene							-----NA-----
90	M	1,1,1,2-tetrachloroethane							-----NA-----
91	M	ethylbenzene							-----NA-----
92	M	m,p-xylene							-----NA-----
93	M	o-xylene							-----NA-----
94	M	styrene							-----NA-----
95	M	bromoform							-----NA-----
96		butyl acrylate							-----NA-----
97		isopropylbenzene							-----NA-----
98		cis-1,4-dichloro-2-butene							-----NA-----

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7119-ICV7119
 Lab FileID: 2B159801.D

99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	114	0.00	17.53
100	S	4-bromofluorobenzene (s)	0.837	0.819	2.2	110	0.00	16.28
101	M	bromobenzene					-----NA-----	
102	M	1,1,2,2-tetrachloroethane					-----NA-----	
103	M	trans-1,4-dichloro-2-bute					-----NA-----	
104	M	1,2,3-trichloropropane					-----NA-----	
105	M	n-propylbenzene					-----NA-----	
106		4-Ethyltoluene					-----NA-----	
107	M	2-chlorotoluene					-----NA-----	
108	M	4-chlorotoluene					-----NA-----	
109	M	1,3,5-trimethylbenzene					-----NA-----	
110	M	tert-butylbenzene					-----NA-----	
111	M	1,2,4-trimethylbenzene					-----NA-----	
112	M	sec-butylbenzene					-----NA-----	
113	M	1,3-dichlorobenzene					-----NA-----	
114	M	p-isopropyltoluene					-----NA-----	
115	M	1,4-dichlorobenzene					-----NA-----	
116		benzyl chloride					-----NA-----	
117	M	1,2-dichlorobenzene					-----NA-----	
118		p-Diethylbenzene					-----NA-----	
119	M	n-butylbenzene					-----NA-----	
120		hexachloroethane					-----NA-----	
121		1,2,4,5-Tetramethylbenzen					-----NA-----	
122	M	1,2-dibromo-3-chloropropa					-----NA-----	
123		1,3,5-trichlorobenzene					-----NA-----	
124		2-ethylhexyl acrylate					-----NA-----	
125	M	1,2,4-trichlorobenzene					-----NA-----	
126	M	hexachlorobutadiene					-----NA-----	
127	M	naphthalene					-----NA-----	
128	M	1,2,3-trichlorobenzene					-----NA-----	
129		2-methylnaphthalene					-----NA-----	

(#) = Out of Range
 2B159795.D M2B7119.M

SPCC's out = 0 CCC's out = 0
 Tue Apr 17 14:09:22 2018

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7119-ICV7119
 Lab FileID: 2B159805.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V2B7119\2B159805.D Vial: 3
 Acq On : 17 Apr 2018 9:01 am Operator: sydney
 Sample : icv7119-50 Inst : MS2B
 Misc : MS25548,V2B7119,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2B7119.M (RTE Integrator)
 Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 Last Update : Tue Apr 17 14:06:37 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	114	0.00	8.30
2 M	tertiary butyl alcohol			-----NA-----			
3	ethanol			-----NA-----			
4 M	1,4-dioxane			-----NA-----			
5 I	pentafluorobenzene	1.000	1.000	0.0	114	0.00	10.76
6 M	chlorodifluoromethane	0.540	0.559	-3.5	113	0.01	4.52
7 M	dichlorodifluoromethane			-----NA-----			
8	freon 114			-----NA-----			
9	freon 142b			-----NA-----			
10 M	chloromethane			-----NA-----			
11 M	vinyl chloride			-----NA-----			
12	1,3-butadiene			-----NA-----			
13 M	bromomethane			-----NA-----			
14 M	chloroethane			-----NA-----			
15 M	trichlorofluoromethane			-----NA-----			
16	vinyl bromide			-----NA-----			
17 M	ethyl ether			-----NA-----			
18 M	acrolein			-----NA-----			
19	freon 113			-----NA-----			
20 M	1,1-dichloroethene			-----NA-----			
21 M	acetone			-----NA-----			
22 M	acetonitrile			-----NA-----			
23 M	iodomethane			-----NA-----			
24 M	carbon disulfide			-----NA-----			
25 M	methylene chloride			-----NA-----			
26 M	methyl acetate			-----NA-----			
27 M	methyl tert butyl ether			-----NA-----			
28 M	trans-1,2-dichloroethene			-----NA-----			
29 M	di-isopropyl ether			-----NA-----			
30 M	2-butanone			-----NA-----			
31 M	1,1-dichloroethane			-----NA-----			
32 M	chloroprene			-----NA-----			
33 M	acrylonitrile			-----NA-----			
34	hexane			-----NA-----			
35 M	vinyl acetate			-----NA-----			
36 M	ethyl tert-butyl ether			-----NA-----			
37 M	ethyl acetate			-----NA-----			
38 M	2,2-dichloropropane			-----NA-----			
39 M	cis-1,2-dichloroethene			-----NA-----			
40	methyl acrylate			-----NA-----			
41 M	propionitrile			-----NA-----			

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7119-ICV7119
 Lab FileID: 2B159805.D

42	M	bromochloromethane								
43	M	tetrahydrofuran								
44	M	chloroform								
45	M	t-butyl formate								
46	S	dibromofluoromethane (s)	0.389	0.391	-0.5	114	0.00	10.76		
47	M	methacrylonitrile								
48	M	1,1,1-trichloroethane								
49		cyclohexane								
50		1,1-dichloropropene								
51		iso-butyl alcohol								
52		carbon tetrachloride								
53		tert amyl alcohol								
54	I	1,4-difluorobenzene	1.000	1.000	0.0	110	0.00	11.70		
55	S	1,2-dichloroethane-d4 (s)	0.355	0.363	-2.3	114	0.00	11.21		
56	M	n-butyl alcohol								
57		2,2,4-trimethylpentane								
58	M	benzene								
59	M	tert-amyl methyl ether								
60	M	heptane								
61	M	isopropyl acetate								
62	M	1,2-dichloroethane								
63	M	trichloroethene								
64		ethyl acrylate								
65	M	2-nitropropane								
66	M	2-chloroethyl vinyl ether								
67	M	methyl methacrylate								
68	M	1,2-dichloropropane								
69	M	dibromomethane								
70	M	methylcyclohexane								
71	M	bromodichloromethane								
72		epichlorohydrin								
73	M	cis-1,3-dichloropropene								
74	M	4-methyl-2-pentanone								
75	M	3-methyl-1-butanol								
76	I	chlorobenzene-d5	1.000	1.000	0.0	108	0.00	15.04		
77	S	toluene-d8 (s)	1.239	1.232	0.6	109	0.00	13.44		
78		toluene								
79		trans-1,3-dichloropropene								
80		ethyl methacrylate								
81		1,1,2-trichloroethane								
82	M	tetrachloroethene								
83	M	1,3-dichloropropane								
84		2-hexanone								
85	M	butyl acetate								
86	M	dibromochloromethane								
87	M	1,2-dibromoethane								
88		n-butyl ether								
89	M	chlorobenzene								
90	M	1,1,1,2-tetrachloroethane								
91	M	ethylbenzene								
92	M	m,p-xylene								
93	M	o-xylene								
94	M	styrene								
95	M	bromoform								
96		butyl acrylate								
97		isopropylbenzene								
98		cis-1,4-dichloro-2-butene								

6.9.4
6

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7119-ICV7119
 Lab FileID: 2B159805.D

99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	111	0.00	17.54
100	S	4-bromofluorobenzene (s)	0.837	0.815	2.6	108	0.00	16.28
101	M	bromobenzene					-----NA-----	
102	M	1,1,2,2-tetrachloroethane					-----NA-----	
103	M	trans-1,4-dichloro-2-bute					-----NA-----	
104	M	1,2,3-trichloropropane					-----NA-----	
105	M	n-propylbenzene					-----NA-----	
106		4-Ethyltoluene					-----NA-----	
107	M	2-chlorotoluene					-----NA-----	
108	M	4-chlorotoluene					-----NA-----	
109	M	1,3,5-trimethylbenzene					-----NA-----	
110	M	tert-butylbenzene					-----NA-----	
111	M	1,2,4-trimethylbenzene					-----NA-----	
112	M	sec-butylbenzene					-----NA-----	
113	M	1,3-dichlorobenzene					-----NA-----	
114	M	p-isopropyltoluene					-----NA-----	
115	M	1,4-dichlorobenzene					-----NA-----	
116		benzyl chloride					-----NA-----	
117	M	1,2-dichlorobenzene					-----NA-----	
118		p-Diethylbenzene					-----NA-----	
119	M	n-butylbenzene					-----NA-----	
120		hexachloroethane					-----NA-----	
121		1,2,4,5-Tetramethylbenzen					-----NA-----	
122	M	1,2-dibromo-3-chloropropa					-----NA-----	
123		1,3,5-trichlorobenzene					-----NA-----	
124		2-ethylhexyl acrylate					-----NA-----	
125	M	1,2,4-trichlorobenzene					-----NA-----	
126	M	hexachlorobutadiene					-----NA-----	
127	M	naphthalene					-----NA-----	
128	M	1,2,3-trichlorobenzene					-----NA-----	
129		2-methylnaphthalene					-----NA-----	

(#) = Out of Range
 2B159795.D M2B7119.M

SPCC's out = 0 CCC's out = 0
 Tue Apr 17 14:09:24 2018

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7179-CC7119
 Lab FileID: 2B160758.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ke...2b7179 qcs\2b160758.d Vial: 19
 Acq On : 31 May 2018 5:45 pm Operator: deving
 Sample : CC7119-50 Inst : MS2B
 Misc : MS26754,V2B7179,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2B7119.M (RTE Integrator)
 Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 Last Update : Tue Apr 17 15:34:05 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	90	0.00	8.30
2 M	tertiary butyl alcohol	1.031	1.087	-5.4	95	0.00	8.43
3	ethanol	0.044	0.050	-13.6	100	-0.01	6.86
4 M	1,4-dioxane	0.071	0.085	-19.7	105	0.00	12.43
5 I	pentafluorobenzene	1.000	1.000	0.0	101	-0.01	10.75
6 M	chlorodifluoromethane	0.540	0.694	-28.5#	124	0.01	4.52
7 M	dichlorodifluoromethane	0.517	0.830	-60.5#	150	0.01	4.50
8	freon 114			-----NA-----			
9	freon 142b			-----NA-----			
10 M	chloromethane	0.684	0.886	-29.5#	131	0.02	4.95
11 M	vinyl chloride	0.586	0.746	-27.3#	121	0.02	5.22
12	1,3-butadiene			-----NA-----			
13 M	bromomethane	0.377	0.437	-15.9	119	0.02	5.92
14 M	chloroethane	0.316	0.384	-21.5#	120	0.02	6.10
15 M	trichlorofluoromethane	0.608	0.676	-11.2	107	0.02	6.66
16	vinyl bromide	0.355	0.540	-52.1#	146	0.01	6.50
17 M	ethyl ether	0.215	0.237	-10.2	106	0.00	7.11
18 M	acrolein	0.089	0.082	7.9	100	0.00	7.33
19	freon 113	0.276	0.302	-9.4	107	0.00	7.57
20 M	1,1-dichloroethene	0.366	0.370	-1.1	108	0.00	7.55
21 M	acetone	0.028	0.029	-3.6	103	0.00	7.57
22 M	acetonitrile	0.051	0.045	11.8	91	0.00	8.03
23 M	iodomethane	0.556	0.550	1.1	94	0.00	7.84
24 M	carbon disulfide	1.049	1.165	-11.1	110	0.00	7.99
25 M	methylene chloride	0.396	0.421	-6.3	107	0.00	8.33
26 M	methyl acetate	0.301	0.261	13.3	87	0.00	8.13
27 M	methyl tert butyl ether	1.113	0.974	12.5	89	0.00	8.76
28 M	trans-1,2-dichloroethene	0.385	0.395	-2.6	105	0.00	8.77
29 M	di-isopropyl ether	1.442	1.238	14.1	90	0.00	9.43
30 M	2-butanone	0.036	0.036	0.0	98	-0.01	10.13
31 M	1,1-dichloroethane	0.715	0.728	-1.8	102	0.00	9.38
32 M	chloroprene	0.627	0.555	11.5	92	0.00	9.52
33 M	acrylonitrile	0.123	0.122	0.8	96	0.00	8.66
34	hexane	0.278	0.306	-10.1	116	0.00	9.17
35 M	vinyl acetate	0.062	0.067	-8.1	105	0.00	9.39
36 M	ethyl tert-butyl ether	1.319	1.130	14.3	86	0.00	9.94
37 M	ethyl acetate	0.051	0.049	3.9	103	-0.01	10.18
38 M	2,2-dichloropropane	0.543	0.528	2.8	100	0.00	10.20
39 M	cis-1,2-dichloroethene	0.421	0.429	-1.9	104	0.00	10.17
40	methyl acrylate	0.049	0.048	2.0	94	0.00	10.26
41 M	propionitrile	0.054	0.052	3.7	99	0.00	10.20

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7179-CC7119
 Lab FileID: 2B160758.D

42 M	bromochloromethane	0.200	0.206	-3.0	101	0.00	10.48
43 M	tetrahydrofuran	0.041	0.041	0.0	96	0.00	10.56
44 M	chloroform	0.445	0.430	3.4	102	-0.01	10.55
45 M	t-butyl formate	0.383	0.170	55.6#	42#	0.00	10.64
46 S	dibromofluoromethane (s)	0.389	0.413	-6.2	106	-0.01	10.76
47 M	methacrylonitrile	0.143	0.138	3.5	99	-0.01	10.42
48 M	1,1,1-trichloroethane	0.587	0.556	5.3	94	0.00	10.86
49	cyclohexane	0.482	0.533	-10.6	111	0.00	10.97
50	1,1-dichloropropene	0.496	0.492	0.8	101	0.00	11.04
51	iso-butyl alcohol	0.015	0.013	13.3	89	-0.01	11.02
52	carbon tetrachloride	0.498	0.481	3.4	97	0.00	11.08
53	tert amyl alcohol	0.014	0.013	7.1	100	0.00	11.18
54 I	1,4-difluorobenzene	1.000	1.000	0.0	100	0.00	11.70
55 S	1,2-dichloroethane-d4 (s)	0.355	0.343	3.4	98	0.00	11.20
56 M	n-butyl alcohol	0.007	0.006#	14.3	96	-0.01	11.80
57	2,2,4-trimethylpentane	1.054	1.185	-12.4	120	0.00	11.39
58 M	benzene	1.122	1.129	-0.6	104	0.00	11.31
59 M	tert-amyl methyl ether	0.206	0.173	16.0	86	0.00	11.39
60 M	heptane	0.214	0.248	-15.9	120	0.00	11.56
61 M	isopropyl acetate	0.052	0.052	0.0	96	-0.01	11.25
62 M	1,2-dichloroethane	0.404	0.363	10.1	94	-0.01	11.29
63 M	trichloroethene	0.311	0.303	2.6	95	0.00	12.06
64	ethyl acrylate	0.356	0.315	11.5	93	0.00	12.07
65 M	2-nitropropane	0.075	0.060	20.0	84	-0.01	12.82
66 M	2-chloroethyl vinyl ether	0.188	0.173	8.0	92	-0.01	12.87
67 M	methyl methacrylate	0.067	0.066	1.5	96	-0.01	12.34
68 M	1,2-dichloropropane	0.309	0.310	-0.3	102	0.00	12.32
69 M	dibromomethane	0.171	0.173	-1.2	101	0.00	12.46
70 M	methylcyclohexane	0.528	0.561	-6.3	109	-0.01	12.33
71 M	bromodichloromethane	0.407	0.399	2.0	100	-0.01	12.60
72	epichlorohydrin	0.030	0.026	13.3	96	-0.01	12.98
73 M	cis-1,3-dichloropropene	0.503	0.493	2.0	98	-0.01	13.10
74 M	4-methyl-2-pentanone	0.106	0.103	2.8	101	0.00	13.22
75 M	3-methyl-1-butanol	0.007	0.007#	0.0	104	-0.01	13.22
76 I	chlorobenzene-d5	1.000	1.000	0.0	106	0.00	15.04
77 S	toluene-d8 (s)	1.239	1.185	4.4	102	0.00	13.44
78	toluene	0.746	0.682	8.6	98	0.00	13.51
79	trans-1,3-dichloropropene	0.469	0.429	8.5	97	0.00	13.69
80	ethyl methacrylate	0.391	0.355	9.2	102	0.00	13.72
81	1,1,2-trichloroethane	0.229	0.217	5.2	104	-0.01	13.91
82 M	tetrachloroethene	0.288	0.247	14.2	94	-0.01	14.14
83 M	1,3-dichloropropane	0.456	0.435	4.6	103	0.00	14.11
84	2-hexanone	0.102	0.096	5.9	102	0.00	14.12
85 M	butyl acetate	0.204	0.173	15.2	98	0.00	14.22
86 M	dibromochloromethane	0.322	0.300	6.8	98	0.00	14.39
87 M	1,2-dibromoethane	0.296	0.293	1.0	106	-0.01	14.55
88	n-butyl ether	1.503	1.316	12.4	94	0.00	15.03
89 M	chlorobenzene	0.842	0.779	7.5	101	-0.01	15.07
90 M	1,1,1,2-tetrachloroethane	0.316	0.293	7.3	98	0.00	15.13
91 M	ethylbenzene	1.423	1.284	9.8	100	0.00	15.15
92 M	m,p-xylene	0.567	0.503	11.3	98	0.00	15.27
93 M	o-xylene	0.586	0.527	10.1	98	-0.01	15.71
94 M	styrene	0.991	0.897	9.5	100	0.00	15.71
95 M	bromoform	0.226	0.216	4.4	100	0.00	15.96
96	butyl acrylate	0.676	0.561	17.0	95	0.00	15.52
97	isopropylbenzene	1.562	1.371	12.2	96	0.00	16.08
98	cis-1,4-dichloro-2-butene	0.126	0.117	7.1	99	-0.01	16.11

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7179-CC7119
 Lab FileID: 2B160758.D

99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	100	-0.01	17.52
100	S	4-bromofluorobenzene (s)	0.837	0.870	-3.9	103	-0.01	16.27
101	M	bromobenzene	0.728	0.711	2.3	99	-0.01	16.48
102	M	1,1,2,2-tetrachloroethane	0.626	0.673	-7.5	110	0.00	16.36
103	M	trans-1,4-dichloro-2-bute	0.165	0.163	1.2	98	0.00	16.41
104	M	1,2,3-trichloropropane	0.164	0.171	-4.3	103	0.00	16.44
105	M	n-propylbenzene	3.005	2.999	0.2	102	0.00	16.52
106		4-Ethyltoluene			-----NA-----			
107	M	2-chlorotoluene	0.655	0.657	-0.3	100	-0.01	16.66
108	M	4-chlorotoluene	1.861	1.820	2.2	102	0.00	16.76
109	M	1,3,5-trimethylbenzene	2.230	2.133	4.3	99	-0.01	16.68
110	M	tert-butylbenzene	0.480	0.478	0.4	97	-0.01	17.05
111	M	1,2,4-trimethylbenzene	2.276	2.192	3.7	99	-0.01	17.09
112	M	sec-butylbenzene	2.884	2.920	-1.2	101	0.00	17.29
113	M	1,3-dichlorobenzene	1.375	1.314	4.4	99	0.00	17.47
114	M	p-isopropyltoluene	2.497	2.474	0.9	100	0.00	17.41
115	M	1,4-dichlorobenzene	1.325	1.289	2.7	98	-0.01	17.55
116		benzyl chloride	1.301	1.451	-11.5	113	0.00	17.67
117	M	1,2-dichlorobenzene	1.353	1.335	1.3	99	0.00	17.98
118		p-Diethylbenzene			-----NA-----			
119	M	n-butylbenzene	1.198	1.321	-10.3	107	-0.01	17.86
120		hexachloroethane	0.469	0.512	-9.2	102	-0.01	18.29
121		1,2,4,5-Tetramethylbenzen			-----NA-----			
122	M	1,2-dibromo-3-chloropropa	0.152	0.161	-5.9	97	0.00	18.80
123		1,3,5-trichlorobenzene	1.229	1.329	-8.1	102	-0.01	19.03
124		2-ethylhexyl acrylate	0.612	0.443	27.6#	67	0.00	19.70
125	M	1,2,4-trichlorobenzene	1.013	1.174	-15.9	106	0.00	19.72
126	M	hexachlorobutadiene	0.541	0.574	-6.1	102	-0.01	19.87
127	M	naphthalene	1.873	2.182	-16.5	107	-0.01	20.02
128	M	1,2,3-trichlorobenzene	0.871	1.024	-17.6	106	-0.01	20.28
129		2-methylnaphthalene	1.002	1.104	-10.2	106	0.00	21.28
130		ethylenimine			-----NA-----			
131		bis(chloromethyl)ether			-----NA-----			

(#) = Out of Range
 2B159795.D M2B7119.M

SPCC's out = 0 CCC's out = 0
 Mon Jun 04 11:02:07 2018

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7179-CC7119
 Lab FileID: 2B160785.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\eu...18\v2b7179\2b160785.d Vial: 5
 Acq On : 1 Jun 2018 9:56 am Operator: sydney
 Sample : cc7119-20 Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2B7119.M (RTE Integrator)
 Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 Last Update : Tue Apr 17 15:34:05 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	80	-0.01	8.29
2 M	tertiary butyl alcohol	1.031	1.291	-25.2#	101	0.00	8.43
3	ethanol	0.044	0.050	-13.6	92	-0.02	6.85
4 M	1,4-dioxane	0.071	0.078	-9.9	89	0.00	12.43
5 I	pentafluorobenzene	1.000	1.000	0.0	93	-0.01	10.75
6 M	chlorodifluoromethane	0.540	0.620	-14.8	104	0.01	4.52
7 M	dichlorodifluoromethane	0.517	0.622	-20.3#	106	0.01	4.50
8	freon 114			-----NA-----			
9	freon 142b			-----NA-----			
10 M	chloromethane	0.684	0.775	-13.3	112	0.02	4.95
11 M	vinyl chloride	0.586	0.660	-12.6	102	0.01	5.21
12	1,3-butadiene			-----NA-----			
13 M	bromomethane	0.377	0.416	-10.3	106	0.03	5.93
14 M	chloroethane	0.316	0.365	-15.5	107	0.02	6.11
15 M	trichlorofluoromethane	0.608	0.642	-5.6	94	0.02	6.66
16	vinyl bromide	0.355	0.509	-43.4#	129	0.02	6.50
17 M	ethyl ether	0.215	0.251	-16.7	104	0.00	7.11
18 M	acrolein	0.089	0.091	-2.2	95	0.00	7.33
19	freon 113	0.276	0.275	0.4	87	0.00	7.57
20 M	1,1-dichloroethene	0.366	0.370	-1.1	97	0.00	7.56
21 M	acetone	0.028	0.034	-21.4#	112	0.00	7.58
22 M	acetonitrile	0.051	0.049	3.9	88	0.00	8.03
23 M	iodomethane	0.556	0.551	0.9	89	0.00	7.84
24 M	carbon disulfide	1.049	1.133	-8.0	99	0.00	7.99
25 M	methylene chloride	0.396	0.438	-10.6	104	0.00	8.33
26 M	methyl acetate	0.301	0.283	6.0	90	0.00	8.13
27 M	methyl tert butyl ether	1.113	0.998	10.3	83	0.00	8.76
28 M	trans-1,2-dichloroethene	0.385	0.396	-2.9	97	0.00	8.77
29 M	di-isopropyl ether	1.442	1.303	9.6	85	0.00	9.43
30 M	2-butanone	0.036	0.037	-2.8	96	0.00	10.13
31 M	1,1-dichloroethane	0.715	0.737	-3.1	95	0.00	9.38
32 M	chloroprene	0.627	0.537	14.4	81	0.00	9.52
33 M	acrylonitrile	0.123	0.129	-4.9	96	0.00	8.67
34	hexane	0.278	0.274	1.4	93	0.00	9.17
35 M	vinyl acetate	0.062	0.062	0.0	91	0.00	9.39
36 M	ethyl tert-butyl ether	1.319	1.128	14.5	79	0.00	9.94
37 M	ethyl acetate	0.051	0.048	5.9	80	0.00	10.18
38 M	2,2-dichloropropane	0.543	0.526	3.1	89	0.00	10.20
39 M	cis-1,2-dichloroethene	0.421	0.438	-4.0	98	0.00	10.17
40	methyl acrylate	0.049	0.049	0.0	88	0.00	10.26
41 M	propionitrile	0.054	0.057	-5.6	98	0.00	10.20

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7179-CC7119
 Lab FileID: 2B160785.D

42	M	bromochloromethane	0.200	0.213	-6.5	96	0.00	10.48
43	M	tetrahydrofuran	0.041	0.040	2.4	85	0.00	10.56
44	M	chloroform	0.445	0.439	1.3	96	-0.01	10.55
45	M	t-butyl formate	0.383	0.116	69.7#	27#	0.00	10.64
46	S	dibromofluoromethane (s)	0.389	0.416	-6.9	99	-0.01	10.76
47	M	methacrylonitrile	0.143	0.143	0.0	96	0.00	10.42
48	M	1,1,1-trichloroethane	0.587	0.538	8.3	86	0.00	10.86
49		cyclohexane	0.482	0.506	-5.0	95	0.00	10.97
50		1,1-dichloropropene	0.496	0.474	4.4	88	0.00	11.04
51		iso-butyl alcohol	0.015	0.013	13.3	85	0.00	11.02
52		carbon tetrachloride	0.498	0.466	6.4	86	0.00	11.08
53		tert amyl alcohol	0.014	0.013	7.1	91	0.00	11.18
54	I	1,4-difluorobenzene	1.000	1.000	0.0	93	0.00	11.70
55	S	1,2-dichloroethane-d4 (s)	0.355	0.353	0.6	94	0.00	11.20
56	M	n-butyl alcohol	0.007	0.006#	14.3	85	0.00	11.81
57		2,2,4-trimethylpentane	1.054	1.117	-6.0	99	0.00	11.39
58	M	benzene	1.122	1.149	-2.4	96	0.00	11.31
59	M	tert-amyl methyl ether	0.206	0.178	13.6	78	0.00	11.39
60	M	heptane	0.214	0.221	-3.3	96	0.00	11.56
61	M	isopropyl acetate	0.052	0.054	-3.8	94	0.00	11.26
62	M	1,2-dichloroethane	0.404	0.377	6.7	90	0.00	11.30
63	M	trichloroethene	0.311	0.286	8.0	85	0.00	12.06
64		ethyl acrylate	0.356	0.316	11.2	86	0.00	12.07
65	M	2-nitropropane	0.075	0.061	18.7	81	0.00	12.83
66	M	2-chloroethyl vinyl ether	0.188	0.067	64.4#	32#	0.00	12.88
67	M	methyl methacrylate	0.067	0.068	-1.5	92	0.00	12.35
68	M	1,2-dichloropropane	0.309	0.316	-2.3	96	0.00	12.32
69	M	dibromomethane	0.171	0.186	-8.8	100	0.00	12.46
70	M	methylcyclohexane	0.528	0.510	3.4	88	-0.01	12.33
71	M	bromodichloromethane	0.407	0.408	-0.2	97	-0.01	12.60
72		epichlorohydrin	0.030	0.024	20.0	82	-0.01	12.98
73	M	cis-1,3-dichloropropene	0.503	0.494	1.8	92	0.00	13.10
74	M	4-methyl-2-pentanone	0.106	0.108	-1.9	96	0.00	13.22
75	M	3-methyl-1-butanol	0.007	0.006#	14.3	91	0.00	13.23
76	I	chlorobenzene-d5	1.000	1.000	0.0	100	0.00	15.04
77	S	toluene-d8 (s)	1.239	1.195	3.6	97	0.00	13.44
78		toluene	0.746	0.673	9.8	91	0.00	13.51
79		trans-1,3-dichloropropene	0.469	0.420	10.4	91	0.00	13.69
80		ethyl methacrylate	0.391	0.350	10.5	93	0.00	13.72
81		1,1,2-trichloroethane	0.229	0.228	0.4	103	-0.01	13.91
82	M	tetrachloroethene	0.288	0.247	14.2	87	-0.01	14.14
83	M	1,3-dichloropropane	0.456	0.445	2.4	100	0.00	14.11
84		2-hexanone	0.102	0.094	7.8	92	0.00	14.13
85	M	butyl acetate	0.204	0.174	14.7	92	0.00	14.22
86	M	dibromochloromethane	0.322	0.305	5.3	96	0.00	14.39
87	M	1,2-dibromoethane	0.296	0.297	-0.3	102	0.00	14.56
88		n-butyl ether	1.503	1.239	17.6	83	0.00	15.03
89	M	chlorobenzene	0.842	0.785	6.8	95	-0.01	15.07
90	M	1,1,1,2-tetrachloroethane	0.316	0.294	7.0	93	0.00	15.13
91	M	ethylbenzene	1.423	1.294	9.1	92	0.00	15.15
92	M	m,p-xylene	0.567	0.498	12.2	89	0.00	15.26
93	M	o-xylene	0.586	0.524	10.6	90	0.00	15.71
94	M	styrene	0.991	0.885	10.7	90	0.00	15.71
95	M	bromoform	0.226	0.219	3.1	99	0.00	15.96
96		butyl acrylate	0.676	0.508	24.9#	80	0.00	15.52
97		isopropylbenzene	1.562	1.312	16.0	84	0.00	16.08
98		cis-1,4-dichloro-2-butene	0.126	0.108	14.3	84	0.00	16.11

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V2B7179-CC7119
 Lab FileID: 2B160785.D

99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	92	-0.01	17.52
100	S	4-bromofluorobenzene (s)	0.837	0.862	-3.0	96	-0.01	16.27
101	M	bromobenzene	0.728	0.713	2.1	91	0.00	16.49
102	M	1,1,2,2-tetrachloroethane	0.626	0.706	-12.8	107	0.00	16.36
103	M	trans-1,4-dichloro-2-bute	0.165	0.149	9.7	83	0.00	16.41
104	M	1,2,3-trichloropropane	0.164	0.185	-12.8	102	0.00	16.44
105	M	n-propylbenzene	3.005	3.031	-0.9	93	0.00	16.52
106		4-Ethyltoluene			-----NA-----			
107	M	2-chlorotoluene	0.655	0.658	-0.5	92	-0.01	16.66
108	M	4-chlorotoluene	1.861	1.834	1.5	92	0.00	16.76
109	M	1,3,5-trimethylbenzene	2.230	2.156	3.3	90	-0.01	16.68
110	M	tert-butylbenzene	0.480	0.442	7.9	84	0.00	17.06
111	M	1,2,4-trimethylbenzene	2.276	2.245	1.4	91	-0.01	17.09
112	M	sec-butylbenzene	2.884	2.799	2.9	89	0.00	17.29
113	M	1,3-dichlorobenzene	1.375	1.344	2.3	92	0.00	17.47
114	M	p-isopropyltoluene	2.497	2.386	4.4	88	0.00	17.41
115	M	1,4-dichlorobenzene	1.325	1.292	2.5	92	-0.01	17.55
116		benzyl chloride	1.301	1.316	-1.2	96	0.00	17.67
117	M	1,2-dichlorobenzene	1.353	1.334	1.4	91	0.00	17.98
118		p-Diethylbenzene			-----NA-----			
119	M	n-butylbenzene	1.198	1.231	-2.8	92	0.00	17.86
120		hexachloroethane	0.469	0.473	-0.9	90	-0.01	18.28
121		1,2,4,5-Tetramethylbenzen			-----NA-----			
122	M	1,2-dibromo-3-chloropropa	0.152	0.156	-2.6	92	0.00	18.80
123		1,3,5-trichlorobenzene	1.229	1.229	0.0	88	-0.01	19.03
124		2-ethylhexyl acrylate	0.612	0.106	82.7#	18#	0.00	19.70
125	M	1,2,4-trichlorobenzene	1.013	1.026	-1.3	89	0.00	19.72
126	M	hexachlorobutadiene	0.541	0.539	0.4	88	-0.01	19.87
127	M	naphthalene	1.873	1.955	-4.4	91	0.00	20.03
128	M	1,2,3-trichlorobenzene	0.871	0.935	-7.3	94	0.00	20.29
129		2-methylnaphthalene	1.002	0.637	36.4#	66	0.00	21.28
130		ethylenimine			-----NA-----			
131		bis(chloromethyl)ether			-----NA-----			

(#) = Out of Range
 2B159794.D M2B7119.M

SPCC's out = 0 CCC's out = 0
 Sun Jun 03 23:31:10 2018

Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V4B3370-ICC3370
 Lab FileID: 4B81329.D

Response Factor Report MS4B

Method : C:\MSDCHEM\1\METHODS\M4B3370.M (RTE Integrator)
 Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 Last Update : Thu Apr 26 08:33:14 2018
 Response via : Initial Calibration

Calibration Files

1 =4B81324.D 5 =4B81326.D 100 =4B81330.D 50 =4B81329.D
 20 =4B81328.D 200 =4B81331.D 10 =4B81327.D 0.5 =4B81323.D
 2 =4B81325.D =

Compound	1	5	100	50	20	200	10	0.5	2	Avg	%RSD
1) I tert butyl alcohol-d9 -----ISTD-----											
2) ethanol										0.000	-1.00
3) tertiary butyl alcohol											
	1.366	1.246	1.340	1.321	1.311	1.404	1.358		1.123	1.309	6.72
4) 1,4-dioxane											
		0.107	0.126	0.128	0.120	0.134	0.123		0.103	0.120	9.27
5) I pentafluorobenzene -----ISTD-----											
6) chlorodifluoromethane											
	1.287	1.141	1.221	1.301	1.289	1.038	1.393	1.317	1.240	1.248	8.43
7) dichlorodifluoromethane											
	1.295	1.290	1.301	1.352	1.239	0.987	1.449	1.165	1.515	1.288	11.95
8) chloromethane											
	1.696	1.544	1.392	1.468	1.402	1.320	1.639	1.755	1.858	1.564	11.77
9) vinyl chloride											
	1.548	1.406	1.322	1.382	1.407	1.202	1.534	1.690	1.727	1.469	11.65
10) 1,3-butadiene											
		0.844	0.815	0.879	0.903	0.694	0.884			0.836	9.13
11) bromomethane											
		1.068	0.865	0.956	0.994		1.087		1.365	1.056	16.23
12) chloroethane											
	0.916	0.765	0.656	0.716	0.739		0.810		0.957	0.794	13.66
13) trichlorofluoromethane											
	1.544	1.337	1.283	1.335	1.323	1.097	1.457	1.531	1.606	1.390	11.43
14) vinyl bromide											
	1.086	0.921	0.861	0.898	0.887	0.813	0.964	1.028	1.057	0.946	9.91
15) ethyl ether											
	0.326	0.277	0.296	0.310	0.306	0.291	0.310	0.220	0.274	0.290	10.73
16) 2-chloropropane											
	1.301	1.055	1.037	1.120	1.124	0.918	1.215	1.326	1.158	1.139	11.38
17) acrolein											
		0.127	0.124	0.129	0.126	0.120	0.125		0.120	0.124	2.88
18) freon 113											
	0.648	0.553	0.663	0.690	0.662	0.514	0.742	0.567	0.628	0.630	11.50
19) 1,1-dichloroethene											
	1.110	0.949	0.961	1.063	1.084	0.860	1.107	1.167	1.057	1.040	9.33
20) acetone											
	0.044	0.047	0.046	0.048	0.048	0.044	0.049		0.047	0.047	4.16
21) acetonitrile											
		0.098	0.093	0.098	0.095	0.086	0.104			0.096	6.22
22) iodomethane											
	1.251	1.058	1.145	1.209	1.181	1.137	1.229	1.216	1.117	1.171	5.30
23) carbon disulfide											

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Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V4B3370-ICC3370
 Lab FileID: 4B81329.D

24)	methylen chloride	2.438	2.006	2.133	2.303	2.261	1.990	2.387	2.450	2.151	2.235	7.84
		0.940	0.710	0.711	0.772	0.768	0.695	0.785		0.706	0.761	10.58
25)	methyl acetate	0.411	0.382	0.372	0.397	0.419	0.357	0.418		0.391	0.393	5.74
26)	methyl tert butyl ether	2.056	1.746	1.910	1.995	1.963	1.806	2.009	2.229	1.769	1.943	7.96
27)	trans-1,2-dichloroethene	0.980	0.846	0.830	0.929	0.926	0.759	0.997	1.050	0.912	0.914	9.92
28)	hexane	0.398	0.370	0.429	0.460	0.407	0.326	0.486	0.404	0.396	0.408	11.55
29)	di-isopropyl ether	2.337	2.055	2.162	2.341	2.314	2.016	2.340	2.537	2.090	2.244	7.66
30)	2-butanone	0.035	0.042	0.048	0.048	0.047	0.049	0.048		0.038	0.044	12.45
31)	1,1-dichloroethane	1.122	1.035	0.998	1.101	1.110	0.953	1.173	1.262	1.089	1.094	8.43
32)	chloroprene	0.763	0.701	0.754	0.804	0.781	0.729	0.810	0.799	0.707	0.761	5.43
33)	acrylonitrile	0.203	0.216	0.221	0.209	0.210	0.219			0.163	0.206	9.71
34)	vinyl acetate	0.057	0.073	0.074	0.069	0.076	0.070				0.070	9.80
35)	ethyl tert-butyl ether	2.090	1.856	2.093	2.196	2.106	2.014	2.129	2.299	1.867	2.072	6.92
36)	ethyl acetate	0.059	0.067	0.069	0.062	0.067	0.063				0.064	5.62
37)	2,2-dichloropropane	1.206	0.953	1.019	1.085	1.077	0.937	1.155	1.223	1.102	1.084	9.36
38)	cis-1,2-dichloroethene	0.674	0.607	0.621	0.663	0.656	0.612	0.680	0.699	0.615	0.647	5.27
39)	propionitrile	0.079	0.079	0.077	0.080	0.081	0.073	0.081	0.073	0.071	0.077	4.88
40)	methyl acrylate	0.053	0.063	0.063	0.062	0.062	0.057				0.060	6.70
41)	methacrylonitrile	0.156	0.178	0.180	0.175	0.183	0.174			0.142	0.170	8.91
42)	bromochloromethane	0.312	0.292	0.311	0.326	0.321	0.317	0.322	0.278	0.285	0.307	5.72
43)	tetrahydrofuran	0.044	0.065	0.063	0.063	0.063	0.060				0.060	12.87
44)	chloroform	1.110	0.934	0.945	1.009	0.993	0.940	1.019	1.069	0.954	0.997	6.17
45)	tert-butyl formate	0.593	0.514	0.637	0.646	0.613	0.626	0.605	0.542	0.528	0.589	8.34
46)	dibromofluoromethane (s)	0.450	0.447	0.445	0.451	0.447	0.446	0.446	0.453	0.449	0.448	0.61
47)	1,1,1-trichloroethane	1.153	0.941	1.082	1.129	1.089	1.024	1.129	1.148	1.008	1.078	6.75
48)	cyclohexane	1.500	1.133	1.081	1.105	1.075	0.908	1.138		1.130	1.134	14.61
49)	isobutyl alcohol										0.000	-1.00
50)	1,1-dichloropropene	0.670	0.607	0.606	0.656	0.656	0.596	0.708	0.706	0.627	0.648	6.49
51)	carbon tetrachloride	0.913	0.809	0.908	0.949	0.927	0.831	1.000	0.947	0.920	0.912	6.47
52)	tert-amyl alcohol	0.029	0.033	0.031	0.029	0.032	0.034				0.031	5.59
53)	isopropyl acetate											

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Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V4B3370-ICC3370
 Lab FileID: 4B81329.D

	0.080	0.094	0.093	0.090	0.097	0.094		0.091	6.61		
54) I 1,4-difluorobenzene	-----ISTD-----										
55) 1,2-dichloroethane-d4 (s)	0.336	0.340	0.309	0.320	0.327	0.296	0.335	0.329	0.333	0.325	4.42
56) n-butyl alcohol	0.011	0.012	0.013	0.013	0.012	0.015				0.013	9.88
57) 2,2,4-trimethylpentane	1.864	1.672	2.011	2.138	1.811	1.545	2.137	1.768		1.868	11.47
58) benzene	1.709	1.481	1.542	1.626	1.617	1.519	1.660	1.764	1.517	1.604	6.01
59) tert-amyl methyl ether	1.457	1.295	1.442	1.489	1.484	1.363	1.452	1.561	1.324	1.430	6.00
60) heptane	0.314	0.282	0.334	0.354	0.310	0.257	0.366	0.342	0.294	0.317	11.23
61) 1,2-dichloroethane	0.592	0.455	0.428	0.459	0.479	0.407	0.491		0.463	0.472	11.77
62) ethyl acrylate	0.359	0.340	0.413	0.403	0.394	0.391	0.391		0.292	0.373	10.82
63) trichloroethene	0.384	0.356	0.376	0.395	0.392	0.369	0.399	0.413	0.367	0.383	4.73
64) 2-chloroethyl vinyl ether	0.203	0.202	0.221	0.229	0.227	0.203	0.229	0.205	0.190	0.212	6.87
65) methyl methacrylate	0.069	0.093	0.090	0.087	0.092	0.075				0.084	11.72
66) methylcyclohexane	0.867	0.801	0.993	1.043	0.962	0.785	1.062	1.016	0.923	0.939	10.87
67) 1,2-dichloropropane	0.442	0.403	0.395	0.426	0.433	0.372	0.445	0.504	0.395	0.424	9.12
68) dibromomethane	0.227	0.234	0.235	0.245	0.246	0.230	0.242	0.235	0.220	0.235	3.64
69) bromodichloromethane	0.535	0.489	0.535	0.551	0.537	0.528	0.545	0.535	0.475	0.526	4.91
70) 2-nitropropane	0.111	0.119	0.122	0.121	0.111	0.123				0.117	4.69
71) epichlorohydrin	0.033	0.037	0.036	0.035	0.036	0.035		0.029		0.035	7.85
72) cis-1,3-dichloropropene	0.603	0.536	0.618	0.640	0.616	0.596	0.612	0.660	0.545	0.603	6.68
73) 4-methyl-2-pentanone	0.150	0.141	0.149	0.154	0.154	0.136	0.156	0.141	0.135	0.146	5.59
74) isoamyl alcohol	0.013	0.011	0.012	0.012	0.013	0.011	0.014	0.011	0.010	0.012	8.63
75) I chlorobenzene-d5	-----ISTD-----										
76) toluene-d8 (s)	1.189	1.189	1.240	1.221	1.199	1.289	1.202	1.173	1.199	1.211	2.89
77) toluene	1.003	0.874	0.983	1.006	0.978	1.024	0.986	1.020	0.918	0.977	5.10
78) ethyl methacrylate	0.383	0.391	0.484	0.478	0.453	0.500	0.434		0.351	0.434	12.42
79) trans-1,3-dichloropropene	0.501	0.479	0.541	0.550	0.529	0.547	0.532	0.497	0.460	0.515	6.25
80) 1,1,2-trichloroethane	0.293	0.271	0.303	0.303	0.301	0.312	0.299	0.276	0.262	0.291	5.91
81) tetrachloroethene	0.383	0.335	0.376	0.384	0.374	0.380	0.388	0.354	0.346	0.369	5.15
82) 2-hexanone	0.121	0.126	0.132	0.130	0.134	0.126	0.135	0.101	0.112	0.124	9.11
83) 1,3-dichloropropane											

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Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V4B3370-ICC3370
 Lab FileID: 4B81329.D

84)	butyl acetate	0.595	0.515	0.527	0.543	0.548	0.528	0.553	0.528	0.521	0.540	4.51
		0.223	0.239	0.237	0.240	0.240	0.242			0.198	0.231	6.95
85)	dibromochloromethane	0.400	0.368	0.448	0.443	0.422	0.478	0.401	0.365	0.356	0.409	10.29
86)	1,2-dibromoethane	0.395	0.347	0.411	0.402	0.387	0.432	0.382	0.394	0.356	0.389	6.69
87)	n-butyl ether	1.748	1.684	1.936	2.013	1.952	1.937	1.943	1.831	1.599	1.849	7.70
88)	chlorobenzene	1.167	1.020	1.104	1.132	1.104	1.136	1.143	1.140	1.052	1.111	4.24
89)	1,1,1,2-tetrachloroethane	0.492	0.427	0.505	0.512	0.498	0.527	0.499	0.474	0.449	0.487	6.48
90)	ethylbenzene	1.970	1.746	1.858	1.955	1.960	1.840	2.010	2.018	1.785	1.905	5.24
91)	m,p-xylene	0.760	0.686	0.745	0.769	0.755	0.761	0.776	0.758	0.684	0.744	4.62
92)	o-xylene	1.635	1.510	1.694	1.749	1.732	1.706	1.730	1.729	1.486	1.663	5.99
93)	styrene	1.117	1.117	1.234	1.278	1.273	1.251	1.256	1.152	1.012	1.188	7.78
94)	butyl acrylate	0.644	0.681	0.795	0.788	0.777	0.818	0.752		0.591	0.731	11.25
95)	isopropylbenzene	2.013	1.906	2.312	2.380	2.267	2.340	2.271	2.136	1.930	2.173	8.38
96)	bromoform	0.251	0.255	0.328	0.315	0.289	0.353	0.279	0.279	0.246	0.288	12.88
97)	cis-1,4-dichloro-2-butene	0.067	0.115	0.104	0.080	0.133	0.081				0.097	25.90
	----- Linear regression -----										0.9902	
	Response Ratio = -0.00947 + 0.12706 *A											
98)	I 1,4-dichlorobenzene-d											
99)	4-bromofluorobenzene (s)	0.718	0.714	0.750	0.758	0.732	0.721	0.715	0.710	0.716	0.726	2.35
100)	1,1,2,2-tetrachloroethane	0.841	0.763	0.881	0.885	0.842	0.829	0.827	0.834	0.734	0.826	5.98
101)	trans-1,4-dichloro-2-butene	0.089	0.146	0.135	0.111	0.149	0.111				0.124	19.30
102)	1,2,3-trichloropropane	0.186	0.200	0.215	0.212	0.212	0.200	0.211		0.201	0.204	4.79
103)	bromobenzene	0.865	0.792	0.886	0.918	0.889	0.841	0.911	0.924	0.774	0.867	6.28
104)	n-propylbenzene	3.739	3.399	3.763	4.036	3.932	3.458	4.006	3.756	3.508	3.733	6.32
105)	2-chlorotoluene	0.818	0.724	0.850	0.883	0.842	0.816	0.842	0.844	0.745	0.818	6.29
106)	4-chlorotoluene	2.186	2.037	2.157	2.294	2.231	2.084	2.239	2.232	2.065	2.169	4.13
107)	4-ethyltoluene										0.000	-1.00
108)	1,3,5-trimethylbenzene	2.670	2.472	2.957	3.090	2.987	2.774	2.948	2.759	2.519	2.797	7.71
109)	tert-butylbenzene	1.956	2.761	2.766	2.508	2.673	2.404			2.043	2.444	13.58
110)	1,2,4-trimethylbenzene	2.615	2.617	2.975	3.159	3.058	2.835	3.041	2.548	2.548	2.822	8.65
111)	sec-butylbenzene	3.428	3.334	4.320	4.405	4.129	4.016	4.048	3.402	3.443	3.836	11.22

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Initial Calibration Summary

Job Number: JC67003
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Sample: V4B3370-ICC3370
 Lab FileID: 4B81329.D

112)	p-isopropyltoluene	2.959	2.886	3.628	3.756	3.520	3.428	3.510	2.970	2.809	3.274	11.10
113)	1,3-dichlorobenzene	1.791	1.649	1.698	1.796	1.777	1.665	1.837	1.842	1.692	1.750	4.24
114)	1,4-dichlorobenzene	1.863	1.615	1.713	1.768	1.760	1.712	1.802	1.991	1.634	1.762	6.56
115)	1,2-dichlorobenzene	1.921	1.731	1.875	1.953	1.937	1.827	1.946	2.004	1.752	1.883	5.02
116)	benzyl chloride	1.638	1.480	1.722	1.732	1.654	1.702	1.630	1.653	1.401	1.624	6.87
117)	1,4-diethylbenzene										0.000	-1.00
118)	n-butylbenzene	1.490	1.510	1.840	1.925	1.868	1.772	1.881	1.504	1.478	1.696	11.50
119)	1,2,4,5-tetramethylbenzene										0.000	-1.00
120)	hexachloroethane	0.486	0.743	0.697	0.599	0.783	0.581		0.478	0.624	19.36	
121)	1,2-dibromo-3-chloropropane	0.214	0.207	0.274	0.254	0.234	0.279	0.230		0.187	0.235	13.84
122)	1,3,5-trichlorobenzene	1.941	1.762	2.154	2.206	2.118	2.060	2.091	2.041	1.810	2.020	7.55
123)	1,2,4-trichlorobenzene	1.625	1.450	1.996	2.020	1.892	1.816	1.814	1.706	1.462	1.753	11.98
124)	2-ethylhexyl acrylate	0.520	1.162	1.043	0.786	1.099	0.621				0.872	30.75
	----- Linear regression -----											
	Response Ratio = -0.01570 + 1.13300 *A											
125)	hexachlorobutadiene	0.829	0.726	0.893	0.917	0.875	0.826	0.896	0.869	0.765	0.844	7.60
126)	naphthalene	2.659	3.912	3.866	3.569	3.512	3.288				3.468	13.24
127)	1,2,3-trichlorobenzene	1.474	1.298	1.849	1.872	1.723	1.639	1.622	1.476	1.348	1.589	12.92
128)	2-methylnaphthalene	2.133	1.977	1.575	1.980	1.280					1.789	19.67

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

M4B3370.M

Thu Apr 26 08:35:58 2018

GCMS4B

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Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V4B3370-ICV3370
 Lab FileID: 4B81334.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\V4B3370\4B81334.D Vial: 15
 Acq On : 25 Apr 2018 10:03 pm Operator: HueanhT
 Sample : ICV3370-50 Inst : MS4B
 Misc : MS25764,V4B3370,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B3370.M (RTE Integrator)
 Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 Last Update : Thu Apr 26 08:33:14 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	98	0.00	6.77
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.309	1.357	-3.7	101	0.00	6.88
4	1,4-dioxane	0.120	0.135	-12.5	104	0.00	10.26
5 I	pentafluorobenzene	1.000	1.000	0.0	103	0.00	8.77
6	chlorodifluoromethane			-----NA-----			
7	dichlorodifluoromethane	1.288	1.249	3.0	95	0.00	3.90
8	chloromethane	1.564	1.469	6.1	103	0.00	4.25
9	vinyl chloride	1.469	1.306	11.1	98	0.00	4.46
10	1,3-butadiene	0.836	0.940	-12.4	111	0.00	4.47
11	bromomethane	1.056	0.963	8.8	104	0.00	4.99
12	chloroethane	0.794	0.795	-0.1	115	0.00	5.13
13	trichlorofluoromethane	1.390	1.231	11.4	95	0.00	5.53
14	vinyl bromide	0.946	0.887	6.2	102	0.00	5.43
15	ethyl ether	0.290	0.278	4.1	93	0.00	5.82
16	2-chloropropane	1.139	1.016	10.8	94	0.00	6.03
17	acrolein	0.124	0.126	-1.6	101	0.00	6.03
18	freon 113	0.630	0.632	-0.3	95	0.00	6.23
19	1,1-dichloroethene	1.040	0.859	17.4	84	0.00	6.20
20	acetone	0.047	0.046	2.1	99	0.00	6.20
21	acetonitrile			-----NA-----			
22	iodomethane	1.171	1.277	-9.1	109	0.00	6.43
23	carbon disulfide	2.235	2.297	-2.8	103	0.00	6.57
24	methylene chloride	0.761	0.705	7.4	94	0.00	6.82
25	methyl acetate	0.393	0.340	13.5	88	0.00	6.57
26	methyl tert butyl ether	1.943	1.819	6.4	94	0.00	7.12
27	trans-1,2-dichloroethene	0.914	0.806	11.8	90	0.00	7.16
28	hexane	0.408	0.377	7.6	85	0.00	7.45
29	di-isopropyl ether	2.244	2.165	3.5	96	0.00	7.64
30	2-butanone	0.044	0.048	-9.1	102	0.00	8.22
31	1,1-dichloroethane	1.094	1.023	6.5	96	0.00	7.66
32	chloroprene	0.761	0.766	-0.7	99	0.00	7.75
33	acrylonitrile	0.206	0.234	-13.6	109	0.00	7.07
34	vinyl acetate	0.070	0.074	-5.7	103	0.00	7.59
35	ethyl tert-butyl ether	2.072	2.075	-0.1	98	0.00	8.05
36	ethyl acetate	0.064	0.060	6.3	90	0.00	8.23
37	2,2-dichloropropane	1.084	1.010	6.8	96	0.00	8.34
38	cis-1,2-dichloroethene	0.647	0.662	-2.3	103	0.00	8.30
39	propionitrile	0.077	0.076	1.3	99	0.00	8.30
40	methyl acrylate	0.060	0.061	-1.7	101	0.00	8.31
41	methacrylonitrile	0.170	0.176	-3.5	101	0.00	8.47

Initial Calibration Verification

Job Number: JC67003
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 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V4B3370-ICV3370
 Lab FileID: 4B81334.D

42	bromochloromethane	0.307	0.322	-4.9	102	0.00	8.57
43	tetrahydrofuran	0.060	0.059	1.7	96	0.00	8.58
44	chloroform	0.997	0.995	0.2	102	0.00	8.64
45	tert-butyl formate	0.589	0.442	25.0	71	0.00	8.68
46 S	dibromofluoromethane (s)	0.448	0.435	2.9	100	0.00	8.82
47	1,1,1-trichloroethane	1.078	1.062	1.5	97	0.00	8.90
48	cyclohexane	1.134	1.089	4.0	102	0.00	9.01
49	isobutyl alcohol			-----NA-----			
50	1,1-dichloropropene	0.648	0.642	0.9	101	0.00	9.04
51	carbon tetrachloride	0.912	0.888	2.6	97	0.00	9.08
52	tert-amyl alcohol	0.031	0.032	-3.2	107	-0.01	9.14
53	isopropyl acetate	0.091	0.091	0.0	102	0.00	9.16
54 I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	9.64
55 S	1,2-dichloroethane-d4 (s)	0.325	0.304	6.5	96	0.00	9.21
56	n-butyl alcohol	0.013	0.013	0.0	101	0.00	9.67
57	2,2,4-trimethylpentane	1.868	1.929	-3.3	91	0.00	9.35
58	benzene	1.604	1.650	-2.9	103	0.00	9.27
59	tert-amyl methyl ether	1.430	1.474	-3.1	100	0.00	9.34
60	heptane	0.317	0.352	-11.0	101	0.00	9.49
61	1,2-dichloroethane	0.472	0.450	4.7	99	0.00	9.29
62	ethyl acrylate	0.373	0.416	-11.5	105	0.00	9.91
63	trichloroethene	0.383	0.415	-8.4	106	0.00	9.94
64	2-chloroethyl vinyl ether	0.212	0.229	-8.0	101	0.00	10.70
65	methyl methacrylate	0.084	0.092	-9.5	103	0.00	10.17
66	methylcyclohexane	0.939	0.956	-1.8	93	0.00	10.24
67	1,2-dichloropropane	0.424	0.418	1.4	99	0.00	10.22
68	dibromomethane	0.235	0.251	-6.8	104	0.00	10.33
69	bromodichloromethane	0.526	0.537	-2.1	99	0.00	10.47
70	2-nitropropane	0.117	0.123	-5.1	102	0.00	10.67
71	epichlorohydrin	0.035	0.036	-2.9	101	0.00	10.79
72	cis-1,3-dichloropropene	0.603	0.644	-6.8	102	0.00	10.92
73	4-methyl-2-pentanone	0.146	0.151	-3.4	100	0.00	11.02
74	isoamyl alcohol	0.012	0.013	-8.3	103	0.00	11.01
75 I	chlorobenzene-d5	1.000	1.000	0.0	100	0.00	12.83
76 S	toluene-d8 (s)	1.211	1.210	0.1	99	0.00	11.24
77	toluene	0.977	1.057	-8.2	105	0.00	11.31
78	ethyl methacrylate	0.434	0.469	-8.1	98	0.00	11.48
79	trans-1,3-dichloropropene	0.515	0.528	-2.5	96	0.00	11.50
80	1,1,2-trichloroethane	0.291	0.311	-6.9	103	0.00	11.73
81	tetrachloroethene			-----NA-----			
82	2-hexanone	0.124	0.133	-7.3	102	0.00	11.90
83	1,3-dichloropropane	0.540	0.557	-3.1	103	0.00	11.92
84	butyl acetate	0.231	0.247	-6.9	104	0.00	11.97
85	dibromochloromethane	0.409	0.449	-9.8	101	0.00	12.19
86	1,2-dibromoethane	0.389	0.417	-7.2	104	0.00	12.36
87	n-butyl ether	1.849	2.020	-9.2	101	0.00	12.81
88	chlorobenzene	1.111	1.191	-7.2	105	0.00	12.86
89	1,1,1,2-tetrachloroethane	0.487	0.542	-11.3	106	0.00	12.94
90	ethylbenzene	1.905	2.050	-7.6	105	0.00	12.93
91	m,p-xylene	0.744	0.811	-9.0	106	0.00	13.06
92	o-xylene	1.663	1.823	-9.6	105	0.00	13.50
93	styrene	1.188	1.358	-14.3	106	0.00	13.51
94	butyl acrylate	0.731	0.799	-9.3	102	0.00	13.30
95	isopropylbenzene	2.173	2.499	-15.0	105	0.00	13.88
96	bromoform	0.288	0.321	-11.5	102	0.00	13.77
97	cis-1,4-dichloro-2-butene	50.000	42.019	16.0	94	0.00	13.92

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V4B3370-ICV3370
 Lab FileID: 4B81334.D

		AvgRF	CCRF	% Dev			
98 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	15.40
99 S	4-bromofluorobenzene (s)	0.726	0.739	-1.8	99	0.00	14.10
100	1,1,2,2-tetrachloroethane	0.826	0.886	-7.3	101	0.00	14.19
101	trans-1,4-dichloro-2-bute	0.124	0.140	-12.9	105	0.00	14.22
102	1,2,3-trichloropropane	0.204	0.218	-6.9	104	0.00	14.29
103	bromobenzene	0.867	0.972	-12.1	107	0.00	14.31
104	n-propylbenzene	3.733	4.206	-12.7	105	0.00	14.34
105	2-chlorotoluene	0.818	0.910	-11.2	104	0.00	14.48
106	4-chlorotoluene	2.169	2.440	-12.5	108	0.00	14.61
107	4-ethyltoluene			NA			
108	1,3,5-trimethylbenzene	2.797	3.218	-15.1	105	0.00	14.51
109	tert-butylbenzene	2.444	2.937	-20.2	107	0.00	14.89
110	1,2,4-trimethylbenzene	2.822	3.342	-18.4	107	0.00	14.94
111	sec-butylbenzene	3.836	4.689	-22.2	108	0.00	15.13
112	p-isopropyltoluene	3.274	4.005	-22.3	108	0.00	15.28
113	1,3-dichlorobenzene	1.750	1.887	-7.8	106	0.00	15.33
114	1,4-dichlorobenzene	1.762	1.886	-7.0	108	0.00	15.43
115	1,2-dichlorobenzene	1.883	2.047	-8.7	106	0.00	15.84
116	benzyl chloride	1.624	1.398	13.9	82	0.00	15.53
117	1,4-diethylbenzene			NA			
118	n-butylbenzene	1.696	2.031	-19.8	107	0.00	15.73
119	1,2,4,5-tetramethylbenzen			NA			
120	hexachloroethane	0.624	0.759	-21.6	110	0.00	16.17
121	1,2-dibromo-3-chloropropa	0.235	0.261	-11.1	104	0.00	16.69
122	1,3,5-trichlorobenzene	2.020	2.315	-14.6	106	0.00	16.89
123	1,2,4-trichlorobenzene	1.753	2.114	-20.6	106	0.00	17.57
		True	Calc.	% Drift			
124	2-ethylhexyl acrylate	10.000	11.127	-11.3	115	0.00	17.58
		AvgRF	CCRF	% Dev			
125	hexachlorobutadiene	0.844	0.964	-14.2	106	0.00	17.69
126	naphthalene	3.468	4.019	-15.9	105	0.00	17.88
127	1,2,3-trichlorobenzene	1.589	1.927	-21.3	104	0.00	18.12
128	2-methylnaphthalene	1.789	1.899	-6.1	97	0.00	19.17

(#) = Out of Range
 4B81329.D M4B3370.M

SPCC's out = 0 CCC's out = 0
 Thu Apr 26 08:35:59 2018 GCMS4B

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V4B3370-ICV3370
 Lab FileID: 4B81335.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\V4B3370\4B81335.D Vial: 16
 Acq On : 25 Apr 2018 10:31 pm Operator: HueanhT
 Sample : ICV3370-50 Inst : MS4B
 Misc : MS25764,V4B3370,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B3370.M (RTE Integrator)
 Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 Last Update : Thu Apr 26 08:33:14 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	110	0.00	6.77
2	ethanol			-----NA-----			
3	tertiary butyl alcohol			-----NA-----			
4	1,4-dioxane			-----NA-----			
5 I	pentafluorobenzene	1.000	1.000	0.0	105	0.00	8.77
6	chlorodifluoromethane	1.248	1.113	10.8	90	0.00	3.91
7	dichlorodifluoromethane			-----NA-----			
8	chloromethane			-----NA-----			
9	vinyl chloride			-----NA-----			
10	1,3-butadiene			-----NA-----			
11	bromomethane			-----NA-----			
12	chloroethane			-----NA-----			
13	trichlorofluoromethane			-----NA-----			
14	vinyl bromide			-----NA-----			
15	ethyl ether			-----NA-----			
16	2-chloropropane			-----NA-----			
17	acrolein			-----NA-----			
18	freon 113			-----NA-----			
19	1,1-dichloroethene			-----NA-----			
20	acetone			-----NA-----			
21	acetonitrile	0.096	0.101	-5.2	108	0.00	6.57
22	iodomethane			-----NA-----			
23	carbon disulfide			-----NA-----			
24	methylene chloride			-----NA-----			
25	methyl acetate			-----NA-----			
26	methyl tert butyl ether			-----NA-----			
27	trans-1,2-dichloroethene			-----NA-----			
28	hexane			-----NA-----			
29	di-isopropyl ether			-----NA-----			
30	2-butanone			-----NA-----			
31	1,1-dichloroethane			-----NA-----			
32	chloroprene			-----NA-----			
33	acrylonitrile			-----NA-----			
34	vinyl acetate			-----NA-----			
35	ethyl tert butyl ether			-----NA-----			
36	ethyl acetate			-----NA-----			
37	2,2-dichloropropane			-----NA-----			
38	cis-1,2-dichloroethene			-----NA-----			
39	propionitrile			-----NA-----			
40	methyl acrylate			-----NA-----			
41	methacrylonitrile			-----NA-----			

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V4B3370-ICV3370
 Lab FileID: 4B81335.D

42	bromochloromethane							
43	tetrahydrofuran							
44	chloroform							
45	tert-butyl formate							
46 S	dibromofluoromethane (s)	0.448	0.430	4.0	100	0.00	8.82	
47	1,1,1-trichloroethane							
48	cyclohexane							
49	isobutyl alcohol							
50	1,1-dichloropropene							
51	carbon tetrachloride							
52	tert-amyl alcohol							
53	isopropyl acetate							
54 I	1,4-difluorobenzene	1.000	1.000	0.0	104	0.00	9.65	
55 S	1,2-dichloroethane-d4 (s)	0.325	0.310	4.6	101	0.00	9.21	
56	n-butyl alcohol							
57	2,2,4-trimethylpentane							
58	benzene							
59	tert-amyl methyl ether							
60	heptane							
61	1,2-dichloroethane							
62	ethyl acrylate							
63	trichloroethene							
64	2-chloroethyl vinyl ether							
65	methyl methacrylate							
66	methylcyclohexane							
67	1,2-dichloropropane							
68	dibromomethane							
69	bromodichloromethane							
70	2-nitropropane							
71	epichlorohydrin							
72	cis-1,3-dichloropropene							
73	4-methyl-2-pentanone							
74	isoamyl alcohol							
75 I	chlorobenzene-d5	1.000	1.000	0.0	104	0.00	12.83	
76 S	toluene-d8 (s)	1.211	1.180	2.6	101	0.00	11.24	
77	toluene							
78	ethyl methacrylate							
79	trans-1,3-dichloropropene							
80	1,1,2-trichloroethane							
81	tetrachloroethene	0.369	0.390	-5.7	106	0.00	11.89	
82	2-hexanone							
83	1,3-dichloropropane							
84	butyl acetate							
85	dibromochloromethane							
86	1,2-dibromoethane							
87	n-butyl ether							
88	chlorobenzene							
89	1,1,1,2-tetrachloroethane							
90	ethylbenzene							
91	m,p-xylene							
92	o-xylene							
93	styrene							
94	butyl acrylate							
95	isopropylbenzene							
96	bromoform							
97	cis-1,4-dichloro-2-butene	True	Calc.	% Drift				

6.9.9
6

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V4B3370-ICV3370
 Lab FileID: 4B81335.D

		AvgRF	CCRF	% Dev			
98 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	110	0.00	15.40
99 S	4-bromofluorobenzene (s)	0.726	0.699	3.7	102	0.00	14.10
100	1,1,2,2-tetrachloroethane			NA			
101	trans-1,4-dichloro-2-bute			NA			
102	1,2,3-trichloropropane			NA			
103	bromobenzene			NA			
104	n-propylbenzene			NA			
105	2-chlorotoluene			NA			
106	4-chlorotoluene			NA			
107	4-ethyltoluene			NA			
108	1,3,5-trimethylbenzene			NA			
109	tert-butylbenzene			NA			
110	1,2,4-trimethylbenzene			NA			
111	sec-butylbenzene			NA			
112	p-isopropyltoluene			NA			
113	1,3-dichlorobenzene			NA			
114	1,4-dichlorobenzene			NA			
115	1,2-dichlorobenzene			NA			
116	benzyl chloride			NA			
117	1,4-diethylbenzene			NA			
118	n-butylbenzene			NA			
119	1,2,4,5-tetramethylbenzen			NA			
120	hexachloroethane			NA			
121	1,2-dibromo-3-chloropropa			NA			
122	1,3,5-trichlorobenzene			NA			
123	1,2,4-trichlorobenzene			NA			
----- True Calc. % Drift -----							
124	2-ethylhexyl acrylate			NA			
----- AvgRF CCRF % Dev -----							
125	hexachlorobutadiene			NA			
126	naphthalene			NA			
127	1,2,3-trichlorobenzene			NA			
128	2-methylnaphthalene			NA			

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 4B81329.D M4B3370.M Thu Apr 26 08:35:59 2018 GCMS4B

6.9.9

6

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V4B3421-CC3370
 Lab FileID: 4B82368.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\eu...418\v4b3421\4b82368.d Vial: 2
 Acq On : 1 Jun 2018 9:04 am Operator: HueanHT
 Sample : cc3370-20 Inst : MS4B
 Misc : MS26771,V4B3421,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B3370.M (RTE Integrator)
 Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 Last Update : Tue May 08 14:24:00 2018
 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	83	0.00	6.78
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.309	1.282	2.1	81	-0.03	6.86
4	1,4-dioxane	0.120	0.100	16.7	69	0.00	10.26
5 I	pentafluorobenzene	1.000	1.000	0.0	83	0.00	8.77
6	chlorodifluoromethane	1.248	1.294	-3.7	84	0.00	3.91
7	dichlorodifluoromethane	1.288	1.319	-2.4	89	0.02	3.91
8	chloromethane	1.564	1.467	6.2	87	0.00	4.25
9	vinyl chloride	1.469	1.421	3.3	84	0.00	4.46
10	1,3-butadiene	0.836	1.291	-54.4#	119	0.00	4.47
11	bromomethane	1.056	1.013	4.1	85	0.01	5.01
12	chloroethane	0.794	0.792	0.3	90	0.01	5.14
13	trichlorofluoromethane	1.390	1.451	-4.4	92	0.00	5.54
14	vinyl bromide	0.946	0.929	1.8	87	0.01	5.43
15	ethyl ether	0.290	0.281	3.1	77	0.00	5.82
16	2-chloropropane	1.139	1.206	-5.9	90	0.00	6.02
17	acrolein	0.124	0.113	8.9	75	0.00	6.04
18	freon 113	0.630	0.734	-16.5	93	0.01	6.24
19	1,1-dichloroethene	1.040	1.085	-4.3	84	0.00	6.20
20	acetone	0.047	0.048	-2.1	84	-0.01	6.19
21	acetonitrile	0.096	0.097	-1.0	85	-0.01	6.57
22	iodomethane	1.171	1.161	0.9	82	0.00	6.44
23	carbon disulfide	2.235	2.204	1.4	81	0.00	6.57
24	methylene chloride	0.761	0.740	2.8	80	0.00	6.82
25	methyl acetate	0.393	0.392	0.3	78	0.01	6.58
26	methyl tert butyl ether	1.943	1.802	7.3	77	-0.01	7.11
27	trans-1,2-dichloroethene	0.914	0.913	0.1	82	0.00	7.16
28	hexane	0.408	0.394	3.4	81	0.00	7.45
29	di-isopropyl ether	2.244	2.157	3.9	78	0.00	7.64
30	2-butanone	0.044	0.043	2.3	77	0.00	8.22
31	1,1-dichloroethane	1.094	1.057	3.4	79	0.00	7.66
32	chloroprene	0.761	0.739	2.9	79	0.00	7.75
33	acrylonitrile	0.206	0.204	1.0	82	0.00	7.07
34	vinyl acetate	0.070	0.059	15.7	72	0.00	7.58
35	ethyl tert-butyl ether	2.072	1.952	5.8	77	0.00	8.05
36	ethyl acetate	0.064	0.067	-4.7	90	0.00	8.23
37	2,2-dichloropropane	1.084	1.163	-7.3	90	0.00	8.34
38	cis-1,2-dichloroethene	0.647	0.607	6.2	77	0.00	8.30
39	propionitrile	0.077	0.076	1.3	78	0.00	8.30
40	methyl acrylate	0.060	0.057	5.0	77	0.00	8.32
41	methacrylonitrile	0.170	0.152	10.6	73	0.00	8.48

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V4B3421-CC3370
 Lab FileID: 4B82368.D

42	bromochloromethane	0.307	0.313	-2.0	81	0.00	8.57
43	tetrahydrofuran	0.060	0.057	5.0	76	0.00	8.58
44	chloroform	0.997	0.960	3.7	81	0.00	8.64
45	tert-butyl formate	0.589	0.561	4.8	76	0.00	8.68
46 S	dibromofluoromethane (s)	0.448	0.467	-4.2	87	0.00	8.82
47	1,1,1-trichloroethane	1.078	1.121	-4.0	86	0.00	8.90
48	cyclohexane	1.134	0.980	13.6	76	0.00	9.01
49	isobutyl alcohol			-----NA-----			
50	1,1-dichloropropene	0.648	0.653	-0.8	83	0.00	9.04
51	carbon tetrachloride	0.912	0.997	-9.3	90	0.00	9.08
52	tert-amyl alcohol	0.031	0.030	3.2	86	0.00	9.15
53	isopropyl acetate	0.091	0.084	7.7	78	0.00	9.16
54 I	1,4-difluorobenzene	1.000	1.000	0.0	83	0.00	9.64
55 S	1,2-dichloroethane-d4 (s)	0.325	0.348	-7.1	88	0.00	9.21
56	n-butyl alcohol	0.013	0.012	7.7	76	0.00	9.67
57	2,2,4-trimethylpentane	1.868	1.851	0.9	85	0.00	9.35
58	benzene	1.604	1.517	5.4	78	0.00	9.27
59	tert-amyl methyl ether	1.430	1.365	4.5	76	0.00	9.34
60	heptane	0.317	0.299	5.7	80	0.00	9.49
61	1,2-dichloroethane	0.472	0.475	-0.6	82	0.00	9.29
62	ethyl acrylate	0.373	0.353	5.4	74	0.00	9.91
63	trichloroethene	0.383	0.378	1.3	80	0.00	9.94
64	2-chloroethyl vinyl ether	0.212	0.210	0.9	76	0.00	10.70
65	methyl methacrylate	0.084	0.070	16.7	67	0.00	10.17
66	methylcyclohexane	0.939	0.994	-5.9	86	0.00	10.24
67	1,2-dichloropropane	0.424	0.407	4.0	78	0.00	10.22
68	dibromomethane	0.235	0.238	-1.3	80	0.00	10.33
69	bromodichloromethane	0.526	0.529	-0.6	82	0.00	10.47
70	2-nitropropane	0.117	0.118	-0.9	81	0.00	10.67
71	epichlorohydrin	0.035	0.033	5.7	78	0.00	10.79
72	cis-1,3-dichloropropene	0.603	0.582	3.5	78	0.00	10.92
73	4-methyl-2-pentanone	0.146	0.147	-0.7	79	0.00	11.02
74	isoamyl alcohol	0.012	0.012	0.0	76	0.00	11.01
75 I	chlorobenzene-d5	1.000	1.000	0.0	85	0.00	12.83
76 S	toluene-d8 (s)	1.211	1.196	1.2	85	0.00	11.24
77	toluene	0.977	0.909	7.0	79	0.00	11.31
78	ethyl methacrylate	0.434	0.381	12.2	72	0.00	11.48
79	trans-1,3-dichloropropene	0.515	0.513	0.4	83	0.00	11.50
80	1,1,2-trichloroethane	0.291	0.271	6.9	77	0.00	11.73
81	tetrachloroethene	0.369	0.370	-0.3	84	0.00	11.89
82	2-hexanone	0.124	0.122	1.6	77	0.00	11.90
83	1,3-dichloropropane	0.540	0.518	4.1	81	0.00	11.92
84	butyl acetate	0.231	0.215	6.9	76	0.00	11.97
85	dibromochloromethane	0.409	0.417	-2.0	84	0.00	12.18
86	1,2-dibromoethane	0.389	0.367	5.7	81	0.00	12.36
87	n-butyl ether	1.849	1.731	6.4	76	0.00	12.81
88	chlorobenzene	1.111	1.046	5.9	81	0.00	12.86
89	1,1,1,2-tetrachloroethane	0.487	0.488	-0.2	84	0.00	12.94
90	ethylbenzene	1.905	1.785	6.3	78	0.00	12.93
91	m,p-xylene	0.744	0.714	4.0	81	0.00	13.06
92	o-xylene	1.663	1.598	3.9	79	0.00	13.50
93	styrene	1.188	1.169	1.6	78	0.00	13.51
94	butyl acrylate	0.731	0.674	7.8	74	0.00	13.31
95	isopropylbenzene	2.173	2.109	2.9	79	0.00	13.88
96	bromoform	0.288	0.299	-3.8	89	0.00	13.76
97	cis-1,4-dichloro-2-butene	20.000	25.790	-28.9#	150	0.00	13.92

6.9.10
6

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: V4B3421-CC3370
 Lab FileID: 4B82368.D

		AvgRF	CCRF	% Dev			
98 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	88	0.00	15.40
99 S	4-bromofluorobenzene (s)	0.726	0.689	5.1	83	0.00	14.10
100	1,1,2,2-tetrachloroethane	0.826	0.776	6.1	81	0.00	14.19
101	trans-1,4-dichloro-2-bute	0.124	0.157	-26.6#	124	0.00	14.22
102	1,2,3-trichloropropane	0.204	0.199	2.5	83	0.00	14.29
103	bromobenzene	0.867	0.836	3.6	83	0.00	14.31
104	n-propylbenzene	3.733	3.574	4.3	80	0.00	14.34
105	2-chlorotoluene	0.818	0.796	2.7	83	0.00	14.49
106	4-chlorotoluene	2.169	1.996	8.0	78	0.00	14.61
107	4-ethyltoluene						
108	1,3,5-trimethylbenzene	2.797	2.751	1.6	81	0.00	14.51
109	tert-butylbenzene	2.444	2.257	7.7	79	0.00	14.89
110	1,2,4-trimethylbenzene	2.822	2.786	1.3	80	0.00	14.94
111	sec-butylbenzene	3.836	3.721	3.0	79	0.00	15.13
112	p-isopropyltoluene	3.274	3.223	1.6	80	0.00	15.28
113	1,3-dichlorobenzene	1.750	1.695	3.1	84	0.00	15.32
114	1,4-dichlorobenzene	1.762	1.672	5.1	83	0.00	15.43
115	1,2-dichlorobenzene	1.883	1.809	3.9	82	0.00	15.84
116	benzyl chloride	1.624	1.548	4.7	82	0.00	15.53
117	1,4-diethylbenzene						
118	n-butylbenzene	1.696	1.619	4.5	76	0.00	15.73
119	1,2,4,5-tetramethylbenzen						
120	hexachloroethane	0.624	0.600	3.8	88	0.00	16.17
121	1,2-dibromo-3-chloropropa	0.235	0.227	3.4	85	0.00	16.69
122	1,3,5-trichlorobenzene	2.020	1.894	6.2	78	0.00	16.89
123	1,2,4-trichlorobenzene	1.753	1.616	7.8	75	0.00	17.57
124	2-ethylhexyl acrylate	4.000	2.135	46.6#	46	0.00	17.58
125	hexachlorobutadiene	0.844	0.804	4.7	81	0.00	17.69
126	naphthalene	3.468	2.838	18.2	70	0.00	17.88
127	1,2,3-trichlorobenzene	1.589	1.515	4.7	77	0.00	18.11
128	2-methylnaphthalene	1.789	0.925	48.3#	51	0.00	19.17
129	Bis(chloromethyl)ether						
130	Ethylenimine						

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 4B81328.D M4B3370.M Mon Jun 04 01:14:48 2018

6.9.10
6

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v4b3421\
 Data File : 4b82374.d
 Acq On : 1 Jun 2018 12:07 pm
 Operator : HueanhT
 Sample : JC67003-1 Inst : MS4B
 Misc : MS26780,V4B3421,5,,,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:42:53 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.770	65	116090	500.00	ug/L	0.00
5) pentafluorobenzene	8.773	168	225230	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.646	114	296372	50.00	ug/L	0.00
75) chlorobenzene-d5	12.831	117	296928	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.399	152	202630	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	107930	53.45	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	106.90%
55) 1,2-dichloroethane-d4 (s)	9.212	65	106822	55.48	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	110.96%
76) toluene-d8 (s)	11.236	98	351959	48.93	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.86%
99) 4-bromofluorobenzene (s)	14.102	95	140716	47.83	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	95.66%

Target Compounds Qvalue

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

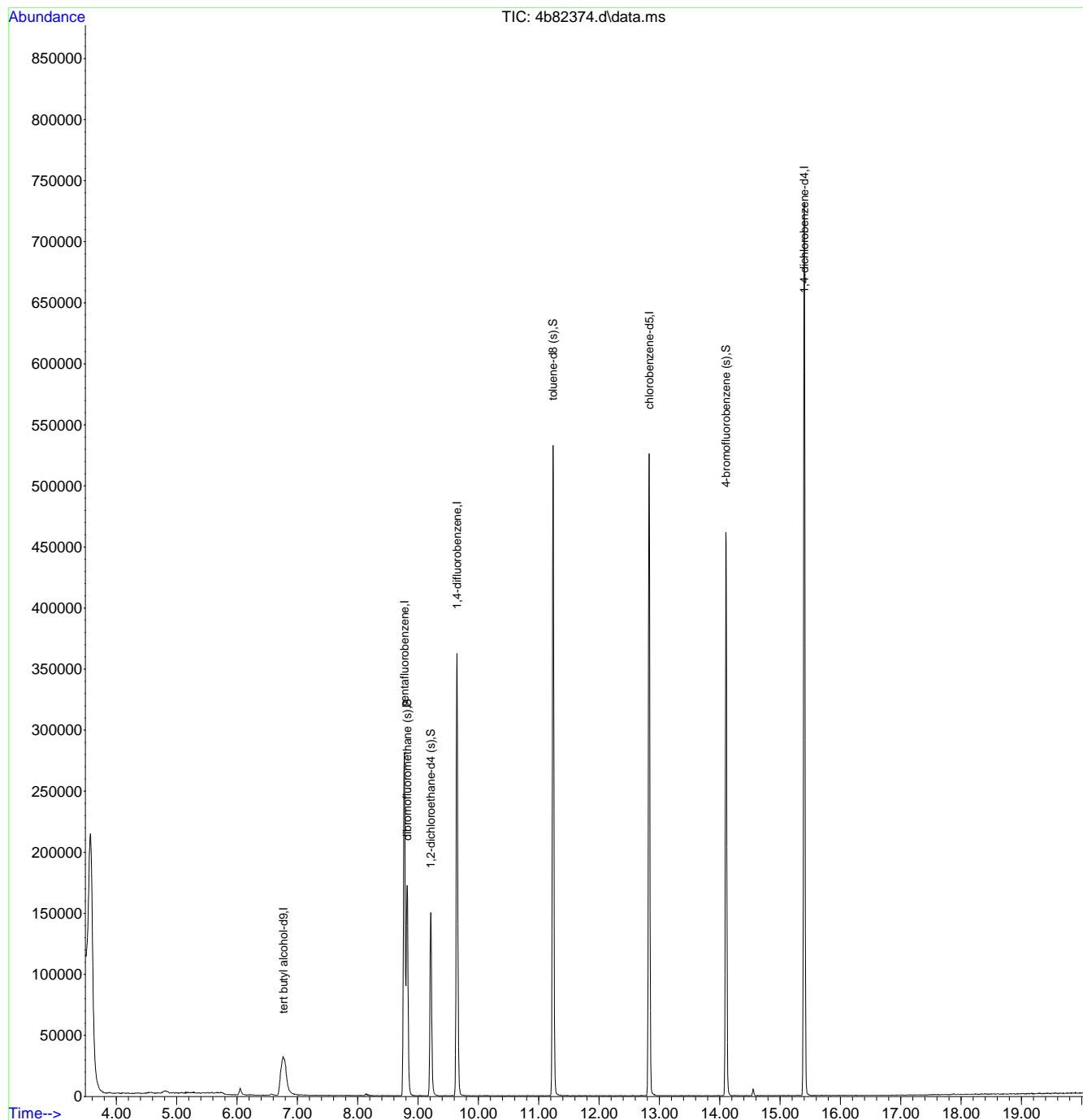
7.1.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\unicem60418\v4b3421\
 Data File : 4b82374.d
 Acq On : 1 Jun 2018 12:07 pm
 Operator : HueanHT
 Sample : JC67003-1
 Misc : MS26780,V4B3421,5,,,,,1
 ALS Vial : 8 Sample Multiplier: 1

Inst : MS4B

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:42:53 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration



7.1.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v2b7179\
 Data File : 2b160775.d
 Acq On : 1 Jun 2018 2:25 am
 Operator : deving
 Sample : jc67003-2 Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,,1
 ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 03 22:39:51 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.297	65	70086	500.00	ug/L	0.00
5) pentafluorobenzene	10.756	168	243081	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.700	114	324866	50.00	ug/L	0.00
76) chlorobenzene-d5	15.039	117	317028	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.525	152	168803	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.756	113	111502	58.89	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	117.78%
55) 1,2-dichloroethane-d4 (s)	11.201	65	123229	53.40	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	106.80%
77) toluene-d8 (s)	13.435	98	394923	50.29	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.58%
100) 4-bromofluorobenzene (s)	16.277	95	145240	51.41	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.82%
Target Compounds						
58) benzene	11.312	78	27933	3.83	ug/L	99
91) ethylbenzene	15.149	91	2081	0.23	ug/L	96
92) m,p-xylene	15.275	106	2128	0.59	ug/L	93
93) o-xylene	15.710	106	6432	1.73	ug/L	88
127) naphthalene	20.031	128	17599	2.78	ug/L	97

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

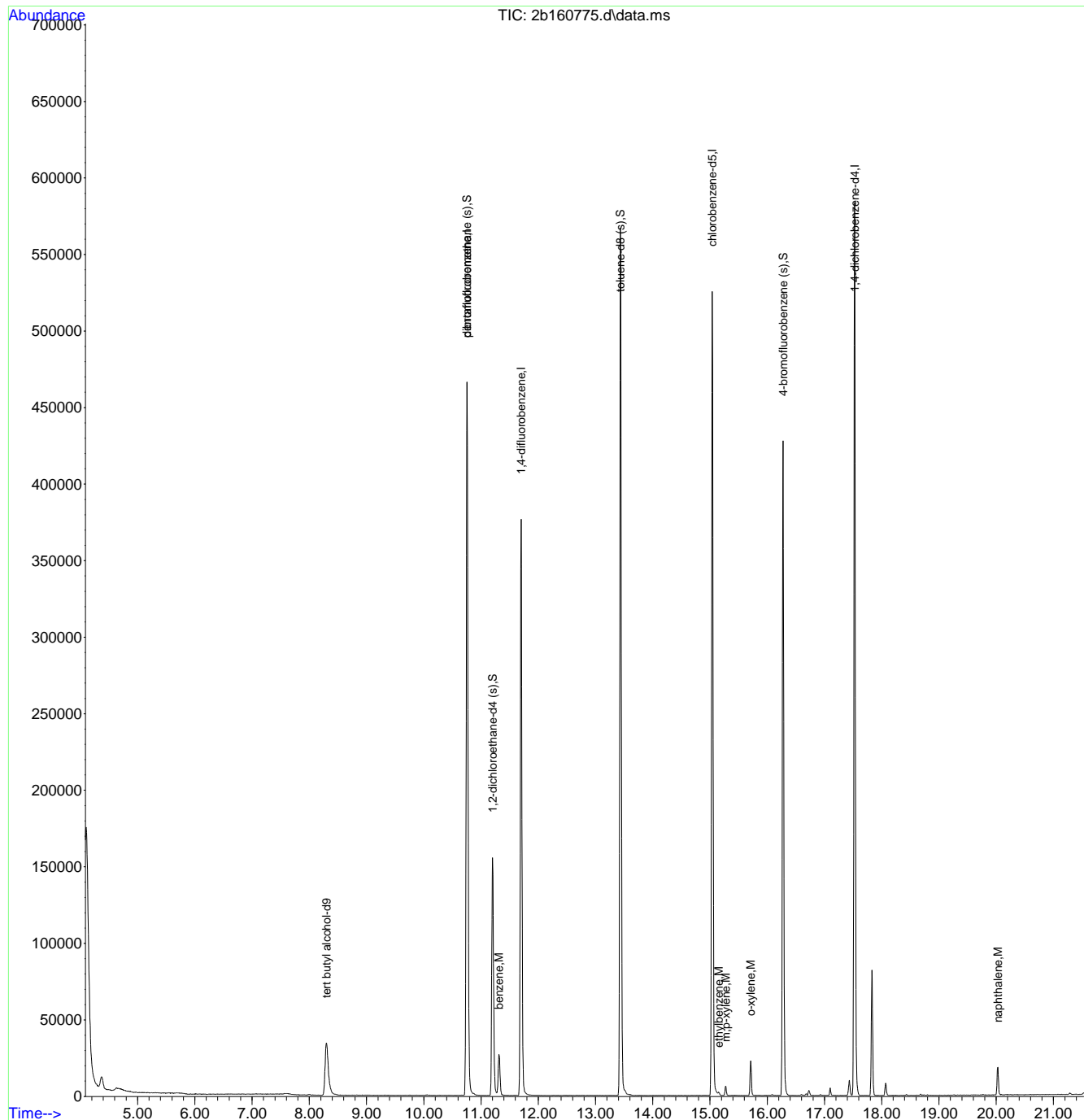
7.12
7

Quantitation Report (QT Reviewed)

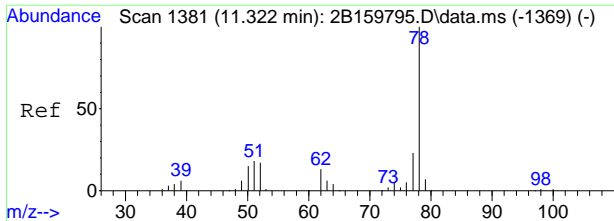
Data Path : C:\msdchem\1\data\eunicem60418\v2b7179\
 Data File : 2b160775.d
 Acq On : 1 Jun 2018 2:25 am
 Operator : deving
 Sample : jc67003-2
 Misc : MS26780,V2B7179,5,,,,,1
 ALS Vial : 36 Sample Multiplier: 1

Inst : MS2B

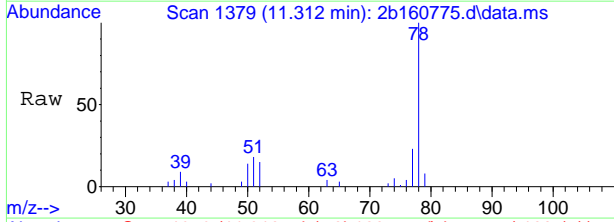
Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 03 22:39:51 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration



7.1.2
7

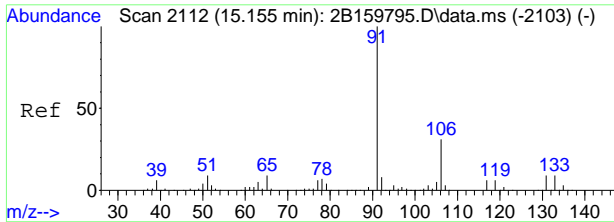
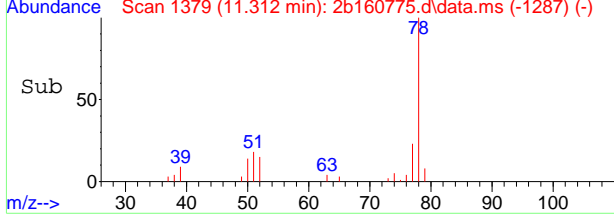
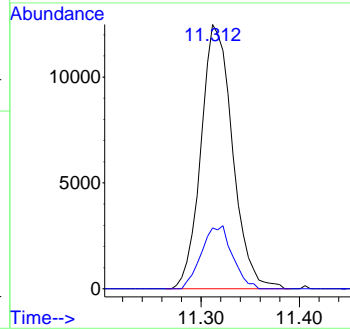


#58
benzene
Concen: 3.83 ug/L
RT: 11.312 min Scan# 1379
Delta R.T. -0.005 min
Lab File: 2b160775.d
Acq: 1 Jun 2018 2:25 am

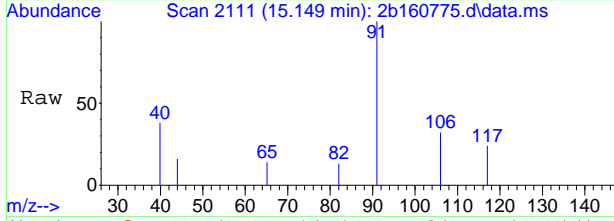


Tgt Ion: 78 Resp: 27933

Ion	Ratio	Lower	Upper
78	100		
77	23.0	0.0	53.5

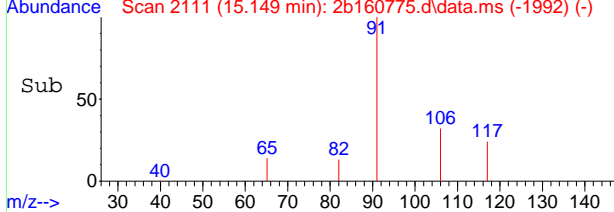
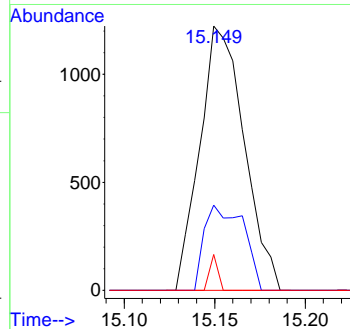


#91
ethylbenzene
Concen: 0.23 ug/L
RT: 15.149 min Scan# 2111
Delta R.T. -0.005 min
Lab File: 2b160775.d
Acq: 1 Jun 2018 2:25 am

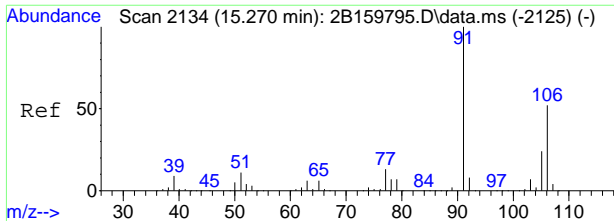


Tgt Ion: 91 Resp: 2081

Ion	Ratio	Lower	Upper
91	100		
106	32.3	1.5	61.5
65	13.6	0.0	38.9

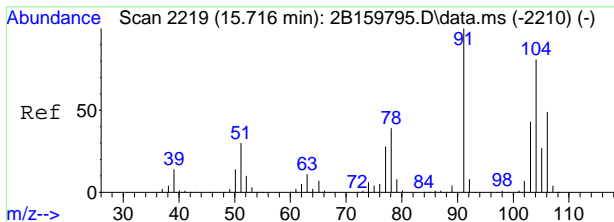
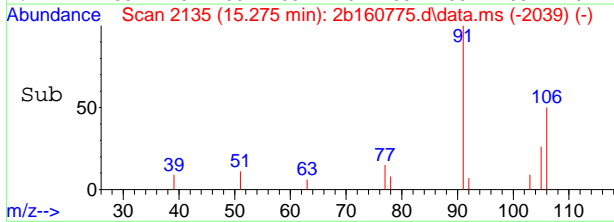
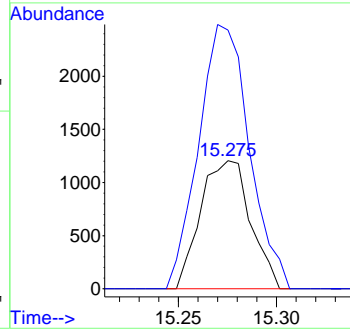
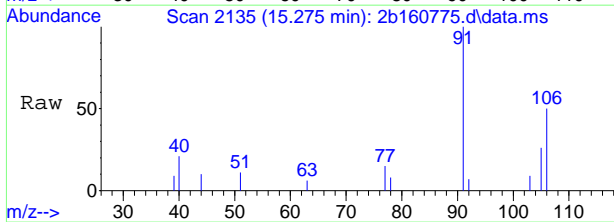


7.12
7



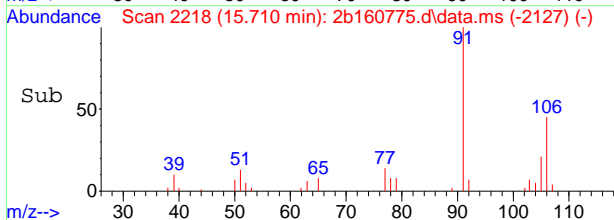
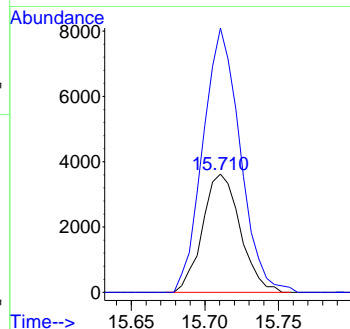
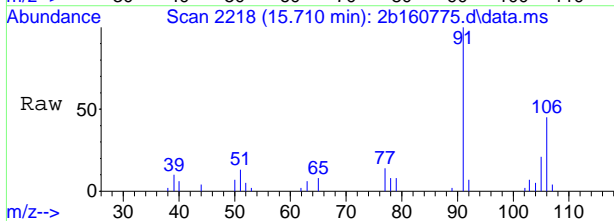
#92
 m,p-xylene
 Concen: 0.59 ug/L
 RT: 15.275 min Scan# 2135
 Delta R.T. 0.005 min
 Lab File: 2b160775.d
 Acq: 1 Jun 2018 2:25 am

Tgt Ion	Ratio	Lower	Upper
106	100		
91	201.7	162.0	222.0

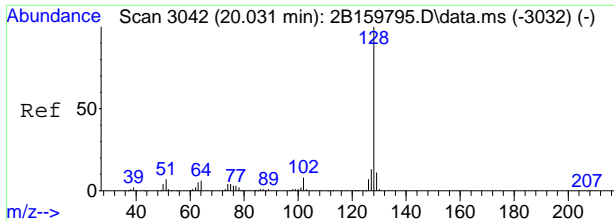


#93
 o-xylene
 Concen: 1.73 ug/L
 RT: 15.710 min Scan# 2218
 Delta R.T. -0.005 min
 Lab File: 2b160775.d
 Acq: 1 Jun 2018 2:25 am

Tgt Ion	Ratio	Lower	Upper
106	100		
91	223.4	175.5	235.5

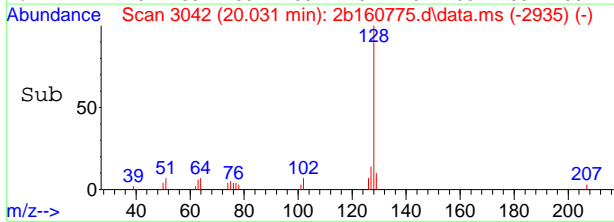
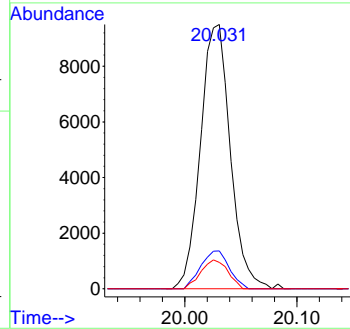
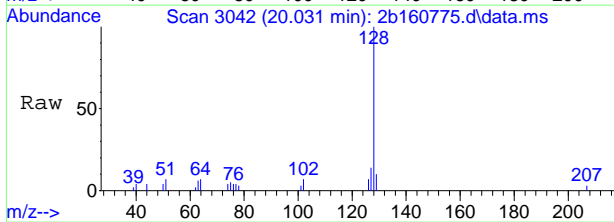


7.12
7



#127
 naphthalene
 Concen: 2.78 ug/L
 RT: 20.031 min Scan# 3042
 Delta R.T. -0.000 min
 Lab File: 2b160775.d
 Acq: 1 Jun 2018 2:25 am

Tgt Ion	Ratio	Lower	Upper
128	100		
127	14.3	0.0	42.6
129	10.0	0.0	40.9



7.12
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v2b7179\
 Data File : 2b160776.d
 Acq On : 1 Jun 2018 2:54 am
 Operator : deving
 Sample : jc67003-3 Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,,1
 ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 03 22:40:30 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.302	65	69153	500.00	ug/L	0.00
5) pentafluorobenzene	10.756	168	242272	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.700	114	323518	50.00	ug/L	0.00
76) chlorobenzene-d5	15.040	117	313135	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.525	152	162282	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.756	113	112179	59.45	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	118.90%
55) 1,2-dichloroethane-d4 (s)	11.202	65	121835	53.02	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	106.04%
77) toluene-d8 (s)	13.435	98	392663	50.62	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.24%
100) 4-bromofluorobenzene (s)	16.277	95	141075	51.94	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	103.88%

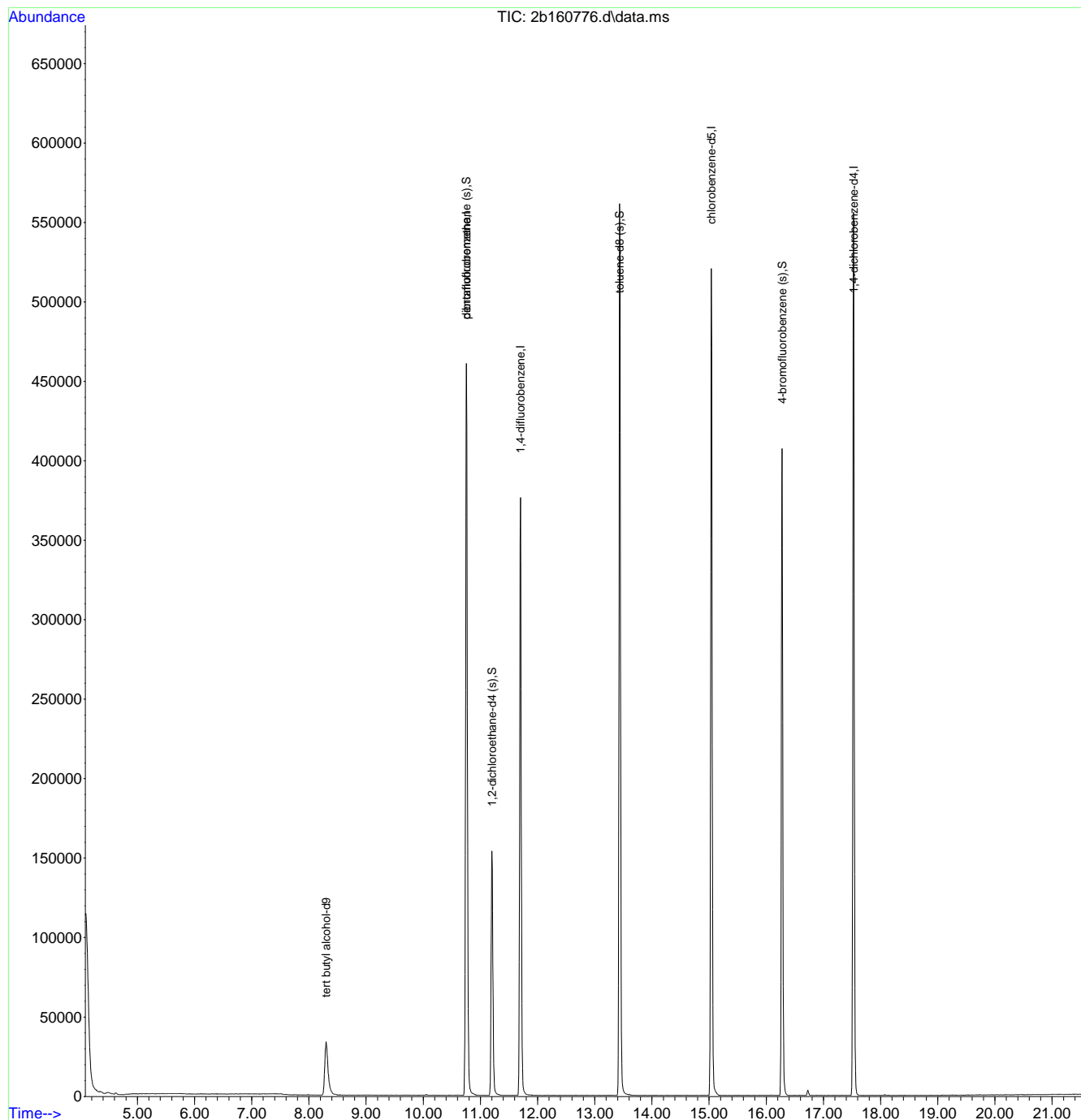
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\unicem60418\v2b7179\
Data File : 2b160776.d
Acq On : 1 Jun 2018 2:54 am
Operator : deving
Sample : jc67003-3 Inst : MS2B
Misc : MS26780,V2B7179,5,,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
Quant Results File: M2B7119.RES
Quant Time: Jun 03 22:40:30 2018
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 17 15:34:05 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v2b7179\
 Data File : 2b160777.d
 Acq On : 1 Jun 2018 3:24 am
 Operator : deving
 Sample : jc67003-7 Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,,1
 ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 03 22:40:59 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.297	65	66877	500.00	ug/L	0.00
5) pentafluorobenzene	10.756	168	243549	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.700	114	326570	50.00	ug/L	0.00
76) chlorobenzene-d5	15.040	117	316260	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.525	152	164268	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.756	113	111959	59.02	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	118.04%
55) 1,2-dichloroethane-d4 (s)	11.202	65	123575	53.27	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	106.54%
77) toluene-d8 (s)	13.435	98	394669	50.38	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.76%
100) 4-bromofluorobenzene (s)	16.277	95	142951	52.00	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	104.00%
Target Compounds						
27) methyl tert butyl ether	8.764	73	112490	20.74	ug/L	Qvalue 93

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

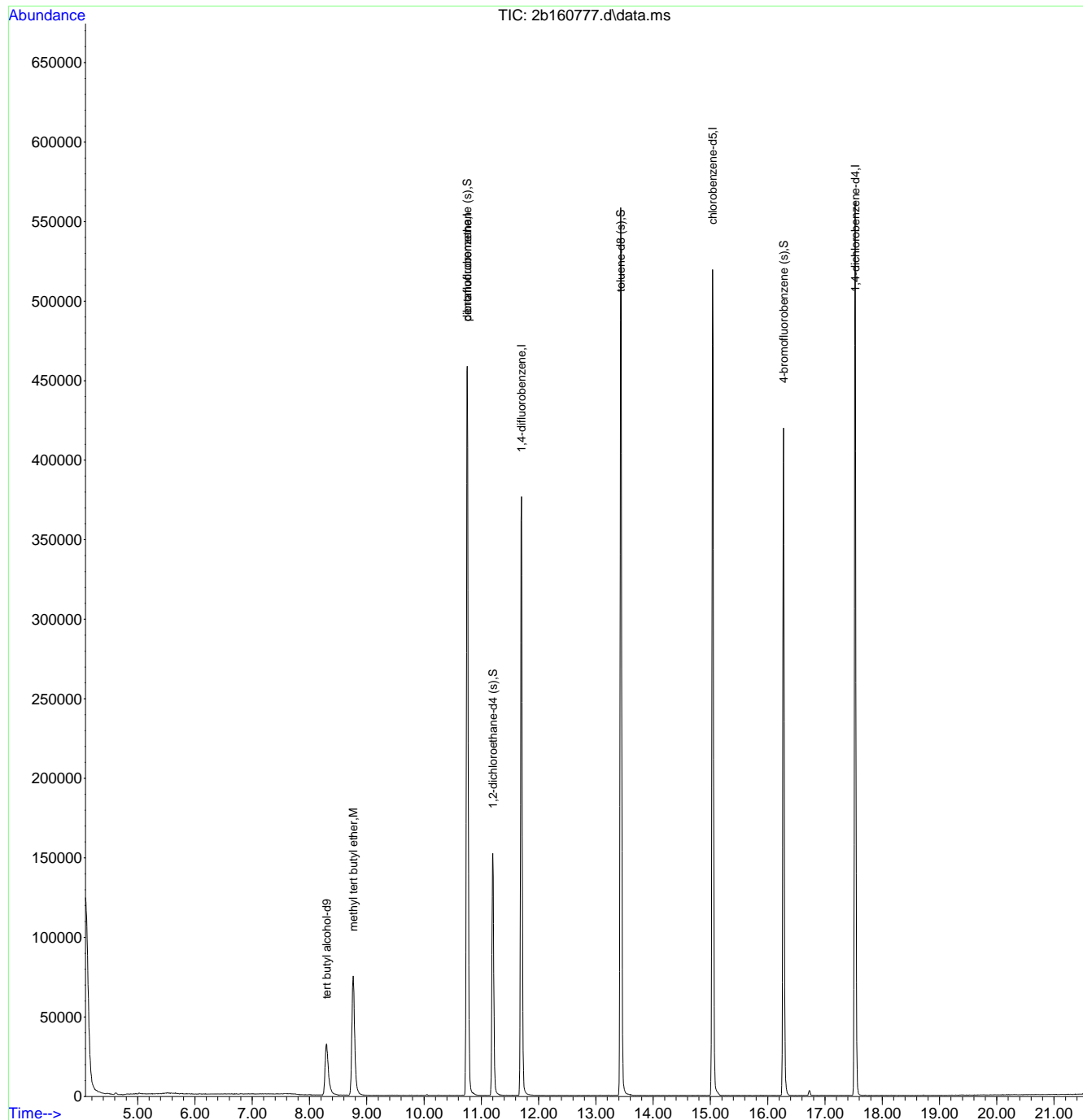
7.14
7

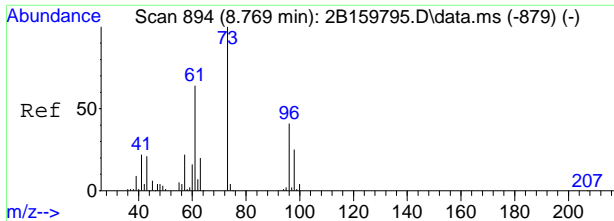
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\unicem60418\v2b7179\
Data File : 2b160777.d
Acq On : 1 Jun 2018 3:24 am
Operator : deving
Sample : jc67003-7
Misc : MS26780,V2B7179,5,,,,,1
ALS Vial : 38 Sample Multiplier: 1

Inst : MS2B

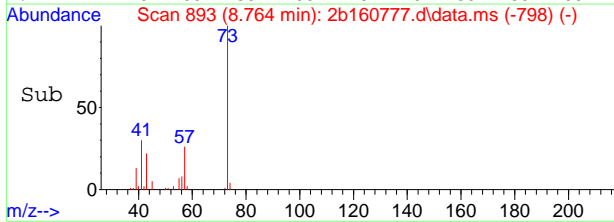
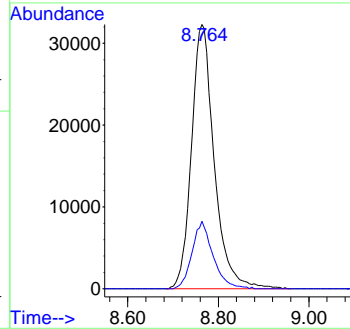
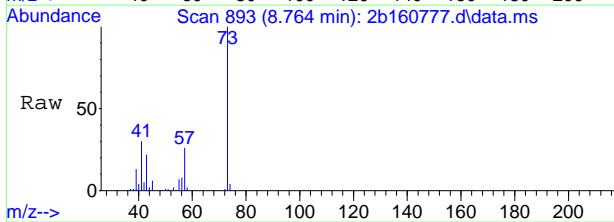
Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
Quant Results File: M2B7119.RES
Quant Time: Jun 03 22:40:59 2018
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 17 15:34:05 2018
Response via : Initial Calibration





#27
 methyl tert butyl ether
 Concen: 20.74 ug/L
 RT: 8.764 min Scan# 893
 Delta R.T. -0.000 min
 Lab File: 2b160777.d
 Acq: 1 Jun 2018 3:24 am

Tgt Ion	Resp
73	112490
57	25.5



7.14
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v2b7179\
 Data File : 2b160773.d
 Acq On : 1 Jun 2018 1:25 am
 Operator : deving
 Sample : jc67003-8 Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,,1
 ALS Vial : 34 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 03 22:38:18 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.302	65	71288	500.00	ug/L	0.00
5) pentafluorobenzene	10.756	168	244627	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.700	114	326289	50.00	ug/L	0.00
76) chlorobenzene-d5	15.039	117	319379	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.525	152	164076	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.756	113	114097	59.88	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	119.76%
55) 1,2-dichloroethane-d4 (s)	11.202	65	124011	53.51	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	107.02%
77) toluene-d8 (s)	13.435	98	394633	49.88	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.76%
100) 4-bromofluorobenzene (s)	16.277	95	142831	52.01	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	104.02%

Target Compounds Qvalue

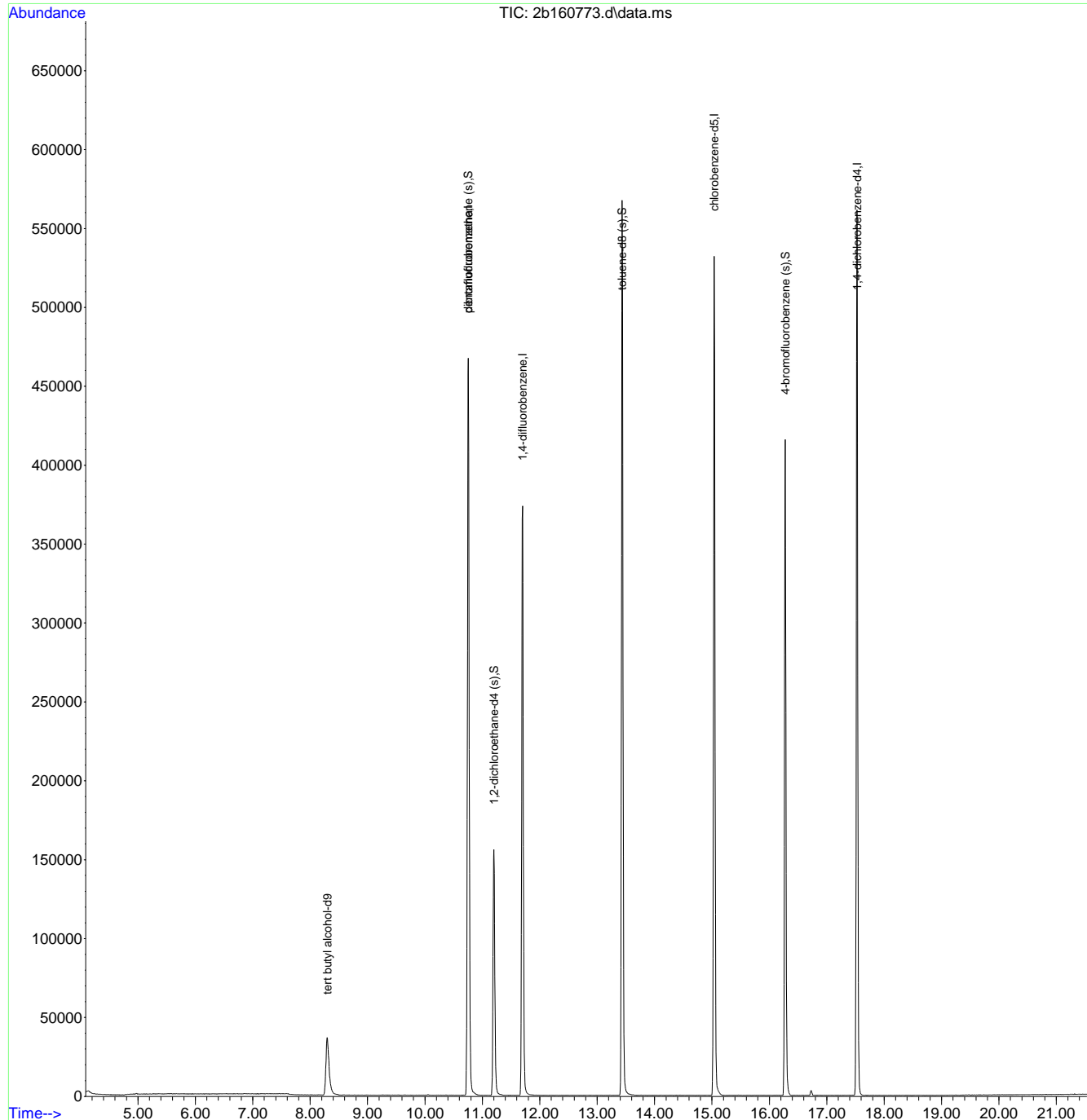
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.15
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\unicem60418\v2b7179\
 Data File : 2b160773.d
 Acq On : 1 Jun 2018 1:25 am
 Operator : deving
 Sample : jc67003-8 Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,,1
 ALS Vial : 34 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 03 22:38:18 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration



7.15
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v2b7179\
 Data File : 2b160761.d
 Acq On : 31 May 2018 7:26 pm
 Operator : deving
 Sample : mb Inst : MS2B
 Misc : MS26668,V2B7179,5,,,,,1
 ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 03 22:27:54 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) tert butyl alcohol-d9	8.302	65	80882	500.00	ug/L	0.00
5) pentafluorobenzene	10.756	168	270704	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.700	114	348164	50.00	ug/L	0.00
76) chlorobenzene-d5	15.039	117	337713	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.525	152	173166	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.756	113	116487	55.25	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	110.50%
55) 1,2-dichloroethane-d4 (s)	11.202	65	125891	50.90	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	101.80%
77) toluene-d8 (s)	13.435	98	413537	49.43	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.86%
100) 4-bromofluorobenzene (s)	16.277	95	151443	52.26	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	104.52%

Target Compounds Qvalue

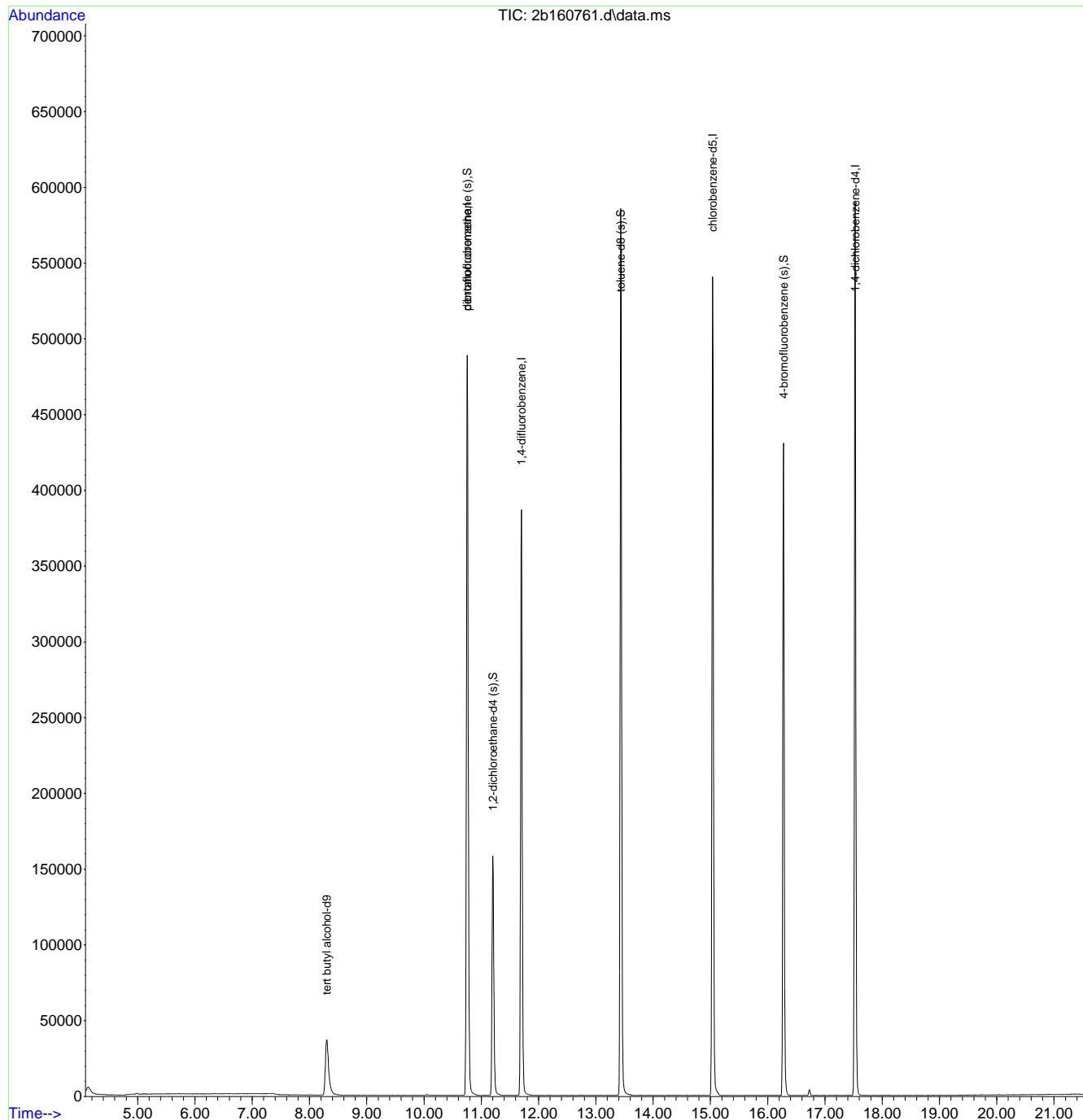
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.2.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\unicem60418\v2b7179\
Data File : 2b160761.d
Acq On : 31 May 2018 7:26 pm
Operator : deving
Sample : mb Inst : MS2B
Misc : MS26668,V2B7179,5,,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
Quant Results File: M2B7119.RES
Quant Time: Jun 03 22:27:54 2018
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 17 15:34:05 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v4b3421\
 Data File : 4b82371.d
 Acq On : 1 Jun 2018 10:34 am
 Operator : HueanHT
 Sample : MB Inst : MS4B
 Misc : MS26763,V4B3421,5,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:40:14 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.770	65	127129	500.00	ug/L	0.00
5) pentafluorobenzene	8.773	168	228529	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.646	114	301431	50.00	ug/L	0.00
75) chlorobenzene-d5	12.832	117	295589	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	202009	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	109107	53.25	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	106.50%
55) 1,2-dichloroethane-d4 (s)	9.212	65	107169	54.72	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	109.44%
76) toluene-d8 (s)	11.236	98	355086	49.59	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.18%
99) 4-bromofluorobenzene (s)	14.103	95	139254	47.48	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	94.96%
Target Compounds						
123) 1,2,4-trichlorobenzene	17.565	180	926	0.13	ug/L	64
126) naphthalene	17.879	128	2398	0.17	ug/L	77
127) 1,2,3-trichlorobenzene	18.119	180	953	0.15	ug/L	85
128) 2-methylnaphthalene	19.165	142	1123	0.16	ug/L	86

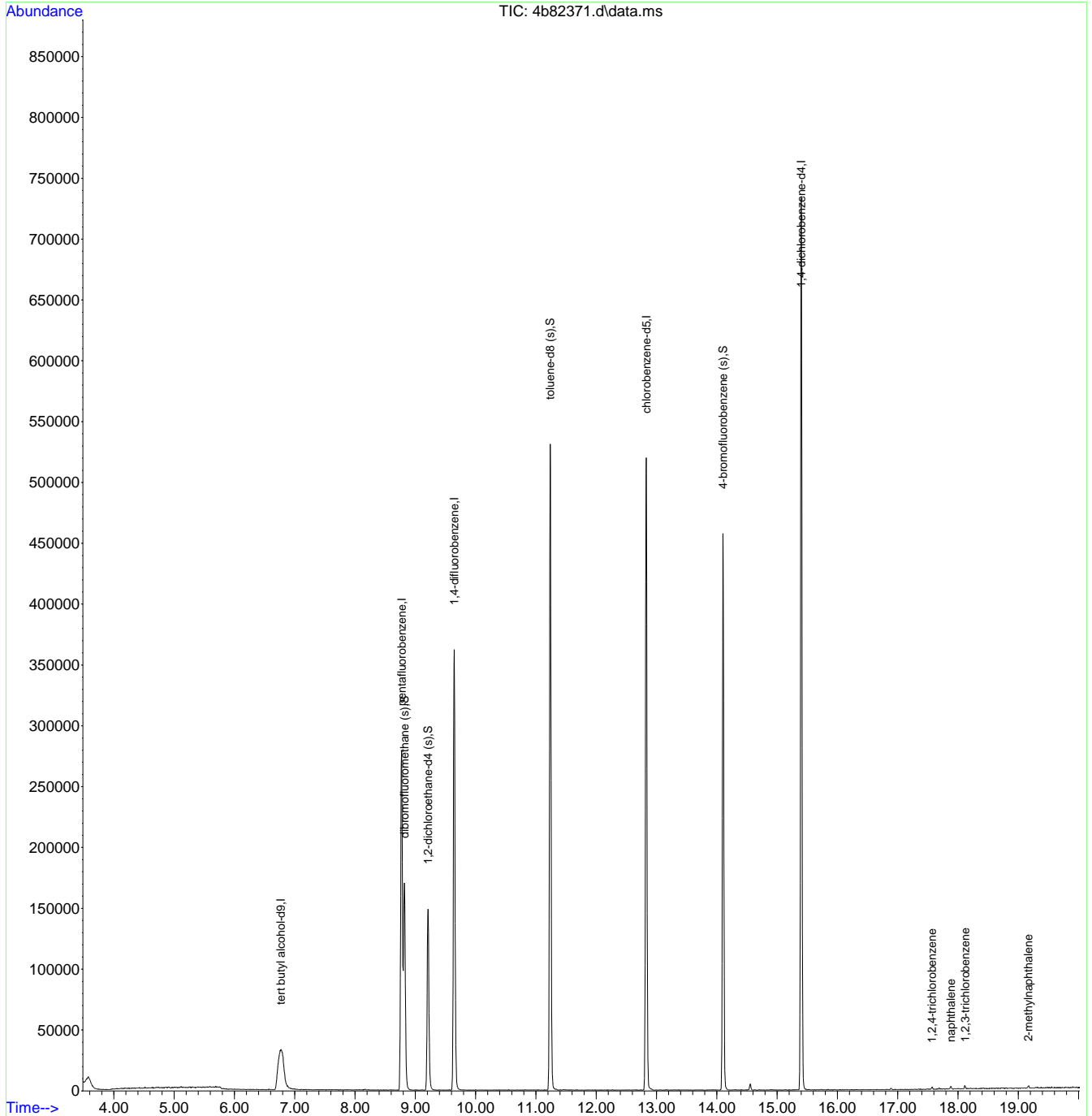
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.22
7

Quantitation Report (QT Reviewed)

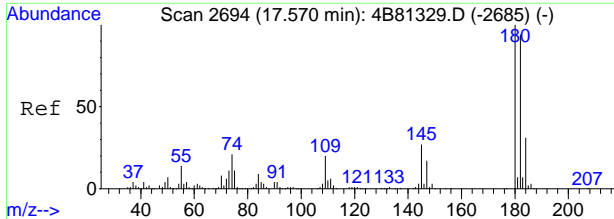
Data Path : C:\msdchem\1\data\unicem60418\v4b3421\
 Data File : 4b82371.d
 Acq On : 1 Jun 2018 10:34 am
 Operator : HueanhT
 Sample : MB Inst : MS4B
 Misc : MS26763,V4B3421,5,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:40:14 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

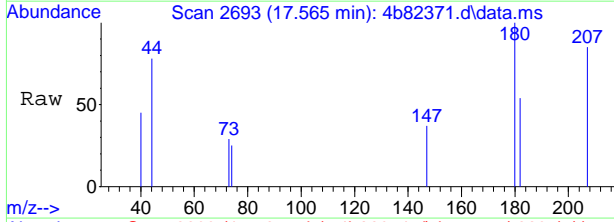


7.22
7



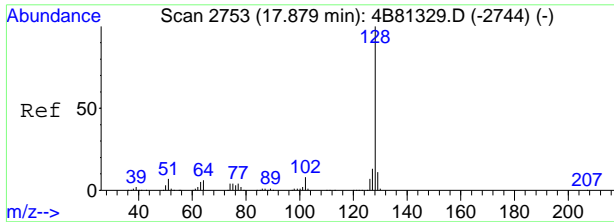
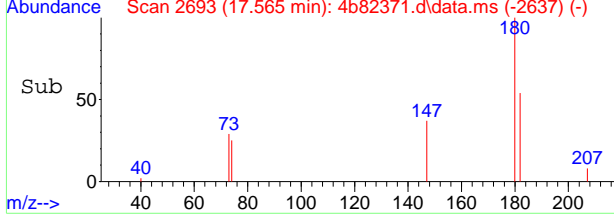
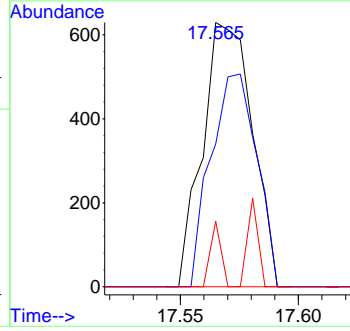


#123
 1,2,4-trichlorobenzene
 Concen: 0.13 ug/L
 RT: 17.565 min Scan# 2693
 Delta R.T. -0.005 min
 Lab File: 4b82371.d
 Acq: 1 Jun 2018 10:34 am

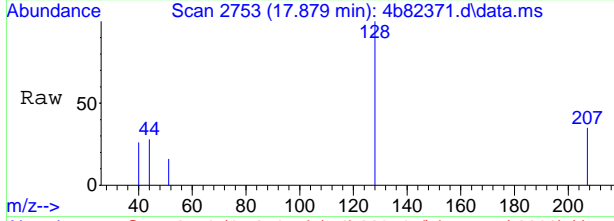


Tgt Ion:180 Resp: 926

Ion	Ratio	Lower	Upper
180	100		
182	54.0	64.4	124.4#
74	24.8	0.0	51.1

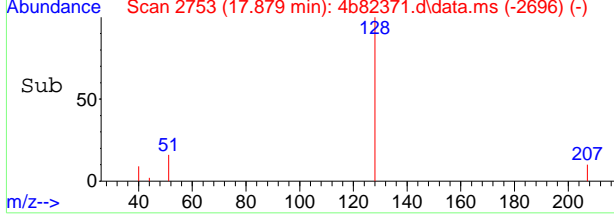
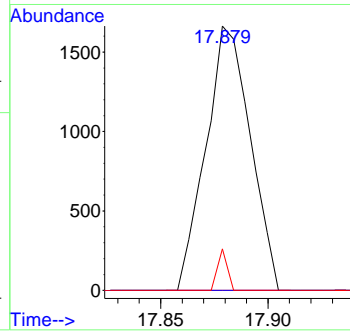


#126
 naphthalene
 Concen: 0.17 ug/L
 RT: 17.879 min Scan# 2753
 Delta R.T. 0.000 min
 Lab File: 4b82371.d
 Acq: 1 Jun 2018 10:34 am

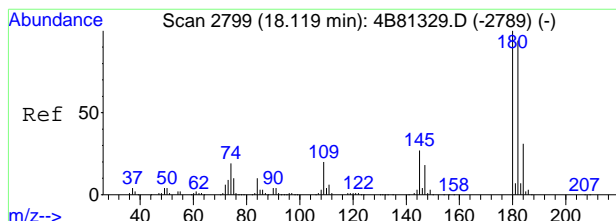


Tgt Ion:128 Resp: 2398

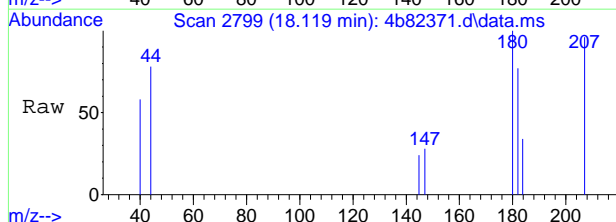
Ion	Ratio	Lower	Upper
128	100		
102	0.0	0.0	37.6
51	15.7	0.0	37.2



7.22
7

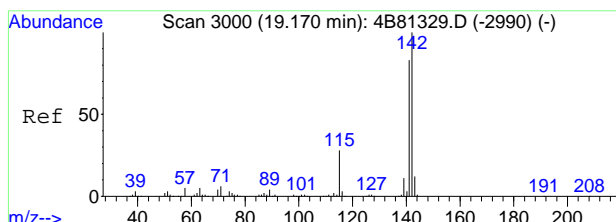
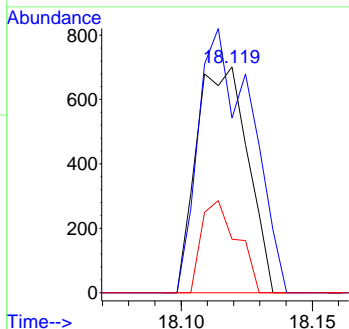
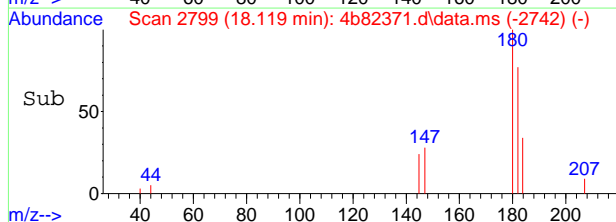


#127
 1,2,3-trichlorobenzene
 Concen: 0.15 ug/L
 RT: 18.119 min Scan# 2799
 Delta R.T. 0.000 min
 Lab File: 4b82371.d
 Acq: 1 Jun 2018 10:34 am

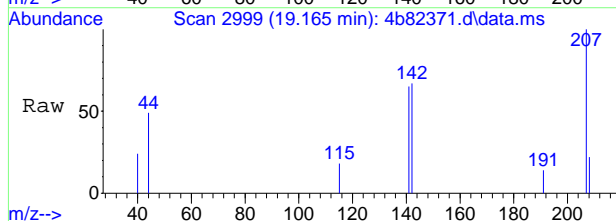


Tgt Ion:180 Resp: 953

Ion	Ratio	Lower	Upper
180	100		
182	77.3	63.9	123.9
145	23.7	0.0	56.8

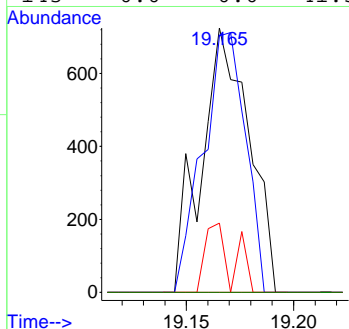
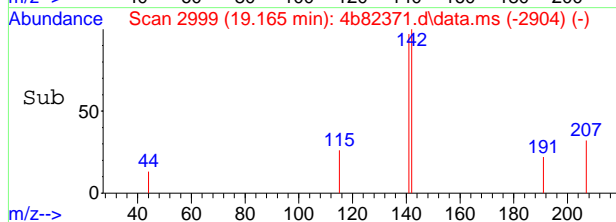


#128
 2-methylnaphthalene
 Concen: 0.16 ug/L
 RT: 19.165 min Scan# 2999
 Delta R.T. -0.005 min
 Lab File: 4b82371.d
 Acq: 1 Jun 2018 10:34 am



Tgt Ion:142 Resp: 1123

Ion	Ratio	Lower	Upper
142	100		
141	97.0	63.4	103.4
115	26.2	0.0	58.2
143	0.0	0.0	41.5



7.22
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v2b7179\
 Data File : 2b160788.d
 Acq On : 1 Jun 2018 11:46 am
 Operator : sydneyes
 Sample : mb2 Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 03 23:03:37 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.297	65	80205	500.00	ug/L	0.00
5) pentafluorobenzene	10.751	168	245321	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	11.700	114	316878	50.00	ug/L	0.00
76) chlorobenzene-d5	15.039	117	307531	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.525	152	159742	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.756	113	108228	56.64	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	113.28%
55) 1,2-dichloroethane-d4 (s)	11.202	65	116410	51.72	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	103.44%
77) toluene-d8 (s)	13.435	98	378961	49.75	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.50%
100) 4-bromofluorobenzene (s)	16.277	95	139170	52.06	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	104.12%

Target Compounds Qvalue

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

7.2.3
7

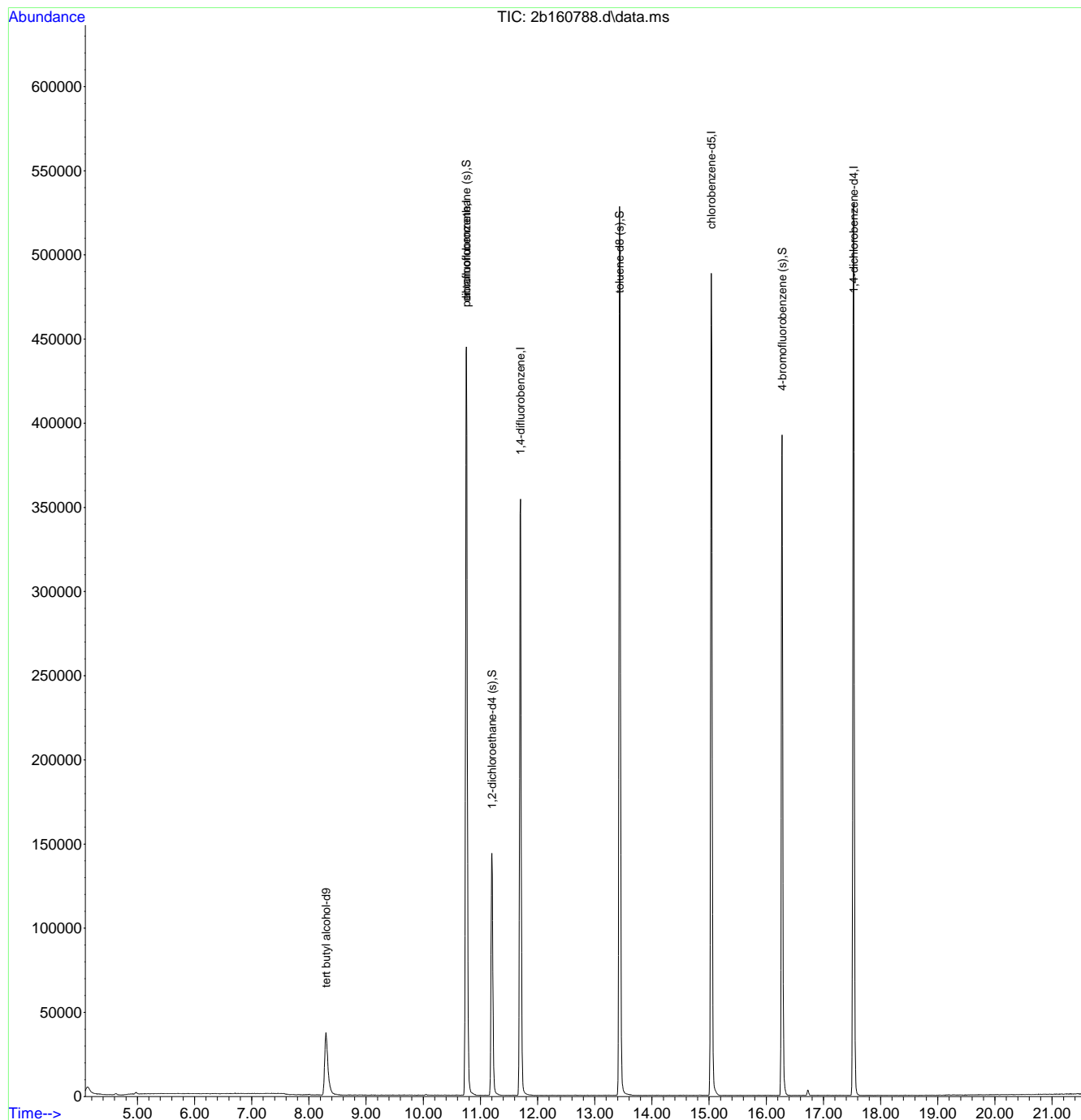


Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v2b7179\
Data File : 2b160788.d
Acq On : 1 Jun 2018 11:46 am
Operator : sydney
Sample : mb2
Misc : MS26780,V2B7179,5,,,,,1
ALS Vial : 8 Sample Multiplier: 1

Inst : MS2B

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
Quant Results File: M2B7119.RES
Quant Time: Jun 03 23:03:37 2018
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 17 15:34:05 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v2b7179 qcs\
 Data File : 2b160759.d
 Acq On : 31 May 2018 6:26 pm
 Operator : deving
 Sample : bs Inst : MS2B
 Misc : MS26754,V2B7179,5,,,,,1
 ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 04 10:58:23 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Mon Jun 04 09:59:09 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.297	65	74584	500.00	ug/L	0.00
5) pentafluorobenzene	10.751	168	249803	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	11.700	114	319880	50.00	ug/L	0.00
76) chlorobenzene-d5	15.040	117	322803	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.525	152	170470	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.756	113	102216	52.53	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	105.06%
55) 1,2-dichloroethane-d4 (s)	11.202	65	108920	47.94	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	95.88%
77) toluene-d8 (s)	13.435	98	384140	48.04	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	96.08%
100) 4-bromofluorobenzene (s)	16.277	95	149888	52.54	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	105.08%
Target Compounds						
2) tertiary butyl alcohol	8.433	59	42135	274.09	ug/L	98
3) ethanol	6.855	46	37136	5594.83	ug/L	97
4) 1,4-dioxane	12.434	88	16302	1542.24	ug/L	91
6) chlorodifluoromethane	4.527	51	170579	63.24	ug/L	98
7) dichlorodifluoromethane	4.501	85	203908	78.88	ug/L	99
10) chloromethane	4.957	50	217147	63.55	ug/L	97
11) vinyl chloride	5.219	62	184317	62.94	ug/L	100
13) bromomethane	5.922	94	108618	57.62	ug/L	98
14) chloroethane	6.100	64	94836	60.09	ug/L	96
15) trichlorofluoromethane	6.656	101	169937	55.90	ug/L	99
16) vinyl bromide	6.504	106	135378	76.26	ug/L	99
17) ethyl ether	7.107	74	59137	54.96	ug/L	93
18) acrolein	7.327	56	20291	45.85	ug/L	82
19) freon 113	7.568	151	76340	55.28	ug/L	96
20) 1,1-dichloroethene	7.558	96	94583	51.75	ug/L	94
21) acetone	7.579	58	27766	195.48	ug/L	# 83
22) acetonitrile	8.035	41	109712	429.27	ug/L	98
23) iodomethane	7.841	142	139450	50.17	ug/L	99
24) carbon disulfide	7.998	76	293120	55.91	ug/L	97
25) methylene chloride	8.329	84	107276	54.22	ug/L	91
26) methyl acetate	8.135	43	64075	42.68	ug/L	96
27) methyl tert butyl ether	8.769	73	245056	44.06	ug/L	98
28) trans-1,2-dichloroethene	8.774	96	99800	51.84	ug/L	93
29) di-isopropyl ether	9.440	45	313728	43.55	ug/L	97
30) 2-butanone	10.132	72	35418	196.92	ug/L	# 82
31) 1,1-dichloroethane	9.377	63	184166	51.58	ug/L	99
32) chloroprene	9.519	53	140265	44.75	ug/L	96
33) acrylonitrile	8.669	53	30143	48.86	ug/L	98
34) hexane	9.173	56	75926	54.73	ug/L	96
35) vinyl acetate	9.382	86	16380	52.49	ug/L	74
36) ethyl tert-butyl ether	9.938	59	286568	43.49	ug/L	100
37) ethyl acetate	10.185	45	11019	43.60	ug/L	70
38) 2,2-dichloropropane	10.195	77	131745	48.60	ug/L	93
39) cis-1,2-dichloroethene	10.169	96	109298	51.96	ug/L	96
40) methyl acrylate	10.258	85	11718	47.62	ug/L	97
41) propionitrile	10.200	54	126342	468.74	ug/L	98
42) bromochloromethane	10.483	128	51592	51.63	ug/L	96
43) tetrahydrofuran	10.552	72	10128	48.93	ug/L	91
44) chloroform	10.557	85	108343	48.72	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v2b7179 qcs\
 Data File : 2b160759.d
 Acq On : 31 May 2018 6:26 pm
 Operator : deving
 Sample : bs Inst : MS2B
 Misc : MS26754,V2B7179,5,,,,,1
 ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 04 10:58:23 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Mon Jun 04 09:59:09 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) t-butyl formate	10.635	59	44180	23.11	ug/L	93
47) methacrylonitrile	10.421	67	34157	47.71	ug/L	82
48) 1,1,1-trichloroethane	10.861	97	141207	48.14	ug/L	98
49) cyclohexane	10.966	84	135518	56.31	ug/L #	76
50) 1,1-dichloropropene	11.044	75	123520	49.81	ug/L	99
51) iso-butyl alcohol	11.018	43	32386	431.43	ug/L	95
52) carbon tetrachloride	11.081	117	120941	48.58	ug/L	98
53) tert amyl alcohol	11.170	55	15377	224.09	ug/L	71
56) n-butyl alcohol	11.805	56	100960	2255.83	ug/L	95
57) 2,2,4-trimethylpentane	11.390	57	389120	57.73	ug/L	88
58) benzene	11.312	78	363113	50.59	ug/L	100
59) tert-amyl methyl ether	11.390	87	56855	43.09	ug/L	93
60) heptane	11.563	71	81376	59.30	ug/L	96
61) isopropyl acetate	11.254	87	16920	50.66	ug/L #	83
62) 1,2-dichloroethane	11.296	62	116892	45.24	ug/L	98
63) trichloroethene	12.056	130	98480	49.48	ug/L	98
64) ethyl acrylate	12.067	55	100427	44.13	ug/L	98
65) 2-nitropropane	12.822	41	18760	39.32	ug/L	95
66) 2-chloroethyl vinyl ether	12.874	63	277348	230.10	ug/L	99
67) methyl methacrylate	12.345	100	21451	49.77	ug/L #	87
68) 1,2-dichloropropane	12.319	63	100332	50.72	ug/L	100
69) dibromomethane	12.460	93	55838	51.19	ug/L	92
70) methylcyclohexane	12.334	83	182950	54.21	ug/L	98
71) bromodichloromethane	12.602	83	130011	49.97	ug/L	100
72) epichlorohydrin	12.979	57	40459	213.31	ug/L	97
73) cis-1,3-dichloropropene	13.100	75	159633	49.61	ug/L	92
74) 4-methyl-2-pentanone	13.220	58	129751	191.41	ug/L	92
75) 3-methyl-1-butanol	13.220	70	41545	978.64	ug/L	88
78) toluene	13.514	92	224622	46.61	ug/L	100
79) trans-1,3-dichloropropene	13.687	75	139646	46.09	ug/L	98
80) ethyl methacrylate	13.718	69	113937	45.15	ug/L	92
81) 1,1,2-trichloroethane	13.912	83	71592	48.49	ug/L	92
82) tetrachloroethene	14.143	164	80427	43.19	ug/L	96
83) 1,3-dichloropropane	14.112	76	141328	48.00	ug/L	92
84) 2-hexanone	14.122	58	120715	182.48	ug/L	92
85) butyl acetate	14.222	56	55315	41.97	ug/L	86
86) dibromochloromethane	14.390	129	98160	47.23	ug/L	98
87) 1,2-dibromoethane	14.557	107	95488	50.03	ug/L	98
88) n-butyl ether	15.029	57	431686	44.48	ug/L	98
89) chlorobenzene	15.071	112	254879	46.86	ug/L	98
90) 1,1,1,2-tetrachloroethane	15.134	131	96242	47.10	ug/L	99
91) ethylbenzene	15.150	91	419360	45.66	ug/L	99
92) m,p-xylene	15.265	106	328438	89.72	ug/L	98
93) o-xylene	15.706	106	174395	46.06	ug/L	99
94) styrene	15.711	104	293832	45.95	ug/L	98
95) bromoform	15.962	173	69775	47.87	ug/L	99
96) butyl acrylate	15.522	55	181275	41.56	ug/L	98
97) isopropylbenzene	16.083	105	453579	44.97	ug/L	100
98) cis-1,4-dichloro-2-butene	16.114	88	37195	45.88	ug/L	94
101) bromobenzene	16.481	156	123237	49.67	ug/L	95
102) 1,1,2,2-tetrachloroethane	16.356	83	114937	53.90	ug/L	100
103) trans-1,4-dichloro-2-b...	16.403	53	27339	48.49	ug/L	94
104) 1,2,3-trichloropropane	16.440	110	29236	52.41	ug/L	98
105) n-propylbenzene	16.518	91	523408	51.09	ug/L	100
107) 2-chlorotoluene	16.660	126	113523	50.84	ug/L	96
108) 4-chlorotoluene	16.765	91	314676	49.59	ug/L	98
109) 1,3,5-trimethylbenzene	16.675	105	369971	48.66	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v2b7179 qcs\
 Data File : 2b160759.d
 Acq On : 31 May 2018 6:26 pm
 Operator : deving
 Sample : bs Inst : MS2B
 Misc : MS26754,V2B7179,5,,,,,1
 ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 04 10:58:23 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Mon Jun 04 09:59:09 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) tert-butylbenzene	17.058	134	82895	50.60	ug/L	98
111) 1,2,4-trimethylbenzene	17.095	105	380719	49.05	ug/L	99
112) sec-butylbenzene	17.289	105	512838	52.16	ug/L	99
113) 1,3-dichlorobenzene	17.467	146	227252	48.47	ug/L	100
114) p-isopropyltoluene	17.415	119	433379	50.91	ug/L	99
115) 1,4-dichlorobenzene	17.551	146	225364	49.89	ug/L	99
116) benzyl chloride	17.666	91	242862	54.76	ug/L	100
117) 1,2-dichlorobenzene	17.976	146	232969	50.50	ug/L	99
119) n-butylbenzene	17.855	92	231116	56.57	ug/L	99
120) hexachloroethane	18.285	201	89659	56.12	ug/L	99
122) 1,2-dibromo-3-chloropr...	18.799	157	27262	52.48	ug/L	97
123) 1,3,5-trichlorobenzene	19.035	180	233096	55.64	ug/L	100
124) 2-ethylhexyl acrylate	19.701	70	15776	7.56	ug/L #	86
125) 1,2,4-trichlorobenzene	19.722	180	204016	59.08	ug/L	99
126) hexachlorobutadiene	19.868	225	101044	54.77	ug/L	99
127) naphthalene	20.021	128	378194	59.22	ug/L	100
128) 1,2,3-trichlorobenzene	20.283	180	178246	60.03	ug/L	99
129) 2-methylnaphthalene	21.284	142	96007	28.10	ug/L	97

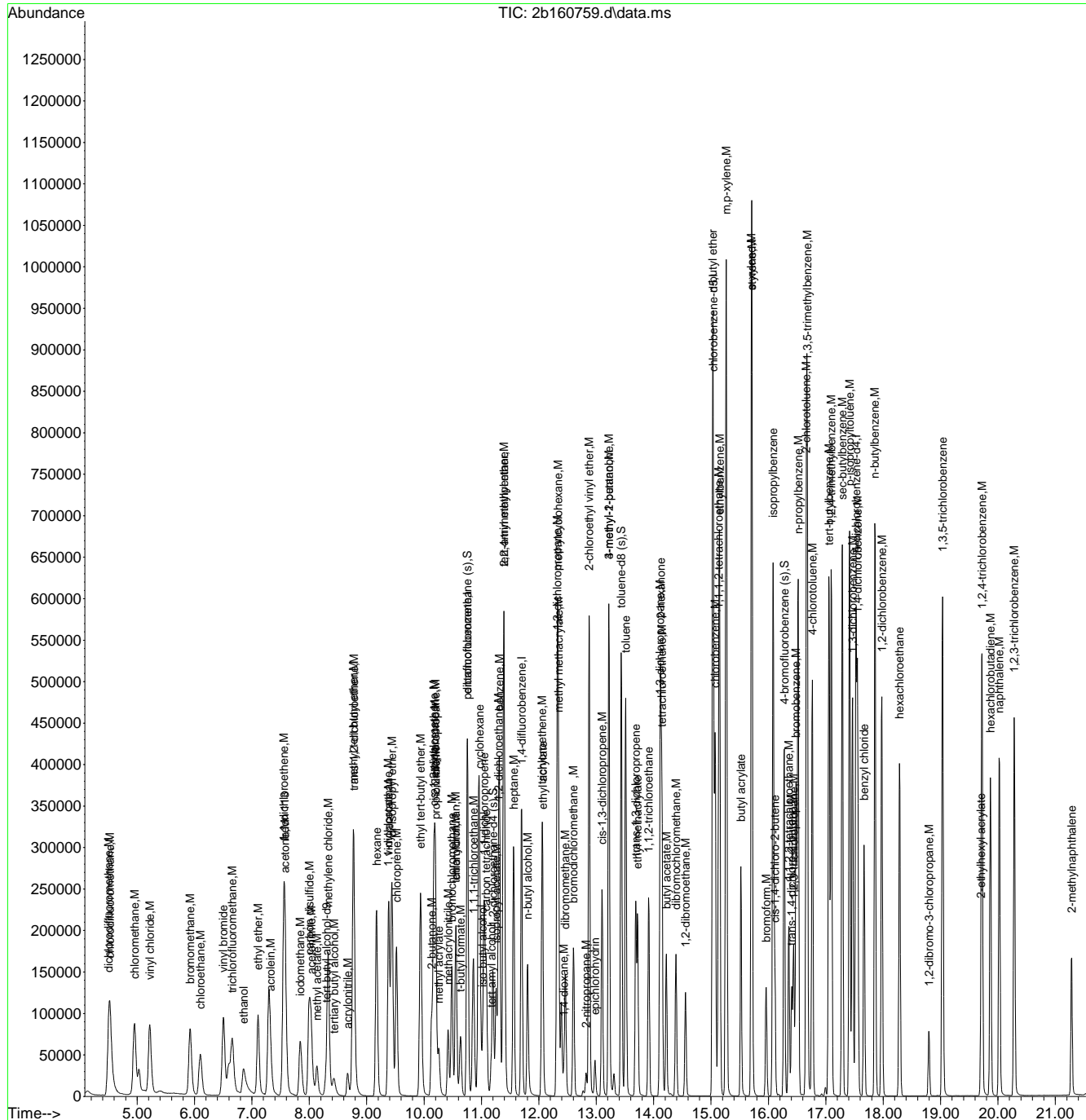
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v2b7179 qcs\
Data File : 2b160759.d
Acq On : 31 May 2018 6:26 pm
Operator : deving
Sample : bs
Misc : MS26754,V2B7179,5,,,,,1
ALS Vial : 20 Sample Multiplier: 1

Inst : MS2B

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
Quant Results File: M2B7119.RES
Quant Time: Jun 04 10:58:23 2018
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Mon Jun 04 09:59:09 2018
Response via : Initial Calibration



7.3.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v4b3421\
 Data File : 4b82369.d
 Acq On : 1 Jun 2018 9:37 am
 Operator : HueanhT
 Sample : BS Inst : MS4B
 Misc : MS26763,V4B3421,5,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:38:13 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.764	65	112439	500.00	ug/L	-0.01
5) pentafluorobenzene	8.773	168	216438	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.646	114	276355	50.00	ug/L	0.00
75) chlorobenzene-d5	12.832	117	276333	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	187667	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	100303	51.69	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	103.38%
55) 1,2-dichloroethane-d4 (s)	9.207	65	92439	51.49	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	102.98%
76) toluene-d8 (s)	11.236	98	338572	50.58	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.16%
99) 4-bromofluorobenzene (s)	14.102	95	130071	47.74	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	95.48%
Target Compounds						
3) tertiary butyl alcohol	6.864	59	77237	262.46	ug/L	98
4) 1,4-dioxane	10.264	88	30992	1146.18	ug/L	93
6) chlorodifluoromethane	3.919	51	314024	58.15	ug/L	99
7) dichlorodifluoromethane	3.904	85	287557	51.57	ug/L	97
8) chloromethane	4.259	50	330282	48.79	ug/L	98
9) vinyl chloride	4.463	62	303982	47.81	ug/L	99
10) 1,3-butadiene	4.479	54	269030	74.30	ug/L	99
11) bromomethane	5.007	94	208858	45.69	ug/L	96
12) chloroethane	5.138	64	171377	49.86	ug/L	97
13) trichlorofluoromethane	5.541	101	313897	52.15	ug/L	99
14) vinyl bromide	5.431	106	206142	50.34	ug/L	95
15) ethyl ether	5.823	74	65313	52.05	ug/L	93
16) 2-chloropropane	6.022	43	273408	55.44	ug/L	97
17) acrolein	6.032	56	27874	51.76	ug/L	92
18) freon 113	6.236	151	168345	61.77	ug/L	95
19) 1,1-dichloroethene	6.205	61	249510	55.43	ug/L	99
20) acetone	6.205	58	39325	194.61	ug/L	100
21) acetonitrile	6.576	41	208737	503.59	ug/L	97
22) iodomethane	6.435	142	274569	54.15	ug/L	98
23) carbon disulfide	6.571	76	510425	52.75	ug/L	98
24) methylene chloride	6.817	84	166672	50.61	ug/L	100
25) methyl acetate	6.576	43	82308	48.34	ug/L	97
26) methyl tert butyl ether	7.120	73	422495	50.24	ug/L	97
27) trans-1,2-dichloroethene	7.157	61	207904	52.53	ug/L	98
28) hexane	7.455	56	95650	54.13	ug/L	96
29) di-isopropyl ether	7.638	45	503971	51.89	ug/L	97
30) 2-butanone	8.229	72	39522	205.42	ug/L #	89
31) 1,1-dichloroethane	7.669	63	242072	51.13	ug/L	99
32) chloroprene	7.748	53	178750	54.28	ug/L	96
33) acrylonitrile	7.068	53	44900	50.41	ug/L	92
34) vinyl acetate	7.580	86	16068	53.38	ug/L	100
35) ethyl tert-butyl ether	8.051	59	468272	52.20	ug/L	98
36) ethyl acetate	8.234	45	13543	48.54	ug/L #	64
37) 2,2-dichloropropane	8.349	77	264211	56.29	ug/L	99
38) cis-1,2-dichloroethene	8.302	96	140256	50.05	ug/L	98
39) propionitrile	8.297	54	164761	493.23	ug/L	96
40) methyl acrylate	8.318	85	13679	52.70	ug/L #	93
41) methacrylonitrile	8.475	67	36713	49.96	ug/L	97
42) bromochloromethane	8.574	128	70962	53.34	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v4b3421\
 Data File : 4b82369.d
 Acq On : 1 Jun 2018 9:37 am
 Operator : HueanhT
 Sample : BS Inst : MS4B
 Misc : MS26763,V4B3421,5,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:38:13 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) tetrahydrofuran	8.585	72	13282	51.39	ug/L	88
44) chloroform	8.642	83	222122	51.46	ug/L	99
45) tert-butyl formate	8.684	59	120251	47.13	ug/L	96
47) 1,1,1-trichloroethane	8.898	97	265217	56.83	ug/L	98
48) cyclohexane	9.008	84	250795	51.10	ug/L	97
50) 1,1-dichloropropene	9.040	75	149206	53.19	ug/L	99
51) carbon tetrachloride	9.081	117	230113	58.32	ug/L	100
52) tert-amyl alcohol	9.144	73	31977	235.85	ug/L #	84
53) isopropyl acetate	9.160	87	19603	49.58	ug/L	100
56) n-butyl alcohol	9.672	56	162027	2330.38	ug/L	95
57) 2,2,4-trimethylpentane	9.353	57	572202	55.42	ug/L	98
58) benzene	9.270	78	456591	51.50	ug/L	100
59) tert-amyl methyl ether	9.338	73	413559	52.34	ug/L	98
60) heptane	9.489	57	92390	52.76	ug/L	97
61) 1,2-dichloroethane	9.291	62	137693	52.82	ug/L	98
62) ethyl acrylate	9.913	55	106590	51.73	ug/L	99
63) trichloroethene	9.944	95	113312	53.47	ug/L	97
64) 2-chloroethyl vinyl ether	10.698	63	302200	258.01	ug/L	99
65) methyl methacrylate	10.164	100	23465	50.42	ug/L	91
66) methylcyclohexane	10.237	83	298092	57.43	ug/L	99
67) 1,2-dichloropropane	10.222	63	120305	51.35	ug/L	99
68) dibromomethane	10.332	93	68842	53.02	ug/L	92
69) bromodichloromethane	10.473	83	158993	54.73	ug/L	98
70) 2-nitropropane	10.666	41	34747	53.51	ug/L	98
71) epichlorohydrin	10.787	57	47891	250.37	ug/L	93
72) cis-1,3-dichloropropene	10.923	75	180544	54.18	ug/L	97
73) 4-methyl-2-pentanone	11.017	58	165004	204.22	ug/L	89
74) isoamyl alcohol	11.011	70	66378	1003.24	ug/L	92
77) toluene	11.315	92	277011	51.31	ug/L	98
78) ethyl methacrylate	11.482	69	123830	51.60	ug/L	96
79) trans-1,3-dichloropropene	11.498	75	155410	54.60	ug/L	92
80) 1,1,2-trichloroethane	11.733	83	83035	51.61	ug/L	98
81) tetrachloroethene	11.890	164	112063	54.95	ug/L	99
82) 2-hexanone	11.895	58	140286	204.46	ug/L	99
83) 1,3-dichloropropane	11.922	76	148225	49.69	ug/L	97
84) butyl acetate	11.974	56	64969	50.83	ug/L	99
85) dibromochloromethane	12.183	129	128304	56.76	ug/L	98
86) 1,2-dibromoethane	12.350	107	109486	50.87	ug/L	98
87) n-butyl ether	12.811	57	552297	54.04	ug/L	99
88) chlorobenzene	12.863	112	315999	51.47	ug/L	98
89) 1,1,1,2-tetrachloroethane	12.936	131	149634	55.59	ug/L	99
90) ethylbenzene	12.926	91	541365	51.43	ug/L	99
91) m,p-xylene	13.056	106	431981	105.10	ug/L	98
92) o-xylene	13.496	91	490905	53.40	ug/L	98
93) styrene	13.506	104	357275	54.41	ug/L	94
94) butyl acrylate	13.302	55	215418	53.33	ug/L	98
95) isopropylbenzene	13.878	105	671360	55.91	ug/L	99
96) bromoform	13.763	173	93671	58.80	ug/L	96
97) cis-1,4-dichloro-2-butene	13.919	88	42543	64.31	ug/L	95
100) 1,1,2,2-tetrachloroethane	14.186	83	153108	49.37	ug/L	98
101) trans-1,4-dichloro-2-b...	14.223	53	31737	68.42	ug/L	92
102) 1,2,3-trichloropropane	14.286	110	38395	50.04	ug/L	95
103) bromobenzene	14.306	156	166470	51.18	ug/L	97
104) n-propylbenzene	14.338	91	725325	51.77	ug/L	99
105) 2-chlorotoluene	14.484	126	162959	53.06	ug/L	99
106) 4-chlorotoluene	14.610	91	407304	50.02	ug/L	97
108) 1,3,5-trimethylbenzene	14.510	105	564192	53.74	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v4b3421\
 Data File : 4b82369.d
 Acq On : 1 Jun 2018 9:37 am
 Operator : HueanHT
 Sample : BS Inst : MS4B
 Misc : MS26763,V4B3421,5,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:38:13 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) tert-butylbenzene	14.887	119	502699	54.79	ug/L	99
110) 1,2,4-trimethylbenzene	14.945	105	569453	53.77	ug/L	100
111) sec-butylbenzene	15.133	105	802792	55.76	ug/L	100
112) p-isopropyltoluene	15.279	119	690864	56.22	ug/L	100
113) 1,3-dichlorobenzene	15.321	146	335933	51.15	ug/L	99
114) 1,4-dichlorobenzene	15.431	146	334292	50.55	ug/L	99
115) 1,2-dichlorobenzene	15.844	146	362219	51.25	ug/L	98
116) benzyl chloride	15.530	91	323076	53.02	ug/L	100
118) n-butylbenzene	15.734	92	345448	54.25	ug/L	99
120) hexachloroethane	16.168	201	139532	59.57	ug/L	99
121) 1,2-dibromo-3-chloropr...	16.686	157	47393	53.77	ug/L	94
122) 1,3,5-trichlorobenzene	16.890	180	395310	52.13	ug/L	98
123) 1,2,4-trichlorobenzene	17.570	180	353885	53.77	ug/L	97
124) 2-ethylhexyl acrylate	17.575	70	26509	6.93	ug/L	93
125) hexachlorobutadiene	17.690	225	165522	52.26	ug/L	100
126) naphthalene	17.879	128	647978	49.78	ug/L	99
127) 1,2,3-trichlorobenzene	18.114	180	327174	54.86	ug/L	98
128) 2-methylnaphthalene	19.165	142	139885	20.83	ug/L	99

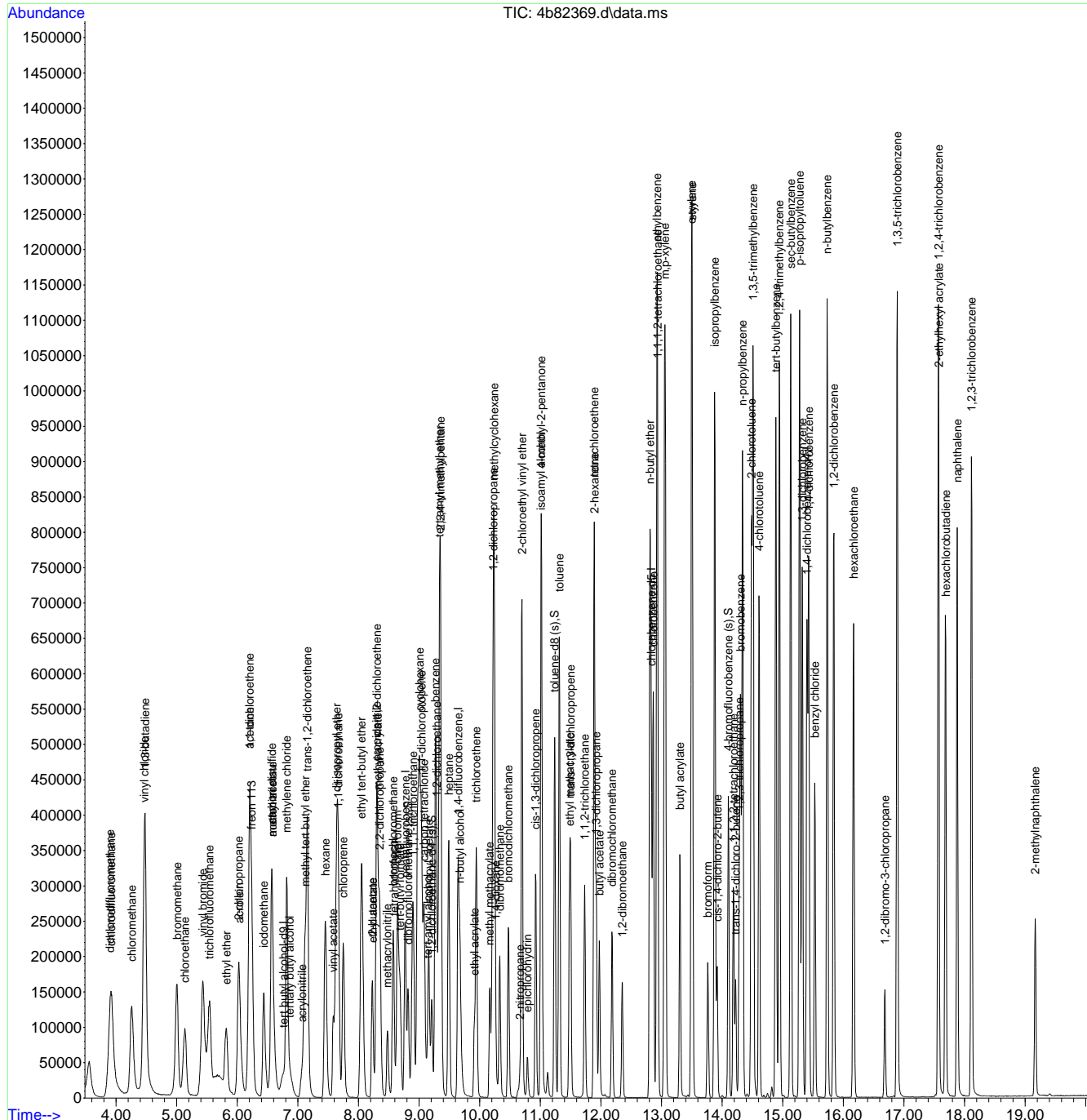
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\unicem60418\v4b3421\
 Data File : 4b82369.d
 Acq On : 1 Jun 2018 9:37 am
 Operator : HueanhT
 Sample : BS
 Misc : MS26763,V4B3421,5,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Inst : MS4B

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:38:13 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration



7.3.2
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v2b7179 qcs\
 Data File : 2b160789.d
 Acq On : 1 Jun 2018 12:25 pm
 Operator : sydney
 Sample : jc67003-2ms Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 04 11:00:52 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Mon Jun 04 09:59:09 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.297	65	73652	500.00	ug/L	0.00
5) pentafluorobenzene	10.756	168	225848	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.700	114	292177	50.00	ug/L	0.00
76) chlorobenzene-d5	15.040	117	299130	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.525	152	156925	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.756	113	93812	53.33	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	106.66%
55) 1,2-dichloroethane-d4 (s)	11.202	65	101909	49.10	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	98.20%
77) toluene-d8 (s)	13.435	98	359437	48.51	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.02%
100) 4-bromofluorobenzene (s)	16.272	95	137669	52.42	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	104.84%
Target Compounds						
2) tertiary butyl alcohol	8.433	59	45824	301.86	ug/L	95
3) ethanol	6.850	46	35772	5457.53	ug/L	96
4) 1,4-dioxane	12.434	88	15918	1524.97	ug/L	95
6) chlorodifluoromethane	4.533	51	63133	25.89	ug/L	82
7) dichlorodifluoromethane	4.512	85	200453	85.77	ug/L	96
10) chloromethane	4.962	50	209903	67.95	ug/L	97
11) vinyl chloride	5.230	62	187627	70.86	ug/L	100
13) bromomethane	5.932	94	108687	63.78	ug/L	96
14) chloroethane	6.105	64	98960	69.36	ug/L	98
15) trichlorofluoromethane	6.661	101	179863	65.44	ug/L	100
16) vinyl bromide	6.509	106	109112	67.98	ug/L	98
17) ethyl ether	7.107	74	46402	47.70	ug/L	98
18) acrolein	7.332	56	19900	49.73	ug/L	82
19) freon 113	7.574	151	60314	48.31	ug/L	90
20) 1,1-dichloroethene	7.558	96	73936	44.75	ug/L	98
21) acetone	7.579	58	28334	220.64	ug/L	87
22) acetonitrile	8.035	41	103355	447.30	ug/L	99
23) iodomethane	7.846	142	105102	41.82	ug/L	98
24) carbon disulfide	8.003	76	212028	44.73	ug/L	97
25) methylene chloride	8.334	84	94871	53.03	ug/L	94
26) methyl acetate	8.135	43	60711	44.73	ug/L	96
27) methyl tert butyl ether	8.769	73	216949	43.14	ug/L	99
28) trans-1,2-dichloroethene	8.774	96	89047	51.17	ug/L	94
29) di-isopropyl ether	9.440	45	297858	45.74	ug/L	98
30) 2-butanone	10.132	72	36141	222.25	ug/L	89
31) 1,1-dichloroethane	9.382	63	171963	53.27	ug/L	100
32) chloroprene	9.524	53	130240	45.95	ug/L	95
33) acrylonitrile	8.669	53	27988	50.18	ug/L	98
34) hexane	9.173	56	64140	51.14	ug/L	96
35) vinyl acetate	9.393	86	14074	49.88	ug/L	73
36) ethyl tert-butyl ether	9.943	59	264672	44.43	ug/L	99
37) ethyl acetate	10.185	45	11661	51.04	ug/L #	58
38) 2,2-dichloropropane	10.200	77	127430	51.99	ug/L	94
39) cis-1,2-dichloroethene	10.169	96	101617	53.44	ug/L	95
40) methyl acrylate	10.263	85	10885	48.92	ug/L	94
41) propionitrile	10.200	54	125058	513.19	ug/L	98
42) bromochloromethane	10.489	128	47656	52.75	ug/L	98
43) tetrahydrofuran	10.557	72	9302	49.71	ug/L	89
44) chloroform	10.557	85	106654	53.05	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v2b7179 qcs\
 Data File : 2b160789.d
 Acq On : 1 Jun 2018 12:25 pm
 Operator : sydney
 Sample : jc67003-2ms Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 04 11:00:52 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Mon Jun 04 09:59:09 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) t-butyl formate	10.635	59	32067	18.55	ug/L	88
47) methacrylonitrile	10.420	67	32374	50.01	ug/L	86
48) 1,1,1-trichloroethane	10.861	97	135326	51.03	ug/L	98
49) cyclohexane	10.966	84	136151	62.57	ug/L #	81
50) 1,1-dichloropropene	11.050	75	117916	52.60	ug/L	99
51) iso-butyl alcohol	11.018	43	34297	505.34	ug/L	96
52) carbon tetrachloride	11.081	117	116362	51.70	ug/L	100
53) tert amyl alcohol	11.175	55	16771	270.33	ug/L	72
56) n-butyl alcohol	11.805	56	107017	2617.89	ug/L	95
57) 2,2,4-trimethylpentane	11.390	57	376141	61.09	ug/L	89
58) benzene	11.312	78	369658	56.39	ug/L	99
59) tert-amyl methyl ether	11.390	87	53280	44.21	ug/L	90
60) heptane	11.563	71	77513	61.84	ug/L	99
61) isopropyl acetate	11.254	87	16652	54.58	ug/L #	85
62) 1,2-dichloroethane	11.296	62	112013	47.46	ug/L	99
63) trichloroethene	12.062	130	95914	52.76	ug/L	98
64) ethyl acrylate	12.067	55	101866	49.00	ug/L	98
65) 2-nitropropane	12.822	41	18740	43.00	ug/L	98
66) 2-chloroethyl vinyl ether	12.879	63	1804	1.64	ug/L	88
67) methyl methacrylate	12.345	100	20629	52.40	ug/L #	83
68) 1,2-dichloropropane	12.318	63	100069	55.38	ug/L	99
69) dibromomethane	12.460	93	54418	54.62	ug/L	90
70) methylcyclohexane	12.334	83	176535	57.27	ug/L	98
71) bromodichloromethane	12.607	83	129463	54.48	ug/L	99
72) epichlorohydrin	12.979	57	31886	184.05	ug/L	97
73) cis-1,3-dichloropropene	13.100	75	159029	54.10	ug/L	93
74) 4-methyl-2-pentanone	13.220	58	144694	233.69	ug/L	92
75) 3-methyl-1-butanol	13.220	70	44946	1159.14	ug/L	91
78) toluene	13.514	92	223843	50.13	ug/L	99
79) trans-1,3-dichloropropene	13.687	75	135481	48.25	ug/L	99
80) ethyl methacrylate	13.718	69	115755	49.51	ug/L	90
81) 1,1,2-trichloroethane	13.912	83	71564	52.30	ug/L	95
82) tetrachloroethene	14.143	164	83629	48.46	ug/L	97
83) 1,3-dichloropropane	14.112	76	142432	52.20	ug/L	93
84) 2-hexanone	14.122	58	134516	219.43	ug/L	93
85) butyl acetate	14.222	56	57857	47.38	ug/L	89
86) dibromochloromethane	14.389	129	97088	50.41	ug/L	99
87) 1,2-dibromoethane	14.557	107	91894	51.96	ug/L	98
88) n-butyl ether	15.029	57	444051	49.37	ug/L	100
89) chlorobenzene	15.071	112	255899	50.77	ug/L	97
90) 1,1,1,2-tetrachloroethane	15.134	131	95553	50.47	ug/L	98
91) ethylbenzene	15.150	91	430900	50.63	ug/L	100
92) m,p-xylene	15.265	106	334549	98.63	ug/L	97
93) o-xylene	15.705	106	184092	52.47	ug/L	97
94) styrene	15.711	104	292777	49.40	ug/L	98
95) bromoform	15.962	173	69114	51.17	ug/L	99
96) butyl acrylate	15.522	55	188309	46.59	ug/L	98
97) isopropylbenzene	16.083	105	464687	49.72	ug/L	99
98) cis-1,4-dichloro-2-butene	16.114	88	26889	35.79	ug/L	96
101) bromobenzene	16.481	156	122681	53.71	ug/L	94
102) 1,1,2,2-tetrachloroethane	16.356	83	119097	60.67	ug/L	98
103) trans-1,4-dichloro-2-b...	16.408	53	20402	39.31	ug/L	87
104) 1,2,3-trichloropropane	16.439	110	30099	58.61	ug/L	97
105) n-propylbenzene	16.518	91	541740	57.44	ug/L	99
107) 2-chlorotoluene	16.660	126	116151	56.51	ug/L	96
108) 4-chlorotoluene	16.765	91	320075	54.80	ug/L	98
109) 1,3,5-trimethylbenzene	16.675	105	380198	54.32	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v2b7179 qcs\
 Data File : 2b160789.d
 Acq On : 1 Jun 2018 12:25 pm
 Operator : sydney
 Sample : jc67003-2ms Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 04 11:00:52 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Mon Jun 04 09:59:09 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) tert-butylbenzene	17.053	134	85521	56.71	ug/L	97
111) 1,2,4-trimethylbenzene	17.095	105	395086	55.30	ug/L	99
112) sec-butylbenzene	17.289	105	528188	58.36	ug/L	99
113) 1,3-dichlorobenzene	17.467	146	228685	52.99	ug/L	99
114) p-isopropyltoluene	17.415	119	446622	57.00	ug/L	99
115) 1,4-dichlorobenzene	17.551	146	226233	54.41	ug/L	97
116) benzyl chloride	17.666	91	205588	50.35	ug/L	100
117) 1,2-dichlorobenzene	17.976	146	234197	55.15	ug/L	100
119) n-butylbenzene	17.860	92	241124	64.12	ug/L	99
120) hexachloroethane	18.285	201	77909	52.97	ug/L	96
122) 1,2-dibromo-3-chloropr...	18.799	157	28094	58.75	ug/L	95
123) 1,3,5-trichlorobenzene	19.035	180	232669	60.33	ug/L	99
124) 2-ethylhexyl acrylate	19.706	70	10957	5.70	ug/L	86
125) 1,2,4-trichlorobenzene	19.722	180	202944	63.84	ug/L	99
126) hexachlorobutadiene	19.868	225	102502	60.36	ug/L	100
127) naphthalene	20.026	128	418724	71.22	ug/L	100
128) 1,2,3-trichlorobenzene	20.283	180	179338	65.61	ug/L	99
129) 2-methylnaphthalene	21.284	142	106296	33.80	ug/L	97

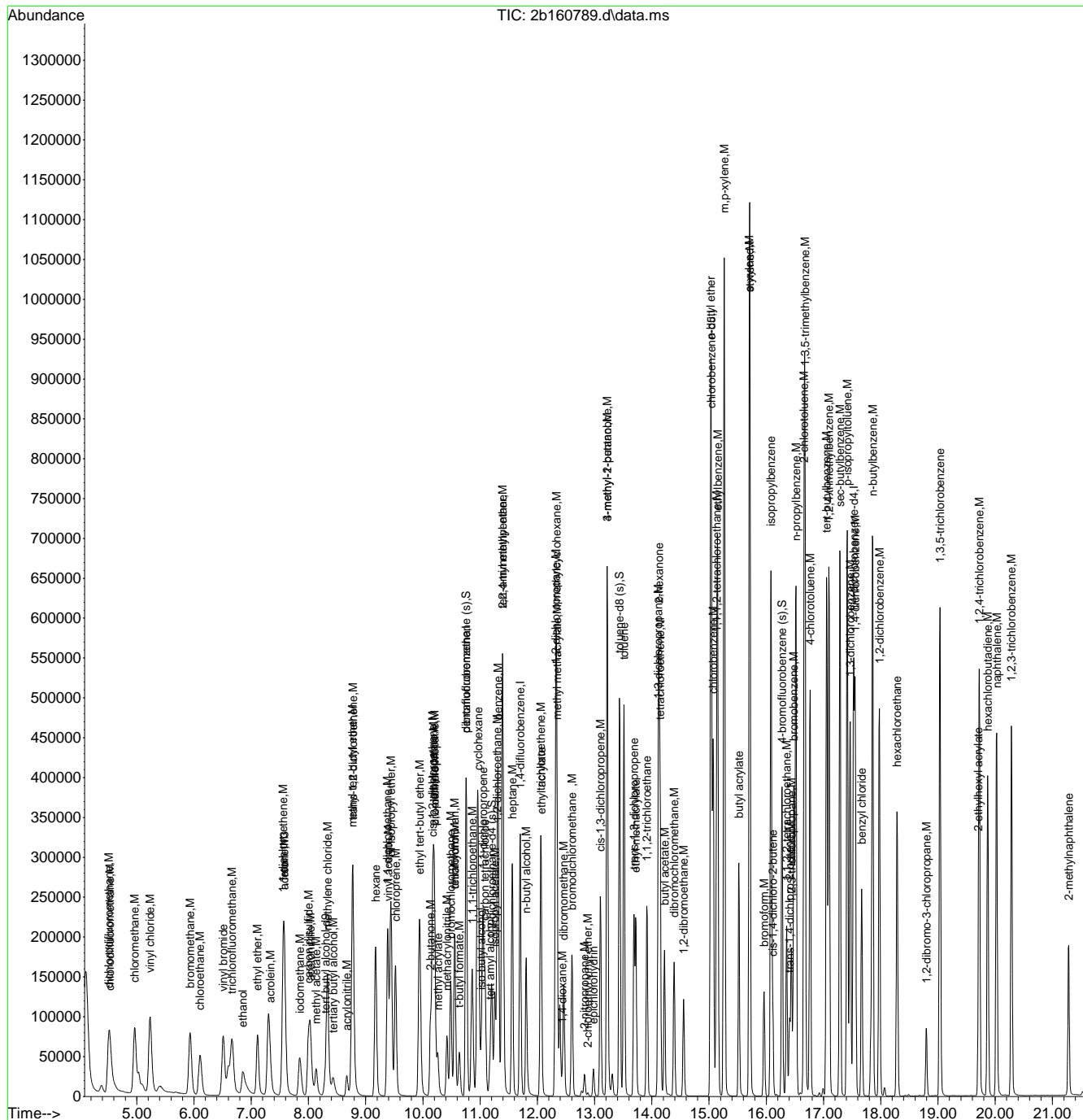
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v2b7179 qcs\
 Data File : 2b160789.d
 Acq On : 1 Jun 2018 12:25 pm
 Operator : sydneys
 Sample : jc67003-2ms
 Misc : MS26780,V2B7179,5,,,,,1
 ALS Vial : 9 Sample Multiplier: 1

Inst : MS2B

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 04 11:00:52 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Mon Jun 04 09:59:09 2018
 Response via : Initial Calibration



7.4.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v4b3421\
 Data File : 4b82378.d
 Acq On : 1 Jun 2018 2:01 pm
 Operator : HueanhT
 Sample : JC66969-2MS Inst : MS4B
 Misc : MS26771,V4B3421,5,,,,,4
 ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:47:49 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.775	65	117783	500.00	ug/L	0.00
5) pentafluorobenzene	8.773	168	238861	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.646	114	319862	50.00	ug/L	0.00
75) chlorobenzene-d5	12.826	117	309554	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.399	152	214941	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	113146	52.83	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	105.66%
55) 1,2-dichloroethane-d4 (s)	9.212	65	109816	52.84	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	105.68%
76) toluene-d8 (s)	11.236	98	379257	50.57	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.14%
99) 4-bromofluorobenzene (s)	14.102	95	149293	47.84	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	95.68%
Target Compounds						
3) tertiary butyl alcohol	6.879	59	80386	260.76	ug/L	95
4) 1,4-dioxane	10.269	88	32018	1130.40	ug/L	91
6) chlorodifluoromethane	3.924	51	293388	49.23	ug/L	98
7) dichlorodifluoromethane	3.903	85	271402	44.11	ug/L	99
8) chloromethane	4.264	50	311262	41.66	ug/L	99
9) vinyl chloride	4.473	62	286675	40.86	ug/L	98
11) bromomethane	5.007	94	191860	38.03	ug/L	98
12) chloroethane	5.143	64	160792	42.39	ug/L	96
13) trichlorofluoromethane	5.546	101	305470	45.99	ug/L	98
14) vinyl bromide	5.431	106	190432	42.14	ug/L	99
15) ethyl ether	5.818	74	68427	49.41	ug/L	94
16) 2-chloropropane	6.027	43	273931	50.33	ug/L	97
17) acrolein	6.032	56	23832	40.10	ug/L	95
18) freon 113	6.236	151	164613	54.73	ug/L	95
19) 1,1-dichloroethene	6.205	61	250781	50.48	ug/L	97
20) acetone	6.194	58	42205	189.26	ug/L	88
21) acetonitrile	6.560	41	206433	451.27	ug/L	98
22) iodomethane	6.440	142	264873	47.33	ug/L	98
23) carbon disulfide	6.571	76	479653	44.92	ug/L	98
24) methylene chloride	6.817	84	165912	45.65	ug/L	100
25) methyl acetate	6.581	43	89605	47.69	ug/L	100
26) methyl tert butyl ether	7.120	73	440075	47.42	ug/L	97
27) trans-1,2-dichloroethene	7.157	61	207931	47.61	ug/L	99
28) hexane	7.455	56	100991	51.78	ug/L	96
29) di-isopropyl ether	7.638	45	496602	46.33	ug/L	96
30) 2-butanone	8.229	72	46611	219.52	ug/L	99
31) 1,1-dichloroethane	7.664	63	247012	47.28	ug/L	100
32) chloroprene	7.753	53	192132	52.87	ug/L	99
33) acrylonitrile	7.057	53	49007	49.86	ug/L	93
34) vinyl acetate	7.585	86	17177	51.71	ug/L	# 90
35) ethyl tert-butyl ether	8.051	59	467056	47.18	ug/L	98
36) ethyl acetate	8.234	45	16383	53.21	ug/L	99
37) 2,2-dichloropropane	8.344	77	246826	47.65	ug/L	98
38) cis-1,2-dichloroethene	8.302	96	162192	52.44	ug/L	99
39) propionitrile	8.302	54	188005	509.98	ug/L	95
40) methyl acrylate	8.318	85	15421	53.84	ug/L	# 92
41) methacrylonitrile	8.480	67	42798	52.77	ug/L	95
42) bromochloromethane	8.574	128	77197	52.58	ug/L	98
43) tetrahydrofuran	8.584	72	14852	52.07	ug/L	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v4b3421\
 Data File : 4b82378.d
 Acq On : 1 Jun 2018 2:01 pm
 Operator : HueanhT
 Sample : JC66969-2MS Inst : MS4B
 Misc : MS26771,V4B3421,5,,,,4
 ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:47:49 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) chloroform	8.647	83	236484	49.65	ug/L	98
45) tert-butyl formate	8.679	59	76788	27.27	ug/L	98
47) 1,1,1-trichloroethane	8.898	97	254810	49.48	ug/L	99
48) cyclohexane	9.003	84	214278	39.56	ug/L	83
50) 1,1-dichloropropene	9.039	75	168889	54.55	ug/L	98
51) carbon tetrachloride	9.081	117	222335	51.06	ug/L	99
52) tert-amyl alcohol	9.144	73	32748	218.87	ug/L #	81
53) isopropyl acetate	9.160	87	21346	48.93	ug/L #	92
56) n-butyl alcohol	9.672	56	182296	2265.28	ug/L	95
57) 2,2,4-trimethylpentane	9.353	57	569118	47.62	ug/L	99
58) benzene	9.275	78	502732	49.00	ug/L	99
59) tert-amyl methyl ether	9.338	73	415724	45.46	ug/L	99
60) heptane	9.489	57	98377	48.53	ug/L	95
61) 1,2-dichloroethane	9.296	62	157193	52.10	ug/L	95
62) ethyl acrylate	9.913	55	125806	52.75	ug/L	98
63) trichloroethene	9.944	95	137065	55.88	ug/L	98
65) methyl methacrylate	10.169	100	26565	49.32	ug/L	87
66) methylcyclohexane	10.237	83	290591	48.37	ug/L	98
67) 1,2-dichloropropane	10.221	63	133250	49.14	ug/L	99
68) dibromomethane	10.331	93	78858	52.47	ug/L	93
69) bromodichloromethane	10.473	83	179257	53.31	ug/L	99
70) 2-nitropropane	10.666	41	25850	34.39	ug/L	98
71) epichlorohydrin	10.786	57	53250	240.52	ug/L	93
72) cis-1,3-dichloropropene	10.922	75	198966	51.59	ug/L	95
73) 4-methyl-2-pentanone	11.016	58	185283	198.13	ug/L	87
74) isoamyl alcohol	11.011	70	74272	969.86	ug/L	96
77) toluene	11.315	92	303617	50.20	ug/L	98
78) ethyl methacrylate	11.482	69	138026	51.34	ug/L	96
79) trans-1,3-dichloropropene	11.498	75	173723	54.49	ug/L	94
80) 1,1,2-trichloroethane	11.733	83	92373	51.25	ug/L	97
81) tetrachloroethene	11.890	164	519489	227.39	ug/L	98
82) 2-hexanone	11.895	58	152180	197.99	ug/L	99
83) 1,3-dichloropropane	11.921	76	162631	48.67	ug/L	95
84) butyl acetate	11.974	56	71151	49.69	ug/L	97
85) dibromochloromethane	12.183	129	140040	55.31	ug/L	100
86) 1,2-dibromoethane	12.350	107	125687	52.13	ug/L	100
87) n-butyl ether	12.810	57	582764	50.90	ug/L	99
88) chlorobenzene	12.863	112	348603	50.69	ug/L	97
89) 1,1,1,2-tetrachloroethane	12.931	131	155992	51.74	ug/L	98
90) ethylbenzene	12.925	91	585276	49.63	ug/L	99
91) m,p-xylene	13.056	106	468114	101.67	ug/L	98
92) o-xylene	13.496	91	516459	50.15	ug/L	99
93) styrene	13.506	104	391453	53.22	ug/L	95
94) butyl acrylate	13.302	55	242966	53.69	ug/L	98
95) isopropylbenzene	13.877	105	695236	51.68	ug/L	100
96) bromoform	13.762	173	104370	58.48	ug/L	97
97) cis-1,4-dichloro-2-butene	13.919	88	43034	58.43	ug/L	94
100) 1,1,2,2-tetrachloroethane	14.186	83	174143	49.03	ug/L	99
101) trans-1,4-dichloro-2-b...	14.223	53	33101	62.30	ug/L	92
102) 1,2,3-trichloropropane	14.285	110	43815	49.86	ug/L	97
103) bromobenzene	14.306	156	186221	49.99	ug/L	95
104) n-propylbenzene	14.338	91	775389	48.32	ug/L	99
105) 2-chlorotoluene	14.484	126	172875	49.14	ug/L	95
106) 4-chlorotoluene	14.610	91	453369	48.61	ug/L	99
108) 1,3,5-trimethylbenzene	14.510	105	579290	48.17	ug/L	99
109) tert-butylbenzene	14.887	119	527472	50.20	ug/L	98
110) 1,2,4-trimethylbenzene	14.944	105	599732	49.44	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v4b3421\
 Data File : 4b82378.d
 Acq On : 1 Jun 2018 2:01 pm
 Operator : HueanHT
 Sample : JC66969-2MS Inst : MS4B
 Misc : MS26771,V4B3421,5,,,,4
 ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:47:49 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
111) sec-butylbenzene	15.133	105	819115	49.67	ug/L	100
112) p-isopropyltoluene	15.279	119	705001	50.09	ug/L	99
113) 1,3-dichlorobenzene	15.321	146	371812	49.43	ug/L	99
114) 1,4-dichlorobenzene	15.431	146	370265	48.88	ug/L	98
115) 1,2-dichlorobenzene	15.844	146	391808	48.40	ug/L	99
116) benzyl chloride	15.530	91	354572	50.80	ug/L	100
118) n-butylbenzene	15.734	92	357944	49.08	ug/L	97
120) hexachloroethane	16.168	201	142699	53.19	ug/L	98
121) 1,2-dibromo-3-chloropr...	16.686	157	50944	50.47	ug/L	97
122) 1,3,5-trichlorobenzene	16.890	180	405325	46.67	ug/L	97
123) 1,2,4-trichlorobenzene	17.570	180	349990	46.43	ug/L	98
124) 2-ethylhexyl acrylate	17.575	70	23558	5.53	ug/L	89
125) hexachlorobutadiene	17.685	225	170021	46.87	ug/L	99
126) naphthalene	17.879	128	636017	42.66	ug/L	99
127) 1,2,3-trichlorobenzene	18.114	180	313862	45.95	ug/L	97
128) 2-methylnaphthalene	19.165	142	113748	14.79	ug/L	97

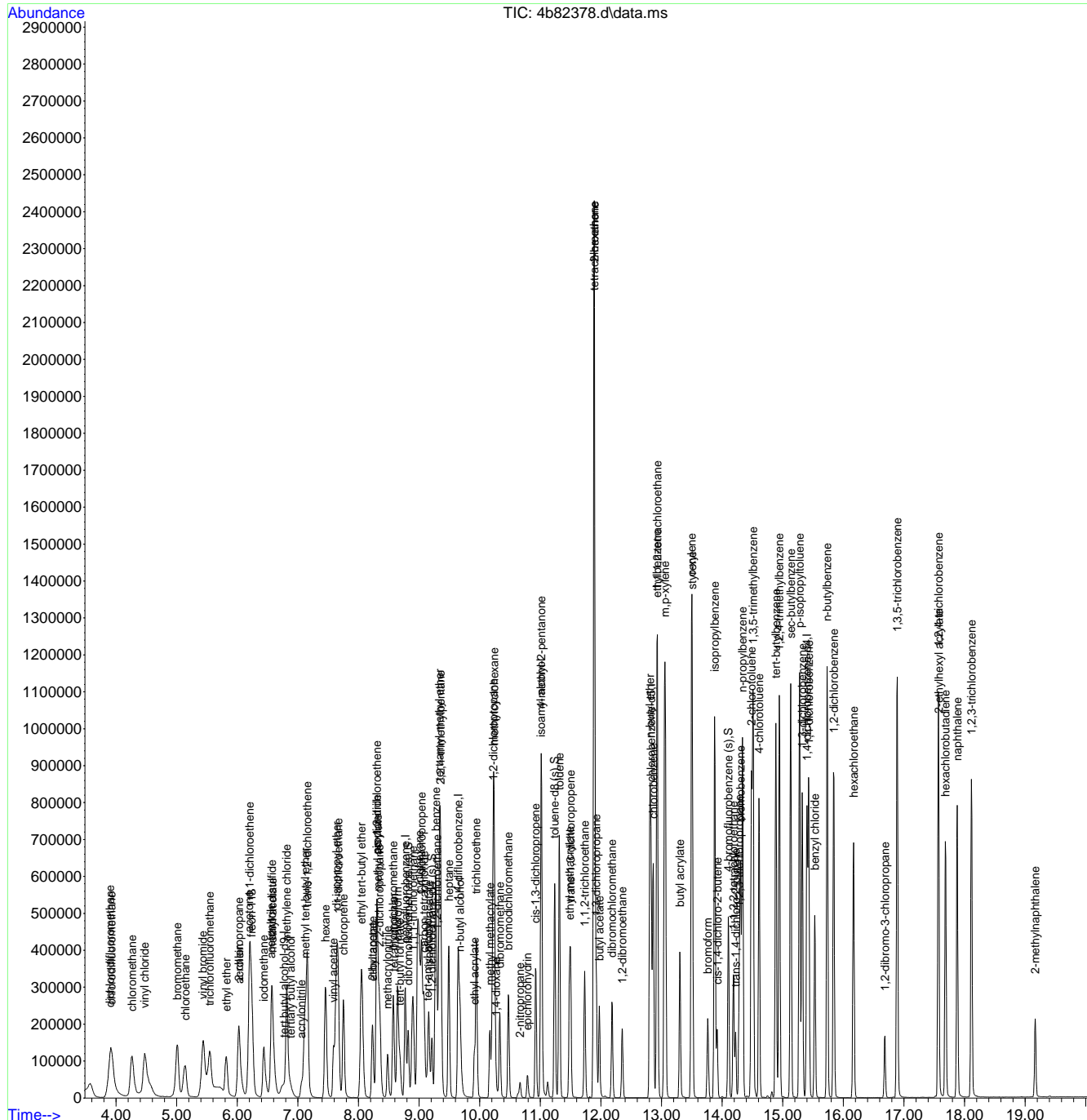
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\unicem60418\v4b3421\
Data File : 4b82378.d
Acq On : 1 Jun 2018 2:01 pm
Operator : HueanhT
Sample : JC66969-2MS
Misc : MS26771,V4B3421,5,,,,,4
ALS Vial : 12 Sample Multiplier: 1

Inst : MS4B

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
Quant Results File: M4B3370.RES
Quant Time: Jun 04 00:47:49 2018
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Tue May 08 14:24:00 2018
Response via : Initial Calibration



7.4.2
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v4b3421\
 Data File : 4b82379.d
 Acq On : 1 Jun 2018 2:29 pm
 Operator : HueanhT
 Sample : JC66969-2MSD Inst : MS4B
 Misc : MS26771,V4B3421,5,,,,,4
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:59:32 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.775	65	120324	500.00	ug/L	0.00
5) pentafluorobenzene	8.773	168	244242	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.646	114	325436	50.00	ug/L	0.00
75) chlorobenzene-d5	12.831	117	320180	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	220396	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	113667	51.91	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	103.82%
55) 1,2-dichloroethane-d4 (s)	9.212	65	107651	50.92	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	101.84%
76) toluene-d8 (s)	11.236	98	387059	49.90	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.80%
99) 4-bromofluorobenzene (s)	14.102	95	154232	48.20	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	96.40%
Target Compounds						
3) tertiary butyl alcohol	6.869	59	86904	275.96	ug/L	98
4) 1,4-dioxane	10.263	88	36390	1257.62	ug/L	91
6) chlorodifluoromethane	3.924	51	314642	51.63	ug/L	99
7) dichlorodifluoromethane	3.909	85	287630	45.71	ug/L	99
8) chloromethane	4.259	50	336529	44.05	ug/L	100
9) vinyl chloride	4.474	62	313244	43.66	ug/L	98
11) bromomethane	5.012	94	212275	41.15	ug/L	99
12) chloroethane	5.133	64	172196	44.39	ug/L	98
13) trichlorofluoromethane	5.546	101	317654	46.77	ug/L	97
14) vinyl bromide	5.431	106	210935	45.64	ug/L	93
15) ethyl ether	5.818	74	69622	49.17	ug/L	93
16) 2-chloropropane	6.027	43	282815	50.82	ug/L	98
17) acrolein	6.027	56	25619	42.16	ug/L	94
18) freon 113	6.231	151	170353	55.39	ug/L	95
19) 1,1-dichloroethene	6.205	61	260025	51.19	ug/L	99
20) acetone	6.194	58	42779	187.61	ug/L	99
21) acetonitrile	6.566	41	213605	456.67	ug/L	100
22) iodomethane	6.435	142	282373	49.35	ug/L	99
23) carbon disulfide	6.571	76	501414	45.92	ug/L	99
24) methylene chloride	6.817	84	171106	46.05	ug/L	97
25) methyl acetate	6.581	43	91404	47.57	ug/L	99
26) methyl tert butyl ether	7.125	73	456871	48.15	ug/L	98
27) trans-1,2-dichloroethene	7.157	61	215578	48.27	ug/L	97
28) hexane	7.455	56	102045	51.17	ug/L	96
29) di-isopropyl ether	7.638	45	515869	47.07	ug/L	100
30) 2-butanone	8.229	72	47647	219.46	ug/L	92
31) 1,1-dichloroethane	7.664	63	255427	47.81	ug/L	98
32) chloroprene	7.753	53	196483	52.88	ug/L	98
33) acrylonitrile	7.063	53	49861	49.61	ug/L	92
34) vinyl acetate	7.586	86	17835	52.51	ug/L #	88
35) ethyl tert-butyl ether	8.051	59	483472	47.76	ug/L	99
36) ethyl acetate	8.239	45	16556	52.59	ug/L #	67
37) 2,2-dichloropropane	8.339	77	252998	47.77	ug/L	99
38) cis-1,2-dichloroethene	8.302	96	170169	53.81	ug/L	99
39) propionitrile	8.302	54	192696	511.19	ug/L	96
40) methyl acrylate	8.318	85	15660	53.47	ug/L #	93
41) methacrylonitrile	8.480	67	43935	52.98	ug/L	93
42) bromochloromethane	8.574	128	78734	52.45	ug/L	99
43) tetrahydrofuran	8.590	72	15474	53.06	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v4b3421\
 Data File : 4b82379.d
 Acq On : 1 Jun 2018 2:29 pm
 Operator : HueanHT
 Sample : JC66969-2MSD Inst : MS4B
 Misc : MS26771,V4B3421,5,,,,4
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:59:32 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) chloroform	8.642	83	243794	50.06	ug/L	99
45) tert-butyl formate	8.684	59	70141	24.36	ug/L	98
47) 1,1,1-trichloroethane	8.898	97	264816	50.29	ug/L	100
48) cyclohexane	9.008	84	218568	39.46	ug/L	97
50) 1,1-dichloropropene	9.040	75	172047	54.35	ug/L	99
51) carbon tetrachloride	9.076	117	230385	51.74	ug/L	98
52) tert-amyl alcohol	9.149	73	34607	226.19	ug/L #	88
53) isopropyl acetate	9.160	87	21718	48.68	ug/L #	86
56) n-butyl alcohol	9.672	56	190267	2323.83	ug/L	92
57) 2,2,4-trimethylpentane	9.353	57	577045	47.46	ug/L	99
58) benzene	9.275	78	518729	49.69	ug/L	99
59) tert-amyl methyl ether	9.338	73	430536	46.27	ug/L	97
60) heptane	9.489	57	98794	47.90	ug/L	95
61) 1,2-dichloroethane	9.296	62	156985	51.14	ug/L	95
62) ethyl acrylate	9.913	55	127056	52.36	ug/L	99
63) trichloroethene	9.944	95	141019	56.51	ug/L	98
65) methyl methacrylate	10.169	100	27805	50.74	ug/L	92
66) methylcyclohexane	10.237	83	296785	48.56	ug/L	98
67) 1,2-dichloropropane	10.222	63	136408	49.44	ug/L	98
68) dibromomethane	10.331	93	81645	53.39	ug/L	93
69) bromodichloromethane	10.478	83	183306	53.59	ug/L	97
70) 2-nitropropane	10.671	41	26857	35.12	ug/L	97
71) epichlorohydrin	10.786	57	55184	244.99	ug/L	97
72) cis-1,3-dichloropropene	10.922	75	207767	52.94	ug/L	96
73) 4-methyl-2-pentanone	11.017	58	192280	202.09	ug/L	94
74) isoamyl alcohol	11.011	70	77376	993.09	ug/L	97
77) toluene	11.315	92	316098	50.53	ug/L	99
78) ethyl methacrylate	11.482	69	145263	52.24	ug/L	94
79) trans-1,3-dichloropropene	11.498	75	178768	54.21	ug/L	94
80) 1,1,2-trichloroethane	11.733	83	95885	51.44	ug/L	97
81) tetrachloroethene	11.890	164	540787	228.85	ug/L	98
82) 2-hexanone	11.895	58	157492	198.11	ug/L	100
83) 1,3-dichloropropane	11.921	76	169055	48.91	ug/L	96
84) butyl acetate	11.974	56	74274	50.15	ug/L	92
85) dibromochloromethane	12.188	129	146950	56.11	ug/L	98
86) 1,2-dibromoethane	12.350	107	130144	52.19	ug/L	100
87) n-butyl ether	12.811	57	615973	52.01	ug/L	100
88) chlorobenzene	12.863	112	365484	51.38	ug/L	97
89) 1,1,1,2-tetrachloroethane	12.936	131	158445	50.80	ug/L	99
90) ethylbenzene	12.926	91	613507	50.30	ug/L	99
91) m,p-xylene	13.056	106	493719	103.67	ug/L	96
92) o-xylene	13.496	91	539927	50.69	ug/L	100
93) styrene	13.506	104	413940	54.41	ug/L	95
94) butyl acrylate	13.302	55	250736	53.57	ug/L	98
95) isopropylbenzene	13.878	105	724870	52.10	ug/L	100
96) bromoform	13.762	173	108758	58.92	ug/L	99
97) cis-1,4-dichloro-2-butene	13.919	88	45463	59.60	ug/L	97
100) 1,1,2,2-tetrachloroethane	14.186	83	176795	48.54	ug/L	99
101) trans-1,4-dichloro-2-b...	14.223	53	34266	62.90	ug/L	98
102) 1,2,3-trichloropropane	14.285	110	44926	49.86	ug/L	95
103) bromobenzene	14.306	156	195987	51.31	ug/L	93
104) n-propylbenzene	14.338	91	808408	49.13	ug/L	99
105) 2-chlorotoluene	14.484	126	181834	50.41	ug/L	97
106) 4-chlorotoluene	14.610	91	474047	49.57	ug/L	97
108) 1,3,5-trimethylbenzene	14.510	105	605044	49.07	ug/L	97
109) tert-butylbenzene	14.887	119	547018	50.77	ug/L	98
110) 1,2,4-trimethylbenzene	14.944	105	621928	50.00	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v4b3421\
 Data File : 4b82379.d
 Acq On : 1 Jun 2018 2:29 pm
 Operator : HueanHT
 Sample : JC66969-2MSD Inst : MS4B
 Misc : MS26771,V4B3421,5,,,,4
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:59:32 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
111) sec-butylbenzene	15.133	105	850509	50.30	ug/L	100
112) p-isopropyltoluene	15.279	119	730990	50.65	ug/L	99
113) 1,3-dichlorobenzene	15.321	146	384234	49.82	ug/L	99
114) 1,4-dichlorobenzene	15.431	146	383151	49.33	ug/L	99
115) 1,2-dichlorobenzene	15.844	146	405649	48.87	ug/L	97
116) benzyl chloride	15.530	91	363634	50.81	ug/L	99
118) n-butylbenzene	15.734	92	369656	49.44	ug/L	99
120) hexachloroethane	16.168	201	145100	52.75	ug/L	99
121) 1,2-dibromo-3-chloropr...	16.686	157	53501	51.69	ug/L	96
122) 1,3,5-trichlorobenzene	16.890	180	415003	46.60	ug/L	98
123) 1,2,4-trichlorobenzene	17.570	180	362271	46.87	ug/L	98
124) 2-ethylhexyl acrylate	17.575	70	26057	5.91	ug/L	93
125) hexachlorobutadiene	17.685	225	175186	47.10	ug/L	98
126) naphthalene	17.879	128	668921	43.76	ug/L	99
127) 1,2,3-trichlorobenzene	18.114	180	325713	46.50	ug/L	98
128) 2-methylnaphthalene	19.165	142	133755	16.96	ug/L	100

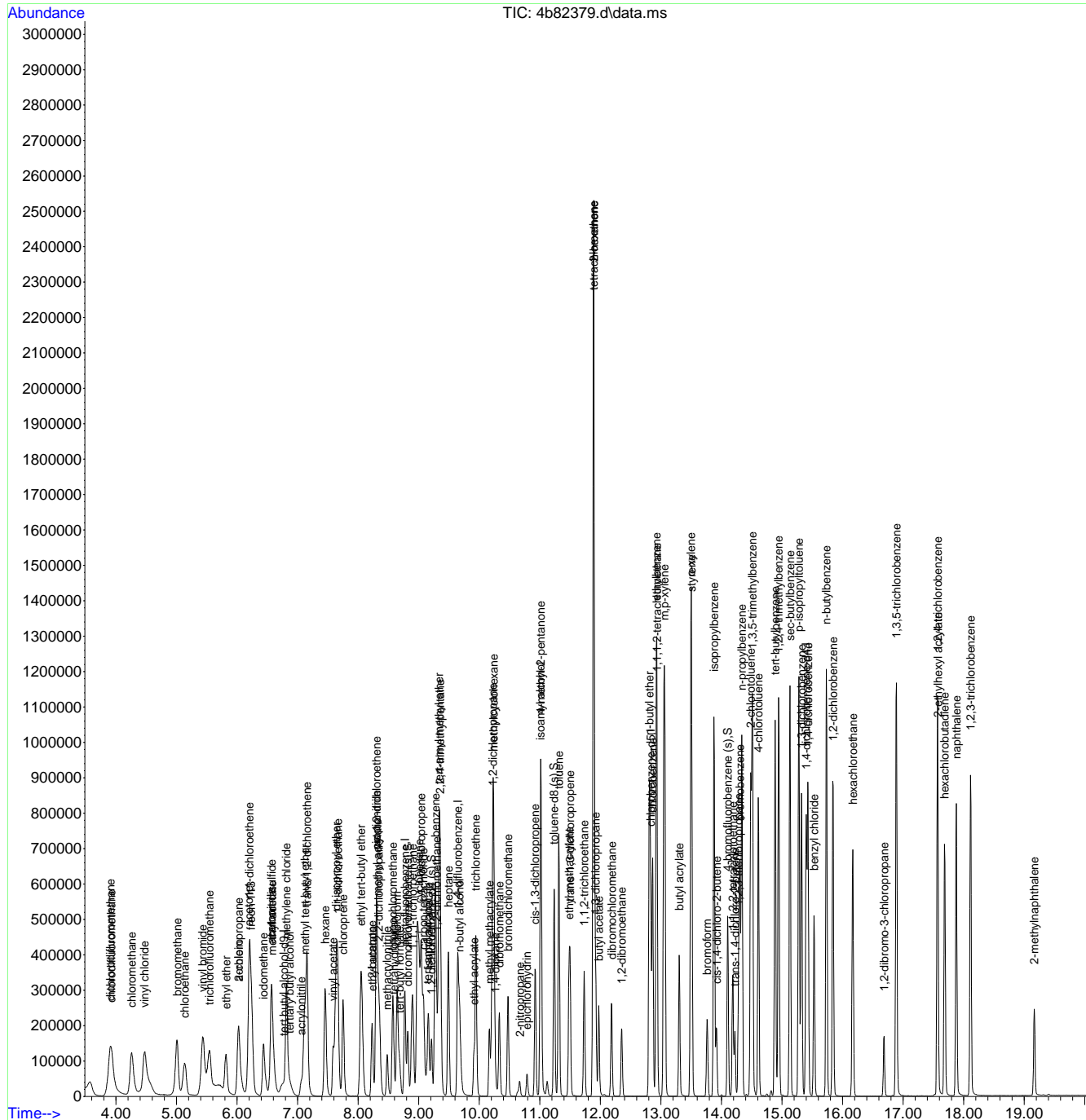
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\unicem60418\v4b3421\
Data File : 4b82379.d
Acq On : 1 Jun 2018 2:29 pm
Operator : HueanhT
Sample : JC66969-2MSD
Misc : MS26771,V4B3421,5,,,,,4
ALS Vial : 13 Sample Multiplier: 1

Inst : MS4B

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
Quant Results File: M4B3370.RES
Quant Time: Jun 04 00:59:32 2018
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Tue May 08 14:24:00 2018
Response via : Initial Calibration



7.4.3
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v2b7179\
 Data File : 2b160791.d
 Acq On : 1 Jun 2018 1:25 pm
 Operator : sydneyes
 Sample : jc67003-3dup Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 03 23:05:40 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.302	65	84112	500.00	ug/L	0.00
5) pentafluorobenzene	10.756	168	246099	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.700	114	320280	50.00	ug/L	0.00
76) chlorobenzene-d5	15.040	117	312574	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.525	152	162519	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.756	113	108460	56.58	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	113.16%
55) 1,2-dichloroethane-d4 (s)	11.202	65	119014	52.31	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	104.62%
77) toluene-d8 (s)	13.435	98	387827	50.09	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.18%
100) 4-bromofluorobenzene (s)	16.277	95	141949	52.19	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	104.38%

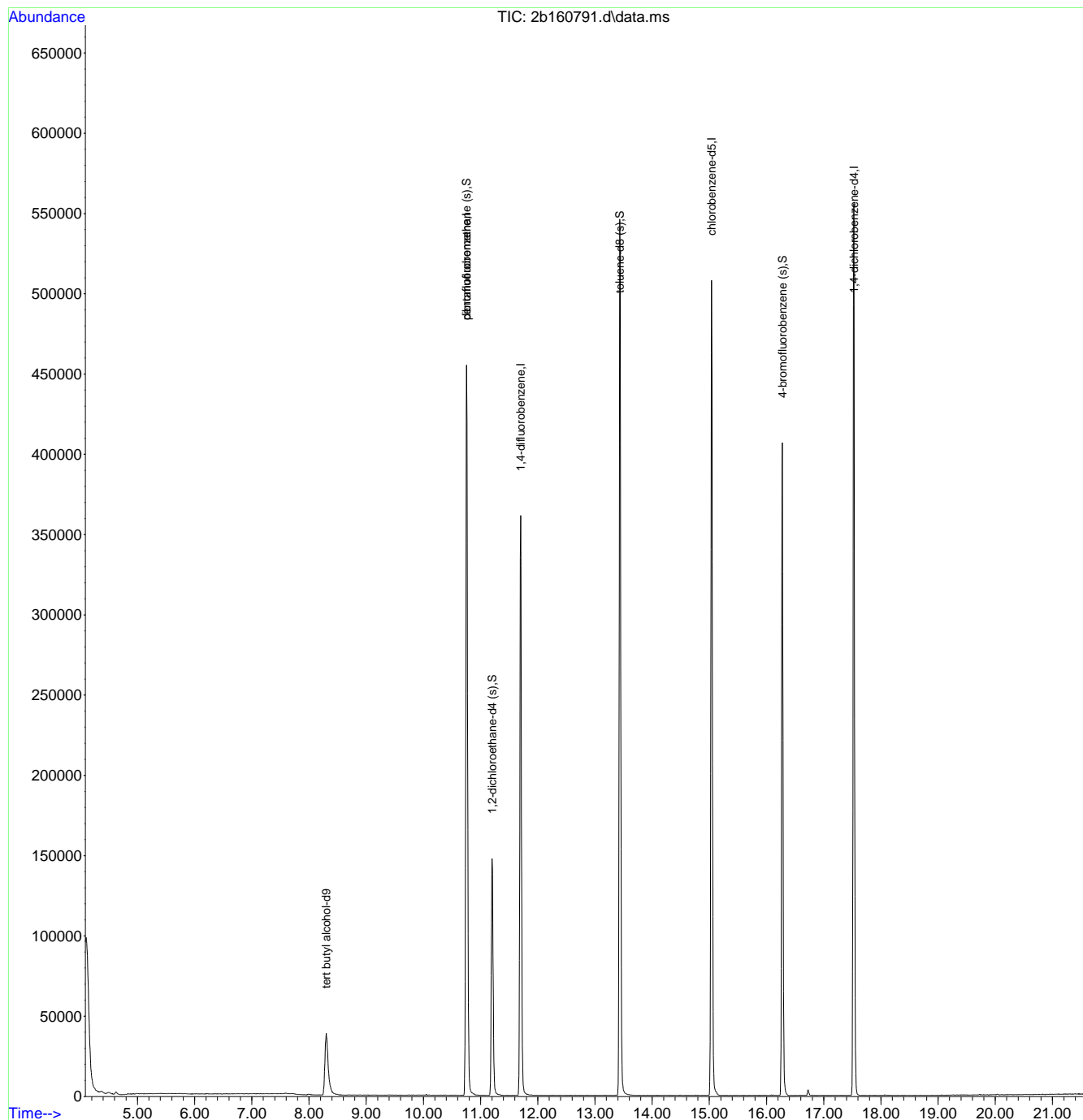
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\unicem60418\v2b7179\
 Data File : 2b160791.d
 Acq On : 1 Jun 2018 1:25 pm
 Operator : sydney
 Sample : jc67003-3dup Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 03 23:05:40 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration



7.5.1
7

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\V2B7119\2B159788.D

Vial: 5

Acq On : 16 Apr 2018 4:23 pm

Operator: sydney

Sample : bfb

Inst : MS2B

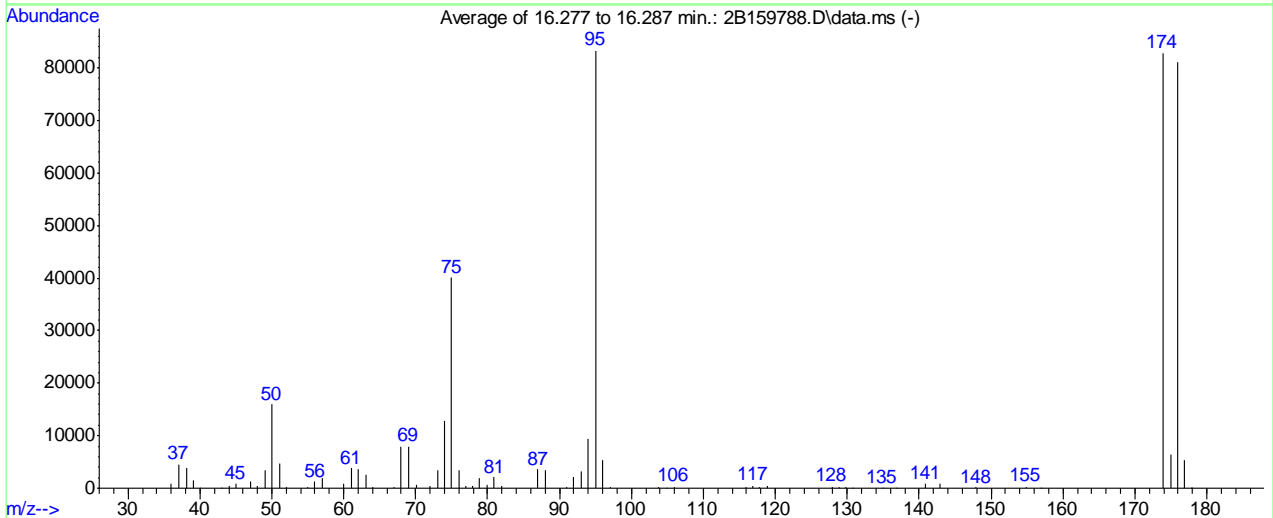
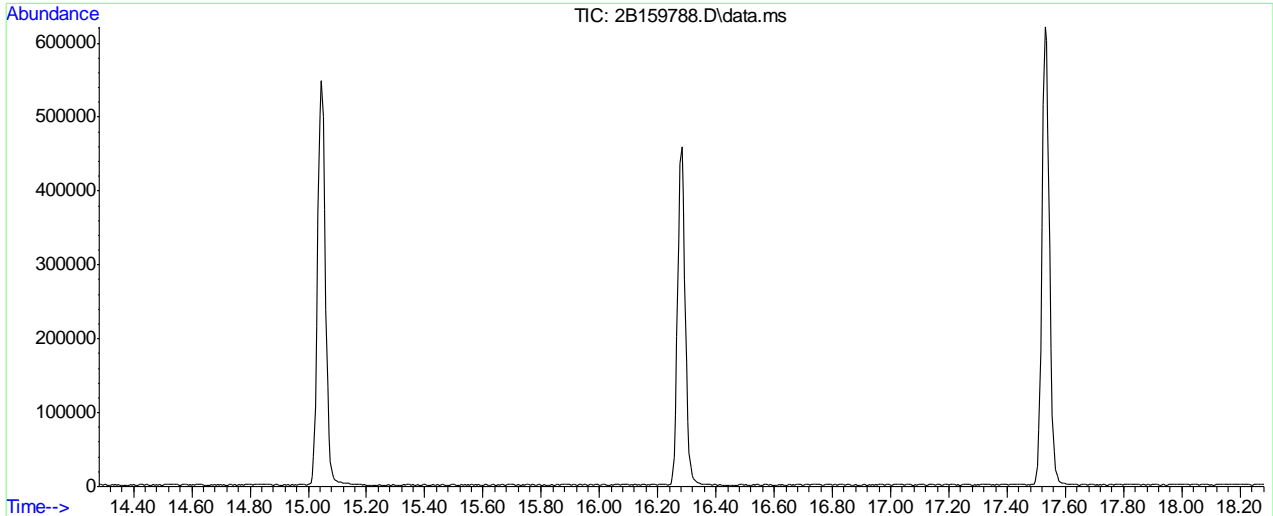
Misc : MS25548,V2B7119,5,,,1

Multiplr: 1.00

MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2B7119.M (RTE Integrator)

Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um



AutoFind: Scans 2326, 2327, 2328; Background Corrected with Scan 2317

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.1	15923	PASS
75	95	30	60	48.1	40069	PASS
95	95	100	100	100.0	83314	PASS
96	95	5	9	6.5	5375	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	99.4	82794	PASS
175	174	5	9	7.6	6307	PASS
176	174	95	101	98.0	81144	PASS
177	176	5	9	6.6	5380	PASS

2B159788.D M2B7119.M

Tue Apr 17 13:55:52 2018

Average of 16.277 to 16.287 min.: 2B159788.D\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	915	50.00	15923	67.05	283	78.90	1997
37.00	4496	51.05	4754	68.00	7885	79.95	608
38.10	3906	52.05	206	69.00	7919	80.90	2112
39.05	1593	55.00	135	70.05	661	81.90	446
40.00	101	56.00	1282	72.00	456	86.95	3545
43.05	36	57.00	1994	73.00	3526	88.00	3409
44.00	433	60.00	833	74.00	12909	90.95	308
45.00	812	61.00	3829	75.00	40069	92.00	2139
47.05	1221	62.00	3662	76.00	3340	93.00	3183
47.95	488	63.05	2626	77.00	495	94.00	9381
49.00	3518	64.05	243	77.95	338	95.00	83314

Average of 16.277 to 16.287 min.: 2B159788.D\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.00	5375	129.85	280	175.90	81144		
97.05	232	130.80	59	176.90	5380		
103.85	324	134.90	111	177.80	57		
104.90	50	136.80	54	177.95	115		
105.90	326	140.90	776				
115.90	282	142.95	765				
116.90	475	147.90	177				
117.85	277	154.90	246				
118.90	381	156.90	55				
127.90	280	173.90	82794				
128.85	175	174.95	6307				

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\V2B7119\2B159804.D

Vial: 2

Acq On : 17 Apr 2018 8:07 am

Operator: sydney

Sample : bfb2

Inst : MS2B

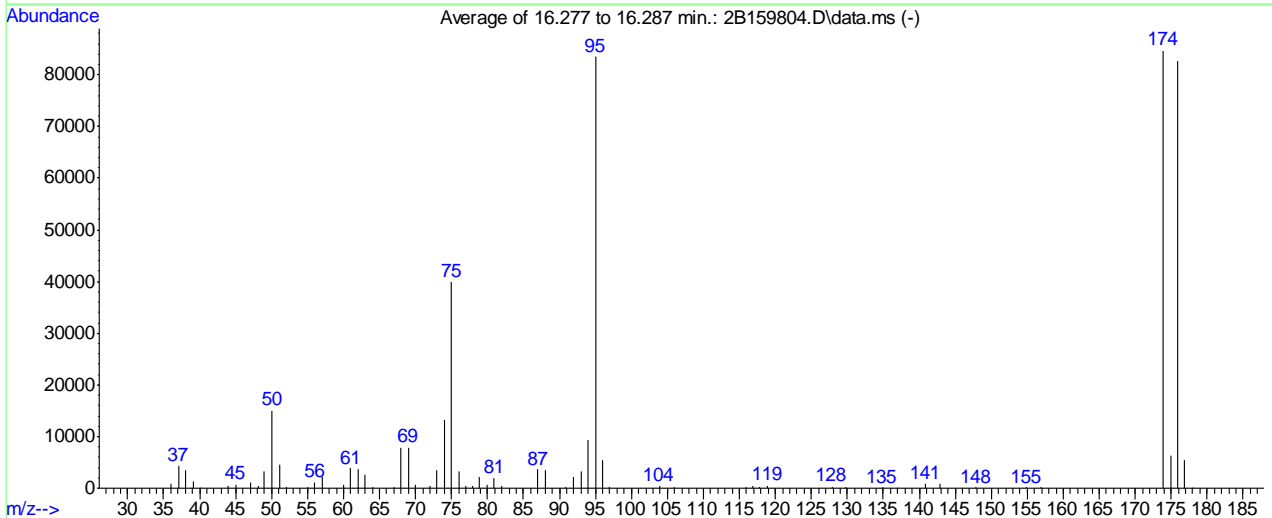
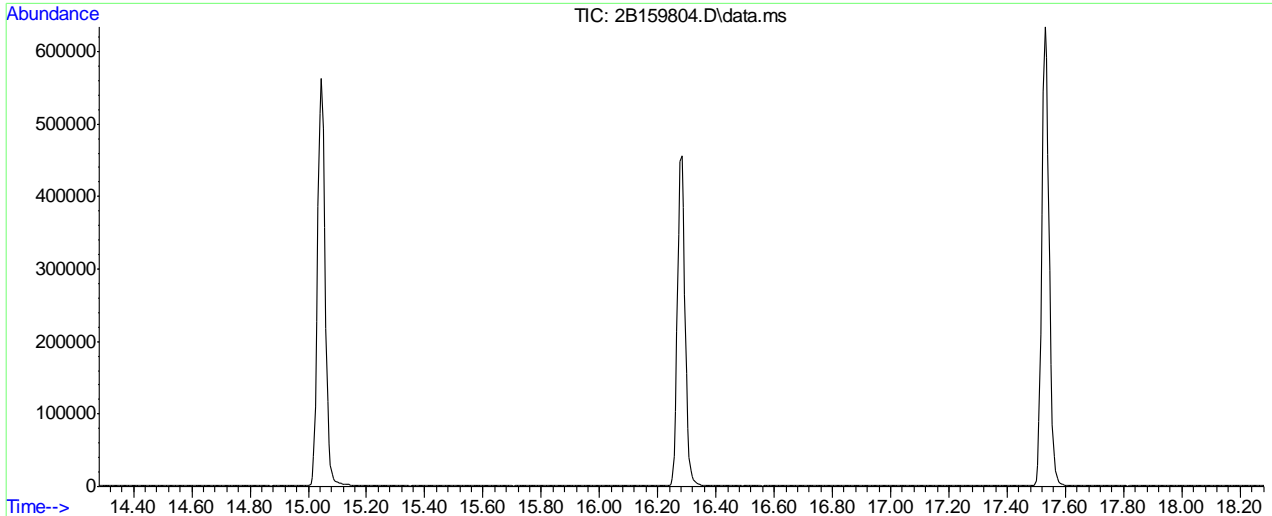
Misc : MS25548,V2B7119,5,,,1

Multiplr: 1.00

MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2B7119.M (RTE Integrator)

Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um



AutoFind: Scans 2326, 2327, 2328; Background Corrected with Scan 2317

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.0	15038	PASS
75	95	30	60	47.7	39826	PASS
95	95	100	100	100.0	83509	PASS
96	95	5	9	6.4	5384	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	101.5	84722	PASS
175	174	5	9	7.3	6226	PASS
176	174	95	101	97.6	82720	PASS
177	176	5	9	6.5	5365	PASS

2B159804.D M2B7119.M

Tue Apr 17 14:08:29 2018

Average of 16.277 to 16.287 min.: 2B159804.D\data.ms

bfb2

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	866	51.05	4661	68.00	7774	79.90	580
37.05	4309	52.05	191	69.00	7857	80.90	2064
38.10	3575	54.95	233	70.00	589	81.90	425
39.10	1399	56.00	1155	71.95	473	87.00	3635
40.00	13	57.00	2085	73.00	3477	88.00	3479
44.00	348	60.00	722	74.00	13284	90.90	295
45.00	712	61.00	3814	75.00	39826	92.00	2131
47.00	1158	62.00	3663	76.00	3334	93.00	3284
48.10	524	63.00	2622	77.00	457	94.00	9357
49.00	3303	64.00	246	77.95	374	95.00	83509
50.05	15038	67.05	249	78.90	2086	96.00	5384

Average of 16.277 to 16.287 min.: 2B159804.D\data.ms

bfb2

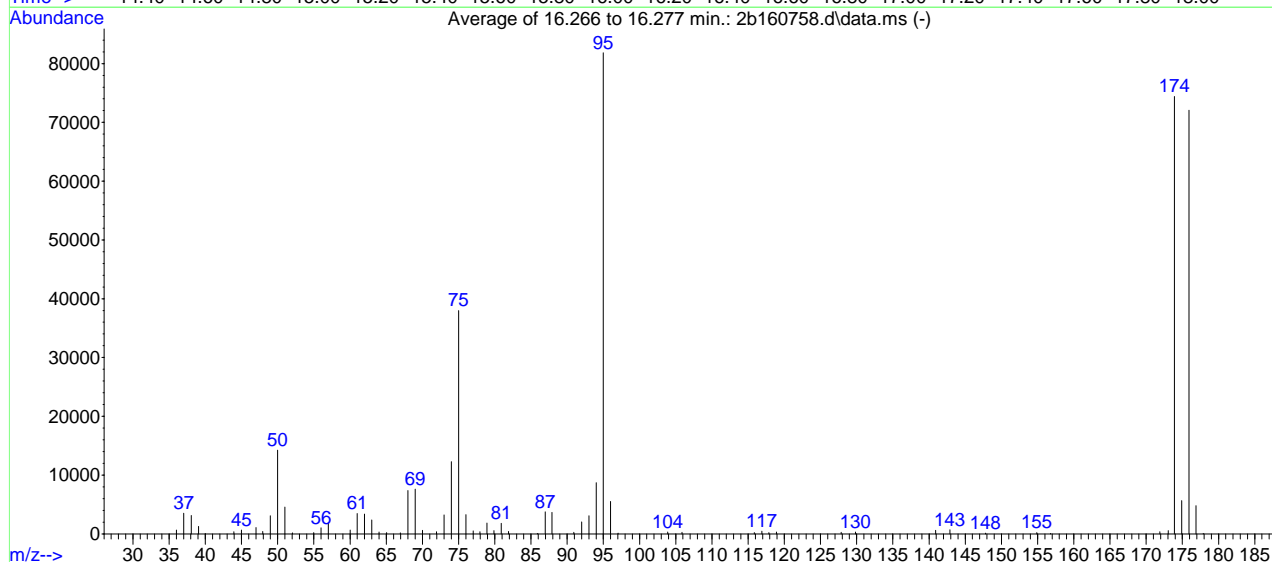
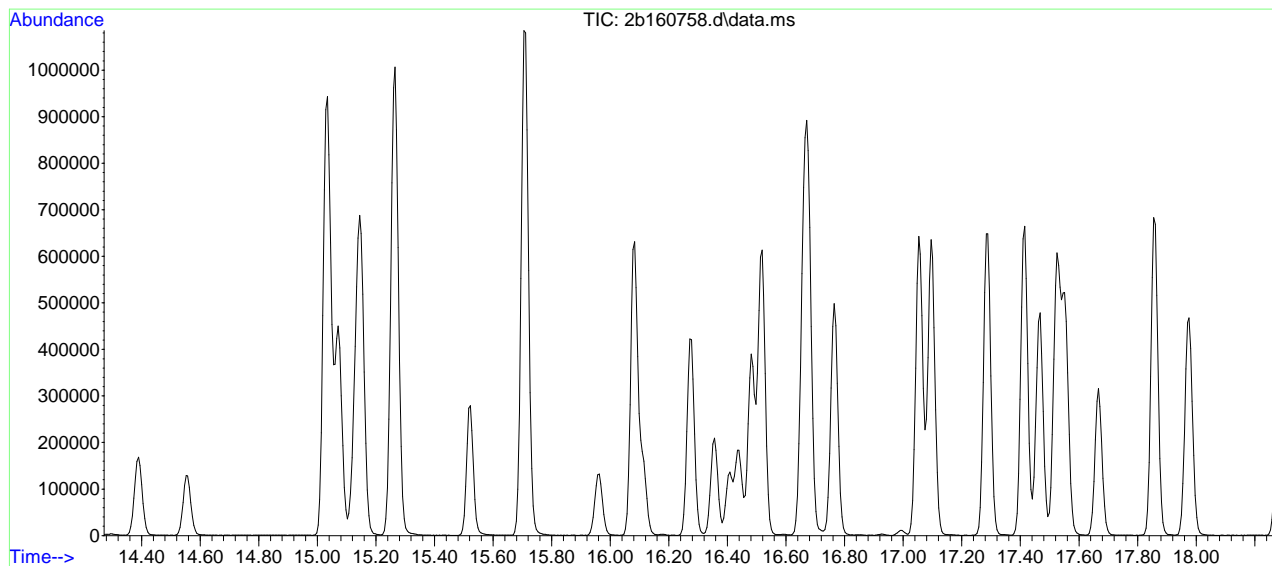
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
97.00	138	140.90	862				
103.90	339	142.90	853				
105.90	279	147.90	147				
115.90	265	154.90	196				
116.90	460	156.90	116				
117.85	292	173.90	84722				
118.90	477	174.95	6226				
127.90	301	175.90	82720				
129.85	275	176.90	5365				
134.90	116	177.90	50				
136.95	110						

SW-846 Method 8260

Data File : C:\msdchem\1\data\eu...18\v2b7179\2b160758.d Vial: 19
 Acq On : 31 May 2018 5:45 pm Operator: deving
 Sample : bfb Inst : MS2B
 Misc : MS26754,V2B7179,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2B7119.M (RTE Integrator)
 Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um



AutoFind: Scans 2324, 2325, 2326; Background Corrected with Scan 2315

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.4	14233	PASS
75	95	30	60	46.4	37997	PASS
95	95	100	100	100.0	81827	PASS
96	95	5	9	6.8	5535	PASS
173	174	0.00	2	0.7	555	PASS
174	95	50	120	90.9	74405	PASS
175	174	5	9	7.6	5649	PASS
176	174	95	101	96.9	72067	PASS
177	176	5	9	6.6	4786	PASS

2b160758.d M2B7119.M Sun Jun 03 22:21:28 2018

Average of 16.266 to 16.277 min.: 2b160758.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	667	51.00	4545	66.95	150	78.90	1822
37.00	3508	52.05	182	68.00	7367	79.90	564
38.05	3142	55.00	204	69.00	7621	80.90	1809
39.05	1274	56.00	1030	70.00	605	81.90	418
40.00	28	57.00	1876	71.95	379	85.90	53
43.95	366	60.00	642	73.00	3217	86.95	3738
45.00	624	61.00	3471	74.00	12294	87.90	3672
47.00	1069	62.00	3364	75.00	37997	90.90	268
47.95	401	63.00	2358	76.00	3283	92.00	2018
49.00	3094	64.00	307	77.00	486	93.00	3073
50.00	14233	65.05	202	77.95	347	94.00	8699

Average of 16.266 to 16.277 min.: 2b160758.d\data.ms

bfb

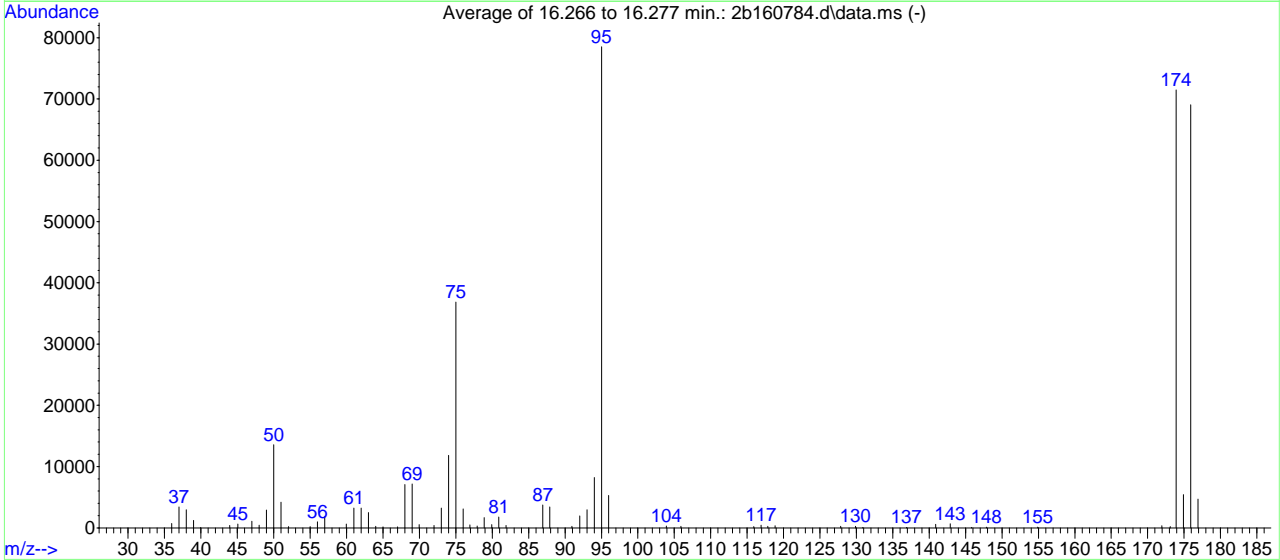
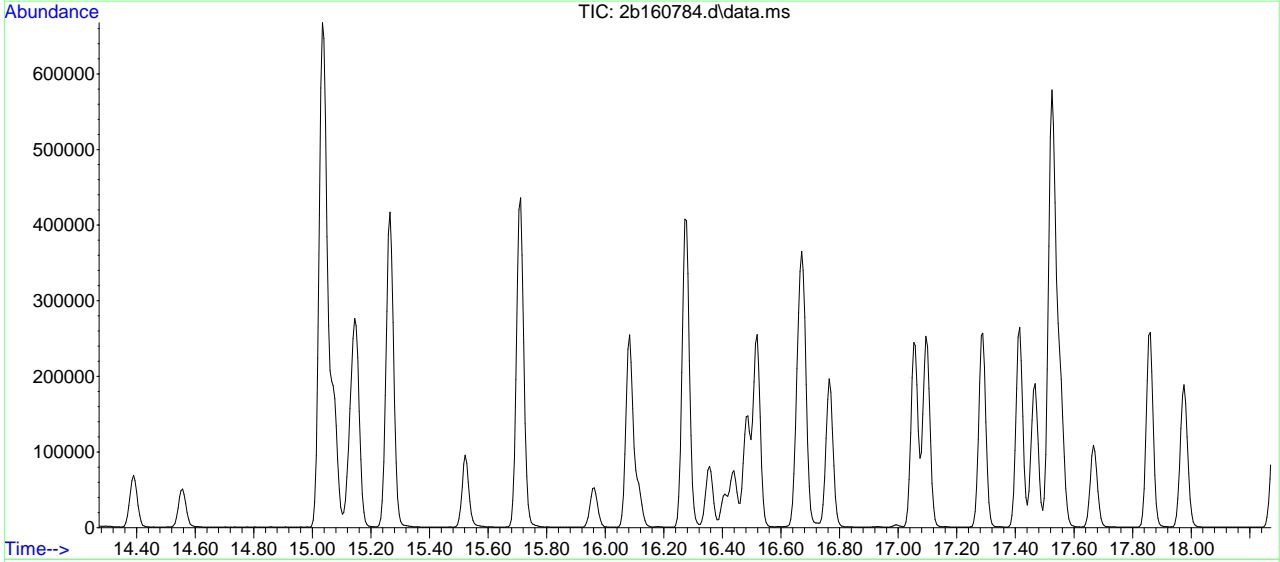
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.00	81827	140.90	587	177.90	54		
96.00	5535	142.90	685				
97.05	111	147.80	114				
103.90	290	154.90	207				
105.85	251	156.80	60				
115.85	206	171.90	351				
116.90	473	173.05	555				
117.85	239	173.90	74405				
118.90	318	174.90	5649				
127.85	262	175.90	72067				
129.85	302	176.90	4786				

SW-846 Method 8260

Data File : C:\msdchem\1\data\eu...18\v2b7179\2b160784.d Vial: 4
 Acq On : 1 Jun 2018 9:15 am Operator: sydneyes
 Sample : bfb2 Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2B7119.M (RTE Integrator)
 Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um



AutoFind: Scans 2324, 2325, 2326; Background Corrected with Scan 2316

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.3	13586	PASS
75	95	30	60	47.0	36867	PASS
95	95	100	100	100.0	78507	PASS
96	95	5	9	6.7	5286	PASS
173	174	0.00	2	0.3	209	PASS
174	95	50	120	91.0	71480	PASS
175	174	5	9	7.6	5417	PASS
176	174	95	101	96.6	69064	PASS
177	176	5	9	6.8	4676	PASS

Average of 16.266 to 16.277 min.: 2b160784.d\data.ms

bfb2

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	691	51.00	4192	67.00	175	78.90	1693
37.00	3410	52.05	211	68.00	7060	79.95	520
38.00	2959	55.00	220	69.00	7181	80.90	1764
39.00	1221	56.00	1002	69.95	530	81.90	392
39.95	26	57.00	1802	72.00	381	86.95	3747
43.95	406	59.95	641	73.00	3233	87.90	3410
45.05	602	61.00	3214	74.00	11823	90.95	236
47.00	1073	62.00	3207	75.00	36867	92.00	1946
48.00	443	63.00	2514	76.00	3112	93.00	2937
49.00	2896	64.00	263	76.95	507	94.00	8220
50.00	13586	65.00	145	77.95	304	95.00	78507

Average of 16.266 to 16.277 min.: 2b160784.d\data.ms

bfb2

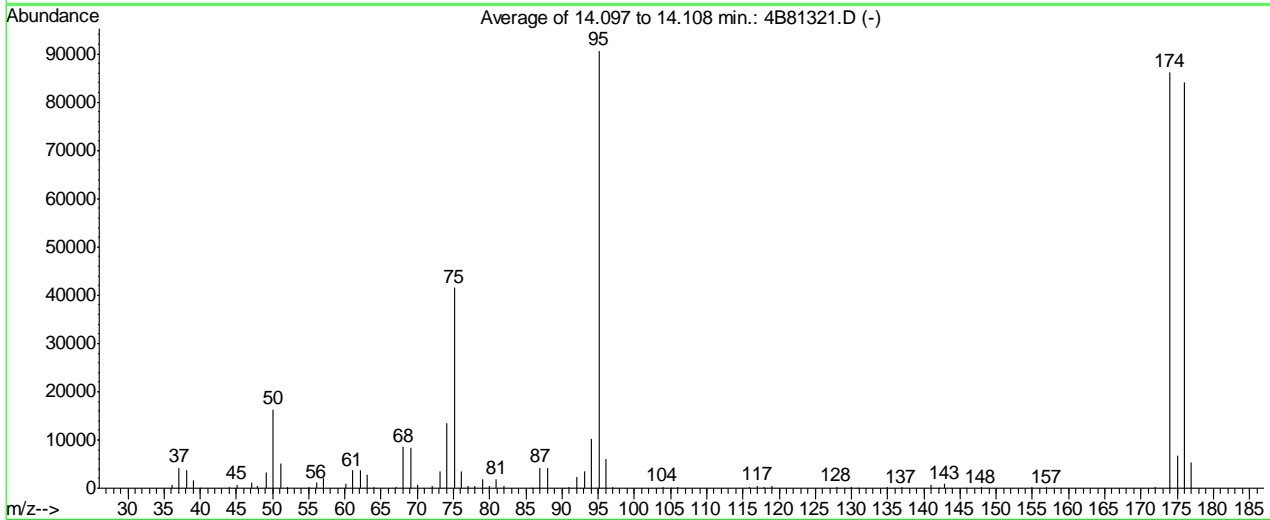
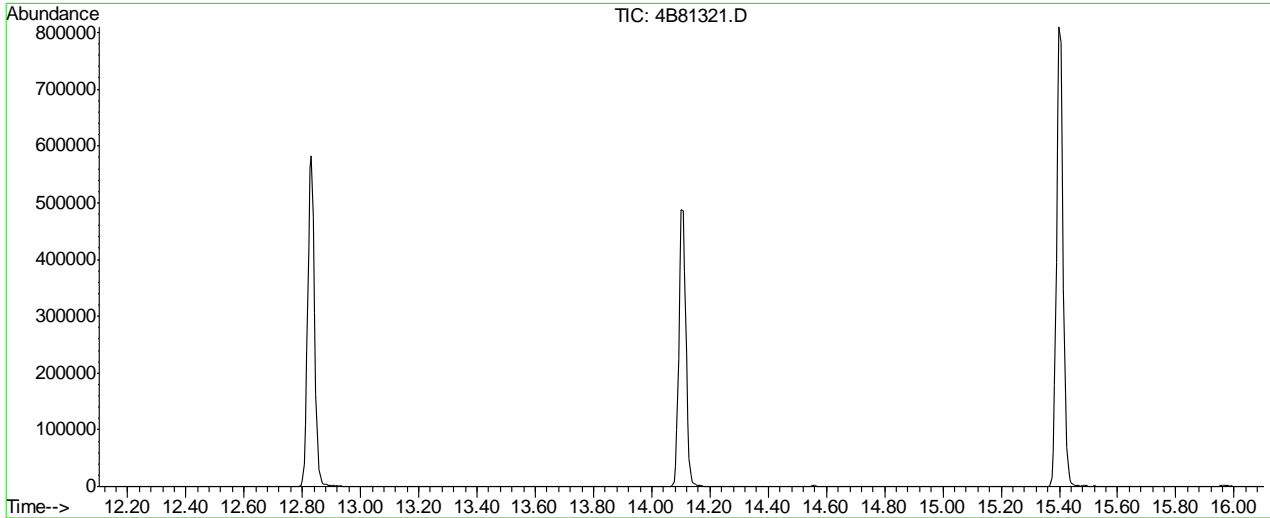
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.00	5286	140.90	553				
103.90	291	142.90	669				
105.90	248	145.80	54				
115.90	213	147.85	107				
116.90	416	154.90	128				
117.85	236	171.95	344				
118.85	344	173.10	209				
127.85	263	173.90	71480				
129.90	273	174.90	5417				
130.90	54	175.90	69064				
136.90	53	176.90	4676				

SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\V4B3370\4B81321.D Vial: 2
 Acq On : 25 Apr 2018 3:08 pm Operator: HueanhT
 Sample : bfb Inst : MS4B
 Misc : MS25764,V4B3370,5,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B3370.M (RTE Integrator)
 Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um



AutoFind: Scans 2030, 2031, 2032; Background Corrected with Scan 2022

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.9	16281	PASS
75	95	30	60	45.8	41533	PASS
95	95	100	100	100.0	90725	PASS
96	95	5	9	6.7	6121	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	95.1	86293	PASS
175	174	5	9	7.8	6714	PASS
176	174	95	101	97.3	84002	PASS
177	176	5	9	6.5	5433	PASS

7.6.5
7

Average of 14.097 to 14.108 min.: 4B81321.D

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	703	51.10	5085	68.10	8529	80.00	591
37.10	4292	52.05	217	69.10	8332	80.95	1919
38.10	3636	55.05	240	70.05	627	81.95	466
39.10	1569	56.05	1110	72.05	458	85.90	52
40.05	3	57.10	2119	73.10	3520	87.00	4250
44.00	255	60.05	866	74.10	13566	88.00	4233
45.05	760	61.05	3681	75.10	41533	90.95	256
47.10	1223	62.10	3626	76.10	3472	92.05	2248
47.95	511	63.10	2743	77.00	496	93.05	3446
49.10	3291	64.00	196	77.95	400	94.10	10118
50.10	16281	67.15	148	79.00	1826	95.10	90725

Average of 14.097 to 14.108 min.: 4B81321.D

bfb

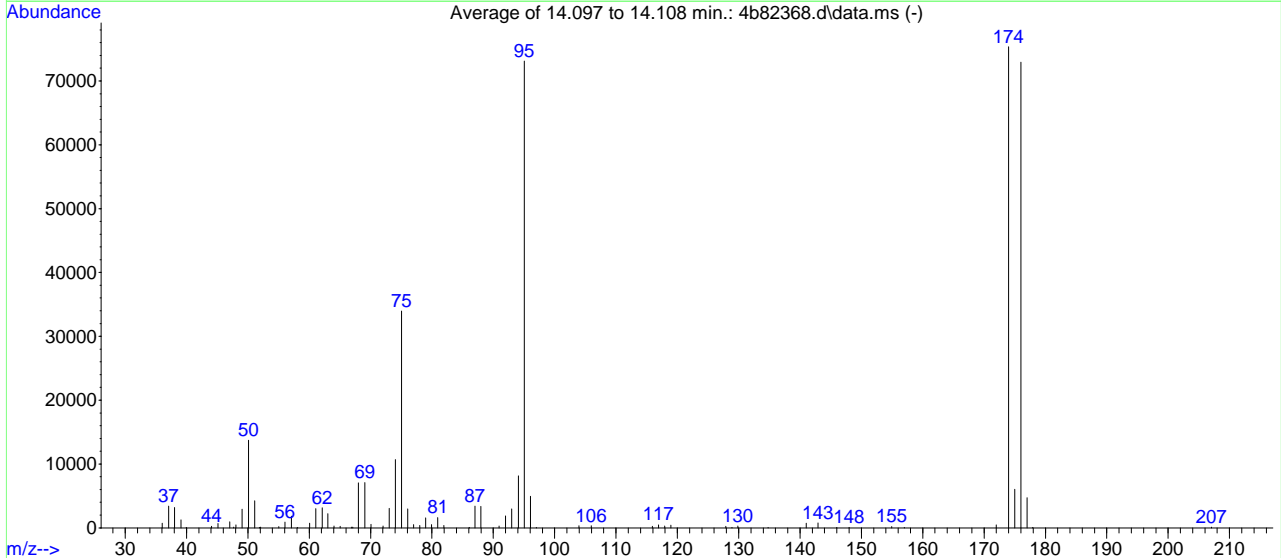
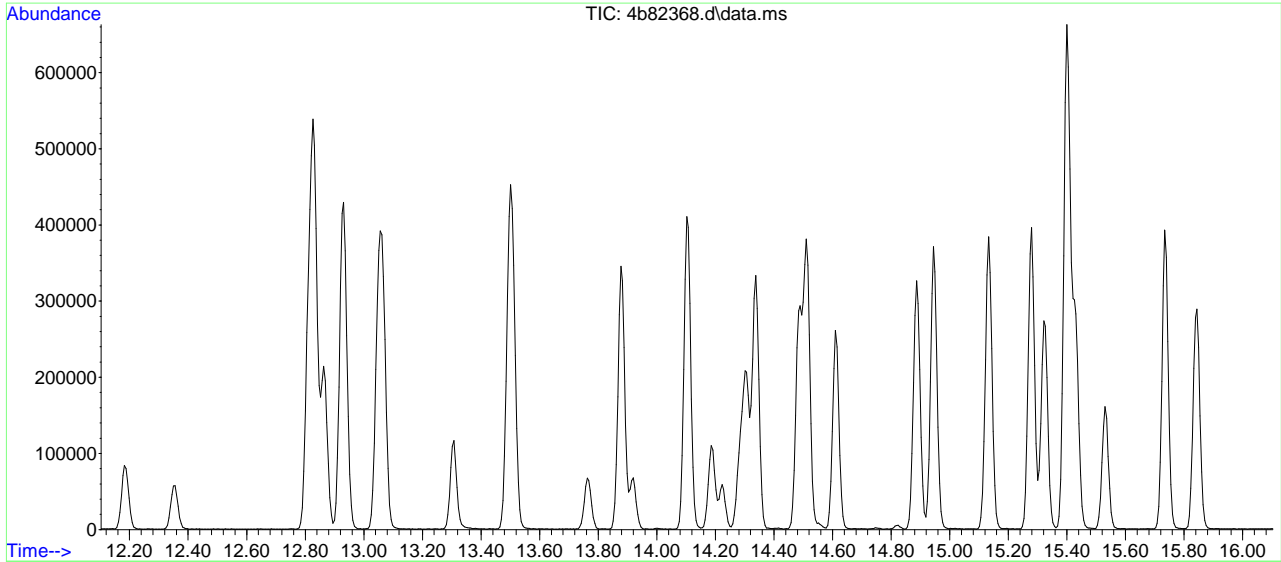
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.10	6121	129.80	72	157.00	226		
97.05	226	130.05	206	171.95	244		
103.95	333	130.90	51	174.00	86293		
105.00	63	134.95	138	175.00	6714		
105.95	292	136.95	183	176.00	84002		
115.90	259	140.95	820	177.00	5433		
117.00	544	142.00	55				
117.95	231	142.90	876				
118.95	429	145.80	51				
127.95	334	147.95	150				
129.00	112	154.95	196				

SW-846 Method 8260

Data File : C:\msdchem\1\data\eu...418\v4b3421\4b82368.d Vial: 2
 Acq On : 1 Jun 2018 9:04 am Operator: HueanhT
 Sample : bfb Inst : MS4B
 Misc : MS26771,V4B3421,5,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B3370.M (RTE Integrator)
 Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um



AutoFind: Scans 2030, 2031, 2032; Background Corrected with Scan 2022

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.7	13701	PASS
75	95	30	60	46.4	33957	PASS
95	95	100	100	100.0	73123	PASS
96	95	5	9	6.8	4941	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	103.0	75341	PASS
175	174	5	9	8.0	6051	PASS
176	174	95	101	96.8	72941	PASS
177	176	5	9	6.5	4712	PASS

Average of 14.097 to 14.108 min.: 4b82368.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	740	50.10	13701	63.05	2239	75.05	33957
37.10	3398	51.10	4253	64.05	280	76.05	2972
38.05	3192	51.90	52	65.05	238	77.00	492
39.10	1256	52.05	131	66.90	98	78.00	356
39.95	48	55.05	213	67.10	95	78.95	1567
44.05	231	56.05	893	68.00	7058	79.95	525
45.10	679	57.10	1813	69.05	7089	80.95	1599
47.05	947	58.10	59	70.05	532	81.95	399
47.70	110	60.05	725	72.05	304	86.10	71
48.05	471	61.05	3025	73.05	3062	87.00	3417
49.05	2920	62.10	3141	74.05	10676	87.95	3350

Average of 14.097 to 14.108 min.: 4b82368.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
90.95	275	117.95	296	157.00	59		
92.00	1882	118.95	421	172.00	455		
93.00	2962	127.90	235	174.00	75341		
94.10	8159	128.90	54	175.00	6051		
95.05	73123	129.85	273	176.00	72941		
96.05	4941	134.80	64	177.00	4712		
97.00	60	141.00	746	177.90	61		
103.95	312	142.95	749	207.05	116		
105.95	326	146.00	56				
115.95	237	148.00	79				
116.95	485	154.95	217				

7.6.6

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159789.D
 Acq On : 16 Apr 2018 4:59 pm
 Operator : sydney
 Sample : ic7119-0.5
 Misc : MS25548,V2B7118,5,,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 17 14:14:52 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:15:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.307	65	105858	500.00	ug/L	0.00
5) pentafluorobenzene	10.761	168	280937	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.705	114	354518	50.00	ug/L	0.00
76) chlorobenzene-d5	15.045	117	333513	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.535	152	192146	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.761	113	107578	49.15	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.30%
55) 1,2-dichloroethane-d4 (s)	11.207	65	128897	51.36	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	102.72%
77) toluene-d8 (s)	13.440	98	409638	49.50	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.00%
100) 4-bromofluorobenzene (s)	16.282	95	159411	49.61	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.22%
Target Compounds						
6) chlorodifluoromethane	4.522	51	1702	0.57	ug/L	64
7) dichlorodifluoromethane	4.496	85	1302	0.45	ug/L #	51
10) chloromethane	4.941	50	2452	0.64	ug/L	79
11) vinyl chloride	5.209	62	1554	0.47	ug/L	82
13) bromomethane	5.917	94	1235	0.58	ug/L	77
14) chloroethane	6.095	64	902	0.51	ug/L	54
15) trichlorofluoromethane	6.661	101	1481	0.43	ug/L	79
16) vinyl bromide	6.509	106	951	0.48	ug/L #	82
17) ethyl ether	7.123	74	504	0.42	ug/L #	46
20) 1,1-dichloroethene	7.563	96	1360	0.69	ug/L #	76
23) iodomethane	7.846	142	1438	0.46	ug/L	86
24) carbon disulfide	7.998	76	3316	0.56	ug/L	68
25) methylene chloride	8.339	84	1208	0.54	ug/L #	67
27) methyl tert butyl ether	8.779	73	3261	0.52	ug/L	90
28) trans-1,2-dichloroethene	8.790	96	1201	0.56	ug/L	94
29) di-isopropyl ether	9.450	45	4690	0.58	ug/L	96
31) 1,1-dichloroethane	9.387	63	2115	0.53	ug/L	88
32) chloroprene	9.529	53	1992	0.57	ug/L	98
36) ethyl tert-butyl ether	9.949	59	3739	0.50	ug/L	96
39) cis-1,2-dichloroethene	10.179	96	1270	0.54	ug/L	91
41) propionitrile	10.232	54	1578	5.24	ug/L	76
42) bromochloromethane	10.489	128	454	0.40	ug/L	94
44) chloroform	10.567	85	1489	0.60	ug/L	90
48) 1,1,1-trichloroethane	10.861	97	1764	0.53	ug/L	96
50) 1,1-dichloropropene	11.055	75	1413	0.51	ug/L	93
52) carbon tetrachloride	11.097	117	1433	0.51	ug/L #	73
56) n-butyl alcohol	11.831	56	1457	29.44	ug/L	78
57) 2,2,4-trimethylpentane	11.390	57	4370	0.58	ug/L	92
58) benzene	11.327	78	4473	0.56	ug/L	99
59) tert-amyl methyl ether	11.401	87	714	0.49	ug/L #	65
60) heptane	11.569	71	755	0.50	ug/L #	67
63) trichloroethene	12.067	130	1121	0.51	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159789.D
 Acq On : 16 Apr 2018 4:59 pm
 Operator : sydney
 Sample : ic7119-0.5
 Misc : MS25548,V2B7118,5,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 17 14:14:52 2018

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Apr 17 07:15:00 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
66) 2-chloroethyl vinyl ether	12.890	63	3281	2.47	ug/L	93
68) 1,2-dichloropropane	12.329	63	1137	0.52	ug/L	89
69) dibromomethane	12.476	93	565	0.47	ug/L	91
70) methylcyclohexane	12.334	83	2053	0.55	ug/L	94
71) bromodichloromethane	12.612	83	1626	0.56	ug/L	95
73) cis-1,3-dichloropropene	13.115	75	1739	0.49	ug/L	79
74) 4-methyl-2-pentanone	13.231	58	1654	2.20	ug/L	94
75) 3-methyl-1-butanol	13.241	70	522	11.10	ug/L #	80
78) toluene	13.524	92	2641	0.53	ug/L	90
79) trans-1,3-dichloropropene	13.697	75	1503	0.48	ug/L	94
80) ethyl methacrylate	13.739	69	1338	0.51	ug/L #	66
81) 1,1,2-trichloroethane	13.928	83	878	0.57	ug/L #	82
82) tetrachloroethene	14.153	164	1078	0.56	ug/L	95
83) 1,3-dichloropropane	14.117	76	1554	0.51	ug/L	91
84) 2-hexanone	14.143	58	1323	1.94	ug/L	92
85) butyl acetate	14.248	56	752	0.55	ug/L #	45
86) dibromochloromethane	14.400	129	971	0.45	ug/L	88
87) 1,2-dibromoethane	14.562	107	907	0.46	ug/L	90
89) chlorobenzene	15.081	112	3089	0.55	ug/L	87
90) 1,1,1,2-tetrachloroethane	15.139	131	992	0.47	ug/L	87
91) ethylbenzene	15.160	91	5267	0.55	ug/L	99
92) m,p-xylene	15.275	106	4158	1.10	ug/L	95
93) o-xylene	15.716	106	2094	0.53	ug/L	89
94) styrene	15.726	104	3601	0.54	ug/L	85
95) bromoform	15.968	173	716	0.47	ug/L	82
97) isopropylbenzene	16.088	105	5820	0.56	ug/L	95
98) cis-1,4-dichloro-2-butene	16.120	88	329	0.39	ug/L #	69
101) bromobenzene	16.492	156	1461	0.52	ug/L	85
102) 1,1,2,2-tetrachloroethane	16.366	83	1287	0.54	ug/L	86
105) n-propylbenzene	16.529	91	6451	0.56	ug/L	98
107) 2-chlorotoluene	16.675	126	1277	0.51	ug/L	93
108) 4-chlorotoluene	16.780	91	3947	0.55	ug/L	95
109) 1,3,5-trimethylbenzene	16.686	105	4775	0.56	ug/L	94
110) tert-butylbenzene	17.063	134	895	0.48	ug/L #	88
111) 1,2,4-trimethylbenzene	17.105	105	4792	0.55	ug/L	96
112) sec-butylbenzene	17.294	105	5960	0.54	ug/L	95
113) 1,3-dichlorobenzene	17.478	146	2931	0.55	ug/L	96
114) p-isopropyltoluene	17.420	119	5201	0.54	ug/L	99
115) 1,4-dichlorobenzene	17.561	146	2748	0.54	ug/L	95
116) benzyl chloride	17.682	91	2782	0.56	ug/L	91
117) 1,2-dichlorobenzene	17.986	146	2706	0.52	ug/L	96
119) n-butylbenzene	17.866	92	2268	0.49	ug/L	98
120) hexachloroethane	18.295	201	766	0.43	ug/L	85
123) 1,3,5-trichlorobenzene	19.045	180	2392	0.51	ug/L	96
125) 1,2,4-trichlorobenzene	19.737	180	1851	0.47	ug/L	78
126) hexachlorobutadiene	19.884	225	1011	0.49	ug/L	99
127) naphthalene	20.041	128	3319	0.46	ug/L	95
128) 1,2,3-trichlorobenzene	20.293	180	1497	0.44	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
Data File : 2B159789.D
Acq On : 16 Apr 2018 4:59 pm
Operator : sydney
Sample : ic7119-0.5
Misc : MS25548,V2B7118,5,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 17 14:14:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 17 07:15:00 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

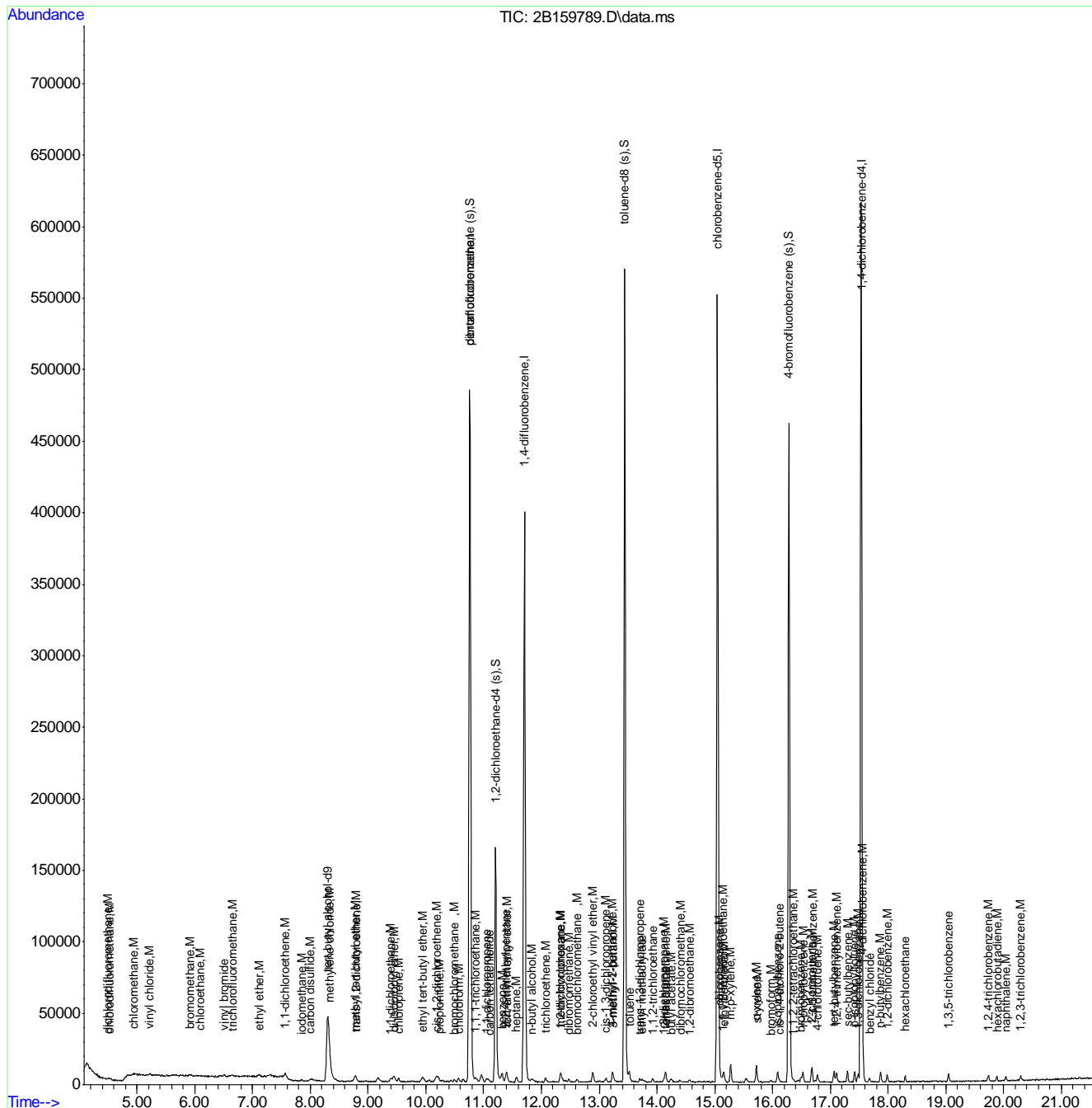
7.7.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159789.D
 Acq On : 16 Apr 2018 4:59 pm
 Operator : sydney
 Sample : ic7119-0.5
 Misc : MS25548,V2B7118,5,,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 17 14:14:52 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:15:00 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159790.D
 Acq On : 16 Apr 2018 5:29 pm
 Operator : sydney
 Sample : ic7119-1
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 17 14:14:58 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:15:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.302	65	99711	500.00	ug/L	0.00
5) pentafluorobenzene	10.756	168	277305	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.705	114	349080	50.00	ug/L	0.00
76) chlorobenzene-d5	15.045	117	331764	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.535	152	191335	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.761	113	107069	49.56	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.12%
55) 1,2-dichloroethane-d4 (s)	11.207	65	127394	51.55	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	103.10%
77) toluene-d8 (s)	13.440	98	406855	49.42	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.84%
100) 4-bromofluorobenzene (s)	16.282	95	158891	49.66	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.32%
Target Compounds						
2) tertiary butyl alcohol	8.433	59	987	4.93	ug/L	78
3) ethanol	6.860	46	905	33.57	ug/L #	21
6) chlorodifluoromethane	4.517	51	3028	1.03	ug/L	86
7) dichlorodifluoromethane	4.496	85	2720	0.95	ug/L	88
10) chloromethane	4.936	50	4005	1.06	ug/L	95
11) vinyl chloride	5.209	62	3218	0.99	ug/L	88
13) bromomethane	5.916	94	2198	1.05	ug/L	95
14) chloroethane	6.084	64	1743	1.00	ug/L	67
15) trichlorofluoromethane	6.645	101	3232	0.96	ug/L	74
16) vinyl bromide	6.509	106	1877	0.95	ug/L #	83
17) ethyl ether	7.117	74	1155	0.97	ug/L #	75
19) freon 113	7.573	151	1341	0.87	ug/L #	80
20) 1,1-dichloroethene	7.558	96	2148	1.10	ug/L	85
21) acetone	7.589	58	679	4.36	ug/L #	44
23) iodomethane	7.841	142	3111	1.01	ug/L	96
24) carbon disulfide	7.998	76	6060	1.04	ug/L	94
25) methylene chloride	8.334	84	2251	1.02	ug/L	90
27) methyl tert butyl ether	8.769	73	6550	1.06	ug/L	95
28) trans-1,2-dichloroethene	8.774	96	2344	1.10	ug/L #	76
29) di-isopropyl ether	9.445	45	8392	1.05	ug/L	91
30) 2-butanone	10.158	72	740	3.71	ug/L #	32
31) 1,1-dichloroethane	9.382	63	3901	0.98	ug/L	87
32) chloroprene	9.518	53	3691	1.06	ug/L	94
33) acrylonitrile	8.690	53	635	0.92	ug/L #	71
34) hexane	9.172	56	1772	1.15	ug/L #	77
36) ethyl tert-butyl ether	9.943	59	7566	1.04	ug/L	94
38) 2,2-dichloropropane	10.200	77	3327	1.11	ug/L	95
39) cis-1,2-dichloroethene	10.174	96	2432	1.04	ug/L	86
41) propionitrile	10.216	54	3129	10.53	ug/L	96
42) bromochloromethane	10.488	128	1159	1.04	ug/L	91
44) chloroform	10.562	85	2690	1.09	ug/L	98
45) t-butyl formate	10.640	59	1972	0.95	ug/L	83

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159790.D
 Acq On : 16 Apr 2018 5:29 pm
 Operator : sydney
 Sample : ic7119-1
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 17 14:14:58 2018

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Apr 17 07:15:00 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
47) methacrylonitrile	10.441	67	733	0.94	ug/L #	40
48) 1,1,1-trichloroethane	10.861	97	3266	1.00	ug/L	84
50) 1,1-dichloropropene	11.049	75	2948	1.07	ug/L	93
52) carbon tetrachloride	11.086	117	2772	1.00	ug/L	94
56) n-butyl alcohol	11.831	56	2388	49.00	ug/L	90
57) 2,2,4-trimethylpentane	11.390	57	8103	1.10	ug/L	91
58) benzene	11.322	78	8185	1.05	ug/L	92
59) tert-amyl methyl ether	11.401	87	1547	1.08	ug/L #	74
60) heptane	11.568	71	1684	1.13	ug/L	90
62) 1,2-dichloroethane	11.301	62	3243	1.15	ug/L	93
63) trichloroethene	12.067	130	2145	0.99	ug/L	94
66) 2-chloroethyl vinyl ether	12.890	63	6685	5.11	ug/L	98
68) 1,2-dichloropropane	12.329	63	2239	1.04	ug/L	97
69) dibromomethane	12.465	93	1212	1.02	ug/L	82
70) methylcyclohexane	12.339	83	3886	1.06	ug/L	94
71) bromodichloromethane	12.612	83	2884	1.02	ug/L	95
72) epichlorohydrin	12.989	57	1285	6.47	ug/L #	52
73) cis-1,3-dichloropropene	13.115	75	3697	1.05	ug/L	96
74) 4-methyl-2-pentanone	13.231	58	2931	3.96	ug/L	92
75) 3-methyl-1-butanol	13.241	70	926	20.00	ug/L #	78
78) toluene	13.524	92	4872	0.98	ug/L	98
79) trans-1,3-dichloropropene	13.702	75	3108	1.00	ug/L	99
80) ethyl methacrylate	13.739	69	2857	1.10	ug/L	91
81) 1,1,2-trichloroethane	13.923	83	1444	0.95	ug/L	96
82) tetrachloroethene	14.153	164	1924	1.00	ug/L	95
83) 1,3-dichloropropane	14.122	76	3047	1.00	ug/L	85
84) 2-hexanone	14.138	58	2642	3.89	ug/L	91
85) butyl acetate	14.237	56	1515	1.12	ug/L #	66
86) dibromochloromethane	14.394	129	2092	0.98	ug/L	96
87) 1,2-dibromoethane	14.568	107	1954	0.99	ug/L	95
88) n-butyl ether	15.039	57	10936	1.09	ug/L	43
89) chlorobenzene	15.081	112	5818	1.04	ug/L	98
90) 1,1,1,2-tetrachloroethane	15.139	131	2090	0.99	ug/L	87
91) ethylbenzene	15.160	91	9927	1.05	ug/L	98
92) m,p-xylene	15.270	106	7843	2.08	ug/L	96
93) o-xylene	15.716	106	4075	1.04	ug/L	94
94) styrene	15.721	104	6703	1.02	ug/L	93
95) bromoform	15.973	173	1364	0.91	ug/L	90
96) butyl acrylate	15.532	55	5442	1.21	ug/L #	96
97) isopropylbenzene	16.088	105	10671	1.03	ug/L	94
98) cis-1,4-dichloro-2-butene	16.125	88	795	0.95	ug/L	98
101) bromobenzene	16.492	156	2910	1.04	ug/L	99
102) 1,1,2,2-tetrachloroethane	16.366	83	2456	1.03	ug/L	90
103) trans-1,4-dichloro-2-b...	16.418	53	607	0.96	ug/L	90
104) 1,2,3-trichloropropane	16.450	110	597	0.97	ug/L	87
105) n-propylbenzene	16.523	91	12091	1.05	ug/L	96
107) 2-chlorotoluene	16.670	126	2563	1.02	ug/L	89
108) 4-chlorotoluene	16.775	91	7467	1.05	ug/L	93
109) 1,3,5-trimethylbenzene	16.686	105	9103	1.07	ug/L	100
110) tert-butylbenzene	17.063	134	1800	0.98	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159790.D
 Acq On : 16 Apr 2018 5:29 pm
 Operator : sydney
 Sample : ic7119-1
 Misc : MS25548,V2B7119,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 17 14:14:58 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:15:00 2018
 Response via : Initial Calibration

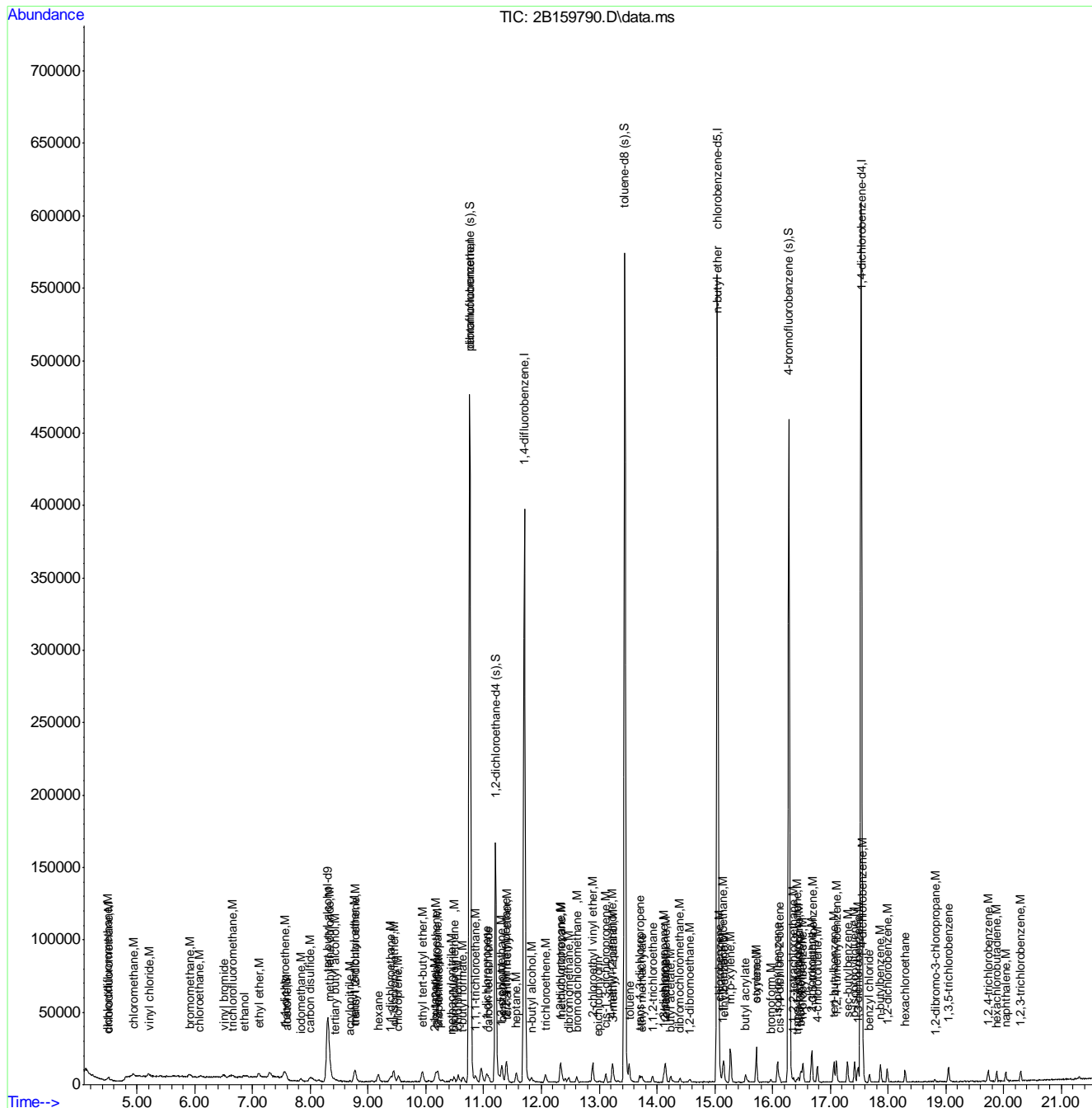
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
111) 1,2,4-trimethylbenzene	17.105	105	8967	1.03	ug/L	96
112) sec-butylbenzene	17.294	105	11351	1.03	ug/L	97
113) 1,3-dichlorobenzene	17.477	146	5468	1.04	ug/L	97
114) p-isopropyltoluene	17.420	119	9806	1.03	ug/L	99
115) 1,4-dichlorobenzene	17.561	146	5258	1.04	ug/L	91
116) benzyl chloride	17.677	91	4963	1.00	ug/L	92
117) 1,2-dichlorobenzene	17.986	146	5168	1.00	ug/L	98
119) n-butylbenzene	17.865	92	4409	0.96	ug/L	97
120) hexachloroethane	18.295	201	1718	0.96	ug/L	91
122) 1,2-dibromo-3-chloropr...	18.814	157	478	0.80	ug/L	79
123) 1,3,5-trichlorobenzene	19.045	180	4399	0.94	ug/L	94
125) 1,2,4-trichlorobenzene	19.732	180	3577	0.92	ug/L	93
126) hexachlorobutadiene	19.873	225	2004	0.97	ug/L	88
127) naphthalene	20.036	128	6437	0.89	ug/L	97
128) 1,2,3-trichlorobenzene	20.298	180	3096	0.92	ug/L	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159790.D
 Acq On : 16 Apr 2018 5:29 pm
 Operator : sydneys
 Sample : ic7119-1
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 17 14:14:58 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:15:00 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159791.D
 Acq On : 16 Apr 2018 5:59 pm
 Operator : sydney
 Sample : ic7119-2
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 17 14:15:06 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:20:02 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.308	65	99127	500.00	ug/L	0.00
5) pentafluorobenzene	10.761	168	279831	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.705	114	355164	50.00	ug/L	0.00
76) chlorobenzene-d5	15.045	117	336670	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.530	152	191422	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.767	113	109198	50.10	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.20%
55) 1,2-dichloroethane-d4 (s)	11.207	65	129435	51.31	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	102.62%
77) toluene-d8 (s)	13.441	98	410849	49.27	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.54%
100) 4-bromofluorobenzene (s)	16.282	95	160626	50.14	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.28%
Target Compounds						
2) tertiary butyl alcohol	8.439	59	1911	9.61	ug/L	94
3) ethanol	6.892	46	1695	192.14	ug/L #	18
4) 1,4-dioxane	12.455	88	517	36.80	ug/L	90
6) chlorodifluoromethane	4.517	51	5426	1.80	ug/L	98
7) dichlorodifluoromethane	4.496	85	5308	1.83	ug/L	92
10) chloromethane	4.952	50	7314	1.91	ug/L	94
11) vinyl chloride	5.214	62	6102	1.86	ug/L	99
13) bromomethane	5.927	94	4188	1.98	ug/L	95
14) chloroethane	6.106	64	3390	1.92	ug/L	84
15) trichlorofluoromethane	6.651	101	6555	1.92	ug/L	99
16) vinyl bromide	6.499	106	3746	1.88	ug/L #	93
17) ethyl ether	7.107	74	2443	2.03	ug/L	88
19) freon 113	7.574	151	2990	2.12	ug/L #	87
20) 1,1-dichloroethene	7.558	96	4004	1.96	ug/L	97
21) acetone	7.584	58	1224	7.79	ug/L #	70
23) iodomethane	7.846	142	5936	1.91	ug/L	98
24) carbon disulfide	7.998	76	10919	1.86	ug/L	97
25) methylene chloride	8.334	84	4277	1.93	ug/L	97
26) methyl acetate	8.140	43	3395	1.91	ug/L	84
27) methyl tert butyl ether	8.769	73	12424	1.99	ug/L	90
28) trans-1,2-dichloroethene	8.774	96	4213	1.95	ug/L	96
29) di-isopropyl ether	9.445	45	16737	2.07	ug/L	97
30) 2-butanone	10.148	72	1503	8.12	ug/L #	85
31) 1,1-dichloroethane	9.388	63	7973	1.99	ug/L	99
32) chloroprene	9.524	53	6982	1.99	ug/L	95
33) acrylonitrile	8.685	53	1286	1.98	ug/L	81
34) hexane	9.178	56	3094	1.91	ug/L	93
36) ethyl tert-butyl ether	9.943	59	14632	1.98	ug/L	97
38) 2,2-dichloropropane	10.200	77	6249	2.00	ug/L	92
39) cis-1,2-dichloroethene	10.174	96	4668	1.98	ug/L	97
40) methyl acrylate	10.274	85	468	1.70	ug/L #	22
41) propionitrile	10.221	54	6078	20.13	ug/L	91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159791.D
 Acq On : 16 Apr 2018 5:59 pm
 Operator : sydney
 Sample : ic7119-2
 Misc : MS25548,V2B7119,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 17 14:15:06 2018

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Apr 17 07:20:02 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) bromochloromethane	10.489	128	2180	1.95	ug/L	90
43) tetrahydrofuran	10.557	72	387	1.67	ug/L #	1
44) chloroform	10.562	85	4978	2.00	ug/L	94
45) t-butyl formate	10.641	59	3741	1.79	ug/L	97
47) methacrylonitrile	10.431	67	1745	2.22	ug/L #	82
48) 1,1,1-trichloroethane	10.866	97	6535	1.99	ug/L	94
50) 1,1-dichloropropene	11.050	75	5329	1.92	ug/L	95
52) carbon tetrachloride	11.086	117	5364	1.92	ug/L	94
56) n-butyl alcohol	11.826	56	4725	95.09	ug/L	98
57) 2,2,4-trimethylpentane	11.390	57	15089	2.02	ug/L	97
58) benzene	11.322	78	16087	2.02	ug/L	99
59) tert-amyl methyl ether	11.401	87	2910	1.99	ug/L #	83
60) heptane	11.569	71	3088	2.03	ug/L	98
61) isopropyl acetate	11.265	87	590	1.59	ug/L #	80
62) 1,2-dichloroethane	11.307	62	6009	2.01	ug/L	96
63) trichloroethene	12.067	130	4185	1.89	ug/L	98
64) ethyl acrylate	12.083	55	5851	2.46	ug/L	94
66) 2-chloroethyl vinyl ether	12.890	63	13473	10.07	ug/L	98
67) methyl methacrylate	12.360	100	777	1.69	ug/L #	46
68) 1,2-dichloropropane	12.329	63	4436	2.02	ug/L	90
69) dibromomethane	12.476	93	2447	2.02	ug/L	94
70) methylcyclohexane	12.334	83	7349	1.96	ug/L	96
71) bromodichloromethane	12.612	83	5749	1.99	ug/L	98
72) epichlorohydrin	12.995	57	2320	10.36	ug/L	96
73) cis-1,3-dichloropropene	13.110	75	7281	2.04	ug/L	98
74) 4-methyl-2-pentanone	13.231	58	6078	8.08	ug/L	91
75) 3-methyl-1-butanol	13.236	70	1842	39.08	ug/L	98
78) toluene	13.519	92	9638	1.92	ug/L	94
79) trans-1,3-dichloropropene	13.697	75	6262	1.98	ug/L	99
80) ethyl methacrylate	13.734	69	5347	2.03	ug/L	98
81) 1,1,2-trichloroethane	13.923	83	2982	1.94	ug/L	94
82) tetrachloroethene	14.154	164	3784	1.95	ug/L	94
83) 1,3-dichloropropane	14.122	76	6082	1.98	ug/L	93
84) 2-hexanone	14.133	58	5716	8.28	ug/L	97
85) butyl acetate	14.232	56	2837	2.06	ug/L	88
86) dibromochloromethane	14.400	129	4255	1.96	ug/L	99
87) 1,2-dibromoethane	14.568	107	3937	1.98	ug/L	91
88) n-butyl ether	15.034	57	19921	2.21	ug/L	81
89) chlorobenzene	15.082	112	10875	1.92	ug/L	96
90) 1,1,1,2-tetrachloroethane	15.139	131	4268	2.00	ug/L	92
91) ethylbenzene	15.160	91	18776	1.96	ug/L	99
92) m,p-xylene	15.276	106	14976	3.92	ug/L	100
93) o-xylene	15.716	106	7669	1.94	ug/L	99
94) styrene	15.721	104	13294	1.99	ug/L	97
95) bromoform	15.973	173	2835	1.86	ug/L	94
96) butyl acrylate	15.532	55	9286	1.96	ug/L	94
97) isopropylbenzene	16.088	105	20180	1.92	ug/L	97
98) cis-1,4-dichloro-2-butene	16.125	88	1706	2.02	ug/L	98
101) bromobenzene	16.492	156	5422	1.95	ug/L	93
102) 1,1,2,2-tetrachloroethane	16.361	83	4684	1.96	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159791.D
 Acq On : 16 Apr 2018 5:59 pm
 Operator : sydney
 Sample : ic7119-2
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 17 14:15:06 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:20:02 2018
 Response via : Initial Calibration

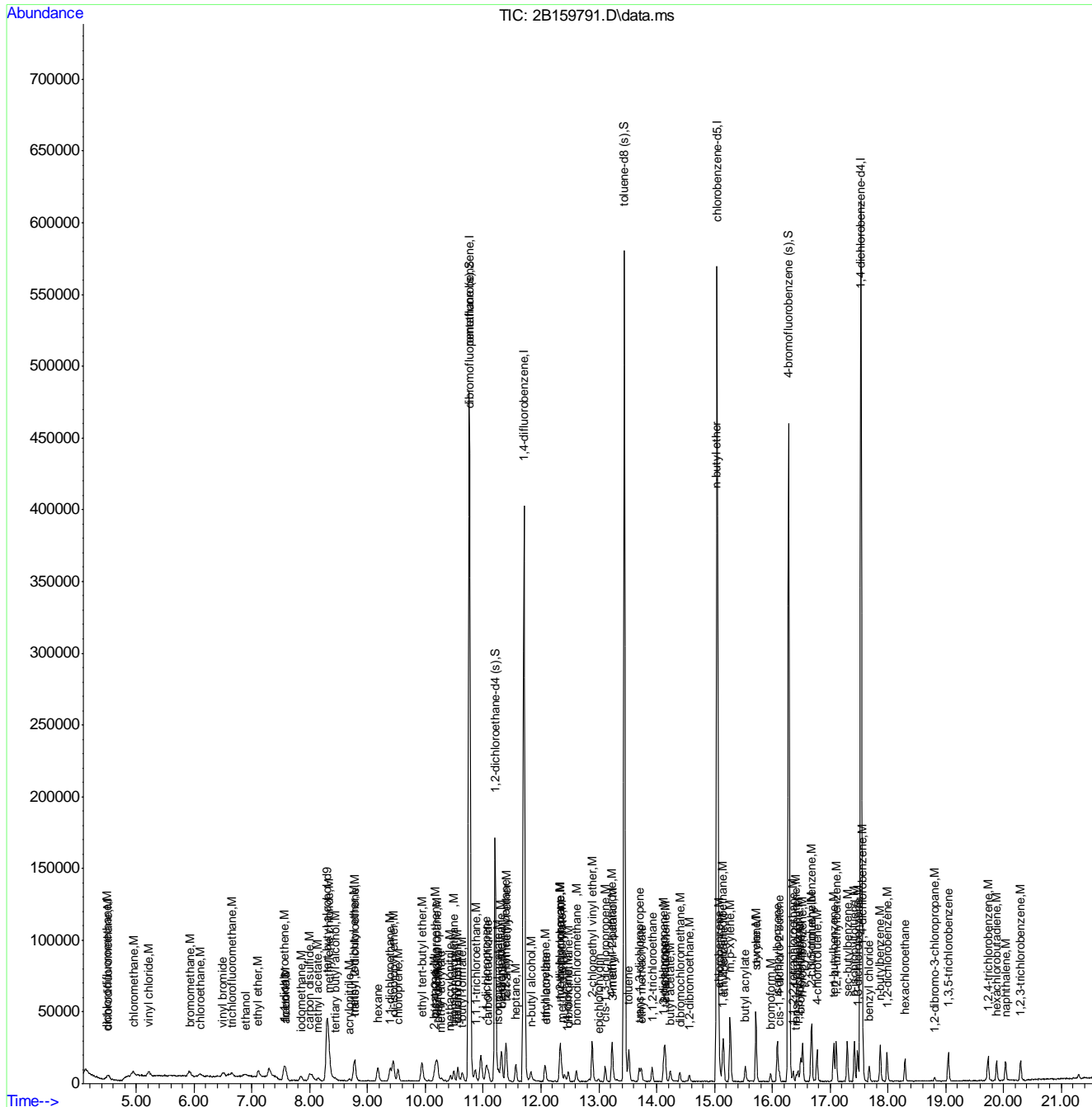
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
103) trans-1,4-dichloro-2-b...	16.413	53	1197	1.97	ug/L	90
104) 1,2,3-trichloropropane	16.450	110	1081	1.76	ug/L	91
105) n-propylbenzene	16.523	91	22582	1.96	ug/L	98
107) 2-chlorotoluene	16.670	126	5016	2.00	ug/L	96
108) 4-chlorotoluene	16.775	91	14641	2.05	ug/L	98
109) 1,3,5-trimethylbenzene	16.681	105	17180	2.01	ug/L	96
110) tert-butylbenzene	17.063	134	3537	1.92	ug/L	97
111) 1,2,4-trimethylbenzene	17.105	105	17525	2.01	ug/L	97
112) sec-butylbenzene	17.294	105	21417	1.94	ug/L	98
113) 1,3-dichlorobenzene	17.472	146	10831	2.06	ug/L	96
114) p-isopropyltoluene	17.420	119	18570	1.94	ug/L	99
115) 1,4-dichlorobenzene	17.562	146	9746	1.92	ug/L	99
116) benzyl chloride	17.677	91	9946	2.00	ug/L	99
117) 1,2-dichlorobenzene	17.986	146	10285	1.99	ug/L	95
119) n-butylbenzene	17.866	92	8964	1.95	ug/L	97
120) hexachloroethane	18.296	201	3326	1.85	ug/L	88
122) 1,2-dibromo-3-chloropr...	18.804	157	923	1.58	ug/L	81
123) 1,3,5-trichlorobenzene	19.045	180	8767	1.86	ug/L	93
125) 1,2,4-trichlorobenzene	19.732	180	7067	1.82	ug/L	98
126) hexachlorobutadiene	19.879	225	4038	1.95	ug/L	92
127) naphthalene	20.036	128	12528	1.75	ug/L	94
128) 1,2,3-trichlorobenzene	20.293	180	5900	1.77	ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
Data File : 2B159791.D
Acq On : 16 Apr 2018 5:59 pm
Operator : sydney
Sample : ic7119-2
Misc : MS25548,V2B7119,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 17 14:15:06 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 17 07:20:02 2018
Response via : Initial Calibration



7.7.3
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159792.D
 Acq On : 16 Apr 2018 6:29 pm
 Operator : sydney
 Sample : ic7119-5
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 17 14:03:25 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:17:33 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.302	65	101683	500.00	ug/L	0.00
5) pentafluorobenzene	10.761	168	273746	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.705	114	348661	50.00	ug/L	0.00
76) chlorobenzene-d5	15.045	117	328077	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.530	152	187737	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.761	113	106730	50.06	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.12%
55) 1,2-dichloroethane-d4 (s)	11.207	65	126432	51.05	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	102.10%
77) toluene-d8 (s)	13.440	98	405627	49.91	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.82%
100) 4-bromofluorobenzene (s)	16.282	95	156445	49.79	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.58%
Target Compounds						
2) tertiary butyl alcohol	8.428	59	5512	27.03	ug/L	84
3) ethanol	6.855	46	4407	674.35	ug/L	94
4) 1,4-dioxane	12.449	88	1753	121.64	ug/L	84
6) chlorodifluoromethane	4.517	51	14929	5.05	ug/L	99
7) dichlorodifluoromethane	4.496	85	14388	5.08	ug/L	98
10) chloromethane	4.936	50	18056	4.82	ug/L	97
11) vinyl chloride	5.219	62	16503	5.14	ug/L	98
13) bromomethane	5.917	94	10280	4.98	ug/L	94
14) chloroethane	6.105	64	8923	5.16	ug/L	97
15) trichlorofluoromethane	6.656	101	17621	5.29	ug/L	99
16) vinyl bromide	6.504	106	9767	5.02	ug/L	98
17) ethyl ether	7.112	74	6003	5.09	ug/L	91
18) acrolein	7.327	56	3081	4.38	ug/L	79
19) freon 113	7.579	151	7994	5.78	ug/L	87
20) 1,1-dichloroethene	7.563	96	9829	4.91	ug/L	98
21) acetone	7.584	58	3347	21.78	ug/L #	69
22) acetonitrile	8.035	41	16833	45.05	ug/L	94
23) iodomethane	7.846	142	15745	5.17	ug/L	98
24) carbon disulfide	7.993	76	28154	4.90	ug/L	99
25) methylene chloride	8.334	84	10795	4.98	ug/L	96
26) methyl acetate	8.140	43	8833	5.08	ug/L	98
27) methyl tert butyl ether	8.769	73	31002	5.09	ug/L	92
28) trans-1,2-dichloroethene	8.779	96	10709	5.08	ug/L	95
29) di-isopropyl ether	9.440	45	39755	5.04	ug/L	94
30) 2-butanone	10.142	72	3921	21.66	ug/L	98
31) 1,1-dichloroethane	9.382	63	20104	5.14	ug/L	98
32) chloroprene	9.524	53	17413	5.07	ug/L	100
33) acrylonitrile	8.674	53	3419	5.37	ug/L	93
34) hexane	9.172	56	7945	5.03	ug/L	94
35) vinyl acetate	9.398	86	1579	4.95	ug/L	92
36) ethyl tert-butyl ether	9.943	59	37427	5.18	ug/L	98
37) ethyl acetate	10.200	45	1403	5.29	ug/L #	47

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159792.D
 Acq On : 16 Apr 2018 6:29 pm
 Operator : sydney
 Sample : ic7119-5
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 17 14:03:25 2018

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Apr 17 07:17:33 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 2,2-dichloropropane	10.200	77	15589	5.11	ug/L	97
39) cis-1,2-dichloroethene	10.174	96	11857	5.14	ug/L	96
40) methyl acrylate	10.268	85	1345	4.99	ug/L #	79
41) propionitrile	10.216	54	15460	52.34	ug/L	96
42) bromochloromethane	10.488	128	5710	5.21	ug/L	97
43) tetrahydrofuran	10.567	72	1054	4.65	ug/L	92
44) chloroform	10.562	85	12150	4.99	ug/L	95
45) t-butyl formate	10.641	59	10410	5.09	ug/L	97
47) methacrylonitrile	10.426	67	3891	5.07	ug/L	89
48) 1,1,1-trichloroethane	10.866	97	15937	4.96	ug/L	98
49) cyclohexane	10.971	84	13983	5.37	ug/L	91
50) 1,1-dichloropropene	11.050	75	13696	5.04	ug/L	98
51) iso-butyl alcohol	11.034	43	4326	42.09	ug/L	94
52) carbon tetrachloride	11.091	117	14082	5.16	ug/L	98
53) tert amyl alcohol	11.191	55	2393	18.81	ug/L	77
56) n-butyl alcohol	11.815	56	12043	246.87	ug/L	94
57) 2,2,4-trimethylpentane	11.390	57	38185	5.20	ug/L	98
58) benzene	11.317	78	39446	5.04	ug/L	100
59) tert-amyl methyl ether	11.396	87	7519	5.23	ug/L	93
60) heptane	11.563	71	7580	5.07	ug/L	98
61) isopropyl acetate	11.264	87	1871	5.14	ug/L #	92
62) 1,2-dichloroethane	11.301	62	14504	4.93	ug/L	94
63) trichloroethene	12.061	130	10862	5.01	ug/L	98
64) ethyl acrylate	12.077	55	13164	5.63	ug/L	95
65) 2-nitropropane	12.832	41	2863	5.57	ug/L	91
66) 2-chloroethyl vinyl ether	12.885	63	33881	25.79	ug/L	98
67) methyl methacrylate	12.360	100	2508	5.57	ug/L #	59
68) 1,2-dichloropropane	12.324	63	10989	5.10	ug/L	94
69) dibromomethane	12.470	93	6142	5.17	ug/L	94
70) methylcyclohexane	12.334	83	18863	5.13	ug/L	97
71) bromodichloromethane	12.612	83	14059	4.96	ug/L	95
72) epichlorohydrin	12.989	57	5446	24.78	ug/L	96
73) cis-1,3-dichloropropene	13.110	75	17553	5.00	ug/L	97
74) 4-methyl-2-pentanone	13.225	58	15335	20.76	ug/L	98
75) 3-methyl-1-butanol	13.231	70	4705	101.68	ug/L	97
78) toluene	13.519	92	24625	5.03	ug/L	98
79) trans-1,3-dichloropropene	13.697	75	15294	4.97	ug/L	95
80) ethyl methacrylate	13.729	69	12925	5.04	ug/L	95
81) 1,1,2-trichloroethane	13.917	83	7526	5.02	ug/L	92
82) tetrachloroethene	14.153	164	9775	5.16	ug/L	99
83) 1,3-dichloropropane	14.122	76	15243	5.09	ug/L	98
84) 2-hexanone	14.132	58	14651	21.79	ug/L	97
85) butyl acetate	14.232	56	6767	5.05	ug/L	94
86) dibromochloromethane	14.395	129	10594	5.02	ug/L	99
87) 1,2-dibromoethane	14.562	107	9966	5.14	ug/L	96
88) n-butyl ether	15.034	57	48329	5.50	ug/L	94
89) chlorobenzene	15.081	112	27682	5.01	ug/L	94
90) 1,1,1,2-tetrachloroethane	15.139	131	10533	5.07	ug/L	99
91) ethylbenzene	15.155	91	47068	5.04	ug/L	99
92) m,p-xylene	15.270	106	37760	10.15	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159792.D
 Acq On : 16 Apr 2018 6:29 pm
 Operator : sydney
 Sample : ic7119-5
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 17 14:03:25 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:17:33 2018
 Response via : Initial Calibration

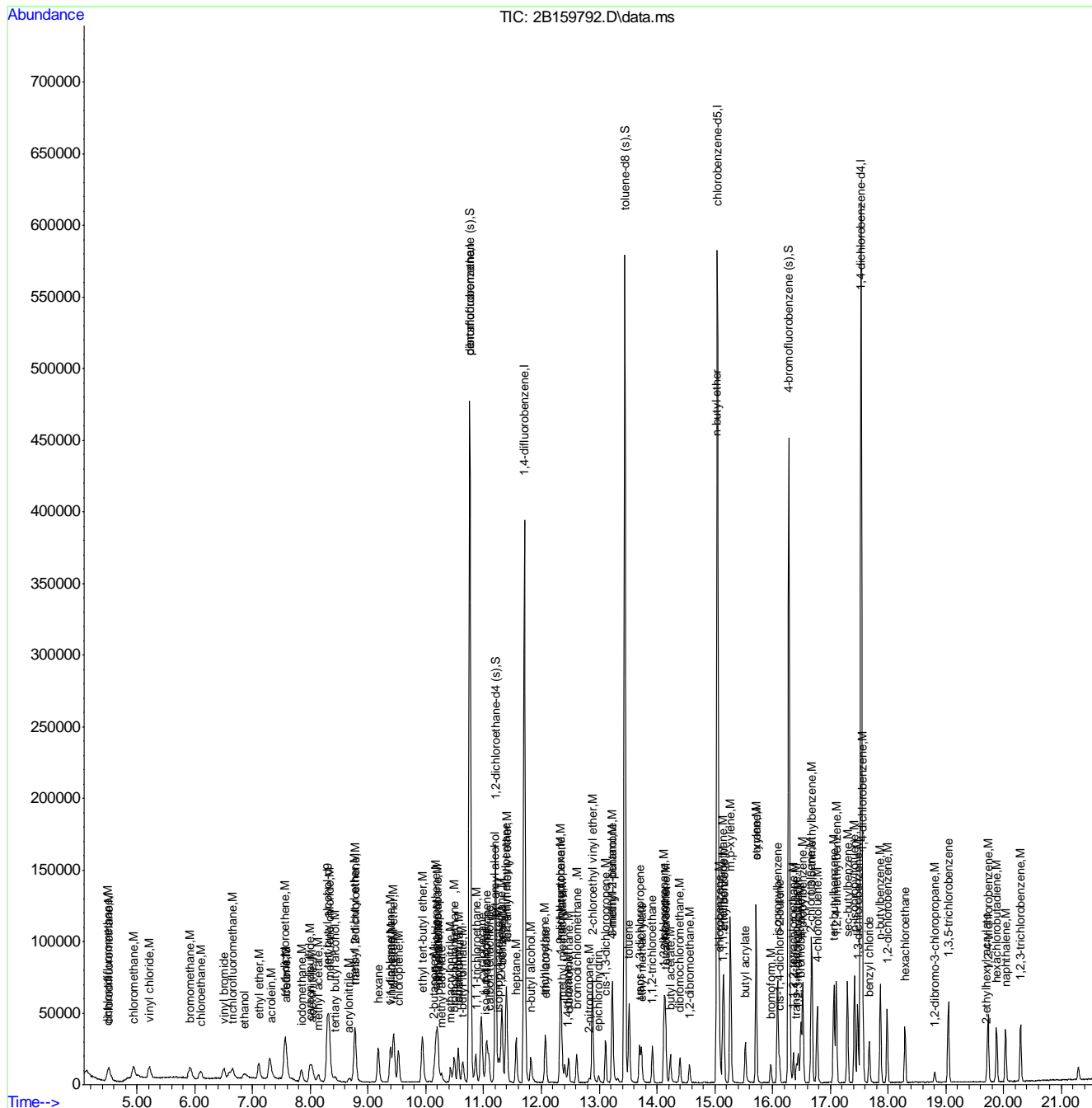
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) o-xylene	15.716	106	19143	4.98	ug/L	97
94) styrene	15.716	104	32865	5.06	ug/L	97
95) bromoform	15.967	173	7330	4.95	ug/L	96
96) butyl acrylate	15.527	55	21866	4.74	ug/L	97
97) isopropylbenzene	16.088	105	50889	4.96	ug/L	99
98) cis-1,4-dichloro-2-butene	16.120	88	4351	5.28	ug/L	97
101) bromobenzene	16.492	156	13889	5.08	ug/L	95
102) 1,1,2,2-tetrachloroethane	16.366	83	11633	4.95	ug/L	98
103) trans-1,4-dichloro-2-b...	16.413	53	3117	5.22	ug/L	96
104) 1,2,3-trichloropropane	16.445	110	3238	5.38	ug/L	97
105) n-propylbenzene	16.523	91	57445	5.09	ug/L	98
107) 2-chlorotoluene	16.665	126	12261	4.99	ug/L	99
108) 4-chlorotoluene	16.775	91	35049	5.02	ug/L	98
109) 1,3,5-trimethylbenzene	16.681	105	41904	5.00	ug/L	99
110) tert-butylbenzene	17.063	134	9252	5.13	ug/L	99
111) 1,2,4-trimethylbenzene	17.105	105	44064	5.16	ug/L	98
112) sec-butylbenzene	17.294	105	54105	5.00	ug/L	98
113) 1,3-dichlorobenzene	17.472	146	26114	5.06	ug/L	97
114) p-isopropyltoluene	17.420	119	46614	4.97	ug/L	97
115) 1,4-dichlorobenzene	17.556	146	24429	4.91	ug/L	98
116) benzyl chloride	17.677	91	23908	4.89	ug/L	97
117) 1,2-dichlorobenzene	17.981	146	25717	5.06	ug/L	99
119) n-butylbenzene	17.865	92	22515	5.00	ug/L	98
120) hexachloroethane	18.295	201	8854	5.03	ug/L	96
122) 1,2-dibromo-3-chloropr...	18.809	157	2883	5.04	ug/L	91
123) 1,3,5-trichlorobenzene	19.045	180	22793	4.94	ug/L	98
124) 2-ethylhexyl acrylate	19.706	70	1822	0.86	ug/L	89
125) 1,2,4-trichlorobenzene	19.732	180	18219	4.79	ug/L	96
126) hexachlorobutadiene	19.879	225	10342	5.09	ug/L	93
127) naphthalene	20.036	128	34457	4.90	ug/L	98
128) 1,2,3-trichlorobenzene	20.293	180	15852	4.85	ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159792.D
 Acq On : 16 Apr 2018 6:29 pm
 Operator : sydney
 Sample : ic7119-5
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 17 14:03:25 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:17:33 2018
 Response via : Initial Calibration



7.7.4
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159793.D
 Acq On : 16 Apr 2018 6:59 pm
 Operator : sydney
 Sample : ic7119-10
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 17 14:04:06 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:15:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.302	65	97006	500.00	ug/L	0.00
5) pentafluorobenzene	10.761	168	273075	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.705	114	346057	50.00	ug/L	0.00
76) chlorobenzene-d5	15.045	117	327827	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.530	152	186537	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.761	113	105797	49.73	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.46%
55) 1,2-dichloroethane-d4 (s)	11.207	65	124676	50.89	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	101.78%
77) toluene-d8 (s)	13.440	98	402944	49.54	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.08%
100) 4-bromofluorobenzene (s)	16.282	95	154851	49.64	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.28%
Target Compounds						
2) tertiary butyl alcohol	8.439	59	9976	51.22	ug/L	97
3) ethanol	6.871	46	8639	329.42	ug/L	# 1
4) 1,4-dioxane	12.444	88	3605	263.89	ug/L	82
6) chlorodifluoromethane	4.527	51	29529	10.23	ug/L	99
7) dichlorodifluoromethane	4.501	85	29193	10.38	ug/L	99
10) chloromethane	4.947	50	35345	9.53	ug/L	97
11) vinyl chloride	5.219	62	32583	10.19	ug/L	99
13) bromomethane	5.927	94	20125	9.79	ug/L	90
14) chloroethane	6.095	64	17717	10.29	ug/L	97
15) trichlorofluoromethane	6.656	101	35075	10.55	ug/L	97
16) vinyl bromide	6.499	106	19824	10.22	ug/L	98
17) ethyl ether	7.112	74	12165	10.35	ug/L	96
18) acrolein	7.332	56	5029	10.43	ug/L	99
19) freon 113	7.573	151	15845	10.49	ug/L	95
20) 1,1-dichloroethene	7.563	96	19555	10.20	ug/L	98
21) acetone	7.584	58	6181	40.31	ug/L	99
22) acetonitrile	8.035	41	26126	93.10	ug/L	99
23) iodomethane	7.841	142	30419	10.02	ug/L	97
24) carbon disulfide	7.998	76	56801	9.91	ug/L	97
25) methylene chloride	8.334	84	21365	9.88	ug/L	98
26) methyl acetate	8.140	43	16179	9.56	ug/L	99
27) methyl tert butyl ether	8.764	73	60201	9.93	ug/L	96
28) trans-1,2-dichloroethene	8.779	96	20793	9.89	ug/L	95
29) di-isopropyl ether	9.440	45	77697	9.90	ug/L	98
30) 2-butanone	10.148	72	7972	40.54	ug/L	# 86
31) 1,1-dichloroethane	9.382	63	38753	9.93	ug/L	99
32) chloroprene	9.524	53	34279	10.01	ug/L	99
33) acrylonitrile	8.674	53	6648	9.78	ug/L	92
34) hexane	9.178	56	15351	10.14	ug/L	96
35) vinyl acetate	9.393	86	3287	9.63	ug/L	84
36) ethyl tert-butyl ether	9.943	59	71973	10.00	ug/L	98
37) ethyl acetate	10.195	45	2895	10.67	ug/L	57

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159793.D
 Acq On : 16 Apr 2018 6:59 pm
 Operator : sydney
 Sample : ic7119-10
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 17 14:04:06 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:15:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 2,2-dichloropropane	10.200	77	30581	10.32	ug/L	95
39) cis-1,2-dichloroethene	10.179	96	23018	10.01	ug/L	94
40) methyl acrylate	10.274	85	2684	9.97	ug/L #	87
41) propionitrile	10.205	54	29529	100.91	ug/L	99
42) bromochloromethane	10.489	128	11071	10.13	ug/L	94
43) tetrahydrofuran	10.562	72	2329	10.29	ug/L	98
44) chloroform	10.562	85	23816	9.80	ug/L	99
45) t-butyl formate	10.641	59	20768	10.18	ug/L	96
47) methacrylonitrile	10.431	67	7926	10.34	ug/L	95
48) 1,1,1-trichloroethane	10.866	97	30786	9.60	ug/L	96
49) cyclohexane	10.971	84	26726	10.29	ug/L	97
50) 1,1-dichloropropene	11.050	75	27400	10.11	ug/L	97
51) iso-butyl alcohol	11.029	43	7927	95.39	ug/L	96
52) carbon tetrachloride	11.086	117	27305	10.03	ug/L	99
53) tert amyl alcohol	11.181	55	3861	51.42	ug/L	96
56) n-butyl alcohol	11.815	56	23372	483.76	ug/L	97
57) 2,2,4-trimethylpentane	11.390	57	72071	9.88	ug/L	99
58) benzene	11.322	78	78289	10.09	ug/L	99
59) tert-amyl methyl ether	11.390	87	14555	10.22	ug/L	93
60) heptane	11.569	71	14883	10.05	ug/L	96
61) isopropyl acetate	11.265	87	3653	10.11	ug/L	97
62) 1,2-dichloroethane	11.301	62	28121	10.06	ug/L	99
63) trichloroethene	12.067	130	21994	10.21	ug/L	97
64) ethyl acrylate	12.077	55	24067	9.83	ug/L	100
65) 2-nitropropane	12.832	41	5300	10.66	ug/L	88
66) 2-chloroethyl vinyl ether	12.885	63	66006	50.88	ug/L	100
67) methyl methacrylate	12.355	100	4900	10.51	ug/L	94
68) 1,2-dichloropropane	12.324	63	21544	10.07	ug/L	98
69) dibromomethane	12.465	93	11941	10.12	ug/L	92
70) methylcyclohexane	12.334	83	36811	10.08	ug/L	98
71) bromodichloromethane	12.612	83	27773	9.87	ug/L	98
72) epichlorohydrin	12.990	57	9644	48.97	ug/L	97
73) cis-1,3-dichloropropene	13.110	75	34781	9.99	ug/L	98
74) 4-methyl-2-pentanone	13.225	58	29224	39.85	ug/L	98
75) 3-methyl-1-butanol	13.236	70	9051	197.15	ug/L	90
78) toluene	13.519	92	48837	9.96	ug/L	97
79) trans-1,3-dichloropropene	13.697	75	30543	9.90	ug/L	99
80) ethyl methacrylate	13.729	69	24959	9.72	ug/L	99
81) 1,1,2-trichloroethane	13.923	83	14726	9.80	ug/L	94
82) tetrachloroethene	14.148	164	18990	10.02	ug/L	97
83) 1,3-dichloropropane	14.122	76	29622	9.88	ug/L	94
84) 2-hexanone	14.132	58	26838	40.02	ug/L	99
85) butyl acetate	14.227	56	12821	9.56	ug/L	99
86) dibromochloromethane	14.395	129	20711	9.79	ug/L	99
87) 1,2-dibromoethane	14.562	107	19140	9.85	ug/L	99
88) n-butyl ether	15.034	57	97545	9.87	ug/L	96
89) chlorobenzene	15.076	112	54071	9.77	ug/L	99
90) 1,1,1,2-tetrachloroethane	15.139	131	20977	10.09	ug/L	94
91) ethylbenzene	15.155	91	93622	10.02	ug/L	99
92) m,p-xylene	15.270	106	73742	19.79	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159793.D
 Acq On : 16 Apr 2018 6:59 pm
 Operator : sydney
 Sample : ic7119-10
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 17 14:04:06 2018

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Apr 17 07:15:00 2018

Response via : Initial Calibration

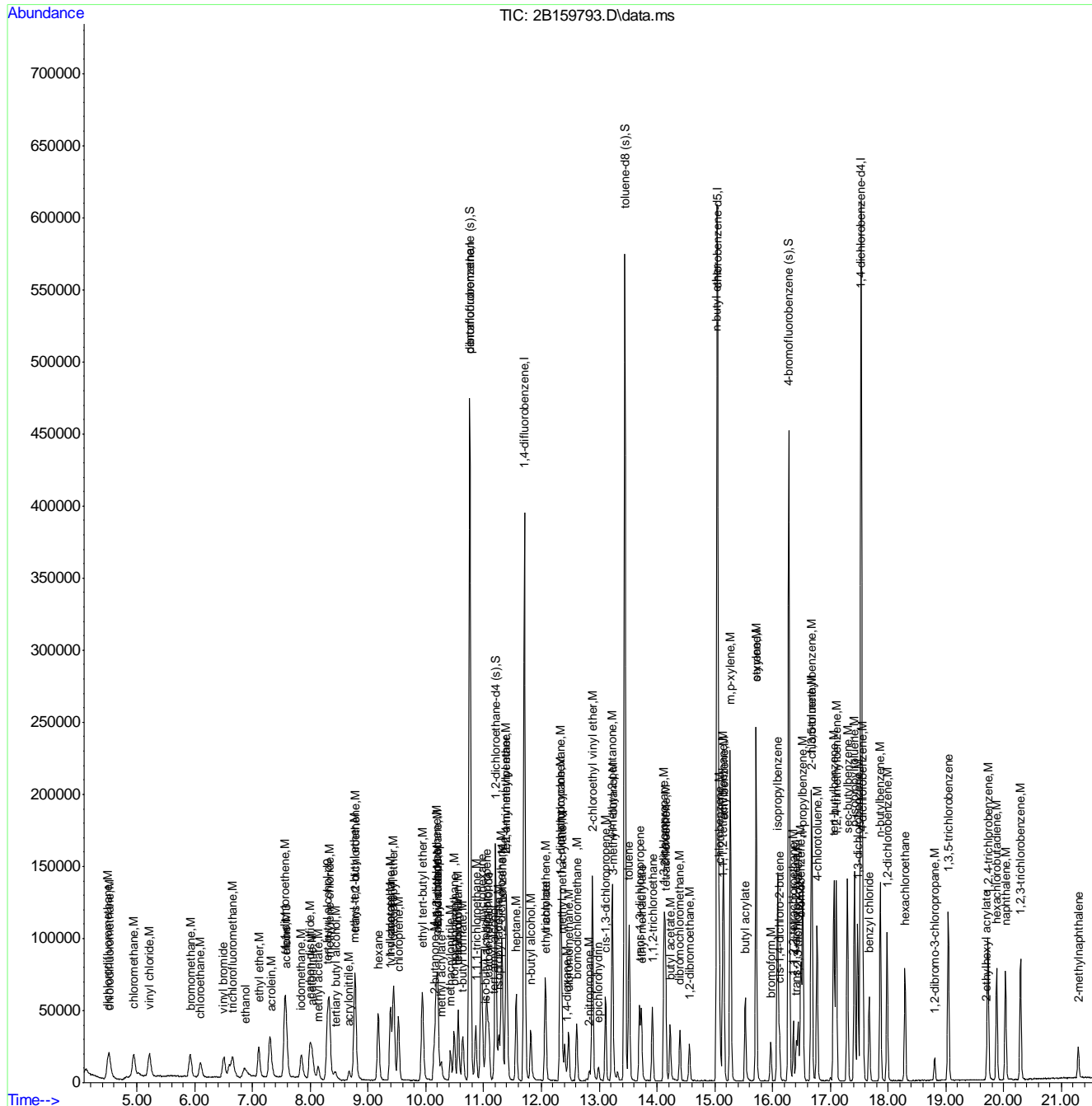
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) o-xylene	15.716	106	38435	9.97	ug/L	100
94) styrene	15.716	104	65259	10.02	ug/L	99
95) bromoform	15.968	173	14499	9.77	ug/L	99
96) butyl acrylate	15.527	55	42383	9.55	ug/L	99
97) isopropylbenzene	16.088	105	102252	9.96	ug/L	99
98) cis-1,4-dichloro-2-butene	16.120	88	8548	10.36	ug/L	99
101) bromobenzene	16.492	156	27528	10.14	ug/L	96
102) 1,1,2,2-tetrachloroethane	16.361	83	22924	9.82	ug/L	98
103) trans-1,4-dichloro-2-b...	16.413	53	6074	9.85	ug/L	95
104) 1,2,3-trichloropropane	16.445	110	6263	10.48	ug/L	95
105) n-propylbenzene	16.523	91	114042	10.17	ug/L	99
107) 2-chlorotoluene	16.670	126	24530	10.04	ug/L	94
108) 4-chlorotoluene	16.770	91	68989	9.94	ug/L	98
109) 1,3,5-trimethylbenzene	16.681	105	84035	10.10	ug/L	96
110) tert-butylbenzene	17.063	134	18106	10.10	ug/L	95
111) 1,2,4-trimethylbenzene	17.105	105	86160	10.15	ug/L	99
112) sec-butylbenzene	17.294	105	108312	10.07	ug/L	99
113) 1,3-dichlorobenzene	17.472	146	51006	9.94	ug/L	98
114) p-isopropyltoluene	17.420	119	94733	10.17	ug/L	99
115) 1,4-dichlorobenzene	17.561	146	49043	9.92	ug/L	99
116) benzyl chloride	17.677	91	46522	9.59	ug/L	100
117) 1,2-dichlorobenzene	17.981	146	50263	9.96	ug/L	98
119) n-butylbenzene	17.866	92	44983	10.06	ug/L	95
120) hexachloroethane	18.295	201	17521	10.02	ug/L	94
122) 1,2-dibromo-3-chloropr...	18.809	157	5537	9.50	ug/L	94
123) 1,3,5-trichlorobenzene	19.045	180	46186	10.08	ug/L	97
124) 2-ethylhexyl acrylate	19.706	70	3782	1.66	ug/L	89
125) 1,2,4-trichlorobenzene	19.732	180	37745	9.93	ug/L	99
126) hexachlorobutadiene	19.879	225	20799	10.30	ug/L	98
127) naphthalene	20.031	128	69782	9.89	ug/L	100
128) 1,2,3-trichlorobenzene	20.293	180	32486	9.87	ug/L	96
129) 2-methylnaphthalene	21.294	142	14029	3.77	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159793.D
 Acq On : 16 Apr 2018 6:59 pm
 Operator : sydney
 Sample : ic7119-10
 Misc : MS25548,V2B7119,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 17 14:04:06 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:15:00 2018
 Response via : Initial Calibration



7.7.5
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159794.D
 Acq On : 16 Apr 2018 7:29 pm
 Operator : sydney
 Sample : ic7119-20
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 17 14:04:26 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:15:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.302	65	94658	500.00	ug/L	0.00
5) pentafluorobenzene	10.761	168	260188	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.705	114	333700	50.00	ug/L	0.00
76) chlorobenzene-d5	15.045	117	316788	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.530	152	181042	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.766	113	102181	50.41	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.82%
55) 1,2-dichloroethane-d4 (s)	11.207	65	117128	49.58	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	99.16%
77) toluene-d8 (s)	13.440	98	387838	49.34	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.68%
100) 4-bromofluorobenzene (s)	16.282	95	149771	49.47	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.94%
Target Compounds						
2) tertiary butyl alcohol	8.433	59	19491	102.55	ug/L	98
3) ethanol	6.871	46	16560	647.13	ug/L	# 1
4) 1,4-dioxane	12.444	88	6680	501.12	ug/L	100
6) chlorodifluoromethane	4.532	51	57953	21.07	ug/L	99
7) dichlorodifluoromethane	4.506	85	57169	21.33	ug/L	99
10) chloromethane	4.947	50	67433	19.07	ug/L	98
11) vinyl chloride	5.214	62	63009	20.68	ug/L	97
13) bromomethane	5.927	94	38194	19.49	ug/L	98
14) chloroethane	6.105	64	33279	20.28	ug/L	98
15) trichlorofluoromethane	6.656	101	66340	20.95	ug/L	100
16) vinyl bromide	6.504	106	38355	20.75	ug/L	97
17) ethyl ether	7.112	74	23543	21.01	ug/L	96
18) acrolein	7.332	56	9284	20.21	ug/L	97
19) freon 113	7.579	151	30752	21.38	ug/L	99
20) 1,1-dichloroethene	7.563	96	36971	20.24	ug/L	97
21) acetone	7.589	58	11830	80.97	ug/L	98
22) acetonitrile	8.040	41	54860	205.18	ug/L	97
23) iodomethane	7.846	142	60139	20.78	ug/L	96
24) carbon disulfide	7.998	76	111009	20.33	ug/L	99
25) methylene chloride	8.334	84	40959	19.87	ug/L	93
26) methyl acetate	8.140	43	30482	18.91	ug/L	98
27) methyl tert butyl ether	8.769	73	117184	20.28	ug/L	99
28) trans-1,2-dichloroethene	8.779	96	39569	19.75	ug/L	99
29) di-isopropyl ether	9.445	45	149087	19.93	ug/L	99
30) 2-butanone	10.142	72	15065	80.39	ug/L	98
31) 1,1-dichloroethane	9.387	63	75887	20.42	ug/L	98
32) chloroprene	9.524	53	64732	19.83	ug/L	97
33) acrylonitrile	8.674	53	12998	20.07	ug/L	98
34) hexane	9.178	56	28817	19.98	ug/L	99
35) vinyl acetate	9.398	86	6595	20.29	ug/L	86
36) ethyl tert-butyl ether	9.943	59	138948	20.26	ug/L	98
37) ethyl acetate	10.195	45	5838	22.59	ug/L	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159794.D
 Acq On : 16 Apr 2018 7:29 pm
 Operator : sydney
 Sample : ic7119-20
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 17 14:04:26 2018

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Apr 17 07:15:00 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 2,2-dichloropropane	10.205	77	57426	20.33	ug/L	99
39) cis-1,2-dichloroethene	10.174	96	43407	19.81	ug/L	100
40) methyl acrylate	10.263	85	5441	21.22	ug/L #	80
41) propionitrile	10.211	54	56005	200.86	ug/L	100
42) bromochloromethane	10.494	128	21545	20.69	ug/L	97
43) tetrahydrofuran	10.567	72	4553	21.11	ug/L	95
44) chloroform	10.562	85	44309	19.13	ug/L	98
45) t-butyl formate	10.646	59	42456	21.84	ug/L	99
47) methacrylonitrile	10.426	67	14594	19.99	ug/L	99
48) 1,1,1-trichloroethane	10.866	97	60560	19.82	ug/L	95
49) cyclohexane	10.971	84	51691	20.89	ug/L	99
50) 1,1-dichloropropene	11.055	75	52256	20.23	ug/L	98
51) iso-butyl alcohol	11.028	43	15434	194.93	ug/L	98
52) carbon tetrachloride	11.091	117	52853	20.38	ug/L	98
53) tert amyl alcohol	11.186	55	6682	93.39	ug/L	98
56) n-butyl alcohol	11.815	56	45778	982.60	ug/L	97
57) 2,2,4-trimethylpentane	11.395	57	139748	19.87	ug/L	99
58) benzene	11.322	78	148350	19.82	ug/L	100
59) tert-amyl methyl ether	11.401	87	28297	20.60	ug/L	96
60) heptane	11.568	71	28551	19.99	ug/L	97
61) isopropyl acetate	11.259	87	7134	20.47	ug/L	97
62) 1,2-dichloroethane	11.301	62	51934	19.26	ug/L	97
63) trichloroethene	12.067	130	42040	20.25	ug/L	98
64) ethyl acrylate	12.077	55	45419	19.24	ug/L	98
65) 2-nitropropane	12.832	41	9401	19.60	ug/L	96
66) 2-chloroethyl vinyl ether	12.884	63	127406	101.85	ug/L	100
67) methyl methacrylate	12.355	100	9220	20.50	ug/L	95
68) 1,2-dichloropropane	12.329	63	40809	19.77	ug/L	98
69) dibromomethane	12.470	93	23003	20.21	ug/L	99
70) methylcyclohexane	12.339	83	71884	20.42	ug/L	97
71) bromodichloromethane	12.612	83	52339	19.28	ug/L	98
72) epichlorohydrin	12.989	57	18477	97.29	ug/L	97
73) cis-1,3-dichloropropene	13.110	75	66759	19.89	ug/L	99
74) 4-methyl-2-pentanone	13.225	58	56076	79.29	ug/L	95
75) 3-methyl-1-butanol	13.231	70	17754	401.04	ug/L	97
78) toluene	13.519	92	93615	19.75	ug/L	99
79) trans-1,3-dichloropropene	13.697	75	58438	19.61	ug/L	97
80) ethyl methacrylate	13.729	69	47700	19.22	ug/L	99
81) 1,1,2-trichloroethane	13.923	83	28067	19.33	ug/L	100
82) tetrachloroethene	14.148	164	36092	19.70	ug/L	98
83) 1,3-dichloropropane	14.117	76	56406	19.48	ug/L	99
84) 2-hexanone	14.132	58	51446	79.40	ug/L	95
85) butyl acetate	14.227	56	24042	18.54	ug/L	96
86) dibromochloromethane	14.394	129	40150	19.64	ug/L	97
87) 1,2-dibromoethane	14.562	107	36701	19.55	ug/L	96
88) n-butyl ether	15.034	57	189039	19.79	ug/L	99
89) chlorobenzene	15.081	112	104275	19.49	ug/L	100
90) 1,1,1,2-tetrachloroethane	15.139	131	40127	19.97	ug/L	98
91) ethylbenzene	15.155	91	178825	19.80	ug/L	99
92) m,p-xylene	15.270	106	140862	39.12	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159794.D
 Acq On : 16 Apr 2018 7:29 pm
 Operator : sydney
 Sample : ic7119-20
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 17 14:04:26 2018

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Apr 17 07:15:00 2018

Response via : Initial Calibration

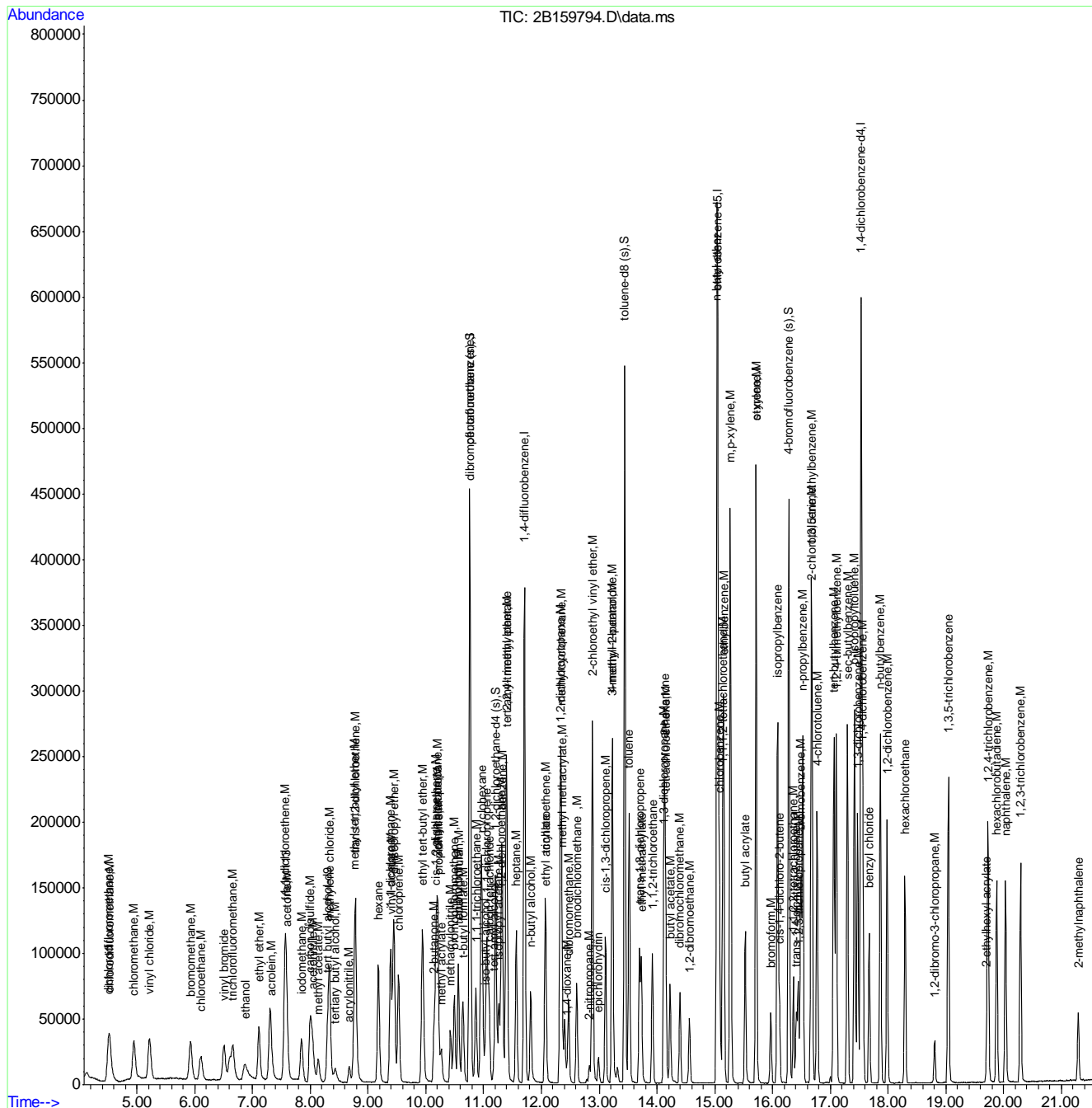
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) o-xylene	15.716	106	73257	19.67	ug/L	100
94) styrene	15.716	104	123808	19.68	ug/L	100
95) bromoform	15.967	173	27893	19.46	ug/L	95
96) butyl acrylate	15.527	55	80099	18.68	ug/L	98
97) isopropylbenzene	16.088	105	196655	19.82	ug/L	99
98) cis-1,4-dichloro-2-butene	16.119	88	16227	20.35	ug/L	97
101) bromobenzene	16.492	156	52071	19.76	ug/L	98
102) 1,1,2,2-tetrachloroethane	16.361	83	43955	19.41	ug/L	98
103) trans-1,4-dichloro-2-b...	16.413	53	11925	19.92	ug/L	99
104) 1,2,3-trichloropropane	16.450	110	12067	20.80	ug/L	99
105) n-propylbenzene	16.523	91	217247	19.97	ug/L	100
107) 2-chlorotoluene	16.670	126	47371	19.98	ug/L	95
108) 4-chlorotoluene	16.770	91	132123	19.61	ug/L	100
109) 1,3,5-trimethylbenzene	16.680	105	159855	19.79	ug/L	98
110) tert-butylbenzene	17.063	134	34986	20.11	ug/L	91
111) 1,2,4-trimethylbenzene	17.105	105	164585	19.97	ug/L	100
112) sec-butylbenzene	17.294	105	209371	20.05	ug/L	99
113) 1,3-dichlorobenzene	17.472	146	97691	19.62	ug/L	100
114) p-isopropyltoluene	17.420	119	181081	20.03	ug/L	99
115) 1,4-dichlorobenzene	17.561	146	93747	19.54	ug/L	99
116) benzyl chloride	17.677	91	91271	19.38	ug/L	99
117) 1,2-dichlorobenzene	17.981	146	97950	19.99	ug/L	99
119) n-butylbenzene	17.865	92	89210	20.56	ug/L	99
120) hexachloroethane	18.295	201	35138	20.71	ug/L	95
122) 1,2-dibromo-3-chloropr...	18.809	157	11300	19.97	ug/L	99
123) 1,3,5-trichlorobenzene	19.045	180	92783	20.85	ug/L	97
124) 2-ethylhexyl acrylate	19.706	70	8092	3.65	ug/L	95
125) 1,2,4-trichlorobenzene	19.732	180	76987	20.87	ug/L	97
126) hexachlorobutadiene	19.879	225	40734	20.79	ug/L	98
127) naphthalene	20.031	128	143066	20.90	ug/L	99
128) 1,2,3-trichlorobenzene	20.293	180	65921	20.64	ug/L	99
129) 2-methylnaphthalene	21.294	142	31892	8.83	ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
Data File : 2B159794.D
Acq On : 16 Apr 2018 7:29 pm
Operator : sydney
Sample : ic7119-20
Misc : MS25548,V2B7119,5,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 17 14:04:26 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 17 07:15:00 2018
Response via : Initial Calibration



7.7.6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159795.D
 Acq On : 16 Apr 2018 7:59 pm
 Operator : sydney
 Sample : icc7119-50
 Misc : MS25548,V2B7119,5,,,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 17 14:04:48 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:15:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.302	65	87779	500.00	ug/L	0.00
5) pentafluorobenzene	10.761	168	249777	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.705	114	323941	50.00	ug/L	0.00
76) chlorobenzene-d5	15.045	117	308953	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.530	152	174955	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.766	113	97517	50.11	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.22%
55) 1,2-dichloroethane-d4 (s)	11.207	65	113300	49.41	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	98.82%
77) toluene-d8 (s)	13.440	98	379661	49.53	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.06%
100) 4-bromofluorobenzene (s)	16.282	95	147270	50.34	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.68%
Target Compounds						
2) tertiary butyl alcohol	8.438	59	45125	256.02	ug/L	Qvalue 100
3) ethanol	6.871	46	39772	1676.00	ug/L	# 1
4) 1,4-dioxane	12.444	88	15863	1283.26	ug/L	100
6) chlorodifluoromethane	4.522	51	140843	53.35	ug/L	100
7) dichlorodifluoromethane	4.506	85	138703	53.90	ug/L	100
10) chloromethane	4.947	50	169954	50.07	ug/L	100
11) vinyl chloride	5.214	62	154409	52.78	ug/L	100
13) bromomethane	5.922	94	92400	49.12	ug/L	100
14) chloroethane	6.105	64	80425	51.04	ug/L	100
15) trichlorofluoromethane	6.656	101	159401	52.43	ug/L	100
16) vinyl bromide	6.509	106	92837	52.32	ug/L	100
17) ethyl ether	7.112	74	55951	52.02	ug/L	100
18) acrolein	7.332	56	20638	46.81	ug/L	98
19) freon 113	7.573	151	71170	51.54	ug/L	100
20) 1,1-dichloroethene	7.563	96	86431	49.30	ug/L	100
21) acetone	7.579	58	27954	199.31	ug/L	100
22) acetonitrile	8.040	41	123394	480.74	ug/L	100
23) iodomethane	7.846	142	146178	52.62	ug/L	100
24) carbon disulfide	8.003	76	266268	50.80	ug/L	100
25) methylene chloride	8.334	84	98797	49.93	ug/L	100
26) methyl acetate	8.140	43	75018	48.48	ug/L	100
27) methyl tert butyl ether	8.769	73	274738	49.53	ug/L	100
28) trans-1,2-dichloroethene	8.779	96	94092	48.91	ug/L	100
29) di-isopropyl ether	9.445	45	345744	48.16	ug/L	100
30) 2-butanone	10.142	72	36925	205.27	ug/L	100
31) 1,1-dichloroethane	9.387	63	178619	50.06	ug/L	100
32) chloroprene	9.524	53	151964	48.49	ug/L	100
33) acrylonitrile	8.674	53	31960	51.40	ug/L	100
34) hexane	9.178	56	66097	47.73	ug/L	100
35) vinyl acetate	9.398	86	16093	51.56	ug/L	100
36) ethyl tert-butyl ether	9.943	59	329034	49.97	ug/L	100
37) ethyl acetate	10.195	45	12004	48.39	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159795.D
 Acq On : 16 Apr 2018 7:59 pm
 Operator : sydney
 Sample : icc7119-50
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 17 14:04:48 2018

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Apr 17 07:15:00 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 2,2-dichloropropane	10.205	77	132365	48.82	ug/L	100
39) cis-1,2-dichloroethene	10.174	96	103510	49.21	ug/L	100
40) methyl acrylate	10.268	85	12740	51.76	ug/L	100
41) propionitrile	10.205	54	131249	490.34	ug/L	100
42) bromochloromethane	10.494	128	51288	51.32	ug/L	100
43) tetrahydrofuran	10.567	72	10823	52.28	ug/L	100
44) chloroform	10.562	85	105560	47.47	ug/L	100
45) t-butyl formate	10.640	59	101669	54.48	ug/L	100
47) methacrylonitrile	10.426	67	35144	50.14	ug/L	100
48) 1,1,1-trichloroethane	10.866	97	148119	50.49	ug/L	100
49) cyclohexane	10.971	84	120215	50.62	ug/L	100
50) 1,1-dichloropropene	11.055	75	122738	49.49	ug/L	100
51) iso-butyl alcohol	11.028	43	36748	483.47	ug/L	100
52) carbon tetrachloride	11.091	117	125083	50.24	ug/L	100
53) tert amyl alcohol	11.186	55	15858	230.87	ug/L	100
56) n-butyl alcohol	11.810	56	108403	2396.92	ug/L	100
57) 2,2,4-trimethylpentane	11.396	57	320502	46.95	ug/L	100
58) benzene	11.322	78	352624	48.53	ug/L	100
59) tert-amyl methyl ether	11.396	87	65255	48.93	ug/L	100
60) heptane	11.569	71	66644	48.07	ug/L	100
61) isopropyl acetate	11.264	87	17586	51.99	ug/L	100
62) 1,2-dichloroethane	11.301	62	124996	47.76	ug/L	100
63) trichloroethene	12.067	130	102813	51.01	ug/L	100
64) ethyl acrylate	12.077	55	110252	48.11	ug/L	100
65) 2-nitropropane	12.832	41	23097	49.61	ug/L	100
66) 2-chloroethyl vinyl ether	12.885	63	304672	250.89	ug/L	100
67) methyl methacrylate	12.355	100	22361	51.22	ug/L	100
68) 1,2-dichloropropane	12.324	63	98938	49.38	ug/L	100
69) dibromomethane	12.470	93	55167	49.94	ug/L	100
70) methylcyclohexane	12.339	83	166393	48.68	ug/L	100
71) bromodichloromethane	12.612	83	128587	48.80	ug/L	100
72) epichlorohydrin	12.984	57	43267	234.69	ug/L	98
73) cis-1,3-dichloropropene	13.110	75	162271	49.79	ug/L	100
74) 4-methyl-2-pentanone	13.225	58	132866	193.54	ug/L	100
75) 3-methyl-1-butanol	13.231	70	41187	958.39	ug/L	100
78) toluene	13.519	92	228351	49.40	ug/L	100
79) trans-1,3-dichloropropene	13.697	75	145634	50.10	ug/L	100
80) ethyl methacrylate	13.729	69	114314	47.22	ug/L	100
81) 1,1,2-trichloroethane	13.923	83	67968	47.99	ug/L	100
82) tetrachloroethene	14.153	164	85891	48.08	ug/L	100
83) 1,3-dichloropropane	14.117	76	138327	48.97	ug/L	100
84) 2-hexanone	14.127	58	122756	194.25	ug/L	100
85) butyl acetate	14.227	56	57722	45.65	ug/L	100
86) dibromochloromethane	14.395	129	100202	50.26	ug/L	100
87) 1,2-dibromoethane	14.562	107	90725	49.55	ug/L	100
88) n-butyl ether	15.034	57	456899	49.05	ug/L	100
89) chlorobenzene	15.081	112	253549	48.59	ug/L	100
90) 1,1,1,2-tetrachloroethane	15.139	131	97727	49.86	ug/L	100
91) ethylbenzene	15.155	91	421224	47.82	ug/L	100
92) m,p-xylene	15.270	106	335325	95.49	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159795.D
 Acq On : 16 Apr 2018 7:59 pm
 Operator : sydney
 Sample : icc7119-50
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 17 14:04:48 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:15:00 2018
 Response via : Initial Calibration

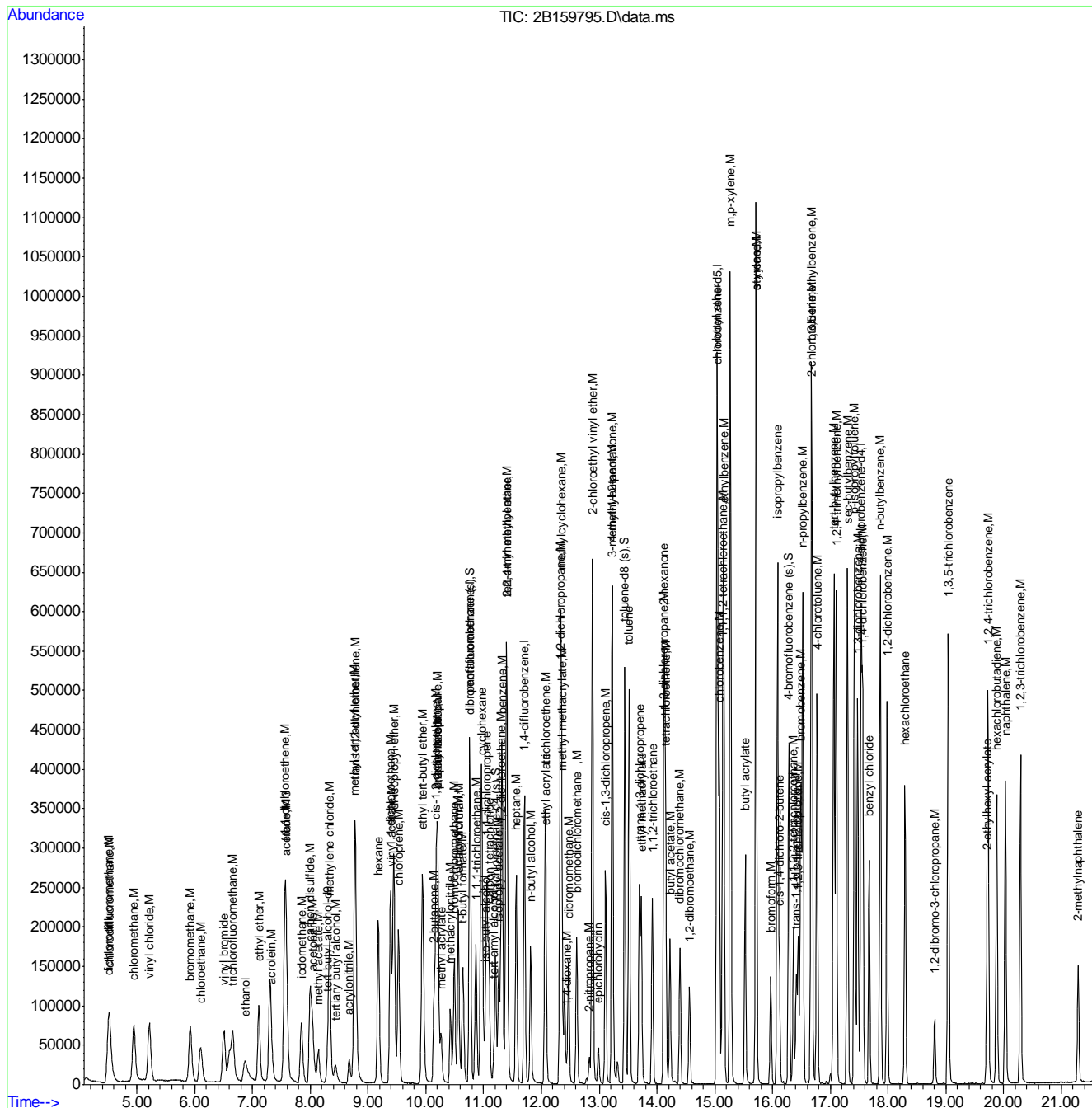
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) o-xylene	15.716	106	176390	48.57	ug/L	100
94) styrene	15.716	104	293438	47.83	ug/L	100
95) bromoform	15.967	173	70848	50.68	ug/L	100
96) butyl acrylate	15.527	55	193776	46.33	ug/L	100
97) isopropylbenzene	16.088	105	469834	48.56	ug/L	100
98) cis-1,4-dichloro-2-butene	16.119	88	38846	49.94	ug/L	100
101) bromobenzene	16.492	156	125202	49.17	ug/L	100
102) 1,1,2,2-tetrachloroethane	16.361	83	106930	48.86	ug/L	100
103) trans-1,4-dichloro-2-b...	16.413	53	28929	50.00	ug/L	100
104) 1,2,3-trichloropropane	16.445	110	28788	51.34	ug/L	100
105) n-propylbenzene	16.523	91	510449	48.55	ug/L	100
107) 2-chlorotoluene	16.670	126	114279	49.87	ug/L	100
108) 4-chlorotoluene	16.770	91	311612	47.85	ug/L	100
109) 1,3,5-trimethylbenzene	16.680	105	375775	48.13	ug/L	100
110) tert-butylbenzene	17.063	134	85893	51.09	ug/L	100
111) 1,2,4-trimethylbenzene	17.105	105	385193	48.36	ug/L	100
112) sec-butylbenzene	17.294	105	503428	49.89	ug/L	100
113) 1,3-dichlorobenzene	17.472	146	230388	47.88	ug/L	100
114) p-isopropyltoluene	17.420	119	432531	49.51	ug/L	100
115) 1,4-dichlorobenzene	17.561	146	228131	49.21	ug/L	100
116) benzyl chloride	17.671	91	223688	49.14	ug/L	100
117) 1,2-dichlorobenzene	17.981	146	235791	49.80	ug/L	100
119) n-butylbenzene	17.865	92	215230	51.34	ug/L	100
120) hexachloroethane	18.295	201	87121	53.13	ug/L	100
122) 1,2-dibromo-3-chloropr...	18.804	157	28853	52.76	ug/L	100
123) 1,3,5-trichlorobenzene	19.045	180	227144	52.83	ug/L	100
124) 2-ethylhexyl acrylate	19.711	70	23170	10.81	ug/L	100
125) 1,2,4-trichlorobenzene	19.727	180	192731	54.05	ug/L	100
126) hexachlorobutadiene	19.879	225	98530	52.04	ug/L	100
127) naphthalene	20.031	128	356529	53.89	ug/L	100
128) 1,2,3-trichlorobenzene	20.293	180	167715	54.34	ug/L	100
129) 2-methylnaphthalene	21.289	142	91042	26.07	ug/L	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
Data File : 2B159795.D
Acq On : 16 Apr 2018 7:59 pm
Operator : sydney
Sample : icc7119-50
Misc : MS25548,V2B7119,5,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 17 14:04:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 17 07:15:00 2018
Response via : Initial Calibration



7.7.7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159796.D
 Acq On : 16 Apr 2018 8:29 pm
 Operator : sydney
 Sample : ic7119-100
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 17 14:05:06 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:15:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.302	65	86511	500.00	ug/L	0.00
5) pentafluorobenzene	10.756	168	243283	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.705	114	320103	50.00	ug/L	0.00
76) chlorobenzene-d5	15.045	117	297257	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.530	152	172465	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.766	113	96381	50.85	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.70%
55) 1,2-dichloroethane-d4 (s)	11.207	65	109493	48.32	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	96.64%
77) toluene-d8 (s)	13.440	98	375114	50.86	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.72%
100) 4-bromofluorobenzene (s)	16.282	95	146027	50.63	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.26%
Target Compounds						
2) tertiary butyl alcohol	8.433	59	93842	540.23	ug/L	99
3) ethanol	6.860	46	79597	3403.40	ug/L	# 1
4) 1,4-dioxane	12.439	88	32468	2665.03	ug/L	94
6) chlorodifluoromethane	4.517	51	260736	101.39	ug/L	99
7) dichlorodifluoromethane	4.490	85	264839	105.67	ug/L	99
10) chloromethane	4.941	50	322288	97.49	ug/L	99
11) vinyl chloride	5.214	62	293995	103.17	ug/L	99
13) bromomethane	5.917	94	177905	97.09	ug/L	99
14) chloroethane	6.095	64	154412	100.62	ug/L	99
15) trichlorofluoromethane	6.651	101	304093	102.68	ug/L	100
16) vinyl bromide	6.504	106	181324	104.92	ug/L	99
17) ethyl ether	7.107	74	110884	105.85	ug/L	95
18) acrolein	7.327	56	39641	92.31	ug/L	100
19) freon 113	7.568	151	133516	99.26	ug/L	98
20) 1,1-dichloroethene	7.558	96	163012	95.46	ug/L	97
21) acetone	7.579	58	55966	409.68	ug/L	93
22) acetonitrile	8.035	41	243861	975.43	ug/L	98
23) iodomethane	7.846	142	280714	103.74	ug/L	97
24) carbon disulfide	7.998	76	501739	98.28	ug/L	100
25) methylene chloride	8.334	84	193601	100.46	ug/L	97
26) methyl acetate	8.134	43	148757	98.69	ug/L	100
27) methyl tert butyl ether	8.769	73	538055	99.59	ug/L	100
28) trans-1,2-dichloroethene	8.774	96	179544	95.83	ug/L	98
29) di-isopropyl ether	9.440	45	660607	94.47	ug/L	99
30) 2-butanone	10.137	72	75759	432.38	ug/L	98
31) 1,1-dichloroethane	9.382	63	346203	99.62	ug/L	98
32) chloroprene	9.524	53	288253	94.44	ug/L	98
33) acrylonitrile	8.669	53	64796	106.99	ug/L	98
34) hexane	9.173	56	125641	93.15	ug/L	98
35) vinyl acetate	9.393	86	32325	106.34	ug/L	100
36) ethyl tert-butyl ether	9.943	59	640497	99.87	ug/L	99
37) ethyl acetate	10.190	45	24335	100.71	ug/L	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159796.D
 Acq On : 16 Apr 2018 8:29 pm
 Operator : sydney
 Sample : ic7119-100
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 17 14:05:06 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:15:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 2,2-dichloropropane	10.200	77	243706	92.29	ug/L	96
39) cis-1,2-dichloroethene	10.174	96	200132	97.68	ug/L	99
40) methyl acrylate	10.263	85	25215	105.18	ug/L	95
41) propionitrile	10.205	54	258838	992.83	ug/L	99
42) bromochloromethane	10.489	128	102605	105.40	ug/L	99
43) tetrahydrofuran	10.557	72	21896	108.60	ug/L	97
44) chloroform	10.557	85	204056	94.21	ug/L	98
45) t-butyl formate	10.641	59	199159	109.57	ug/L	98
47) methacrylonitrile	10.426	67	72379	106.02	ug/L	98
48) 1,1,1-trichloroethane	10.866	97	287940	100.77	ug/L	98
49) cyclohexane	10.971	84	225304	97.40	ug/L	93
50) 1,1-dichloropropene	11.050	75	237513	98.33	ug/L	99
51) iso-butyl alcohol	11.023	43	75735	1022.99	ug/L	99
52) carbon tetrachloride	11.086	117	240393	99.13	ug/L	99
53) tert amyl alcohol	11.181	55	32022	478.64	ug/L	97
56) n-butyl alcohol	11.810	56	229164	5127.84	ug/L	98
57) 2,2,4-trimethylpentane	11.396	57	606688	89.94	ug/L	99
58) benzene	11.317	78	680068	94.71	ug/L	100
59) tert-amyl methyl ether	11.396	87	129107	97.98	ug/L	99
60) heptane	11.563	71	130362	95.15	ug/L	99
61) isopropyl acetate	11.264	87	36317	108.64	ug/L	92
62) 1,2-dichloroethane	11.301	62	247139	95.57	ug/L	98
63) trichloroethene	12.061	130	202198	101.52	ug/L	99
64) ethyl acrylate	12.072	55	224966	99.34	ug/L	99
65) 2-nitropropane	12.832	41	47539	103.34	ug/L	97
66) 2-chloroethyl vinyl ether	12.885	63	607415	506.18	ug/L	98
67) methyl methacrylate	12.350	100	45085	104.51	ug/L #	78
68) 1,2-dichloropropane	12.324	63	195137	98.57	ug/L	99
69) dibromomethane	12.465	93	111080	101.75	ug/L	98
70) methylcyclohexane	12.334	83	318376	94.26	ug/L	100
71) bromodichloromethane	12.612	83	257548	98.92	ug/L	99
72) epichlorohydrin	12.984	57	88562	486.15	ug/L	98
73) cis-1,3-dichloropropene	13.110	75	322117	100.02	ug/L	99
74) 4-methyl-2-pentanone	13.225	58	268874	396.35	ug/L	99
75) 3-methyl-1-butanol	13.225	70	84860	1998.29	ug/L	97
78) toluene	13.519	92	449760	101.13	ug/L	99
79) trans-1,3-dichloropropene	13.692	75	293443	104.92	ug/L	99
80) ethyl methacrylate	13.729	69	231841	99.53	ug/L	99
81) 1,1,2-trichloroethane	13.923	83	138609	101.71	ug/L	98
82) tetrachloroethene	14.148	164	166918	97.11	ug/L	99
83) 1,3-dichloropropane	14.117	76	277420	102.08	ug/L	99
84) 2-hexanone	14.127	58	247899	407.72	ug/L	98
85) butyl acetate	14.227	56	118064	97.05	ug/L	95
86) dibromochloromethane	14.395	129	206949	107.88	ug/L	100
87) 1,2-dibromoethane	14.562	107	186610	105.93	ug/L	98
88) n-butyl ether	15.034	57	894836	99.85	ug/L	99
89) chlorobenzene	15.076	112	499661	99.53	ug/L	98
90) 1,1,1,2-tetrachloroethane	15.139	131	193621	102.67	ug/L	99
91) ethylbenzene	15.155	91	812685	95.89	ug/L	99
92) m,p-xylene	15.270	106	656344	194.26	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159796.D
 Acq On : 16 Apr 2018 8:29 pm
 Operator : sydney
 Sample : ic7119-100
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 17 14:05:06 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:15:00 2018
 Response via : Initial Calibration

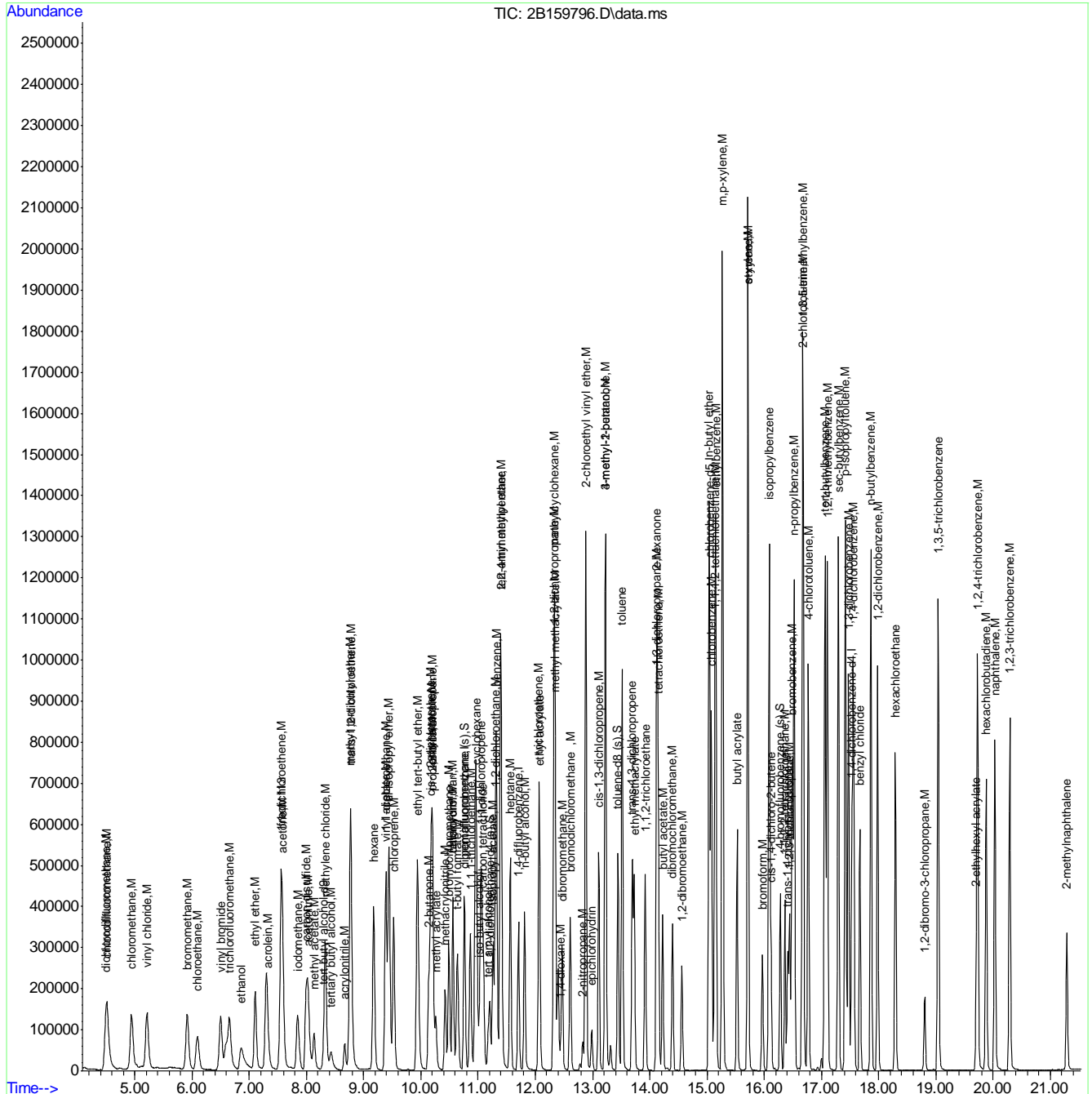
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) o-xylene	15.716	106	344904	98.70	ug/L	96
94) styrene	15.716	104	577587	97.85	ug/L	99
95) bromoform	15.967	173	150235	111.69	ug/L	99
96) butyl acrylate	15.527	55	396601	98.55	ug/L	99
97) isopropylbenzene	16.088	105	914956	98.28	ug/L	100
98) cis-1,4-dichloro-2-butene	16.120	88	80552	107.64	ug/L	98
101) bromobenzene	16.492	156	249485	99.39	ug/L	99
102) 1,1,2,2-tetrachloroethane	16.361	83	222712	103.22	ug/L	98
103) trans-1,4-dichloro-2-b...	16.413	53	61866	108.46	ug/L	96
104) 1,2,3-trichloropropane	16.445	110	60656	109.74	ug/L	99
105) n-propylbenzene	16.523	91	987804	95.30	ug/L	99
107) 2-chlorotoluene	16.670	126	226922	100.45	ug/L	100
108) 4-chlorotoluene	16.770	91	619109	96.44	ug/L	99
109) 1,3,5-trimethylbenzene	16.681	105	738973	96.02	ug/L	100
110) tert-butylbenzene	17.063	134	172571	104.13	ug/L	98
111) 1,2,4-trimethylbenzene	17.105	105	756653	96.36	ug/L	100
112) sec-butylbenzene	17.294	105	990708	99.59	ug/L	99
113) 1,3-dichlorobenzene	17.472	146	458052	96.57	ug/L	99
114) p-isopropyltoluene	17.420	119	856739	99.49	ug/L	100
115) 1,4-dichlorobenzene	17.561	146	464325	101.62	ug/L	99
116) benzyl chloride	17.671	91	464665	103.55	ug/L	99
117) 1,2-dichlorobenzene	17.981	146	474535	101.67	ug/L	99
119) n-butylbenzene	17.865	92	430674	104.21	ug/L	98
120) hexachloroethane	18.295	201	179421	111.00	ug/L	98
122) 1,2-dibromo-3-chloropr...	18.804	157	62247	115.47	ug/L	99
123) 1,3,5-trichlorobenzene	19.040	180	449620	106.08	ug/L	98
124) 2-ethylhexyl acrylate	19.706	70	50273	23.80	ug/L	94
125) 1,2,4-trichlorobenzene	19.727	180	389054	110.69	ug/L	99
126) hexachlorobutadiene	19.879	225	189938	101.76	ug/L	99
127) naphthalene	20.031	128	739852	113.44	ug/L	100
128) 1,2,3-trichlorobenzene	20.293	180	342218	112.48	ug/L	98
129) 2-methylnaphthalene	21.289	142	204517	59.41	ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
Data File : 2B159796.D
Acq On : 16 Apr 2018 8:29 pm
Operator : sydney
Sample : ic7119-100
Misc : MS25548,V2B7119,5,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 17 14:05:06 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 17 07:15:00 2018
Response via : Initial Calibration



7.7.8
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159797.D
 Acq On : 16 Apr 2018 8:59 pm
 Operator : sydney
 Sample : ic7119-200
 Misc : MS25548,V2B7119,5,,,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 17 14:05:25 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:15:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.302	65	83213	500.00	ug/L	0.00
5) pentafluorobenzene	10.761	168	243550	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.705	114	322486	50.00	ug/L	0.00
76) chlorobenzene-d5	15.045	117	293676	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.535	152	177623	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.767	113	94773	49.95	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.90%
55) 1,2-dichloroethane-d4 (s)	11.207	65	108941	47.72	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	95.44%
77) toluene-d8 (s)	13.440	98	379221	52.04	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	104.08%
100) 4-bromofluorobenzene (s)	16.282	95	151492	51.00	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.00%
Target Compounds						
2) tertiary butyl alcohol	8.433	59	172358	1031.55	ug/L	98
3) ethanol	6.866	46	149550	6647.87	ug/L	# 1
4) 1,4-dioxane	12.439	88	68798	5870.88	ug/L	95
6) chlorodifluoromethane	4.512	51	467562	181.63	ug/L	98
7) dichlorodifluoromethane	4.491	85	506191	201.75	ug/L	97
10) chloromethane	4.936	50	593764	179.41	ug/L	98
11) vinyl chloride	5.204	62	554995	194.55	ug/L	99
13) bromomethane	5.901	94	330262	180.05	ug/L	99
14) chloroethane	6.084	64	287597	187.20	ug/L	97
15) trichlorofluoromethane	6.640	101	579110	195.34	ug/L	97
16) vinyl bromide	6.488	106	344697	199.24	ug/L	100
17) ethyl ether	7.102	74	206662	197.07	ug/L	95
18) acrolein	7.327	56	71686	166.75	ug/L	99
19) freon 113	7.563	151	258472	191.95	ug/L	100
20) 1,1-dichloroethene	7.553	96	301635	176.44	ug/L	98
21) acetone	7.579	58	99310	726.17	ug/L	99
22) acetonitrile	8.030	41	442012	1766.09	ug/L	99
23) iodomethane	7.841	142	518088	191.26	ug/L	98
24) carbon disulfide	7.993	76	938305	183.60	ug/L	100
25) methylene chloride	8.328	84	364121	188.73	ug/L	96
26) methyl acetate	8.129	43	275112	182.32	ug/L	98
27) methyl tert butyl ether	8.764	73	976162	180.48	ug/L	100
28) trans-1,2-dichloroethene	8.769	96	334490	178.33	ug/L	97
29) di-isopropyl ether	9.440	45	1216950	173.84	ug/L	99
30) 2-butanone	10.137	72	143040	815.49	ug/L	96
31) 1,1-dichloroethane	9.382	63	646327	185.77	ug/L	99
32) chloroprene	9.519	53	547591	179.21	ug/L	99
33) acrylonitrile	8.664	53	122597	202.20	ug/L	97
34) hexane	9.173	56	247781	183.50	ug/L	100
35) vinyl acetate	9.388	86	61076	200.70	ug/L	97
36) ethyl tert-butyl ether	9.943	59	1182920	184.25	ug/L	99
37) ethyl acetate	10.190	45	43901	181.49	ug/L	91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159797.D
 Acq On : 16 Apr 2018 8:59 pm
 Operator : sydney
 Sample : ic7119-200
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 17 14:05:25 2018

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Apr 17 07:15:00 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 2,2-dichloropropane	10.200	77	458658	173.50	ug/L	96
39) cis-1,2-dichloroethene	10.169	96	374103	182.38	ug/L	98
40) methyl acrylate	10.263	85	48329	201.37	ug/L	95
41) propionitrile	10.205	54	473026	1812.40	ug/L	99
42) bromochloromethane	10.489	128	195190	200.29	ug/L	100
43) tetrahydrofuran	10.562	72	41104	203.64	ug/L	92
44) chloroform	10.562	85	388179	179.02	ug/L	98
45) t-butyl formate	10.641	59	376283	206.79	ug/L	98
47) methacrylonitrile	10.426	67	137757	201.56	ug/L	98
48) 1,1,1-trichloroethane	10.861	97	556389	194.51	ug/L	97
49) cyclohexane	10.971	84	437614	188.98	ug/L	95
50) 1,1-dichloropropene	11.050	75	460502	190.43	ug/L	99
51) iso-butyl alcohol	11.029	43	143473	1935.83	ug/L	98
52) carbon tetrachloride	11.086	117	466201	192.03	ug/L	100
53) tert amyl alcohol	11.181	55	58862	878.86	ug/L	92
56) n-butyl alcohol	11.815	56	443432	9849.04	ug/L	100
57) 2,2,4-trimethylpentane	11.396	57	1169787	172.14	ug/L	98
58) benzene	11.317	78	1297688	179.40	ug/L	99
59) tert-amyl methyl ether	11.396	87	241614	182.00	ug/L	96
60) heptane	11.563	71	262029	189.84	ug/L	100
61) isopropyl acetate	11.265	87	68418	203.16	ug/L	95
62) 1,2-dichloroethane	11.301	62	465015	178.49	ug/L	99
63) trichloroethene	12.062	130	392395	195.56	ug/L	100
64) ethyl acrylate	12.072	55	414016	181.46	ug/L	98
65) 2-nitropropane	12.832	41	93860	202.53	ug/L	94
66) 2-chloroethyl vinyl ether	12.885	63	1132139	936.48	ug/L	98
67) methyl methacrylate	12.355	100	84730	194.96	ug/L	99
68) 1,2-dichloropropane	12.324	63	370006	185.52	ug/L	99
69) dibromomethane	12.465	93	212218	192.96	ug/L	97
70) methylcyclohexane	12.339	83	609604	179.15	ug/L	99
71) bromodichloromethane	12.612	83	500065	190.65	ug/L	99
72) epichlorohydrin	12.990	57	171165	932.65	ug/L	98
73) cis-1,3-dichloropropene	13.110	75	624658	192.53	ug/L	99
74) 4-methyl-2-pentanone	13.225	58	500392	732.18	ug/L	96
75) 3-methyl-1-butanol	13.231	70	163108	3812.50	ug/L	91
78) toluene	13.519	92	876027	199.39	ug/L	96
79) trans-1,3-dichloropropene	13.692	75	566076	204.87	ug/L	98
80) ethyl methacrylate	13.729	69	443679	192.80	ug/L	99
81) 1,1,2-trichloroethane	13.923	83	267184	198.45	ug/L	99
82) tetrachloroethene	14.153	164	317959	187.24	ug/L	99
83) 1,3-dichloropropane	14.117	76	530881	197.72	ug/L	98
84) 2-hexanone	14.127	58	462046	769.19	ug/L	98
85) butyl acetate	14.227	56	229868	191.25	ug/L	92
86) dibromochloromethane	14.395	129	407585	215.06	ug/L	99
87) 1,2-dibromoethane	14.562	107	363099	208.62	ug/L	100
88) n-butyl ether	15.034	57	1718972	194.15	ug/L	98
89) chlorobenzene	15.082	112	962567	194.07	ug/L	98
90) 1,1,1,2-tetrachloroethane	15.139	131	375074	201.31	ug/L	100
91) ethylbenzene	15.155	91	1562986	186.67	ug/L	98
92) m,p-xylene	15.270	106	1278676	383.07	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159797.D
 Acq On : 16 Apr 2018 8:59 pm
 Operator : sydney
 Sample : ic7119-200
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 17 14:05:25 2018

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Apr 17 07:15:00 2018

Response via : Initial Calibration

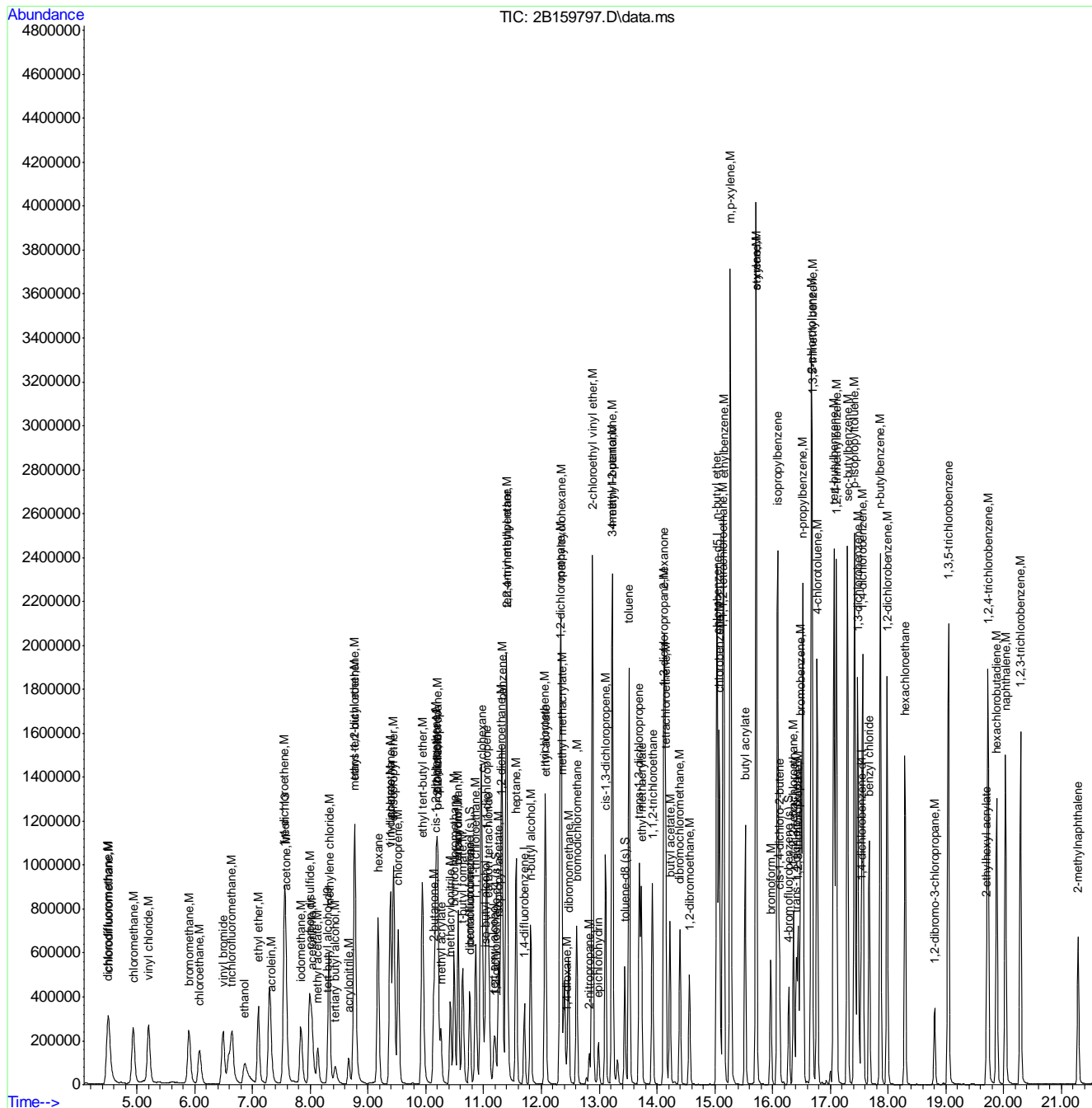
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) o-xylene	15.716	106	666372	193.02	ug/L	94
94) styrene	15.716	104	1107448	189.89	ug/L	97
95) bromoform	15.968	173	298779	224.84	ug/L	99
96) butyl acrylate	15.527	55	770012	193.67	ug/L	99
97) isopropylbenzene	16.088	105	1745706	189.81	ug/L	98
98) cis-1,4-dichloro-2-butene	16.120	88	156048	211.06	ug/L	99
101) bromobenzene	16.492	156	486581	188.22	ug/L	99
102) 1,1,2,2-tetrachloroethane	16.361	83	432176	194.49	ug/L	97
103) trans-1,4-dichloro-2-b...	16.413	53	120581	205.27	ug/L	96
104) 1,2,3-trichloropropane	16.445	110	116776	205.14	ug/L	98
105) n-propylbenzene	16.523	91	1904388	178.40	ug/L	98
107) 2-chlorotoluene	16.670	126	446969	192.11	ug/L	95
108) 4-chlorotoluene	16.770	91	1218998	184.38	ug/L	98
109) 1,3,5-trimethylbenzene	16.686	105	1407219	177.54	ug/L	99
110) tert-butylbenzene	17.063	134	336488	197.14	ug/L	98
111) 1,2,4-trimethylbenzene	17.105	105	1447290	178.97	ug/L	98
112) sec-butylbenzene	17.294	105	1892637	184.74	ug/L	98
113) 1,3-dichlorobenzene	17.472	146	891563	182.51	ug/L	99
114) p-isopropyltoluene	17.420	119	1631941	184.00	ug/L	99
115) 1,4-dichlorobenzene	17.561	146	913506	194.11	ug/L	98
116) benzyl chloride	17.672	91	893851	193.41	ug/L	99
117) 1,2-dichlorobenzene	17.981	146	911624	189.65	ug/L	99
119) n-butylbenzene	17.866	92	827684	194.47	ug/L	96
120) hexachloroethane	18.296	201	348731	209.49	ug/L	98
122) 1,2-dibromo-3-chloropr...	18.804	157	120841	217.65	ug/L	100
123) 1,3,5-trichlorobenzene	19.045	180	842011	192.90	ug/L	99
124) 2-ethylhexyl acrylate	19.706	70	104068	47.84	ug/L	97
125) 1,2,4-trichlorobenzene	19.727	180	724967	200.27	ug/L	99
126) hexachlorobutadiene	19.879	225	361061	187.83	ug/L	98
127) naphthalene	20.031	128	1384967	206.19	ug/L	100
128) 1,2,3-trichlorobenzene	20.293	180	641876	204.84	ug/L	97
129) 2-methylnaphthalene	21.289	142	408660	115.27	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159797.D
 Acq On : 16 Apr 2018 8:59 pm
 Operator : sydney
 Sample : ic7119-200
 Misc : MS25548,V2B7119,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 17 14:05:25 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 07:15:00 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159800.D
 Acq On : 16 Apr 2018 10:29 pm
 Operator : sydney
 Sample : icv7119-50
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 17 14:19:55 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 14:14:07 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) tert butyl alcohol-d9	8.302	65	84928	500.00	ug/L	0.00	
5) pentafluorobenzene	10.761	168	254211	50.00	ug/L	0.00	
54) 1,4-difluorobenzene	11.705	114	328328	50.00	ug/L	0.00	
76) chlorobenzene-d5	15.045	117	310593	50.00	ug/L	0.00	
99) 1,4-dichlorobenzene-d4	17.530	152	173973	50.00	ug/L	0.00	
System Monitoring Compounds							
46) dibromofluoromethane (s)	10.766	113	99292	50.15	ug/L	0.00	
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.30%	
55) 1,2-dichloroethane-d4 (s)	11.207	65	113744	48.77	ug/L	0.00	
Spiked Amount	50.000	Range	81 - 124	Recovery	=	97.54%	
77) toluene-d8 (s)	13.440	98	381155	49.54	ug/L	0.00	
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.08%	
100) 4-bromofluorobenzene (s)	16.282	95	147950	50.81	ug/L	0.00	
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.62%	
Target Compounds							
2) tertiary butyl alcohol	8.439	59	50476	288.36	ug/L	97	Qvalue
3) ethanol	6.866	46	43469	5751.30	ug/L	98	
4) 1,4-dioxane	12.444	88	17483	1452.52	ug/L	97	
6) chlorodifluoromethane	4.527	51	91872	33.47	ug/L	95	
7) dichlorodifluoromethane	4.511	85	135534	51.52	ug/L	98	
10) chloromethane	4.952	50	175887	50.58	ug/L	99	
11) vinyl chloride	5.214	62	149944	50.31	ug/L	98	
13) bromomethane	5.922	94	96424	50.27	ug/L	100	
14) chloroethane	6.100	64	82767	51.54	ug/L	98	
15) trichlorofluoromethane	6.661	101	153062	49.47	ug/L	98	
16) vinyl bromide	6.509	106	108777	60.21	ug/L	100	
17) ethyl ether	7.112	74	55850	51.01	ug/L	96	
18) acrolein	7.332	56	27281	60.57	ug/L	94	
19) freon 113	7.573	151	78271	55.70	ug/L	98	
20) 1,1-dichloroethene	7.558	96	75897	40.81	ug/L	98	
21) acetone	7.584	58	30209	208.99	ug/L	99	
23) iodomethane	7.846	142	160772	56.84	ug/L	99	
24) carbon disulfide	8.003	76	260578	48.84	ug/L	99	
25) methylene chloride	8.334	84	97131	48.24	ug/L	98	
26) methyl acetate	8.140	43	73096	47.84	ug/L	99	
27) methyl tert butyl ether	8.769	73	563420	99.53	ug/L	94	
28) trans-1,2-dichloroethene	8.779	96	88050	44.95	ug/L	98	
29) di-isopropyl ether	9.445	45	365303	49.83	ug/L	98	
30) 2-butanone	10.143	72	40276	220.05	ug/L	90	
31) 1,1-dichloroethane	9.388	63	181501	49.95	ug/L	99	
32) chloroprene	9.524	53	155991	48.90	ug/L	99	
33) acrylonitrile	8.669	53	34627	55.15	ug/L	99	
34) hexane	9.178	56	57906	41.02	ug/L	98	
35) vinyl acetate	9.393	86	18487	58.21	ug/L	94	
36) ethyl tert-butyl ether	9.943	59	347392	51.81	ug/L	98	
37) ethyl acetate	10.195	45	13231	51.45	ug/L	87	
38) 2,2-dichloropropane	10.205	77	131265	47.58	ug/L	98	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159800.D
 Acq On : 16 Apr 2018 10:29 pm
 Operator : sydney
 Sample : icv7119-50
 Misc : MS25548,V2B7119,5,,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 17 14:19:55 2018

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Apr 17 14:14:07 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) cis-1,2-dichloroethene	10.174	96	107576	50.26	ug/L	99
40) methyl acrylate	10.263	85	13702	54.71	ug/L	94
41) propionitrile	10.211	54	140940	513.84	ug/L	99
42) bromochloromethane	10.494	128	54512	53.60	ug/L	98
43) tetrahydrofuran	10.562	72	11465	54.43	ug/L	94
44) chloroform	10.562	85	111981	49.48	ug/L	97
45) t-butyl formate	10.641	59	75261	38.69	ug/L	97
47) methacrylonitrile	10.426	67	38567	52.93	ug/L	97
48) 1,1,1-trichloroethane	10.866	97	147675	49.47	ug/L	98
49) cyclohexane	10.971	84	159263	65.03	ug/L #	88
50) 1,1-dichloropropene	11.055	75	126513	50.14	ug/L	98
51) iso-butyl alcohol	11.029	43	44163	578.11	ug/L	97
52) carbon tetrachloride	11.086	117	126186	49.81	ug/L	99
53) tert amyl alcohol	11.181	55	17397	249.14	ug/L	99
56) n-butyl alcohol	11.810	56	121115	2636.54	ug/L	98
57) 2,2,4-trimethylpentane	11.396	57	297273	42.97	ug/L	97
58) benzene	11.322	78	368779	50.06	ug/L	99
59) tert-amyl methyl ether	11.396	87	69815	51.55	ug/L	99
60) heptane	11.563	71	70635	50.15	ug/L	98
61) isopropyl acetate	11.265	87	19091	55.68	ug/L	95
62) 1,2-dichloroethane	11.301	62	134354	50.66	ug/L	98
63) trichloroethene	12.061	130	109962	53.83	ug/L	98
64) ethyl acrylate	12.077	55	123319	52.79	ug/L	99
65) 2-nitropropane	12.832	41	25095	51.25	ug/L	97
66) 2-chloroethyl vinyl ether	12.885	63	341461	276.00	ug/L	100
67) methyl methacrylate	12.355	100	24061	54.38	ug/L #	90
68) 1,2-dichloropropane	12.324	63	99763	49.13	ug/L	99
69) dibromomethane	12.470	93	60836	54.34	ug/L	98
70) methylcyclohexane	12.339	83	147218	42.50	ug/L	98
71) bromodichloromethane	12.612	83	136537	51.13	ug/L	100
72) epichlorohydrin	12.984	57	47626	244.63	ug/L	99
73) cis-1,3-dichloropropene	13.110	75	177792	53.83	ug/L	99
74) 4-methyl-2-pentanone	13.225	58	145624	209.30	ug/L	100
75) 3-methyl-1-butanol	13.225	70	45946	1054.46	ug/L	99
78) toluene	13.519	92	246226	53.11	ug/L	98
79) trans-1,3-dichloropropene	13.697	75	151940	52.11	ug/L	99
80) ethyl methacrylate	13.729	69	123816	51.00	ug/L	99
81) 1,1,2-trichloroethane	13.918	83	75019	52.80	ug/L	99
83) 1,3-dichloropropane	14.117	76	155570	54.91	ug/L	99
84) 2-hexanone	14.127	58	134245	210.91	ug/L	98
85) butyl acetate	14.227	56	65490	51.65	ug/L	98
86) dibromochloromethane	14.395	129	113582	56.80	ug/L	99
87) 1,2-dibromoethane	14.562	107	102240	55.67	ug/L	99
88) n-butyl ether	15.034	57	488811	52.34	ug/L	99
89) chlorobenzene	15.076	112	277579	53.04	ug/L	98
90) 1,1,1,2-tetrachloroethane	15.139	131	108707	55.30	ug/L	99
91) ethylbenzene	15.155	91	459679	52.01	ug/L	100
92) m,p-xylene	15.270	106	367850	104.44	ug/L	99
93) o-xylene	15.716	106	192970	52.97	ug/L	99
94) styrene	15.716	104	326385	53.04	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159800.D
 Acq On : 16 Apr 2018 10:29 pm
 Operator : sydney
 Sample : icv7119-50
 Misc : MS25548,V2B7119,5,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 17 14:19:55 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 14:14:07 2018
 Response via : Initial Calibration

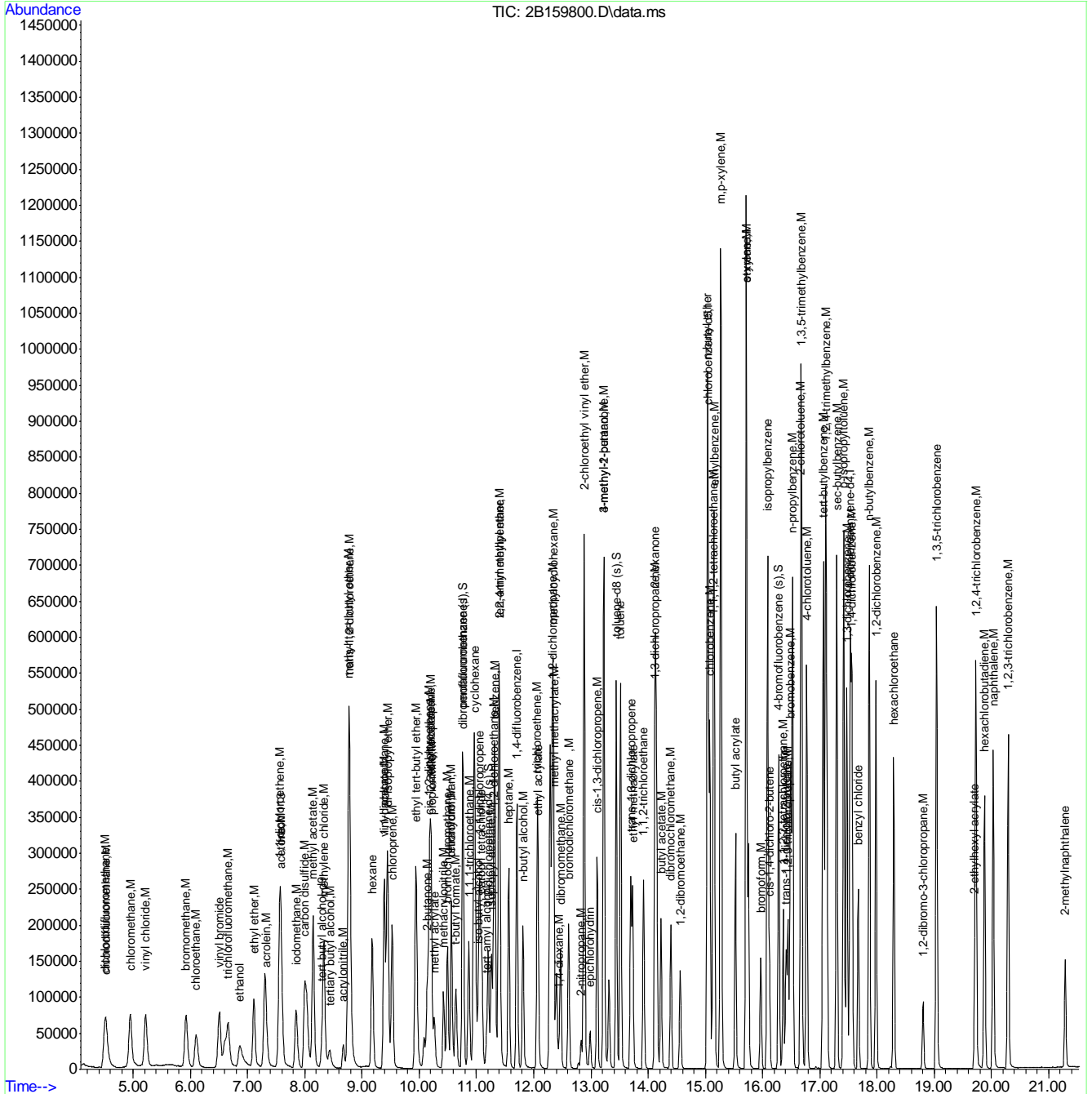
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) bromoform	15.968	173	81561	58.16	ug/L	100
96) butyl acrylate	15.527	55	216485	51.59	ug/L	99
97) isopropylbenzene	16.088	105	509572	52.51	ug/L	100
98) cis-1,4-dichloro-2-butene	16.120	88	41494	53.19	ug/L	99
101) bromobenzene	16.492	156	138756	54.80	ug/L	100
102) 1,1,2,2-tetrachloroethane	16.361	83	119403	54.86	ug/L	100
103) trans-1,4-dichloro-2-b...	16.413	53	35307	61.36	ug/L	99
104) 1,2,3-trichloropropane	16.445	110	32641	57.34	ug/L	100
105) n-propylbenzene	16.523	91	557653	53.34	ug/L	100
107) 2-chlorotoluene	16.665	126	122703	53.85	ug/L	97
108) 4-chlorotoluene	16.770	91	352555	54.44	ug/L	100
109) 1,3,5-trimethylbenzene	16.681	105	410721	52.93	ug/L	99
110) tert-butylbenzene	17.063	134	94442	56.49	ug/L	96
111) 1,2,4-trimethylbenzene	17.105	105	431674	54.50	ug/L	100
112) sec-butylbenzene	17.294	105	545891	54.40	ug/L	100
113) 1,3-dichlorobenzene	17.472	146	256094	53.53	ug/L	99
114) p-isopropyltoluene	17.420	119	476840	54.89	ug/L	99
115) 1,4-dichlorobenzene	17.561	146	254294	55.17	ug/L	100
116) benzyl chloride	17.672	91	200765	44.35	ug/L	100
117) 1,2-dichlorobenzene	17.981	146	261910	55.63	ug/L	99
119) n-butylbenzene	17.866	92	235940	56.59	ug/L	100
120) hexachloroethane	18.295	201	98005	60.11	ug/L	98
122) 1,2-dibromo-3-chloropr...	18.804	157	31848	60.07	ug/L	99
123) 1,3,5-trichlorobenzene	19.040	180	250347	58.55	ug/L	99
124) 2-ethylhexyl acrylate	19.706	70	26300	12.34	ug/L	91
125) 1,2,4-trichlorobenzene	19.727	180	215271	61.08	ug/L	99
126) hexachlorobutadiene	19.879	225	102647	54.52	ug/L	98
127) naphthalene	20.031	128	406255	62.33	ug/L	100
128) 1,2,3-trichlorobenzene	20.293	180	184549	60.90	ug/L	98
129) 2-methylnaphthalene	21.289	142	90181	25.87	ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
Data File : 2B159800.D
Acq On : 16 Apr 2018 10:29 pm
Operator : sydney
Sample : icv7119-50
Misc : MS25548,V2B7119,5,,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 17 14:19:55 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 17 14:14:07 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159801.D
 Acq On : 16 Apr 2018 10:59 pm
 Operator : sydney
 Sample : icv7119-50
 Misc : MS25548,V2B7119,5,,,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 17 14:08:01 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 14:06:37 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.302	65	102859	500.00	ug/L	0.00
5) pentafluorobenzene	10.761	168	285685	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.705	114	359563	50.00	ug/L	0.00
76) chlorobenzene-d5	15.045	117	335057	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.530	152	198642	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.766	113	111984	50.33	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.66%
55) 1,2-dichloroethane-d4 (s)	11.207	65	129679	50.77	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	101.54%
77) toluene-d8 (s)	13.440	98	418883	50.47	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.94%
100) 4-bromofluorobenzene (s)	16.282	95	162631	48.92	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.84%
Target Compounds						
22) acetonitrile	8.040	41	147531	504.75	ug/L	99
82) tetrachloroethene	14.148	164	99790	51.63	ug/L	99

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

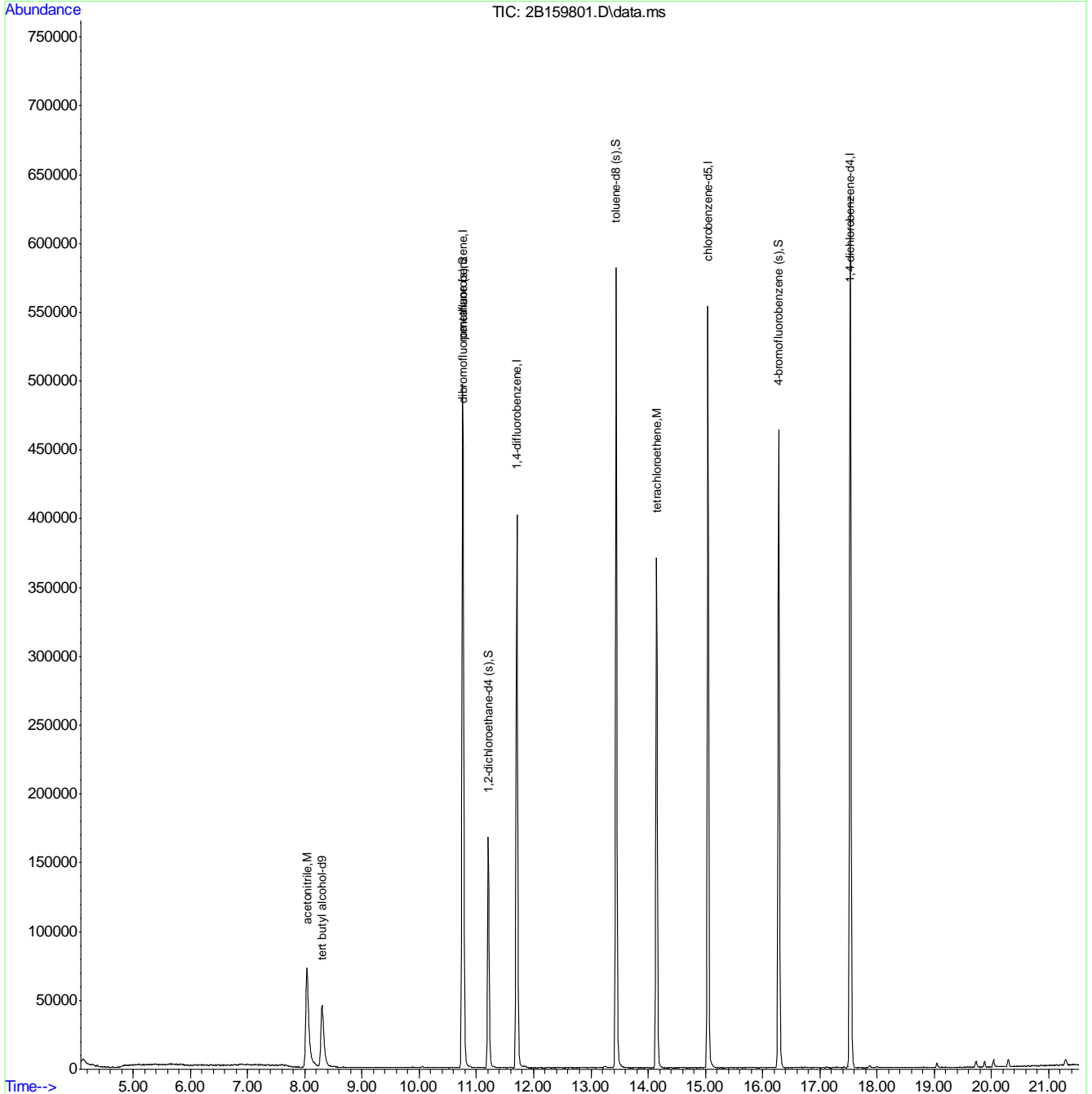
7.7.11

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159801.D
 Acq On : 16 Apr 2018 10:59 pm
 Operator : sydney
 Sample : icv7119-50
 Misc : MS25548,V2B7119,5,,,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 17 14:08:01 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 14:06:37 2018
 Response via : Initial Calibration



7.7.11
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159805.D
 Acq On : 17 Apr 2018 9:01 am
 Operator : sydney
 Sample : icv7119-50
 Misc : MS25548,V2B7119,5,,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 17 14:08:57 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 14:06:37 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.297	65	100030	500.00	ug/L	0.00
5) pentafluorobenzene	10.756	168	285346	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.705	114	355736	50.00	ug/L	0.00
76) chlorobenzene-d5	15.045	117	334438	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.535	152	194996	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.761	113	111587	50.21	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.42%
55) 1,2-dichloroethane-d4 (s)	11.207	65	129039	51.07	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	102.14%
77) toluene-d8 (s)	13.440	98	412085	49.74	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.48%
100) 4-bromofluorobenzene (s)	16.282	95	158901	48.69	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.38%
Target Compounds						
6) chlorodifluoromethane	4.522	51	159527	51.77	ug/L	91

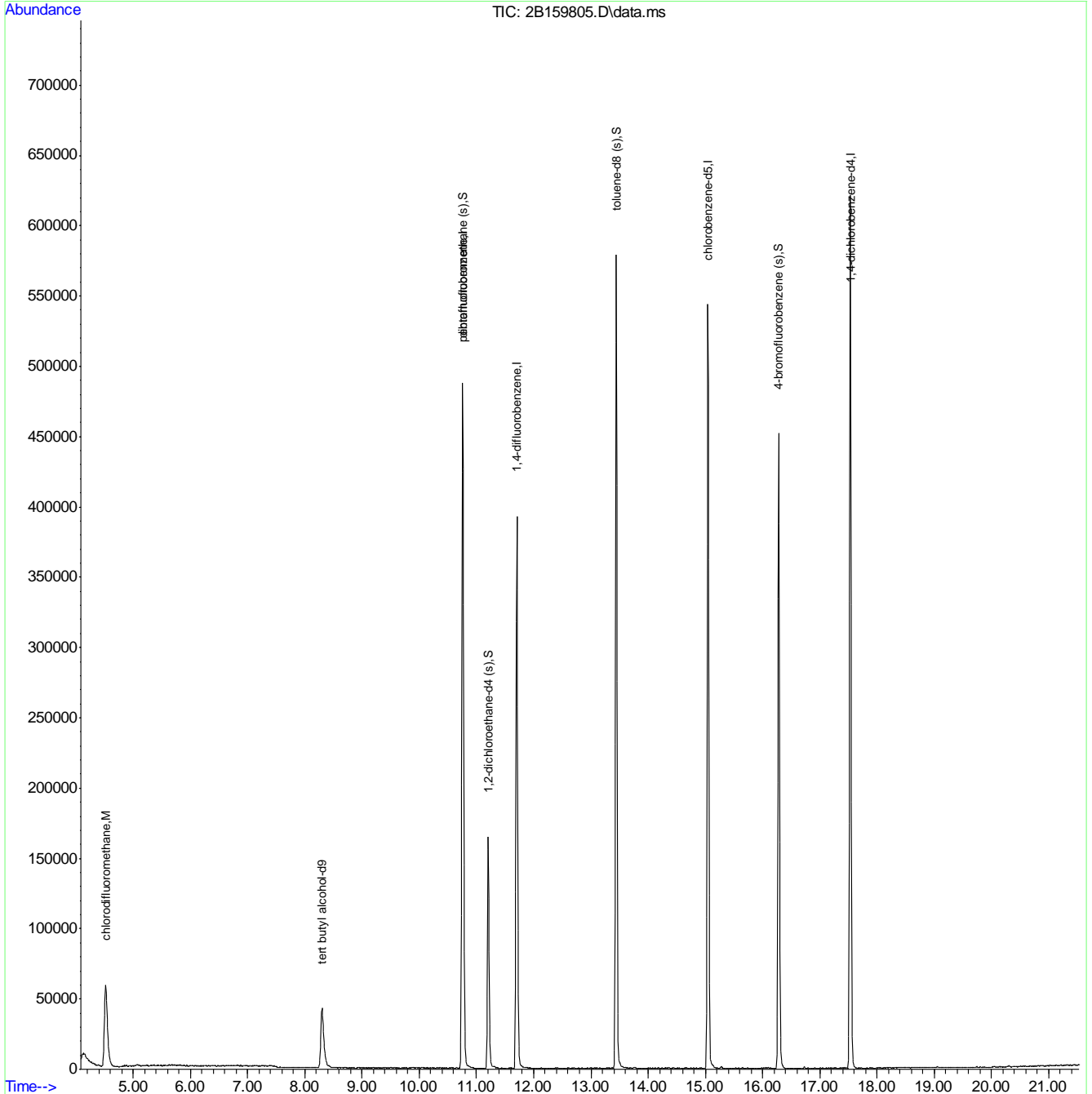
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.12
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2B7119\
 Data File : 2B159805.D
 Acq On : 17 Apr 2018 9:01 am
 Operator : sydney
 Sample : icv7119-50
 Misc : MS25548,V2B7119,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 17 14:08:57 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 14:06:37 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v2b7179 qcs\
 Data File : 2b160758.d
 Acq On : 31 May 2018 5:45 pm
 Operator : deving
 Sample : CC7119-50 Inst : MS2B
 Misc : MS26754,V2B7179,5,,,,,1
 ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 04 10:55:41 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	8.297	65	78660	500.00	ug/L	0.00
5) pentafluorobenzene	10.751	168	251207	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	11.700	114	323841	50.00	ug/L	0.00
76) chlorobenzene-d5	15.040	117	327621	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	17.525	152	174226	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.756	113	103623	52.96	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	105.92%
55) 1,2-dichloroethane-d4 (s)	11.202	65	110916	48.22	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	96.44%
77) toluene-d8 (s)	13.435	98	388382	47.86	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	95.72%
100) 4-bromofluorobenzene (s)	16.272	95	151490	51.95	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	103.90%
Target Compounds						
2) tertiary butyl alcohol	8.428	59	42771	263.81	ug/L	94
3) ethanol	6.855	46	39674	5667.47	ug/L	93
4) 1,4-dioxane	12.434	88	16623	1491.12	ug/L	95
6) chlorodifluoromethane	4.522	51	174289	64.25	ug/L	99
7) dichlorodifluoromethane	4.501	85	208548	80.22	ug/L	98
10) chloromethane	4.952	50	222685	64.81	ug/L	99
11) vinyl chloride	5.219	62	187480	63.66	ug/L	99
13) bromomethane	5.922	94	109879	57.97	ug/L	98
14) chloroethane	6.100	64	96527	60.82	ug/L	96
15) trichlorofluoromethane	6.656	101	169842	55.56	ug/L	99
16) vinyl bromide	6.499	106	135703	76.01	ug/L	99
17) ethyl ether	7.107	74	59481	54.97	ug/L	92
18) acrolein	7.327	56	20604	46.29	ug/L	85
19) freon 113	7.568	151	75911	54.66	ug/L	96
20) 1,1-dichloroethene	7.553	96	93036	50.62	ug/L	95
21) acetone	7.574	58	28846	201.95	ug/L #	86
22) acetonitrile	8.030	41	112456	437.55	ug/L	98
23) iodomethane	7.841	142	138066	49.40	ug/L	99
24) carbon disulfide	7.993	76	292714	55.52	ug/L	96
25) methylene chloride	8.329	84	105658	53.10	ug/L	90
26) methyl acetate	8.129	43	65606	43.45	ug/L	96
27) methyl tert butyl ether	8.764	73	244558	43.72	ug/L	100
28) trans-1,2-dichloroethene	8.774	96	99104	51.20	ug/L	93
29) di-isopropyl ether	9.435	45	310887	42.92	ug/L	98
30) 2-butanone	10.127	72	36101	199.59	ug/L #	89
31) 1,1-dichloroethane	9.377	63	182809	50.92	ug/L	98
32) chloroprene	9.519	53	139484	44.25	ug/L	93
33) acrylonitrile	8.664	53	30632	49.37	ug/L	96
34) hexane	9.167	56	76844	55.08	ug/L	96
35) vinyl acetate	9.388	86	16897	53.84	ug/L	74
36) ethyl tert-butyl ether	9.938	59	283815	42.83	ug/L	100
37) ethyl acetate	10.179	45	12331	48.52	ug/L #	44
38) 2,2-dichloropropane	10.195	77	132598	48.64	ug/L	92
39) cis-1,2-dichloroethene	10.169	96	107713	50.92	ug/L	96
40) methyl acrylate	10.258	85	11999	48.49	ug/L	99
41) propionitrile	10.200	54	129794	478.86	ug/L	98
42) bromochloromethane	10.483	128	51851	51.60	ug/L	98
43) tetrahydrofuran	10.557	72	10356	49.76	ug/L	92
44) chloroform	10.552	85	107983	48.29	ug/L	98

7.7.13
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v2b7179 qcs\
 Data File : 2b160758.d
 Acq On : 31 May 2018 5:45 pm
 Operator : deving
 Sample : CC7119-50 Inst : MS2B
 Misc : MS26754,V2B7179,5,,,,,1
 ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 04 10:55:41 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) t-butyl formate	10.635	59	42634	22.18	ug/L	94
47) methacrylonitrile	10.415	67	34703	48.20	ug/L	87
48) 1,1,1-trichloroethane	10.856	97	139738	47.37	ug/L	98
49) cyclohexane	10.966	84	133838	55.30	ug/L #	75
50) 1,1-dichloropropene	11.044	75	123572	49.56	ug/L	99
51) iso-butyl alcohol	11.018	43	32739	433.69	ug/L	98
52) carbon tetrachloride	11.081	117	120877	48.28	ug/L	99
53) tert amyl alcohol	11.175	55	15849	229.68	ug/L	71
56) n-butyl alcohol	11.805	56	103957	2294.39	ug/L	95
57) 2,2,4-trimethylpentane	11.390	57	383769	56.24	ug/L	88
58) benzene	11.312	78	365546	50.31	ug/L	100
59) tert-amyl methyl ether	11.390	87	55902	41.85	ug/L	94
60) heptane	11.558	71	80156	57.70	ug/L	98
61) isopropyl acetate	11.254	87	16921	50.04	ug/L #	81
62) 1,2-dichloroethane	11.291	62	117664	44.98	ug/L	97
63) trichloroethene	12.056	130	98107	48.69	ug/L	98
64) ethyl acrylate	12.067	55	102114	44.32	ug/L	99
65) 2-nitropropane	12.822	41	19357	40.08	ug/L	98
66) 2-chloroethyl vinyl ether	12.874	63	280825	230.13	ug/L	98
67) methyl methacrylate	12.345	100	21482	49.23	ug/L #	91
68) 1,2-dichloropropane	12.318	63	100428	50.15	ug/L	99
69) dibromomethane	12.460	93	55947	50.66	ug/L	93
70) methylcyclohexane	12.329	83	181810	53.21	ug/L	98
71) bromodichloromethane	12.602	83	129140	49.03	ug/L	98
72) epichlorohydrin	12.979	57	41498	216.11	ug/L	98
73) cis-1,3-dichloropropene	13.100	75	159718	49.03	ug/L	92
74) 4-methyl-2-pentanone	13.220	58	133744	194.89	ug/L	91
75) 3-methyl-1-butanol	13.220	70	42986	1000.20	ug/L	88
78) toluene	13.514	92	223339	45.67	ug/L	100
79) trans-1,3-dichloropropene	13.687	75	140632	45.73	ug/L	99
80) ethyl methacrylate	13.724	69	116437	45.47	ug/L	90
81) 1,1,2-trichloroethane	13.912	83	71005	47.38	ug/L	95
82) tetrachloroethene	14.143	164	81021	42.87	ug/L	97
83) 1,3-dichloropropane	14.112	76	142620	47.73	ug/L	92
84) 2-hexanone	14.122	58	125476	186.88	ug/L	92
85) butyl acetate	14.222	56	56781	42.45	ug/L	86
86) dibromochloromethane	14.389	129	98434	46.66	ug/L	100
87) 1,2-dibromoethane	14.552	107	95988	49.55	ug/L	99
88) n-butyl ether	15.029	57	431001	43.75	ug/L	99
89) chlorobenzene	15.071	112	255239	46.24	ug/L	98
90) 1,1,1,2-tetrachloroethane	15.134	131	95997	46.29	ug/L	99
91) ethylbenzene	15.150	91	420686	45.13	ug/L	99
92) m,p-xylene	15.265	106	329480	88.68	ug/L	98
93) o-xylene	15.705	106	172544	44.91	ug/L	97
94) styrene	15.711	104	293831	45.27	ug/L	96
95) bromoform	15.962	173	70623	47.74	ug/L	99
96) butyl acrylate	15.522	55	183709	41.50	ug/L	98
97) isopropylbenzene	16.083	105	449210	43.88	ug/L	100
98) cis-1,4-dichloro-2-butene	16.109	88	38360	46.62	ug/L	96
101) bromobenzene	16.481	156	123950	48.88	ug/L	95
102) 1,1,2,2-tetrachloroethane	16.356	83	117295	53.82	ug/L	98
103) trans-1,4-dichloro-2-b...	16.408	53	28410	49.31	ug/L	85
104) 1,2,3-trichloropropane	16.439	110	29754	52.19	ug/L	95
105) n-propylbenzene	16.518	91	522436	49.89	ug/L	100
107) 2-chlorotoluene	16.660	126	114511	50.18	ug/L	97
108) 4-chlorotoluene	16.765	91	317042	48.89	ug/L	98
109) 1,3,5-trimethylbenzene	16.675	105	371548	47.81	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v2b7179 qcs\
 Data File : 2b160758.d
 Acq On : 31 May 2018 5:45 pm
 Operator : deving
 Sample : CC7119-50 Inst : MS2B
 Misc : MS26754,V2B7179,5,,,,,1
 ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 04 10:55:41 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) tert-butylbenzene	17.053	134	83260	49.73	ug/L	95
111) 1,2,4-trimethylbenzene	17.095	105	381966	48.15	ug/L	100
112) sec-butylbenzene	17.289	105	508698	50.62	ug/L	100
113) 1,3-dichlorobenzene	17.467	146	229006	47.79	ug/L	100
114) p-isopropyltoluene	17.415	119	431113	49.55	ug/L	100
115) 1,4-dichlorobenzene	17.551	146	224550	48.64	ug/L	98
116) benzyl chloride	17.666	91	252821	55.77	ug/L	100
117) 1,2-dichlorobenzene	17.976	146	232617	49.33	ug/L	99
119) n-butylbenzene	17.855	92	230185	55.13	ug/L	98
120) hexachloroethane	18.285	201	89168	54.61	ug/L	99
122) 1,2-dibromo-3-chloropr...	18.799	157	27974	52.69	ug/L	95
123) 1,3,5-trichlorobenzene	19.035	180	231556	54.08	ug/L	99
124) 2-ethylhexyl acrylate	19.701	70	15431	7.23	ug/L	90
125) 1,2,4-trichlorobenzene	19.722	180	204526	57.95	ug/L	99
126) hexachlorobutadiene	19.868	225	100092	53.08	ug/L	99
127) naphthalene	20.020	128	380168	58.24	ug/L	100
128) 1,2,3-trichlorobenzene	20.283	180	178397	58.78	ug/L	98
129) 2-methylnaphthalene	21.284	142	96178	27.55	ug/L	96

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

7.7.13

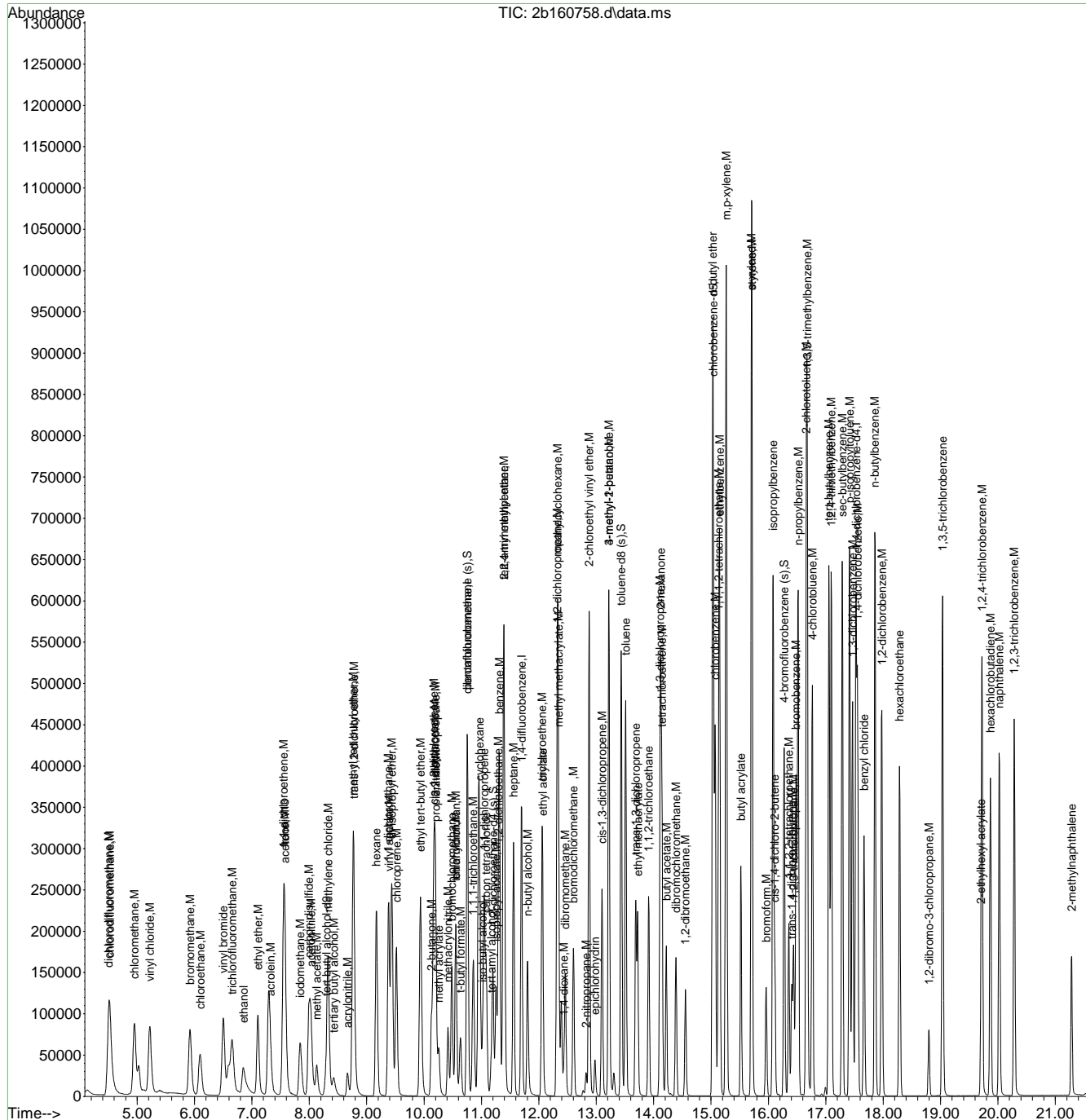
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\v2b7179 qcs\
Data File : 2b160758.d
Acq On : 31 May 2018 5:45 pm
Operator : deving
Sample : CC7119-50
Misc : MS26754,V2B7179,5,,,,,1
ALS Vial : 19 Sample Multiplier: 1

Inst : MS2B

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
Quant Results File: M2B7119.RES
Quant Time: Jun 04 10:55:41 2018
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Apr 17 15:34:05 2018
Response via : Initial Calibration



7.7.13
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v2b7179\
 Data File : 2b160785.d
 Acq On : 1 Jun 2018 9:56 am
 Operator : sydneyes
 Sample : cc7119-20 Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 03 23:01:17 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) tert butyl alcohol-d9	8.292	65	76033	500.00	ug/L	-0.01	
5) pentafluorobenzene	10.751	168	243207	50.00	ug/L	-0.01	
54) 1,4-difluorobenzene	11.700	114	310579	50.00	ug/L	0.00	
76) chlorobenzene-d5	15.040	117	316136	50.00	ug/L	0.00	
99) 1,4-dichlorobenzene-d4	17.525	152	166408	50.00	ug/L	-0.01	
System Monitoring Compounds							
46) dibromofluoromethane (s)	10.756	113	101253	53.45	ug/L	-0.01	
Spiked Amount	50.000	Range	80 - 120	Recovery	=	106.90%	
55) 1,2-dichloroethane-d4 (s)	11.202	65	109654	49.70	ug/L	0.00	
Spiked Amount	50.000	Range	81 - 124	Recovery	=	99.40%	
77) toluene-d8 (s)	13.435	98	377733	48.24	ug/L	0.00	
Spiked Amount	50.000	Range	80 - 120	Recovery	=	96.48%	
100) 4-bromofluorobenzene (s)	16.272	95	143524	51.53	ug/L	-0.01	
Spiked Amount	50.000	Range	80 - 120	Recovery	=	103.06%	
Target Compounds							
2) tertiary butyl alcohol	8.428	59	19639	125.32	ug/L		Qvalue 92
3) ethanol	6.850	46	15294m	2260.25	ug/L		
4) 1,4-dioxane	12.434	88	5962	553.28	ug/L		97
6) chlorodifluoromethane	4.522	51	60341	22.98	ug/L		97
7) dichlorodifluoromethane	4.501	85	60528	24.05	ug/L		98
10) chloromethane	4.952	50	75398	22.66	ug/L		99
11) vinyl chloride	5.214	62	64234	22.53	ug/L		99
13) bromomethane	5.927	94	40502	22.07	ug/L		97
14) chloroethane	6.105	64	35475	23.09	ug/L		98
15) trichlorofluoromethane	6.656	101	62411	21.09	ug/L		99
16) vinyl bromide	6.504	106	49494	28.64	ug/L		98
17) ethyl ether	7.107	74	24387	23.28	ug/L		96
18) acrolein	7.327	56	8832	20.50	ug/L #		57
19) freon 113	7.568	151	26787	19.92	ug/L		95
20) 1,1-dichloroethene	7.558	96	36002	20.23	ug/L		94
21) acetone	7.579	58	13281	96.04	ug/L #		76
22) acetonitrile	8.030	41	48003	192.92	ug/L		99
23) iodomethane	7.841	142	53555	19.79	ug/L		98
24) carbon disulfide	7.993	76	110213	21.59	ug/L		98
25) methylene chloride	8.328	84	42627	22.13	ug/L		86
26) methyl acetate	8.129	43	27509	18.82	ug/L		94
27) methyl tert butyl ether	8.764	73	97082	17.93	ug/L		98
28) trans-1,2-dichloroethene	8.774	96	38480	20.53	ug/L		94
29) di-isopropyl ether	9.435	45	126795	18.08	ug/L		99
30) 2-butanone	10.132	72	14457	82.56	ug/L #		81
31) 1,1-dichloroethane	9.382	63	71737	20.64	ug/L		99
32) chloroprene	9.519	53	52282	17.13	ug/L		94
33) acrylonitrile	8.669	53	12512	20.83	ug/L		96
34) hexane	9.173	56	26702	19.77	ug/L		93
35) vinyl acetate	9.388	86	5999	19.74	ug/L		92
36) ethyl tert-butyl ether	9.938	59	109735	17.10	ug/L		100
37) ethyl acetate	10.184	45	4695	19.08	ug/L		73
38) 2,2-dichloropropane	10.200	77	51219	19.41	ug/L		92
39) cis-1,2-dichloroethene	10.169	96	42649	20.83	ug/L		99
40) methyl acrylate	10.263	85	4775	19.93	ug/L #		81
41) propionitrile	10.200	54	55083	209.91	ug/L		97
42) bromochloromethane	10.483	128	20745	21.32	ug/L		96
43) tetrahydrofuran	10.557	72	3891	19.31	ug/L		90
44) chloroform	10.551	85	42659	19.70	ug/L		98

7.7.14
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v2b7179\
 Data File : 2b160785.d
 Acq On : 1 Jun 2018 9:56 am
 Operator : sydney
 Sample : cc7119-20 Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 03 23:01:17 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) t-butyl formate	10.635	59	11314	6.08	ug/L	87
47) methacrylonitrile	10.420	67	13960	20.03	ug/L	86
48) 1,1,1-trichloroethane	10.856	97	52344	18.33	ug/L	98
49) cyclohexane	10.966	84	49261	21.02	ug/L #	76
50) 1,1-dichloropropene	11.044	75	46125	19.11	ug/L	99
51) iso-butyl alcohol	11.023	43	13054	178.61	ug/L	98
52) carbon tetrachloride	11.081	117	45356	18.71	ug/L	99
53) tert amyl alcohol	11.175	55	6101	91.32	ug/L	69
56) n-butyl alcohol	11.810	56	38848	894.01	ug/L	96
57) 2,2,4-trimethylpentane	11.390	57	138791	21.21	ug/L	89
58) benzene	11.312	78	142708	20.48	ug/L	99
59) tert-amyl methyl ether	11.390	87	22116	17.26	ug/L	93
60) heptane	11.563	71	27499	20.64	ug/L	97
61) isopropyl acetate	11.259	87	6679	20.59	ug/L #	68
62) 1,2-dichloroethane	11.296	62	46813	18.66	ug/L	98
63) trichloroethene	12.056	130	35575	18.41	ug/L	96
64) ethyl acrylate	12.072	55	39286	17.78	ug/L	99
65) 2-nitropropane	12.827	41	7584	16.37	ug/L	95
66) 2-chloroethyl vinyl ether	12.879	63	41355	35.34	ug/L	99
67) methyl methacrylate	12.350	100	8491	20.29	ug/L #	73
68) 1,2-dichloropropane	12.318	63	39287	20.45	ug/L	96
69) dibromomethane	12.460	93	23075	21.79	ug/L	93
70) methylcyclohexane	12.329	83	63298	19.32	ug/L	99
71) bromodichloromethane	12.602	83	50647	20.05	ug/L	100
72) epichlorohydrin	12.979	57	15183	82.44	ug/L	99
73) cis-1,3-dichloropropene	13.105	75	61349	19.64	ug/L	90
74) 4-methyl-2-pentanone	13.220	58	53795	81.74	ug/L	91
75) 3-methyl-1-butanol	13.225	70	16105	390.73	ug/L	91
78) toluene	13.514	92	85163	18.05	ug/L	98
79) trans-1,3-dichloropropene	13.687	75	53110	17.90	ug/L	99
80) ethyl methacrylate	13.724	69	44214	17.89	ug/L	89
81) 1,1,2-trichloroethane	13.912	83	28778	19.90	ug/L	93
82) tetrachloroethene	14.143	164	31240	17.13	ug/L	97
83) 1,3-dichloropropane	14.111	76	56266	19.51	ug/L	89
84) 2-hexanone	14.127	58	47370	73.12	ug/L	93
85) butyl acetate	14.222	56	22052	17.09	ug/L	89
86) dibromochloromethane	14.389	129	38570	18.95	ug/L	98
87) 1,2-dibromoethane	14.557	107	37615	20.12	ug/L	98
88) n-butyl ether	15.029	57	156649	16.48	ug/L	98
89) chlorobenzene	15.071	112	99289	18.64	ug/L	98
90) 1,1,1,2-tetrachloroethane	15.134	131	37120	18.55	ug/L	96
91) ethylbenzene	15.150	91	163665	18.19	ug/L	99
92) m,p-xylene	15.265	106	126066	35.17	ug/L	95
93) o-xylene	15.711	106	66268	17.87	ug/L	97
94) styrene	15.711	104	111852	17.86	ug/L	98
95) bromoform	15.962	173	27646	19.37	ug/L	99
96) butyl acrylate	15.522	55	64278	15.05	ug/L	98
97) isopropylbenzene	16.083	105	165933	16.80	ug/L	98
98) cis-1,4-dichloro-2-butene	16.114	88	13625	17.16	ug/L	96
101) bromobenzene	16.487	156	47462	19.60	ug/L	97
102) 1,1,2,2-tetrachloroethane	16.356	83	46969	22.56	ug/L	98
103) trans-1,4-dichloro-2-b...	16.408	53	9925	18.03	ug/L	89
104) 1,2,3-trichloropropane	16.439	110	12308	22.60	ug/L	98
105) n-propylbenzene	16.518	91	201735	20.17	ug/L	99
107) 2-chlorotoluene	16.660	126	43812	20.10	ug/L	94
108) 4-chlorotoluene	16.764	91	122049	19.70	ug/L	99
109) 1,3,5-trimethylbenzene	16.675	105	143516	19.34	ug/L	99

7.7.14
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v2b7179\
 Data File : 2b160785.d
 Acq On : 1 Jun 2018 9:56 am
 Operator : sydney
 Sample : cc7119-20 Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 03 23:01:17 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) tert-butylbenzene	17.058	134	29436	18.41	ug/L	92
111) 1,2,4-trimethylbenzene	17.095	105	149459	19.73	ug/L	98
112) sec-butylbenzene	17.289	105	186283	19.41	ug/L	98
113) 1,3-dichlorobenzene	17.467	146	89461	19.55	ug/L	99
114) p-isopropyltoluene	17.415	119	158852	19.12	ug/L	99
115) 1,4-dichlorobenzene	17.551	146	85969	19.50	ug/L	98
116) benzyl chloride	17.666	91	87585	20.23	ug/L	99
117) 1,2-dichlorobenzene	17.976	146	88803	19.72	ug/L	98
119) n-butylbenzene	17.860	92	81934	20.55	ug/L	97
120) hexachloroethane	18.285	201	31486	20.19	ug/L	96
122) 1,2-dibromo-3-chloropr...	18.799	157	10366	20.44	ug/L	94
123) 1,3,5-trichlorobenzene	19.035	180	81826	20.01	ug/L	99
124) 2-ethylhexyl acrylate	19.701	70	1417	0.70	ug/L #	73
125) 1,2,4-trichlorobenzene	19.722	180	68294	20.26	ug/L	98
126) hexachlorobutadiene	19.868	225	35889	19.93	ug/L	98
127) naphthalene	20.026	128	130146	20.88	ug/L	100
128) 1,2,3-trichlorobenzene	20.288	180	62233	21.47	ug/L	98
129) 2-methylnaphthalene	21.284	142	21207	6.36	ug/L	95

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

7.7.14

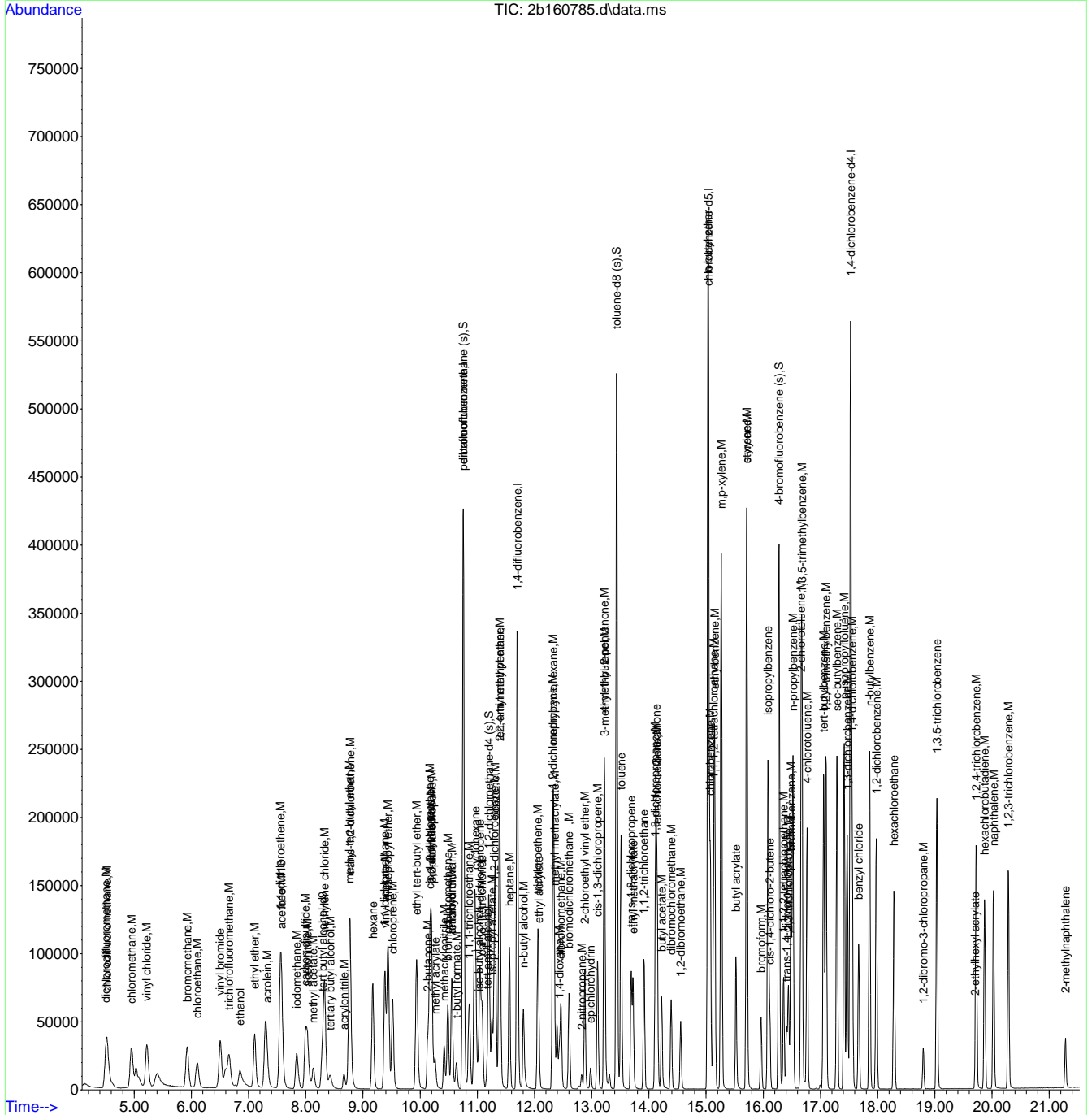
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\unicem60418\v2b7179\
 Data File : 2b160785.d
 Acq On : 1 Jun 2018 9:56 am
 Operator : sydney
 Sample : cc7119-20
 Misc : MS26780,V2B7179,5,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Inst : MS2B

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 03 23:01:17 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration



7.7.14
7

Manual Integration Approval Summary

Sample Number: V2B7179-CC7119 Method: SW846 8260C
Lab FileID: 2B160785.D Analyst approved: 06/03/18 23:36 Eunice Mabutas
Injection Time: 06/01/18 09:56 Supervisor approved: 06/04/18 14:55 MoHui Huang

Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethanol	64-17-5		6.85	Poor instrument integration

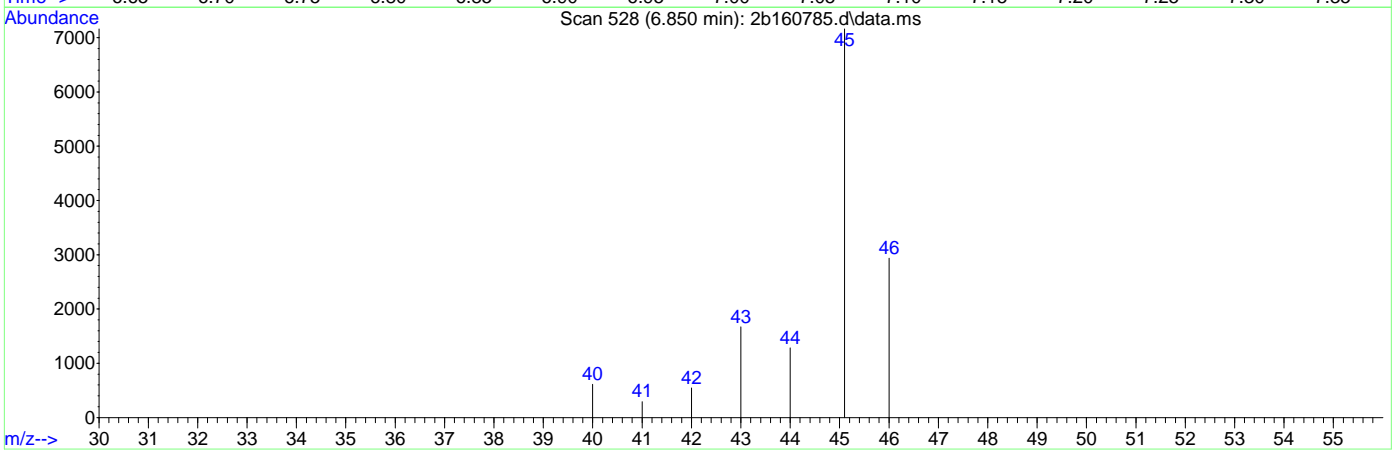
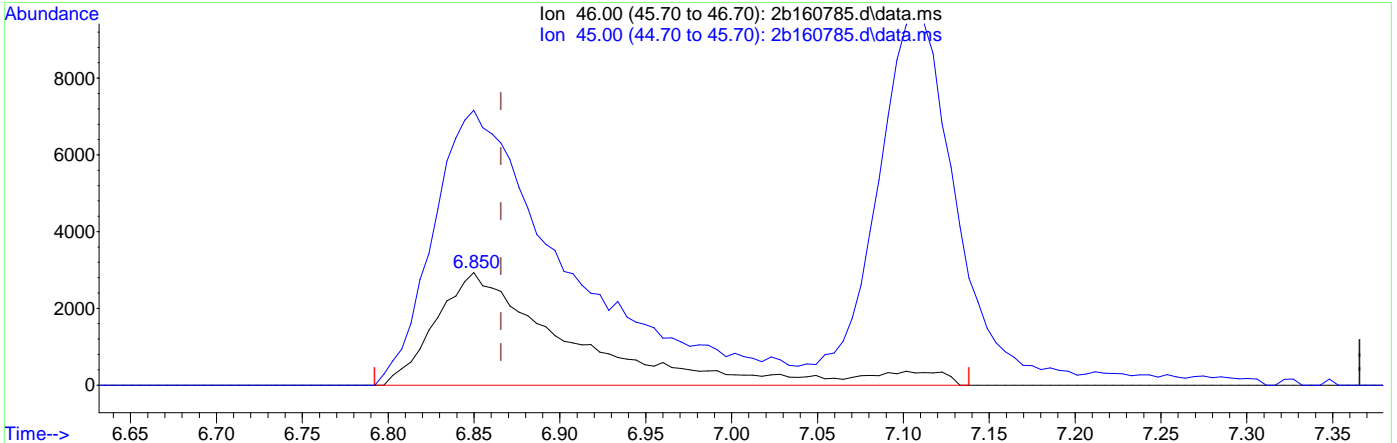
7.7.14.1

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Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\unicem60418\v2b7179\
 Data File : 2b160785.d
 Acq On : 1 Jun 2018 9:56 am
 Operator : sydney
 Sample : cc7119-20 Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 01 10:31:17 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration



TIC: 2b160785.d\data.ms

(3) ethanol

6.850min (-0.016) 2420.89ug/L

response 16381

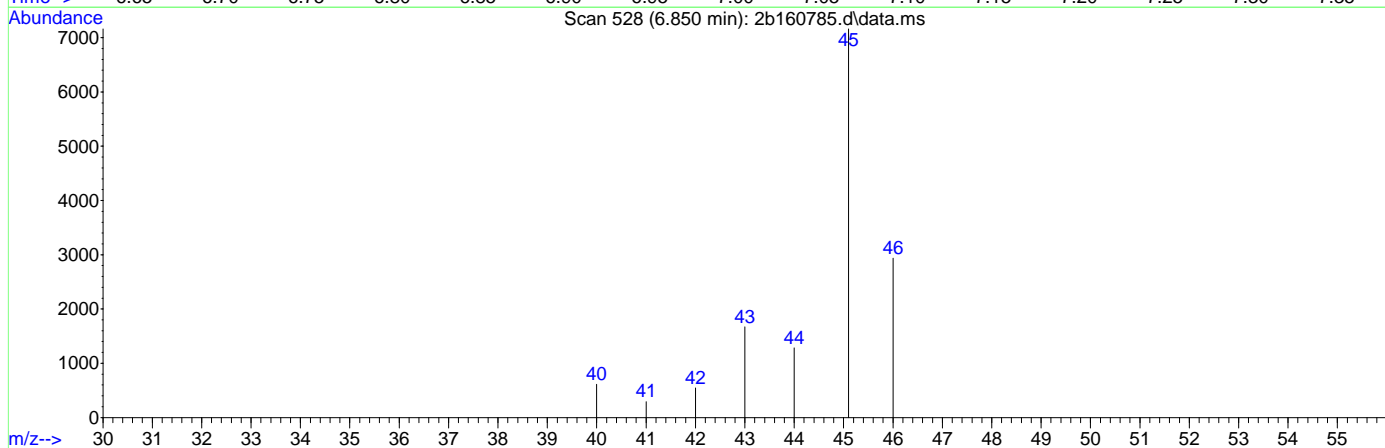
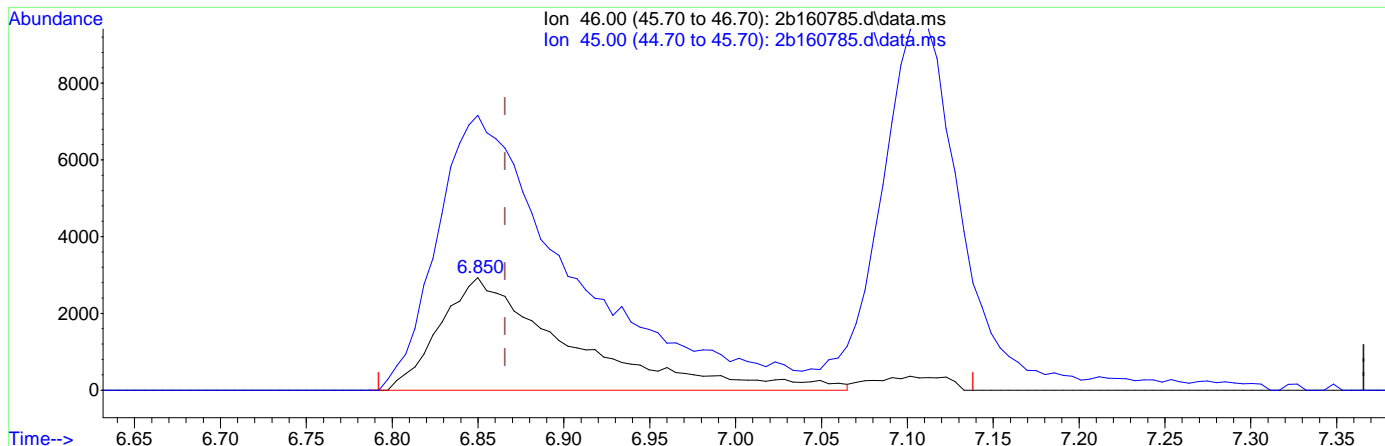
Ion	Exp%	Act%
46.00	100	100
45.00	252.90	244.17
0.00	0.00	0.00
0.00	0.00	0.00

7.7.14.2
7

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\unicem60418\v2b7179\
 Data File : 2b160785.d
 Acq On : 1 Jun 2018 9:56 am
 Operator : sydney
 Sample : cc7119-20 Inst : MS2B
 Misc : MS26780,V2B7179,5,,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2B7119.M
 Quant Results File: M2B7119.RES
 Quant Time: Jun 01 10:31:17 2018
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
 QLast Update : Tue Apr 17 15:34:05 2018
 Response via : Initial Calibration



TIC: 2b160785.d\data.ms

(3) ethanol

6.850min (-0.016) 2260.25ug/L m

response 15294

Ion	Exp%	Act%
46.00	100	100
45.00	252.90	244.17
0.00	0.00	0.00
0.00	0.00	0.00

7.7.14.3
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81323.D
 Acq On : 25 Apr 2018 4:54 pm
 Operator : HueanhT
 Sample : IC3370-0.5
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 26 08:08:02 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 07:50:44 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.78	65	141498	500.00	ug/L	0.00
5) pentafluorobenzene	8.77	168	250013	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.65	114	322421	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	325715	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	219975	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	113325	50.55	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.10%
55) 1,2-dichloroethane-d4 (s)	9.21	65	106012	50.61	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	101.22%
76) toluene-d8 (s)	11.24	98	382129	48.43	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	96.86%
99) 4-bromofluorobenzene (s)	14.10	95	156213	48.91	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.82%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
6) chlorodifluoromethane	3.91	51	3293	0.53	ug/L	90
7) dichlorodifluoromethane	3.90	85	2912	0.45	ug/L	86
8) chloromethane	4.25	50	4387	0.56	ug/L	91
9) vinyl chloride	4.46	62	4226	0.58	ug/L	86
13) trichlorofluoromethane	5.54	101	3827	0.55	ug/L	87
14) vinyl bromide	5.43	106	2571	0.54	ug/L #	67
15) ethyl ether	5.81	74	549	0.38	ug/L #	32
16) 2-chloropropane	6.03	43	3316	0.58	ug/L	97
18) freon 113	6.24	151	1417	0.45	ug/L #	78
19) 1,1-dichloroethene	6.20	61	2918	0.56	ug/L	95
22) iodomethane	6.44	142	3040	0.52	ug/L	82
23) carbon disulfide	6.58	76	6125	0.55	ug/L	97
26) methyl tert butyl ether	7.13	73	5574	0.57	ug/L	90
27) trans-1,2-dichloroethene	7.16	61	2624	0.57	ug/L	85
28) hexane	7.44	56	1009	0.49	ug/L #	77
29) di-isopropyl ether	7.64	45	6343	0.57	ug/L	87
31) 1,1-dichloroethane	7.66	63	3155	0.58	ug/L	81
32) chloroprene	7.75	53	1997	0.53	ug/L	69
35) ethyl tert-butyl ether	8.05	59	5749	0.55	ug/L	97
37) 2,2-dichloropropane	8.35	77	3057	0.56	ug/L	86
38) cis-1,2-dichloroethene	8.30	96	1748	0.54	ug/L	92
39) propionitrile	8.32	54	1821	4.72	ug/L	90
42) bromochloromethane	8.58	128	696	0.45	ug/L	96
44) chloroform	8.64	83	2672	0.54	ug/L	94
45) tert-butyl formate	8.68	59	1355	0.46	ug/L	83
47) 1,1,1-trichloroethane	8.90	97	2870	0.53	ug/L	82
50) 1,1-dichloropropene	9.04	75	1765	0.54	ug/L	88
51) carbon tetrachloride	9.08	117	2368	0.52	ug/L #	72
58) benzene	9.27	78	5688	0.55	ug/L	92
59) tert-amyl methyl ether	9.33	73	5032	0.55	ug/L	85
60) heptane	9.49	57	1103	0.54	ug/L #	58
63) trichloroethene	9.94	95	1331	0.54	ug/L #	81
64) 2-chloroethyl vinyl ether	10.70	63	3299	2.41	ug/L	86

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81323.D
 Acq On : 25 Apr 2018 4:54 pm
 Operator : HueanhT
 Sample : IC3370-0.5
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 26 08:08:02 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 07:50:44 2018
 Response via : Initial Calibration

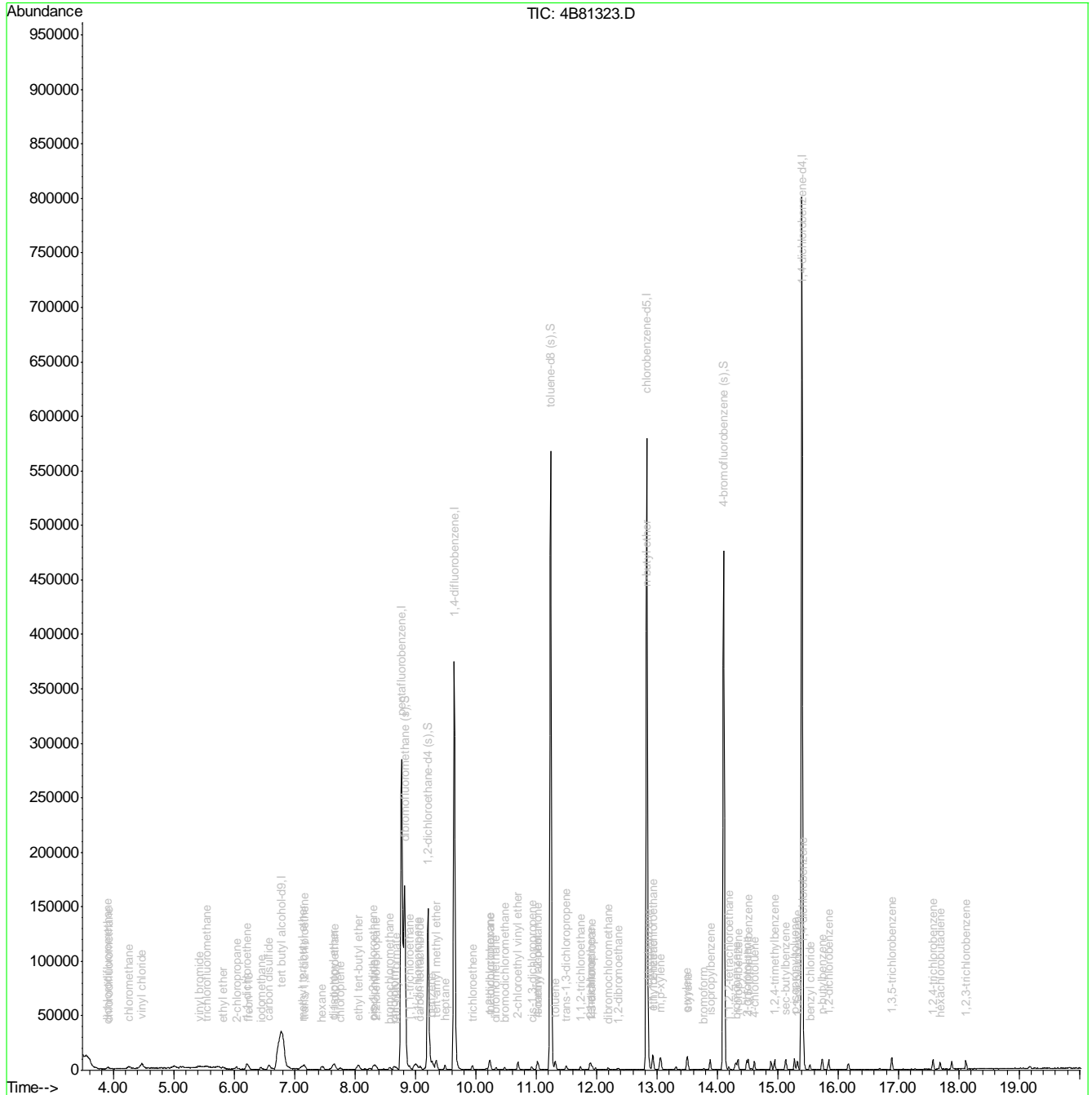
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
66) methylcyclohexane	10.24	83	3275	0.54	ug/L	93
67) 1,2-dichloropropane	10.23	63	1624	0.59	ug/L	89
68) dibromomethane	10.33	93	758	0.50	ug/L	82
69) bromodichloromethane	10.48	83	1726	0.51	ug/L	89
72) cis-1,3-dichloropropene	10.93	75	2127	0.55	ug/L	87
73) 4-methyl-2-pentanone	11.02	58	1816	1.93	ug/L	90
74) isoamyl alcohol	11.02	70	713	9.24	ug/L #	77
77) toluene	11.31	92	3322	0.52	ug/L	94
79) trans-1,3-dichloropropene	11.50	75	1620	0.48	ug/L	94
80) 1,1,2-trichloroethane	11.73	83	898	0.47	ug/L #	74
81) tetrachloroethene	11.89	164	1154	0.48	ug/L	98
82) 2-hexanone	11.90	58	1316	1.63	ug/L #	71
83) 1,3-dichloropropane	11.92	76	1720	0.49	ug/L	93
85) dibromochloromethane	12.18	129	1189	0.45	ug/L	99
86) 1,2-dibromoethane	12.36	107	1284	0.51	ug/L	98
87) n-butyl ether	12.82	57	5964	0.50	ug/L	58
88) chlorobenzene	12.86	112	3712	0.51	ug/L	90
89) 1,1,1,2-tetrachloroethane	12.94	131	1545	0.49	ug/L	86
90) ethylbenzene	12.93	91	6573	0.53	ug/L	96
91) m,p-xylene	13.06	106	4939	1.02	ug/L	97
92) o-xylene	13.50	91	5631	0.52	ug/L	93
93) styrene	13.51	104	3752	0.48	ug/L	99
95) isopropylbenzene	13.88	105	6958	0.49	ug/L	96
96) bromoform	13.77	173	908	0.48	ug/L	91
100) 1,1,2,2-tetrachloroethane	14.19	83	1834	0.50	ug/L	91
103) bromobenzene	14.31	156	2033	0.53	ug/L	84
104) n-propylbenzene	14.34	91	8263	0.50	ug/L	95
105) 2-chlorotoluene	14.49	126	1857	0.52	ug/L	93
106) 4-chlorotoluene	14.61	91	4909	0.51	ug/L	92
108) 1,3,5-trimethylbenzene	14.52	105	6070	0.49	ug/L	94
110) 1,2,4-trimethylbenzene	14.95	105	5605	0.45	ug/L	93
111) sec-butylbenzene	15.14	105	7484	0.44	ug/L	97
112) p-isopropyltoluene	15.28	119	6534	0.45	ug/L	97
113) 1,3-dichlorobenzene	15.33	146	4053	0.53	ug/L	97
114) 1,4-dichlorobenzene	15.43	146	4379	0.56	ug/L	91
115) 1,2-dichlorobenzene	15.84	146	4408	0.53	ug/L	96
116) benzyl chloride	15.54	91	3637	0.51	ug/L	97
118) n-butylbenzene	15.73	92	3309	0.44	ug/L	82
122) 1,3,5-trichlorobenzene	16.90	180	4490	0.51	ug/L	97
123) 1,2,4-trichlorobenzene	17.58	180	3753	0.49	ug/L	90
125) hexachlorobutadiene	17.69	225	1911	0.51	ug/L	93
127) 1,2,3-trichlorobenzene	18.12	180	3247	0.46	ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\4B3370\
 Data File : 4B81323.D
 Acq On : 25 Apr 2018 4:54 pm
 Operator : HueanhT
 Sample : IC3370-0.5
 Misc : MS25764,V4B3370,5,,,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 26 08:08:02 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 07:50:44 2018
 Response via : Initial Calibration



7.7.15
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Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81324.D
 Acq On : 25 Apr 2018 5:22 pm
 Operator : HueanhT
 Sample : IC3370-1
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 26 08:30:08 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 07:52:42 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.77	65	144462	500.00	ug/L	0.00
5) pentafluorobenzene	8.77	168	245872	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.65	114	321107	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	320138	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	216549	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	110740	50.23	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.46%
55) 1,2-dichloroethane-d4 (s)	9.21	65	107902	51.72	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	103.44%
76) toluene-d8 (s)	11.24	98	380617	49.08	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.16%
99) 4-bromofluorobenzene (s)	14.10	95	155559	49.48	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.96%

Target Compounds

						Qvalue
3) tertiary butyl alcohol	6.90	59	1973	5.23	ug/L	78
6) chlorodifluoromethane	3.92	51	6329	1.03	ug/L	92
7) dichlorodifluoromethane	3.90	85	6366	1.00	ug/L	83
8) chloromethane	4.25	50	8341	1.08	ug/L	95
9) vinyl chloride	4.46	62	7612	1.05	ug/L	90
12) chloroethane	5.13	64	4502	1.15	ug/L	88
13) trichlorofluoromethane	5.54	101	7592	1.11	ug/L	93
14) vinyl bromide	5.42	106	5341	1.15	ug/L	92
15) ethyl ether	5.83	74	1601	1.12	ug/L #	63
16) 2-chloropropane	6.02	43	6396	1.14	ug/L	98
18) freon 113	6.23	151	3185	1.03	ug/L #	67
19) 1,1-dichloroethene	6.20	61	5459	1.07	ug/L	91
20) acetone	6.19	58	858	3.76	ug/L #	1
22) iodomethane	6.43	142	6150	1.07	ug/L	91
23) carbon disulfide	6.57	76	11988	1.09	ug/L	92
24) methylene chloride	6.82	84	4622	1.24	ug/L	98
25) methyl acetate	6.58	43	2022	1.07	ug/L	61
26) methyl tert butyl ether	7.13	73	10111	1.06	ug/L	97
27) trans-1,2-dichloroethene	7.16	61	4818	1.07	ug/L	96
28) hexane	7.45	56	1955	0.97	ug/L	88
29) di-isopropyl ether	7.64	45	11491	1.04	ug/L	93
30) 2-butanone	8.23	72	688	3.15	ug/L #	4
31) 1,1-dichloroethane	7.67	63	5517	1.03	ug/L	98
32) chloroprene	7.76	53	3752	1.00	ug/L	96
35) ethyl tert-butyl ether	8.05	59	10277	1.01	ug/L	93
37) 2,2-dichloropropane	8.34	77	5931	1.11	ug/L	97
38) cis-1,2-dichloroethene	8.31	96	3313	1.04	ug/L	98
39) propionitrile	8.31	54	3897	10.27	ug/L	98
42) bromochloromethane	8.57	128	1536	1.02	ug/L	88
44) chloroform	8.64	83	5458	1.11	ug/L	96
45) tert-butyl formate	8.69	59	2918	1.01	ug/L	87
47) 1,1,1-trichloroethane	8.89	97	5670	1.07	ug/L	96
48) cyclohexane	9.00	84	7376	1.23	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81324.D
 Acq On : 25 Apr 2018 5:22 pm
 Operator : HueanhT
 Sample : IC3370-1
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 26 08:30:08 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 07:52:42 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
50) 1,1-dichloropropene	9.04	75	3293	1.03	ug/L	95
51) carbon tetrachloride	9.08	117	4491	1.00	ug/L	95
57) 2,2,4-trimethylpentane	9.35	57	11971	1.00	ug/L	95
58) benzene	9.27	78	10976	1.07	ug/L	96
59) tert-amyl methyl ether	9.33	73	9355	1.02	ug/L	96
60) heptane	9.48	57	2016	0.99	ug/L	84
61) 1,2-dichloroethane	9.30	62	3803	1.26	ug/L	99
62) ethyl acrylate	9.92	55	2304	0.96	ug/L	82
63) trichloroethene	9.94	95	2468	1.00	ug/L	89
64) 2-chloroethyl vinyl ether	10.70	63	6525	4.79	ug/L	97
66) methylcyclohexane	10.24	83	5567	0.92	ug/L	94
67) 1,2-dichloropropane	10.23	63	2837	1.04	ug/L	81
68) dibromomethane	10.33	93	1461	0.97	ug/L	96
69) bromodichloromethane	10.47	83	3439	1.02	ug/L	90
72) cis-1,3-dichloropropene	10.92	75	3871	1.00	ug/L	88
73) 4-methyl-2-pentanone	11.02	58	3857	4.11	ug/L #	84
74) isoamyl alcohol	11.02	70	1609	20.93	ug/L	88
77) toluene	11.31	92	6423	1.03	ug/L	99
78) ethyl methacrylate	11.49	69	2455	0.88	ug/L	98
79) trans-1,3-dichloropropene	11.50	75	3206	0.97	ug/L	92
80) 1,1,2-trichloroethane	11.73	83	1873	1.00	ug/L	95
81) tetrachloroethene	11.88	164	2450	1.04	ug/L	93
82) 2-hexanone	11.90	58	3097	3.90	ug/L	89
83) 1,3-dichloropropane	11.92	76	3811	1.10	ug/L	93
85) dibromochloromethane	12.19	129	2559	0.98	ug/L	90
86) 1,2-dibromoethane	12.36	107	2526	1.01	ug/L	82
87) n-butyl ether	12.81	57	11189	0.94	ug/L	94
88) chlorobenzene	12.86	112	7470	1.05	ug/L	95
89) 1,1,1,2-tetrachloroethane	12.94	131	3148	1.01	ug/L	94
90) ethylbenzene	12.93	91	12614	1.03	ug/L	99
91) m,p-xylene	13.06	106	9736	2.04	ug/L	92
92) o-xylene	13.50	91	10466	0.98	ug/L	94
93) styrene	13.51	104	7154	0.94	ug/L	86
94) butyl acrylate	13.30	55	4121	0.88	ug/L	93
95) isopropylbenzene	13.88	105	12889	0.93	ug/L	99
96) bromoform	13.77	173	1604	0.87	ug/L	98
100) 1,1,2,2-tetrachloroethane	14.19	83	3643	1.02	ug/L	83
102) 1,2,3-trichloropropane	14.29	110	804	0.94	ug/L	98
103) bromobenzene	14.31	156	3745	1.00	ug/L	95
104) n-propylbenzene	14.34	91	16195	1.00	ug/L	96
105) 2-chlorotoluene	14.49	126	3543	1.00	ug/L	97
106) 4-chlorotoluene	14.62	91	9469	1.01	ug/L	91
108) 1,3,5-trimethylbenzene	14.52	105	11563	0.95	ug/L	95
110) 1,2,4-trimethylbenzene	14.95	105	11324	0.93	ug/L	94
111) sec-butylbenzene	15.13	105	14845	0.89	ug/L	99
112) p-isopropyltoluene	15.28	119	12814	0.90	ug/L	97
113) 1,3-dichlorobenzene	15.33	146	7758	1.02	ug/L	93
114) 1,4-dichlorobenzene	15.43	146	8070	1.06	ug/L	99
115) 1,2-dichlorobenzene	15.84	146	8319	1.02	ug/L	94
116) benzyl chloride	15.53	91	7092	1.01	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81324.D
 Acq On : 25 Apr 2018 5:22 pm
 Operator : HueanhT
 Sample : IC3370-1
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 26 08:30:08 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 07:52:42 2018
 Response via : Initial Calibration

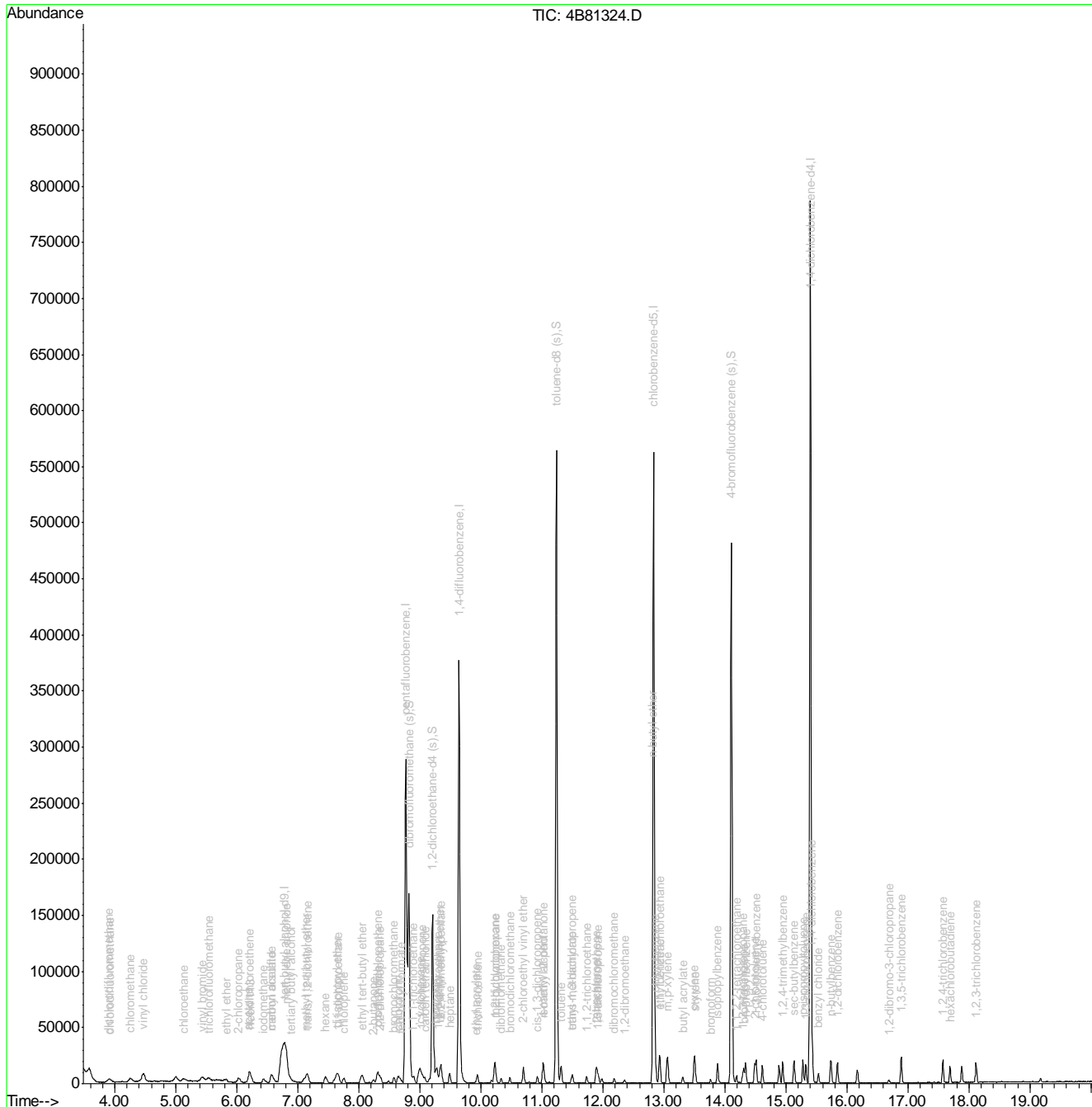
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
118) n-butylbenzene	15.73	92	6451	0.88	ug/L	92
121) 1,2-dibromo-3-chloropropan	16.69	157	925	0.91	ug/L	91
122) 1,3,5-trichlorobenzene	16.89	180	8408	0.96	ug/L	87
123) 1,2,4-trichlorobenzene	17.58	180	7040	0.93	ug/L	95
125) hexachlorobutadiene	17.69	225	3589	0.98	ug/L	94
127) 1,2,3-trichlorobenzene	18.11	180	6385	0.93	ug/L	92

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81324.D
 Acq On : 25 Apr 2018 5:22 pm
 Operator : HueanhT
 Sample : IC3370-1
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 26 08:30:08 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 07:52:42 2018
 Response via : Initial Calibration



7.7.16
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Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81325.D
 Acq On : 25 Apr 2018 5:50 pm
 Operator : HueanhT
 Sample : IC3370-2
 Misc : MS25764,V4B3370,5,,,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 26 08:29:49 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:19:55 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.77	65	144863	500.00	ug/L	0.00
5) pentafluorobenzene	8.77	168	238073	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.64	114	306503	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	304875	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	201842	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	106794	50.03	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.06%
55) 1,2-dichloroethane-d4 (s)	9.21	65	102037	51.24	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	102.48%
76) toluene-d8 (s)	11.24	98	365559	49.49	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.98%
99) 4-bromofluorobenzene (s)	14.10	95	144456	49.29	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.58%

Target Compounds

						Qvalue
3) tertiary butyl alcohol	6.86	59	3255	8.59	ug/L	78
4) 1,4-dioxane	10.27	88	1497	42.97	ug/L	79
6) chlorodifluoromethane	3.90	51	11812	1.99	ug/L	91
7) dichlorodifluoromethane	3.89	85	14424	2.35	ug/L	96
8) chloromethane	4.24	50	17697	2.38	ug/L	95
9) vinyl chloride	4.46	62	16448	2.35	ug/L	96
11) bromomethane	5.00	94	13002	2.72	ug/L	95
12) chloroethane	5.13	64	9111	2.51	ug/L	99
13) trichlorofluoromethane	5.54	101	15296	2.31	ug/L	95
14) vinyl bromide	5.41	106	10064	2.23	ug/L	95
15) ethyl ether	5.81	74	2610	1.89	ug/L #	63
16) 2-chloropropane	6.03	43	11030	2.03	ug/L	95
17) acrolein	6.03	56	1139	1.92	ug/L	66
18) freon 113	6.23	151	5977	1.99	ug/L	92
19) 1,1-dichloroethene	6.20	61	10068	2.03	ug/L	98
20) acetone	6.22	58	1809	8.14	ug/L #	39
22) iodomethane	6.44	142	10639	1.91	ug/L	99
23) carbon disulfide	6.57	76	20487	1.92	ug/L	94
24) methylene chloride	6.82	84	6719	1.85	ug/L	93
25) methyl acetate	6.59	43	3728	1.99	ug/L	83
26) methyl tert butyl ether	7.12	73	16842	1.82	ug/L	95
27) trans-1,2-dichloroethene	7.16	61	8687	2.00	ug/L	93
28) hexane	7.45	56	3773	1.94	ug/L #	77
29) di-isopropyl ether	7.64	45	19906	1.86	ug/L	94
30) 2-butanone	8.22	72	1433	6.77	ug/L #	22
31) 1,1-dichloroethane	7.67	63	10374	1.99	ug/L	97
32) chloroprene	7.75	53	6731	1.86	ug/L	97
33) acrylonitrile	7.08	53	1549	1.58	ug/L	90
35) ethyl tert-butyl ether	8.05	59	17780	1.80	ug/L	97
37) 2,2-dichloropropane	8.34	77	10498	2.03	ug/L	98
38) cis-1,2-dichloroethene	8.30	96	5860	1.90	ug/L	91
39) propionitrile	8.30	54	6788	18.47	ug/L	98
41) methacrylonitrile	8.48	67	1348	1.67	ug/L #	70

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81325.D
 Acq On : 25 Apr 2018 5:50 pm
 Operator : HueanhT
 Sample : IC3370-2
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 26 08:29:49 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:19:55 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) bromochloromethane	8.57	128	2716	1.86	ug/L	89
44) chloroform	8.64	83	9083	1.91	ug/L	91
45) tert-butyl formate	8.68	59	5030	1.79	ug/L	95
47) 1,1,1-trichloroethane	8.90	97	9600	1.87	ug/L	97
48) cyclohexane	9.01	84	10761	1.99	ug/L	99
50) 1,1-dichloropropene	9.04	75	5969	1.93	ug/L	90
51) carbon tetrachloride	9.08	117	8760	2.23	ug/L #	83
57) 2,2,4-trimethylpentane	9.35	57	21676	1.89	ug/L	96
58) benzene	9.27	78	18594	1.89	ug/L	97
59) tert-amyl methyl ether	9.33	73	16232	1.85	ug/L	94
60) heptane	9.49	57	3604	1.86	ug/L	97
61) 1,2-dichloroethane	9.30	62	5680	1.96	ug/L	94
62) ethyl acrylate	9.92	55	3583	1.57	ug/L	82
63) trichloroethene	9.94	95	4500	1.91	ug/L	75
64) 2-chloroethyl vinyl ether	10.70	63	11635	8.96	ug/L	97
66) methylcyclohexane	10.24	83	11321	1.97	ug/L	87
67) 1,2-dichloropropane	10.22	63	4845	1.86	ug/L	92
68) dibromomethane	10.33	93	2692	1.87	ug/L	93
69) bromodichloromethane	10.48	83	5825	1.81	ug/L	84
71) epichlorohydrin	10.80	57	1792	8.45	ug/L	96
72) cis-1,3-dichloropropene	10.93	75	6685	1.81	ug/L	99
73) 4-methyl-2-pentanone	11.02	58	6598	7.36	ug/L	86
74) isoamyl alcohol	11.02	70	2543	34.65	ug/L #	87
77) toluene	11.31	92	11195	1.88	ug/L	99
78) ethyl methacrylate	11.48	69	4285	1.62	ug/L	91
79) trans-1,3-dichloropropene	11.50	75	5606	1.79	ug/L	97
80) 1,1,2-trichloroethane	11.73	83	3200	1.80	ug/L	95
81) tetrachloroethene	11.89	164	4223	1.88	ug/L	93
82) 2-hexanone	11.90	58	5455	7.21	ug/L	93
83) 1,3-dichloropropane	11.92	76	6354	1.93	ug/L	92
84) butyl acetate	11.98	56	2413	1.71	ug/L	92
85) dibromochloromethane	12.18	129	4343	1.74	ug/L	98
86) 1,2-dibromoethane	12.36	107	4338	1.83	ug/L	82
87) n-butyl ether	12.81	57	19505	1.73	ug/L	92
88) chlorobenzene	12.86	112	12828	1.89	ug/L	97
89) 1,1,1,2-tetrachloroethane	12.94	131	5481	1.85	ug/L	95
90) ethylbenzene	12.93	91	21767	1.87	ug/L	95
91) m,p-xylene	13.06	106	16681	3.68	ug/L	96
92) o-xylene	13.50	91	18118	1.79	ug/L	98
93) styrene	13.51	104	12345	1.70	ug/L	94
94) butyl acrylate	13.31	55	7209	1.62	ug/L	95
95) isopropylbenzene	13.88	105	23542	1.78	ug/L	99
96) bromoform	13.77	173	2995	1.70	ug/L	96
100) 1,1,2,2-tetrachloroethane	14.19	83	5925	1.78	ug/L	97
102) 1,2,3-trichloropropane	14.29	110	1620	1.96	ug/L #	69
103) bromobenzene	14.31	156	6245	1.79	ug/L	96
104) n-propylbenzene	14.34	91	28322	1.88	ug/L	97
105) 2-chlorotoluene	14.48	126	6015	1.82	ug/L	91
106) 4-chlorotoluene	14.61	91	16675	1.90	ug/L	95
108) 1,3,5-trimethylbenzene	14.52	105	20336	1.80	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81325.D
 Acq On : 25 Apr 2018 5:50 pm
 Operator : HueanhT
 Sample : IC3370-2
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 26 08:29:49 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:19:55 2018
 Response via : Initial Calibration

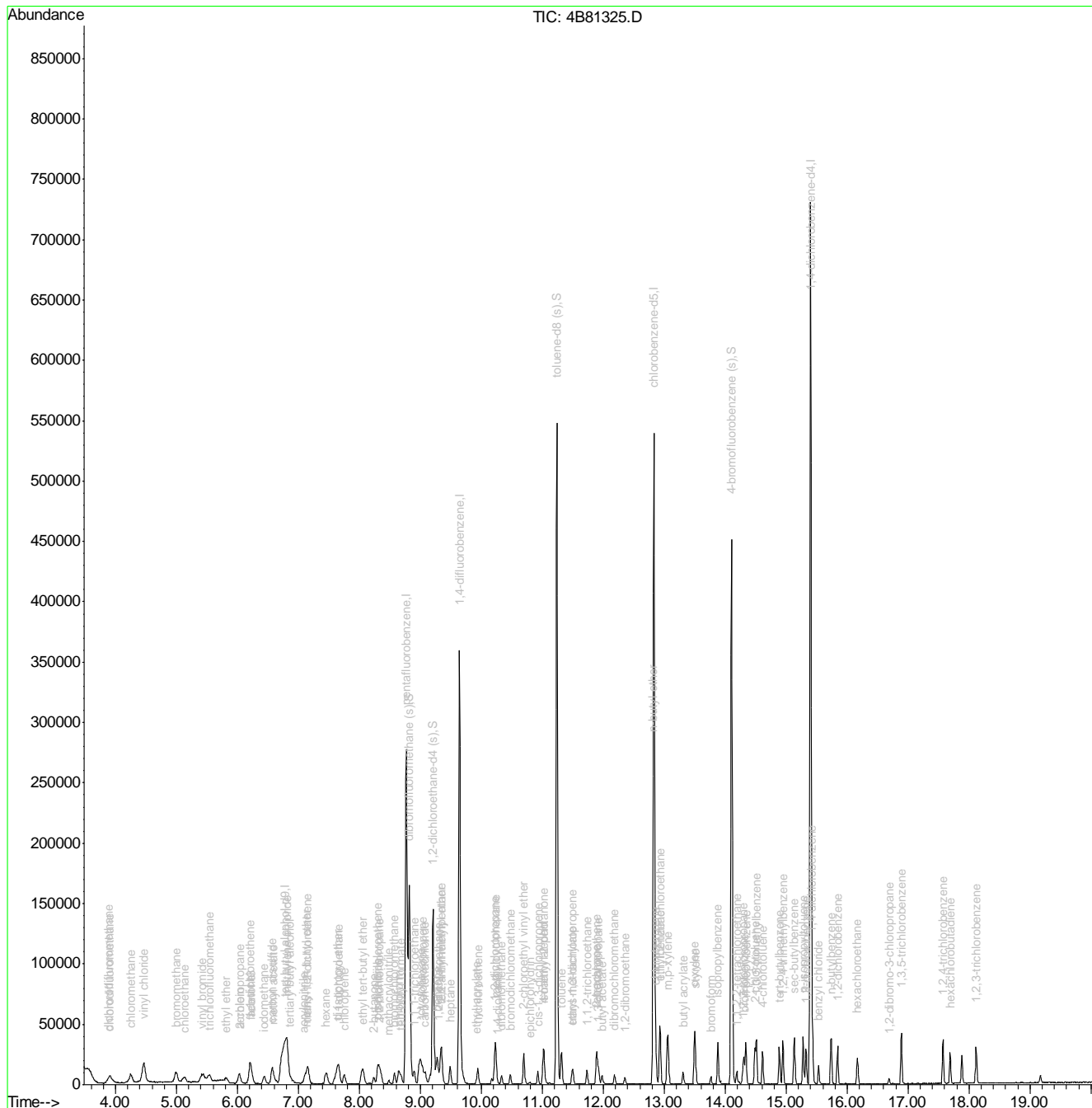
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) tert-butylbenzene	14.89	119	16495	1.67	ug/L	93
110) 1,2,4-trimethylbenzene	14.95	105	20569	1.81	ug/L	99
111) sec-butylbenzene	15.13	105	27798	1.80	ug/L	99
112) p-isopropyltoluene	15.28	119	22680	1.72	ug/L	99
113) 1,3-dichlorobenzene	15.33	146	13657	1.93	ug/L	98
114) 1,4-dichlorobenzene	15.43	146	13196	1.86	ug/L	97
115) 1,2-dichlorobenzene	15.84	146	14142	1.86	ug/L	98
116) benzyl chloride	15.53	91	11312	1.73	ug/L	97
118) n-butylbenzene	15.74	92	11934	1.74	ug/L	95
120) hexachloroethane	16.17	201	3862	1.53	ug/L	88
121) 1,2-dibromo-3-chloropropan	16.69	157	1512	1.60	ug/L	88
122) 1,3,5-trichlorobenzene	16.89	180	14611	1.79	ug/L	95
123) 1,2,4-trichlorobenzene	17.57	180	11802	1.67	ug/L	97
125) hexachlorobutadiene	17.69	225	6173	1.81	ug/L	96
127) 1,2,3-trichlorobenzene	18.11	180	10885	1.70	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81325.D
 Acq On : 25 Apr 2018 5:50 pm
 Operator : HueanhT
 Sample : IC3370-2
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 26 08:29:49 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:19:55 2018
 Response via : Initial Calibration



7.7.17
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Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81326.D
 Acq On : 25 Apr 2018 6:18 pm
 Operator : HueanhT
 Sample : IC3370-5
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 26 08:29:34 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:28:49 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.78	65	148775	500.00	ug/L	0.00
5) pentafluorobenzene	8.77	168	256138	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.65	114	333845	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	327666	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	222993	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	114595	49.90	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.80%
55) 1,2-dichloroethane-d4 (s)	9.21	65	113382	52.28	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	104.56%
76) toluene-d8 (s)	11.24	98	389490	49.07	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.14%
99) 4-bromofluorobenzene (s)	14.10	95	159130	49.15	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.30%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	6.87	59	9270	23.81	ug/L	95
4) 1,4-dioxane	10.27	88	3986	111.41	ug/L	90
6) chlorodifluoromethane	3.91	51	29219	4.57	ug/L	96
7) dichlorodifluoromethane	3.90	85	33034	5.01	ug/L	95
8) chloromethane	4.25	50	39554	4.94	ug/L	94
9) vinyl chloride	4.47	62	36021	4.79	ug/L	97
10) 1,3-butadiene	4.48	54	21612	5.04	ug/L	91
11) bromomethane	5.00	94	27348	5.06	ug/L	95
12) chloroethane	5.13	64	19603	4.82	ug/L	97
13) trichlorofluoromethane	5.55	101	34254	4.81	ug/L	94
14) vinyl bromide	5.43	106	23587	4.87	ug/L	91
15) ethyl ether	5.83	74	7087	4.77	ug/L	77
16) 2-chloropropane	6.03	43	27021	4.63	ug/L	95
17) acrolein	6.04	56	3265	5.12	ug/L	78
18) freon 113	6.22	151	14157	4.39	ug/L	95
19) 1,1-dichloroethene	6.21	61	24304	4.56	ug/L	98
20) acetone	6.20	58	4794	20.05	ug/L #	83
21) acetonitrile	6.59	41	25041	50.31	ug/L	96
22) iodomethane	6.43	142	27099	4.52	ug/L	99
23) carbon disulfide	6.57	76	51374	4.49	ug/L	99
24) methylene chloride	6.82	84	18182	4.67	ug/L	97
25) methyl acetate	6.58	43	9778	4.85	ug/L	99
26) methyl tert butyl ether	7.13	73	44719	4.49	ug/L	97
27) trans-1,2-dichloroethene	7.16	61	21677	4.63	ug/L	94
28) hexane	7.46	56	9466	4.53	ug/L #	79
29) di-isopropyl ether	7.64	45	52630	4.58	ug/L	95
30) 2-butanone	8.23	72	4313	18.94	ug/L #	65
31) 1,1-dichloroethane	7.67	63	26515	4.73	ug/L	96
32) chloroprene	7.75	53	17963	4.61	ug/L	92
33) acrylonitrile	7.07	53	5208	4.94	ug/L	90
34) vinyl acetate	7.59	86	1453	4.08	ug/L #	52
35) ethyl tert-butyl ether	8.05	59	47527	4.48	ug/L	97
36) ethyl acetate	8.23	45	1515	4.59	ug/L #	54

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81326.D
 Acq On : 25 Apr 2018 6:18 pm
 Operator : HueanhT
 Sample : IC3370-5
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 26 08:29:34 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:28:49 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	8.35	77	24410	4.39	ug/L	89
38) cis-1,2-dichloroethene	8.30	96	15545	4.69	ug/L	98
39) propionitrile	8.30	54	20361	51.51	ug/L	92
40) methyl acrylate	8.31	85	1359	4.42	ug/L #	82
41) methacrylonitrile	8.49	67	4006	4.61	ug/L	91
42) bromochloromethane	8.58	128	7479	4.75	ug/L	95
43) tetrahydrofuran	8.60	72	1137	3.72	ug/L	94
44) chloroform	8.64	83	23930	4.69	ug/L	97
45) tert-butyl formate	8.68	59	13166	4.36	ug/L	95
47) 1,1,1-trichloroethane	8.90	97	24105	4.36	ug/L	91
48) cyclohexane	9.01	84	29032	5.00	ug/L	98
50) 1,1-dichloropropene	9.04	75	15554	4.69	ug/L	98
51) carbon tetrachloride	9.08	117	20720	4.44	ug/L	97
52) tert-amyl alcohol	9.15	73	3760	23.43	ug/L #	83
53) isopropyl acetate	9.17	87	2044	4.37	ug/L #	75
56) n-butyl alcohol	9.67	56	18464	219.83	ug/L	95
57) 2,2,4-trimethylpentane	9.35	57	55819	4.48	ug/L	97
58) benzene	9.27	78	49440	4.62	ug/L	97
59) tert-amyl methyl ether	9.33	73	43221	4.53	ug/L	96
60) heptane	9.49	57	9398	4.44	ug/L	97
61) 1,2-dichloroethane	9.30	62	15176	4.82	ug/L	97
62) ethyl acrylate	9.92	55	11343	4.56	ug/L	95
63) trichloroethene	9.94	95	11869	4.64	ug/L	97
64) 2-chloroethyl vinyl ether	10.70	63	33653	23.78	ug/L	97
65) methyl methacrylate	10.17	100	2295	4.08	ug/L	92
66) methylcyclohexane	10.24	83	26738	4.26	ug/L	98
67) 1,2-dichloropropane	10.22	63	13450	4.75	ug/L	92
68) dibromomethane	10.33	93	7823	4.99	ug/L	96
69) bromodichloromethane	10.47	83	16312	4.65	ug/L	96
70) 2-nitropropane	10.67	41	3695	4.71	ug/L	95
71) epichlorohydrin	10.79	57	5490	23.76	ug/L	95
72) cis-1,3-dichloropropene	10.93	75	17883	4.44	ug/L	93
73) 4-methyl-2-pentanone	11.02	58	18829	19.29	ug/L	89
74) isoamyl alcohol	11.02	70	7678	96.06	ug/L	88
77) toluene	11.31	92	28626	4.47	ug/L	91
78) ethyl methacrylate	11.48	69	12802	4.50	ug/L	98
79) trans-1,3-dichloropropene	11.50	75	15681	4.65	ug/L	92
80) 1,1,2-trichloroethane	11.73	83	8877	4.65	ug/L	96
81) tetrachloroethene	11.89	164	10974	4.54	ug/L	99
82) 2-hexanone	11.90	58	16556	20.35	ug/L	97
83) 1,3-dichloropropane	11.92	76	16864	4.77	ug/L	93
84) butyl acetate	11.98	56	7298	4.81	ug/L	95
85) dibromochloromethane	12.18	129	12058	4.50	ug/L	88
86) 1,2-dibromoethane	12.36	107	11378	4.46	ug/L	97
87) n-butyl ether	12.81	57	55165	4.55	ug/L	98
88) chlorobenzene	12.87	112	33435	4.59	ug/L	90
89) 1,1,1,2-tetrachloroethane	12.94	131	13990	4.38	ug/L	99
90) ethylbenzene	12.93	91	57226	4.58	ug/L	100
91) m,p-xylene	13.06	106	44968	9.23	ug/L	93
92) o-xylene	13.50	91	49481	4.54	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81326.D
 Acq On : 25 Apr 2018 6:18 pm
 Operator : HueanhT
 Sample : IC3370-5
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 26 08:29:34 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:28:49 2018
 Response via : Initial Calibration

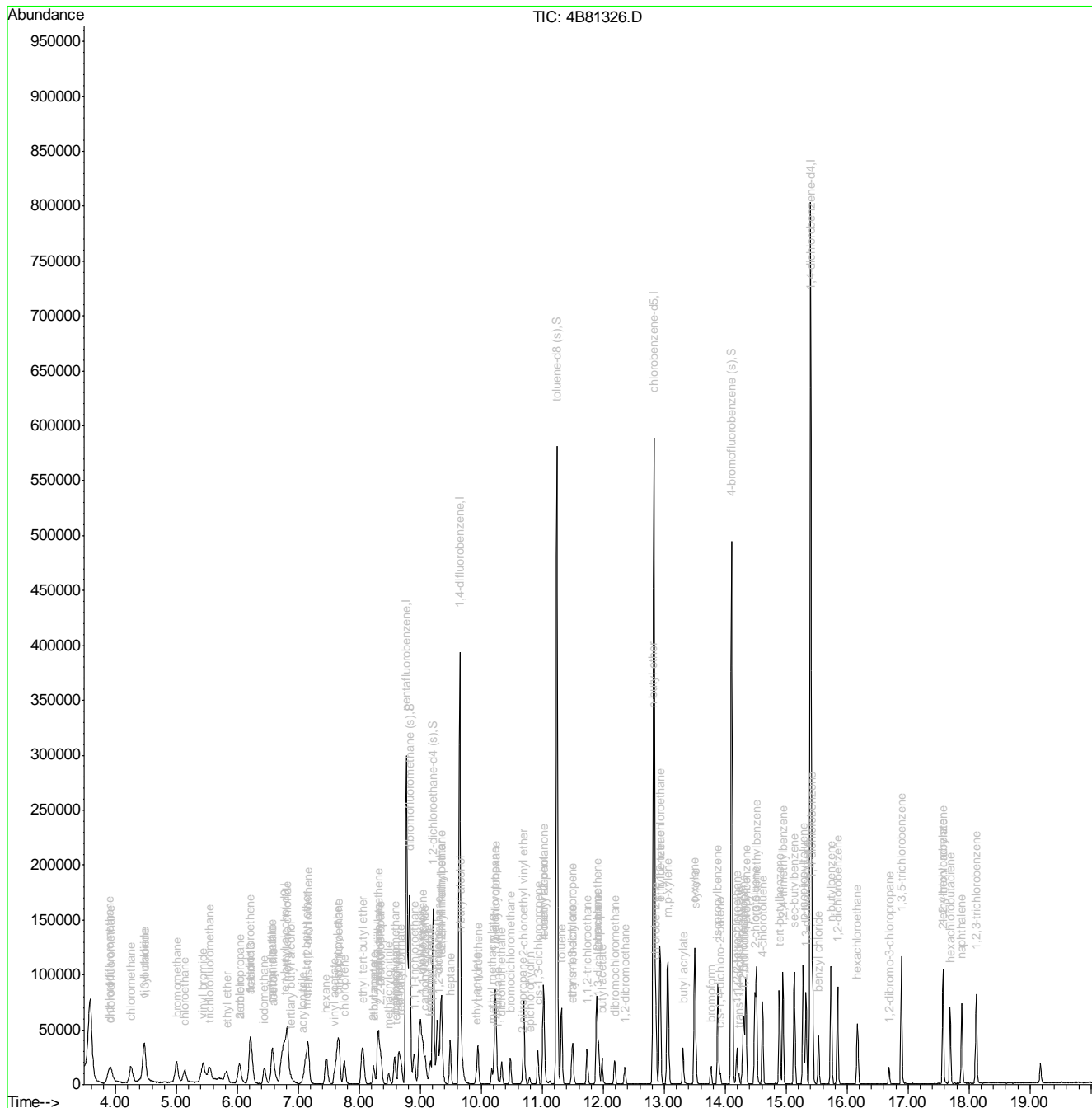
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	13.51	104	36608	4.70	ug/L	98
94) butyl acrylate	13.31	55	22308	4.66	ug/L	95
95) isopropylbenzene	13.88	105	62466	4.39	ug/L	98
96) bromoform	13.76	173	8363	4.43	ug/L	95
97) cis-1,4-dichloro-2-butene	13.92	88	2191	6.36	ug/L	89
100) 1,1,2,2-tetrachloroethane	14.19	83	17011	4.62	ug/L	98
101) trans-1,4-dichloro-2-buten	14.23	53	1980	3.59	ug/L	97
102) 1,2,3-trichloropropane	14.29	110	4459	4.89	ug/L	92
103) bromobenzene	14.31	156	17657	4.57	ug/L	99
104) n-propylbenzene	14.34	91	75792	4.55	ug/L	98
105) 2-chlorotoluene	14.49	126	16155	4.43	ug/L	97
106) 4-chlorotoluene	14.62	91	45414	4.69	ug/L	97
108) 1,3,5-trimethylbenzene	14.51	105	55116	4.42	ug/L	98
109) tert-butylbenzene	14.89	119	43611	4.00	ug/L	99
110) 1,2,4-trimethylbenzene	14.95	105	58362	4.64	ug/L	98
111) sec-butylbenzene	15.13	105	74340	4.35	ug/L	98
112) p-isopropyltoluene	15.28	119	64361	4.41	ug/L	99
113) 1,3-dichlorobenzene	15.33	146	36779	4.71	ug/L	98
114) 1,4-dichlorobenzene	15.43	146	36017	4.58	ug/L	98
115) 1,2-dichlorobenzene	15.84	146	38596	4.60	ug/L	96
116) benzyl chloride	15.53	91	33006	4.56	ug/L	98
118) n-butylbenzene	15.73	92	33665	4.45	ug/L	94
120) hexachloroethane	16.17	201	10847	3.90	ug/L	93
121) 1,2-dibromo-3-chloropropan	16.69	157	4610	4.40	ug/L	89
122) 1,3,5-trichlorobenzene	16.89	180	39300	4.36	ug/L	99
123) 1,2,4-trichlorobenzene	17.57	180	32325	4.13	ug/L	99
124) 2-ethylhexyl acrylate	17.58	70	2318	1.15	ug/L	99
125) hexachlorobutadiene	17.69	225	16180	4.30	ug/L	96
126) naphthalene	17.88	128	59299	3.83	ug/L	99
127) 1,2,3-trichlorobenzene	18.12	180	28950	4.08	ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\4B3370\
 Data File : 4B81326.D
 Acq On : 25 Apr 2018 6:18 pm
 Operator : HueanhT
 Sample : IC3370-5
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 26 08:29:34 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:28:49 2018
 Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81327.D
 Acq On : 25 Apr 2018 6:46 pm
 Operator : HueanhT
 Sample : IC3370-10
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 08:30:25 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:00 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.77	65	144454	500.00	ug/L	0.00
5) pentafluorobenzene	8.77	168	242511	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.64	114	315545	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	311348	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	208017	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	108226	49.77	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.54%
55) 1,2-dichloroethane-d4 (s)	9.21	65	105704	51.56	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	103.12%
76) toluene-d8 (s)	11.24	98	374210	49.61	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.22%
99) 4-bromofluorobenzene (s)	14.10	95	148733	49.25	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.50%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	6.88	59	19621	51.90	ug/L	97
4) 1,4-dioxane	10.26	88	8899	256.17	ug/L	95
6) chlorodifluoromethane	3.92	51	67577	11.17	ug/L	99
7) dichlorodifluoromethane	3.90	85	70288	11.25	ug/L	96
8) chloromethane	4.25	50	79503	10.48	ug/L	98
9) vinyl chloride	4.46	62	74382	10.44	ug/L	98
10) 1,3-butadiene	4.47	54	42885	10.57	ug/L	98
11) bromomethane	5.00	94	52742	10.30	ug/L	99
12) chloroethane	5.13	64	39294	10.20	ug/L	98
13) trichlorofluoromethane	5.54	101	70661	10.48	ug/L	99
14) vinyl bromide	5.43	106	46732	10.18	ug/L	98
15) ethyl ether	5.82	74	15051	10.71	ug/L	87
16) 2-chloropropane	6.03	43	58929	10.66	ug/L	95
17) acrolein	6.03	56	6057	10.04	ug/L	90
18) freon 113	6.23	151	36006	11.79	ug/L	98
19) 1,1-dichloroethene	6.20	61	53713	10.65	ug/L	97
20) acetone	6.20	58	9507	41.99	ug/L	92
21) acetonitrile	6.58	41	50637	110.04	ug/L	93
22) iodomethane	6.43	142	59619	10.49	ug/L	97
23) carbon disulfide	6.57	76	115752	10.68	ug/L	99
24) methylene chloride	6.82	84	38090	10.32	ug/L	99
25) methyl acetate	6.58	43	20256	10.62	ug/L	96
26) methyl tert butyl ether	7.13	73	97424	10.34	ug/L	99
27) trans-1,2-dichloroethene	7.15	61	48366	10.91	ug/L	97
28) hexane	7.45	56	23596	11.92	ug/L	93
29) di-isopropyl ether	7.64	45	113510	10.43	ug/L	97
30) 2-butanone	8.23	72	9402	43.61	ug/L #	89
31) 1,1-dichloroethane	7.66	63	56874	10.72	ug/L	97
32) chloroprene	7.75	53	39284	10.65	ug/L	97
33) acrylonitrile	7.06	53	10604	10.63	ug/L	94
34) vinyl acetate	7.59	86	3385	10.04	ug/L	97
35) ethyl tert-butyl ether	8.05	59	103239	10.27	ug/L	99
36) ethyl acetate	8.23	45	3056	9.78	ug/L #	57

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81327.D
 Acq On : 25 Apr 2018 6:46 pm
 Operator : HueanhT
 Sample : IC3370-10
 Misc : MS25764,V4B3370,5,,,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 08:30:25 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:00 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	8.34	77	56014	10.65	ug/L	97
38) cis-1,2-dichloroethene	8.30	96	32958	10.50	ug/L	100
39) propionitrile	8.30	54	39394	105.25	ug/L	86
40) methyl acrylate	8.32	85	2769	9.52	ug/L #	64
41) methacrylonitrile	8.48	67	8456	10.27	ug/L	94
42) bromochloromethane	8.57	128	15612	10.47	ug/L	98
43) tetrahydrofuran	8.58	72	2893	9.99	ug/L #	85
44) chloroform	8.64	83	49444	10.22	ug/L	99
45) tert-butyl formate	8.68	59	29357	10.27	ug/L	98
47) 1,1,1-trichloroethane	8.90	97	54744	10.47	ug/L	92
48) cyclohexane	9.00	84	55205	10.04	ug/L	97
50) 1,1-dichloropropene	9.04	75	34346	10.93	ug/L	96
51) carbon tetrachloride	9.08	117	48493	10.97	ug/L	98
52) tert-amyl alcohol	9.14	73	8167	53.76	ug/L #	67
53) isopropyl acetate	9.16	87	4553	10.28	ug/L #	82
56) n-butyl alcohol	9.67	56	45936	578.63	ug/L	98
57) 2,2,4-trimethylpentane	9.35	57	134836	11.44	ug/L	99
58) benzene	9.27	78	104789	10.35	ug/L	99
59) tert-amyl methyl ether	9.33	73	91661	10.16	ug/L	98
60) heptane	9.49	57	23098	11.55	ug/L	94
61) 1,2-dichloroethane	9.29	62	30969	10.40	ug/L	97
62) ethyl acrylate	9.91	55	24687	10.49	ug/L	99
63) trichloroethene	9.94	95	25176	10.41	ug/L	96
64) 2-chloroethyl vinyl ether	10.70	63	72221	54.00	ug/L	99
65) methyl methacrylate	10.17	100	4753	8.95	ug/L	85
66) methylcyclohexane	10.24	83	67009	11.31	ug/L	96
67) 1,2-dichloropropane	10.22	63	28088	10.50	ug/L	98
68) dibromomethane	10.33	93	15300	10.32	ug/L	91
69) bromodichloromethane	10.47	83	34385	10.37	ug/L	98
70) 2-nitropropane	10.67	41	7733	10.43	ug/L	87
71) epichlorohydrin	10.79	57	11188	51.23	ug/L	96
72) cis-1,3-dichloropropene	10.92	75	38614	10.15	ug/L	98
73) 4-methyl-2-pentanone	11.02	58	39426	42.74	ug/L	95
74) isoamyl alcohol	11.01	70	17136	226.83	ug/L	97
77) toluene	11.31	92	61372	10.09	ug/L	96
78) ethyl methacrylate	11.48	69	27028	10.00	ug/L	98
79) trans-1,3-dichloropropene	11.50	75	33134	10.33	ug/L	90
80) 1,1,2-trichloroethane	11.73	83	18643	10.28	ug/L	99
81) tetrachloroethene	11.89	164	24191	10.53	ug/L	95
82) 2-hexanone	11.90	58	33608	43.47	ug/L	95
83) 1,3-dichloropropane	11.92	76	34445	10.25	ug/L	96
84) butyl acetate	11.97	56	15047	10.45	ug/L	91
85) dibromochloromethane	12.19	129	24977	9.81	ug/L	95
86) 1,2-dibromoethane	12.36	107	23767	9.80	ug/L	96
87) n-butyl ether	12.81	57	121018	10.51	ug/L	99
88) chlorobenzene	12.86	112	71145	10.29	ug/L	96
89) 1,1,1,2-tetrachloroethane	12.94	131	31100	10.25	ug/L	98
90) ethylbenzene	12.93	91	125191	10.56	ug/L	96
91) m,p-xylene	13.06	106	96632	20.87	ug/L	99
92) o-xylene	13.50	91	107748	10.40	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81327.D
 Acq On : 25 Apr 2018 6:46 pm
 Operator : HueanhT
 Sample : IC3370-10
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 08:30:25 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:00 2018
 Response via : Initial Calibration

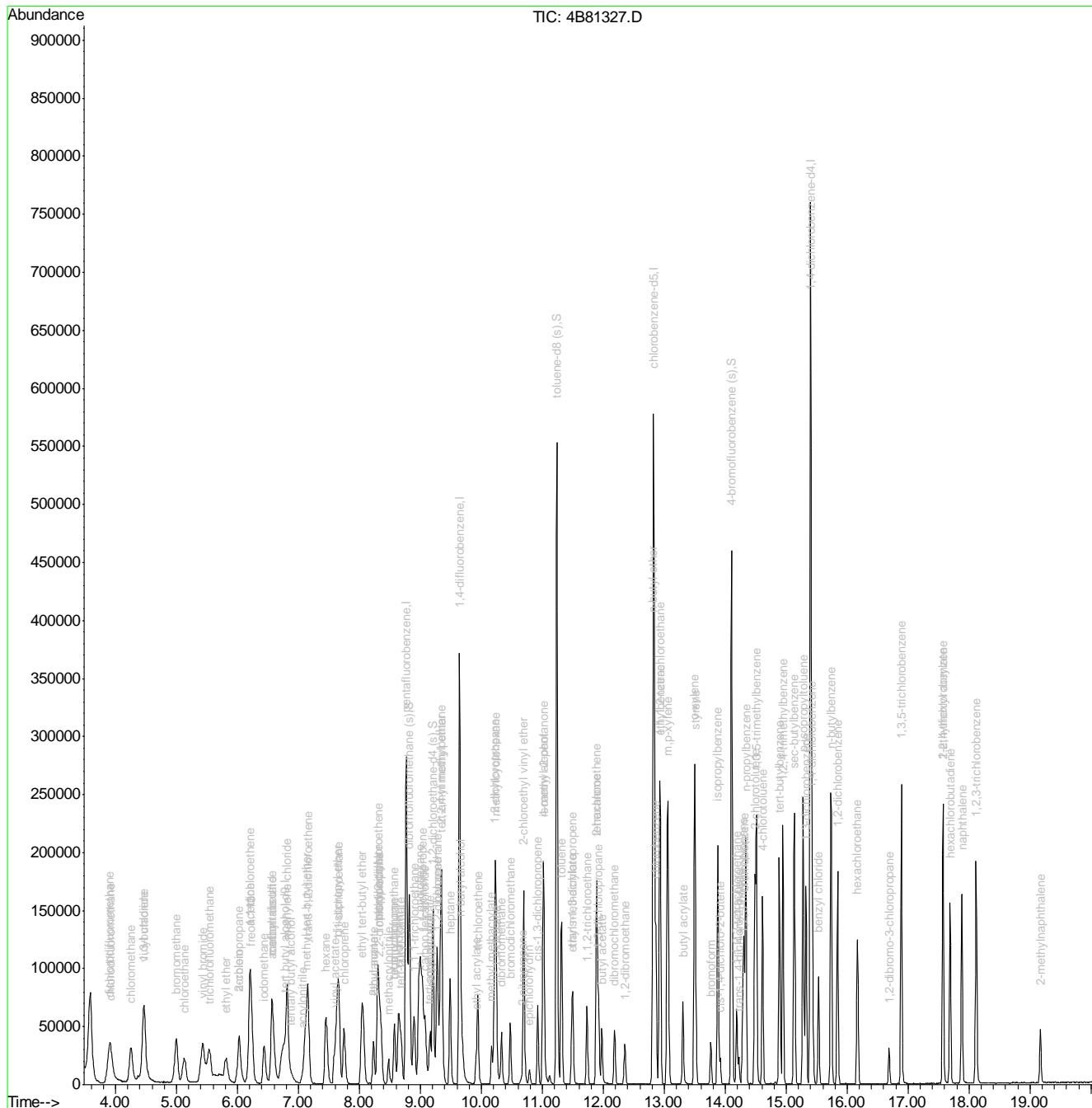
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	13.51	104	78228	10.57	ug/L	98
94) butyl acrylate	13.31	55	46853	10.29	ug/L	98
95) isopropylbenzene	13.88	105	141431	10.45	ug/L	99
96) bromoform	13.76	173	17392	9.69	ug/L	97
97) cis-1,4-dichloro-2-butene	13.92	88	5069	10.13	ug/L	92
100) 1,1,2,2-tetrachloroethane	14.19	83	34421	10.01	ug/L	99
101) trans-1,4-dichloro-2-buten	14.22	53	4613	8.97	ug/L	89
102) 1,2,3-trichloropropane	14.29	110	8760	10.30	ug/L	93
103) bromobenzene	14.31	156	37892	10.51	ug/L	96
104) n-propylbenzene	14.34	91	166674	10.73	ug/L	99
105) 2-chlorotoluene	14.48	126	35010	10.28	ug/L	98
106) 4-chlorotoluene	14.61	91	93135	10.32	ug/L	100
108) 1,3,5-trimethylbenzene	14.51	105	122665	10.54	ug/L	99
109) tert-butylbenzene	14.89	119	100002	9.83	ug/L	97
110) 1,2,4-trimethylbenzene	14.94	105	126530	10.78	ug/L	98
111) sec-butylbenzene	15.13	105	168404	10.55	ug/L	99
112) p-isopropyltoluene	15.28	119	146038	10.72	ug/L	100
113) 1,3-dichlorobenzene	15.33	146	76409	10.50	ug/L	99
114) 1,4-dichlorobenzene	15.43	146	74979	10.23	ug/L	100
115) 1,2-dichlorobenzene	15.84	146	80962	10.34	ug/L	99
116) benzyl chloride	15.53	91	67833	10.04	ug/L	98
118) n-butylbenzene	15.73	92	78263	11.09	ug/L	95
120) hexachloroethane	16.17	201	24162	9.31	ug/L	95
121) 1,2-dibromo-3-chloropropan	16.69	157	9549	9.77	ug/L	96
122) 1,3,5-trichlorobenzene	16.89	180	87005	10.35	ug/L	98
123) 1,2,4-trichlorobenzene	17.57	180	75468	10.35	ug/L	99
124) 2-ethylhexyl acrylate	17.58	70	5168	1.79	ug/L	87
125) hexachlorobutadiene	17.69	225	37295	10.62	ug/L	98
126) naphthalene	17.88	128	136806	9.48	ug/L	99
127) 1,2,3-trichlorobenzene	18.11	180	67483	10.21	ug/L	98
128) 2-methylnaphthalene	19.17	142	26621	3.58	ug/L	95

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
Data File : 4B81327.D
Acq On : 25 Apr 2018 6:46 pm
Operator : HueanhT
Sample : IC3370-10
Misc : MS25764,V4B3370,5,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 08:30:25 2018
Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 26 08:30:00 2018
Response via : Initial Calibration



7.7.19
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81328.D
 Acq On : 25 Apr 2018 7:14 pm
 Operator : HueanhT
 Sample : IC3370-20
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 08:30:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:33 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.79	65	140015	500.00	ug/L	0.01
5) pentafluorobenzene	8.77	168	249940	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.65	114	321938	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	317148	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	207057	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	111798	49.89	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.78%
55) 1,2-dichloroethane-d4 (s)	9.21	65	105141	50.27	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	100.54%
76) toluene-d8 (s)	11.24	98	380362	49.51	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.02%
99) 4-bromofluorobenzene (s)	14.10	95	151529	50.41	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.82%

Target Compounds

						Qvalue
3) tertiary butyl alcohol	6.87	59	36709	100.17	ug/L	97
4) 1,4-dioxane	10.26	88	16780	498.35	ug/L	95
6) chlorodifluoromethane	3.91	51	128915	20.67	ug/L	100
7) dichlorodifluoromethane	3.90	85	123920	19.25	ug/L	95
8) chloromethane	4.25	50	140151	17.93	ug/L	98
9) vinyl chloride	4.47	62	140659	19.16	ug/L	99
10) 1,3-butadiene	4.47	54	90277	21.59	ug/L	100
11) bromomethane	5.00	94	99414	18.83	ug/L	98
12) chloroethane	5.13	64	73848	18.60	ug/L	97
13) trichlorofluoromethane	5.54	101	132225	19.02	ug/L	99
14) vinyl bromide	5.43	106	88655	18.75	ug/L	99
15) ethyl ether	5.82	74	30547	21.08	ug/L	92
16) 2-chloropropane	6.03	43	112394	19.73	ug/L	98
17) acrolein	6.03	56	12567	20.21	ug/L	97
18) freon 113	6.24	151	66145	21.02	ug/L	94
19) 1,1-dichloroethene	6.20	61	108373	20.85	ug/L	98
20) acetone	6.20	58	19035	81.57	ug/L #	80
21) acetonitrile	6.58	41	94753	199.43	ug/L	98
22) iodomethane	6.44	142	118099	20.17	ug/L	99
23) carbon disulfide	6.58	76	225997	20.23	ug/L	99
24) methylene chloride	6.82	84	76746	20.18	ug/L	97
25) methyl acetate	6.57	43	41919	21.32	ug/L	98
26) methyl tert butyl ether	7.13	73	196213	20.21	ug/L	99
27) trans-1,2-dichloroethene	7.16	61	92607	20.26	ug/L	99
28) hexane	7.45	56	40696	19.94	ug/L	87
29) di-isopropyl ether	7.64	45	231340	20.63	ug/L	97
30) 2-butanone	8.22	72	18728	84.29	ug/L	98
31) 1,1-dichloroethane	7.67	63	110954	20.30	ug/L	98
32) chloroprene	7.75	53	78045	20.52	ug/L	99
33) acrylonitrile	7.07	53	20868	20.29	ug/L	91
34) vinyl acetate	7.59	86	6853	19.72	ug/L #	93
35) ethyl tert-butyl ether	8.05	59	210539	20.33	ug/L	98
36) ethyl acetate	8.23	45	6204	19.26	ug/L #	71

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81328.D
 Acq On : 25 Apr 2018 7:14 pm
 Operator : HueanhT
 Sample : IC3370-20
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 08:30:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:33 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	8.35	77	107667	19.86	ug/L	99
38) cis-1,2-dichloroethene	8.30	96	65572	20.26	ug/L	96
39) propionitrile	8.30	54	80546	208.80	ug/L	85
40) methyl acrylate	8.31	85	6215	20.74	ug/L	99
41) methacrylonitrile	8.48	67	17476	20.59	ug/L	96
42) bromochloromethane	8.57	128	32110	20.90	ug/L	97
43) tetrahydrofuran	8.58	72	6286	21.06	ug/L	91
44) chloroform	8.65	83	99263	19.92	ug/L	97
45) tert-butyl formate	8.68	59	61295	20.80	ug/L	95
47) 1,1,1-trichloroethane	8.90	97	108886	20.21	ug/L	97
48) cyclohexane	9.00	84	107451	18.96	ug/L	94
50) 1,1-dichloropropene	9.04	75	65602	20.25	ug/L	99
51) carbon tetrachloride	9.08	117	92671	20.34	ug/L	97
52) tert-amyl alcohol	9.15	73	14710	93.95	ug/L	89
53) isopropyl acetate	9.17	87	9044	19.81	ug/L	94
56) n-butyl alcohol	9.67	56	85459	1055.10	ug/L	98
57) 2,2,4-trimethylpentane	9.35	57	233170	19.39	ug/L	97
58) benzene	9.27	78	208220	20.16	ug/L	99
59) tert-amyl methyl ether	9.34	73	191091	20.76	ug/L	98
60) heptane	9.49	57	39920	19.57	ug/L	97
61) 1,2-dichloroethane	9.29	62	61657	20.30	ug/L	99
62) ethyl acrylate	9.91	55	50742	21.14	ug/L	99
63) trichloroethene	9.94	95	50469	20.44	ug/L	98
64) 2-chloroethyl vinyl ether	10.70	63	146442	107.32	ug/L	98
65) methyl methacrylate	10.17	100	11143	20.56	ug/L	96
66) methylcyclohexane	10.24	83	123922	20.49	ug/L	99
67) 1,2-dichloropropane	10.22	63	55744	20.42	ug/L	99
68) dibromomethane	10.33	93	31637	20.91	ug/L	98
69) bromodichloromethane	10.47	83	69196	20.45	ug/L	99
70) 2-nitropropane	10.67	41	15527	20.52	ug/L	88
71) epichlorohydrin	10.79	57	22708	101.91	ug/L	99
72) cis-1,3-dichloropropene	10.92	75	79385	20.45	ug/L	99
73) 4-methyl-2-pentanone	11.02	58	79563	84.53	ug/L	92
74) isoamyl alcohol	11.01	70	33254	431.44	ug/L	94
77) toluene	11.31	92	124074	20.02	ug/L	97
78) ethyl methacrylate	11.48	69	57438	20.85	ug/L	97
79) trans-1,3-dichloropropene	11.50	75	67074	20.53	ug/L	96
80) 1,1,2-trichloroethane	11.73	83	38150	20.66	ug/L	94
81) tetrachloroethene	11.89	164	47486	20.29	ug/L	97
82) 2-hexanone	11.90	58	68092	86.47	ug/L	99
83) 1,3-dichloropropane	11.92	76	69461	20.29	ug/L	98
84) butyl acetate	11.97	56	30449	20.76	ug/L	93
85) dibromochloromethane	12.19	129	53522	20.63	ug/L	98
86) 1,2-dibromoethane	12.36	107	49119	19.88	ug/L	100
87) n-butyl ether	12.81	57	247596	21.11	ug/L	98
88) chlorobenzene	12.86	112	140110	19.89	ug/L	97
89) 1,1,1,2-tetrachloroethane	12.94	131	63184	20.45	ug/L	99
90) ethylbenzene	12.93	91	248617	20.58	ug/L	98
91) m,p-xylene	13.06	106	191494	40.59	ug/L	97
92) o-xylene	13.50	91	219674	20.82	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81328.D
 Acq On : 25 Apr 2018 7:14 pm
 Operator : HueanhT
 Sample : IC3370-20
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 08:30:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:33 2018
 Response via : Initial Calibration

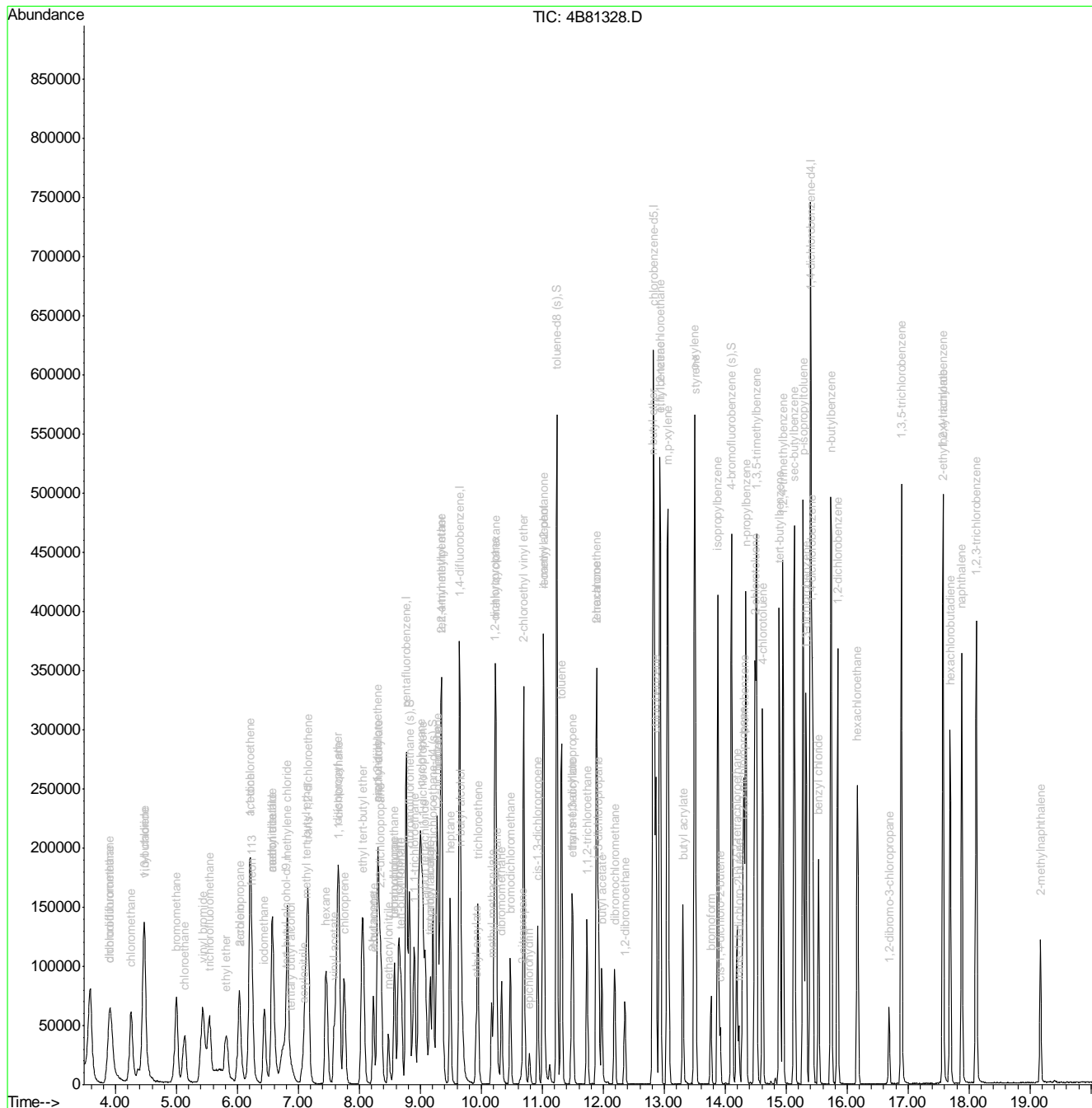
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	13.51	104	161546	21.44	ug/L	99
94) butyl acrylate	13.31	55	98627	21.27	ug/L	99
95) isopropylbenzene	13.88	105	287582	20.87	ug/L	99
96) bromoform	13.77	173	36655	20.05	ug/L	98
97) cis-1,4-dichloro-2-butene	13.92	88	10096	16.25	ug/L	96
100) 1,1,2,2-tetrachloroethane	14.19	83	69765	20.39	ug/L	97
101) trans-1,4-dichloro-2-buten	14.22	53	9192	17.96	ug/L	96
102) 1,2,3-trichloropropane	14.29	110	17540	20.72	ug/L	98
103) bromobenzene	14.31	156	73606	20.51	ug/L	98
104) n-propylbenzene	14.34	91	325621	21.06	ug/L	99
105) 2-chlorotoluene	14.48	126	69741	20.58	ug/L	98
106) 4-chlorotoluene	14.61	91	184781	20.57	ug/L	99
108) 1,3,5-trimethylbenzene	14.51	105	247404	21.36	ug/L	100
109) tert-butylbenzene	14.89	119	207752	20.52	ug/L	99
110) 1,2,4-trimethylbenzene	14.94	105	253269	21.67	ug/L	99
111) sec-butylbenzene	15.13	105	341981	21.53	ug/L	100
112) p-isopropyltoluene	15.28	119	291545	21.50	ug/L	99
113) 1,3-dichlorobenzene	15.33	146	147201	20.32	ug/L	99
114) 1,4-dichlorobenzene	15.43	146	145732	19.97	ug/L	99
115) 1,2-dichlorobenzene	15.84	146	160455	20.58	ug/L	99
116) benzyl chloride	15.53	91	136995	20.38	ug/L	97
118) n-butylbenzene	15.73	92	154696	22.02	ug/L	96
120) hexachloroethane	16.17	201	49611	19.20	ug/L	95
121) 1,2-dibromo-3-chloropropan	16.69	157	19386	19.94	ug/L	92
122) 1,3,5-trichlorobenzene	16.89	180	175410	20.96	ug/L	100
123) 1,2,4-trichlorobenzene	17.57	180	156674	21.58	ug/L	100
124) 2-ethylhexyl acrylate	17.58	70	13017	3.47	ug/L	96
125) hexachlorobutadiene	17.69	225	72449	20.73	ug/L	98
126) naphthalene	17.88	128	295634	20.59	ug/L	100
127) 1,2,3-trichlorobenzene	18.12	180	142724	21.69	ug/L	98
128) 2-methylnaphthalene	19.17	142	65217	8.80	ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\4B3370\
 Data File : 4B81328.D
 Acq On : 25 Apr 2018 7:14 pm
 Operator : HueanhT
 Sample : IC3370-20
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 08:30:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:33 2018
 Response via : Initial Calibration



7.7.20
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81329.D
 Acq On : 25 Apr 2018 7:42 pm
 Operator : HueanhT
 Sample : ICC3370-50
 Misc : MS25764,V4B3370,5,,,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 26 08:31:05 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:53 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.77	65	136240	500.00	ug/L	0.00
5) pentafluorobenzene	8.77	168	247560	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.65	114	319483	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	313720	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	199074	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	111611	50.28	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.56%
55) 1,2-dichloroethane-d4 (s)	9.21	65	102174	49.23	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	98.46%
76) toluene-d8 (s)	11.24	98	383203	50.42	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.84%
99) 4-bromofluorobenzene (s)	14.10	95	150901	52.21	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	104.42%

Target Compounds

						Qvalue
3) tertiary butyl alcohol	6.89	59	89992	252.38	ug/L	100
4) 1,4-dioxane	10.26	88	43680	1333.21	ug/L	100
6) chlorodifluoromethane	3.91	51	322133	52.15	ug/L	100
7) dichlorodifluoromethane	3.90	85	334665	52.48	ug/L	100
8) chloromethane	4.25	50	363404	46.93	ug/L	100
9) vinyl chloride	4.47	62	342063	47.04	ug/L	100
10) 1,3-butadiene	4.47	54	217540	52.53	ug/L	100
11) bromomethane	5.00	94	236697	45.27	ug/L	100
12) chloroethane	5.13	64	177353	45.11	ug/L	100
13) trichlorofluoromethane	5.54	101	330500	48.01	ug/L	100
14) vinyl bromide	5.42	106	222334	47.47	ug/L	100
15) ethyl ether	5.82	74	76718	53.46	ug/L	100
16) 2-chloropropane	6.03	43	277287	49.16	ug/L	100
17) acrolein	6.03	56	31963	51.89	ug/L	100
18) freon 113	6.23	151	170753	54.78	ug/L	100
19) 1,1-dichloroethene	6.20	61	263117	51.11	ug/L	100
20) acetone	6.20	58	47953	207.48	ug/L	100
21) acetonitrile	6.58	41	242215	513.10	ug/L	100
22) iodomethane	6.44	142	299300	51.60	ug/L	100
23) carbon disulfide	6.57	76	570065	51.51	ug/L	100
24) methylene chloride	6.82	84	191115	50.74	ug/L	100
25) methyl acetate	6.57	43	98307	50.48	ug/L	100
26) methyl tert butyl ether	7.13	73	494004	51.36	ug/L	100
27) trans-1,2-dichloroethene	7.16	61	229949	50.80	ug/L	100
28) hexane	7.45	56	113766	56.28	ug/L	100
29) di-isopropyl ether	7.64	45	579557	52.17	ug/L	100
30) 2-butanone	8.22	72	47714	216.82	ug/L	100
31) 1,1-dichloroethane	7.67	63	272514	50.33	ug/L	100
32) chloroprene	7.75	53	198958	52.82	ug/L	100
33) acrylonitrile	7.07	53	54790	53.78	ug/L	100
34) vinyl acetate	7.58	86	18240	52.98	ug/L	100
35) ethyl tert-butyl ether	8.05	59	543756	53.00	ug/L	100
36) ethyl acetate	8.23	45	16966	53.17	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81329.D
 Acq On : 25 Apr 2018 7:42 pm
 Operator : HueanhT
 Sample : ICC3370-50
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 26 08:31:05 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:53 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	8.35	77	268714	50.06	ug/L	100
38) cis-1,2-dichloroethene	8.30	96	164154	51.21	ug/L	100
39) propionitrile	8.30	54	197522	516.97	ug/L	100
40) methyl acrylate	8.31	85	15480	52.14	ug/L	100
41) methacrylonitrile	8.48	67	44613	53.08	ug/L	100
42) bromochloromethane	8.57	128	80824	53.12	ug/L	100
43) tetrahydrofuran	8.58	72	15675	53.03	ug/L	100
44) chloroform	8.65	83	249802	50.60	ug/L	100
45) tert-butyl formate	8.68	59	159975	54.81	ug/L	100
47) 1,1,1-trichloroethane	8.90	97	279414	52.35	ug/L	100
48) cyclohexane	9.01	84	273593	48.74	ug/L	100
50) 1,1-dichloropropene	9.04	75	162487	50.64	ug/L	100
51) carbon tetrachloride	9.08	117	234965	52.06	ug/L	100
52) tert-amyl alcohol	9.15	73	38181	246.21	ug/L	100
53) isopropyl acetate	9.16	87	22925	50.70	ug/L	100
56) n-butyl alcohol	9.67	56	200809	2498.29	ug/L	100
57) 2,2,4-trimethylpentane	9.35	57	682941	57.22	ug/L	100
58) benzene	9.27	78	519539	50.69	ug/L	100
59) tert-amyl methyl ether	9.34	73	475847	52.09	ug/L	100
60) heptane	9.49	57	113009	55.82	ug/L	100
61) 1,2-dichloroethane	9.29	62	146532	48.62	ug/L	100
62) ethyl acrylate	9.91	55	128609	53.99	ug/L	100
63) trichloroethene	9.94	95	126241	51.53	ug/L	100
64) 2-chloroethyl vinyl ether	10.70	63	365287	269.77	ug/L	100
65) methyl methacrylate	10.17	100	28860	53.65	ug/L	100
66) methylcyclohexane	10.24	83	333159	55.52	ug/L	100
67) 1,2-dichloropropane	10.23	63	136032	50.22	ug/L	100
68) dibromomethane	10.33	93	78195	52.09	ug/L	100
69) bromodichloromethane	10.48	83	175899	52.38	ug/L	100
70) 2-nitropropane	10.67	41	39003	51.95	ug/L	100
71) epichlorohydrin	10.79	57	58199	263.19	ug/L	100
72) cis-1,3-dichloropropene	10.92	75	204501	53.08	ug/L	100
73) 4-methyl-2-pentanone	11.02	58	196203	210.06	ug/L	100
74) isoamyl alcohol	11.01	70	79398	1038.03	ug/L	100
77) toluene	11.31	92	315629	51.50	ug/L	100
78) ethyl methacrylate	11.48	69	149880	55.01	ug/L	100
79) trans-1,3-dichloropropene	11.50	75	172592	53.41	ug/L	100
80) 1,1,2-trichloroethane	11.73	83	95066	52.05	ug/L	100
81) tetrachloroethene	11.89	164	120491	52.04	ug/L	100
82) 2-hexanone	11.90	58	163739	210.20	ug/L	100
83) 1,3-dichloropropane	11.93	76	170308	50.29	ug/L	100
84) butyl acetate	11.97	56	74497	51.33	ug/L	100
85) dibromochloromethane	12.19	129	139016	54.17	ug/L	100
86) 1,2-dibromoethane	12.36	107	126091	51.60	ug/L	100
87) n-butyl ether	12.81	57	631671	54.44	ug/L	100
88) chlorobenzene	12.86	112	355191	50.96	ug/L	100
89) 1,1,1,2-tetrachloroethane	12.94	131	160480	52.52	ug/L	100
90) ethylbenzene	12.93	91	613330	51.32	ug/L	100
91) m,p-xylene	13.06	106	482251	103.35	ug/L	100
92) o-xylene	13.50	91	548660	52.57	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81329.D
 Acq On : 25 Apr 2018 7:42 pm
 Operator : HueanhT
 Sample : ICC3370-50
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 26 08:31:05 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:53 2018
 Response via : Initial Calibration

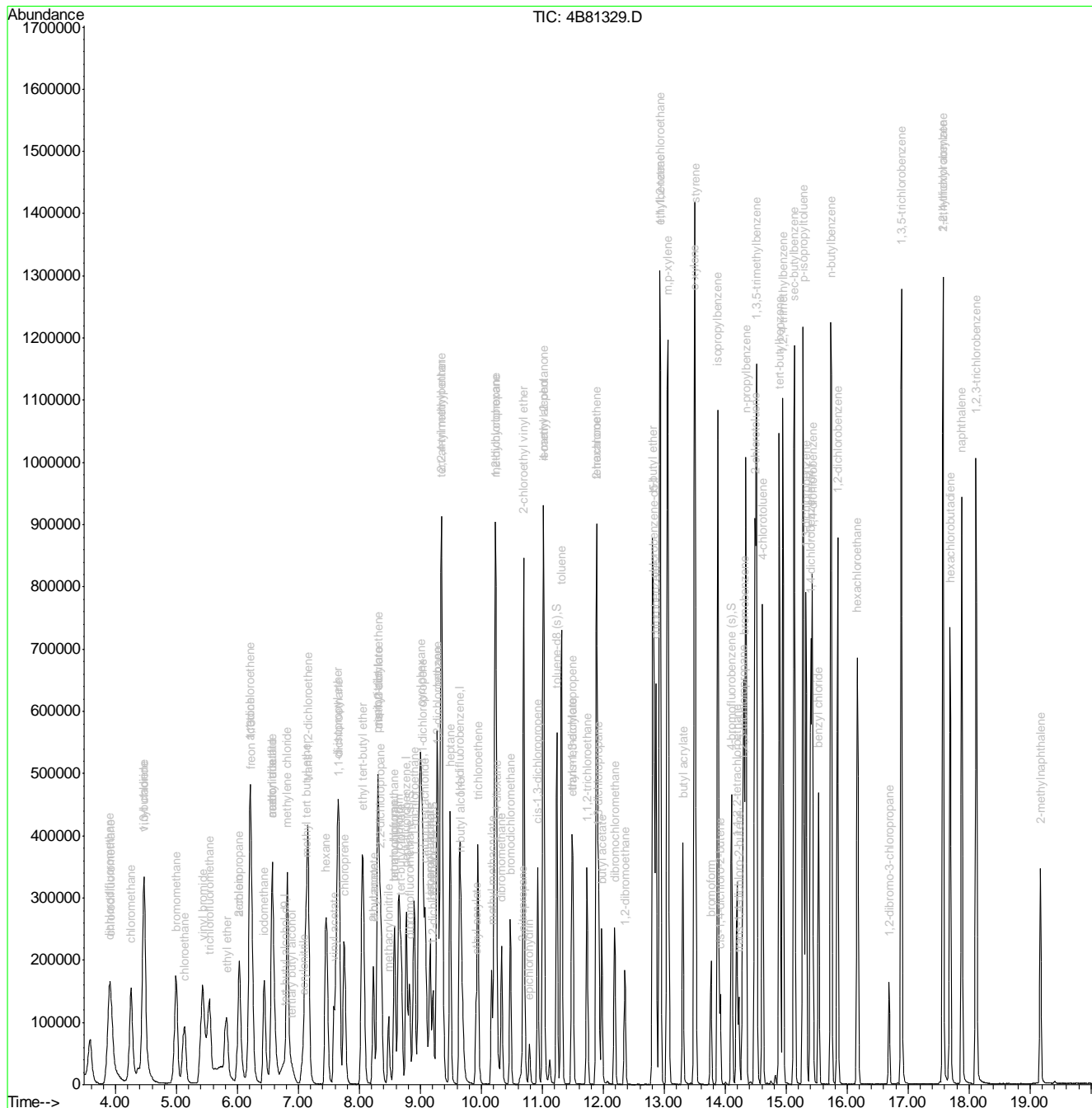
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	13.51	104	400979	53.79	ug/L	100
94) butyl acrylate	13.31	55	247291	53.92	ug/L	100
95) isopropylbenzene	13.88	105	746541	54.76	ug/L	100
96) bromoform	13.77	173	98773	54.61	ug/L	100
97) cis-1,4-dichloro-2-butene	13.92	88	32690	44.73	ug/L	100
100) 1,1,2,2-tetrachloroethane	14.19	83	176131	53.54	ug/L	100
101) trans-1,4-dichloro-2-buten	14.22	53	26920	54.71	ug/L	100
102) 1,2,3-trichloropropane	14.29	110	42270	51.94	ug/L	100
103) bromobenzene	14.31	156	182814	52.99	ug/L	100
104) n-propylbenzene	14.34	91	803501	54.06	ug/L	100
105) 2-chlorotoluene	14.49	126	175862	53.98	ug/L	100
106) 4-chlorotoluene	14.61	91	456646	52.87	ug/L	100
108) 1,3,5-trimethylbenzene	14.51	105	615071	55.23	ug/L	100
109) tert-butylbenzene	14.89	119	550547	56.57	ug/L	100
110) 1,2,4-trimethylbenzene	14.94	105	628963	55.98	ug/L	100
111) sec-butylbenzene	15.13	105	876976	57.42	ug/L	100
112) p-isopropyltoluene	15.28	119	747802	57.36	ug/L	100
113) 1,3-dichlorobenzene	15.33	146	357535	51.32	ug/L	100
114) 1,4-dichlorobenzene	15.43	146	352006	50.18	ug/L	100
115) 1,2-dichlorobenzene	15.84	146	388855	51.87	ug/L	100
116) benzyl chloride	15.53	91	344748	53.33	ug/L	100
118) n-butylbenzene	15.73	92	383240	56.74	ug/L	100
120) hexachloroethane	16.17	201	138778	55.85	ug/L	100
121) 1,2-dibromo-3-chloropropan	16.69	157	50663	54.19	ug/L	100
122) 1,3,5-trichlorobenzene	16.89	180	439101	54.59	ug/L	100
123) 1,2,4-trichlorobenzene	17.57	180	402226	57.62	ug/L	100
124) 2-ethylhexyl acrylate	17.58	70	41534	9.90	ug/L	100
125) hexachlorobutadiene	17.69	225	182579	54.34	ug/L	100
126) naphthalene	17.88	128	769597	55.74	ug/L	100
127) 1,2,3-trichlorobenzene	18.12	180	372591	58.89	ug/L	100
128) 2-methylnaphthalene	19.17	142	196782	27.63	ug/L	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\4B3370\
Data File : 4B81329.D
Acq On : 25 Apr 2018 7:42 pm
Operator : HueanhT
Sample : ICC3370-50
Misc : MS25764,V4B3370,5,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 26 08:31:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 26 08:30:53 2018
Response via : Initial Calibration



7.7.21
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81330.D
 Acq On : 25 Apr 2018 8:10 pm
 Operator : HueanhT
 Sample : IC3370-100
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 26 08:33:21 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:31:18 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.79	65	140967	500.00	ug/L	0.02
5) pentafluorobenzene	8.77	168	249399	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.64	114	321840	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	307738	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	197537	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	110860	49.58	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.16%
55) 1,2-dichloroethane-d4 (s)	9.21	65	99450	47.56	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	95.12%
76) toluene-d8 (s)	11.24	98	381587	51.18	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.36%
99) 4-bromofluorobenzene (s)	14.10	95	148094	51.64	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	103.28%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	6.89	59	188860	511.89	ug/L	100
4) 1,4-dioxane	10.26	88	88954	2624.03	ug/L	95
6) chlorodifluoromethane	3.91	51	609244	97.90	ug/L	99
7) dichlorodifluoromethane	3.90	85	649126	101.03	ug/L	98
8) chloromethane	4.25	50	694531	89.04	ug/L	99
9) vinyl chloride	4.46	62	659571	90.03	ug/L	99
10) 1,3-butadiene	4.47	54	406386	97.40	ug/L	99
11) bromomethane	4.99	94	431697	81.95	ug/L	99
12) chloroethane	5.12	64	326975	82.56	ug/L	99
13) trichlorofluoromethane	5.54	101	640110	92.30	ug/L	97
14) vinyl bromide	5.42	106	429348	90.99	ug/L	96
15) ethyl ether	5.82	74	147800	102.22	ug/L	97
16) 2-chloropropane	6.03	43	517084	90.99	ug/L	98
17) acrolein	6.03	56	61953	99.83	ug/L	100
18) freon 113	6.23	151	330775	105.33	ug/L	96
19) 1,1-dichloroethene	6.20	61	479408	92.43	ug/L	98
20) acetone	6.19	58	92722	398.22	ug/L	94
21) acetonitrile	6.57	41	465525	977.69	ug/L	100
22) iodomethane	6.43	142	571275	97.77	ug/L	98
23) carbon disulfide	6.57	76	1063703	95.41	ug/L	100
24) methylene chloride	6.82	84	354663	93.47	ug/L	99
25) methyl acetate	6.58	43	185344	94.47	ug/L	99
26) methyl tert butyl ether	7.13	73	952488	98.30	ug/L	100
27) trans-1,2-dichloroethene	7.16	61	413942	90.77	ug/L	95
28) hexane	7.45	56	213804	105.00	ug/L	98
29) di-isopropyl ether	7.64	45	1078433	96.37	ug/L	100
30) 2-butanone	8.22	72	96011	433.07	ug/L	99
31) 1,1-dichloroethane	7.67	63	498027	91.30	ug/L	100
32) chloroprene	7.75	53	375997	99.09	ug/L	99
33) acrylonitrile	7.07	53	107560	104.81	ug/L	97
34) vinyl acetate	7.58	86	36168	104.28	ug/L	97
35) ethyl tert-butyl ether	8.06	59	1044218	101.03	ug/L	99
36) ethyl acetate	8.23	45	33586	104.47	ug/L #	88

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81330.D
 Acq On : 25 Apr 2018 8:10 pm
 Operator : HueanhT
 Sample : IC3370-100
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 26 08:33:21 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:31:18 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	8.35	77	508502	94.02	ug/L	97
38) cis-1,2-dichloroethene	8.30	96	309784	95.93	ug/L	97
39) propionitrile	8.30	54	383347	995.93	ug/L	94
40) methyl acrylate	8.31	85	31470	105.22	ug/L	96
41) methacrylonitrile	8.47	67	88843	104.92	ug/L	99
42) bromochloromethane	8.57	128	155182	101.23	ug/L	99
43) tetrahydrofuran	8.58	72	32227	108.22	ug/L	96
44) chloroform	8.64	83	471381	94.78	ug/L	99
45) tert-butyl formate	8.68	59	317760	108.07	ug/L	96
47) 1,1,1-trichloroethane	8.90	97	539496	100.33	ug/L	99
48) cyclohexane	9.01	84	539058	95.32	ug/L	99
50) 1,1-dichloropropene	9.04	75	302464	93.57	ug/L	98
51) carbon tetrachloride	9.08	117	453028	99.64	ug/L	99
52) tert-amyl alcohol	9.14	73	81343	520.67	ug/L #	89
53) isopropyl acetate	9.16	87	47020	103.22	ug/L	97
56) n-butyl alcohol	9.67	56	400287	4943.55	ug/L	99
57) 2,2,4-trimethylpentane	9.35	57	1294389	107.65	ug/L	99
58) benzene	9.27	78	992724	96.16	ug/L	99
59) tert-amyl methyl ether	9.34	73	927884	100.84	ug/L	97
60) heptane	9.49	57	214767	105.30	ug/L	94
61) 1,2-dichloroethane	9.29	62	275583	90.77	ug/L	99
62) ethyl acrylate	9.91	55	265649	110.70	ug/L	99
63) trichloroethene	9.94	95	242291	98.18	ug/L	99
64) 2-chloroethyl vinyl ether	10.70	63	709688	520.27	ug/L	98
65) methyl methacrylate	10.17	100	59642	110.05	ug/L	96
66) methylcyclohexane	10.24	83	638922	105.70	ug/L	99
67) 1,2-dichloropropane	10.22	63	254473	93.27	ug/L	99
68) dibromomethane	10.33	93	151453	100.15	ug/L	94
69) bromodichloromethane	10.47	83	344142	101.73	ug/L	97
70) 2-nitropropane	10.67	41	76308	100.90	ug/L	98
71) epichlorohydrin	10.79	57	119521	536.54	ug/L	97
72) cis-1,3-dichloropropene	10.92	75	397850	102.52	ug/L	98
73) 4-methyl-2-pentanone	11.02	58	382805	406.83	ug/L	98
74) isoamyl alcohol	11.01	70	158488	2056.86	ug/L	98
77) toluene	11.31	92	605207	100.66	ug/L	99
78) ethyl methacrylate	11.48	69	297695	111.39	ug/L	100
79) trans-1,3-dichloropropene	11.50	75	332860	105.02	ug/L	96
80) 1,1,2-trichloroethane	11.73	83	186488	104.08	ug/L	96
81) tetrachloroethene	11.89	164	231716	102.02	ug/L	99
82) 2-hexanone	11.90	58	324940	425.26	ug/L	96
83) 1,3-dichloropropane	11.93	76	324320	97.63	ug/L	100
84) butyl acetate	11.97	56	147297	103.47	ug/L	98
85) dibromochloromethane	12.19	129	275470	109.44	ug/L	99
86) 1,2-dibromoethane	12.36	107	252661	105.41	ug/L	100
87) n-butyl ether	12.81	57	1191767	104.70	ug/L	99
88) chlorobenzene	12.86	112	679263	99.35	ug/L	98
89) 1,1,1,2-tetrachloroethane	12.94	131	310885	103.71	ug/L	97
90) ethylbenzene	12.93	91	1143258	97.52	ug/L	99
91) m,p-xylene	13.06	106	916500	200.23	ug/L	97
92) o-xylene	13.50	91	1042334	101.82	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81330.D
 Acq On : 25 Apr 2018 8:10 pm
 Operator : HueanhT
 Sample : IC3370-100
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 26 08:33:21 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:31:18 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	13.51	104	759754	103.91	ug/L	100
94) butyl acrylate	13.30	55	489536	108.82	ug/L	99
95) isopropylbenzene	13.88	105	1422956	106.40	ug/L	100
96) bromoform	13.77	173	201729	113.70	ug/L	99
97) cis-1,4-dichloro-2-butene	13.92	88	70687	94.12	ug/L	97
100) 1,1,2,2-tetrachloroethane	14.19	83	348183	106.66	ug/L	99
101) trans-1,4-dichloro-2-buten	14.22	53	57843	118.46	ug/L	87
102) 1,2,3-trichloropropane	14.29	110	84851	105.07	ug/L	99
103) bromobenzene	14.31	156	349967	102.22	ug/L	98
104) n-propylbenzene	14.34	91	1486837	100.81	ug/L	100
105) 2-chlorotoluene	14.49	126	335748	103.86	ug/L	99
106) 4-chlorotoluene	14.61	91	852201	99.43	ug/L	99
108) 1,3,5-trimethylbenzene	14.52	105	1168201	105.71	ug/L	98
109) tert-butylbenzene	14.89	119	1090653	112.94	ug/L	99
110) 1,2,4-trimethylbenzene	14.94	105	1175480	105.44	ug/L	98
111) sec-butylbenzene	15.13	105	1706741	112.62	ug/L	99
112) p-isopropyltoluene	15.28	119	1433275	110.80	ug/L	99
113) 1,3-dichlorobenzene	15.33	146	670807	97.04	ug/L	99
114) 1,4-dichlorobenzene	15.43	146	676607	97.20	ug/L	99
115) 1,2-dichlorobenzene	15.84	146	740840	99.59	ug/L	100
116) benzyl chloride	15.53	91	680198	106.04	ug/L	98
118) n-butylbenzene	15.73	92	726903	108.46	ug/L	100
120) hexachloroethane	16.17	201	293664	119.11	ug/L	99
121) 1,2-dibromo-3-chloropropan	16.69	157	108276	116.72	ug/L	97
122) 1,3,5-trichlorobenzene	16.89	180	851100	106.62	ug/L	98
123) 1,2,4-trichlorobenzene	17.57	180	788596	113.84	ug/L	97
124) 2-ethylhexyl acrylate	17.58	70	91850	21.21	ug/L	97
125) hexachlorobutadiene	17.69	225	352604	105.77	ug/L	99
126) naphthalene	17.88	128	1545539	112.81	ug/L	99
127) 1,2,3-trichlorobenzene	18.12	180	730418	116.35	ug/L	99
128) 2-methylnaphthalene	19.17	142	421317	59.62	ug/L	100

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

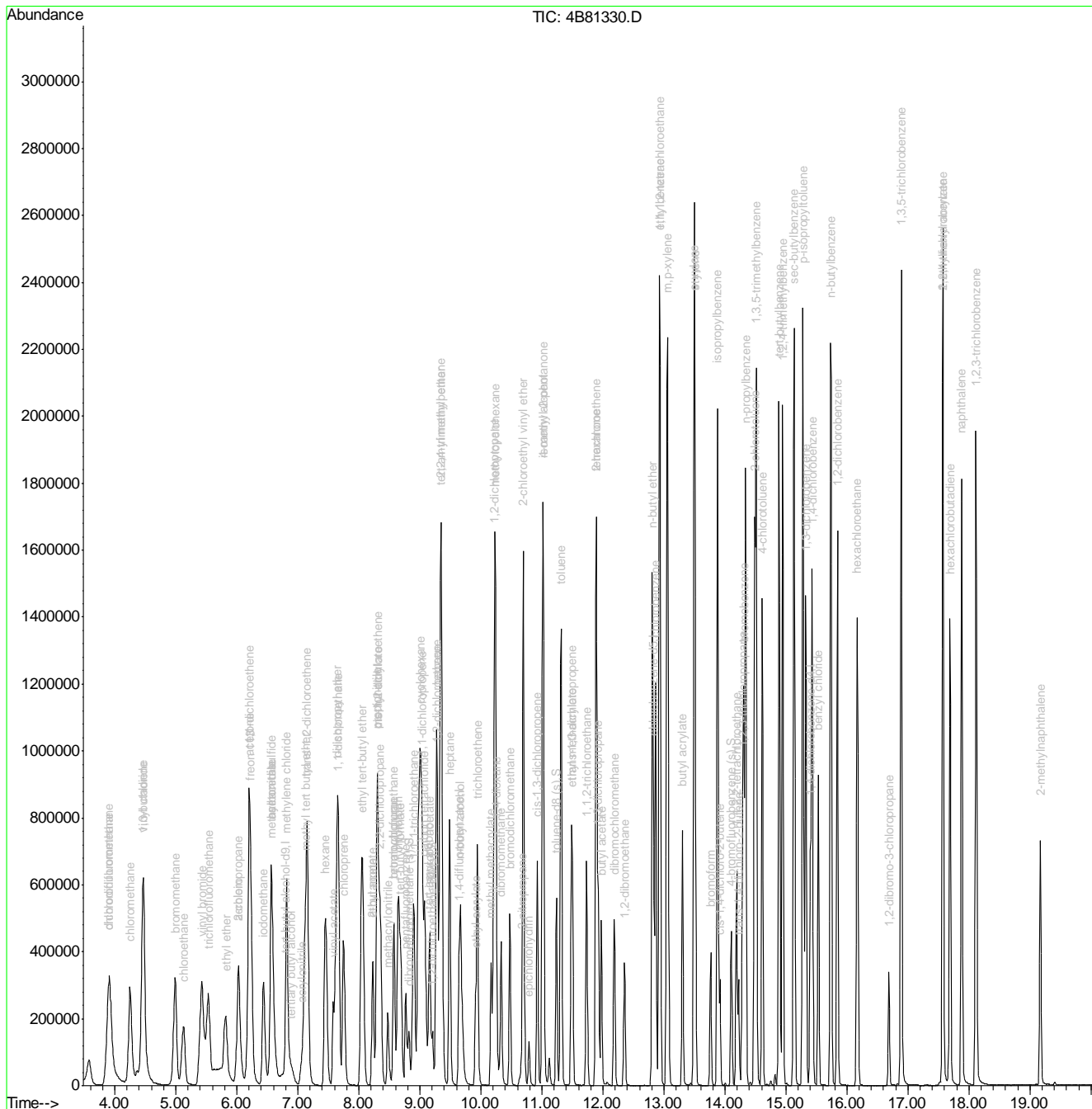
7.7.22

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Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
Data File : 4B81330.D
Acq On : 25 Apr 2018 8:10 pm
Operator : HueanhT
Sample : IC3370-100
Misc : MS25764,V4B3370,5,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 26 08:33:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 26 08:31:18 2018
Response via : Initial Calibration



7.7.22
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81331.D
 Acq On : 25 Apr 2018 8:38 pm
 Operator : HueanhT
 Sample : IC3370-200
 Misc : MS25764,V4B3370,5,,,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 26 08:33:32 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:31:41 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.80	65	135013	500.00	ug/L	0.03
5) pentafluorobenzene	8.77	168	264077	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.65	114	347565	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	309164	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	217537	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.83	113	117822	49.76	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.52%
55) 1,2-dichloroethane-d4 (s)	9.21	65	102824	45.54	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	91.08%
76) toluene-d8 (s)	11.24	98	398524	53.21	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	106.42%
99) 4-bromofluorobenzene (s)	14.10	95	156867	49.67	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.34%

Target Compounds

						Qvalue
3) tertiary butyl alcohol	6.89	59	379028	1072.62	ug/L	99
4) 1,4-dioxane	10.26	88	180473	5558.49	ug/L	98
6) chlorodifluoromethane	3.91	51	1096197	166.36	ug/L	99
7) dichlorodifluoromethane	3.90	85	1042816	153.29	ug/L	96
8) chloromethane	4.25	50	1393889	168.76	ug/L	99
9) vinyl chloride	4.46	62	1269628	163.68	ug/L	100
10) 1,3-butadiene	4.47	54	733556	166.04	ug/L	99
13) trichlorofluoromethane	5.53	101	1159276	157.87	ug/L	99
14) vinyl bromide	5.42	106	858928	171.90	ug/L	97
15) ethyl ether	5.82	74	307155	200.63	ug/L	96
16) 2-chloropropane	6.02	43	969522	161.12	ug/L	98
17) acrolein	6.04	56	126648	192.74	ug/L	94
18) freon 113	6.23	151	543305	163.40	ug/L	98
19) 1,1-dichloroethene	6.20	61	908242	165.38	ug/L	97
20) acetone	6.20	58	186073	754.73	ug/L	99
21) acetonitrile	6.58	41	912870	1807.66	ug/L	99
22) iodomethane	6.43	142	1200511	194.04	ug/L	97
23) carbon disulfide	6.57	76	2101545	178.02	ug/L	100
24) methylene chloride	6.82	84	733616	182.59	ug/L	99
25) methyl acetate	6.59	43	376597	181.29	ug/L	98
26) methyl tert butyl ether	7.13	73	1908032	185.98	ug/L	99
27) trans-1,2-dichloroethene	7.16	61	801304	165.94	ug/L	93
28) hexane	7.45	56	343838	159.47	ug/L	97
29) di-isopropyl ether	7.64	45	2129246	179.69	ug/L	99
30) 2-butanone	8.22	72	208220	887.00	ug/L	92
31) 1,1-dichloroethane	7.67	63	1006372	174.23	ug/L	99
32) chloroprene	7.75	53	769529	191.53	ug/L	97
33) acrylonitrile	7.07	53	221757	204.07	ug/L	96
34) vinyl acetate	7.58	86	80229	218.46	ug/L #	90
35) ethyl tert-butyl ether	8.06	59	2126933	194.34	ug/L	98
36) ethyl acetate	8.23	45	70377	206.75	ug/L #	93
37) 2,2-dichloropropane	8.35	77	990127	172.90	ug/L	95
38) cis-1,2-dichloroethene	8.30	96	646614	189.10	ug/L	96

7.7.23
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Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81331.D
 Acq On : 25 Apr 2018 8:38 pm
 Operator : HueanhT
 Sample : IC3370-200
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 26 08:33:32 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:31:41 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) propionitrile	8.30	54	773530	1897.92	ug/L	78
40) methyl acrylate	8.31	85	65303	206.21	ug/L	99
41) methacrylonitrile	8.48	67	193158	215.44	ug/L	97
42) bromochloromethane	8.57	128	335251	206.54	ug/L	97
43) tetrahydrofuran	8.59	72	66955	212.33	ug/L	99
44) chloroform	8.65	83	993340	188.63	ug/L	99
45) tert-butyl formate	8.68	59	661379	212.43	ug/L	96
47) 1,1,1-trichloroethane	8.90	97	1081481	189.95	ug/L	98
48) cyclohexane	9.01	84	959453	160.22	ug/L	98
50) 1,1-dichloropropene	9.04	75	629132	183.82	ug/L	99
51) carbon tetrachloride	9.08	117	877406	182.25	ug/L	98
52) tert-amyl alcohol	9.15	73	169009	1021.69	ug/L	95
53) isopropyl acetate	9.16	87	102431	212.35	ug/L #	92
56) n-butyl alcohol	9.67	56	804743	9202.98	ug/L	99
57) 2,2,4-trimethylpentane	9.35	57	2147534	165.38	ug/L	99
58) benzene	9.27	78	2111509	189.38	ug/L	99
59) tert-amyl methyl ether	9.34	73	1894748	190.67	ug/L	95
60) heptane	9.49	57	357072	162.12	ug/L	95
61) 1,2-dichloroethane	9.30	62	565708	172.54	ug/L	98
62) ethyl acrylate	9.91	55	544054	209.93	ug/L	99
63) trichloroethene	9.94	95	512342	192.24	ug/L	99
64) 2-chloroethyl vinyl ether	10.70	63	1407706	955.60	ug/L	98
65) methyl methacrylate	10.17	100	127326	217.56	ug/L	92
66) methylcyclohexane	10.24	83	1091848	167.26	ug/L	97
67) 1,2-dichloropropane	10.23	63	517730	175.71	ug/L	99
68) dibromomethane	10.33	93	319466	195.62	ug/L	95
69) bromodichloromethane	10.47	83	734395	201.01	ug/L	99
70) 2-nitropropane	10.67	41	153701	188.19	ug/L	99
71) epichlorohydrin	10.79	57	249110	1035.51	ug/L	98
72) cis-1,3-dichloropropene	10.92	75	829158	197.84	ug/L	98
73) 4-methyl-2-pentanone	11.02	58	757825	745.78	ug/L	94
74) isoamyl alcohol	11.01	70	307448	3694.74	ug/L	95
77) toluene	11.31	92	1266446	209.67	ug/L	97
78) ethyl methacrylate	11.48	69	618441	230.33	ug/L	97
79) trans-1,3-dichloropropene	11.50	75	676009	212.30	ug/L	98
80) 1,1,2-trichloroethane	11.73	83	386271	214.59	ug/L	97
81) tetrachloroethene	11.89	164	469464	205.75	ug/L	98
82) 2-hexanone	11.90	58	621589	809.74	ug/L	94
83) 1,3-dichloropropane	11.93	76	653285	195.74	ug/L	100
84) butyl acetate	11.97	56	296773	207.52	ug/L	99
85) dibromochloromethane	12.19	129	591457	233.89	ug/L	98
86) 1,2-dibromoethane	12.36	107	534123	221.81	ug/L	99
87) n-butyl ether	12.81	57	2396017	209.53	ug/L	98
88) chlorobenzene	12.86	112	1404658	204.51	ug/L	98
89) 1,1,1,2-tetrachloroethane	12.94	131	651271	216.27	ug/L	100
90) ethylbenzene	12.93	91	2275443	193.21	ug/L	98
91) m,p-xylene	13.06	106	1882125	409.29	ug/L	94
92) o-xylene	13.50	91	2109396	205.11	ug/L	98
93) styrene	13.51	104	1547184	210.62	ug/L	99
94) butyl acrylate	13.30	55	1011722	223.86	ug/L	100

7.7.23
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Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81331.D
 Acq On : 25 Apr 2018 8:38 pm
 Operator : HueanhT
 Sample : IC3370-200
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 26 08:33:32 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:31:41 2018
 Response via : Initial Calibration

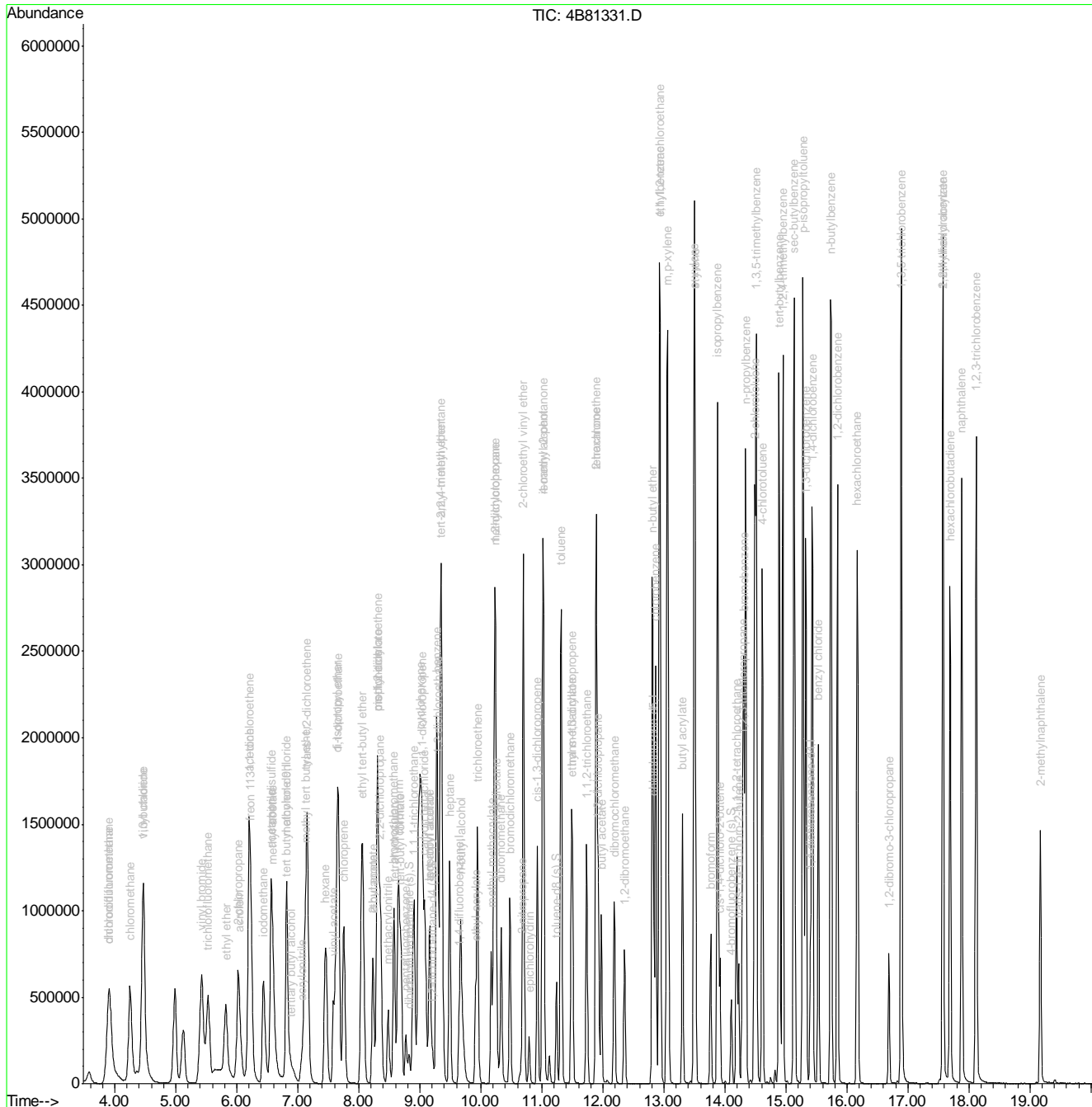
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) isopropylbenzene	13.88	105	2893339	215.35	ug/L	98
96) bromoform	13.77	173	437088	245.22	ug/L	99
97) cis-1,4-dichloro-2-butene	13.92	88	164741	213.41	ug/L	96
100) 1,1,2,2-tetrachloroethane	14.19	83	721465	200.69	ug/L	99
101) trans-1,4-dichloro-2-buten	14.22	53	129875	241.53	ug/L	90
102) 1,2,3-trichloropropane	14.29	110	173718	195.33	ug/L	99
103) bromobenzene	14.31	156	732067	194.17	ug/L	97
104) n-propylbenzene	14.34	91	3009357	185.28	ug/L	99
105) 2-chlorotoluene	14.49	126	710104	199.46	ug/L	94
106) 4-chlorotoluene	14.61	91	1813569	192.15	ug/L	99
108) 1,3,5-trimethylbenzene	14.52	105	2413398	198.30	ug/L	96
109) tert-butylbenzene	14.89	119	2326074	218.73	ug/L	98
110) 1,2,4-trimethylbenzene	14.95	105	2466786	200.93	ug/L	96
111) sec-butylbenzene	15.13	105	3494713	209.39	ug/L	99
112) p-isopropyltoluene	15.28	119	2983002	209.41	ug/L	98
113) 1,3-dichlorobenzene	15.33	146	1448878	190.33	ug/L	99
114) 1,4-dichlorobenzene	15.43	146	1489384	194.29	ug/L	99
115) 1,2-dichlorobenzene	15.84	146	1590176	194.11	ug/L	99
116) benzyl chloride	15.53	91	1480955	209.66	ug/L	100
118) n-butylbenzene	15.73	92	1541934	208.92	ug/L	97
120) hexachloroethane	16.17	201	681621	251.05	ug/L	98
121) 1,2-dibromo-3-chloropropan	16.69	157	242585	237.45	ug/L	95
122) 1,3,5-trichlorobenzene	16.89	180	1792570	203.92	ug/L	98
123) 1,2,4-trichlorobenzene	17.57	180	1579773	207.08	ug/L	97
124) 2-ethylhexyl acrylate	17.58	70	191189	39.48	ug/L	95
125) hexachlorobutadiene	17.69	225	718904	195.81	ug/L	99
126) naphthalene	17.88	128	3056008	202.55	ug/L	99
127) 1,2,3-trichlorobenzene	18.12	180	1426218	206.29	ug/L	96
128) 2-methylnaphthalene	19.17	142	861324	110.67	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\4B3370\
 Data File : 4B81331.D
 Acq On : 25 Apr 2018 8:38 pm
 Operator : HueanhT
 Sample : IC3370-200
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 26 08:33:32 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:31:41 2018
 Response via : Initial Calibration



7.7.23
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Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81334.D
 Acq On : 25 Apr 2018 10:03 pm
 Operator : HueanhT
 Sample : ICV3370-50
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 26 08:34:43 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:33:14 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.77	65	133751	500.00	ug/L	0.00
5) pentafluorobenzene	8.77	168	255837	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.64	114	323523	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	314446	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	201286	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	111415	48.57	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.14%
55) 1,2-dichloroethane-d4 (s)	9.21	65	98486	46.86	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	93.72%
76) toluene-d8 (s)	11.24	98	380483	49.95	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.90%
99) 4-bromofluorobenzene (s)	14.10	95	148779	50.91	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.82%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	6.88	59	90728	259.18	ug/L	99
4) 1,4-dioxane	10.26	88	45220	1405.90	ug/L	90
7) dichlorodifluoromethane	3.90	85	319449	48.47	ug/L	98
8) chloromethane	4.25	50	375806	46.97	ug/L	99
9) vinyl chloride	4.46	62	334177	44.47	ug/L	99
10) 1,3-butadiene	4.47	54	240397	56.17	ug/L	100
11) bromomethane	4.99	94	246266	45.57	ug/L	98
12) chloroethane	5.13	64	203445	50.07	ug/L	99
13) trichlorofluoromethane	5.53	101	314837	44.25	ug/L	99
14) vinyl bromide	5.43	106	226907	46.87	ug/L	97
15) ethyl ether	5.82	74	71126	47.96	ug/L	95
16) 2-chloropropane	6.03	43	259951	44.59	ug/L	95
17) acrolein	6.03	56	32279	50.71	ug/L	92
18) freon 113	6.23	151	161598	50.17	ug/L	97
19) 1,1-dichloroethene	6.20	61	219819	41.31	ug/L	97
20) acetone	6.20	58	47453	198.67	ug/L	97
22) iodomethane	6.43	142	326664	54.50	ug/L	97
23) carbon disulfide	6.57	76	587685	51.39	ug/L	100
24) methylene chloride	6.82	84	180375	46.34	ug/L	97
25) methyl acetate	6.57	43	86973	43.22	ug/L	94
26) methyl tert butyl ether	7.12	73	930862	93.65	ug/L	98
27) trans-1,2-dichloroethene	7.16	61	206277	44.09	ug/L	94
28) hexane	7.45	56	96462	46.18	ug/L	97
29) di-isopropyl ether	7.64	45	553801	48.24	ug/L	97
30) 2-butanone	8.22	72	48900	215.02	ug/L	96
31) 1,1-dichloroethane	7.66	63	261626	46.75	ug/L	99
32) chloroprene	7.75	53	196080	50.38	ug/L	97
33) acrylonitrile	7.07	53	59951	56.95	ug/L	97
34) vinyl acetate	7.59	86	18849	52.98	ug/L #	81
35) ethyl tert-butyl ether	8.05	59	530843	50.07	ug/L	99
36) ethyl acetate	8.23	45	15325	46.47	ug/L	97
37) 2,2-dichloropropane	8.34	77	258468	46.59	ug/L	90
38) cis-1,2-dichloroethene	8.30	96	169413	51.14	ug/L	96

7.7.24
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81334.D
 Acq On : 25 Apr 2018 10:03 pm
 Operator : HueanhT
 Sample : ICV3370-50
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 26 08:34:43 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:33:14 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) propionitrile	8.30	54	194834	493.44	ug/L	96
40) methyl acrylate	8.31	85	15662	51.05	ug/L #	88
41) methacrylonitrile	8.47	67	45014	51.82	ug/L	96
42) bromochloromethane	8.57	128	82503	52.47	ug/L	96
43) tetrahydrofuran	8.58	72	14992	49.08	ug/L	95
44) chloroform	8.64	83	254503	49.89	ug/L	100
45) tert-butyl formate	8.68	59	113046	37.48	ug/L	99
47) 1,1,1-trichloroethane	8.90	97	271581	49.24	ug/L	98
48) cyclohexane	9.01	84	278599	48.02	ug/L	96
50) 1,1-dichloropropene	9.04	75	164164	49.51	ug/L	100
51) carbon tetrachloride	9.08	117	227135	48.70	ug/L	98
52) tert-amyl alcohol	9.14	73	40702	253.97	ug/L #	75
53) isopropyl acetate	9.16	87	23346	49.96	ug/L #	91
56) n-butyl alcohol	9.67	56	203429	2499.28	ug/L	98
57) 2,2,4-trimethylpentane	9.35	57	624186	51.64	ug/L	99
58) benzene	9.27	78	533667	51.42	ug/L	100
59) tert-amyl methyl ether	9.34	73	476931	51.56	ug/L	98
60) heptane	9.49	57	113887	55.55	ug/L	97
61) 1,2-dichloroethane	9.29	62	145708	47.74	ug/L	99
62) ethyl acrylate	9.91	55	134580	55.79	ug/L	99
63) trichloroethene	9.94	95	134307	54.14	ug/L	99
64) 2-chloroethyl vinyl ether	10.70	63	370664	270.32	ug/L	98
65) methyl methacrylate	10.17	100	29703	54.52	ug/L #	65
66) methylcyclohexane	10.24	83	309315	50.90	ug/L	99
67) 1,2-dichloropropane	10.22	63	135139	49.27	ug/L	97
68) dibromomethane	10.33	93	81090	53.34	ug/L	92
69) bromodichloromethane	10.47	83	173726	51.08	ug/L	100
70) 2-nitropropane	10.67	41	39884	52.46	ug/L	95
71) epichlorohydrin	10.79	57	58685	262.07	ug/L	95
72) cis-1,3-dichloropropene	10.92	75	208432	53.43	ug/L	98
73) 4-methyl-2-pentanone	11.02	58	195446	206.63	ug/L	94
74) isoamyl alcohol	11.01	70	81539	1052.71	ug/L	98
77) toluene	11.31	92	332264	54.08	ug/L	99
78) ethyl methacrylate	11.48	69	147504	54.01	ug/L	99
79) trans-1,3-dichloropropene	11.50	75	166083	51.28	ug/L	97
80) 1,1,2-trichloroethane	11.73	83	97685	53.36	ug/L	94
82) 2-hexanone	11.90	58	167074	213.99	ug/L	96
83) 1,3-dichloropropane	11.92	76	175251	51.63	ug/L	96
84) butyl acetate	11.97	56	77565	53.33	ug/L	98
85) dibromochloromethane	12.19	129	141036	54.83	ug/L	98
86) 1,2-dibromoethane	12.36	107	131079	53.52	ug/L	100
87) n-butyl ether	12.81	57	635208	54.62	ug/L	99
88) chlorobenzene	12.86	112	374388	53.59	ug/L	97
89) 1,1,1,2-tetrachloroethane	12.94	131	170476	55.66	ug/L	99
90) ethylbenzene	12.93	91	644607	53.81	ug/L	99
91) m,p-xylene	13.06	106	510099	109.06	ug/L	98
92) o-xylene	13.50	91	573358	54.81	ug/L	100
93) styrene	13.51	104	426870	57.13	ug/L	98
94) butyl acrylate	13.30	55	251367	54.69	ug/L	99
95) isopropylbenzene	13.88	105	785827	57.51	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81334.D
 Acq On : 25 Apr 2018 10:03 pm
 Operator : HueanhT
 Sample : ICV3370-50
 Misc : MS25764,V4B3370,5,,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 26 08:34:43 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:33:14 2018
 Response via : Initial Calibration

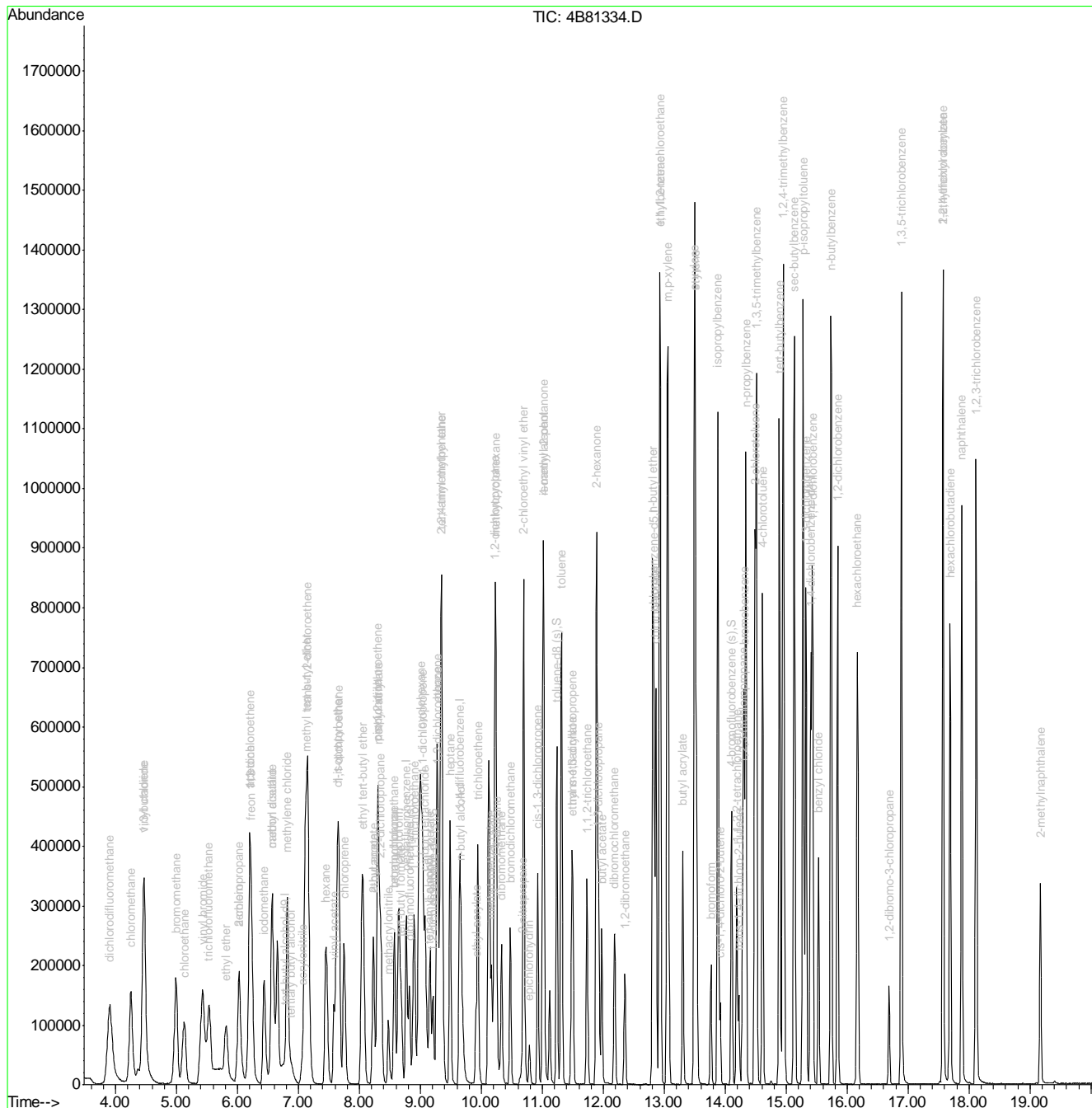
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
96) bromoform	13.77	173	100814	55.61	ug/L	98
97) cis-1,4-dichloro-2-butene	13.92	88	30599	42.02	ug/L	96
100) 1,1,2,2-tetrachloroethane	14.19	83	178434	53.64	ug/L	99
101) trans-1,4-dichloro-2-buten	14.22	53	28224	56.73	ug/L	95
102) 1,2,3-trichloropropane	14.29	110	43815	53.24	ug/L	96
103) bromobenzene	14.31	156	195687	56.09	ug/L	97
104) n-propylbenzene	14.34	91	846588	56.33	ug/L	100
105) 2-chlorotoluene	14.48	126	183252	55.63	ug/L	97
106) 4-chlorotoluene	14.61	91	491051	56.23	ug/L	99
108) 1,3,5-trimethylbenzene	14.51	105	647734	57.52	ug/L	100
109) tert-butylbenzene	14.89	119	591196	60.08	ug/L	99
110) 1,2,4-trimethylbenzene	14.94	105	672777	59.22	ug/L	99
111) sec-butylbenzene	15.13	105	943869	61.12	ug/L	99
112) p-isopropyltoluene	15.28	119	806206	61.17	ug/L	100
113) 1,3-dichlorobenzene	15.33	146	379849	53.93	ug/L	99
114) 1,4-dichlorobenzene	15.43	146	379660	53.52	ug/L	99
115) 1,2-dichlorobenzene	15.84	146	411942	54.34	ug/L	98
116) benzyl chloride	15.53	91	281468	43.06	ug/L	99
118) n-butylbenzene	15.73	92	408883	59.87	ug/L	99
120) hexachloroethane	16.17	201	152841	60.84	ug/L	98
121) 1,2-dibromo-3-chloropropan	16.69	157	52632	55.68	ug/L	97
122) 1,3,5-trichlorobenzene	16.89	180	466010	57.29	ug/L	97
123) 1,2,4-trichlorobenzene	17.57	180	425563	60.29	ug/L	97
124) 2-ethylhexyl acrylate	17.58	70	47592	11.13	ug/L	97
125) hexachlorobutadiene	17.69	225	194140	57.15	ug/L	100
126) naphthalene	17.88	128	808877	57.94	ug/L	99
127) 1,2,3-trichlorobenzene	18.12	180	387893	60.64	ug/L	99
128) 2-methylnaphthalene	19.17	142	191094	26.54	ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\4B3370\
 Data File : 4B81334.D
 Acq On : 25 Apr 2018 10:03 pm
 Operator : HueanhT
 Sample : ICV3370-50
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 26 08:34:43 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:33:14 2018
 Response via : Initial Calibration



7.7.24
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81335.D
 Acq On : 25 Apr 2018 10:31 pm
 Operator : HueanhT
 Sample : ICV3370-50
 Misc : MS25764,V4B3370,5,,,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 26 08:35:13 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:33:14 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.77	65	149404	500.00	ug/L	0.00
5) pentafluorobenzene	8.77	168	260101	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.65	114	331948	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	326746	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	219679	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	8.82	113	111891	47.98	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	95.96%
55) 1,2-dichloroethane-d4 (s)	9.21	65	102891	47.71	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	95.42%
76) toluene-d8 (s)	11.24	98	385702	48.73	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.46%
99) 4-bromofluorobenzene (s)	14.10	95	153490	48.12	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	96.24%

Target Compounds						Qvalue
6) chlorodifluoromethane	3.91	51	289399	44.59	ug/L	98
21) acetonitrile	6.57	41	262148	526.27	ug/L	98
81) tetrachloroethene	11.89	164	127408	52.83	ug/L	99

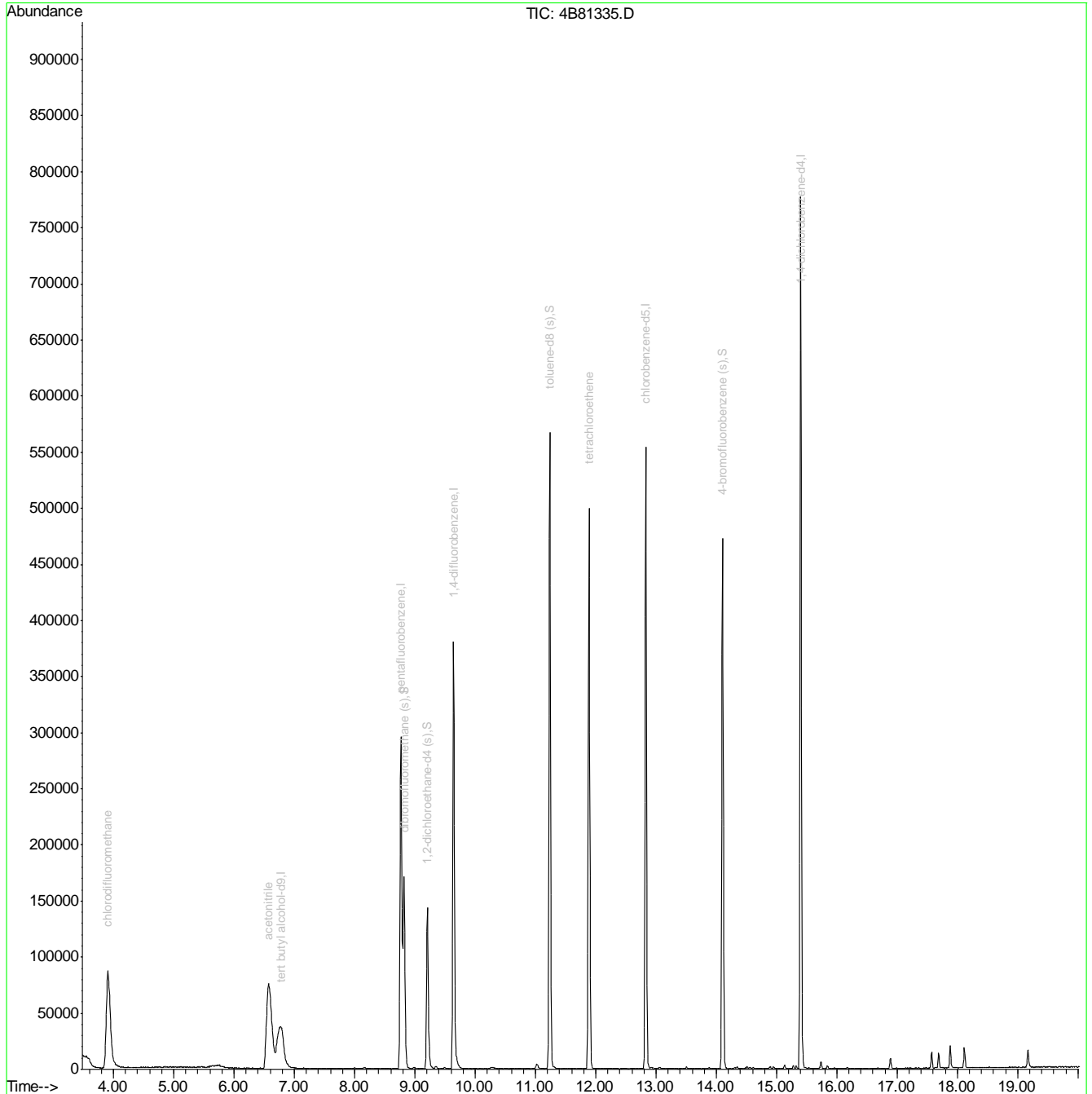
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.25
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81335.D
 Acq On : 25 Apr 2018 10:31 pm
 Operator : HueanhT
 Sample : ICV3370-50
 Misc : MS25764,V4B3370,5,,,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 26 08:35:13 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:33:14 2018
 Response via : Initial Calibration



7.7.25
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v4b3421\
 Data File : 4b82368.d
 Acq On : 1 Jun 2018 9:04 am
 Operator : HueanhT
 Sample : cc3370-20 Inst : MS4B
 Misc : MS26771,V4B3421,5,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:37:09 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.780	65	116240	500.00	ug/L	0.00
5) pentafluorobenzene	8.773	168	208646	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.641	114	266586	50.00	ug/L	0.00
75) chlorobenzene-d5	12.831	117	270961	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.399	152	181621	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	97420	52.08	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	104.16%
55) 1,2-dichloroethane-d4 (s)	9.207	65	92656	53.50	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	107.00%
76) toluene-d8 (s)	11.236	98	324079	49.37	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.74%
99) 4-bromofluorobenzene (s)	14.102	95	125080	47.43	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	94.86%
Target Compounds						
3) tertiary butyl alcohol	6.864	59	29801	97.95	ug/L	98
4) 1,4-dioxane	10.263	88	11592	414.69	ug/L	96
6) chlorodifluoromethane	3.914	51	108006	20.75	ug/L	99
7) dichlorodifluoromethane	3.914	85	110092	20.48	ug/L	100
8) chloromethane	4.254	50	122460	18.77	ug/L	98
9) vinyl chloride	4.463	62	118618	19.35	ug/L	97
10) 1,3-butadiene	4.474	54	107711	30.86	ug/L	99
11) bromomethane	5.007	94	84583	19.19	ug/L	97
12) chloroethane	5.143	64	66113	19.95	ug/L	96
13) trichlorofluoromethane	5.540	101	121077	20.87	ug/L	97
14) vinyl bromide	5.431	106	77495	19.63	ug/L	93
15) ethyl ether	5.823	74	23419	19.36	ug/L	88
16) 2-chloropropane	6.022	43	100676	21.18	ug/L	98
17) acrolein	6.037	56	9405	18.12	ug/L	92
18) freon 113	6.236	151	61283	23.33	ug/L	96
19) 1,1-dichloroethene	6.205	61	90538	20.87	ug/L	96
20) acetone	6.194	58	16016	82.22	ug/L	90
21) acetonitrile	6.566	41	80655	201.85	ug/L	98
22) iodomethane	6.440	142	96885	19.82	ug/L	99
23) carbon disulfide	6.571	76	183918	19.72	ug/L	99
24) methylene chloride	6.817	84	61772	19.46	ug/L	97
25) methyl acetate	6.581	43	32694	19.92	ug/L	98
26) methyl tert butyl ether	7.115	73	150423	18.56	ug/L	98
27) trans-1,2-dichloroethene	7.157	61	76178	19.97	ug/L	96
28) hexane	7.450	56	32898	19.31	ug/L	88
29) di-isopropyl ether	7.643	45	180053	19.23	ug/L	97
30) 2-butanone	8.224	72	14334	77.28	ug/L	# 88
31) 1,1-dichloroethane	7.664	63	88196	19.33	ug/L	98
32) chloroprene	7.753	53	61668	19.43	ug/L	99
33) acrylonitrile	7.068	53	17041	19.85	ug/L	95
34) vinyl acetate	7.580	86	4901	16.89	ug/L	# 73
35) ethyl tert-butyl ether	8.051	59	162935	18.84	ug/L	98
36) ethyl acetate	8.234	45	5557	20.66	ug/L	# 79
37) 2,2-dichloropropane	8.344	77	97066	21.45	ug/L	95
38) cis-1,2-dichloroethene	8.297	96	50679	18.76	ug/L	97
39) propionitrile	8.302	54	63213	196.30	ug/L	95
40) methyl acrylate	8.318	85	4794	19.16	ug/L	# 80
41) methacrylonitrile	8.480	67	12695	17.92	ug/L	97
42) bromochloromethane	8.574	128	26146	20.39	ug/L	94

7.7.26
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v4b3421\
 Data File : 4b82368.d
 Acq On : 1 Jun 2018 9:04 am
 Operator : HueanhT
 Sample : cc3370-20 Inst : MS4B
 Misc : MS26771,V4B3421,5,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:37:09 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) tetrahydrofuran	8.579	72	4771	19.15	ug/L	89
44) chloroform	8.642	83	80084	19.25	ug/L	95
45) tert-butyl formate	8.684	59	46817	19.03	ug/L	98
47) 1,1,1-trichloroethane	8.898	97	93557	20.80	ug/L	96
48) cyclohexane	9.008	84	81768	17.28	ug/L	96
50) 1,1-dichloropropene	9.040	75	54537	20.17	ug/L	98
51) carbon tetrachloride	9.076	117	83245	21.88	ug/L	97
52) tert-amyl alcohol	9.149	73	12629	96.63	ug/L #	87
53) isopropyl acetate	9.160	87	7027	18.44	ug/L #	93
56) n-butyl alcohol	9.672	56	65374	974.71	ug/L	93
57) 2,2,4-trimethylpentane	9.348	57	197346	19.81	ug/L	97
58) benzene	9.270	78	161723	18.91	ug/L	99
59) tert-amyl methyl ether	9.338	73	145608	19.10	ug/L	98
60) heptane	9.489	57	31836	18.84	ug/L	92
61) 1,2-dichloroethane	9.291	62	50680	20.15	ug/L	99
62) ethyl acrylate	9.913	55	37605	18.92	ug/L	100
63) trichloroethene	9.944	95	40266	19.70	ug/L	99
64) 2-chloroethyl vinyl ether	10.698	63	111947	99.08	ug/L	97
65) methyl methacrylate	10.169	100	7413	16.51	ug/L #	74
66) methylcyclohexane	10.237	83	105998	21.17	ug/L	97
67) 1,2-dichloropropane	10.222	63	43380	19.19	ug/L	99
68) dibromomethane	10.331	93	25417	20.29	ug/L	95
69) bromodichloromethane	10.473	83	56452	20.15	ug/L	97
70) 2-nitropropane	10.666	41	12555	20.04	ug/L	97
71) epichlorohydrin	10.792	57	17684	95.84	ug/L	97
72) cis-1,3-dichloropropene	10.922	75	62106	19.32	ug/L	94
73) 4-methyl-2-pentanone	11.017	58	62828	80.61	ug/L	88
74) isoamyl alcohol	11.011	70	25174	394.42	ug/L	94
77) toluene	11.315	92	98526	18.61	ug/L	99
78) ethyl methacrylate	11.482	69	41266	17.54	ug/L	94
79) trans-1,3-dichloropropene	11.503	75	55636	19.94	ug/L	97
80) 1,1,2-trichloroethane	11.733	83	29391	18.63	ug/L	98
81) tetrachloroethene	11.890	164	40114	20.06	ug/L	99
82) 2-hexanone	11.895	58	52690	78.32	ug/L	93
83) 1,3-dichloropropane	11.921	76	56092	19.18	ug/L	96
84) butyl acetate	11.974	56	23292	18.58	ug/L	96
85) dibromochloromethane	12.183	129	45218	20.40	ug/L	99
86) 1,2-dibromoethane	12.355	107	39809	18.86	ug/L	99
87) n-butyl ether	12.811	57	187577	18.72	ug/L	99
88) chlorobenzene	12.863	112	113384	18.84	ug/L	97
89) 1,1,1,2-tetrachloroethane	12.936	131	52909	20.05	ug/L	96
90) ethylbenzene	12.926	91	193502	18.75	ug/L	98
91) m,p-xylene	13.062	106	154794	38.41	ug/L	95
92) o-xylene	13.496	91	173161	19.21	ug/L	97
93) styrene	13.511	104	126661	19.67	ug/L	99
94) butyl acrylate	13.307	55	73011	18.43	ug/L	99
95) isopropylbenzene	13.877	105	228530	19.41	ug/L	100
96) bromoform	13.762	173	32445	20.77	ug/L	94
97) cis-1,4-dichloro-2-butene	13.919	88	15193	25.79	ug/L	96
100) 1,1,2,2-tetrachloroethane	14.186	83	56343	18.77	ug/L	100
101) trans-1,4-dichloro-2-b...	14.223	53	11374	25.34	ug/L	88
102) 1,2,3-trichloropropane	14.285	110	14489	19.51	ug/L	93
103) bromobenzene	14.306	156	60734	19.29	ug/L	94
104) n-propylbenzene	14.338	91	259629	19.15	ug/L	98
105) 2-chlorotoluene	14.489	126	57863	19.47	ug/L	89
106) 4-chlorotoluene	14.610	91	144993	18.40	ug/L	97
108) 1,3,5-trimethylbenzene	14.510	105	199882	19.67	ug/L	99

7.7.26
7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\eunicem60418\v4b3421\
 Data File : 4b82368.d
 Acq On : 1 Jun 2018 9:04 am
 Operator : HueanHT
 Sample : cc3370-20 Inst : MS4B
 Misc : MS26771,V4B3421,5,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:37:09 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) tert-butylbenzene	14.887	119	163997	18.47	ug/L	99
110) 1,2,4-trimethylbenzene	14.944	105	202402	19.75	ug/L	99
111) sec-butylbenzene	15.133	105	270328	19.40	ug/L	99
112) p-isopropyltoluene	15.279	119	234174	19.69	ug/L	99
113) 1,3-dichlorobenzene	15.321	146	123132	19.37	ug/L	98
114) 1,4-dichlorobenzene	15.431	146	121495	18.98	ug/L	98
115) 1,2-dichlorobenzene	15.844	146	131426	19.22	ug/L	97
116) benzyl chloride	15.530	91	112449	19.07	ug/L	100
118) n-butylbenzene	15.734	92	117645	19.09	ug/L	97
120) hexachloroethane	16.168	201	43559	19.22	ug/L	98
121) 1,2-dibromo-3-chloropr...	16.686	157	16490	19.33	ug/L	95
122) 1,3,5-trichlorobenzene	16.890	180	137562	18.74	ug/L	97
123) 1,2,4-trichlorobenzene	17.570	180	117410	18.43	ug/L	98
124) 2-ethylhexyl acrylate	17.575	70	5934	2.13	ug/L #	76
125) hexachlorobutadiene	17.690	225	58435	19.06	ug/L	98
126) naphthalene	17.879	128	206211	16.37	ug/L	99
127) 1,2,3-trichlorobenzene	18.114	180	110027	19.06	ug/L	99
128) 2-methylnaphthalene	19.165	142	33582	5.17	ug/L	97

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

7.7.26

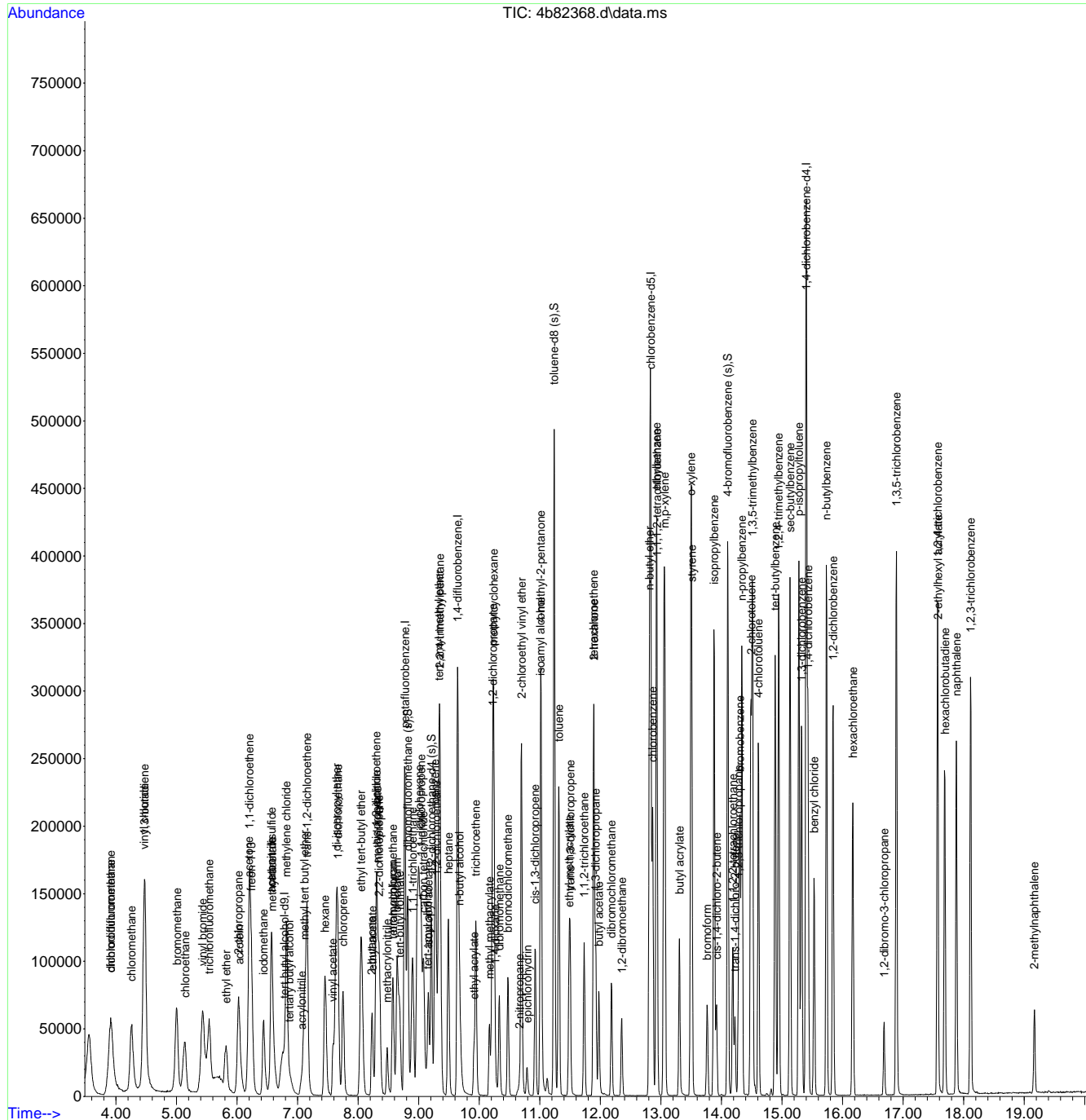
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\unicem60418\v4b3421\
 Data File : 4b82368.d
 Acq On : 1 Jun 2018 9:04 am
 Operator : HueanHT
 Sample : cc3370-20
 Misc : MS26771,V4B3421,5,,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Inst : MS4B

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: Jun 04 00:37:09 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration



7.7.26
7

GCMS Volatile Run Log

Standard / Reagents	Lot #		Column
Standard	ABK V018-2615-120.3	C V018-2615-131.1	DB624(60mx0.25mmx1.4um)
Standard Concentration	100ppm	100ppm	Method V8260C
Internal Surrogate	V018-2615-113		Init Calib Date 1/3/2018
Internal Surrogate Concentration	250/2500ppm		
Standard	EXT ABK v018-2615-114.8	EXT C v018-2615-127.9	Analysis Date 4/16/2018
Standard Concentration	100-10000ppm	100ppm	Sequence loaded by Bridget Kelly
Standard	Ext Chlorodifluoromethane	V018-2615-132.1	Data processed by Robert Szot
Standard Concentration	100 ppm		Batch ID V2B7119
			Matrix AQ
Initial Calibration Method	V2B7119		Approved By: JESSICA
			Approved Date: 4/23/2018 5:12:09 PM

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2b 159786	IB		NA			5			1	ok	
2b 159787	IB		NA			5			2	ok	
2b 159788	BFB		NA			5			3	ok	
2b 159789	IC7119-0.5		NA		8260 initial cal.	5			4	ok	1 uL ABK C E / 200 mL
2b 159790	IC7119-1		NA		8260 initial cal.	5			5	ok	1 uL ABK C E / 100 mL
2b 159791	IC7119-2		NA		8260 initial cal.	5			6	ok	2 uL ABK C E / 100 mL
2b 159792	IC7119-5		NA		8260 initial cal.	5			7	ok	5 uL ABK C E / 100 mL
2b 159793	IC7119-10		NA		8260 initial cal.	5			8	ok	10 uL ABK C E / 100 mL
2b 159794	IC7119-20		NA		8260 initial cal.	5			9	ok	20 uL ABK C E / 100 mL
2b 159795	IC7119-50		NA		8260 initial cal.	5			10	ok	50 uL ABK C E / 100 mL
2b 159796	IC7119-100		NA		8260 initial cal.	5			11	ok	100 uL ABK C E / 100 mL
2b 159797	IC7119-200		NA		8260 initial cal.	5			12	ok	200 uL ABK C E / 100 mL

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2b 159798	IB		NA			5			13	ok	
2b 159799	IB		NA			5			14	ok	
2b 159800	ICV7119-50		NA		8260 initial cal.	5			15	ok	50 uL EXT ABK C E / 100 mL
2b 159801	ICV7119-50		NA		8260 initial cal.	5			16	ok	50 uL EXT PA / 100 mL
2b 159802	IB		NA			5			17	ok	
2b 159803	IB		NA			5			1	ok	
2b 159804	BFB2		NA			5			2	ok	
2b 159805	ICV7119-50		NA		8260 initial cal.	5			3	ok	25 uL Ext Chlorodifluoromethane / 50 mL DI H2O

GCMS Volatile Run Log

Standard / Reagents		Lot #		Column
Standard	ABK V018-2623-05.39	C V018-2623-29.4	E V018-2615-03.61	RX1624(60mx0.25mmx1.4um)
Standard Concentration	100-10,000ppm	100ppm	100ppm	Method v8260C
Internal Surrogate	V018-2623-17			Init Calib Date 4/25/2018
Concentration	250/2500ppm			Rough Reviewed Bridget Kelly
				Analysis Date 5/31/2018
				Sequence loaded by TOANP
				Data processed by Eunice
				Batch ID V2B7179
				Matrix AQ
Initial Calibration Method	m2b7119			Approved By: JESSICA
pH Paper Lot#	216315			Approved Date: 6/13/2018 11:48:28 AM

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2b 160757	BFB/CC7119-50		NA			5			1	NG	A/B/K,C,E 25UL/50ML
2b 160758	BFB/CC7119-50		NA			5			2	ok/ok	A/B/K,C,E 25UL/50ML 7,10,11,14 HIGH 5:45PM
2b 160759	BS		NA			5			3	ok	A/B/K,C,E 25UL/50ML 7 high
2b 160760	IB		NA			5			4	ok	
2b 160761	MB		NA			5			5	ok	
2b 160762	JC66769-3	4	NA	MS26668	V8260TCL20+,ACNIT ,TBA	5		1	6	ok	
2b 160763	JC66769-6	4	NA	MS26668	V8260TCL20+,ACNIT ,TBA	5		1	7	ok	
2b 160764	JC66769-7	4	NA	MS26668	V8260TCL20+,ACNIT ,TBA	5		1	8	ok	
2b 160765	JC66769-11	5	NA	MS26668	V8260TCL20+,ACNIT ,TBA	5		1	9	ok	
2b 160766	JC66769-13	4	NA	MS26668	V8260TCL20+,ACNIT ,TBA	5		1	10	ok	
2b 160767	JC66769-15	5	NA	MS26668	V8260TCL20+,ACNIT ,TBA	5		1	11	ok	

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2b 160768	JC66769-17	5	NA	MS26668	V8260TCL20+,ACNIT ,TBA	5		1	12	ok	
2b 160769	JC66769-20	4	NA	MS26668	V8260TCL20+,ACNIT ,TBA	5		1	13	ok	
2b 160770	JC66769-22	3	NA	MS26668	V8260TCL20+,ACNIT ,TBA	5		1	14	ok	
2b 160771	JC66769-24	4	NA	MS26668	V8260TCL20+,ACNIT ,TBA	5		1	15	ok	
2b 160772	JC66769-26	6	NA	MS26668	V8260TCL20+,ACNIT ,TBA	5		1	16	ok	
2b 160773	JC67003-8	1	NA	MS26780	V8260TCL20	5		1	17	ok	
2b 160774	JC67003-1	10	NA	MS26780	V8260TCL20	5		1	18	rr	surr high
2b 160775	JC67003-2	11	NA	MS26780	V8260TCL20	5		1	19	ok	
2b 160776	JC67003-3	10	NA	MS26780	V8260TCL20	5		1	20	ok	
2b 160777	JC67003-7	10	NA	MS26780	V8260TCL20	5		1	21	ok	
2b 160778	JC66960-3	1	NA	MS26780	V8260CP51G	5		1	22	rr	surr out
2b 160779	JC66960-1	4	NA	MS26780	V8260CP51G	5		1	23	ok	
2b 160780	JC66960-2	3	NA	MS26780	V8260CP51G	5		1	24	rr	surr out 4:53am
2b 160781	IB		NA			5			1	ok	
2b 160782	CC7119-20		NA			5			2	NG	20 uL ABK C E / 100 mL
2b 160783	CC7119-20		NA			5			3	NG	20 uL ABK C E / 100 mL
2b 160784	BFB2/CC7119-20		NA			5			4	ok/ok	20 uL ABK C E / 100 mL 9:15am
2b 160785	CC7119-20		NA			5			5	ok	20 uL ABK C E / 100 mL
2b 160786	BS2		NA			5			6	ok	50 uL ABK C E / 100 mL
2b 160787	IB		NA			5			7	ok	

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2b 160788	MB2		NA			5			8	ok	
2b 160789	JC67003-2MS	10	NA	MS26780	V8260TCL20	5		1	9	ok	20 uL ABK C E / 40 mL
2b 160790	IB		NA			5			10	ok	
2b 160791	JC67003-3DUP	11	NA	MS26780	V8260TCL20	5		1	11	ok	1:25pm

GCMS Volatile Run Log

Standard / Reagents		Lot #		Column
Standard	ABK V018-2615-136.16	C V018-2615-143.3	E V018-2615-121.62	DB624(60mx0.25mmx1.4um)
Standard Concentration	100-10.000ppm	100ppm	100PPM	V8260C
Internal Surrogate	V018-2615-113			Init Calib Date
Internal Surrogate Concentration	250/2500ppm			4/25/2018
External Standard	ABK V018-2615-137.2	C V018-2615-141.7	E V018-2615-133.6	Analysis Date
External Standard Concentration	100-10.000PPM	100PPM	100PPM	4/25/2018
External Standard	Ext PA V018-2615-128	Ext Chlorodifluoromethane	V018-2615-132.1	Sequence loaded by
External Standard Concentration	100/1000 PPM	100ppm		Hueanh Tran
Initial Calibration Method	M4B3370			Data processed by
pH Paper Lot#	216315			Robert Szot
				Batch ID
				V4B3370
				Matrix
				AQ
				Approved By:
				OWENM
				Approved Date:
				5/7/2018 1:36:55 PM

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
4b 81320	IB		NA			5			1	ok	
4b 81321	BFB		NA			5			2	ok	3:08pm
4b 81322	IC3370-0.2		NA		V8260C initial cal.	5			3	not used	1 ul abk,c,e,13btd /500ml
4b 81323	IC3370-0.5		NA		V8260C initial cal.	5			4	ok	2.5 ul abk,c,e,13btd /500ml
4b 81324	IC3370-1		NA		V8260C initial cal.	5			5	ok	1 ul abk,c,e,13btd /100ml
4b 81325	IC3370-2		NA		V8260C initial cal.	5			6	ok	2 ul abk,c,e,13btd /100ml
4b 81326	IC3370-5		NA		V8260C initial cal.	5			7	ok	5 ul abk,c,e,13btd /100ml
4b 81327	IC3370-10		NA		V8260C initial cal.	5			8	ok	10 ul abk,c,e,13btd /100ml
4b 81328	IC3370-20		NA		V8260C initial cal.	5			9	ok	10 ul abk,c,e,13btd /50ml
4b 81329	ICC3370-50		NA		V8260C initial cal.	5			10	ok	25 ul abk,c,e,13btd /50ml
4b 81330	IC3370-100		NA		V8260C initial cal.	5			11	ok	50 ul abk,c,e,13btd /50ml

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
4b 81331	IC3370-200		NA		V8260C initial cal.	5			12	ok	100 ul abk.c.e, 13btd /50ml
4b 81332	IB		NA			5			13	ok	
4b 81333	IB		NA			5			14	ok	
4b 81334	ICV3370-50		NA		V8260C initial cal.	5			15	ok	25 ul ext abk.c.e, 13btd/50ml
4b 81335	ICV3370-50		NA		V8260C initial cal.	5			16	ok	25 ul ext PA, chlorodifluoromethane/ 50ml
4b 81336	IB		NA			5			17	ok	

GCMS Volatile Run Log

Standard / Reagents		Lot #		Column
Standards	ABK V018-2623-20.39	C V018-2623-38.20	E V018-2623-34.13	Rxi-624 (60mx0.25mmx1.4 um)
Standard Concentration	100-10,000PPM	100PPM	100PPM	Method V8260C
Internal Surrogate	V018-2623-17			Init Calib Date 5/24/2018
Internal Surrogate Concentration	250/2500 ppm			
				Analysis Date 6/1/2018
				Sequence loaded by Hueanh Tran
				Data processed by Eunice
				Batch ID V4B3421
				Matrix AQ
Initial Calibration Method	M4B3370			Approved By: JESSICA
pH paper	216315			Approved Date: 6/13/2018 11:49:15 AM

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
4B 82367	IB		NA			5			1	ok	
4B 82368	BFB/CC3370-20		NA			5			2	ok/ok	9:04AM. #101 HIGH. 10ul abk,c.e,13btd/50ml
4B 82369	BS		NA			5			3	ok	25ul abk,c.e,13btd/50ml
4B 82370	IB		NA			5			4	ok	
4B 82371	MB		NA			5			5	ok	
R 82372	JC66960-3	2	NA	MS26780	V8260CP51G	5		1	6	ok	
R 82373	JC66960-2	4	NA	MS26780	V8260CP51G	5		1	7	ok	
R 82374	JC67003-1	11	NA	MS26780	V8260TCL20	5		1	8	ok	
R 82375	JC66890-3	11	NA	MS26738	V8260SL+	5		1	9	ok	
R 82376	JC66969-2	1	4	MS26771	V8260PCE,DCE,VC	12.5/50		1	10	ok/dl	+T12DCE,TCE, F/D
R 82377	JC66969-1	2	2.5	MS26771	V8260PCE,DCE,VC	20/50		1	11	ok/dl	+T12DCE,TCE, F/D

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
4B 82378	JC66969-2MS	1	4	MS26771	V8260PCE,DCE,VC	12.5/50		1	12	ok	50ul abk, c.e/100ml
4B 82379	JC66969-2MSD	1	4	MS26771	V8260PCE,DCE,VC	12.5/50		1	13	ok	50ul abk, c.e/100ml
4B 82380	IB		NA			5			14	ok	
R 82381	JC66955-5	4	NA	MS26763	V8260TCL20+	5		1	15	ok	
R 82382	JC66955-1	4	NA	MS26763	V8260TCL20+	5		1	16	ok	
R 82383	JC66955-1	4	10	MS26763	V8260TCL20+	5/50		1	17	ok	
R 82384	JC66955-3	2	NA	MS26763	V8260TCL20+	5		1	18	ok	
R 82385	JC66955-3	2	10	MS26763	V8260TCL20+	5/50		1	19	ok	
R 82386	JC66955-4	4	NA	MS26763	V8260TCL20+	5		1	20	ok	
R 82387	JC66955-4	4	10	MS26763	V8260TCL20+	5/50		1	21	ok	
R 82388	JC66999-13	2	4	MS26778	V8260NJTCL11+	12.5/50		1	1	ok/dl	+NAP. F/D 6:43pm
4B 82389	IB		NA			5			2	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: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12443-MB1	6P473594.D	1	06/08/18	GS	06/01/18	OP12443	E6P2238

The QC reported here applies to the following samples:

Method: SW846 8270D

JC67003-1, JC67003-2, JC67003-3, JC67003-7

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	0.82	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	0.89	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.3	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	2.4	ug/l	
51-28-5	2,4-Dinitrophenol	ND	5.0	1.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	5.0	1.3	ug/l	
95-48-7	2-Methylphenol	ND	2.0	0.89	ug/l	
	3&4-Methylphenol	ND	2.0	0.88	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	0.96	ug/l	
100-02-7	4-Nitrophenol	ND	10	1.2	ug/l	
87-86-5	Pentachlorophenol	ND	4.0	1.4	ug/l	
108-95-2	Phenol	ND	2.0	0.39	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	1.5	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.3	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.92	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.19	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.14	ug/l	
98-86-2	Acetophenone	ND	2.0	0.21	ug/l	
120-12-7	Anthracene	ND	1.0	0.21	ug/l	
1912-24-9	Atrazine	ND	2.0	0.45	ug/l	
100-52-7	Benzaldehyde	ND	5.0	0.29	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.21	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.21	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.34	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.21	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.40	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.46	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.21	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.24	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.34	ug/l	
86-74-8	Carbazole	ND	1.0	0.23	ug/l	
105-60-2	Caprolactam	ND	2.0	0.65	ug/l	
218-01-9	Chrysene	ND	1.0	0.18	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.28	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.25	ug/l	

Method Blank Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12443-MB1	6P473594.D	1	06/08/18	GS	06/01/18	OP12443	E6P2238

The QC reported here applies to the following samples:

Method: SW846 8270D

JC67003-1, JC67003-2, JC67003-3, JC67003-7

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	2.0	0.40	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.37	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.55	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.48	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	0.51	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.33	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.22	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.50	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.23	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.26	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.22	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	2.4	2.0	1.7	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.17	ug/l	
86-73-7	Fluorene	ND	1.0	0.17	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.33	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.49	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.8	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.39	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.33	ug/l	
78-59-1	Isophorone	ND	2.0	0.28	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.39	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.44	ug/l	
91-20-3	Naphthalene	ND	1.0	0.23	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.64	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.22	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.18	ug/l	
129-00-0	Pyrene	ND	1.0	0.22	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.37	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	42% 10-110%

8.1.1
8

Method Blank Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12443-MB1	6P473594.D	1	06/08/18	GS	06/01/18	OP12443	E6P2238

The QC reported here applies to the following samples: Method: SW846 8270D

JC67003-1, JC67003-2, JC67003-3, JC67003-7

CAS No.	Surrogate Recoveries	Limits
4165-62-2	Phenol-d5	31% 10-110%
118-79-6	2,4,6-Tribromophenol	78% 36-151%
4165-60-0	Nitrobenzene-d5	76% 34-128%
321-60-8	2-Fluorobiphenyl	75% 38-119%
1718-51-0	Terphenyl-d14	71% 26-129%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	2.09	8.4	ug/l	J
	Internal standard added for SIM test	4.79	4.4	ug/l	J
	Internal standard added for SIM test	6.43	4.3	ug/l	J
	Internal standard added for SIM test	8.04	4.5	ug/l	J
	Internal standard added for SIM test	10.58	4.2	ug/l	J
	Total TIC, Semi-Volatile		0	ug/l	

8.1.1
8

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12443-BS1	6P473595.D	1	06/08/18	GS	06/01/18	OP12443	E6P2238
OP12443-BSD	6P473596.D	1	06/08/18	GS	06/01/18	OP12443	E6P2238

The QC reported here applies to the following samples:

Method: SW846 8270D

JC67003-1, JC67003-2, JC67003-3, JC67003-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	50	38.7	77	36.1	72	7	39-106/27
59-50-7	4-Chloro-3-methyl phenol	50	39.2	78	38.0	76	3	45-118/23
120-83-2	2,4-Dichlorophenol	50	39.0	78	38.1	76	2	43-115/26
105-67-9	2,4-Dimethylphenol	50	42.0	84	42.1	84	0	38-125/23
51-28-5	2,4-Dinitrophenol	100	99.7	100	96.5	97	3	35-137/22
534-52-1	4,6-Dinitro-o-cresol	50	46.9	94	45.1	90	4	45-134/23
95-48-7	2-Methylphenol	50	34.0	68	32.3	65	5	34-106/24
	3&4-Methylphenol	50	34.0	68	31.3	63	8	31-110/25
88-75-5	2-Nitrophenol	50	42.4	85	42.0	84	1	41-118/28
100-02-7	4-Nitrophenol	50	27.6	55	24.4	49	12	10-113/31
87-86-5	Pentachlorophenol	50	47.7	95	46.6	93	2	21-134/25
108-95-2	Phenol	50	20.5	41	18.2	36	12	10-110/27
58-90-2	2,3,4,6-Tetrachlorophenol	50	45.2	90	43.2	86	5	41-129/41
95-95-4	2,4,5-Trichlorophenol	50	44.4	89	44.1	88	1	45-117/26
88-06-2	2,4,6-Trichlorophenol	50	45.1	90	43.4	87	4	47-125/35
83-32-9	Acenaphthene	50	42.9	86	40.8	82	5	40-114/22
208-96-8	Acenaphthylene	50	43.5	87	41.3	83	5	40-109/22
98-86-2	Acetophenone	50	42.6	85	43.1	86	1	43-112/21
120-12-7	Anthracene	50	41.7	83	40.5	81	3	50-113/20
1912-24-9	Atrazine	50	44.4	89	42.9	86	3	46-141/23
100-52-7	Benzaldehyde	50	29.6	59	27.6	55	7	27-116/29
56-55-3	Benzo(a)anthracene	50	41.6	83	39.8	80	4	55-110/22
50-32-8	Benzo(a)pyrene	50	40.4	81	38.4	77	5	52-112/24
205-99-2	Benzo(b)fluoranthene	50	40.0	80	37.7	75	6	53-114/22
191-24-2	Benzo(g,h,i)perylene	50	41.3	83	39.8	80	4	46-115/28
207-08-9	Benzo(k)fluoranthene	50	44.1	88	41.0	82	7	55-115/23
101-55-3	4-Bromophenyl phenyl ether	50	40.3	81	38.5	77	5	47-122/25
85-68-7	Butyl benzyl phthalate	50	46.5	93	43.3	87	7	50-124/22
92-52-4	1,1'-Biphenyl	50	40.0	80	38.3	77	4	42-114/22
91-58-7	2-Chloronaphthalene	50	40.8	82	39.3	79	4	33-112/26
106-47-8	4-Chloroaniline	50	20.1	40	20.2	40	0	17-87/39
86-74-8	Carbazole	50	43.3	87	41.8	84	4	54-118/21
105-60-2	Caprolactam	50	10.7	21	9.8	20	9	10-110/23
218-01-9	Chrysene	50	41.9	84	39.8	80	5	52-107/21
111-91-1	bis(2-Chloroethoxy)methane	50	42.3	85	42.8	86	1	38-116/24
111-44-4	bis(2-Chloroethyl)ether	50	44.0	88	43.1	86	2	38-118/23

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12443-BS1	6P473595.D	1	06/08/18	GS	06/01/18	OP12443	E6P2238
OP12443-BSD	6P473596.D	1	06/08/18	GS	06/01/18	OP12443	E6P2238

The QC reported here applies to the following samples:

Method: SW846 8270D

JC67003-1, JC67003-2, JC67003-3, JC67003-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
108-60-1	2,2'-Oxybis(1-chloropropane)	50	43.4	87	42.6	85	2	29-108/23
7005-72-3	4-Chlorophenyl phenyl ether	50	42.3	85	40.1	80	5	40-122/21
121-14-2	2,4-Dinitrotoluene	50	47.1	94	45.5	91	3	54-129/21
606-20-2	2,6-Dinitrotoluene	50	49.8	100	47.1	94	6	53-131/21
91-94-1	3,3'-Dichlorobenzidine	100	57.7	58	54.4	54	6	28-91/44
53-70-3	Dibenzo(a,h)anthracene	50	39.5	79	37.4	75	5	51-117/25
132-64-9	Dibenzofuran	50	40.4	81	38.0	76	6	46-118/16
84-74-2	Di-n-butyl phthalate	50	43.8	88	42.8	86	2	54-124/23
117-84-0	Di-n-octyl phthalate	50	46.7	93	42.8	86	9	41-137/22
84-66-2	Diethyl phthalate	50	47.4	95	44.5	89	6	49-122/20
131-11-3	Dimethyl phthalate	50	47.0	94	44.8	90	5	51-118/20
117-81-7	bis(2-Ethylhexyl)phthalate	50	49.0	98	45.4	91	8	47-128/36
206-44-0	Fluoranthene	50	42.2	84	41.0	82	3	54-118/23
86-73-7	Fluorene	50	43.3	87	41.4	83	4	45-116/20
118-74-1	Hexachlorobenzene	50	41.7	83	40.1	80	4	45-124/23
87-68-3	Hexachlorobutadiene	50	32.1	64	31.7	63	1	10-120/35
77-47-4	Hexachlorocyclopentadiene	100	65.4	65	60.5	61	8	10-110/43
67-72-1	Hexachloroethane	50	32.5	65	31.9	64	2	11-110/38
193-39-5	Indeno(1,2,3-cd)pyrene	50	39.1	78	37.4	75	4	45-123/30
78-59-1	Isophorone	50	40.2	80	40.3	81	0	43-115/20
91-57-6	2-Methylnaphthalene	50	33.7	67	32.3	65	4	37-111/21
88-74-4	2-Nitroaniline	50	47.3	95	45.2	90	5	40-144/18
99-09-2	3-Nitroaniline	50	33.1	66	30.9	62	7	31-104/42
100-01-6	4-Nitroaniline	50	45.9	92	42.8	86	7	48-119/20
91-20-3	Naphthalene	50	35.3	71	35.4	71	0	29-110/23
98-95-3	Nitrobenzene	50	39.1	78	39.0	78	0	35-118/21
621-64-7	N-Nitroso-di-n-propylamine	50	44.1	88	45.0	90	2	38-116/22
86-30-6	N-Nitrosodiphenylamine	50	39.8	80	38.6	77	3	49-114/22
85-01-8	Phenanthrene	50	41.3	83	39.9	80	3	49-116/21
129-00-0	Pyrene	50	42.2	84	40.0	80	5	51-116/21
95-94-3	1,2,4,5-Tetrachlorobenzene	50	34.9	70	33.5	67	4	21-124/32

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	55%	48%	10-110%

* = Outside of Control Limits.

8.2.1
8

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12443-BS1	6P473595.D	1	06/08/18	GS	06/01/18	OP12443	E6P2238
OP12443-BSD	6P473596.D	1	06/08/18	GS	06/01/18	OP12443	E6P2238

The QC reported here applies to the following samples:

Method: SW846 8270D

JC67003-1, JC67003-2, JC67003-3, JC67003-7

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
4165-62-2	Phenol-d5	39%	34%	10-110%
118-79-6	2,4,6-Tribromophenol	85%	81%	36-151%
4165-60-0	Nitrobenzene-d5	79%	78%	34-128%
321-60-8	2-Fluorobiphenyl	84%	80%	38-119%
1718-51-0	Terphenyl-d14	85%	76%	26-129%

8.2.1
8

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample:	E6P2235-DFTPP	Injection Date:	06/06/18
Lab File ID:	6P473538.D	Injection Time:	12:33
Instrument ID:	GCMS6P		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	109183	43.5	Pass
68	Less than 2.0% of mass 69	2113	0.84 (1.85) ^a	Pass
69	Mass 69 relative abundance	114144	45.5	Pass
70	Less than 2.0% of mass 69	504	0.20 (0.44) ^a	Pass
127	40.0 - 60.0% of mass 198	136840	54.5	Pass
197	Less than 1.0% of mass 198	787	0.31	Pass
198	Base peak, 100% relative abundance	251104	100.0	Pass
199	5.0 - 9.0% of mass 198	16339	6.51	Pass
275	10.0 - 30.0% of mass 198	65797	26.2	Pass
365	1.0 - 100.0% of mass 198	8602	3.43	Pass
441	Present, but less than mass 443	23821	9.49 (72.1) ^b	Pass
442	40.0 - 100.0% of mass 198	163832	65.2	Pass
443	17.0 - 23.0% of mass 442	33038	13.2 (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
E6P2235-IC2235	6P473539.D	06/06/18	13:08	00:35	Initial cal 100
E6P2235-IC2235	6P473540.D	06/06/18	13:32	00:59	Initial cal 80
E6P2235-ICC2235	6P473541.D	06/06/18	13:57	01:24	Initial cal 50
E6P2235-IC2235	6P473542.D	06/06/18	14:22	01:49	Initial cal 25
E6P2235-IC2235	6P473543.D	06/06/18	14:47	02:14	Initial cal 10
E6P2235-IC2235	6P473544.D	06/06/18	15:12	02:39	Initial cal 5
E6P2235-IC2235	6P473545.D	06/06/18	15:37	03:04	Initial cal 2
E6P2235-IC2235	6P473546.D	06/06/18	16:02	03:29	Initial cal 1
E6P2235-ICV2235	6P473547.D	06/06/18	16:27	03:54	Initial cal verification 50
E6P2235-ICV2235	6P473548.D	06/06/18	16:52	04:19	Initial cal verification 50
E6P2235-ICV2235	6P473549.D	06/06/18	17:17	04:44	Initial cal verification 50
E6P2235-ICV2235	6P473550.D	06/06/18	17:56	05:23	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2236-DFTPP	Injection Date: 06/06/18
Lab File ID: 6P473552.D	Injection Time: 21:20
Instrument ID: GCMS6P	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	84477	41.7	Pass
68	Less than 2.0% of mass 69	1292	0.64 (1.46) ^a	Pass
69	Mass 69 relative abundance	88304	43.6	Pass
70	Less than 2.0% of mass 69	560	0.28 (0.63) ^a	Pass
127	40.0 - 60.0% of mass 198	110488	54.5	Pass
197	Less than 1.0% of mass 198	717	0.35	Pass
198	Base peak, 100% relative abundance	202661	100.0	Pass
199	5.0 - 9.0% of mass 198	13481	6.65	Pass
275	10.0 - 30.0% of mass 198	55434	27.4	Pass
365	1.0 - 100.0% of mass 198	6637	3.27	Pass
441	Present, but less than mass 443	20633	10.2 (74.5) ^b	Pass
442	40.0 - 100.0% of mass 198	145149	71.6	Pass
443	17.0 - 23.0% of mass 442	27702	13.7 (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
E6P2236-IC2236	6P473553.D	06/06/18	21:53	00:33	Initial cal 100
E6P2236-IC2236	6P473554.D	06/06/18	22:17	00:57	Initial cal 80
E6P2236-ICC2236	6P473555.D	06/06/18	22:42	01:22	Initial cal 50
E6P2236-IC2236	6P473556.D	06/06/18	23:07	01:47	Initial cal 25
E6P2236-IC2236	6P473557.D	06/06/18	23:32	02:12	Initial cal 10
E6P2236-IC2236	6P473558.D	06/06/18	23:56	02:36	Initial cal 5
E6P2236-IC2236	6P473559.D	06/07/18	00:21	03:01	Initial cal 2
E6P2236-IC2236	6P473560.D	06/07/18	00:46	03:26	Initial cal 1
E6P2236-ICV2236	6P473561.D	06/07/18	01:11	03:51	Initial cal verification 50
E6P2236-ICV2236	6P473562.D	06/07/18	01:35	04:15	Initial cal verification 50
E6P2236-ICV2236	6P473563.D	06/07/18	02:00	04:40	Initial cal verification 50
E6P2236-ICV2236	6P473564.D	06/07/18	02:25	05:05	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample:	E6P2238-DFTPP	Injection Date:	06/08/18
Lab File ID:	6P473588.D	Injection Time:	00:04
Instrument ID:	GCMS6P		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	116729	44.7	Pass
68	Less than 2.0% of mass 69	1743	0.67 (1.38) ^a	Pass
69	Mass 69 relative abundance	125888	48.2	Pass
70	Less than 2.0% of mass 69	947	0.36 (0.75) ^a	Pass
127	40.0 - 60.0% of mass 198	145178	55.6	Pass
197	Less than 1.0% of mass 198	815	0.31	Pass
198	Base peak, 100% relative abundance	261064	100.0	Pass
199	5.0 - 9.0% of mass 198	17299	6.63	Pass
275	10.0 - 30.0% of mass 198	68557	26.3	Pass
365	1.0 - 100.0% of mass 198	7606	2.91	Pass
441	Present, but less than mass 443	25306	9.69 (75.9) ^b	Pass
442	40.0 - 100.0% of mass 198	170904	65.5	Pass
443	17.0 - 23.0% of mass 442	33326	12.8 (19.5) ^c	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E6P2238-CC2235	6P473589.D	06/08/18	00:19	00:15	Continuing cal 25
E6P2238-CC2236	6P473590.D	06/08/18	00:44	00:40	Continuing cal 25
OP12596-MB1	6P473591.D	06/08/18	01:08	01:04	Method Blank
OP12596-BS1	6P473592.D	06/08/18	01:33	01:29	Blank Spike
OP12596-BSD	6P473593.D	06/08/18	01:58	01:54	Blank Spike Duplicate
OP12443-MB1	6P473594.D	06/08/18	02:23	02:19	Method Blank
OP12443-BS1	6P473595.D	06/08/18	02:47	02:43	Blank Spike
OP12443-BSD	6P473596.D	06/08/18	03:12	03:08	Blank Spike Duplicate
ZZZZZZ	6P473597.D	06/08/18	03:37	03:33	(unrelated sample)
ZZZZZZ	6P473598.D	06/08/18	04:01	03:57	(unrelated sample)
ZZZZZZ	6P473599.D	06/08/18	04:26	04:22	(unrelated sample)
ZZZZZZ	6P473600.D	06/08/18	04:51	04:47	(unrelated sample)
JC67003-1	6P473601.D	06/08/18	05:15	05:11	MW-104
JC67003-2	6P473602.D	06/08/18	05:40	05:36	MW-101
JC67003-3	6P473603.D	06/08/18	06:04	06:00	MW-105
JC67003-7	6P473604.D	06/08/18	06:29	06:25	MW-107
ZZZZZZ	6P473605.D	06/08/18	06:54	06:50	(unrelated sample)
ZZZZZZ	6P473606.D	06/08/18	07:18	07:14	(unrelated sample)
ZZZZZZ	6P473607.D	06/08/18	07:43	07:39	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample:	E6P2238-DFTPP	Injection Date:	06/08/18
Lab File ID:	6P473588.D	Injection Time:	00:04
Instrument ID:	GCMS6P		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	6P473608.D	06/08/18	08:07	08:03	(unrelated sample)
ZZZZZZ	6P473609.D	06/08/18	08:32	08:28	(unrelated sample)
ZZZZZZ	6P473610.D	06/08/18	08:56	08:52	(unrelated sample)
ZZZZZZ	6P473611.D	06/08/18	09:21	09:17	(unrelated sample)
ZZZZZZ	6P473612.D	06/08/18	09:46	09:42	(unrelated sample)
ZZZZZZ	6P473613.D	06/08/18	10:10	10:06	(unrelated sample)
ZZZZZZ	6P473616.D	06/08/18	11:25	11:21	(unrelated sample)

8.3.3
8

Internal Standard Area Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	E6P2238-CC2235	Injection Date:	06/08/18
Lab File ID:	6P473589.D	Injection Time:	00:19
Instrument ID:	GCMS6P	Method:	SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	706274	4.67	2857574	5.71	1627947	7.46	2725685	9.16	2602442	12.35	2625522	13.95
Upper Limit ^a	1412548	5.17	5715148	6.21	3255894	7.96	5451370	9.66	5204884	12.85	5251044	14.45
Lower Limit ^b	353137	4.17	1428787	5.21	813974	6.96	1362843	8.66	1301221	11.85	1312761	13.45

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP12596-MB1	496067	4.67	1992636	5.70	993205	7.46	1862993	9.16	1700400	12.34	1803494	13.94
OP12596-BS1	487319	4.67	1984342	5.71	947825	7.46	1689224	9.16	1536571	12.34	1592619	13.94
OP12596-BSD	525488	4.67	2076125	5.71	1006287	7.46	1795046	9.16	1616953	12.34	1643377	13.94
OP12443-MB1	597130	4.67	2420312	5.70	1211355	7.46	2274902	9.16	2153905	12.34	2232312	13.94
OP12443-BS1	511260	4.67	2101972	5.71	966750	7.46	1748522	9.16	1564411	12.34	1593161	13.94
OP12443-BSD	495042	4.67	2022949	5.71	965940	7.46	1708788	9.16	1588747	12.34	1618225	13.94
ZZZZZZ	512093	4.67	2076383	5.70	1046296	7.46	1931986	9.16	1837478	12.34	1830823	13.94
ZZZZZZ	556996	4.67	2248985	5.70	1114218	7.46	2047366	9.16	1939100	12.34	1959778	13.94
ZZZZZZ	518759	4.67	2098245	5.70	1039623	7.46	1907750	9.16	1772317	12.33	1781869	13.94
ZZZZZZ	541161	4.67	2142546	5.70	1049438	7.46	1910261	9.15	1780601	12.33	1838018	13.94
JC67003-1	528350	4.67	2149162	5.70	1042951	7.46	1948454	9.16	1788664	12.34	1852693	13.94
JC67003-2	538937	4.67	2145044	5.70	1031027	7.46	1911703	9.16	1787620	12.34	1831085	13.94
JC67003-3	493734	4.67	1986899	5.70	980163	7.46	1790310	9.16	1690217	12.33	1759696	13.94
JC67003-7	517649	4.67	2087729	5.70	1014617	7.46	1823196	9.16	1705764	12.34	1795752	13.94
ZZZZZZ	502453	4.67	1999585	5.70	976723	7.46	1773142	9.15	1652643	12.33	1704100	13.94
ZZZZZZ	542968	4.67	2188810	5.70	1066277	7.46	1948210	9.16	1794741	12.34	1865782	13.94
ZZZZZZ	506360	4.67	2106634	5.70	1034969	7.46	1914113	9.15	1778615	12.34	1830438	13.94
ZZZZZZ	541466	4.67	2181871	5.70	1092450	7.46	1979259	9.16	1912747	12.34	2003424	13.94
ZZZZZZ	547244	4.67	2216870	5.70	1090800	7.46	1970430	9.16	1811476	12.34	1932465	13.94
ZZZZZZ	535997	4.67	2132489	5.70	1075602	7.46	1966792	9.16	1862389	12.34	1924148	13.94
ZZZZZZ	503295	4.67	2030922	5.70	993979	7.46	1817960	9.16	1666407	12.34	1703943	13.94
ZZZZZZ	530046	4.67	2104857	5.70	1042260	7.46	1877800	9.16	1793037	12.34	1821436	13.94
ZZZZZZ	555558	4.67	2264553	5.70	1109091	7.46	1978337	9.16	1865538	12.34	1894992	13.94
ZZZZZZ	497751	4.67	1129068*5.72		641600*	7.50	1477707	9.21	1732366	12.35	1733080	13.94

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

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

8.4.1
8

Surrogate Recovery Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Method: SW846 8270D	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
JC67003-1	6P473601.D	33	23	82	69	71	76
JC67003-2	6P473602.D	39	27	74	68	71	64
JC67003-3	6P473603.D	39	27	75	70	70	65
JC67003-7	6P473604.D	39	27	75	72	72	66
OP12443-BS1	6P473595.D	55	39	85	79	84	85
OP12443-BSD	6P473596.D	48	34	81	78	80	76
OP12443-MB1	6P473594.D	42	31	78	76	75	71

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	10-110%
S2 = Phenol-d5	10-110%
S3 = 2,4,6-Tribromophenol	36-151%
S4 = Nitrobenzene-d5	34-128%
S5 = 2-Fluorobiphenyl	38-119%
S6 = Terphenyl-d14	26-129%

8.5.1
8

Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2235-ICC2235
 Lab FileID: 6P473541.D

Response Factor Report MS6P

Method : C:\MSDCHEM\1\METHODS\M6P2235.M (RTE Integrator)
 Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 10:11:12 2018
 Last Update : Thu Jun 07 10:11:12 2018
 Response via : Initial Calibration

Calibration Files

2 =6p473545.D 5 =6p473544.D 25 =6p473542.D 80 =6p473540.D
 100 =6p473539.D 50 =6p473541.D 1 =6p473546.D 10 =6p473543.D

Compound	2	5	25	80	100	50	1	10	Avg	%RSD

1) I 1,4-Dichlorobenzene-d	-----ISTD-----									
2) 1,4-Dioxane	0.751	0.875	0.706	0.690	0.682	0.709	0.778	0.777	0.746	8.61
3) Pyridine	1.804	2.167	1.827	1.808	1.738	1.843	1.802	2.023	1.876	7.65
4) N-Nitrosodim	1.103	1.327	1.095	1.049	1.056	1.067	1.147	1.147	1.124	8.03
5) 2-Fluorophen	1.360	1.703	1.397	1.342	1.304	1.363	1.364	1.492	1.416	9.05
6) Indene	2.620	3.042	2.453	1.982	1.781	2.203	2.647	2.695	2.428	17.06
7) Cumene	3.947	4.673	3.761	3.272	3.022	3.548	4.121	4.124	3.809	13.82
8) Phenol-d5	1.980	2.327	1.895	1.786	1.701	1.830	1.999	2.044	1.945	9.92
9) Phenol	2.249	2.667	2.108	1.884	1.732	2.008	2.224	2.294	2.146	13.30
10) Aniline	2.578	3.084	2.167	1.883		1.925	2.605	2.463	2.387	17.88
11) bis(2-Chloro	1.542	1.820	1.462	1.385	1.345	1.409	1.588	1.570	1.515	10.03
12) 2-Chlorophen	1.532	1.847	1.498	1.421	1.360	1.460	1.514	1.585	1.527	9.61
13) Decane	1.835	2.158	1.696	1.354	1.248	1.546	1.875	1.905	1.702	17.89
14) 1,3-Dichloro	1.665	2.014	1.586	1.489	1.381	1.554	1.680	1.774	1.643	11.73
15) 1,4-Dichloro	1.786	2.014	1.611	1.478	1.408	1.546	1.828	1.748	1.677	12.06
16) Benzyl alcoh	0.989	1.234	1.008	1.007	0.974	1.024	1.021	1.076	1.042	7.98
17) 1,2-Dichloro	1.613	1.877	1.504	1.392	1.334	1.474	1.679	1.632	1.563	11.14
18) Acetophenone	2.220	2.592	1.983	1.598	1.457	1.778	2.223	2.217	2.009	18.83
----- Quadratic regression -----										Coefficient = 0.9998
Response Ratio = 0.02820 + 2.09744 *A + -0.26001 *A^2										
19) 2-Methylphen	1.436	1.769	1.407	1.197	1.091	1.299	1.487	1.530	1.402	14.98
20) 2,2'-oxybis(	0.469	0.561	0.448	0.428	0.411	0.435	0.498	0.479	0.466	10.25
21) 3&4-Methylph	1.510	1.820	1.411	1.119	1.008	1.265	1.499	1.598	1.404	18.82
----- Quadratic regression -----										Coefficient = 0.9998
Response Ratio = 0.01572 + 1.52166 *A + -0.20769 *A^2										
22) n-Nitroso-di	1.234	1.483	1.104	0.886	0.843	0.976	1.272	1.240	1.130	19.33
----- Quadratic regression -----										Coefficient = 0.9994
Response Ratio = 0.02677 + 1.09821 *A + -0.10835 *A^2										
23) Hexachloroet	0.447	0.542	0.455	0.447	0.441	0.457	0.467	0.486	0.468	7.09

24) I Naphthalene-d8	-----ISTD-----									
25) Nitrobenzene	0.446	0.523	0.443	0.409	0.398	0.431	0.447	0.464	0.445	8.61
26) Nitrobenzene	0.453	0.517	0.435	0.390	0.378	0.412	0.465	0.470	0.440	10.45
27) Quinoline	0.781	0.904	0.757	0.708	0.682	0.734	0.797	0.812	0.772	8.97
28) Isophorone	0.784	0.914	0.760	0.672	0.648	0.715	0.795	0.809	0.762	11.07
29) 2-Nitrophen	0.173	0.221	0.202	0.189	0.181	0.198	0.165	0.210	0.192	9.89
30) 2,4-Dimethyl	0.316	0.426	0.346	0.343	0.334	0.349	0.284	0.347	0.343	11.68
31) Benzoic acid		0.235	0.300	0.317	0.311	0.314		0.264	0.290	11.48
32) bis(2-Chloro	0.443	0.512	0.419	0.376	0.366	0.401	0.448	0.451	0.427	11.04
33) 2,4-Dichloro	0.287	0.346	0.296	0.280	0.264	0.288	0.284	0.310	0.294	8.41
34) 2,6-Dichloro	0.302	0.341	0.286	0.258	0.241	0.275	0.299	0.304	0.288	10.78
35) 1,3,5-Trichl	0.343	0.390	0.322	0.290	0.275	0.306	0.358	0.339	0.328	11.40
36) 1,2,4-Trichl	0.309	0.356	0.304	0.282	0.270	0.293	0.336	0.324	0.309	9.20

8.6.1
8

Initial Calibration Summary

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2235-ICC2235
Lab FileID: 6P473541.D

37)	1,2,3-Trichl	0.319	0.359	0.295	0.275	0.266	0.287	0.340	0.322	0.308	10.60
38)	Naphthalene	1.182	1.341	1.089	0.941	0.877	1.021	1.267	1.203	1.115	14.48
39)	4-Chloroanil	0.494	0.584	0.459	0.392		0.422	0.500	0.503	0.479	13.11
40)	2,3-Dichloro	0.383	0.438	0.364	0.323	0.303	0.340	0.396	0.386	0.367	11.87
41)	Caprolactam	0.192	0.230	0.200	0.191	0.189	0.196	0.187	0.207	0.199	7.13
42)	Hexachlorobu	0.157	0.178	0.147	0.140	0.139	0.148	0.162	0.160	0.154	8.44
43)	4-Chloro-3-m	0.312	0.395	0.339	0.315	0.300	0.326	0.318	0.356	0.333	9.18
44)	2-Methylnaph	0.635	0.731	0.613	0.544	0.511	0.576	0.640	0.669	0.615	11.46
45)	1-Methylnaph	0.672	0.767	0.643	0.565	0.537	0.615	0.681	0.693	0.647	11.43
46)	Dimethylnaph	0.649	0.788	0.656	0.582	0.546	0.618	0.688	0.698	0.653	11.44
47)	I Acenaphthene-d10	-----ISTD-----									
48)	Hexachlorocy	0.180	0.267	0.260	0.282	0.286	0.268		0.244	0.255	14.14
49)	2,4,6-Trichl	0.354	0.446	0.363	0.341	0.326	0.345	0.347	0.372	0.362	10.13
50)	2,4,5-Trichl	0.367	0.467	0.378	0.380	0.371	0.377	0.331	0.396	0.383	10.05
51)	2-Fluorobiph	1.588	1.905	1.452	1.319	1.275	1.362	1.579	1.543	1.503	13.41
52)	2-Chloronaph	1.283	1.627	1.196	1.079	1.044	1.115	1.303	1.310	1.245	14.94
53)	Biphenyl	1.842	2.257	1.704	1.491		1.556	1.818	1.822	1.784	14.00
54)	2-Nitroanili	0.374	0.518	0.437	0.418	0.409	0.420	0.356	0.449	0.423	11.62
55)	Dimethylphth	1.390	1.697	1.307	1.222	1.186	1.235	1.335	1.359	1.341	11.96
56)	Acenaphthyle	2.107	2.640	1.995	1.800	1.733	1.852	2.067	2.162	2.044	13.95
57)	2,6-Dinitrot	0.248	0.351	0.297	0.293	0.290	0.285	0.205	0.300	0.284	14.89
58)	3-Nitroanili	0.320	0.463	0.375	0.374	0.361	0.370	0.302	0.397	0.370	13.11
59)	Acenaphthene	1.352	1.712	1.301	1.169	1.110	1.197	1.439	1.405	1.336	14.33
60)	2,4-Dinitrop	0.019	0.051	0.116	0.150	0.148	0.140		0.079	0.100	51.71
	----- Quadratic regression -----	Coefficient = 0.9987									
	Response Ratio =	$-0.02458 + 0.14323 *A + 0.00237 *A^2$									
61)	4-Nitropheno	0.129	0.204	0.193	0.194	0.191	0.193		0.190	0.185	13.63
62)	Dibenzofuran	1.892	2.320	1.696	1.546		1.586	1.851	1.845	1.819	14.22
63)	2,4-Dinitrot	0.309	0.467	0.411	0.395	0.375	0.394	0.253	0.408	0.377	17.58
	----- Quadratic regression -----	Coefficient = 0.9995									
	Response Ratio =	$-0.00295 + 0.42881 *A + -0.01986 *A^2$									
64)	2,3,4,6-Tetr	0.282	0.370	0.313	0.321	0.319	0.305	0.247	0.321	0.310	11.40
65)	Diethylphtha	1.338	1.729	1.321	1.211	1.179	1.236	1.308	1.390	1.339	12.90
66)	Fluorene	1.475	1.863	1.390	1.190		1.278	1.438	1.502	1.448	14.78
67)	4-Chlorophen	0.636	0.766	0.604	0.544	0.521	0.565	0.635	0.625	0.612	12.39
68)	4-Nitroanili	0.335	0.472	0.396	0.379	0.368	0.376	0.306	0.410	0.380	13.08
69)	I Phenanthrene-d10	-----ISTD-----									
70)	4,6-Dinitro-	0.033	0.071	0.112	0.128	0.129	0.123	0.024	0.089	0.089	47.67
	----- Quadratic regression -----	Coefficient = 0.9997									
	Response Ratio =	$-0.00536 + 0.12052 *A + 0.00453 *A^2$									
71)	n-Nitrosodip	0.614	0.759	0.624	0.591	0.574	0.585	0.603	0.653	0.625	9.52
72)	1,2-Diphenyl	0.956	1.143	0.970	0.862	0.833	0.890	0.955	1.007	0.952	10.20
73)	2,4,6-Tribro	0.080	0.109	0.100	0.109	0.109	0.103	0.084	0.094	0.098	11.69
74)	4-Bromopheny	0.207	0.248	0.217	0.213	0.210	0.211	0.204	0.213	0.215	6.40
75)	Hexachlorobe	0.218	0.265	0.227	0.235	0.235	0.225	0.228	0.231	0.233	6.10
76)	Pentachlorop	0.109	0.160	0.152	0.169	0.165	0.161		0.145	0.152	13.35
77)	Phenanthrene	1.287	1.460	1.170	1.089	1.042	1.094	1.321	1.215	1.210	11.64
78)	Anthracene	1.215	1.445	1.191	1.096	1.050	1.096	1.217	1.237	1.194	10.30
79)	Carbazole	1.163	1.389	1.153	1.052	1.021	1.059	1.148	1.183	1.146	10.04
80)	Di-n-butylph	1.260	1.591	1.353	1.237	1.205	1.288	1.242	1.388	1.321	9.50
81)	Fluoranthene	1.181	1.401	1.213	1.151	1.113	1.158	1.176	1.251	1.205	7.39
82)	Octadecane	0.639	0.808	0.679	0.559	0.520	0.607	0.604	0.710	0.641	14.24
83)	I Chrysene-d12	-----ISTD-----									
84)	Pyrene	1.439	1.632	1.339	1.244	1.195	1.292	1.457	1.437	1.379	10.19

8.6.1
8

Initial Calibration Summary

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2235-ICC2235
Lab FileID: 6P473541.D

85) Terphenyl-d1	0.844	0.998	0.859	0.863	0.829	0.851	0.858	0.905	0.876	6.18
86) Butylbenzylp	0.573	0.705	0.625	0.592	0.569	0.613	0.539	0.658	0.609	8.78
87) Benzo[a]anth	1.224	1.404	1.220	1.155	1.097	1.166	1.324	1.280	1.234	8.04
88) 3,3'-Dichlor	0.395	0.491	0.428	0.446	0.423	0.438	0.338	0.450	0.426	10.51
89) Chrysene	1.250	1.374	1.183	1.123	1.071	1.143	1.268	1.266	1.210	8.09
90) bis(2-Ethylh	0.765	0.971	0.882	0.805	0.765	0.847	0.737	0.926	0.837	10.04

91) I Perylene-d12	-----ISTD-----									
92) Di-n-octylph	1.259	1.597	1.490	1.333	1.254	1.406	1.162	1.505	1.376	10.85
93) Benzo[b]fluo	1.138	1.453	1.255	1.265	1.288	1.206	1.132	1.263	1.250	8.08
94) Benzo[k]fluo	1.167	1.261	1.153	1.056	0.948	1.145	1.116	1.186	1.129	8.28
95) Benzo[a]pyre	1.012	1.209	1.053	1.041	1.027	1.055	1.031	1.080	1.064	5.84
96) Indeno[1,2,3	1.246	1.435	1.307	1.325	1.330	1.312	1.268	1.294	1.315	4.30
97) Dibenz(a,h)a	0.896	1.054	0.973	0.965	0.975	0.970	0.911	0.960	0.963	4.92
98) Dibenz[a,h)a	1.037	1.246	1.117	1.152	1.157	1.131	1.072	1.136	1.131	5.48
99) 7,12-Dimethy	0.390	0.581	0.535	0.540	0.525	0.533	0.356	0.493	0.494	15.97
100) Benzo[g,h,i]	1.005	1.163	1.018	1.034	1.039	1.022	1.016	1.042	1.042	4.84

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

M6P2235.M Thu Jun 07 10:37:19 2018 ACLIMS

8.6.1
8

Initial Calibration Verification

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2235-ICV2235
Lab FileID: 6P473547.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E6P2235\6p473547.D Vial: 10
 Acq On : 6 Jun 2018 4:27 pm Operator: christc2
 Sample : icv2235-50 Inst : MS6P
 Misc : op8717,e6p2235,1000,,,1,1 Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M6P2235.M (RTE Integrator)
 Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 10:11:12 2018
 Last Update : Thu Jun 07 10:11:12 2018
 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	117	-0.01	4.68
5 S	2-Fluorophenol	1.416	1.477	-4.3	127	0.00	3.69
8 S	Phenol-d5	1.945	1.963	-0.9	125	-0.01	4.40
24 I	Naphthalene-d8	1.000	1.000	0.0	118	-0.02	5.71
25 S	Nitrobenzene-d5	0.445	0.448	-0.7	123	-0.02	5.10
47 I	Acenaphthene-d10	1.000	1.000	0.0	104	-0.02	7.47
51 S	2-Fluorobiphenyl	1.503	1.520	-1.1	116	-0.02	6.75
69 I	Phenanthrene-d10	1.000	1.000	0.0	111	-0.02	9.16
73 S	2,4,6-Tribromophenol	0.098	0.095	3.1	102	-0.02	8.36
83 I	Chrysene-d12	1.000	1.000	0.0	94	-0.03	12.34
85 S	Terphenyl-d14	0.876	0.928	-5.9	103	-0.02	11.10

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 6p473541a.D M6P2235.M Thu Jun 07 10:32:17 2018 ACLIMS

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2235-ICV2235
 Lab FileID: 6P473548.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E6P2235\6p473548.D Vial: 11
 Acq On : 6 Jun 2018 4:52 pm Operator: christc2
 Sample : icv2235-50 Inst : MS6P
 Misc : op8717,e6p2235,1000,,1,1 Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M6P2235.M (RTE Integrator)
 Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 10:11:12 2018
 Last Update : Thu Jun 07 10:11:12 2018
 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	-0.01	4.68
2 t	1,4-Dioxane	0.746	0.691	7.4	77	-0.02	2.22
3 t	Pyridine	1.876	1.846	1.6	79	-0.02	2.53
4 t	N-Nitrosodimethylamine	1.124	1.040	7.5	77	-0.02	2.51
9 t	Phenol	2.146	2.030	5.4	80	-0.01	4.41
10	Aniline	2.387	2.341	1.9	96	-0.01	4.43
11 t	bis(2-Chloroethyl)ether	1.515	1.504	0.7	85	-0.01	4.48
12 t	2-Chlorophenol	1.527	1.454	4.8	79	-0.01	4.52
14 t	1,3-Dichlorobenzene	1.643	1.520	7.5	78	-0.02	4.63
15 t	1,4-Dichlorobenzene	1.677	1.503	10.4	77	-0.02	4.69
16 t	Benzyl alcohol	1.042	1.053	-1.1	82	-0.02	4.78
17 t	1,2-Dichlorobenzene	1.563	1.443	7.7	78	-0.02	4.81
----- True Calc. % Drift -----							
18 t	Acetophenone	50.000	49.681	0.6	80	-0.02	4.99
----- AvgRF CCRF % Dev -----							
19 t	2-Methylphenol	1.402	1.421	-1.4	87	-0.01	4.87
20 t	2,2'-oxybis(1-Chloropropa	0.466	0.486	-4.3	89	-0.02	4.89
----- True Calc. % Drift -----							
21 t	3&4-Methylphenol	50.000	52.778	-5.6	83	-0.01	4.99
22 t	n-Nitroso-di-n-propylamin	50.000	48.289	3.4	78	-0.02	4.99
----- AvgRF CCRF % Dev -----							
23 t	Hexachloroethane	0.468	0.458	2.1	79	-0.02	5.07
24 I	Naphthalene-d8	1.000	1.000	0.0	81	-0.02	5.71
26 t	Nitrobenzene	0.440	0.389	11.6	77	-0.02	5.12
28 t	Isophorone	0.762	0.744	2.4	84	-0.01	5.32
29 t	2-Nitrophenol	0.192	0.187	2.6	76	-0.02	5.38
30 t	2,4-Dimethylphenol	0.343	0.366	-6.7	85	-0.01	5.42
32 t	bis(2-Chloroethoxy)methan	0.427	0.445	-4.2	90	-0.02	5.50
33 t	2,4-Dichlorophenol	0.294	0.278	5.4	78	-0.01	5.59
34 t	2,6-Dichlorophenol	0.288	0.267	7.3	79	-0.02	5.79
36 t	1,2,4-Trichlorobenzene	0.309	0.280	9.4	78	-0.02	5.67
38 t	Naphthalene	1.115	1.008	9.6	80	-0.02	5.74
39 t	4-Chloroaniline	0.479	0.437	8.8	84	-0.02	5.78
41 t	Caprolactam	0.199	0.180	9.5	75	-0.03	6.09
42 t	Hexachlorobutadiene	0.154	0.140	9.1	76	-0.02	5.85
43 t	4-Chloro-3-methylphenol	0.333	0.314	5.7	78	-0.02	6.23
44 t	2-Methylnaphthalene	0.615	0.581	5.5	82	-0.01	6.38

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2235-ICV2235
 Lab FileID: 6P473548.D

45	t	1-Methylnaphthalene	0.647	0.571	11.7	75	-0.02	6.48
47	I	Acenaphthene-d10	1.000	1.000	0.0	73	-0.02	7.47
48	t	Hexachlorocyclopentadiene	0.255	0.306	-20.0	89	-0.02	6.55
49	t	2,4,6-Trichlorophenol	0.362	0.368	-1.7	78	-0.02	6.67
50	t	2,4,5-Trichlorophenol	0.383	0.383	0.0	74	-0.02	6.70
52	t	2-Chloronaphthalene	1.245	1.262	-1.4	82	-0.02	6.87
53	t	Biphenyl	1.784	1.687	5.4	79	-0.02	6.85
54	t	2-Nitroaniline	0.423	0.491	-16.1	85	-0.01	6.98
55	t	Dimethylphthalate	1.341	1.326	1.1	78	-0.01	7.19
56	t	Acenaphthylene	2.044	1.941	5.0	76	-0.02	7.31
57	t	2,6-Dinitrotoluene	0.284	0.311	-9.5	79	-0.02	7.24
58	t	3-Nitroaniline	0.370	0.394	-6.5	77	-0.02	7.42
59	t	Acenaphthene	1.336	1.276	4.5	77	-0.02	7.51
			----- True	Calc.	% Drift	-----		
60	t	2,4-Dinitrophenol	50.000	50.368	-0.7	83	-0.02	7.53
			----- AvgRF	CCRF	% Dev	-----		
61	t	4-Nitrophenol	0.185	0.194	-4.9	73	-0.02	7.61
62	t	Dibenzofuran	1.819	1.712	5.9	78	-0.02	7.70
			----- True	Calc.	% Drift	-----		
63	t	2,4-Dinitrotoluene	50.000	52.209	-4.4	77	-0.02	7.68
			----- AvgRF	CCRF	% Dev	-----		
64	t	2,3,4,6-Tetrachlorophenol	0.310	0.322	-3.9	77	-0.02	7.84
65	t	Diethylphthalate	1.339	1.340	-0.1	79	-0.02	7.97
66	t	Fluorene	1.448	1.401	3.2	80	-0.02	8.08
67	t	4-Chlorophenyl-phenylethe	0.612	0.609	0.5	78	-0.02	8.09
68	t	4-Nitroaniline	0.380	0.414	-8.9	80	-0.02	8.11
69	I	Phenanthrene-d10	1.000	1.000	0.0	80	-0.02	9.17
			----- True	Calc.	% Drift	-----		
70	t	4,6-Dinitro-2-methylpheno	50.000	43.485	13.0	68	-0.02	8.15
			----- AvgRF	CCRF	% Dev	-----		
71	t	n-Nitrosodiphenylamine	0.625	0.678	-8.5	93	-0.02	8.23
72	t	1,2-Diphenylhydrazine	0.952	0.872	8.4	79	-0.02	8.27
74	t	4-Bromophenyl-phenylether	0.215	0.204	5.1	78	-0.02	8.66
75	t	Hexachlorobenzene	0.233	0.218	6.4	78	-0.02	8.73
76	t	Pentachlorophenol	0.152	0.143	5.9	78	-0.02	8.96
77	t	Phenanthrene	1.210	1.104	8.8	81	-0.02	9.20
78	t	Anthracene	1.194	1.153	3.4	84	-0.02	9.26
79	t	Carbazole	1.146	1.055	7.9	80	-0.02	9.45
80	t	Di-n-butylphthalate	1.321	1.246	5.7	77	-0.02	9.91
81	t	Fluoranthene	1.205	1.163	3.5	80	-0.02	10.61
83	I	Chrysene-d12	1.000	1.000	0.0	79	-0.02	12.35
84	t	Pyrene	1.379	1.258	8.8	77	-0.02	10.89
86	t	Butylbenzylphthalate	0.609	0.594	2.5	77	-0.02	11.72
87	t	Benzo[a]anthracene	1.234	1.197	3.0	81	-0.02	12.34
88	t	3,3'-Dichlorobenzidine	0.426	0.419	1.6	76	-0.02	12.33
89	t	Chrysene	1.210	1.124	7.1	78	-0.02	12.38
90	t	bis(2-Ethylhexyl)phthalat	0.837	0.809	3.3	76	-0.02	12.43
91	I	Perylene-d12	1.000	1.000	0.0	84	-0.02	13.95
92	t	Di-n-octylphthalate	1.376	1.288	6.4	77	-0.02	13.17
93	t	Benzo[b]fluoranthene	1.250	1.207	3.4	84	-0.02	13.55

Initial Calibration Verification

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2235-ICV2235
Lab FileID: 6P473548.D

94	t	Benzo[k]fluoranthene	1.129	1.016	10.0	74	-0.02	13.59
95	t	Benzo[a]pyrene	1.064	1.064	0.0	84	-0.02	13.89
96	t	Indeno[1,2,3-cd]pyrene	1.315	1.252	4.8	80	-0.02	15.12
97	t	Dibenz(a,h)acridine	0.963	0.902	6.3	78	0.04	14.90
98	t	Dibenz[a,h]anthracene	1.131	1.056	6.6	78	-0.02	15.14
99	t	7,12-Dimethylbenz(a)anthr	0.494	0.528	-6.9	83	-0.02	13.56
100	t	Benzo[g,h,i]perylene	1.042	1.046	-0.4	86	-0.03	15.45

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p473541a.D M6P2235.M Thu Jun 07 10:32:19 2018 ACLIMS

8.6.3
8

Initial Calibration Verification

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2235-ICV2235
Lab FileID: 6P473549.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E6P2235\6p473549.D Vial: 12
 Acq On : 6 Jun 2018 5:17 pm Operator: christc2
 Sample : icv2235-50 Inst : MS6P
 Misc : op8717,e6p2235,1000,,,1,1 Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M6P2235.M (RTE Integrator)
 Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 10:11:12 2018
 Last Update : Thu Jun 07 10:11:12 2018
 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	-0.01	4.68
6 t	Indene	2.428	2.495	-2.8	112	-0.02	4.87
7 t	Cumene	3.809	3.380	11.3	94	0.00	4.09
13 t	Decane	1.702	1.450	14.8	93	-0.01	4.56
24 I	Naphthalene-d8	1.000	1.000	0.0	103	-0.02	5.71
27 t	Quinoline	0.772	0.676	12.4	95	-0.03	6.03
40 t	2,3-Dichloroaniline	0.367	0.287	21.8	87	-0.02	6.66
45 t	1-Methylnaphthalene	0.647	0.519	19.8	87	-0.02	6.48
46 t	Dimethylnaphthalene	0.653	0.562	13.9	94	-0.02	7.02
69 I	Phenanthrene-d10	1.000	1.000	0.0	91	-0.02	9.16
82 t	Octadecane	0.641	0.590	8.0	88	-0.02	9.10

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 6p473541a.D M6P2235.M Thu Jun 07 10:32:21 2018 ACLIMS

Initial Calibration Verification

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2235-ICV2235
Lab FileID: 6P473550.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E6P2235\6p473550.D Vial: 13
 Acq On : 6 Jun 2018 5:56 pm Operator: christc2
 Sample : icv2235-50 Inst : MS6P
 Misc : op8717,e6p2235,1000,,,1,1 Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M6P2235.M (RTE Integrator)
 Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 10:11:12 2018
 Last Update : Thu Jun 07 10:11:12 2018
 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.
24 I Naphthalene-d8	1.000	1.000	0.0	91	-0.02	5.71
31 t Benzoic acid	0.290	0.270	6.9	78	-0.02	5.52

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 6p473541a.D M6P2235.M Thu Jun 07 10:32:23 2018 ACLIMS

Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2236-ICC2236
 Lab FileID: 6P473555.D

Response Factor Report MS6P

Method : C:\MSDCHEM\1\METHODS\M6P2236.M (RTE Integrator)
 Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 Last Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

Calibration Files

2 =6p473559.D 5 =6p473558.D 25 =6p473556.D 80 =6p473554.D
 100 =6p473553.D 50 =6p473555.D 1 =6p473560.D 10 =6p473557.D

Compound	2	5	25	80	100	50	1	10	Avg	%RSD
101) 1,4-Dichlorobenzene-d	-----ISTD-----									
102) Benzaldehyde	1.376	1.268	1.299	1.191	1.170	1.233	1.289	1.296	1.265	5.22
103) Acenaphthene-d10a	-----ISTD-----									
104) 1,2,4,5-Tetr	0.619	0.606	0.576	0.560	0.543	0.570	0.633	0.552	0.582	5.68
105) Phenanthrene-d10a	-----ISTD-----									
106) 1-chloroocta	0.327	0.381	0.432	0.382	0.382	0.408	0.277	0.383	0.372	12.98
107) o-terphenyl	0.571	0.590	0.595	0.544	0.557	0.571	0.538	0.552	0.565	3.64
108) Atrazine	0.099	0.103	0.116	0.111	0.117	0.116	0.092	0.101	0.107	8.92
109) I Chrysene-d12a	-----ISTD-----									
110) benzidine	0.459	0.646	0.927	0.888	0.866	0.924	0.327	0.749	0.723	31.48
----- Quadratic regression -----										
Response Ratio = -0.03555 + 1.01096 *A + -0.05199 *A^2										
111) I Naphthalene-d8a	-----ISTD-----									
112) Hydroquinone	0.323	0.335	0.346	0.336	0.231	0.314	0.231	0.314	0.314	15.08
113) Phenanthrene-d10b	-----ISTD-----									
114) Pentachloron	0.029	0.038	0.041	0.041	0.041	0.031	0.037	0.037	0.037	14.84

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

M6P2235.M Thu Jun 07 11:26:26 2018 ACLIMS

8.66
8

Initial Calibration Verification

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2236-ICV2236
Lab FileID: 6P473561.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E6P2236\6p473561.D Vial: 10
 Acq On : 7 Jun 2018 1:11 am Operator: chriss2
 Sample : icv2236-50 Inst : MS6P
 Misc : op8717,e6p2236,1000,,,1,1 Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M6P2235.M (RTE Integrator)
 Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 Last Update : Thu Jun 07 11:19:34 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
103	Acenaphthene-d10a	1.000	1.000	0.0	101	0.00	7.47
104	1,2,4,5-Tetrachlorobenzen	0.582	0.549	5.7	97	-0.01	6.55
105	Phenanthrene-d10a	1.000	1.000	0.0	105	0.00	9.17
108	Atrazine	0.107	0.111	-3.7	100	0.00	8.86
113	Phenanthrene-d10b	1.000	1.000	0.0	105	0.00	9.17
114	Pentachloronitrobenzene	0.037	0.037#	0.0	96	0.00	8.98

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 6p473555a.D M6P2235.M Thu Jun 07 11:23:30 2018 ACLIMS

Initial Calibration Verification

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2236-ICV2236
Lab FileID: 6P473562.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E6P2236\6p473562.D Vial: 11
 Acq On : 7 Jun 2018 1:35 am Operator: chriss2
 Sample : icv2236-50 Inst : MS6P
 Misc : op8717,e6p2236,1000,,,1,1 Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M6P2235.M (RTE Integrator)
 Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 Last Update : Thu Jun 07 11:19:34 2018
 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.
109 I Chrysene-d12a	1.000	1.000	0.0	152	0.00	12.35
	True	Calc.	% Drift			
110 T benzidine	50.000	44.202	11.6	134	-0.01	10.80

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 6p473555a.D M6P2235.M Thu Jun 07 11:23:32 2018 ACLIMS

Initial Calibration Verification

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2236-ICV2236
Lab FileID: 6P473563.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E6P2236\6p473563.D Vial: 12
 Acq On : 7 Jun 2018 2:00 am Operator: chriss2
 Sample : icv2236-50 Inst : MS6P
 Misc : op8717,e6p2236,1000,,,1,1 Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M6P2235.M (RTE Integrator)
 Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 Last Update : Thu Jun 07 11:19:34 2018
 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	144	0.00	5.71
112 T Hydroquinone	0.314	0.335	-6.7	143	0.00	6.08

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 6p473555a.D M6P2235.M Thu Jun 07 11:23:34 2018 ACLIMS

Initial Calibration Verification

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2236-ICV2236
Lab FileID: 6P473564.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E6P2236\6p473564.D Vial: 13
Acq On : 7 Jun 2018 2:25 am Operator: chriss2
Sample : icv2236-50 Inst : MS6P
Misc : op8717,e6p2236,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M6P2235.M (RTE Integrator)
Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
Last Update : Thu Jun 07 11:19:34 2018
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	102	0.00	4.68
102	Benzaldehyde	1.265	1.172	7.4	97	0.00	4.35

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p473555a.D M6P2235.M Thu Jun 07 11:23:36 2018 ACLIMS

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2238-CC2235
 Lab FileID: 6P473589.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E6P2238\6p473589.D Vial: 2
 Acq On : 8 Jun 2018 12:19 am Operator: georges
 Sample : cc2235-25 Inst : MS6P
 Misc : op8717,e6p2238,1000,,,1,1 Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M6P2235.M (RTE Integrator)
 Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 Last Update : Thu Jun 07 11:19:34 2018
 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	104	-0.02	4.67
2 t 1,4-Dioxane	0.746	0.756	-1.3	111	-0.02	2.22
3 t Pyridine	1.876	1.910	-1.8	108	-0.02	2.54
4 t N-Nitrosodimethylamine	1.124	1.157	-2.9	109	-0.02	2.51
5 S 2-Fluorophenol	1.416	1.474	-4.1	109	-0.02	3.68
6 t Indene	2.428	2.534	-4.4	107	-0.02	4.87
7 t Cumene	3.809	3.881	-1.9	107	-0.02	4.08
8 S Phenol-d5	1.945	2.036	-4.7	111	-0.02	4.40
9 t Phenol	2.146	2.228	-3.8	109	-0.02	4.41
10 Aniline	2.387	2.215	7.2	106	-0.02	4.43
11 t bis(2-Chloroethyl)ether	1.515	1.552	-2.4	110	-0.02	4.47
12 t 2-Chlorophenol	1.527	1.604	-5.0	111	-0.02	4.52
13 t Decane	1.702	1.745	-2.5	107	-0.02	4.56
14 t 1,3-Dichlorobenzene	1.643	1.677	-2.1	109	-0.02	4.63
15 t 1,4-Dichlorobenzene	1.677	1.677	0.0	108	-0.02	4.68
16 t Benzyl alcohol	1.042	1.114	-6.9	114	-0.02	4.78
17 t 1,2-Dichlorobenzene	1.563	1.577	-0.9	109	-0.02	4.81
----- True Calc. % Drift -----						
18 t Acetophenone	25.000	27.150	-8.6	111	-0.02	4.98
----- AvgRF CCRF % Dev -----						
19 t 2-Methylphenol	1.402	1.498	-6.8	110	-0.02	4.86
20 t 2,2'-oxybis(1-Chloropropa	0.466	0.482	-3.4	111	-0.02	4.88
----- True Calc. % Drift -----						
21 t 3&4-Methylphenol	25.000	26.672	-6.7	110	-0.02	4.98
22 t n-Nitroso-di-n-propylamin	25.000	27.620	-10.5	110	-0.02	4.98
----- AvgRF CCRF % Dev -----						
23 t Hexachloroethane	0.468	0.478	-2.1	109	-0.02	5.07
24 I Naphthalene-d8	1.000	1.000	0.0	109	-0.02	5.71
25 S Nitrobenzene-d5	0.445	0.468	-5.2	115	-0.02	5.10
26 t Nitrobenzene	0.440	0.454	-3.2	114	-0.02	5.12
27 t Quinoline	0.772	0.805	-4.3	116	-0.03	6.04
28 t Isophorone	0.762	0.802	-5.2	115	-0.02	5.31
29 t 2-Nitrophenol	0.192	0.215	-12.0	116	-0.02	5.38
30 t 2,4-Dimethylphenol	0.343	0.358	-4.4	113	-0.02	5.41
31 t Benzoic acid	0.290	0.355	-22.4#	129	-0.03	5.51
32 t bis(2-Chloroethoxy)methan	0.427	0.441	-3.3	115	-0.02	5.49
33 t 2,4-Dichlorophenol	0.294	0.310	-5.4	114	-0.02	5.59

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2238-CC2235
 Lab FileID: 6P473589.D

34	t	2,6-Dichlorophenol	0.288	0.298	-3.5	113	-0.02	5.78
35		1,3,5-Trichlorobenzene	0.328	0.314	4.3	106	-0.02	5.39
36	t	1,2,4-Trichlorobenzene	0.309	0.299	3.2	107	-0.02	5.66
37		1,2,3-Trichlorobenzene	0.308	0.303	1.6	112	-0.02	5.86
38	t	Naphthalene	1.115	1.115	0.0	112	-0.02	5.73
39	t	4-Chloroaniline	0.479	0.483	-0.8	115	-0.02	5.77
40	t	2,3-Dichloroaniline	0.367	0.375	-2.2	112	-0.02	6.66
41	t	Caprolactam	0.199	0.222	-11.6	121	-0.03	6.09
42	t	Hexachlorobutadiene	0.154	0.149	3.2	110	-0.02	5.85
43	t	4-Chloro-3-methylphenol	0.333	0.368	-10.5	118	-0.02	6.23
44	t	2-Methylnaphthalene	0.615	0.640	-4.1	114	-0.02	6.37
45	t	1-Methylnaphthalene	0.647	0.682	-5.4	116	-0.02	6.47
46	t	Dimethylnaphthalene	0.653	0.694	-6.3	115	-0.02	7.01
47	I	Acenaphthene-d10	1.000	1.000	0.0	117	-0.02	7.46
48	t	Hexachlorocyclopentadiene	0.255	0.288	-12.9	129	-0.03	6.54
49	t	2,4,6-Trichlorophenol	0.362	0.356	1.7	114	-0.02	6.66
50	t	2,4,5-Trichlorophenol	0.383	0.394	-2.9	121	-0.02	6.70
51	S	2-Fluorobiphenyl	1.503	1.407	6.4	113	-0.02	6.75
52	t	2-Chloronaphthalene	1.245	1.185	4.8	116	-0.03	6.86
53	t	Biphenyl	1.784	1.663	6.8	114	-0.02	6.85
54	t	2-Nitroaniline	0.423	0.459	-8.5	123	-0.02	6.97
55	t	Dimethylphthalate	1.341	1.334	0.5	119	-0.02	7.17
56	t	Acenaphthylene	2.044	2.003	2.0	117	-0.02	7.31
57	t	2,6-Dinitrotoluene	0.284	0.311	-9.5	123	-0.02	7.23
58	t	3-Nitroaniline	0.370	0.413	-11.6	129	-0.02	7.42
59	t	Acenaphthene	1.336	1.276	4.5	114	-0.02	7.50
		----- True	Calc.	% Drift	-----			
60	t	2,4-Dinitrophenol	50.000	62.620	-25.2#	165	-0.03	7.53
		----- AvgRF	CCRF	% Dev	-----			
61	t	4-Nitrophenol	0.185	0.218	-17.8	132	-0.02	7.61
62	t	Dibenzofuran	1.819	1.714	5.8	118	-0.03	7.69
		----- True	Calc.	% Drift	-----			
63	t	2,4-Dinitrotoluene	25.000	26.467	-5.9	124	-0.02	7.68
		----- AvgRF	CCRF	% Dev	-----			
64		2,3,4,6-Tetrachlorophenol	0.310	0.325	-4.8	121	-0.02	7.83
65	t	Diethylphthalate	1.339	1.389	-3.7	123	-0.03	7.97
66	t	Fluorene	1.448	1.407	2.8	118	-0.02	8.08
67	t	4-Chlorophenyl-phenylethe	0.612	0.581	5.1	112	-0.02	8.08
68	t	4-Nitroaniline	0.380	0.419	-10.3	124	-0.03	8.11
69	I	Phenanthrene-d10	1.000	1.000	0.0	119	-0.02	9.16
		----- True	Calc.	% Drift	-----			
70	t	4,6-Dinitro-2-methylpheno	25.000	29.610	-18.4	148	-0.02	8.14
		----- AvgRF	CCRF	% Dev	-----			
71	t	n-Nitrosodiphenylamine	0.625	0.630	-0.8	120	-0.03	8.22
72	t	1,2-Diphenylhydrazine	0.952	0.977	-2.6	120	-0.02	8.27
73	S	2,4,6-Tribromophenol	0.098	0.100	-2.0	119	-0.02	8.35
74	t	4-Bromophenyl-phenylether	0.215	0.208	3.3	114	-0.03	8.65
75	t	Hexachlorobenzene	0.233	0.226	3.0	119	-0.02	8.72
76	t	Pentachlorophenol	0.152	0.160	-5.3	125	-0.03	8.95
77	t	Phenanthrene	1.210	1.179	2.6	120	-0.03	9.19
78	t	Anthracene	1.194	1.197	-0.3	120	-0.03	9.25
79	t	Carbazole	1.146	1.181	-3.1	122	-0.02	9.45

8.6.11

8

Continuing Calibration Summary

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2238-CC2235
Lab FileID: 6P473589.D

80	t	Di-n-butylphthalate	1.321	1.441	-9.1	127	-0.02	9.91
81	t	Fluoranthene	1.205	1.252	-3.9	123	-0.03	10.61
82	t	Octadecane	0.641	0.685	-6.9	120	-0.02	9.09
83	I	Chrysene-d12	1.000	1.000	0.0	120	-0.02	12.35
84	t	Pyrene	1.379	1.378	0.1	123	-0.02	10.88
85	S	Terphenyl-d14	0.876	0.886	-1.1	123	-0.02	11.10
86	t	Butylbenzylphthalate	0.609	0.689	-13.1	132	-0.02	11.71
87	t	Benzo[a]anthracene	1.234	1.227	0.6	120	-0.02	12.33
88	t	3,3'-Dichlorobenzidine	0.426	0.456	-7.0	127	-0.02	12.32
89	t	Chrysene	1.210	1.206	0.3	122	-0.03	12.37
90	t	bis(2-Ethylhexyl)phthalat	0.837	0.929	-11.0	126	-0.02	12.43
91	I	Perylene-d12	1.000	1.000	0.0	119	-0.02	13.95
92	t	Di-n-octylphthalate	1.376	1.590	-15.6	127	-0.02	13.17
93	t	Benzo[b]fluoranthene	1.250	1.242	0.6	118	-0.03	13.54
94	t	Benzo[k]fluoranthene	1.129	1.203	-6.6	124	-0.03	13.58
95	t	Benzo[a]pyrene	1.064	1.098	-3.2	124	-0.03	13.88
96	t	Indeno[1,2,3-cd]pyrene	1.315	1.331	-1.2	121	-0.03	15.11
97	t	Dibenz[a,h]acridine	0.963	0.979	-1.7	120	-0.03	14.83
98	t	Dibenz[a,h]anthracene	1.131	1.144	-1.1	122	-0.03	15.13
99	t	7,12-Dimethylbenz(a)anthr	0.494	0.521	-5.5	116	-0.03	13.54
100	t	Benzo[g,h,i]perylene	1.042	1.054	-1.2	123	-0.04	15.43

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p473556a.D M6P2235.M Fri Jun 08 12:06:27 2018 ACLIMS

8.6.11

8

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: E6P2238-CC2236
 Lab FileID: 6P473590.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E6P2238\6p473590.D Vial: 3
 Acq On : 8 Jun 2018 12:44 am Operator: georges
 Sample : cc2236-25 Inst : MS6P
 Misc : op8717,e6p2238,1000,,,1,1 Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M6P2235.M (RTE Integrator)
 Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 Last Update : Thu Jun 07 11:19:34 2018
 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	138	-0.01 4.67
102	Benzaldehyde	1.265	1.083	14.4	115	-0.01 4.34
103	Acenaphthene-d10a	1.000	1.000	0.0	149	-0.01 7.46
104	1,2,4,5-Tetrachlorobenzen	0.582	0.509	12.5	132	-0.02 6.54
105	Phenanthrene-d10a	1.000	1.000	0.0	160	-0.01 9.16
106 S	1-chlorooctadecane	0.372	0.433	-16.4	160	-0.01 10.53
107 S	o-terphenyl	0.565	0.539	4.6	145	-0.02 9.64
108	Atrazine	0.107	0.111	-3.7	153	-0.01 8.86
109 I	Chrysene-d12a	1.000	1.000	0.0	167	-0.01 12.34
----- True Calc. % Drift -----						
110 T	benzidine	25.000	18.476	26.1#	121	-0.02 10.79
----- AvgRF CCRF % Dev -----						
111 I	Naphthalene-d8a	1.000	1.000	0.0	134	-0.01 5.71
112 T	Hydroquinone	0.314	0.424	-35.0#	176	-0.02 6.07
113	Phenanthrene-d10b	1.000	1.000	0.0	160	-0.01 9.16
114	Pentachloronitrobenzene	0.037	0.037#	0.0	154	-0.01 8.97

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 6p473556a.D M6P2235.M Fri Jun 08 12:08:32 2018 ACLIMS

MS Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473601.D
 Acq On : 8 Jun 2018 5:15 am
 Operator : georges
 Sample : jc67003-1
 Misc : op12443,e6p2238,1050,,,1,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 08 12:51:49 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

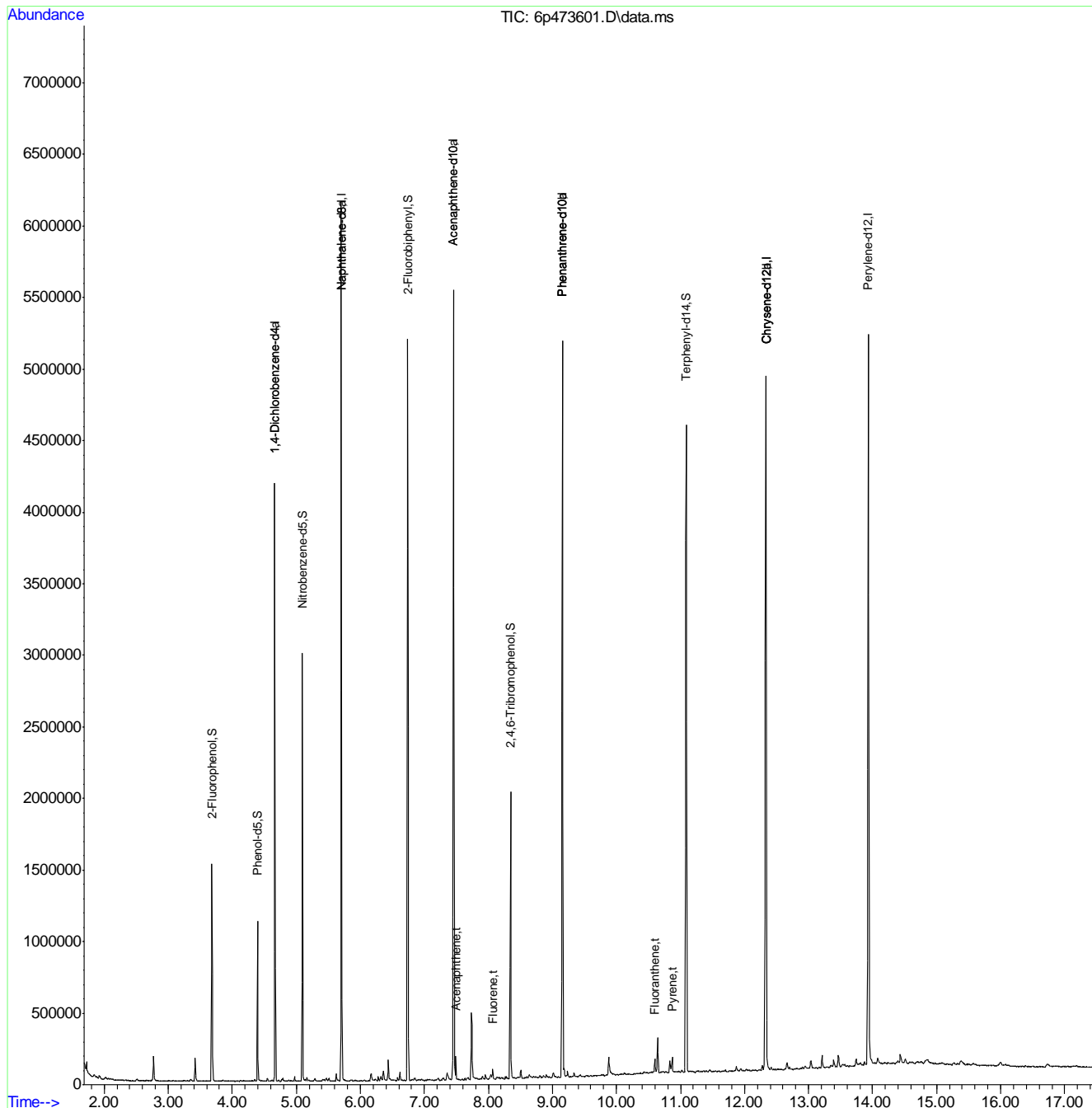
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.671	152	528350	40.00	ppm	-0.02	
24) Naphthalene-d8	5.704	136	2149162	40.00	ppm	-0.03	
47) Acenaphthene-d10	7.458	164	1042951	40.00	ppm	-0.03	
69) Phenanthrene-d10	9.159	188	1948454	40.00	ppm	-0.03	
83) Chrysene-d12	12.336	240	1788664	40.00	ppm	-0.03	
91) Perylene-d12	13.935	264	1852693	40.00	ppm	-0.03	
101) 1,4-Dichlorobenzene-d4a	4.671	152	528350	40.00	ppm	-0.01	
103) Acenaphthene-d10a	7.458	164	1042951	40.00	ppm	-0.02	
105) Phenanthrene-d10a	9.159	188	1948454	40.00	ppm	-0.02	
109) Chrysene-d12a	12.336	240	1788664	40.00	ppm	-0.02	
111) Naphthalene-d8a	5.704	136	2149162	40.00	ppm	-0.02	
113) Phenanthrene-d10b	9.159	188	1948454	40.00	ppm	-0.02	
115) Chrysene-d12b	12.336	240	1788664	40.00	ppm	-0.02	
System Monitoring Compounds							
5) 2-Fluorophenol	3.682	112	310813	16.62	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	33.24%		
8) Phenol-d5	4.393	99	295263	11.49	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	22.98%		
25) Nitrobenzene-d5	5.094	82	824043	34.46	ppm	-0.03	
Spiked Amount	50.000		Recovery	=	68.92%		
51) 2-Fluorobiphenyl	6.741	172	1390225	35.48	ppm	-0.03	
Spiked Amount	50.000		Recovery	=	70.96%		
73) 2,4,6-Tribromophenol	8.346	330	196771	41.03	ppm	-0.03	
Spiked Amount	50.000		Recovery	=	82.06%		
85) Terphenyl-d14	11.090	244	1494578	38.17	ppm	-0.03	
Spiked Amount	50.000		Recovery	=	76.34%		
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm		
107) o-terphenyl	0.000	230	0d	0.00	ppm		
Target Compounds							
59) Acenaphthene	7.490	153	33626	0.97	ppm		Qvalue 94
66) Fluorene	8.068	166	18846	0.50	ppm		94
81) Fluoranthene	10.598	202	35192	0.60	ppm		95
84) Pyrene	10.870	202	37153	0.60	ppm		96

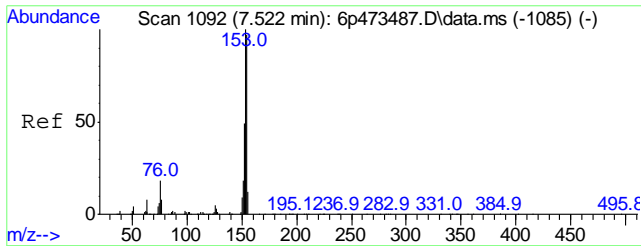
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473601.D
 Acq On : 8 Jun 2018 5:15 am
 Operator : georges
 Sample : jc67003-1
 Misc : op12443,e6p2238,1050,,,1,1
 ALS Vial : 14 Sample Multiplier: 1

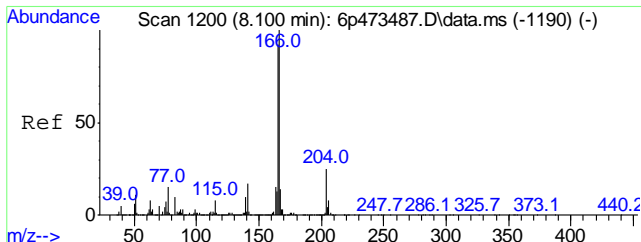
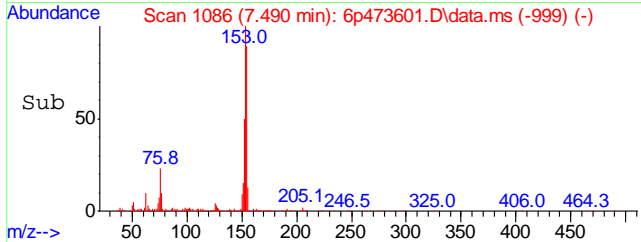
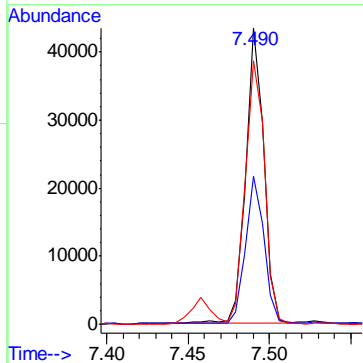
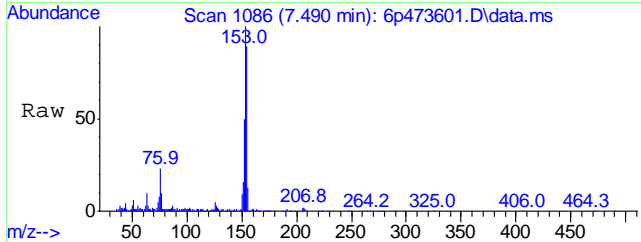
Quant Time: Jun 08 12:51:49 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration





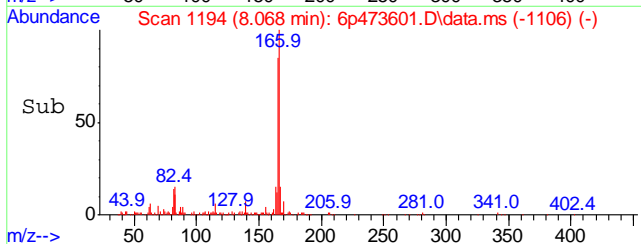
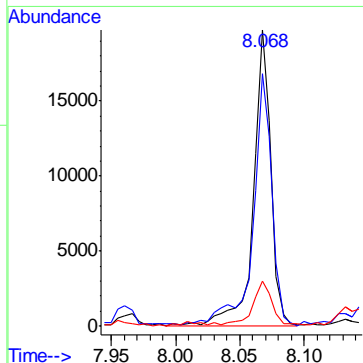
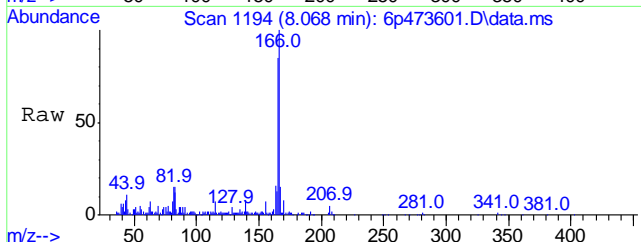
#59
 Acenaphthene
 Concen: 0.97 ppm
 RT: 7.490 min Scan# 1086
 Delta R.T. -0.032 min
 Lab File: 6p473601.D
 Acq: 8 Jun 2018 5:15 am

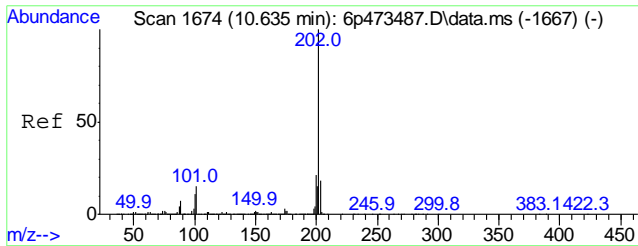
Tgt Ion	Resp	Lower	Upper
153	100		
152	49.8	18.5	78.5
154	89.4	67.4	127.4



#66
 Fluorene
 Concen: 0.50 ppm
 RT: 8.068 min Scan# 1194
 Delta R.T. -0.031 min
 Lab File: 6p473601.D
 Acq: 8 Jun 2018 5:15 am

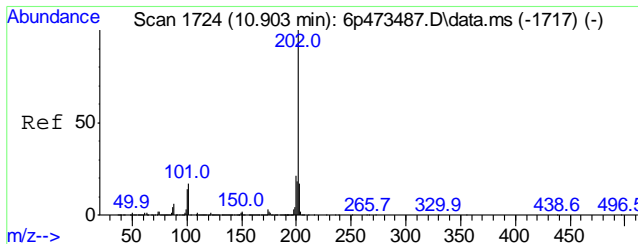
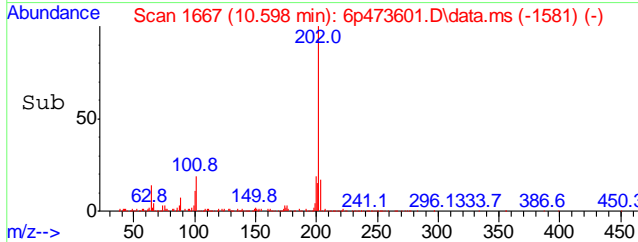
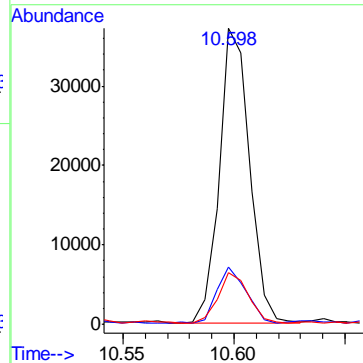
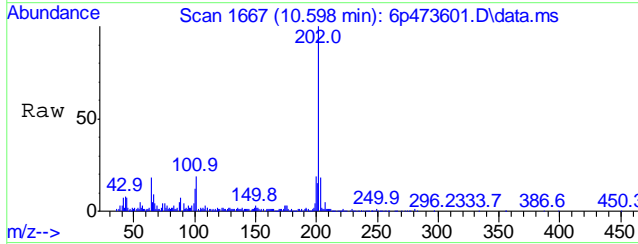
Tgt Ion	Resp	Lower	Upper
166	100		
165	85.5	61.5	121.5
167	14.8	0.0	43.7





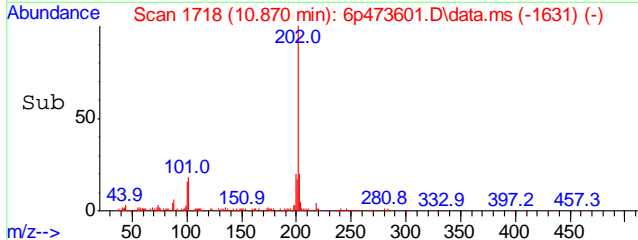
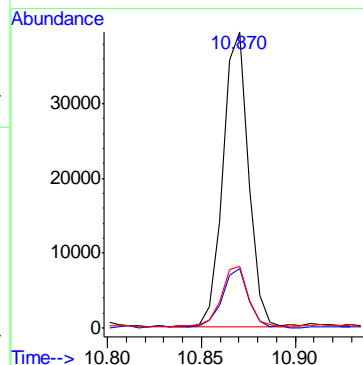
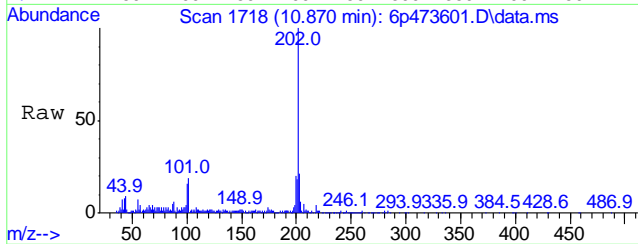
#81
 Fluoranthene
 Concen: 0.60 ppm
 RT: 10.598 min Scan# 1667
 Delta R.T. -0.037 min
 Lab File: 6p473601.D
 Acq: 8 Jun 2018 5:15 am

Tgt Ion	Resp	Lower	Upper
202	35192		
101	18.9	0.0	45.1
203	16.8	0.0	47.8



#84
 Pyrene
 Concen: 0.60 ppm
 RT: 10.870 min Scan# 1718
 Delta R.T. -0.032 min
 Lab File: 6p473601.D
 Acq: 8 Jun 2018 5:15 am

Tgt Ion	Resp	Lower	Upper
202	37153		
200	19.9	0.0	51.0
203	20.2	0.0	47.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473602.D
 Acq On : 8 Jun 2018 5:40 am
 Operator : georges
 Sample : jc67003-2
 Misc : op12443,e6p2238,1000,,,1,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 08 13:01:09 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS, zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

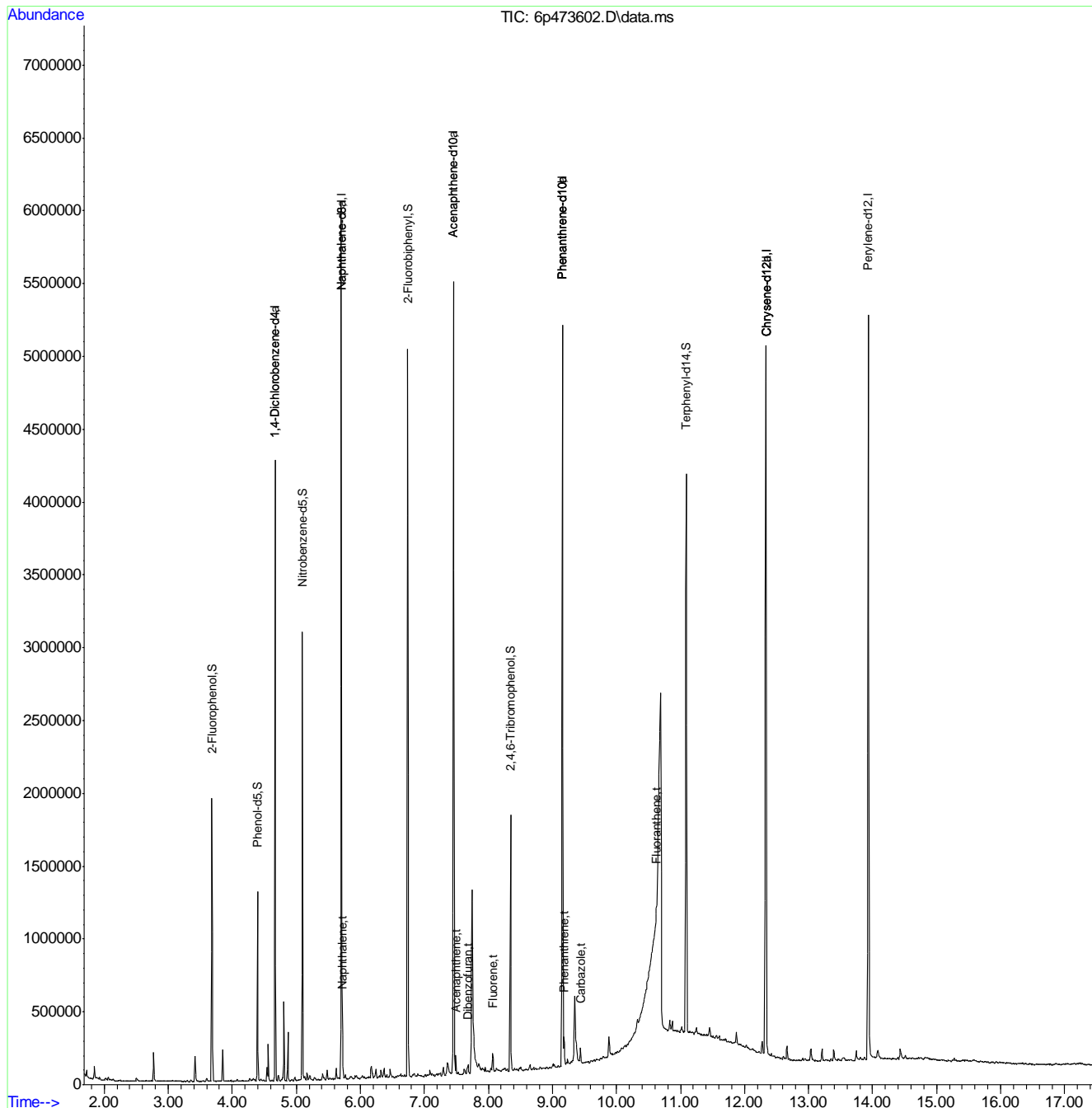
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.671	152	538937	40.00	ppm	-0.02
24) Naphthalene-d8	5.704	136	2145044	40.00	ppm	-0.03
47) Acenaphthene-d10	7.458	164	1031027	40.00	ppm	-0.03
69) Phenanthrene-d10	9.159	188	1911703	40.00	ppm	-0.03
83) Chrysene-d12	12.336	240	1787620	40.00	ppm	-0.03
91) Perylene-d12	13.935	264	1831085	40.00	ppm	-0.03
101) 1,4-Dichlorobenzene-d4a	4.671	152	538937	40.00	ppm	-0.01
103) Acenaphthene-d10a	7.458	164	1031027	40.00	ppm	-0.02
105) Phenanthrene-d10a	9.159	188	1911703	40.00	ppm	-0.02
109) Chrysene-d12a	12.336	240	1787620	40.00	ppm	-0.02
111) Naphthalene-d8a	5.704	136	2145044	40.00	ppm	-0.02
113) Phenanthrene-d10b	9.159	188	1911703	40.00	ppm	-0.02
115) Chrysene-d12b	12.336	240	1787620	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.682	112	371350	19.47	ppm	-0.02
Spiked Amount	50.000		Recovery	=	38.94%	
8) Phenol-d5	4.393	99	355675	13.57	ppm	-0.02
Spiked Amount	50.000		Recovery	=	27.14%	
25) Nitrobenzene-d5	5.094	82	811296	33.99	ppm	-0.03
Spiked Amount	50.000		Recovery	=	67.98%	
51) 2-Fluorobiphenyl	6.741	172	1366289	35.27	ppm	-0.03
Spiked Amount	50.000		Recovery	=	70.54%	
73) 2,4,6-Tribromophenol	8.346	330	173380	36.85	ppm	-0.03
Spiked Amount	50.000		Recovery	=	73.70%	
85) Terphenyl-d14	11.090	244	1252879	32.01	ppm	-0.03
Spiked Amount	50.000		Recovery	=	64.02%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						
38) Naphthalene	5.725	128	112714	1.88	ppm	99
59) Acenaphthene	7.495	153	26009	0.76	ppm	97
62) Dibenzofuran	7.683	168	20651	0.44	ppm	99
66) Fluorene	8.068	166	31774	0.85	ppm	99
77) Phenanthrene	9.180	178	63561	1.10	ppm	95
79) Carbazole	9.437	167	38344	0.70	ppm	96
81) Fluoranthene	10.624	202	25431	0.44	ppm	95

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

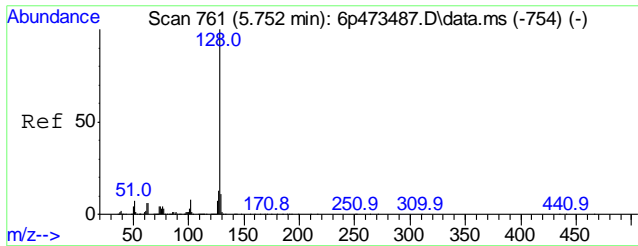
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473602.D
 Acq On : 8 Jun 2018 5:40 am
 Operator : georges
 Sample : jc67003-2
 Misc : op12443,e6p2238,1000,,,1,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 08 13:01:09 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

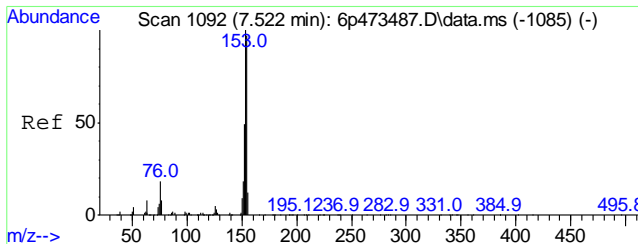
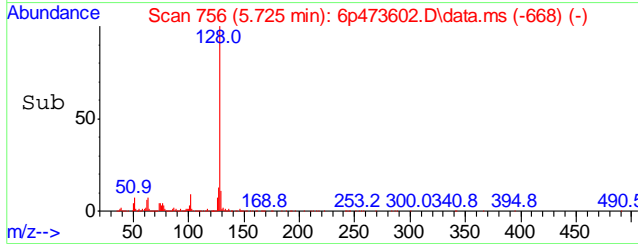
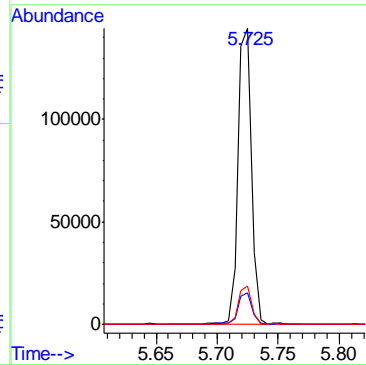
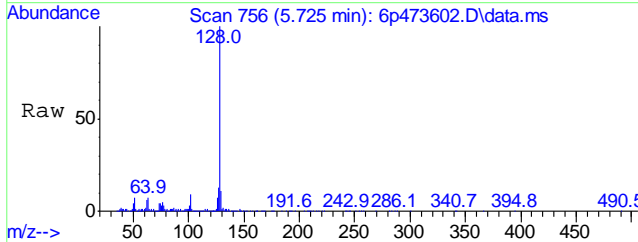


9.1.2
 9



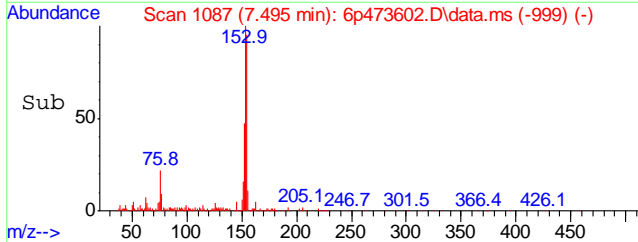
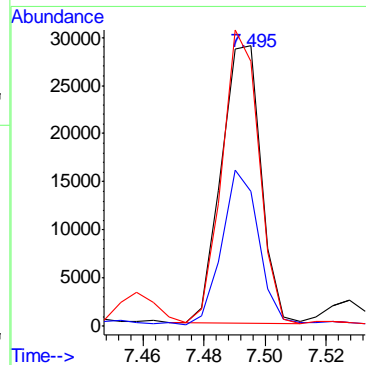
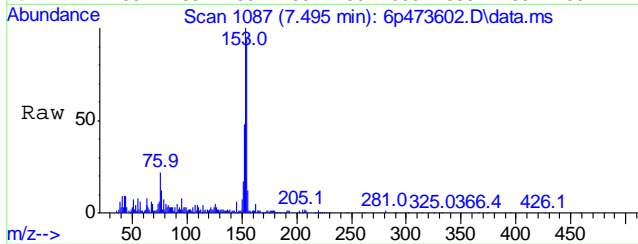
#38
Naphthalene
Concen: 1.88 ppm
RT: 5.725 min Scan# 756
Delta R.T. -0.027 min
Lab File: 6p473602.D
Acq: 8 Jun 2018 5:40 am

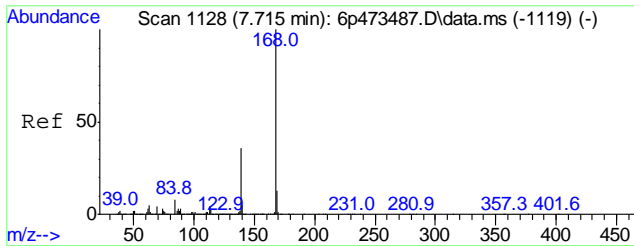
Tgt Ion	Ratio	Lower	Upper
128	100		
129	10.6	0.0	41.2
127	12.9	0.0	42.8



#59
Acenaphthene
Concen: 0.76 ppm
RT: 7.495 min Scan# 1087
Delta R.T. -0.027 min
Lab File: 6p473602.D
Acq: 8 Jun 2018 5:40 am

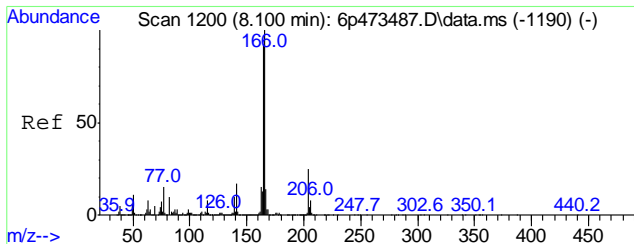
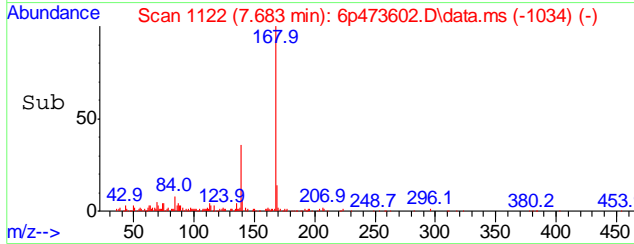
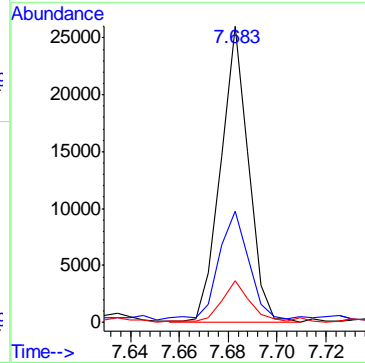
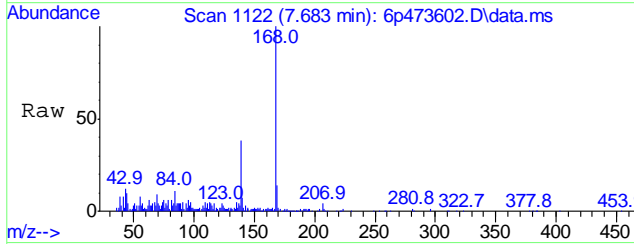
Tgt Ion	Ratio	Lower	Upper
153	100		
152	47.4	18.5	78.5
154	93.5	67.4	127.4





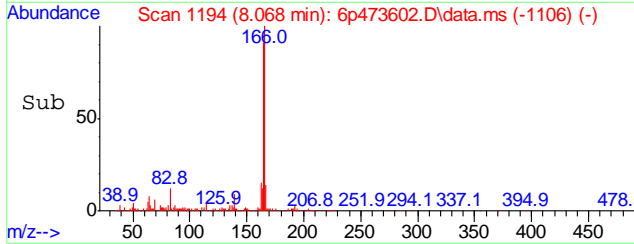
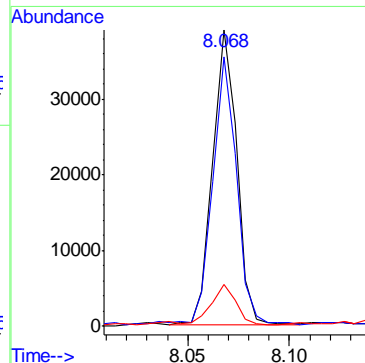
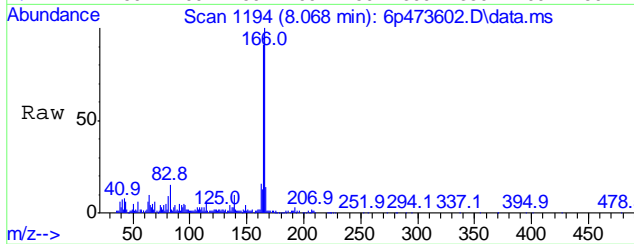
#62
 Dibenzofuran
 Concen: 0.44 ppm
 RT: 7.683 min Scan# 1122
 Delta R.T. -0.031 min
 Lab File: 6p473602.D
 Acq: 8 Jun 2018 5:40 am

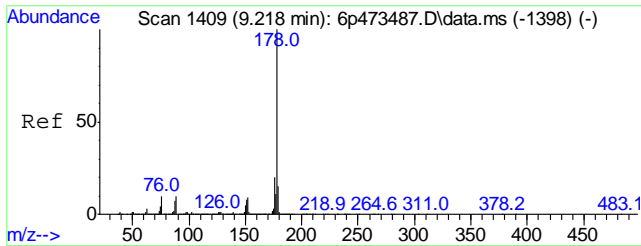
Tgt Ion	Ratio	Lower	Upper
168	100		
139	36.2	6.5	66.5
169	13.1	0.0	43.4



#66
 Fluorene
 Concen: 0.85 ppm
 RT: 8.068 min Scan# 1194
 Delta R.T. -0.031 min
 Lab File: 6p473602.D
 Acq: 8 Jun 2018 5:40 am

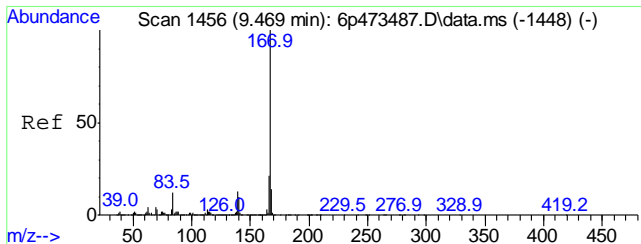
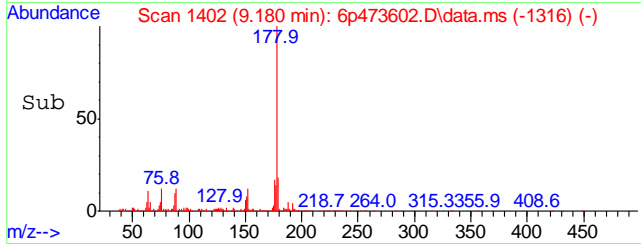
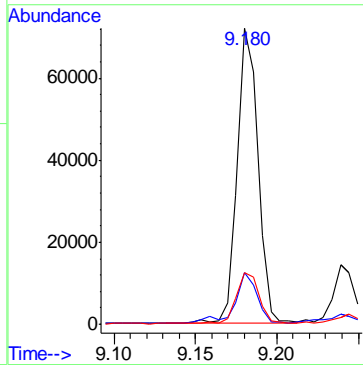
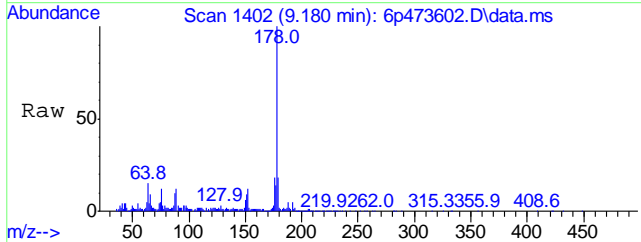
Tgt Ion	Ratio	Lower	Upper
166	100		
165	90.7	61.5	121.5
167	12.8	0.0	43.7





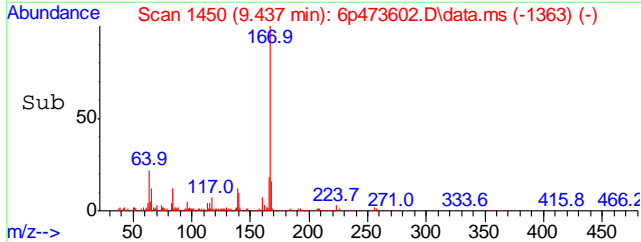
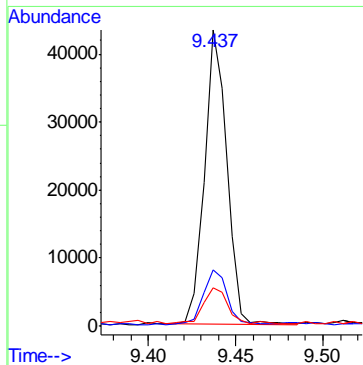
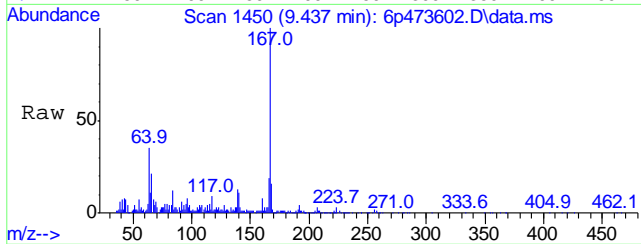
#77
 Phenanthrene
 Concen: 1.10 ppm
 RT: 9.180 min Scan# 1402
 Delta R.T. -0.037 min
 Lab File: 6p473602.D
 Acq: 8 Jun 2018 5:40 am

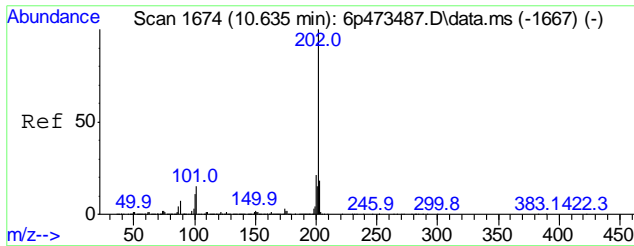
Tgt Ion	Resp	Lower	Upper
178	100		
179	17.0	0.0	45.2
176	17.4	0.0	49.6



#79
 Carbazole
 Concen: 0.70 ppm
 RT: 9.437 min Scan# 1450
 Delta R.T. -0.032 min
 Lab File: 6p473602.D
 Acq: 8 Jun 2018 5:40 am

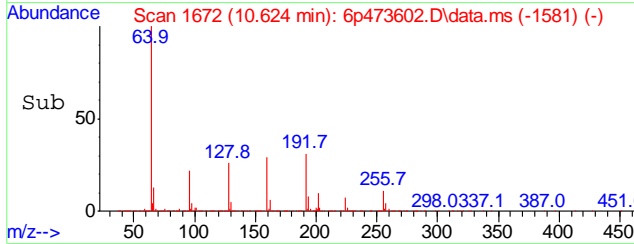
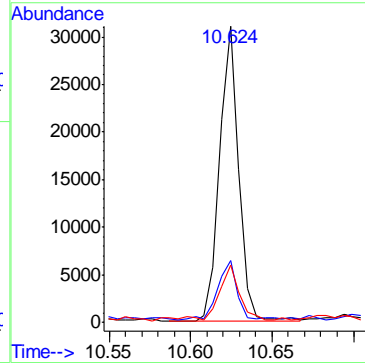
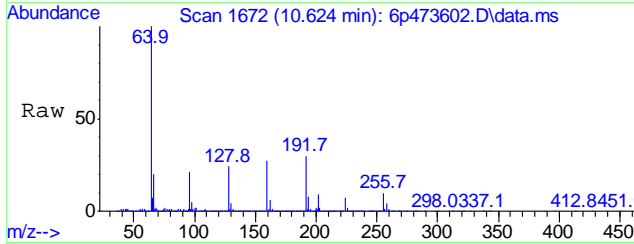
Tgt Ion	Resp	Lower	Upper
167	100		
166	18.2	0.0	50.8
139	12.3	0.0	42.9





#81
 Fluoranthene
 Concen: 0.44 ppm
 RT: 10.624 min Scan# 1672
 Delta R.T. -0.011 min
 Lab File: 6p473602.D
 Acq: 8 Jun 2018 5:40 am

Tgt Ion	Ratio	Lower	Upper
202	100		
101	19.7	0.0	45.1
203	17.9	0.0	47.8



9.12
 9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473603.D
 Acq On : 8 Jun 2018 6:04 am
 Operator : georges
 Sample : jc67003-3
 Misc : op12443,e6p2238,1050,,,1,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jun 08 13:04:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

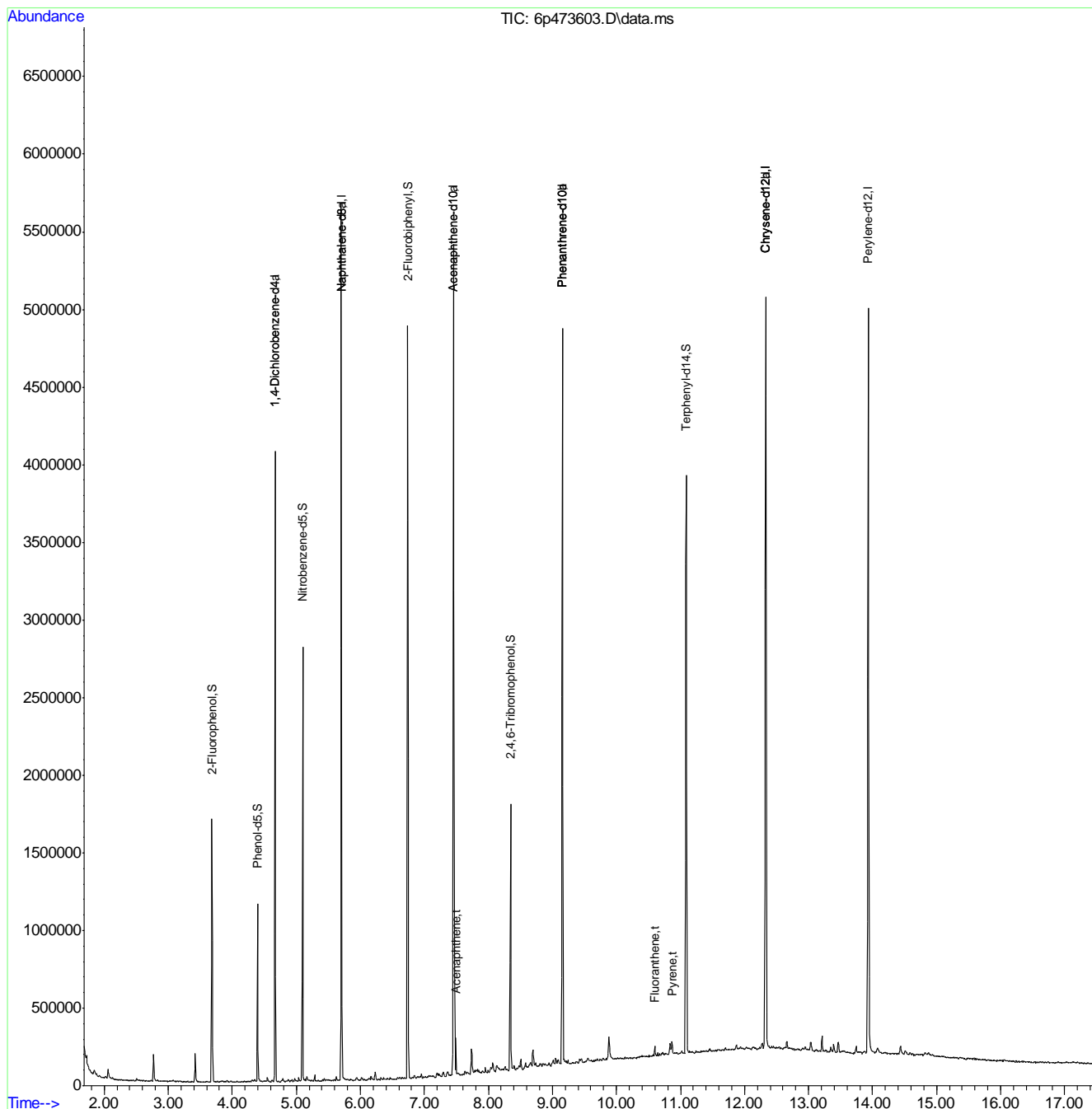
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.666	152	493734	40.00	ppm	-0.02
24) Naphthalene-d8	5.704	136	1986899	40.00	ppm	-0.03
47) Acenaphthene-d10	7.458	164	980163	40.00	ppm	-0.03
69) Phenanthrene-d10	9.159	188	1790310	40.00	ppm	-0.03
83) Chrysene-d12	12.331	240	1690217	40.00	ppm	-0.04
91) Perylene-d12	13.935	264	1759696	40.00	ppm	-0.03
101) 1,4-Dichlorobenzene-d4a	4.666	152	493734	40.00	ppm	-0.02
103) Acenaphthene-d10a	7.458	164	980163	40.00	ppm	-0.02
105) Phenanthrene-d10a	9.159	188	1790310	40.00	ppm	-0.02
109) Chrysene-d12a	12.331	240	1690217	40.00	ppm	-0.02
111) Naphthalene-d8a	5.704	136	1986899	40.00	ppm	-0.02
113) Phenanthrene-d10b	9.159	188	1790310	40.00	ppm	-0.02
115) Chrysene-d12b	12.331	240	1690217	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.682	112	340008	19.46	ppm	-0.02
Spiked Amount	50.000		Recovery	=	38.92%	
8) Phenol-d5	4.399	99	322914	13.45	ppm	-0.02
Spiked Amount	50.000		Recovery	=	26.90%	
25) Nitrobenzene-d5	5.099	82	769474	34.81	ppm	-0.02
Spiked Amount	50.000		Recovery	=	69.62%	
51) 2-Fluorobiphenyl	6.741	172	1294486	35.15	ppm	-0.03
Spiked Amount	50.000		Recovery	=	70.30%	
73) 2,4,6-Tribromophenol	8.346	330	164145	37.25	ppm	-0.03
Spiked Amount	50.000		Recovery	=	74.50%	
85) Terphenyl-d14	11.090	244	1202921	32.51	ppm	-0.03
Spiked Amount	50.000		Recovery	=	65.02%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0d	0.00	ppm	
Target Compounds						Qvalue
59) Acenaphthene	7.490	153	45235	1.38	ppm	98
81) Fluoranthene	10.603	202	25225	0.47	ppm	95
84) Pyrene	10.871	202	28546	0.49	ppm	96

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

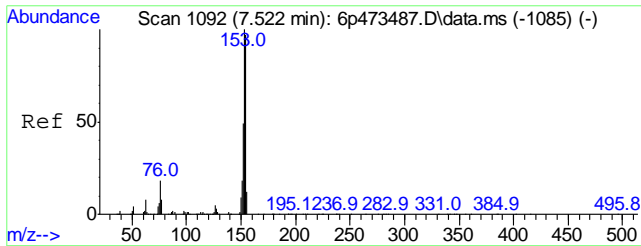
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473603.D
 Acq On : 8 Jun 2018 6:04 am
 Operator : georges
 Sample : jc67003-3
 Misc : op12443,e6p2238,1050,,,1,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jun 08 13:04:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

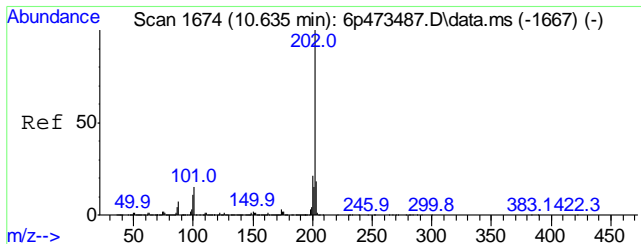
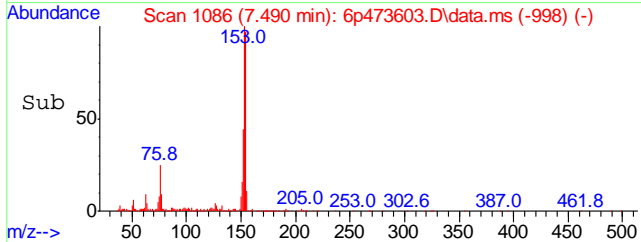
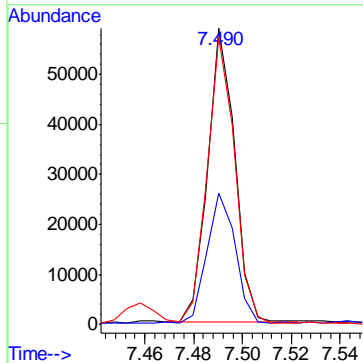
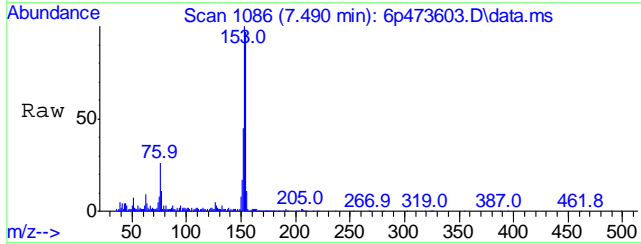


9.1.3
6



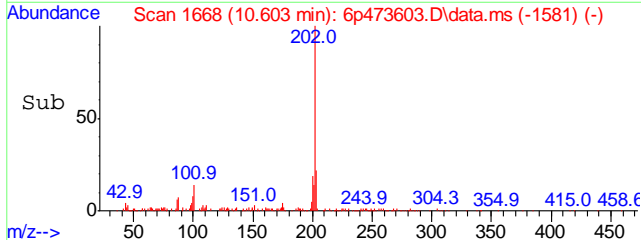
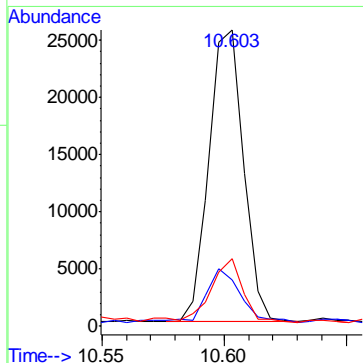
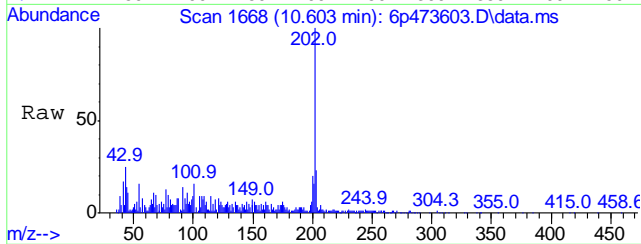
#59
 Acenaphthene
 Concen: 1.38 ppm
 RT: 7.490 min Scan# 1086
 Delta R.T. -0.032 min
 Lab File: 6p473603.D
 Acq: 8 Jun 2018 6:04 am

Tgt Ion	Resp	Lower	Upper
153	100		
152	44.4	18.5	78.5
154	96.8	67.4	127.4

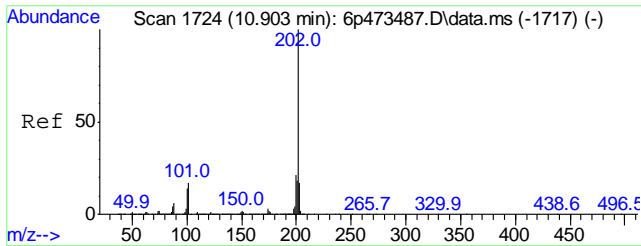


#81
 Fluoranthene
 Concen: 0.47 ppm
 RT: 10.603 min Scan# 1668
 Delta R.T. -0.032 min
 Lab File: 6p473603.D
 Acq: 8 Jun 2018 6:04 am

Tgt Ion	Resp	Lower	Upper
202	100		
101	14.2	0.0	45.1
203	21.1	0.0	47.8

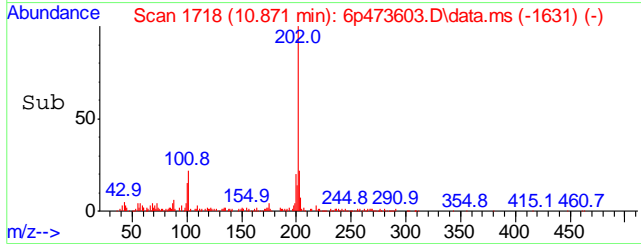
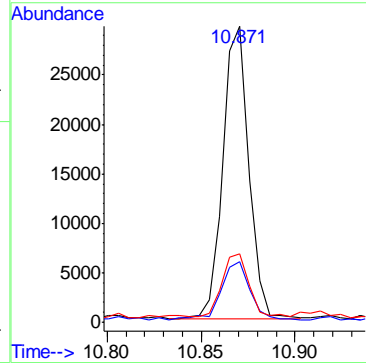
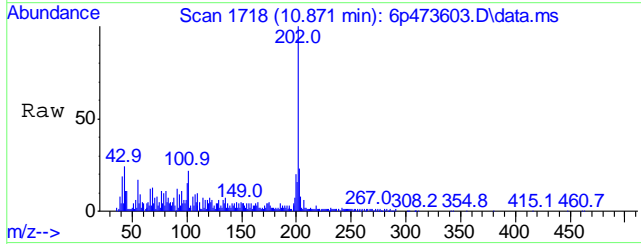


9.13
 9



#84
 Pyrene
 Concen: 0.49 ppm
 RT: 10.871 min Scan# 1718
 Delta R.T. -0.032 min
 Lab File: 6p473603.D
 Acq: 8 Jun 2018 6:04 am

Tgt Ion	Resp	Lower	Upper
202	100		
200	19.9	0.0	51.0
203	20.4	0.0	47.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473604.D
 Acq On : 8 Jun 2018 6:29 am
 Operator : georges
 Sample : jc67003-7
 Misc : op12443,e6p2238,950,,,1,1
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jun 10 18:02:09 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

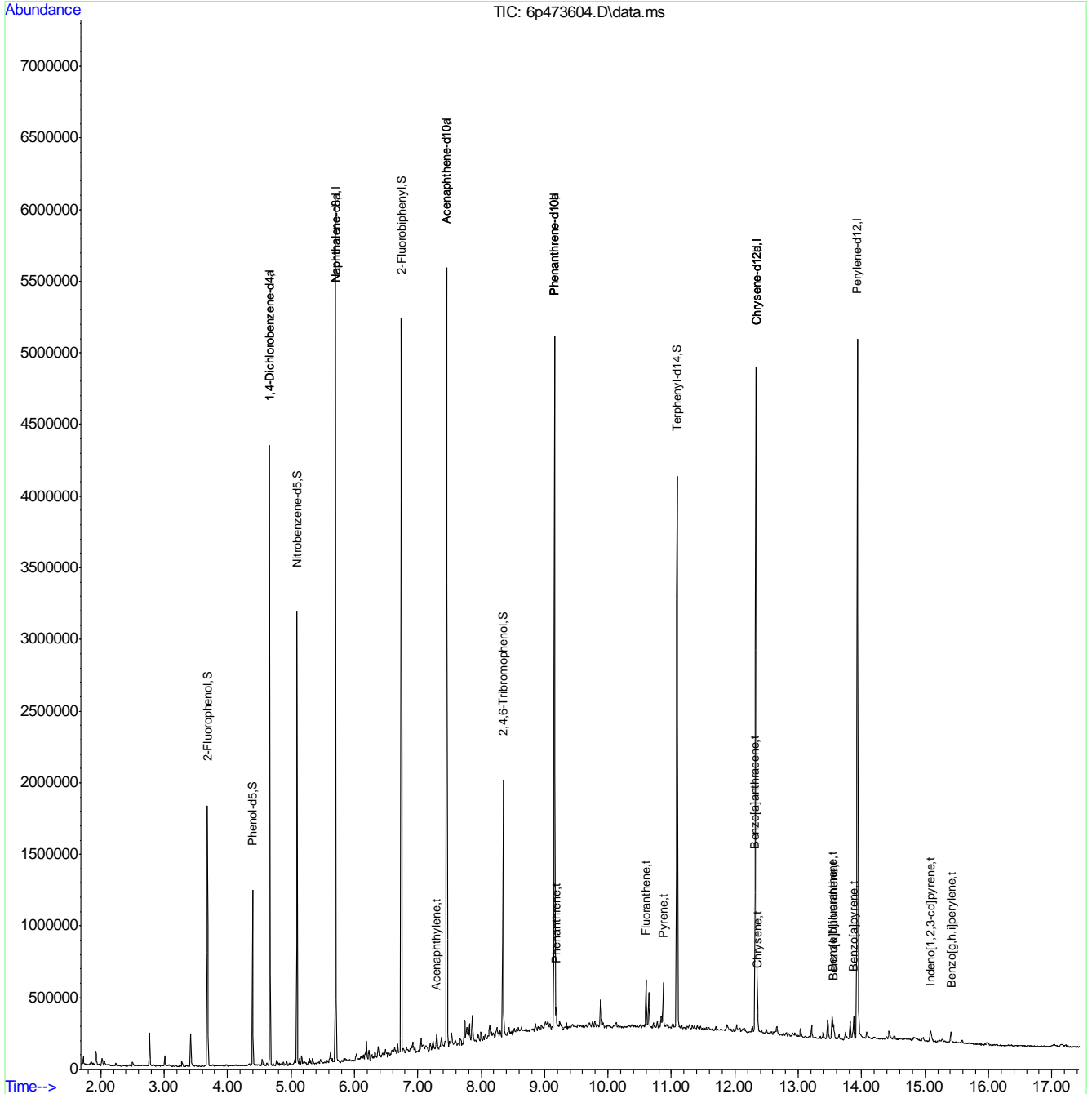
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.666	152	517649	40.00	ppm	-0.02	
24) Naphthalene-d8	5.704	136	2087729	40.00	ppm	-0.03	
47) Acenaphthene-d10	7.458	164	1014617	40.00	ppm	-0.03	
69) Phenanthrene-d10	9.159	188	1823196	40.00	ppm	-0.03	
83) Chrysene-d12	12.336	240	1705764	40.00	ppm	-0.03	
91) Perylene-d12	13.935	264	1795752	40.00	ppm	-0.03	
101) 1,4-Dichlorobenzene-d4a	4.666	152	517649	40.00	ppm	-0.02	
103) Acenaphthene-d10a	7.458	164	1014617	40.00	ppm	-0.02	
105) Phenanthrene-d10a	9.159	188	1823196	40.00	ppm	-0.02	
109) Chrysene-d12a	12.336	240	1705764	40.00	ppm	-0.02	
111) Naphthalene-d8a	5.704	136	2087729	40.00	ppm	-0.02	
113) Phenanthrene-d10b	9.159	188	1823196	40.00	ppm	-0.02	
115) Chrysene-d12b	12.336	240	1705764	40.00	ppm	-0.02	
System Monitoring Compounds							
5) 2-Fluorophenol	3.682	112	359775	19.64	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	39.28%		
8) Phenol-d5	4.393	99	345778	13.74	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	27.48%		
25) Nitrobenzene-d5	5.094	82	837666	36.06	ppm	-0.03	
Spiked Amount	50.000		Recovery	=	72.12%		
51) 2-Fluorobiphenyl	6.741	172	1369967	35.94	ppm	-0.03	
Spiked Amount	50.000		Recovery	=	71.88%		
73) 2,4,6-Tribromophenol	8.346	330	168550	37.56	ppm	-0.03	
Spiked Amount	50.000		Recovery	=	75.12%		
85) Terphenyl-d14	11.090	244	1235859	33.09	ppm	-0.03	
Spiked Amount	50.000		Recovery	=	66.18%		
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm		
107) o-terphenyl	0.000	230	0d	0.00	ppm		
Target Compounds							
56) Acenaphthylene	7.298	152	22474	0.43	ppm		99
77) Phenanthrene	9.180	178	51222	0.93	ppm		98
81) Fluoranthene	10.603	202	134259	2.44	ppm		96
84) Pyrene	10.871	202	114482	1.95	ppm		98
87) Benzo[a]anthracene	12.320	228	63211	1.20	ppm		91
89) Chrysene	12.363	228	54834	1.06	ppm		91
93) Benzo[b]fluoranthene	13.534	252	89180m	1.59	ppm		
94) Benzo[k]fluoranthene	13.561	252	25377m	0.50	ppm		
95) Benzo[a]pyrene	13.871	252	52367	1.10	ppm		93
96) Indeno[1,2,3-cd]pyrene	15.085	276	41616	0.71	ppm		95
100) Benzo[g,h,i]perylene	15.412	276	42270	0.90	ppm		99

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

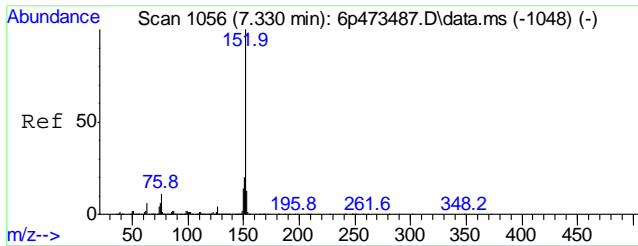
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473604.D
 Acq On : 8 Jun 2018 6:29 am
 Operator : georges
 Sample : jc67003-7
 Misc : op12443,e6p2238,950,,,1,1
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jun 10 18:02:09 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

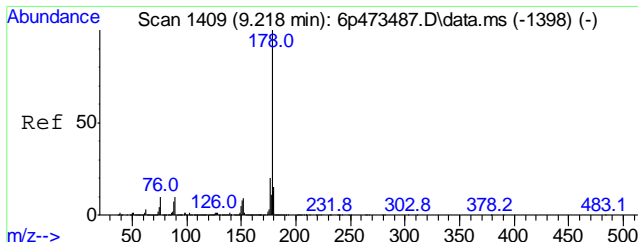
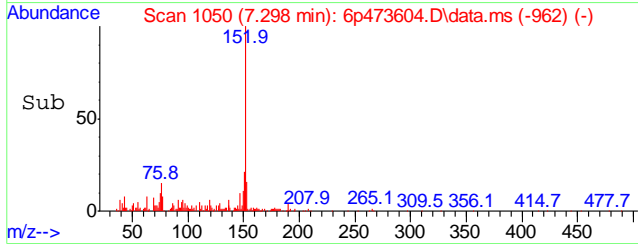
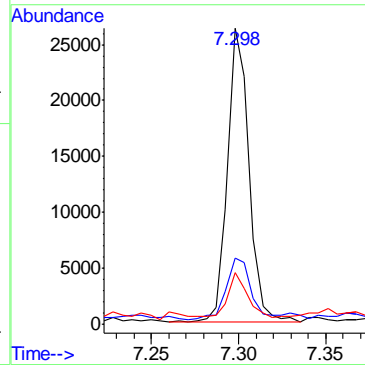
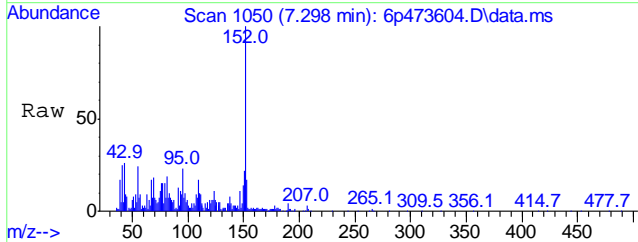


9.1.4
6



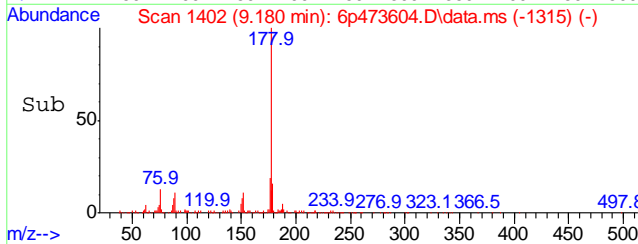
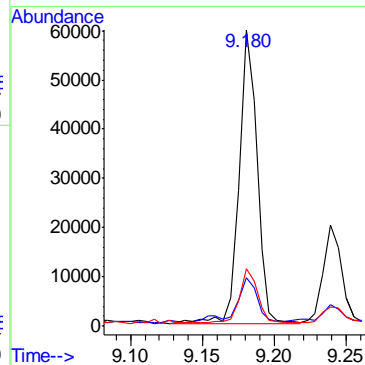
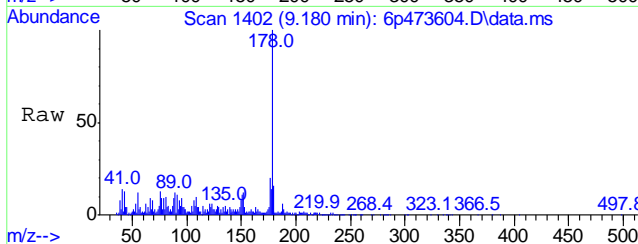
#56
 Acenaphthylene
 Concen: 0.43 ppm
 RT: 7.298 min Scan# 1050
 Delta R.T. -0.032 min
 Lab File: 6p473604.D
 Acq: 8 Jun 2018 6:29 am

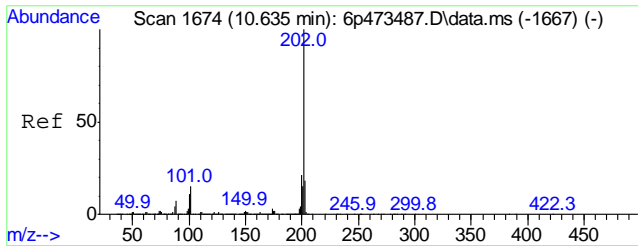
Tgt Ion	Ratio	Lower	Upper
152	100		
151	19.7	0.0	49.5
153	13.8	0.0	43.2



#77
 Phenanthrene
 Concen: 0.93 ppm
 RT: 9.180 min Scan# 1402
 Delta R.T. -0.037 min
 Lab File: 6p473604.D
 Acq: 8 Jun 2018 6:29 am

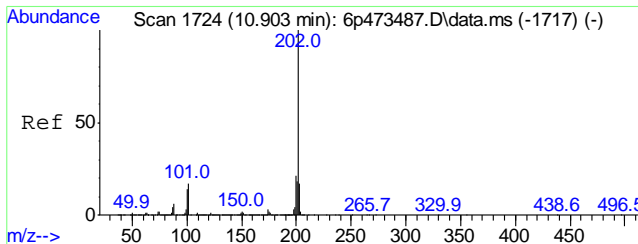
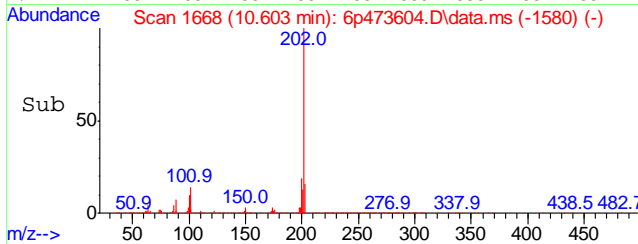
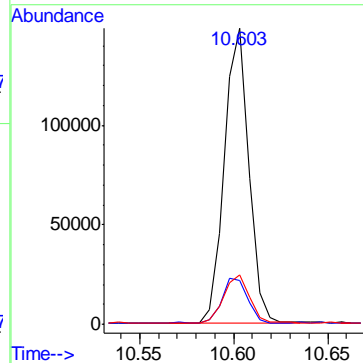
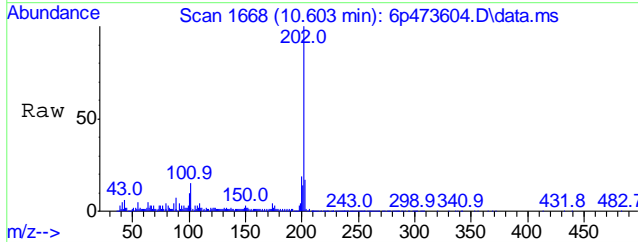
Tgt Ion	Ratio	Lower	Upper
178	100		
179	14.7	0.0	45.2
176	18.1	0.0	49.6





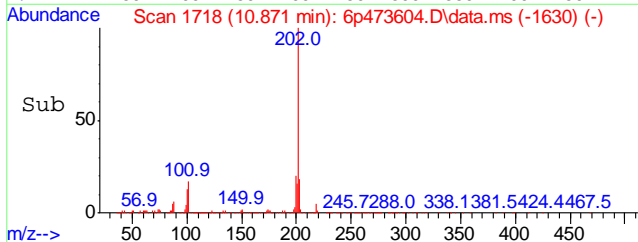
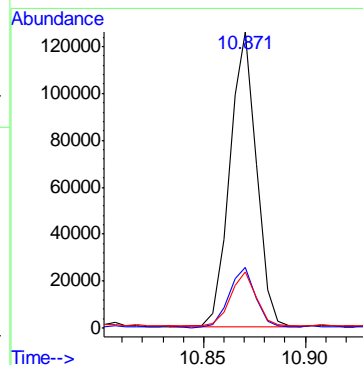
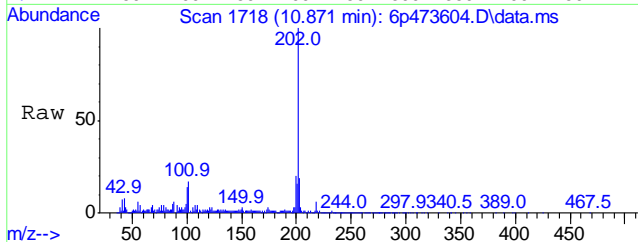
#81
 Fluoranthene
 Concen: 2.44 ppm
 RT: 10.603 min Scan# 1668
 Delta R.T. -0.032 min
 Lab File: 6p473604.D
 Acq: 8 Jun 2018 6:29 am

Tgt Ion	Resp	Lower	Upper
202	134259		
101	16.4	0.0	45.1
203	16.1	0.0	47.8

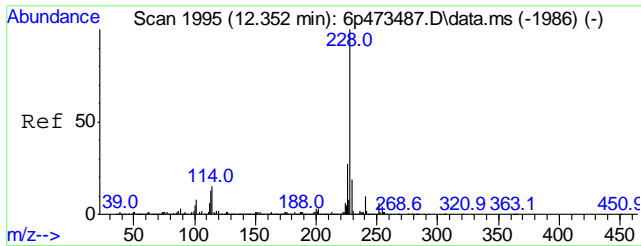


#84
 Pyrene
 Concen: 1.95 ppm
 RT: 10.871 min Scan# 1718
 Delta R.T. -0.032 min
 Lab File: 6p473604.D
 Acq: 8 Jun 2018 6:29 am

Tgt Ion	Resp	Lower	Upper
202	114482		
200	19.8	0.0	51.0
203	18.0	0.0	47.4

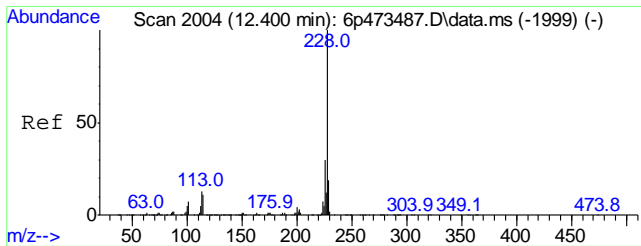
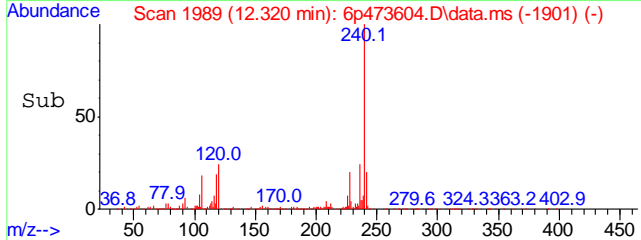
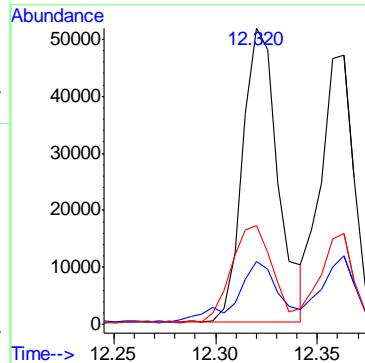
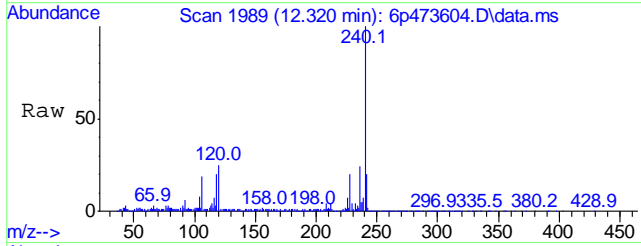


9.14
 9



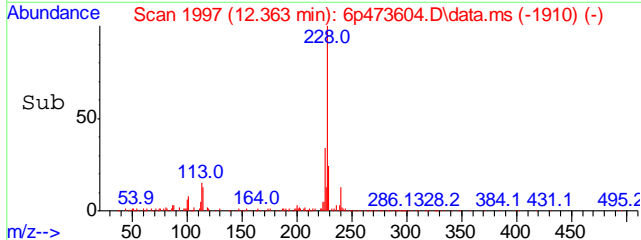
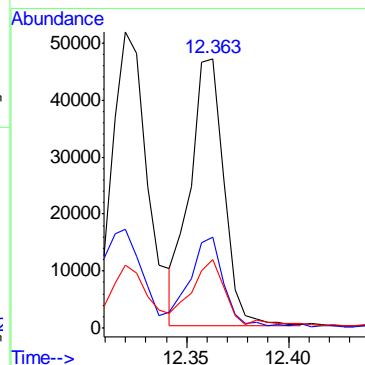
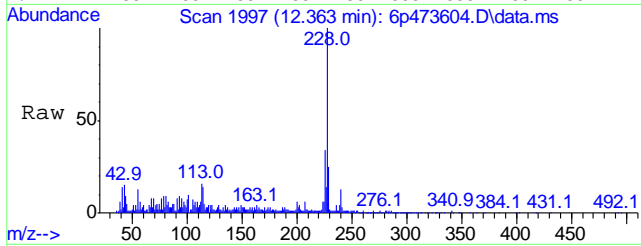
#87
 Benzo[a]anthracene
 Concen: 1.20 ppm
 RT: 12.320 min Scan# 1989
 Delta R.T. -0.032 min
 Lab File: 6p473604.D
 Acq: 8 Jun 2018 6:29 am

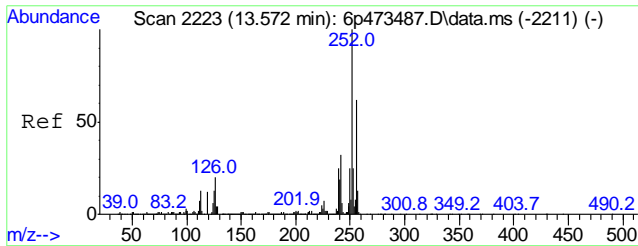
Tgt Ion:	228	Resp:	63211
Ion Ratio	100	Lower	Upper
228	100	0.0	49.2
229	20.2	0.0	56.9
226	33.9	0.0	



#89
 Chrysene
 Concen: 1.06 ppm
 RT: 12.363 min Scan# 1997
 Delta R.T. -0.037 min
 Lab File: 6p473604.D
 Acq: 8 Jun 2018 6:29 am

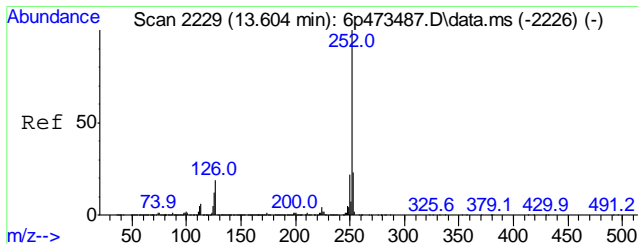
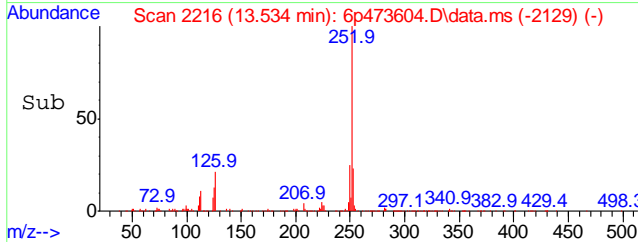
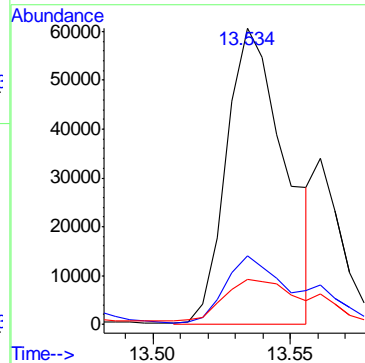
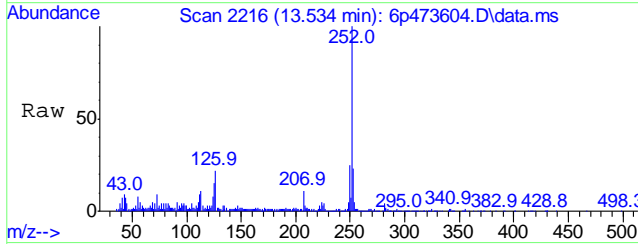
Tgt Ion:	228	Resp:	54834
Ion Ratio	100	Lower	Upper
228	100	0.0	59.9
226	34.1	0.0	49.3
229	24.7	0.0	





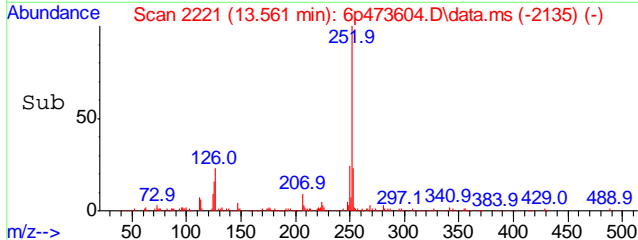
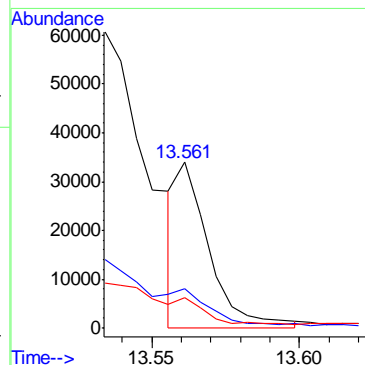
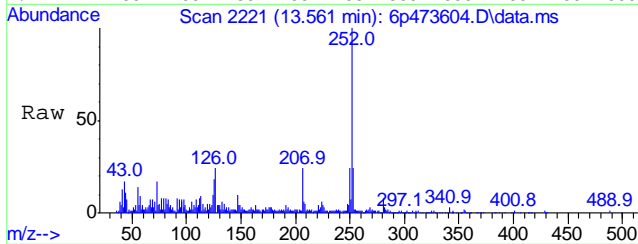
#93
 Benzo[b]fluoranthene
 Concen: 1.59 ppm m
 RT: 13.534 min Scan# 2216
 Delta R.T. -0.037 min
 Lab File: 6p473604.D
 Acq: 8 Jun 2018 6:29 am

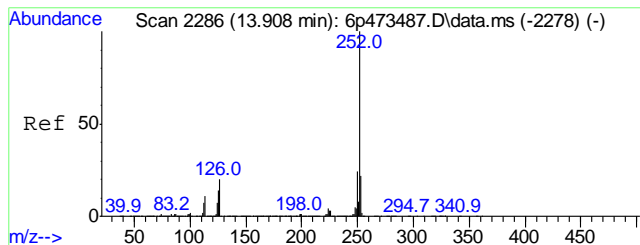
Tgt Ion	Resp	Lower	Upper
252	100		
253	23.3	0.0	55.3
125	15.2	0.0	43.1



#94
 Benzo[k]fluoranthene
 Concen: 0.50 ppm m
 RT: 13.561 min Scan# 2221
 Delta R.T. -0.043 min
 Lab File: 6p473604.D
 Acq: 8 Jun 2018 6:29 am

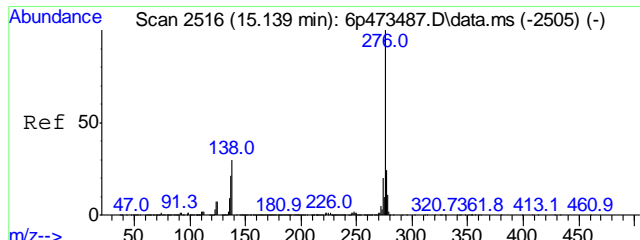
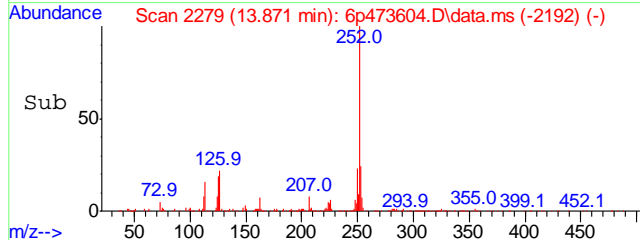
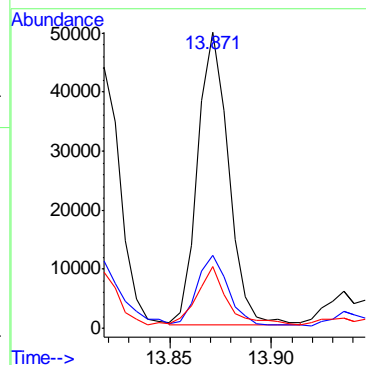
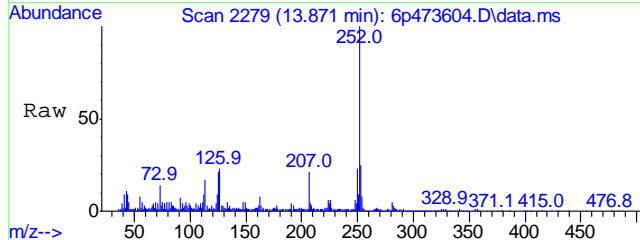
Tgt Ion	Resp	Lower	Upper
252	100		
253	23.8	0.0	52.7
125	18.1	0.0	42.2





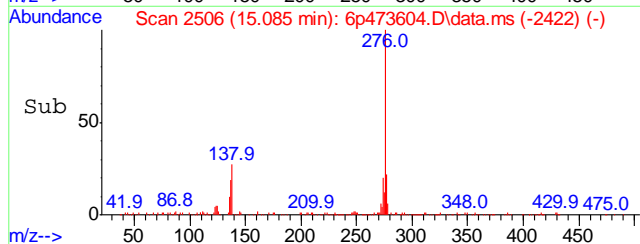
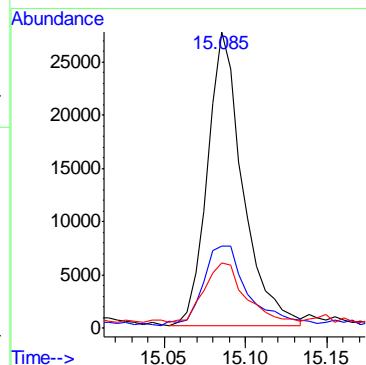
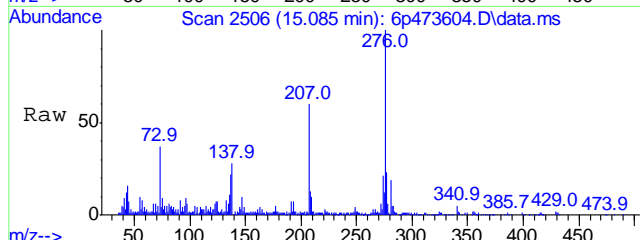
#95
 Benzo[a]pyrene
 Concen: 1.10 ppm
 RT: 13.871 min Scan# 2279
 Delta R.T. -0.037 min
 Lab File: 6p473604.D
 Acq: 8 Jun 2018 6:29 am

Tgt Ion	Resp	Lower	Upper
252	100		
253	23.9	0.0	52.5
125	19.7	0.0	43.8

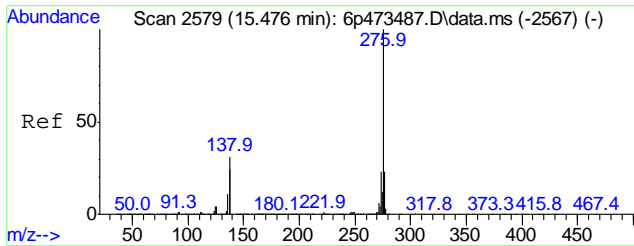


#96
 Indeno[1,2,3-cd]pyrene
 Concen: 0.71 ppm
 RT: 15.085 min Scan# 2506
 Delta R.T. -0.053 min
 Lab File: 6p473604.D
 Acq: 8 Jun 2018 6:29 am

Tgt Ion	Resp	Lower	Upper
276	100		
138	25.5	0.0	59.6
137	20.5	0.0	50.8

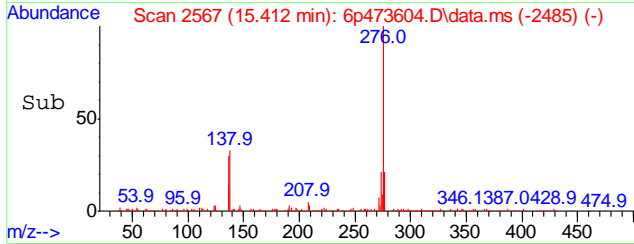
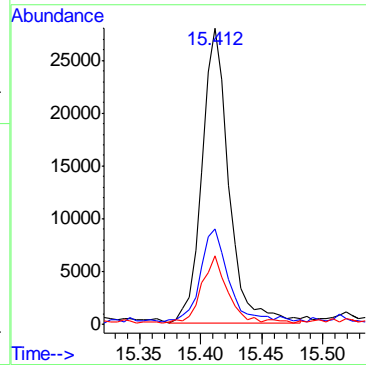
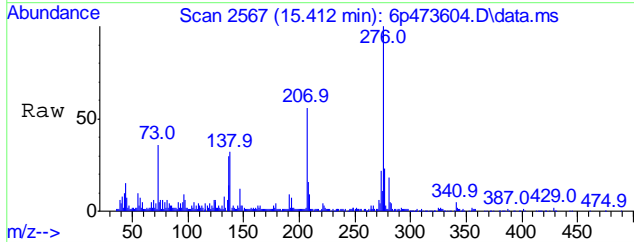


9.14
 9



#100
 Benzo[g,h,i]perylene
 Concen: 0.90 ppm
 RT: 15.412 min Scan# 2567
 Delta R.T. -0.064 min
 Lab File: 6p473604.D
 Acq: 8 Jun 2018 6:29 am

Tgt Ion	Ratio	Lower	Upper
276	100		
138	31.1	0.6	60.6
277	22.5	0.0	53.2



9.14
 9

Manual Integration Approval Summary

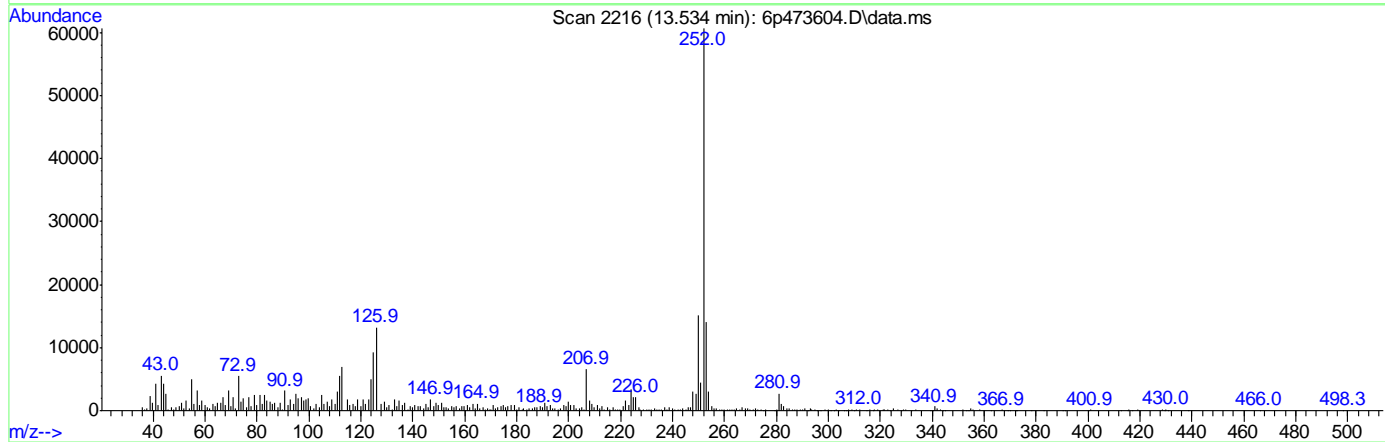
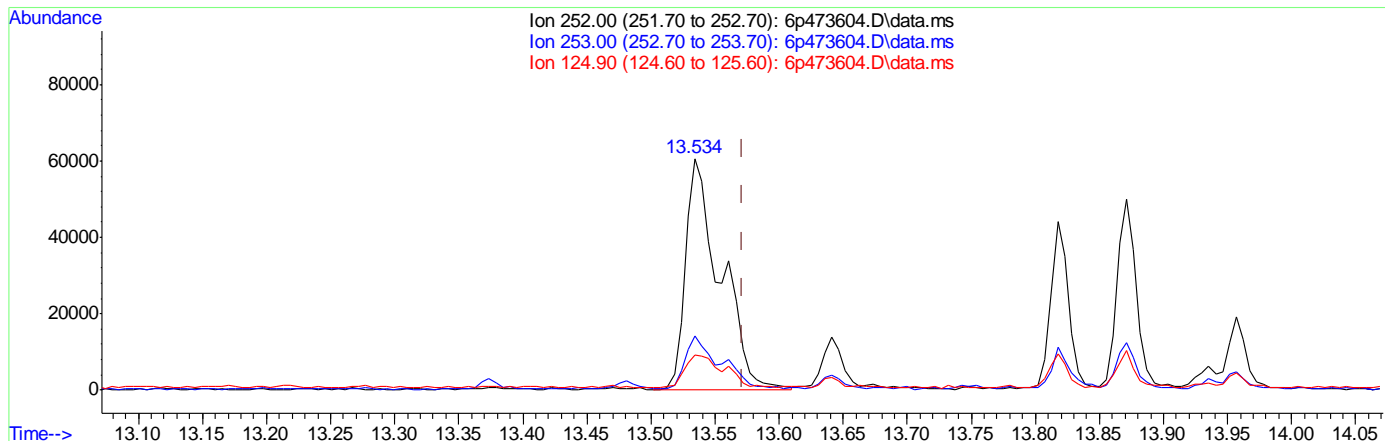
Sample Number: JC67003-7 Method: SW846 8270D
Lab FileID: 6P473604.D Analyst approved: 06/08/18 13:51 Ying Li
Injection Time: 06/08/18 06:29 Supervisor approved: 06/10/18 17:05 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(b)fluoranthene	205-99-2		13.53	Overlapping peak
Benzo(k)fluoranthene	207-08-9		13.56	Overlapping peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473604.D
 Acq On : 8 Jun 2018 6:29 am
 Operator : georges
 Sample : jc67003-7
 Misc : op12443,e6p2238,950,,,1,1
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jun 08 13:06:17 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration



(93) Benzo[b]fluoranthene (t)

13.534min (-0.037) 2.04ppm

response 114742

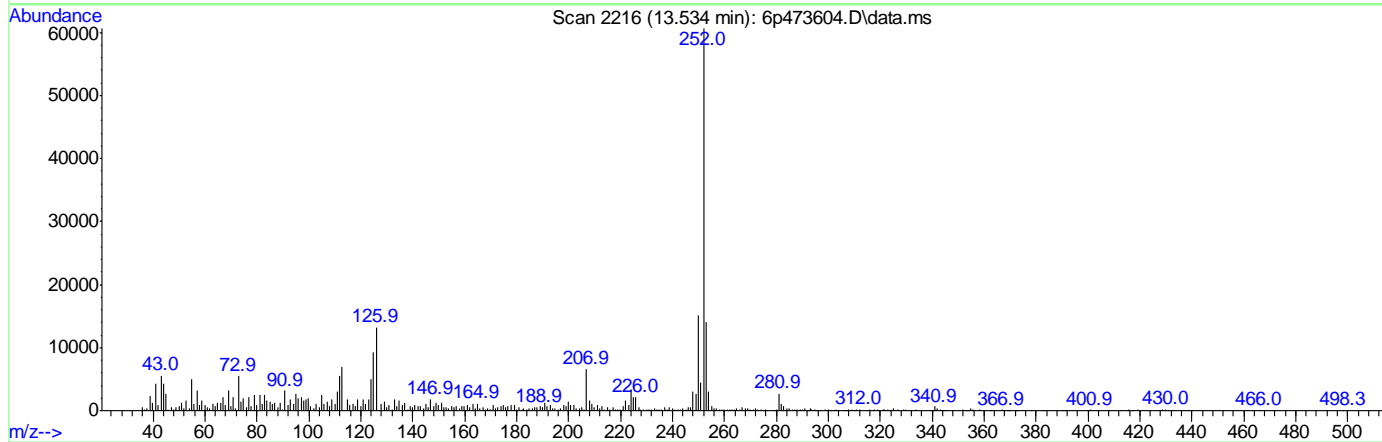
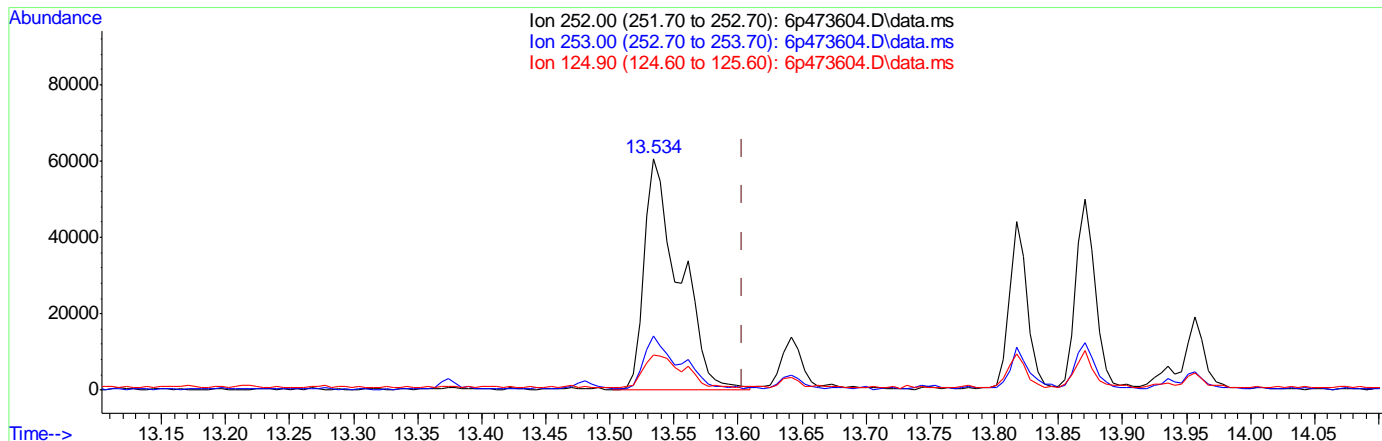
Ion	Exp%	Act%
252.00	100	100
253.00	25.30	22.51
124.90	13.10	13.93
0.00	0.00	0.00

9.1.4.2
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473604.D
 Acq On : 8 Jun 2018 6:29 am
 Operator : georges
 Sample : jc67003-7
 Misc : op12443,e6p2238,950,,,1,1
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jun 08 13:06:17 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration



(94) Benzo[k]fluoranthene (t)

13.534min (-0.069) 2.26ppm

response 114742

Ion	Exp%	Act%
252.00	100	100
253.00	22.70	22.51
124.90	12.20	13.93
0.00	0.00	0.00

9.1.4.3
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473594.D
 Acq On : 8 Jun 2018 2:23 am
 Operator : georges
 Sample : opl2443-mb1
 Misc : opl2443,e6p2238,1000,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 08 12:28:00 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.671	152	597130	40.00	ppm	-0.02
24) Naphthalene-d8	5.704	136	2420312	40.00	ppm	-0.03
47) Acenaphthene-d10	7.458	164	1211355	40.00	ppm	-0.03
69) Phenanthrene-d10	9.159	188	2274902	40.00	ppm	-0.03
83) Chrysene-d12	12.336	240	2153905	40.00	ppm	-0.03
91) Perylene-d12	13.940	264	2232312	40.00	ppm	-0.03
101) 1,4-Dichlorobenzene-d4a	4.671	152	597130	40.00	ppm	-0.01
103) Acenaphthene-d10a	7.458	164	1211355	40.00	ppm	-0.02
105) Phenanthrene-d10a	9.159	188	2274902	40.00	ppm	-0.02
109) Chrysene-d12a	12.336	240	2153905	40.00	ppm	-0.02
111) Naphthalene-d8a	5.704	136	2420312	40.00	ppm	-0.02
113) Phenanthrene-d10b	9.159	188	2274902	40.00	ppm	-0.02
115) Chrysene-d12b	12.336	240	2153905	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.682	112	448287	21.21	ppm	-0.02
Spiked Amount	50.000		Recovery	=	42.42%	
8) Phenol-d5	4.398	99	444046	15.29	ppm	-0.02
Spiked Amount	50.000		Recovery	=	30.58%	
25) Nitrobenzene-d5	5.099	82	1025625	38.08	ppm	-0.02
Spiked Amount	50.000		Recovery	=	76.16%	
51) 2-Fluorobiphenyl	6.741	172	1700119	37.36	ppm	-0.03
Spiked Amount	50.000		Recovery	=	74.72%	
73) 2,4,6-Tribromophenol	8.346	330	219602	39.22	ppm	-0.03
Spiked Amount	50.000		Recovery	=	78.44%	
85) Terphenyl-d14	11.090	244	1680853	35.64	ppm	-0.03
Spiked Amount	50.000		Recovery	=	71.28%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						
53) Biphenyl	6.843	154	2802	0.05	ppm	85
80) Di-n-butylphthalate	9.902	149	2211	0.03	ppm	93
86) Butylbenzylphthalate	11.699	149	1473	0.04	ppm	# 60
87) Benzo[a]anthracene	12.336	228	6100	0.09	ppm	64
90) bis(2-Ethylhexyl)phtha...	12.421	149	108099	2.40	ppm	97
93) Benzo[b]fluoranthene	13.539	252	2984	0.04	ppm	73
94) Benzo[k]fluoranthene	13.561	252	2111	0.03	ppm	82
95) Benzo[a]pyrene	13.871	252	2527	0.04	ppm	72
98) Dibenz[a,h]anthracene	15.112	278	2230	0.04	ppm	81
100) Benzo[g,h,i]perylene	15.411	276	3651	0.06	ppm	95

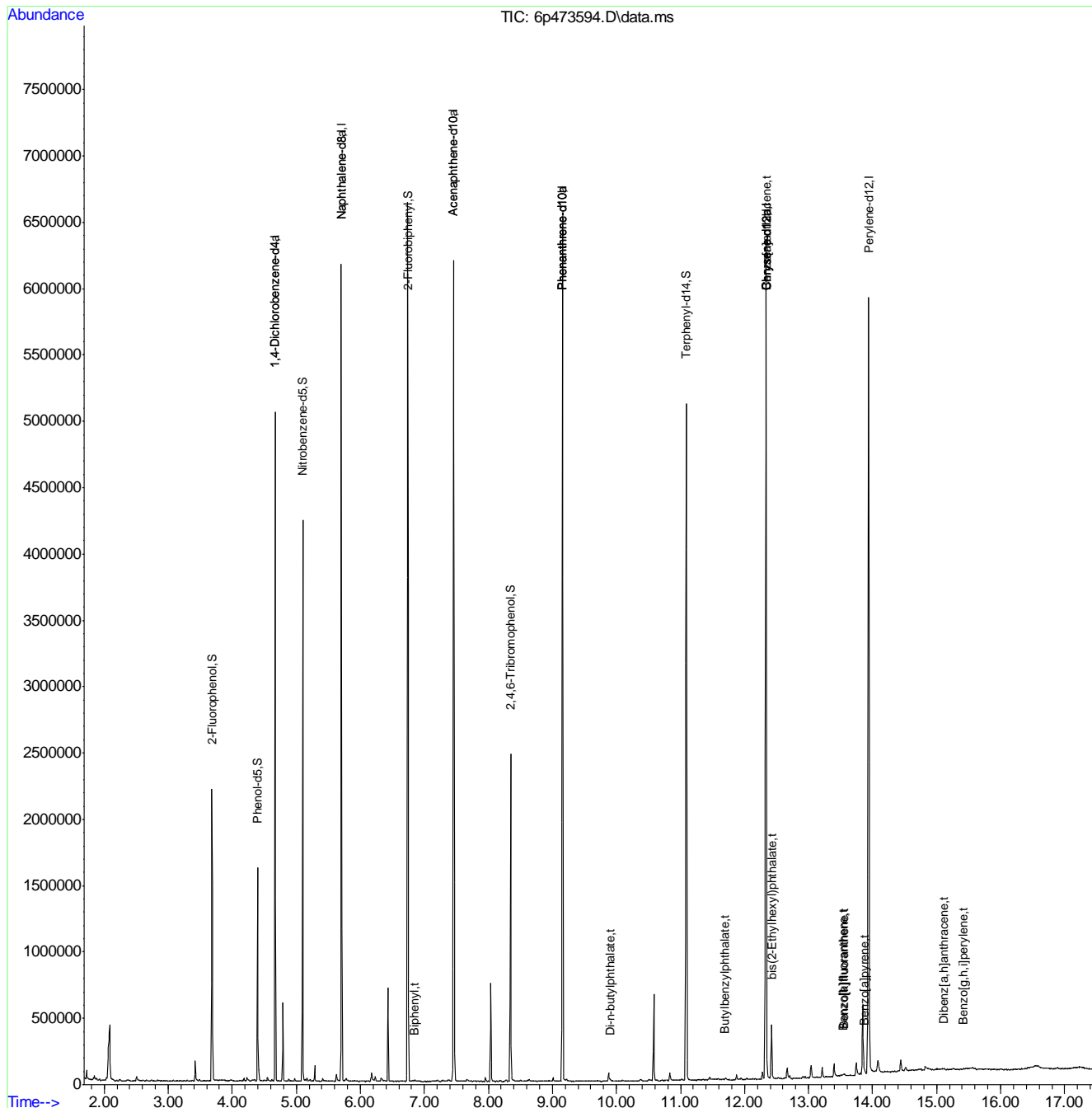
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.2.1
9

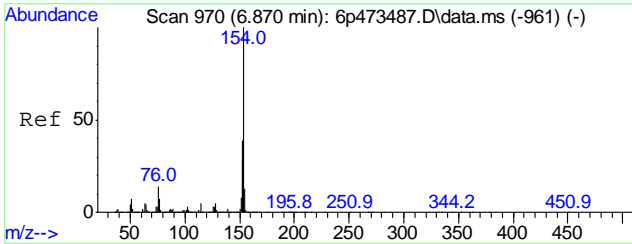
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473594.D
 Acq On : 8 Jun 2018 2:23 am
 Operator : georges
 Sample : op12443-mb1
 Misc : op12443,e6p2238,1000,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 08 12:28:00 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

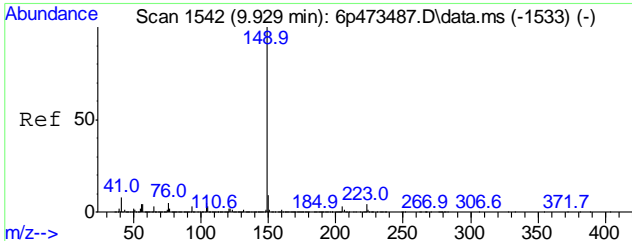
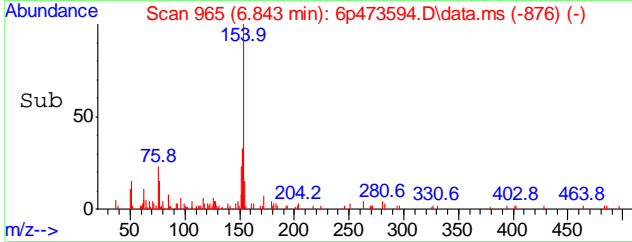
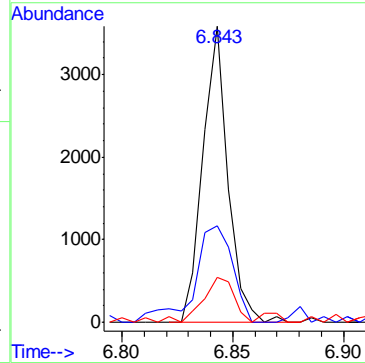
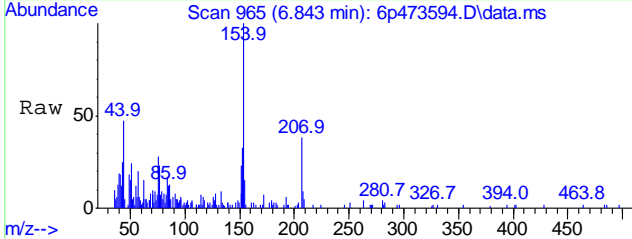


9.2.1
9



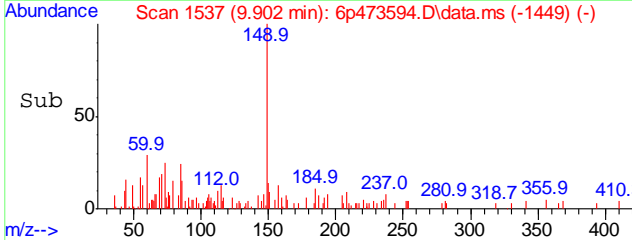
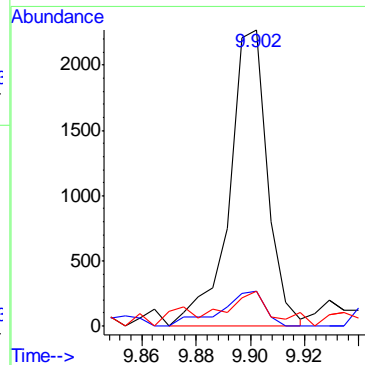
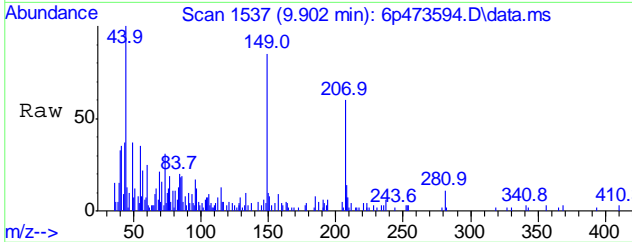
#53
 Biphenyl
 Concen: 0.05 ppm
 RT: 6.843 min Scan# 965
 Delta R.T. -0.026 min
 Lab File: 6p473594.D
 Acq: 8 Jun 2018 2:23 am

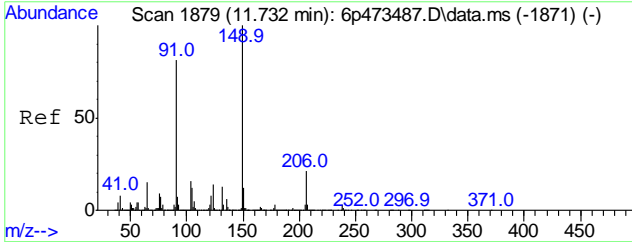
Tgt Ion	Resp	Lower	Upper
154	100		
153	27.6	9.5	69.5
155	14.2	0.0	43.2



#80
 Di-n-butylphthalate
 Concen: 0.03 ppm
 RT: 9.902 min Scan# 1537
 Delta R.T. -0.027 min
 Lab File: 6p473594.D
 Acq: 8 Jun 2018 2:23 am

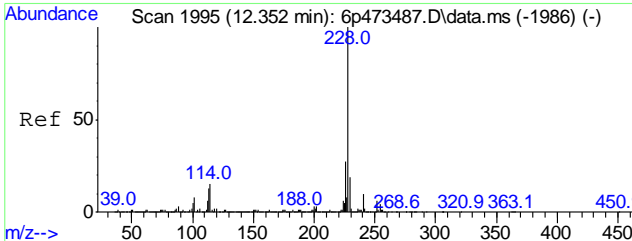
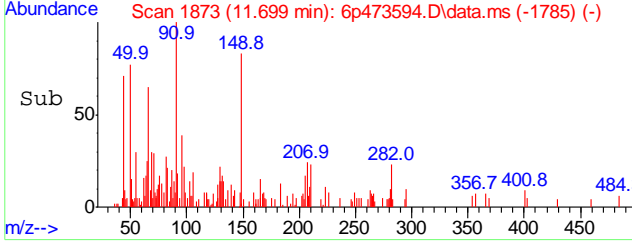
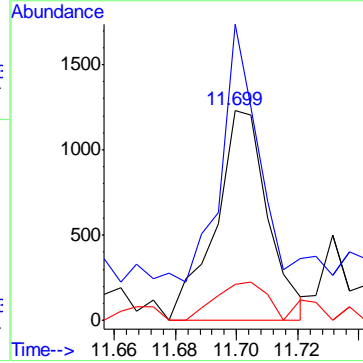
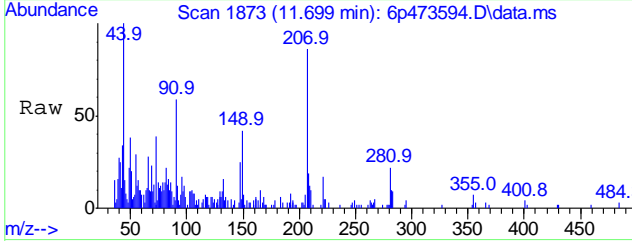
Tgt Ion	Resp	Lower	Upper
149	100		
150	12.0	0.0	39.4
104	7.0	0.0	35.1





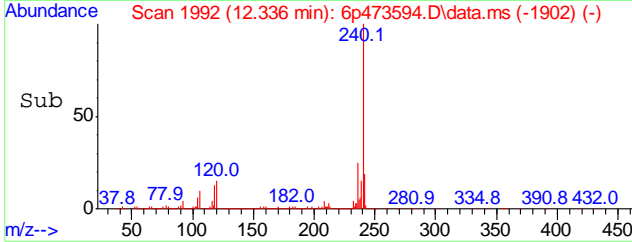
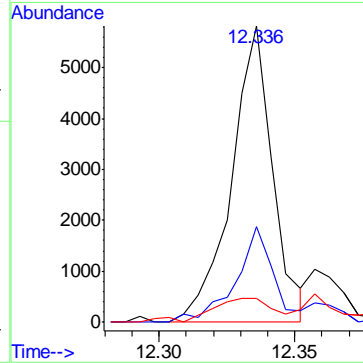
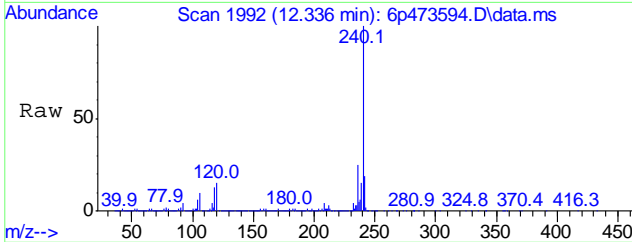
#86
 Butylbenzylphthalate
 Concen: 0.04 ppm
 RT: 11.699 min Scan# 1873
 Delta R.T. -0.032 min
 Lab File: 6p473594.D
 Acq: 8 Jun 2018 2:23 am

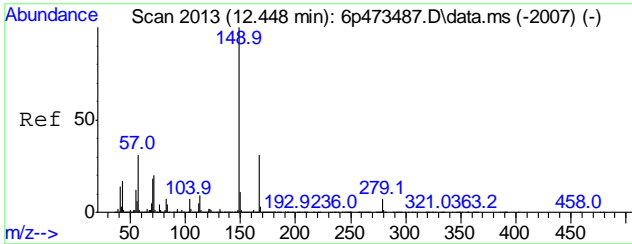
Tgt Ion	Resp	Lower	Upper
149	1473		
149	100		
91	121.8	50.6	110.6#
206	13.0	0.0	51.2



#87
 Benzo[a]anthracene
 Concen: 0.09 ppm
 RT: 12.336 min Scan# 1992
 Delta R.T. -0.016 min
 Lab File: 6p473594.D
 Acq: 8 Jun 2018 2:23 am

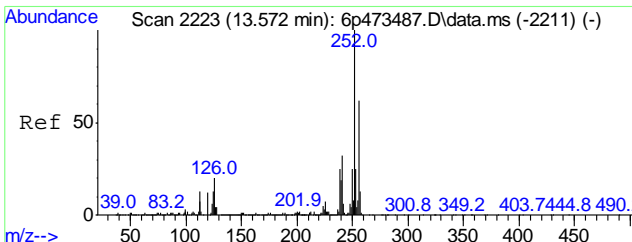
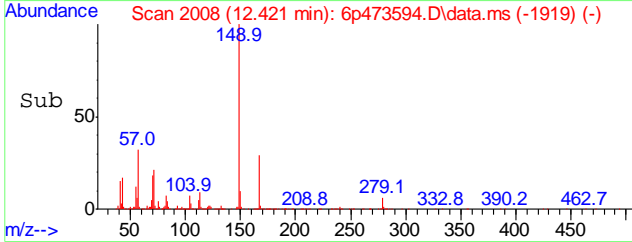
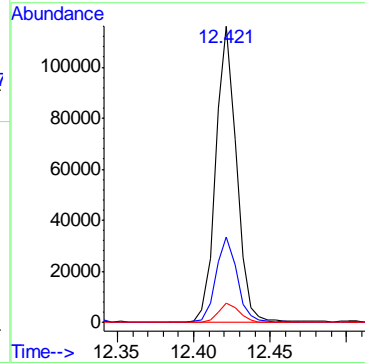
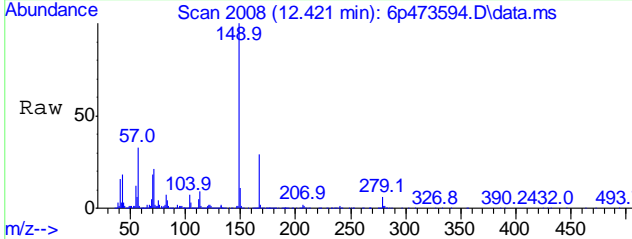
Tgt Ion	Resp	Lower	Upper
228	6100		
228	100		
229	32.1	0.0	49.2
226	5.4	0.0	56.9





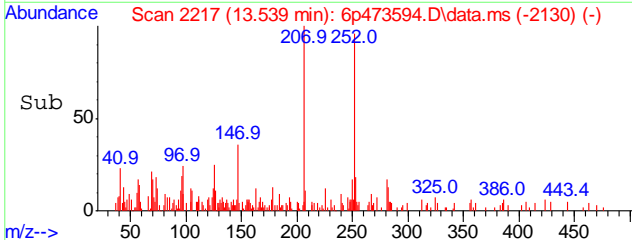
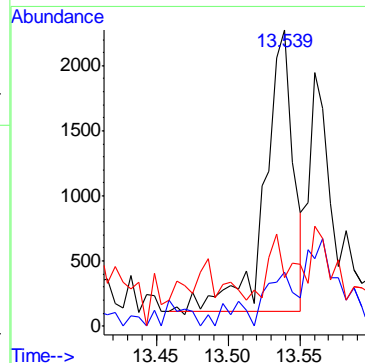
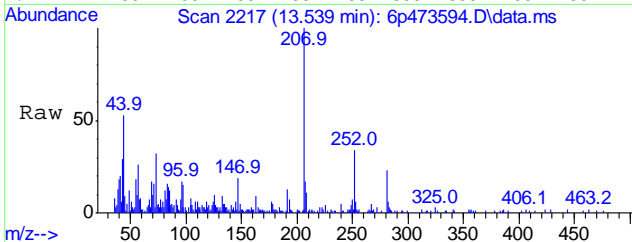
#90
 bis(2-Ethylhexyl)phthalate
 Concen: 2.40 ppm
 RT: 12.421 min Scan# 2008
 Delta R.T. -0.027 min
 Lab File: 6p473594.D
 Acq: 8 Jun 2018 2:23 am

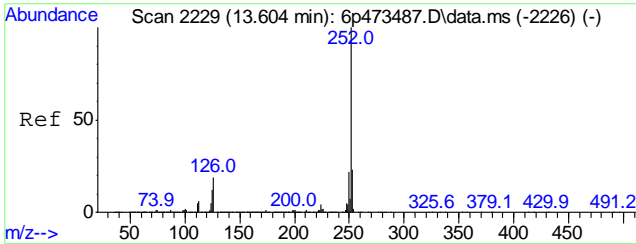
Tgt Ion	Ratio	Lower	Upper
149	100		
167	28.7	0.6	60.6
279	6.4	0.0	37.3



#93
 Benzo[b]fluoranthene
 Concen: 0.04 ppm
 RT: 13.539 min Scan# 2217
 Delta R.T. -0.032 min
 Lab File: 6p473594.D
 Acq: 8 Jun 2018 2:23 am

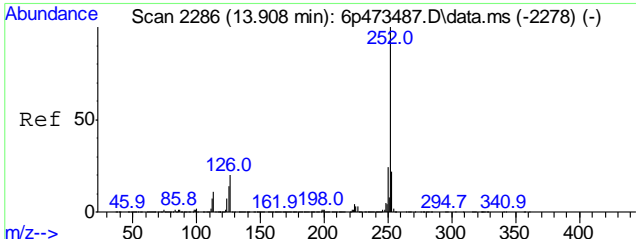
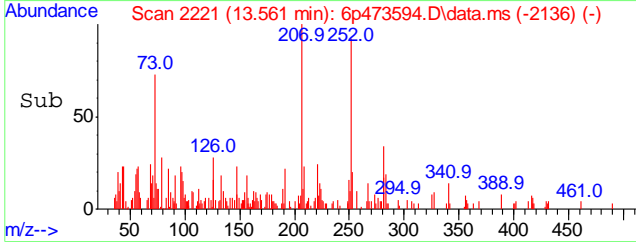
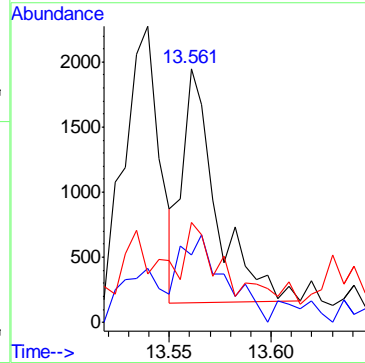
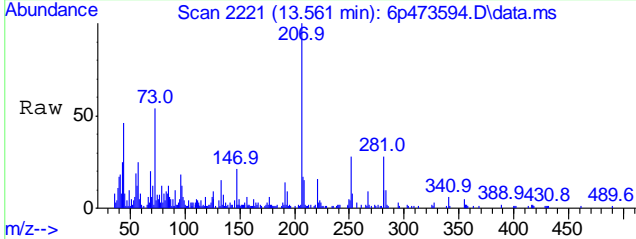
Tgt Ion	Ratio	Lower	Upper
252	100		
253	11.9	0.0	55.3
125	2.1	0.0	43.1





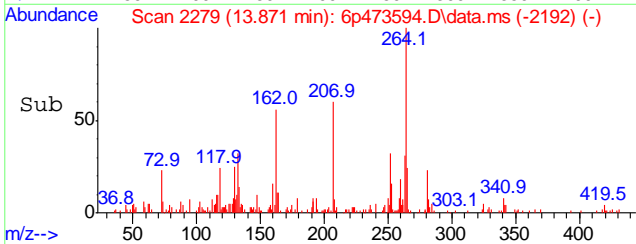
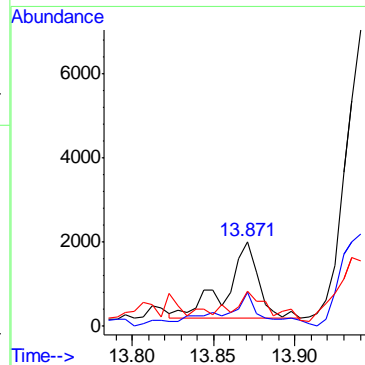
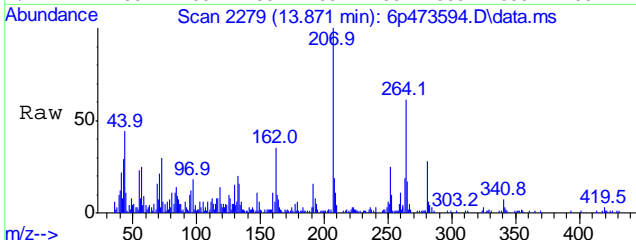
#94
 Benzo[k]fluoranthene
 Concen: 0.03 ppm
 RT: 13.561 min Scan# 2221
 Delta R.T. -0.043 min
 Lab File: 6p473594.D
 Acq: 8 Jun 2018 2:23 am

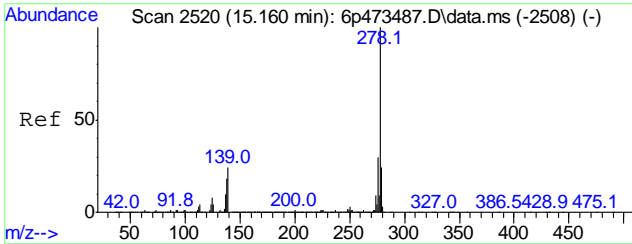
Tgt Ion	Ratio	Lower	Upper
252	100		
253	22.6	0.0	52.7
125	32.5	0.0	42.2



#95
 Benzo[a]pyrene
 Concen: 0.04 ppm
 RT: 13.871 min Scan# 2279
 Delta R.T. -0.037 min
 Lab File: 6p473594.D
 Acq: 8 Jun 2018 2:23 am

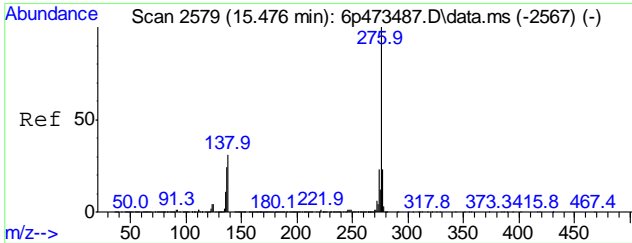
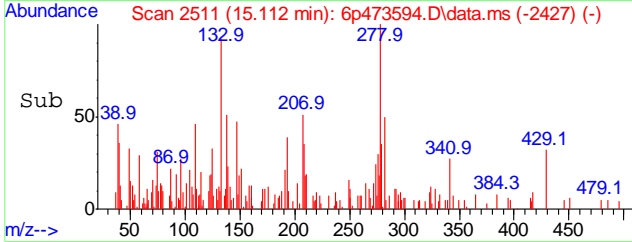
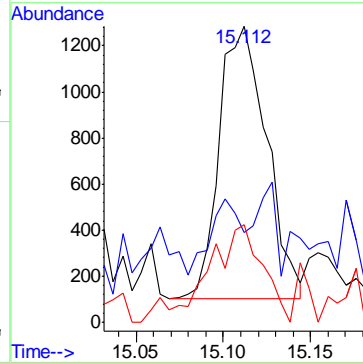
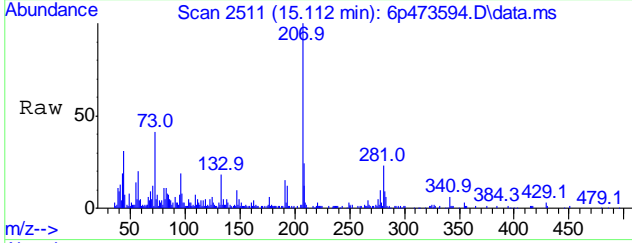
Tgt Ion	Ratio	Lower	Upper
252	100		
253	38.6	0.0	52.5
125	21.2	0.0	43.8





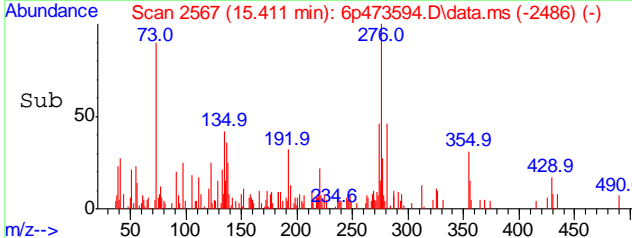
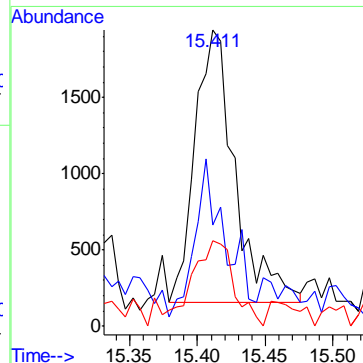
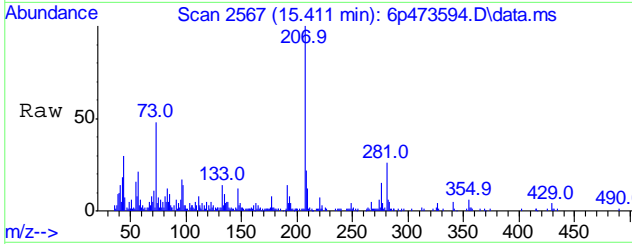
#98
 Dibenz[a,h]anthracene
 Concen: 0.04 ppm
 RT: 15.112 min Scan# 2511
 Delta R.T. -0.048 min
 Lab File: 6p473594.D
 Acq: 8 Jun 2018 2:23 am

Tgt Ion	Ratio	Lower	Upper
278	100		
139	5.5	0.0	53.8
279	23.6	0.0	54.3



#100
 Benzo[g,h,i]perylene
 Concen: 0.06 ppm
 RT: 15.411 min Scan# 2567
 Delta R.T. -0.064 min
 Lab File: 6p473594.D
 Acq: 8 Jun 2018 2:23 am

Tgt Ion	Ratio	Lower	Upper
276	100		
138	32.4	0.6	60.6
277	26.9	0.0	53.2



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473595.D
 Acq On : 8 Jun 2018 2:47 am
 Operator : georges
 Sample : opl2443-bs1
 Misc : opl2443,e6p2238,1000,,,1,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 08 12:30:28 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS, zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018

QLast Update : Thu Jun 07 11:19:34 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.671	152	511260	40.00	ppm	-0.02	
24) Naphthalene-d8	5.709	136	2101972	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.458	164	966750	40.00	ppm	-0.03	
69) Phenanthrene-d10	9.159	188	1748522	40.00	ppm	-0.03	
83) Chrysene-d12	12.336	240	1564411	40.00	ppm	-0.03	
91) Perylene-d12	13.935	264	1593161	40.00	ppm	-0.03	
101) 1,4-Dichlorobenzene-d4a	4.671	152	511260	40.00	ppm	-0.01	
103) Acenaphthene-d10a	7.458	164	966750	40.00	ppm	-0.02	
105) Phenanthrene-d10a	9.159	188	1748522	40.00	ppm	-0.02	
109) Chrysene-d12a	12.336	240	1564411	40.00	ppm	-0.02	
111) Naphthalene-d8a	5.709	136	2101972	40.00	ppm	-0.01	
113) Phenanthrene-d10b	9.159	188	1748522	40.00	ppm	-0.02	
115) Chrysene-d12b	12.336	240	1564382	40.00	ppm	-0.02	
System Monitoring Compounds							
5) 2-Fluorophenol	3.687	112	495300	27.38	ppm	-0.01	
Spiked Amount	50.000		Recovery	=	54.76%		
8) Phenol-d5	4.399	99	480367	19.32	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	38.64%		
25) Nitrobenzene-d5	5.099	82	925649	39.58	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	79.16%		
51) 2-Fluorobiphenyl	6.741	172	1522245	41.91	ppm	-0.03	
Spiked Amount	50.000		Recovery	=	83.82%		
73) 2,4,6-Tribromophenol	8.346	330	183322	42.60	ppm	-0.03	
Spiked Amount	50.000		Recovery	=	85.20%		
85) Terphenyl-d14	11.090	244	1447496	42.26	ppm	-0.03	
Spiked Amount	50.000		Recovery	=	84.52%		
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm		
107) o-terphenyl	0.000	230	0d	0.00	ppm		
Target Compounds							
2) 1,4-Dioxane	2.227	88	194204	20.36	ppm		Qvalue 95
3) Pyridine	2.543	79	480574	20.04	ppm		99
4) N-Nitrosodimethylamine	2.505	74	326659	22.74	ppm		98
6) Indene	4.869	116	1250791	40.31	ppm		99
7) Cumene	4.078	105	1604404	32.96	ppm		100
9) Phenol	4.409	94	562999	20.53	ppm		98
10) Aniline	4.420	93	776464	25.45	ppm		99
11) bis(2-Chloroethyl)ether	4.468	93	851437	43.97	ppm		99
12) 2-Chlorophenol	4.516	128	755360	38.70	ppm		96
13) Decane	4.554	43	592053	27.21	ppm		97
14) 1,3-Dichlorobenzene	4.629	146	706890	33.67	ppm		98
15) 1,4-Dichlorobenzene	4.682	146	721085	33.63	ppm		98
16) Benzyl alcohol	4.773	108	496494	37.29	ppm		94
17) 1,2-Dichlorobenzene	4.800	146	691952	34.64	ppm		98
18) Acetophenone	4.982	105	1005206	42.58	ppm		99
19) 2-Methylphenol	4.864	108	609276	34.00	ppm		98
20) 2,2'-oxybis(1-Chloropr...	4.880	121	258511	43.39	ppm	#	88
21) 3&4-Methylphenol	4.982	108	592062	33.96	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473595.D
 Acq On : 8 Jun 2018 2:47 am
 Operator : georges
 Sample : opl2443-bs1
 Misc : opl2443,e6p2238,1000,,,1,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 08 12:30:28 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018

QLast Update : Thu Jun 07 11:19:34 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	4.982	70	564978	44.06	ppm	99
23) Hexachloroethane	5.067	201	194034	32.45	ppm	94
26) Nitrobenzene	5.115	77	903586	39.08	ppm	99
27) Quinoline	6.030	129	1374358	33.88	ppm	99
28) Isophorone	5.308	82	1608214	40.15	ppm	98
29) 2-Nitrophenol	5.377	139	428556	42.39	ppm	98
30) 2,4-Dimethylphenol	5.410	107	758130	42.04	ppm	99
31) Benzoic acid	5.490	105	341712	22.42	ppm	99
32) bis(2-Chloroethoxy)met...	5.490	93	950264	42.34	ppm	98
33) 2,4-Dichlorophenol	5.581	162	603681	39.01	ppm	99
34) 2,6-Dichlorophenol	5.779	162	601972	39.72	ppm	94
36) 1,2,4-Trichlorobenzene	5.656	180	526878	32.41	ppm	97
38) Naphthalene	5.725	128	2070973	35.34	ppm	100
39) 4-Chloroaniline	5.773	127	505250	20.07	ppm	98
40) 2,3-Dichloroaniline	6.650	161	647520	33.59	ppm	98
41) Caprolactam	6.083	55	111512	10.66	ppm	96
42) Hexachlorobutadiene	5.843	225	259260	32.08	ppm	96
43) 4-Chloro-3-methylphenol	6.223	107	684936	39.18	ppm	99
44) 2-Methylnaphthalene	6.372	141	1087312	33.65	ppm	97
45) 1-Methylnaphthalene	6.469	141	1151738	33.90	ppm	99
46) Dimethylnaphthalene	7.009	156	1240428	36.14	ppm	99
48) Hexachlorocyclopentadiene	6.538	237	403154	65.37	ppm	98
49) 2,4,6-Trichlorophenol	6.656	196	394320	45.11	ppm	99
50) 2,4,5-Trichlorophenol	6.693	196	411081	44.39	ppm	98
52) 2-Chloronaphthalene	6.864	162	1227150	40.80	ppm	99
53) Biphenyl	6.843	154	1724532	40.00	ppm	100
54) 2-Nitroaniline	6.971	65	482799	47.26	ppm	90
55) Dimethylphthalate	7.175	163	1525257	47.05	ppm	99
56) Acenaphthylene	7.303	152	2151754	43.55	ppm	100
57) 2,6-Dinitrotoluene	7.228	165	341660	49.83	ppm	96
58) 3-Nitroaniline	7.410	138	296304	33.12	ppm	99
59) Acenaphthene	7.496	153	1384919	42.91	ppm	96
60) 2,4-Dinitrophenol	7.528	184	335799	99.75	ppm #	63
61) 4-Nitrophenol	7.603	109	123275	27.59	ppm	98
62) Dibenzofuran	7.688	168	1776934	40.41	ppm	99
63) 2,4-Dinitrotoluene	7.672	165	458714	47.11	ppm	99
64) 2,3,4,6-Tetrachlorophenol	7.827	232	338646	45.23	ppm	96
65) Diethylphthalate	7.966	149	1532605	47.35	ppm	99
66) Fluorene	8.073	166	1514995	43.29	ppm	99
67) 4-Chlorophenyl-phenyle...	8.079	204	625506	42.30	ppm	98
68) 4-Nitroaniline	8.100	138	422204	45.93	ppm	96
70) 4,6-Dinitro-2-methylph...	8.137	198	248706	46.92	ppm	99
71) n-Nitrosodiphenylamine	8.218	169	1087019	39.76	ppm	99
72) 1,2-Diphenylhydrazine	8.260	77	1779773	42.77	ppm	99
74) 4-Bromophenyl-phenylether	8.645	248	379574	40.32	ppm	96
75) Hexachlorobenzene	8.715	284	424578	41.66	ppm	97
76) Pentachlorophenol	8.945	266	316073	47.71	ppm	98
77) Phenanthrene	9.186	178	2182900	41.28	ppm	98
78) Anthracene	9.250	178	2174317	41.68	ppm	100
79) Carbazole	9.442	167	2166912	43.26	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473595.D
 Acq On : 8 Jun 2018 2:47 am
 Operator : georges
 Sample : op12443-bs1
 Misc : op12443,e6p2238,1000,,,1,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 08 12:30:28 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) Di-n-butylphthalate	9.902	149	2528111	43.79	ppm	100
81) Fluoranthene	10.608	202	2225841	42.24	ppm	99
82) Octadecane	9.089	57	924613	33.02	ppm	99
84) Pyrene	10.876	202	2276601	42.20	ppm	100
86) Butylbenzylphthalate	11.705	149	1108154	46.51	ppm	98
87) Benzo[a]anthracene	12.325	228	2008474	41.62	ppm	99
88) 3,3'-Dichlorobenzidine	12.315	252	961189	57.69	ppm	100
89) Chrysene	12.368	228	1983662	41.93	ppm	99
90) bis(2-Ethylhexyl)phtha...	12.422	149	1603160	48.97	ppm	99
92) Di-n-octylphthalate	13.165	149	2561052	46.74	ppm	99
93) Benzo[b]fluoranthene	13.539	252	1993190	40.04	ppm	97
94) Benzo[k]fluoranthene	13.572	252	1983283	44.11	ppm	98
95) Benzo[a]pyrene	13.876	252	1709634	40.36	ppm	98
96) Indeno[1,2,3-cd]pyrene	15.101	276	2047326	39.10	ppm	98
98) Dibenz[a,h]anthracene	15.123	278	1779273	39.51	ppm	98
99) 7,12-Dimethylbenz(a)an...	13.539	256	728672	37.03	ppm	98
100) Benzo[g,h,i]perylene	15.428	276	1714102	41.28	ppm	99
102) Benzaldehyde	4.340	105	478586	29.60	ppm	98
104) 1,2,4,5-Tetrachloroben...	6.543	216	491266	34.90	ppm	99
108) Atrazine	8.859	215	207250	44.39	ppm #	83
110) benzidine	10.780	184	156039	5.39	ppm	98
114) Pentachloronitrobenzene	8.966	295	67597	42.06	ppm	98

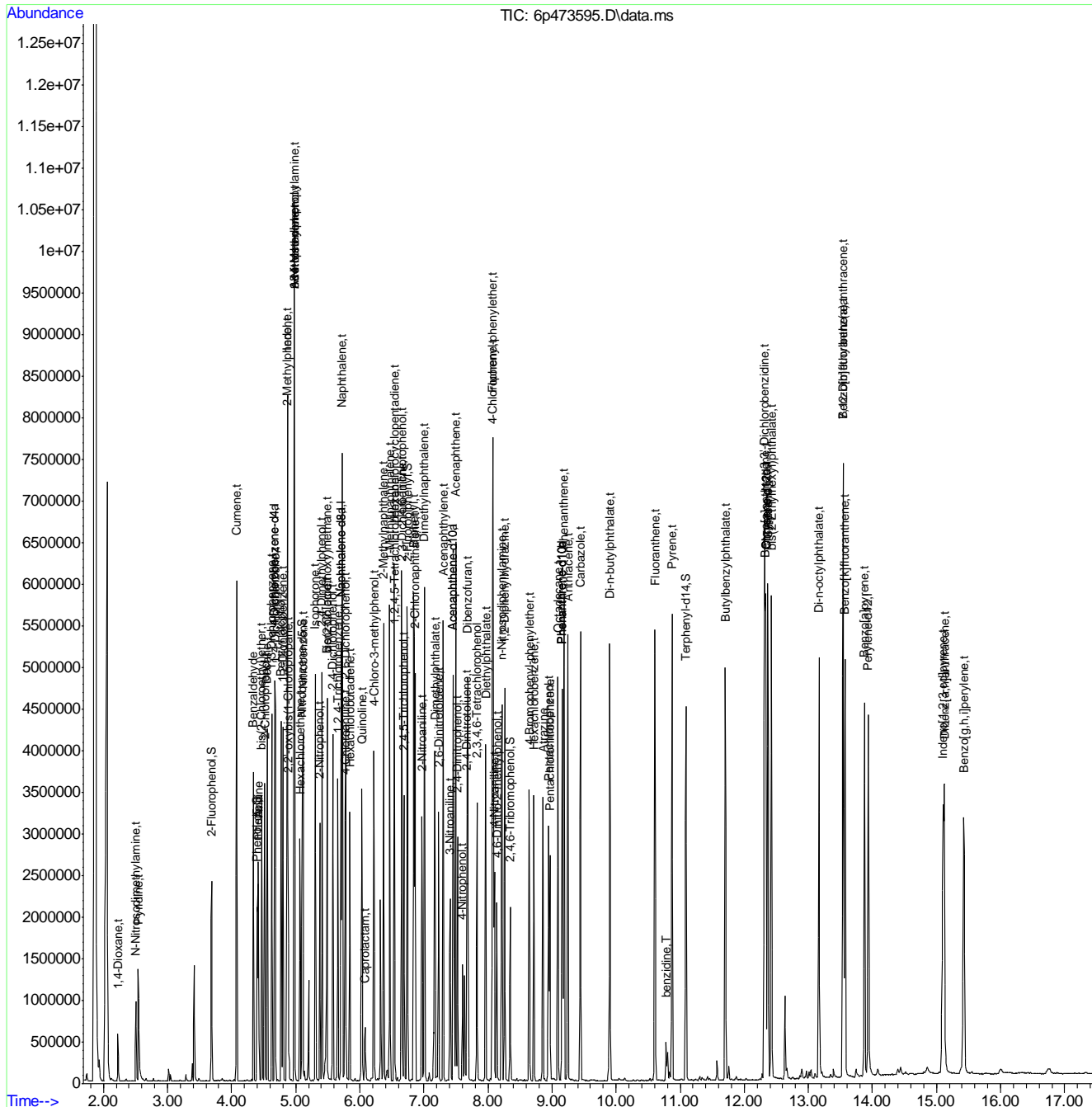
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.3.1
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
Data File : 6p473595.D
Acq On : 8 Jun 2018 2:47 am
Operator : georges
Sample : op12443-bs1
Misc : op12443,e6p2238,1000,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 08 12:30:28 2018
Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
QLast Update : Thu Jun 07 11:19:34 2018
Response via : Initial Calibration



9.3.1
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473596.D
 Acq On : 8 Jun 2018 3:12 am
 Operator : georges
 Sample : opl2443-bsd
 Misc : opl2443,e6p2238,1000,,,1,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 08 12:31:38 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018

QLast Update : Thu Jun 07 11:19:34 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.671	152	495042	40.00	ppm	-0.02
24) Naphthalene-d8	5.709	136	2022949	40.00	ppm	-0.02
47) Acenaphthene-d10	7.458	164	965940	40.00	ppm	-0.03
69) Phenanthrene-d10	9.159	188	1708788	40.00	ppm	-0.03
83) Chrysene-d12	12.336	240	1588747	40.00	ppm	-0.03
91) Perylene-d12	13.935	264	1618225	40.00	ppm	-0.03
101) 1,4-Dichlorobenzene-d4a	4.671	152	495042	40.00	ppm	-0.01
103) Acenaphthene-d10a	7.458	164	965940	40.00	ppm	-0.02
105) Phenanthrene-d10a	9.159	188	1708788	40.00	ppm	-0.02
109) Chrysene-d12a	12.336	240	1588747	40.00	ppm	-0.02
111) Naphthalene-d8a	5.709	136	2022949	40.00	ppm	-0.01
113) Phenanthrene-d10b	9.159	188	1708788	40.00	ppm	-0.02
115) Chrysene-d12b	12.336	240	1588813	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.687	112	418730	23.90	ppm	-0.01
Spiked Amount	50.000		Recovery	=	47.80%	
8) Phenol-d5	4.399	99	411848	17.11	ppm	-0.02
Spiked Amount	50.000		Recovery	=	34.22%	
25) Nitrobenzene-d5	5.099	82	875025	38.87	ppm	-0.02
Spiked Amount	50.000		Recovery	=	77.74%	
51) 2-Fluorobiphenyl	6.741	172	1443494	39.78	ppm	-0.03
Spiked Amount	50.000		Recovery	=	79.56%	
73) 2,4,6-Tribromophenol	8.351	330	171088	40.68	ppm	-0.02
Spiked Amount	50.000		Recovery	=	81.36%	
85) Terphenyl-d14	11.090	244	1326791	38.15	ppm	-0.03
Spiked Amount	50.000		Recovery	=	76.30%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
107) o-terphenyl	0.000	230	0d	0.00	ppm	
Target Compounds						
2) 1,4-Dioxane	2.222	88	170485	18.46	ppm	99
3) Pyridine	2.543	79	420008	18.09	ppm	99
4) N-Nitrosodimethylamine	2.505	74	290804	20.91	ppm	98
6) Indene	4.869	116	1199502	39.92	ppm	99
7) Cumene	4.078	105	1525545	32.37	ppm	99
9) Phenol	4.409	94	482547	18.17	ppm	97
10) Aniline	4.420	93	648528	21.96	ppm	98
11) bis(2-Chloroethyl)ether	4.468	93	807710	43.07	ppm	99
12) 2-Chlorophenol	4.511	128	682630	36.12	ppm	97
13) Decane	4.554	43	566187	26.88	ppm	97
14) 1,3-Dichlorobenzene	4.629	146	671973	33.05	ppm	99
15) 1,4-Dichlorobenzene	4.682	146	701852	33.81	ppm	97
16) Benzyl alcohol	4.773	108	445917	34.59	ppm	97
17) 1,2-Dichlorobenzene	4.800	146	674457	34.87	ppm	98
18) Acetophenone	4.976	105	983622	43.12	ppm	94
19) 2-Methylphenol	4.864	108	559700	32.25	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.880	121	245864	42.62	ppm	# 89
21) 3&4-Methylphenol	4.976	108	533806	31.27	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473596.D
 Acq On : 8 Jun 2018 3:12 am
 Operator : georges
 Sample : opl2443-bsd
 Misc : opl2443,e6p2238,1000,,,1,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 08 12:31:38 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018

QLast Update : Thu Jun 07 11:19:34 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	4.982	70	557511	45.05	ppm	98
23) Hexachloroethane	5.067	201	184680	31.90	ppm	96
26) Nitrobenzene	5.115	77	866714	38.95	ppm	98
27) Quinoline	6.030	129	1279522	32.77	ppm	99
28) Isophorone	5.308	82	1553571	40.30	ppm	97
29) 2-Nitrophenol	5.377	139	408845	42.02	ppm	97
30) 2,4-Dimethylphenol	5.409	107	730138	42.07	ppm	98
31) Benzoic acid	5.484	105	285038	19.43	ppm	96
32) bis(2-Chloroethoxy)met...	5.490	93	925060	42.83	ppm	99
33) 2,4-Dichlorophenol	5.581	162	566983	38.07	ppm	99
34) 2,6-Dichlorophenol	5.779	162	585905	40.17	ppm	96
36) 1,2,4-Trichlorobenzene	5.656	180	512668	32.77	ppm	99
38) Naphthalene	5.725	128	1993915	35.36	ppm	100
39) 4-Chloroaniline	5.768	127	488730	20.17	ppm	97
40) 2,3-Dichloroaniline	6.650	161	634572	34.21	ppm	98
41) Caprolactam	6.078	55	98577	9.79	ppm	97
42) Hexachlorobutadiene	5.843	225	246269	31.67	ppm	97
43) 4-Chloro-3-methylphenol	6.222	107	638995	37.98	ppm	98
44) 2-Methylnaphthalene	6.372	141	1004827	32.32	ppm	98
45) 1-Methylnaphthalene	6.468	141	1120542	34.27	ppm	100
46) Dimethylnaphthalene	7.009	156	1187877	35.96	ppm	100
48) Hexachlorocyclopentadiene	6.538	237	372993	60.53	ppm	97
49) 2,4,6-Trichlorophenol	6.656	196	379407	43.44	ppm	96
50) 2,4,5-Trichlorophenol	6.693	196	408450	44.14	ppm	99
52) 2-Chloronaphthalene	6.864	162	1181932	39.33	ppm	99
53) Biphenyl	6.843	154	1651070	38.32	ppm	99
54) 2-Nitroaniline	6.971	65	461519	45.21	ppm	90
55) Dimethylphthalate	7.175	163	1451218	44.80	ppm	99
56) Acenaphthylene	7.303	152	2040637	41.33	ppm	100
57) 2,6-Dinitrotoluene	7.228	165	322666	47.10	ppm	98
58) 3-Nitroaniline	7.410	138	275879	30.86	ppm	96
59) Acenaphthene	7.495	153	1315464	40.79	ppm	97
60) 2,4-Dinitrophenol	7.528	184	323335	96.49	ppm #	60
61) 4-Nitrophenol	7.602	109	109066	24.43	ppm	94
62) Dibenzofuran	7.688	168	1670505	38.02	ppm	99
63) 2,4-Dinitrotoluene	7.677	165	443627	45.51	ppm	90
64) 2,3,4,6-Tetrachlorophenol	7.827	232	323045	43.19	ppm	97
65) Diethylphthalate	7.966	149	1439566	44.52	ppm	99
66) Fluorene	8.073	166	1446274	41.36	ppm	100
67) 4-Chlorophenyl-phenyle...	8.078	204	591770	40.06	ppm	97
68) 4-Nitroaniline	8.100	138	392820	42.77	ppm	95
70) 4,6-Dinitro-2-methylph...	8.137	198	232881	45.10	ppm	97
71) n-Nitrosodiphenylamine	8.217	169	1032341	38.64	ppm	100
72) 1,2-Diphenylhydrazine	8.260	77	1708730	42.02	ppm	98
74) 4-Bromophenyl-phenylether	8.645	248	354121	38.49	ppm	98
75) Hexachlorobenzene	8.715	284	399463	40.11	ppm	98
76) Pentachlorophenol	8.945	266	301806	46.61	ppm	97
77) Phenanthrene	9.186	178	2064263	39.95	ppm	98
78) Anthracene	9.244	178	2066523	40.53	ppm	99
79) Carbazole	9.442	167	2047643	41.83	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473596.D
 Acq On : 8 Jun 2018 3:12 am
 Operator : georges
 Sample : op12443-bsd
 Misc : op12443,e6p2238,1000,,,1,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 08 12:31:38 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018

QLast Update : Thu Jun 07 11:19:34 2018

Response via : Initial Calibration

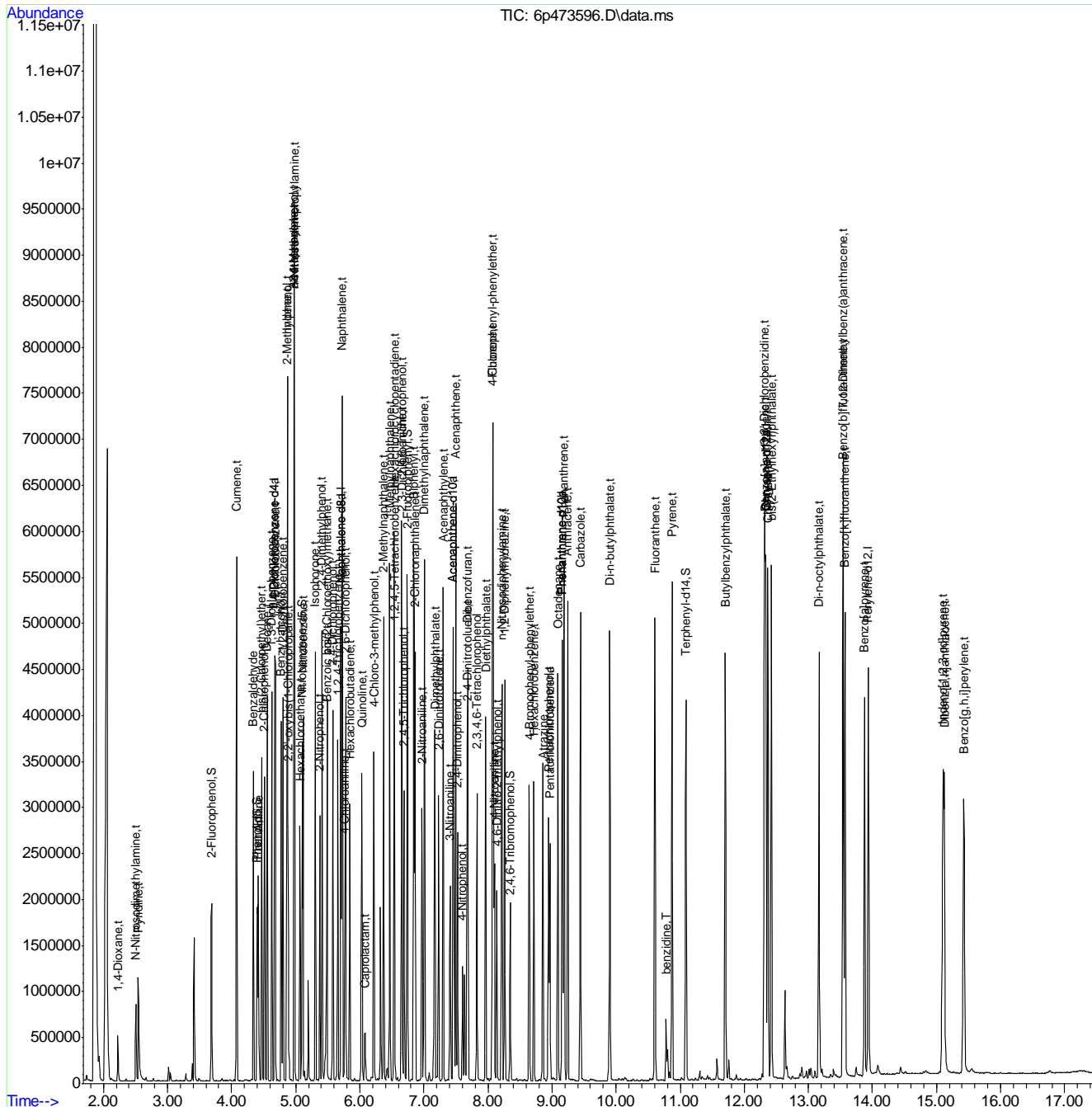
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) Di-n-butylphthalate	9.902	149	2413173	42.78	ppm	99
81) Fluoranthene	10.608	202	2110530	40.98	ppm	99
82) Octadecane	9.089	57	832298	30.41	ppm	99
84) Pyrene	10.876	202	2189666	39.96	ppm	99
86) Butylbenzylphthalate	11.705	149	1047981	43.31	ppm	97
87) Benzo[a]anthracene	12.325	228	1950867	39.80	ppm	99
88) 3,3'-Dichlorobenzidine	12.315	252	919832	54.36	ppm	100
89) Chrysene	12.368	228	1910760	39.77	ppm	98
90) bis(2-Ethylhexyl)phtha...	12.422	149	1508367	45.37	ppm	99
92) Di-n-octylphthalate	13.165	149	2384092	42.84	ppm	99
93) Benzo[b]fluoranthene	13.545	252	1908601	37.74	ppm	98
94) Benzo[k]fluoranthene	13.571	252	1872390	41.00	ppm	99
95) Benzo[a]pyrene	13.876	252	1651657	38.38	ppm	97
96) Indeno[1,2,3-cd]pyrene	15.101	276	1991436	37.44	ppm	96
98) Dibenz[a,h]anthracene	15.123	278	1710182	37.39	ppm	99
99) 7,12-Dimethylbenz(a)an...	13.539	256	629865	31.51	ppm	97
100) Benzo[g,h,i]perylene	15.427	276	1678124	39.79	ppm	99
102) Benzaldehyde	4.340	105	432598	27.63	ppm	98
104) 1,2,4,5-Tetrachloroben...	6.543	216	470584	33.45	ppm	99
108) Atrazine	8.859	215	195659	42.89	ppm #	83
110) benzidine	10.780	184	237727	7.40	ppm	97
114) Pentachloronitrobenzene	8.966	295	64391	40.99	ppm	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
Data File : 6p473596.D
Acq On : 8 Jun 2018 3:12 am
Operator : georges
Sample : op12443-bsd
Misc : op12443,e6p2238,1000,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 08 12:31:38 2018
Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
QLast Update : Thu Jun 07 11:19:34 2018
Response via : Initial Calibration

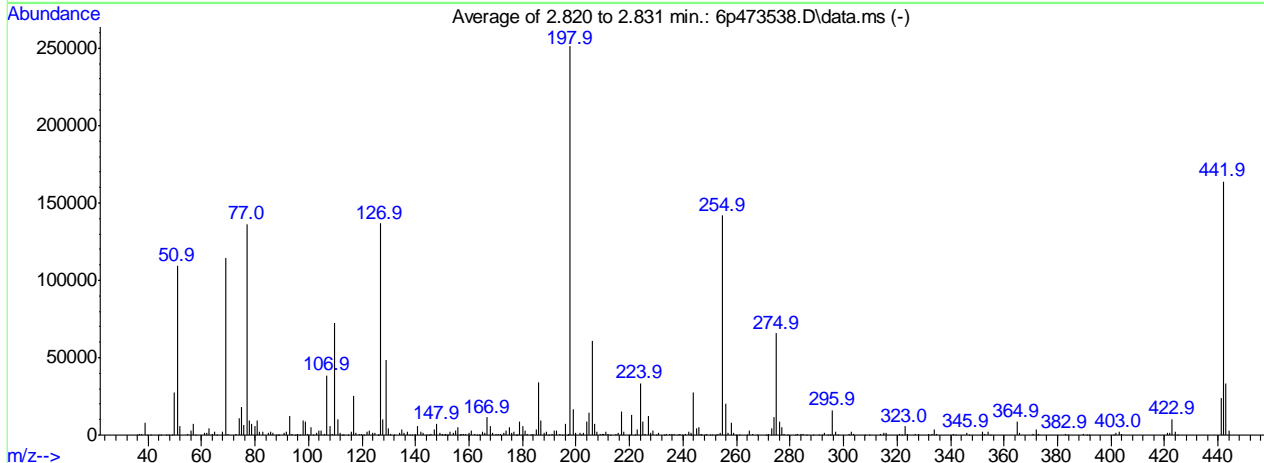
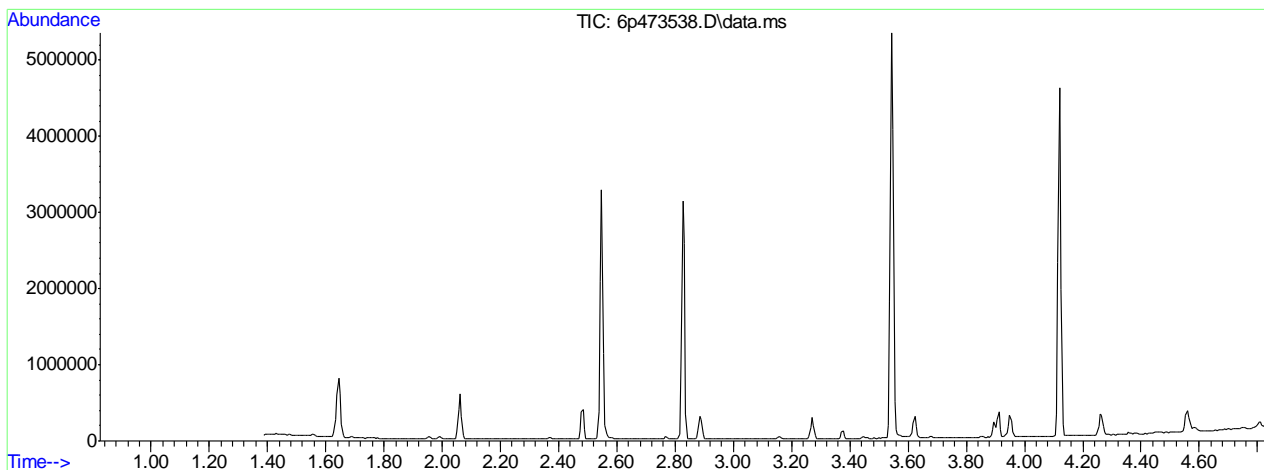


9.3.2
9

DFTPP

Data File : C:\msdchem\1\DATA\E6P2235\6p473538.D Vial: 1
 Acq On : 6 Jun 2018 12:33 pm Operator: christc2
 Sample : dftpp Inst : MS6P
 Misc : op8717,e6p2235,1000,,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 269, 270, 271; Background Corrected with Scan 265

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result
51	198	30	60	43.5	109183	PASS
68	69	0.00	2	1.9	2113	PASS
69	198	0.00	100	45.5	114144	PASS
70	69	0.00	2	0.4	504	PASS
127	198	40	60	54.5	136840	PASS
197	198	0.00	1	0.3	787	PASS
198	198	100	100	100.0	251104	PASS
199	198	5	9	6.5	16339	PASS
275	198	10	30	26.2	65797	PASS
365	198	1	100	3.4	8602	PASS
441	443	0.10	100	72.1	23821	PASS
442	198	40	100	65.2	163832	PASS
443	442	17	23	20.2	33038	PASS

9.4.1
9

Average of 2.820 to 2.831 min.: 6p473538.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.80	166	49.95	27797	64.95	2320	78.90	7574
36.85	513	50.90	109183	65.90	114	79.90	6100
37.85	886	51.95	5526	67.90	2113	80.90	9638
38.90	8105	54.90	543	68.90	114144	81.85	2384
39.85	289	55.90	2868	69.90	504	82.90	1973
40.90	356	56.90	7599	72.90	812	84.90	1270
43.90	65	57.85	313	73.90	11171	85.80	1917
44.85	84	60.95	1313	74.90	17852	86.85	1190
46.80	69	61.95	1553	75.95	6345	87.80	253
47.80	38	62.90	4627	76.95	136508	88.70	142
48.90	30	63.90	662	77.95	9415	88.90	117

Average of 2.820 to 2.831 min.: 6p473538.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
90.90	1784	101.85	301	112.70	180	123.90	1666
91.90	2212	102.90	1522	112.90	233	124.90	1813
92.90	12318	103.90	3186	114.80	219	125.90	313
93.85	1063	104.90	2764	115.90	2020	126.10	297
95.00	249	105.95	961	116.90	25673	126.90	136840
95.85	822	106.90	38418	117.85	1712	127.90	10006
96.90	113	107.90	6115	118.85	438	128.90	48538
97.90	9396	108.90	1057	119.95	562	129.90	4230
98.90	8425	109.90	72736	120.80	131	130.85	724
99.85	784	110.90	10013	121.90	2164	131.95	336
100.90	4762	111.90	1215	122.90	3023	133.85	1261

Average of 2.820 to 2.831 min.: 6p473538.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
134.90	3929	145.90	983	153.95	1338	163.95	266
135.90	1704	146.90	3324	154.90	3217	164.90	1911
136.90	2243	147.90	7179	155.90	5318	165.95	1716
137.80	328	148.95	1453	156.80	166	166.90	11595
138.80	259	149.80	122	156.95	839	167.90	6040
139.95	475	149.95	489	157.95	902	168.95	1277
140.90	5514	150.80	178	158.85	751	169.90	488
141.90	2143	151.00	752	159.85	1709	170.85	425
142.90	1383	151.50	243	160.90	3036	171.85	932
143.95	319	152.00	274	161.90	976	172.90	1320
144.90	352	152.90	1872	162.90	181	173.95	2691

Average of 2.820 to 2.831 min.: 6p473538.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
174.90	4869	184.95	3803	195.90	7064	206.00	60826
175.90	1777	185.90	34339	196.90	331	206.95	7379
176.90	2045	186.95	9570	197.10	787	207.90	2255
177.80	269	187.95	1277	197.90	251104	208.90	757
178.00	316	188.95	1942	198.90	16339	209.90	538
178.90	8380	189.85	325	199.95	1418	210.40	501
179.95	5724	190.95	1088	201.45	1163	211.00	2423
180.95	2972	191.90	2948	202.00	107	211.95	424
181.85	568	192.90	3204	202.85	1376	213.00	117
182.85	362	193.85	878	203.90	8514	214.90	487
183.90	535	194.95	383	204.90	14292	215.90	1345

Average of 2.820 to 2.831 min.: 6p473538.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
216.90	15526	228.90	2804	240.90	766	249.90	117
217.90	2249	229.85	326	241.95	2000	250.90	179
219.80	133	230.90	1358	242.80	203	252.00	209
220.90	13349	232.85	253	243.00	1522	252.85	687

221.90	222	233.90	596	244.00	27890	253.95	1232
222.90	3635	234.90	1064	244.95	4069	254.90	141760
223.95	33576	235.85	539	245.90	4992	255.95	20113
224.95	8602	236.90	1018	246.70	111	256.90	1702
225.95	909	238.00	117	246.90	1002	257.90	7903
226.90	12258	238.85	475	247.90	148	258.90	1260
227.85	1732	239.80	369	248.85	965	259.80	177

Average of 2.820 to 2.831 min.: 6p473538.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
260.90	317	276.90	4888	292.85	1217	313.90	979
263.80	215	277.90	638	293.95	242	314.90	1546
264.90	3169	278.90	106	294.90	154	315.90	1169
265.90	444	281.80	143	295.90	16231	320.90	643
267.80	117	282.90	550	296.90	2274	321.75	231
270.85	257	283.90	524	297.80	101	323.00	5558
271.95	545	284.90	766	301.90	411	323.95	1042
272.95	4552	286.00	141	302.90	2288	326.80	926
273.90	11781	288.80	120	303.95	485	327.95	467
274.90	65797	290.80	116	307.85	234	331.85	462
275.90	8638	291.80	152	309.80	144	332.90	633

Average of 2.820 to 2.831 min.: 6p473538.D\data.ms

dftpp

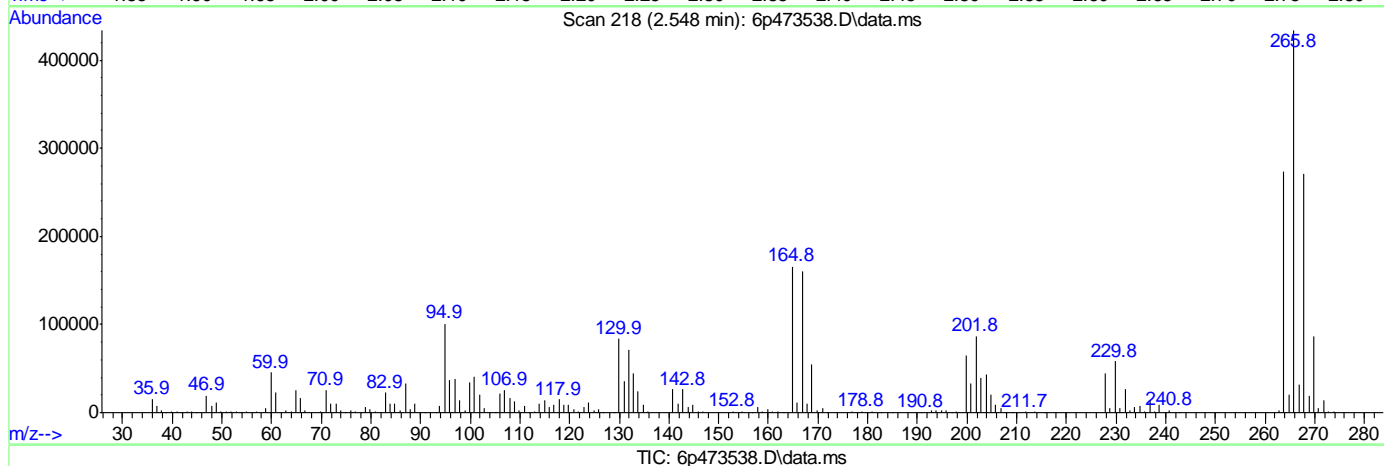
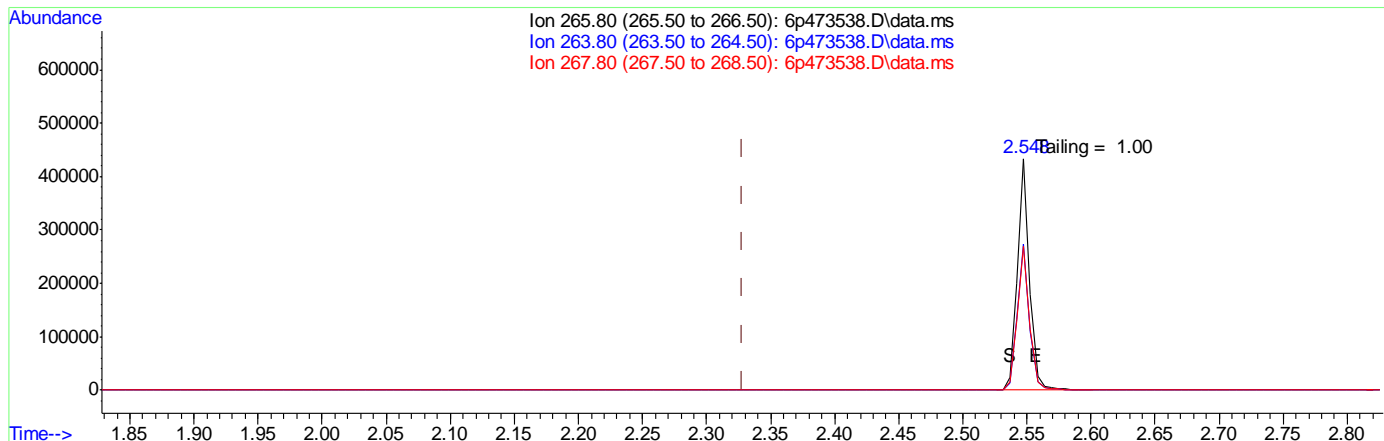
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
333.90	3944	365.90	1254	403.00	1867		
334.90	805	370.90	523	403.95	747		
340.90	625	371.95	3536	420.90	1615		
341.90	297	372.90	699	421.90	1482		
345.90	1482	382.90	794	422.95	10163		
347.00	139	383.85	266	423.95	2279		
351.90	1995	389.80	460	425.00	131		
352.90	1059	390.80	286	441.00	23821		
353.95	2092	391.90	303	441.95	163832		
354.95	378	400.90	296	442.95	33038		
364.90	8602	401.85	1377	443.95	2900		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473538.D
 Acq On : 6 Jun 2018 12:33 pm
 Operator : christc2
 Sample : dftpp
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 06 12:39:49 2018
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
 Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
 QLast Update : Thu May 31 16:07:29 2018
 Response via : Initial Calibration



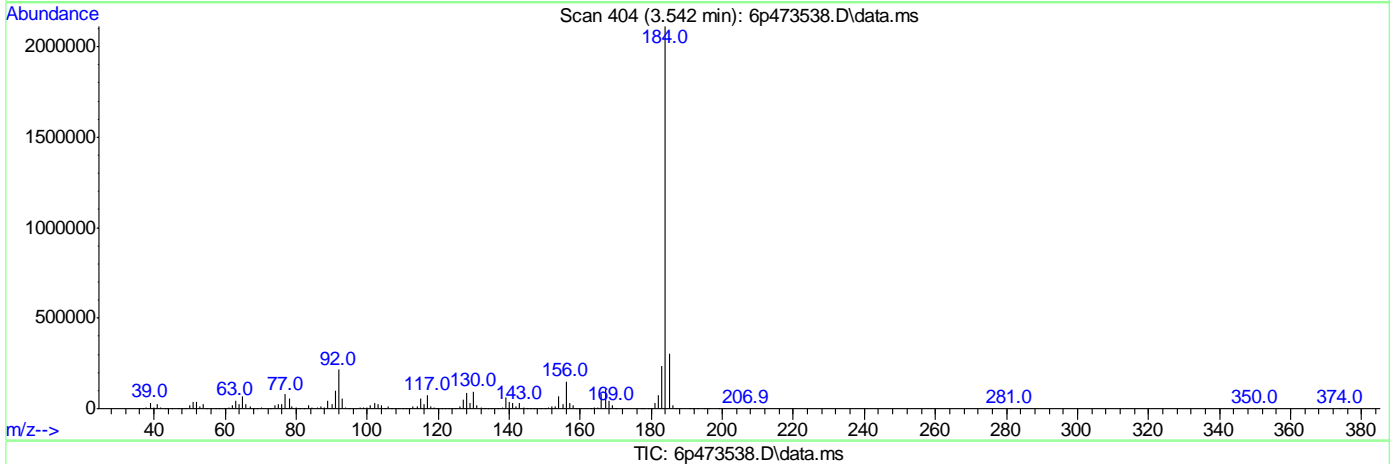
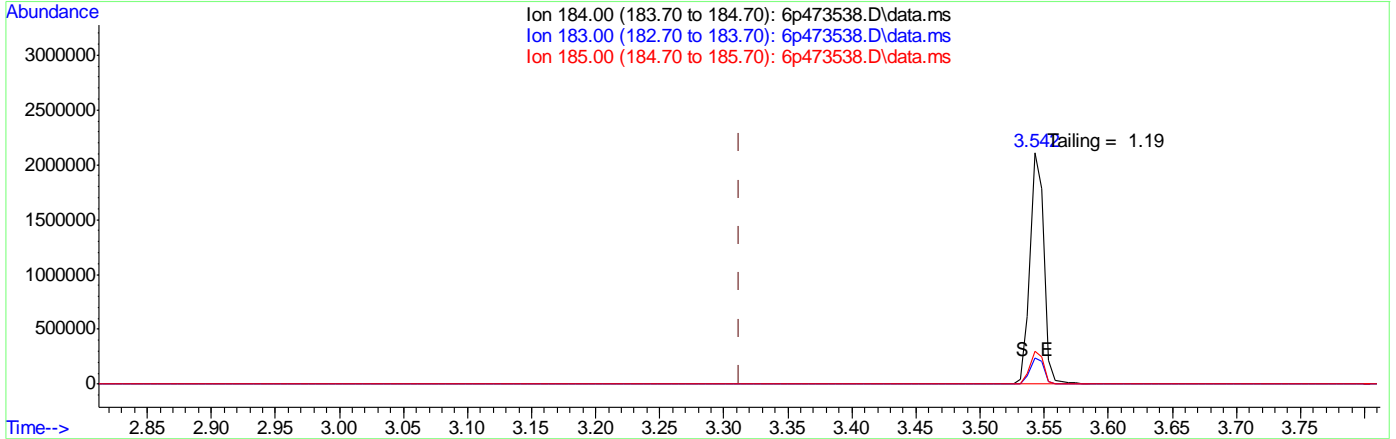
(1) Pentachlorophenol (t)
 2.548min (+0.219) 0.00ppb m
 response 285324

Ion	Exp%	Act%
265.80	100	100
263.80	63.30	63.03
267.80	61.90	62.35
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473538.D
 Acq On : 6 Jun 2018 12:33 pm
 Operator : christc2
 Sample : dftpp
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 06 12:39:49 2018
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
 Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
 QLast Update : Thu May 31 16:07:29 2018
 Response via : Initial Calibration



(2) Benzidine (t)

3.542min (+0.230) 0.00ppb

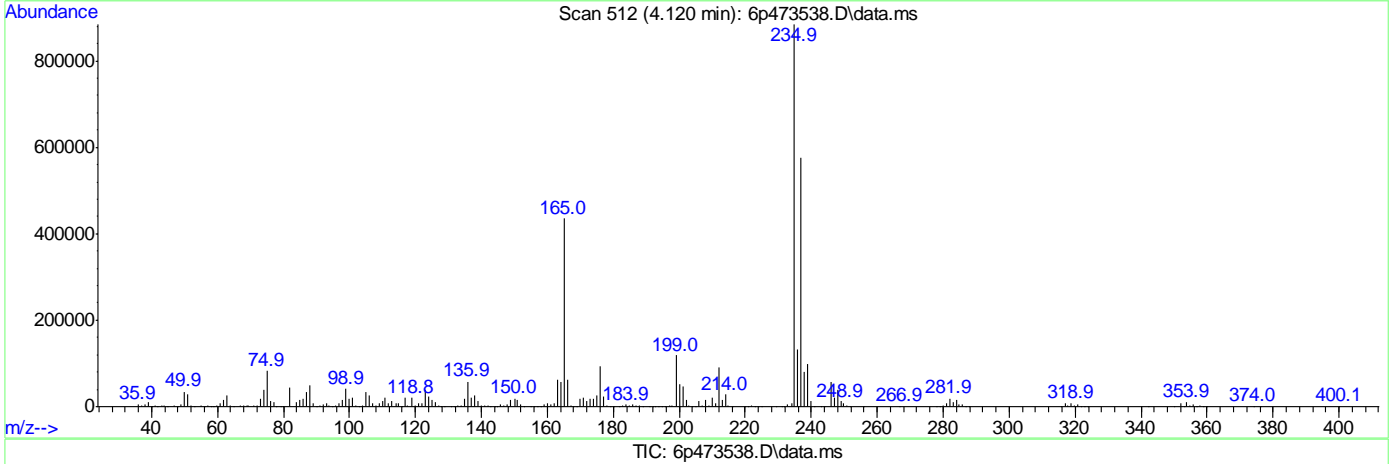
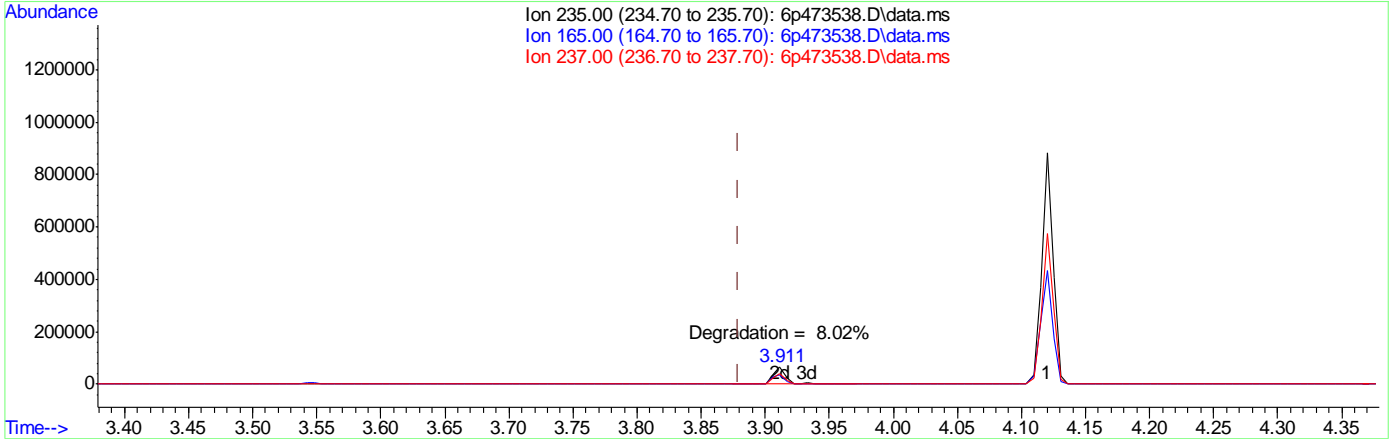
response 1582666

Ion	Exp%	Act%
184.00	100	100
183.00	10.80	11.15
185.00	13.80	14.42
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473538.D
 Acq On : 6 Jun 2018 12:33 pm
 Operator : christc2
 Sample : dftpp
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 06 12:39:49 2018
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
 Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
 QLast Update : Thu May 31 16:07:29 2018
 Response via : Initial Calibration



TIC: 6p473538.D\data.ms

(3) PP-DDT (t)
 4.120min (+0.241) 0.00ppb
 response 556467

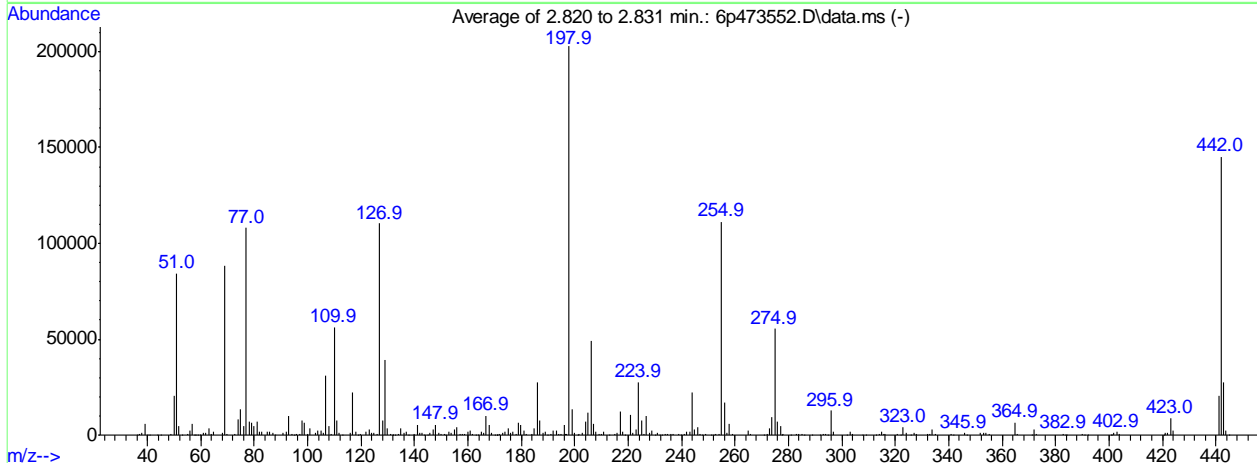
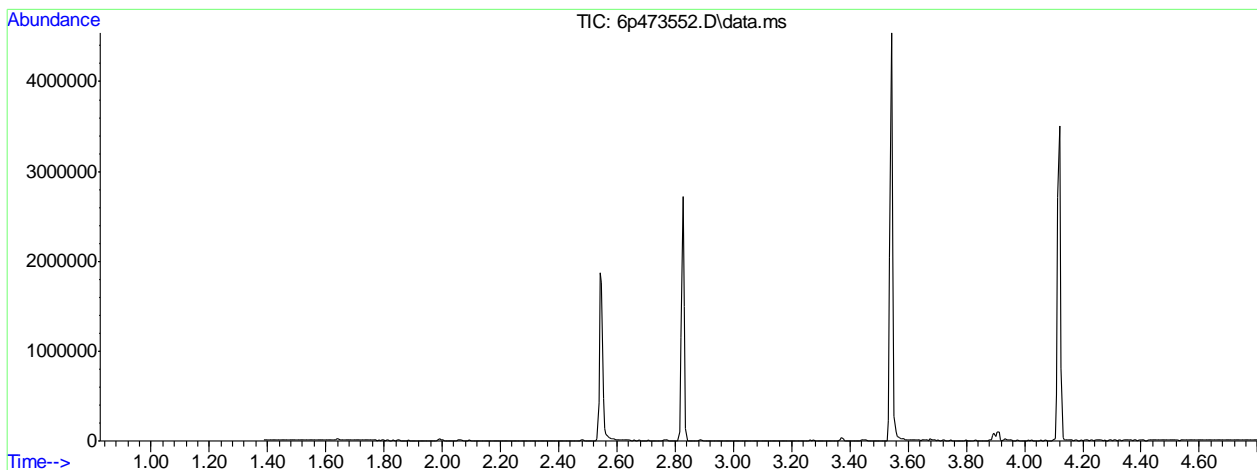
Ion	Exp%	Act%
235.00	100	100
165.00	51.00	51.26
237.00	59.20	65.25
0.00	0.00	0.00

9.4.1.3
 9

DFTPP

Data File : C:\msdchem\1\DATA\E6P2236\6p473552.D Vial: 1
 Acq On : 6 Jun 2018 9:20 pm Operator: chriss2
 Sample : dftpp Inst : MS6P
 Misc : op8717,e6p2236,1000,,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 269, 270, 271; Background Corrected with Scan 265

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result
51	198	30	60	41.7	84477	PASS
68	69	0.00	2	1.5	1292	PASS
69	198	0.00	100	43.6	88304	PASS
70	69	0.00	2	0.6	560	PASS
127	198	40	60	54.5	110488	PASS
197	198	0.00	1	0.4	717	PASS
198	198	100	100	100.0	202661	PASS
199	198	5	9	6.7	13481	PASS
275	198	10	30	27.4	55434	PASS
365	198	1	100	3.3	6637	PASS
441	443	0.10	100	74.5	20633	PASS
442	198	40	100	71.6	145149	PASS
443	442	17	23	19.1	27702	PASS

Average of 2.820 to 2.831 min.: 6p473552.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	107	51.90	4444	62.90	3399	77.95	7295
36.85	463	52.85	221	63.90	518	78.90	6403
37.95	928	54.90	616	64.90	1961	79.90	4921
38.95	5834	55.90	2428	67.90	1292	80.90	7157
39.80	116	56.90	6011	68.90	88304	81.90	1954
40.90	164	57.70	142	69.90	560	82.90	1774
43.85	35	57.90	129	72.90	464	84.90	1493
44.90	101	58.85	221	74.00	8177	85.90	1718
48.95	633	59.80	101	74.90	13759	86.90	954
49.90	20458	60.95	1093	75.90	4733	87.80	267
51.00	84477	61.90	1205	77.00	108080	90.90	1321

Average of 2.820 to 2.831 min.: 6p473552.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
91.90	1608	103.90	2241	116.90	22052	128.90	39456
92.90	10008	104.90	2316	117.95	1685	129.90	3416
93.90	787	105.90	931	118.90	174	130.90	727
94.80	168	106.90	31178	119.85	485	131.70	139
95.90	557	107.90	4771	121.85	1675	132.00	113
96.90	332	109.00	818	122.90	2794	132.90	258
97.90	7640	109.90	56386	123.90	1267	133.90	890
98.90	6695	110.90	7712	124.90	1279	134.90	3347
99.85	521	111.85	1001	126.10	603	135.90	1448
100.90	3747	112.90	219	126.90	110488	137.00	1621
102.90	1310	115.90	1255	127.90	7755	137.80	110

Average of 2.820 to 2.831 min.: 6p473552.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
139.85	446	151.00	558	161.85	676	171.85	657
140.90	5050	151.80	159	162.80	147	172.95	1109
141.90	1478	152.90	1609	163.70	112	173.90	1880
142.80	1036	153.90	1157	164.85	1658	174.95	3797
143.80	248	154.95	2949	165.90	1477	175.95	1313
144.85	292	155.95	3947	166.90	10139	176.90	1689
145.85	927	157.00	891	167.90	5138	177.85	547
146.90	2690	157.90	876	168.90	897	178.90	6363
147.90	5551	158.90	725	169.90	216	179.90	5181
148.90	1164	159.90	1548	170.80	304	180.90	2366
149.85	557	160.90	2314	171.00	133	181.90	314

Average of 2.820 to 2.831 min.: 6p473552.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
183.90	569	195.00	339	205.00	11917	217.90	1716
184.90	3542	195.95	5316	205.95	48834	218.90	103
185.90	27394	196.70	717	206.95	5657	220.95	10611
186.90	7536	197.00	466	207.95	1851	221.75	1153
188.00	899	197.90	202661	208.90	636	222.90	2848
188.90	1490	198.90	13481	209.90	517	223.95	27654
189.80	142	199.90	1289	210.95	1759	224.95	7436
190.85	844	201.20	140	213.00	142	226.00	577
191.95	2183	201.45	865	214.85	448	226.90	10053
192.95	2513	202.90	1268	215.85	1002	227.85	1435
193.90	539	203.90	6761	216.90	12430	228.95	2191

Average of 2.820 to 2.831 min.: 6p473552.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
229.90	309	241.90	1675	254.00	401	273.90	9654
230.90	1301	242.95	1613	254.90	111248	274.90	55434
231.80	123	244.00	22471	255.90	16902	275.90	7062
232.80	124	244.95	2953	256.95	1293	276.90	4457

233.90	500	245.90	3897	257.90	5776	277.70	111
234.90	881	246.90	755	258.90	847	277.90	622
235.85	353	247.70	136	264.90	2106	281.00	176
236.90	765	248.90	894	265.85	376	282.95	648
238.90	551	251.00	106	270.90	136	283.90	354
239.90	249	251.90	151	271.90	376	284.85	686
240.85	575	252.90	421	272.90	3384	285.80	103

Average of 2.820 to 2.831 min.: 6p473552.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
288.90	144	308.90	119	326.85	937	352.90	1091
291.80	127	312.80	145	327.75	364	353.95	1293
292.85	839	313.90	667	331.95	418	354.95	445
293.95	373	314.90	1933	332.95	594	364.90	6637
294.90	224	315.80	554	333.95	3108	365.80	839
295.90	12714	316.00	485	334.95	571	370.90	268
296.90	2002	320.90	322	340.90	575	371.95	3071
301.95	248	321.90	141	341.90	104	372.90	626
302.90	1962	323.00	4402	345.90	1101	382.90	722
303.85	385	323.95	903	346.90	107	383.70	114
307.80	143	325.90	108	351.90	1432	383.90	103

Average of 2.820 to 2.831 min.: 6p473552.D\data.ms

dftpp

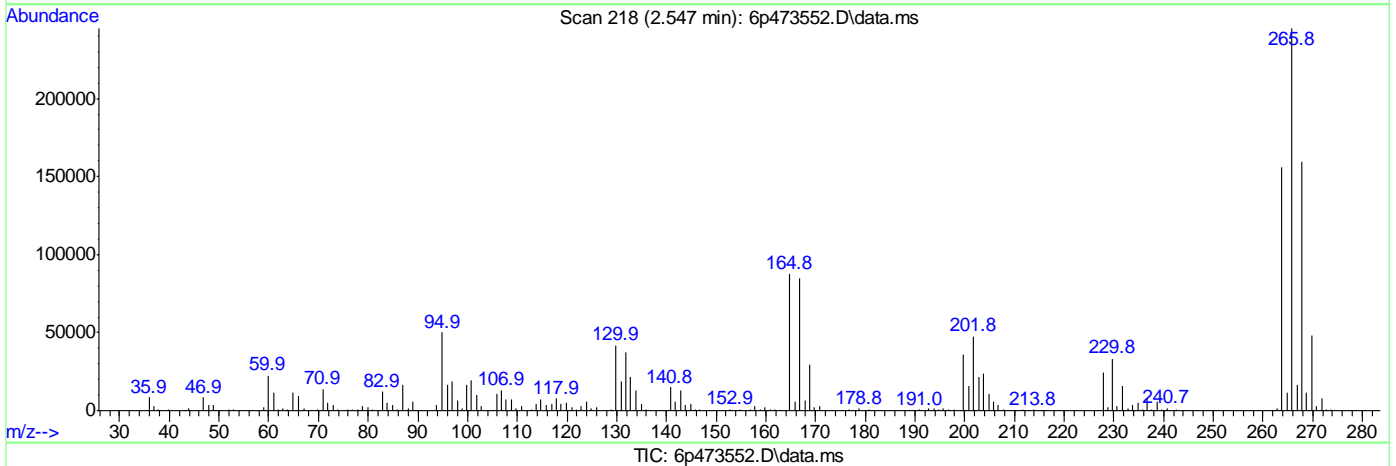
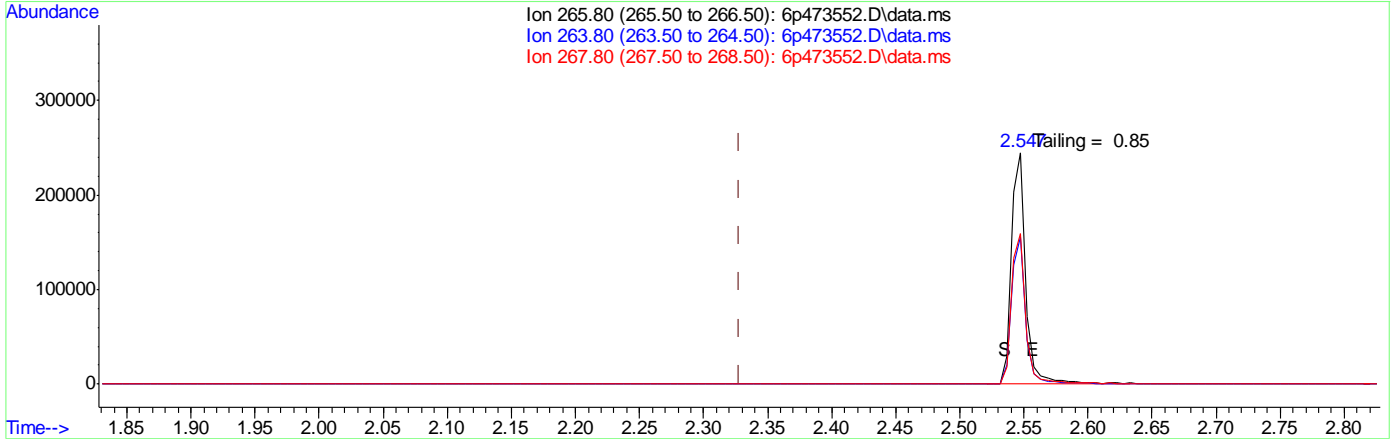
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
389.80	401	423.00	8838				
390.95	280	423.90	2078				
391.90	250	441.00	20633				
400.70	127	442.00	145149				
401.00	104	443.00	27702				
401.90	1010	443.90	2430				
402.95	1564	444.80	103				
404.00	638						
420.70	112						
420.90	1385						
421.90	1181						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473552.D
 Acq On : 6 Jun 2018 9:20 pm
 Operator : chriss2
 Sample : dftpp
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 06 21:26:09 2018
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
 Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
 QLast Update : Thu May 31 16:07:29 2018
 Response via : Initial Calibration



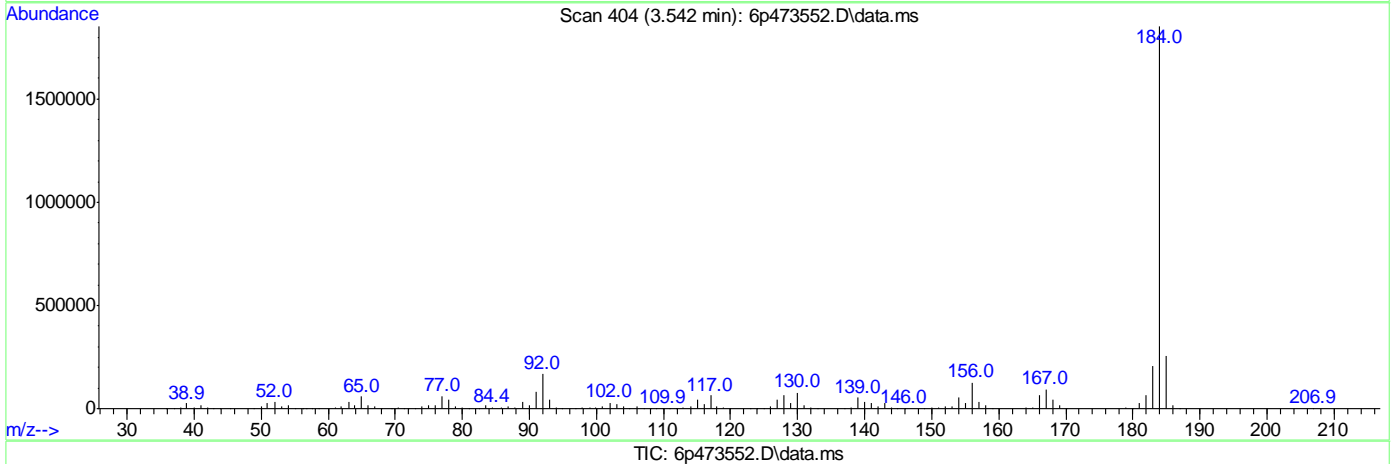
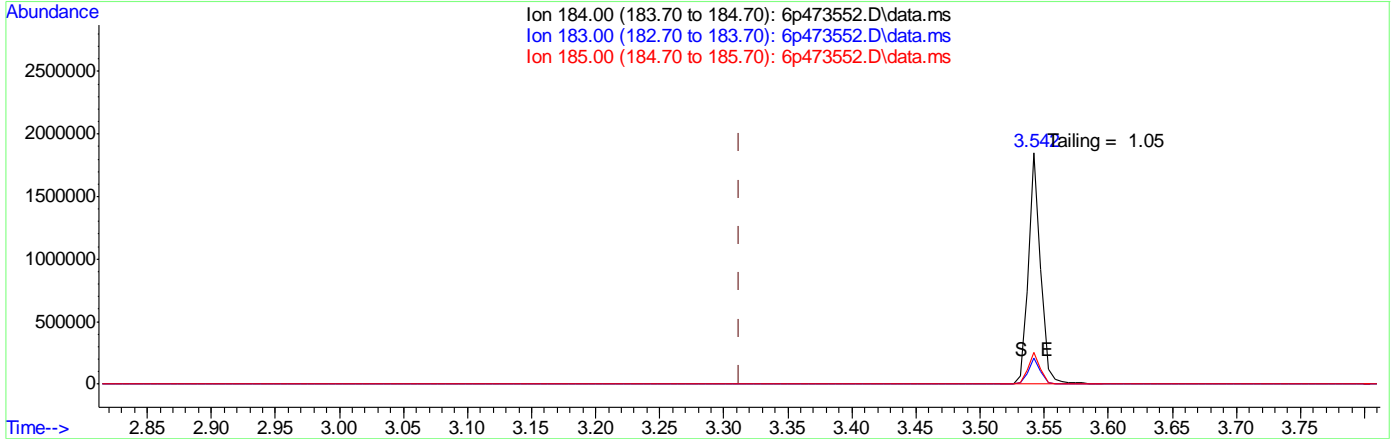
(1) Pentachlorophenol (t)
 2.547min (+0.219) 0.00ppb
 response 197213

Ion	Exp%	Act%
265.80	100	100
263.80	63.30	63.50
267.80	61.90	65.10
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473552.D
 Acq On : 6 Jun 2018 9:20 pm
 Operator : chriss2
 Sample : dftpp
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 06 21:26:09 2018
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
 Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
 QLast Update : Thu May 31 16:07:29 2018
 Response via : Initial Calibration



(2) Benzidine (t)

3.542min (+0.230) 0.00ppb

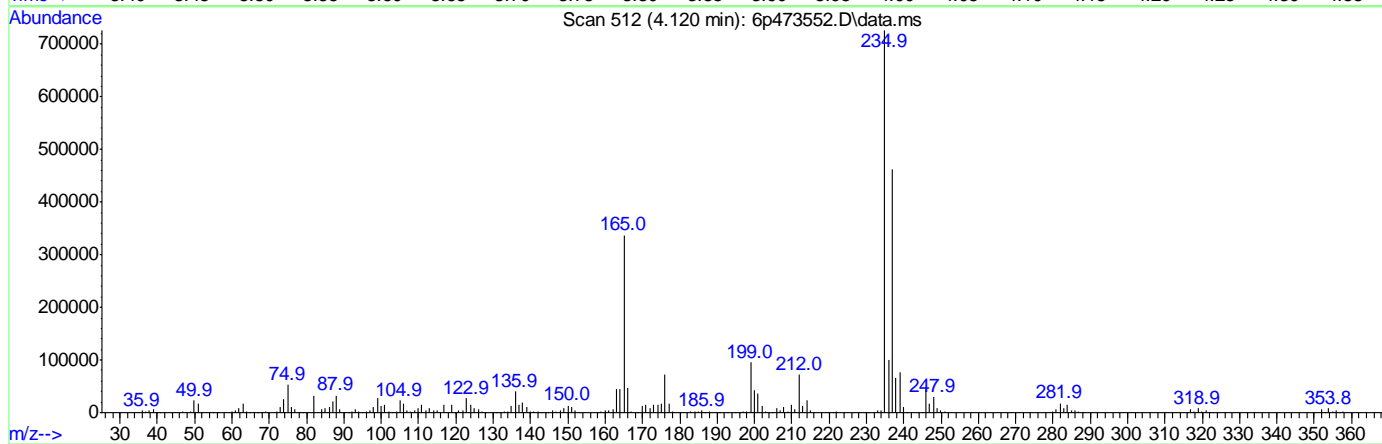
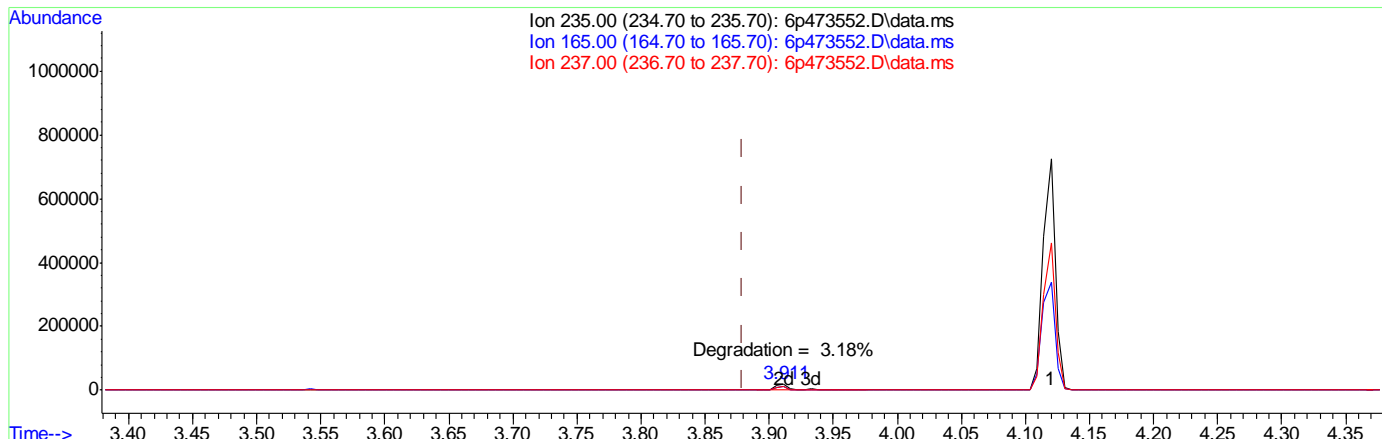
response 1237087

Ion	Exp%	Act%
184.00	100	100
183.00	10.80	11.25
185.00	13.80	13.89
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473552.D
 Acq On : 6 Jun 2018 9:20 pm
 Operator : chriss2
 Sample : dftpp
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 06 21:26:09 2018
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
 Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
 QLast Update : Thu May 31 16:07:29 2018
 Response via : Initial Calibration



(3) PP-DDT (t)
 4.120min (+0.241) 0.00ppb
 response 474209

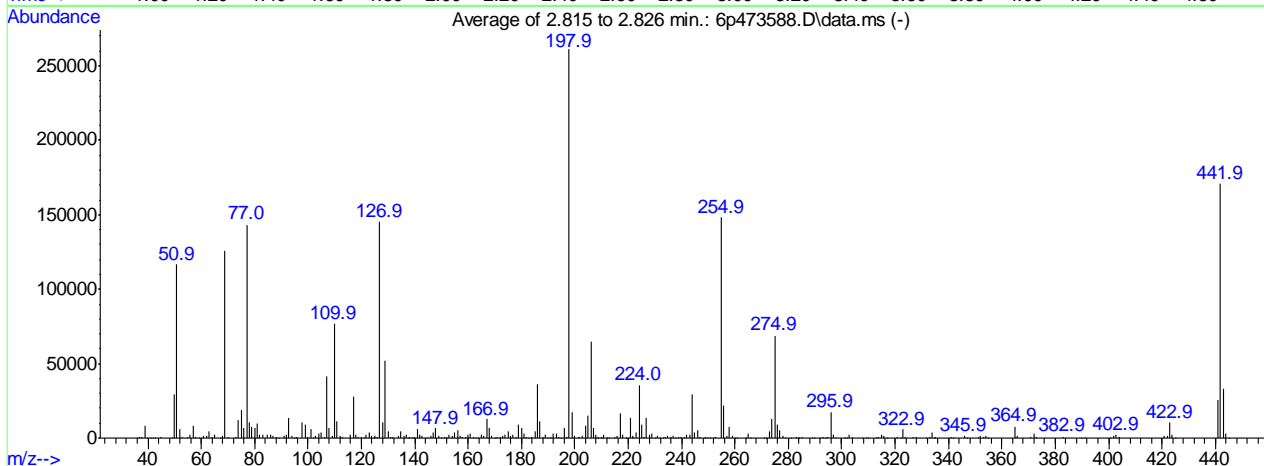
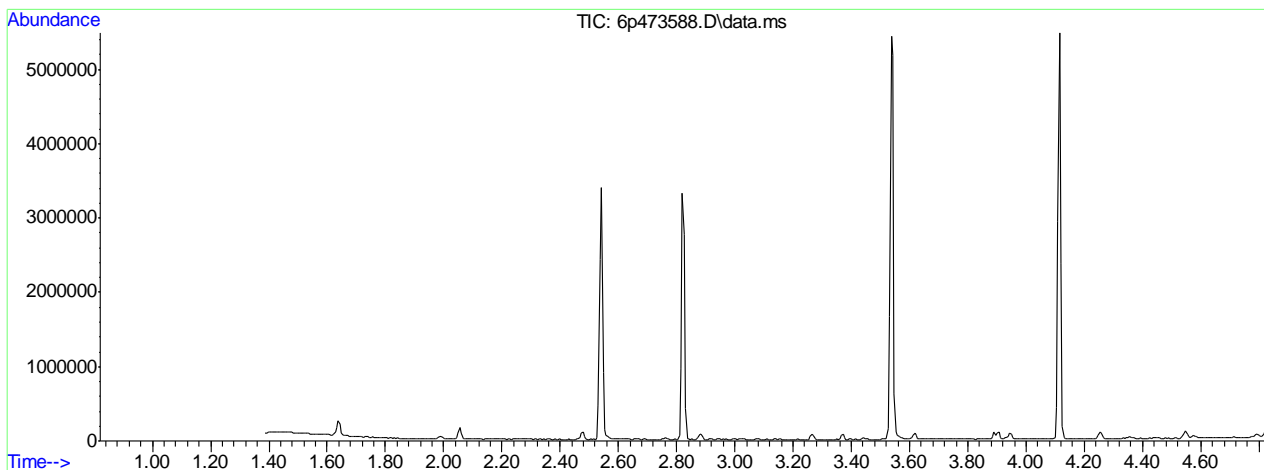
Ion	Exp%	Act%
235.00	100	100
165.00	51.00	50.33
237.00	59.20	62.91
0.00	0.00	0.00

9.4.2.3
9

DFTPP

Data File : C:\msdchem\1\DATA\E6P2238\6p473588.D Vial: 1
 Acq On : 8 Jun 2018 12:04 am Operator: georges
 Sample : dftpp Inst : MS6P
 Misc : op8717,e6p2238,1000,,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 268, 269, 270; Background Corrected with Scan 264

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result
51	198	30	60	44.7	116729	PASS
68	69	0.00	2	1.4	1743	PASS
69	198	0.00	100	48.2	125888	PASS
70	69	0.00	2	0.8	947	PASS
127	198	40	60	55.6	145178	PASS
197	198	0.00	1	0.3	815	PASS
198	198	100	100	100.0	261064	PASS
199	198	5	9	6.6	17299	PASS
275	198	10	30	26.3	68557	PASS
365	198	1	100	2.9	7606	PASS
441	443	0.10	100	75.9	25306	PASS
442	198	40	100	65.5	170904	PASS
443	442	17	23	19.5	33326	PASS

Average of 2.815 to 2.826 min.: 6p473588.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.80	32	50.90	116729	63.95	643	77.95	10501
36.85	533	51.95	6154	64.90	2570	78.90	7862
37.85	1058	52.85	479	66.90	50	79.90	6544
38.90	8414	54.90	591	67.85	1743	80.90	9904
39.80	206	55.90	2607	68.90	125888	81.90	1987
40.90	298	56.90	7999	69.90	947	82.90	2395
41.85	243	57.85	623	72.90	872	84.90	2227
42.90	61	58.90	259	73.95	11849	85.85	2310
44.85	440	60.90	1336	74.90	18741	86.90	1228
48.90	147	61.85	1547	75.95	6909	87.90	488
49.95	29392	62.90	4870	77.00	143469	88.90	105

Average of 2.815 to 2.826 min.: 6p473588.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
90.85	1776	102.90	1745	115.90	2250	126.10	739
91.90	2077	103.90	3371	116.90	28251	126.90	145178
92.90	13848	104.90	3444	117.90	2168	127.95	10378
93.90	1315	105.95	834	118.90	426	128.90	51778
94.90	102	106.90	41082	119.90	688	129.90	4511
95.85	766	107.90	6825	121.05	249	130.90	976
97.90	10706	108.95	1337	121.90	2421	131.80	543
98.90	9017	109.90	76672	122.90	4000	133.90	1511
99.90	766	110.90	10996	123.85	1486	134.90	4529
100.90	5719	111.85	1362	124.70	192	135.90	1581
101.95	297	112.85	495	124.90	1470	136.95	2020

Average of 2.815 to 2.826 min.: 6p473588.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
137.60	224	147.90	6642	157.90	880	168.90	1274
137.90	544	148.90	1678	158.95	1010	169.80	398
138.90	167	149.85	347	159.90	1981	170.90	496
139.90	741	150.95	972	160.90	3071	171.90	954
140.90	6054	151.40	276	161.90	907	172.90	1427
141.90	2395	151.90	310	162.80	320	173.90	2621
142.85	1439	152.90	1999	163.85	288	174.95	4862
143.95	375	153.90	1713	164.90	2456	175.90	1729
144.85	365	154.95	3992	165.90	1642	176.90	2469
145.85	1237	156.00	5144	166.90	12682	177.85	586
146.90	3480	156.95	1200	167.90	6889	178.90	9089

Average of 2.815 to 2.826 min.: 6p473588.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
179.90	6557	190.80	663	201.30	671	210.50	202
180.90	3240	191.90	2875	201.50	695	210.90	2431
181.85	530	192.95	3111	202.90	1850	211.90	280
182.80	161	193.85	598	203.90	8065	212.90	115
183.90	531	194.90	375	204.95	14882	214.90	696
184.95	4770	195.95	6781	206.00	64989	215.95	1425
185.95	36447	196.70	742	206.90	7072	216.90	16620
186.95	10963	197.00	815	207.85	1978	217.90	2243
187.90	1010	197.90	261064	208.70	144	219.00	278
188.90	2009	198.90	17299	208.85	539	219.80	175
189.85	340	199.90	1451	209.90	909	220.90	13710

Average of 2.815 to 2.826 min.: 6p473588.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
221.60	295	231.90	235	242.90	2182	254.90	148328
221.85	1746	232.85	360	244.00	29265	255.90	21632
222.90	3847	233.95	776	244.95	3863	256.95	1549
224.00	35561	234.90	1217	245.90	5598	257.90	7905

224.95	8717	235.90	574	246.85	1075	258.90	1478
225.90	883	236.90	1353	248.70	167	259.80	125
226.90	13880	237.80	106	248.95	853	260.80	106
227.90	2017	238.85	581	249.80	103	263.90	239
228.90	3224	239.80	418	250.80	141	264.90	3306
229.90	355	240.95	914	251.90	228	265.95	386
231.00	1402	241.90	1949	252.85	750	270.85	308

Average of 2.815 to 2.826 min.: 6p473588.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
271.85	407	283.90	174	300.90	285	316.90	120
272.90	4501	284.90	1045	301.95	279	320.90	498
273.90	12658	289.00	221	302.90	2347	321.90	289
274.90	68557	289.90	227	303.95	635	322.90	5799
275.90	9236	291.90	242	307.95	268	323.95	1015
276.90	5561	292.90	1165	308.90	138	326.85	980
277.95	1170	293.80	363	309.90	374	327.90	447
278.90	225	294.90	451	313.00	105	331.80	331
280.95	309	295.90	17402	313.85	829	332.80	439
282.85	538	296.95	2322	314.90	1964	333.95	3834
283.70	150	297.90	318	315.90	1240	334.80	333

Average of 2.815 to 2.826 min.: 6p473588.D\data.ms

dftpp

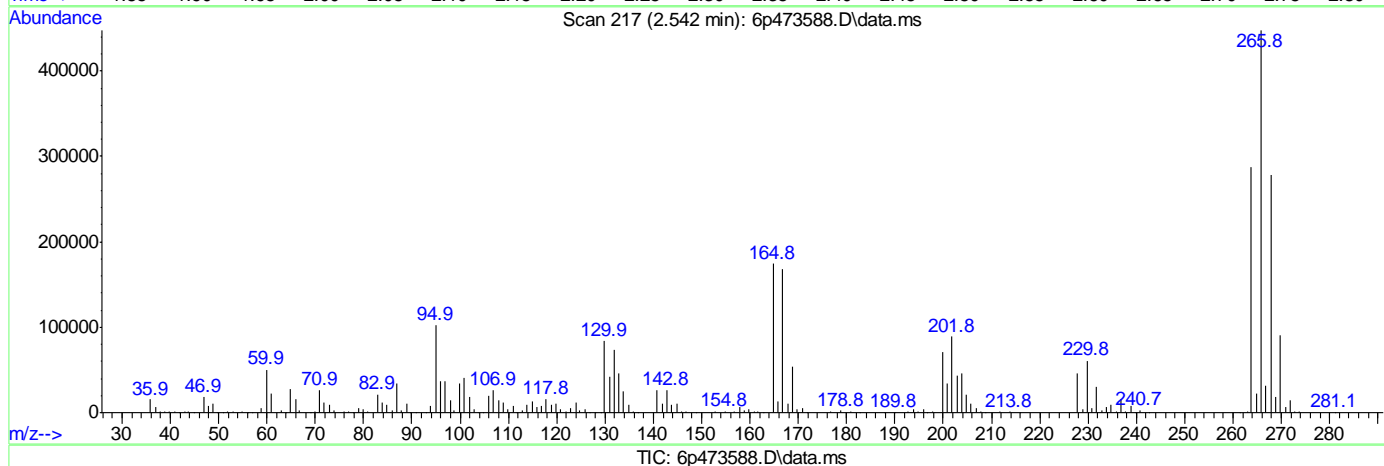
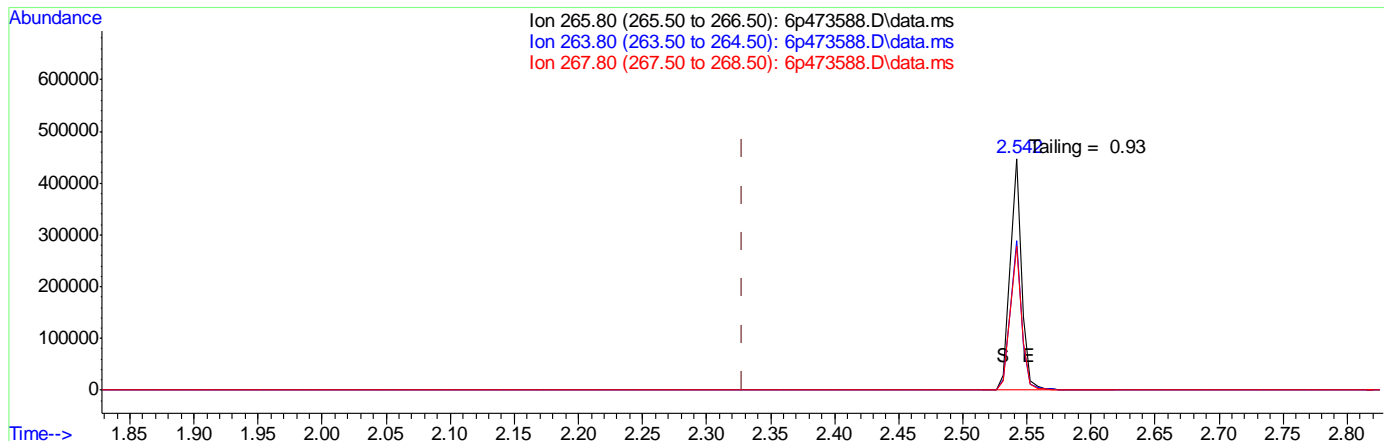
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
335.00	458	365.85	1283	403.95	687		
340.90	681	370.90	446	420.90	1824		
341.90	147	371.95	2919	421.90	1711		
345.85	1349	372.90	849	422.95	10542		
346.85	262	382.90	914	423.90	2282		
351.00	106	383.90	354	424.85	235		
351.95	1918	389.80	326	441.00	25306		
352.95	1067	390.90	341	441.95	170904		
353.95	1899	400.80	127	442.95	33326		
354.90	376	401.90	1461	443.90	3062		
364.90	7606	402.90	2229	445.00	143		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473588.D
 Acq On : 8 Jun 2018 12:04 am
 Operator : georges
 Sample : dftpp
 Misc : op8717,e6p2238,1000,,,1,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 08 00:10:02 2018
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
 Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
 QLast Update : Thu May 31 16:07:29 2018
 Response via : Initial Calibration



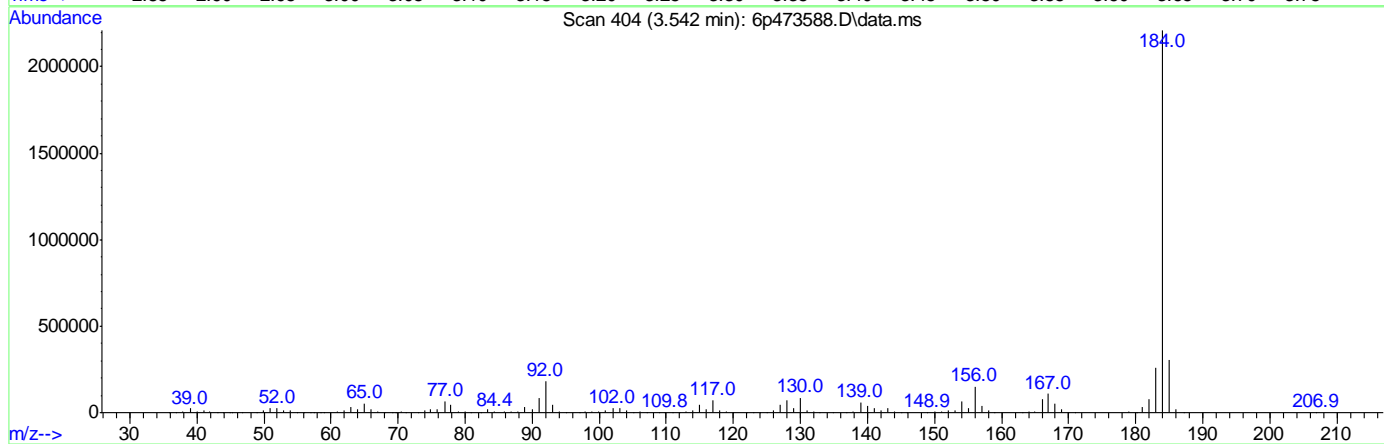
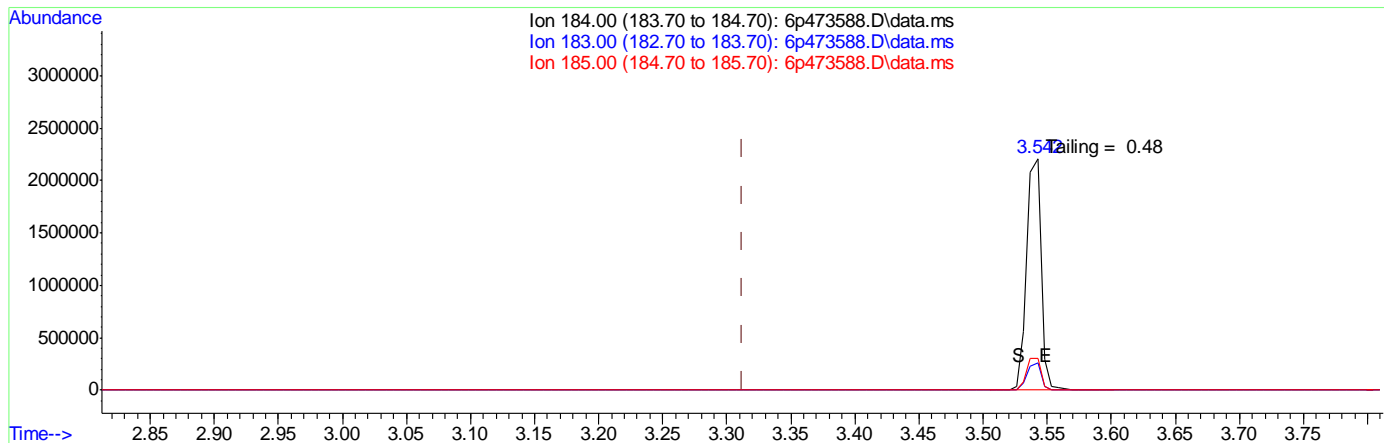
(1) Pentachlorophenol (t)
 2.542min (+0.214) 0.00ppb
 response 289492

Ion	Exp%	Act%
265.80	100	100
263.80	63.30	64.26
267.80	61.90	62.15
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473588.D
 Acq On : 8 Jun 2018 12:04 am
 Operator : georges
 Sample : dftpp
 Misc : op8717,e6p2238,1000,,,1,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 08 00:10:02 2018
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
 Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
 QLast Update : Thu May 31 16:07:29 2018
 Response via : Initial Calibration



TIC: 6p473588.D\data.ms

(2) Benzidine (t)

3.542min (+0.230) 0.00ppb

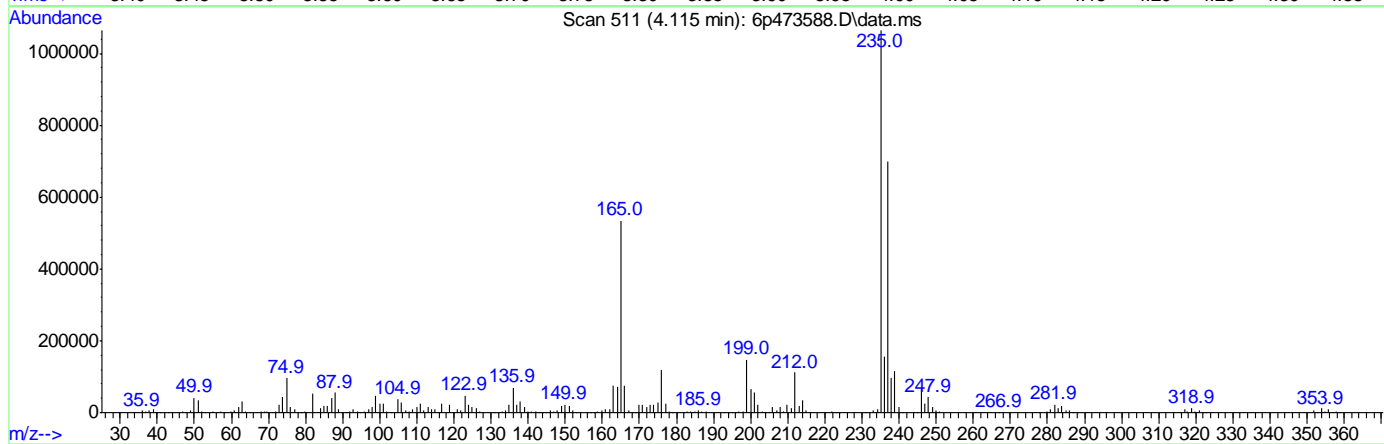
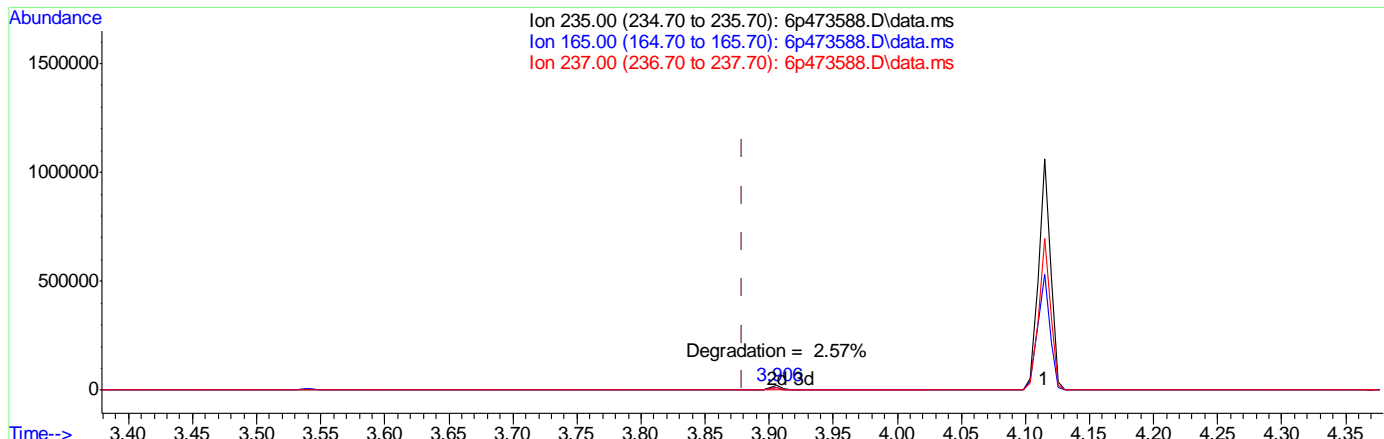
response 1704844

Ion	Exp%	Act%
184.00	100	100
183.00	10.80	11.62
185.00	13.80	13.72
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473588.D
 Acq On : 8 Jun 2018 12:04 am
 Operator : georges
 Sample : dftpp
 Misc : op8717,e6p2238,1000,,,1,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 08 00:10:02 2018
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP6P.M
 Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
 QLast Update : Thu May 31 16:07:29 2018
 Response via : Initial Calibration



TIC: 6p473588.D\data.ms

(3) PP-DDT (t)

4.115min (+0.235) 0.00ppb

response 696768

Ion	Exp%	Act%
235.00	100	100
165.00	51.00	51.34
237.00	59.20	64.18
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473539.D
 Acq On : 6 Jun 2018 1:08 pm
 Operator : christc2
 Sample : ic2235-100
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 06 18:19:58 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	665738	40.00	ppm	-0.01	
24) Naphthalene-d8	5.720	136	2688065	40.00	ppm	-0.01	
47) Acenaphthene-d10	7.474	164	1410673	40.00	ppm	-0.01	
69) Phenanthrene-d10	9.175	188	2289656	40.00	ppm	-0.01	
83) Chrysene-d12	12.363	240	2242301	40.00	ppm	0.00	
91) Perylene-d12	13.962	264	2329060	40.00	ppm	0.00	
101) 1,4-Dichlorobenzene-d4a	4.677	152	665738	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.474	164	1410673	40.00	ppm	0.00	
105) Phenanthrene-d10a	9.175	188	2289656	40.00	ppm	0.00	
109) Chrysene-d12a	12.363	240	2242301	40.00	ppm	0.01	
111) Naphthalene-d8a	5.720	136	2688065	40.00	ppm	0.00	
113) Phenanthrene-d10b	9.175	188	2289656	40.00	ppm	0.00	
115) Chrysene-d12b	12.363	240	2242760	40.00	ppm	0.01	
System Monitoring Compounds							
5) 2-Fluorophenol	3.693	112	2170093	95.33	ppm	0.00	
Spiked Amount	50.000		Recovery	=	190.66%		
8) Phenol-d5	4.415	99	2830675	90.85	ppm	0.00	
Spiked Amount	50.000		Recovery	=	181.70%		
25) Nitrobenzene-d5	5.115	82	2673150	94.42	ppm	0.00	
Spiked Amount	50.000		Recovery	=	188.84%		
51) 2-Fluorobiphenyl	6.757	172	4495438	85.92	ppm	-0.01	
Spiked Amount	50.000		Recovery	=	171.84%		
73) 2,4,6-Tribromophenol	8.367	330	626491	124.95	ppm	0.00	
Spiked Amount	50.000		Recovery	=	249.90%		
85) Terphenyl-d14	11.111	244	4644939	97.14	ppm	0.00	
Spiked Amount	50.000		Recovery	=	194.28%		
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm		
107) o-terphenyl	0.000	230	0	0.00	ppm		
Target Compounds							
2) 1,4-Dioxane	2.222	88	1135863	88.51	ppm	98	Qvalue
3) Pyridine	2.537	79	2891839	91.10	ppm	99	
4) N-Nitrosodimethylamine	2.511	74	1757917	94.02	ppm	98	
6) Indene	4.880	116	2963921	72.82	ppm	98	
7) Cumene	4.083	105	5030269	78.41	ppm	96	
9) Phenol	4.425	94	2882675	79.64	ppm	82	
10) Aniline	4.431	93	2816761	71.49	ppm	78	
11) bis(2-Chloroethyl)ether	4.484	93	2239004	88.34	ppm	95	
12) 2-Chlorophenol	4.527	128	2263365	91.71	ppm	95	
13) Decane	4.564	43	2076988	70.25	ppm	98	
14) 1,3-Dichlorobenzene	4.639	146	2298084	82.96	ppm	97	
15) 1,4-Dichlorobenzene	4.693	146	2343620	84.00	ppm	99	
16) Benzyl alcohol	4.789	108	1621624	96.64	ppm	99	
17) 1,2-Dichlorobenzene	4.811	146	2220978	83.78	ppm	98	
18) Acetophenone	4.992	105	2425166	71.92	ppm	99	
19) 2-Methylphenol	4.875	108	1815447	77.81	ppm	98	
20) 2,2'-oxybis(1-Chloropr...	4.891	121	684086	88.25	ppm	# 86	
21) 3&4-Methylphenol	4.998	108	1676871	72.91	ppm	99	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473539.D
 Acq On : 6 Jun 2018 1:08 pm
 Operator : christc2
 Sample : ic2235-100
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 06 18:19:58 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	5.003	70	1403399	75.54	ppm	97
23) Hexachloroethane	5.078	201	734494	95.37	ppm	89
26) Nitrobenzene	5.131	77	2537035	88.33	ppm	97
27) Quinoline	6.073	129	4585501	91.44	ppm	100
28) Isophorone	5.329	82	4357404	88.11	ppm	96
29) 2-Nitrophenol	5.394	139	1216142	107.26	ppm	86
30) 2,4-Dimethylphenol	5.426	107	2242501	97.31	ppm	98
31) Benzoic acid	5.565	105	2088544m	112.17	ppm	
32) bis(2-Chloroethoxy)met...	5.506	93	2459226	86.37	ppm	99
33) 2,4-Dichlorophenol	5.597	162	1772835	95.02	ppm	98
34) 2,6-Dichlorophenol	5.795	162	1616655	87.89	ppm	98
35) 1,3,5-Trichlorobenzene	5.404	180	1850575	85.10	ppm	95
36) 1,2,4-Trichlorobenzene	5.672	180	1815569	87.94	ppm	98
37) 1,2,3-Trichlorobenzene	5.870	180	1786691	86.95	ppm	97
38) Naphthalene	5.741	128	5895310	78.28	ppm	98
39) 4-Chloroaniline	5.789	127	2414073	78.96	ppm	99
40) 2,3-Dichloroaniline	6.666	161	2036706	85.54	ppm	100
41) Caprolactam	6.137	55	1271657m	104.11	ppm	
42) Hexachlorobutadiene	5.853	225	930969	93.21	ppm	97
43) 4-Chloro-3-methylphenol	6.249	107	2019219	97.31	ppm	97
44) 2-Methylnaphthalene	6.388	141	3436305	84.04	ppm	99
45) 1-Methylnaphthalene	6.485	141	3607500	83.84	ppm	98
46) Dimethylnaphthalene	7.030	156	3672033	85.55	ppm	100
48) Hexachlorocyclopentadiene	6.554	237	2019567	222.31	ppm	98
49) 2,4,6-Trichlorophenol	6.677	196	1151170	99.71	ppm	96
50) 2,4,5-Trichlorophenol	6.715	196	1308284	104.25	ppm	98
52) 2-Chloronaphthalene	6.880	162	3681341	84.13	ppm	97
53) Biphenyl	6.864	154	4911787	81.15	ppm	99
54) 2-Nitroaniline	6.993	65	1442146	101.18	ppm	88
55) Dimethylphthalate	7.191	163	4182013	90.77	ppm	100
56) Acenaphthylene	7.319	152	6113319	88.10	ppm	98
57) 2,6-Dinitrotoluene	7.255	165	1023496	102.96	ppm	90
58) 3-Nitroaniline	7.437	138	1273890	102.42	ppm	100
59) Acenaphthene	7.512	153	3912977	83.47	ppm	99
60) 2,4-Dinitrophenol	7.554	184	1046149	192.45	ppm	97
61) 4-Nitrophenol	7.635	109	672508	105.62	ppm	94
62) Dibenzofuran	7.709	168	5133244	82.70	ppm	99
63) 2,4-Dinitrotoluene	7.699	165	1323058	97.27	ppm	98
64) 2,3,4,6-Tetrachlorophenol	7.849	232	1126211	111.44	ppm	94
65) Diethylphthalate	7.988	149	4158595	92.25	ppm	98
66) Fluorene	8.095	166	3962178	81.90	ppm	99
67) 4-Chlorophenyl-phenyle...	8.100	204	1835850	87.13	ppm	93
68) 4-Nitroaniline	8.132	138	1298573	99.74	ppm	95
70) 4,6-Dinitro-2-methylph...	8.169	198	738788	100.38	ppm	74
71) n-Nitrosodiphenylamine	8.239	169	3284888	95.77	ppm	97
72) 1,2-Diphenylhydrazine	8.282	77	4765748	87.31	ppm	93
74) 4-Bromophenyl-phenylether	8.662	248	1204676	105.08	ppm	95
75) Hexachlorobenzene	8.736	284	1346113	105.50	ppm	89
76) Pentachlorophenol	8.972	266	1883294	214.15	ppm	96
77) Phenanthrene	9.207	178	5966227	88.02	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473539.D
 Acq On : 6 Jun 2018 1:08 pm
 Operator : christc2
 Sample : ic2235-100
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 06 18:19:58 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

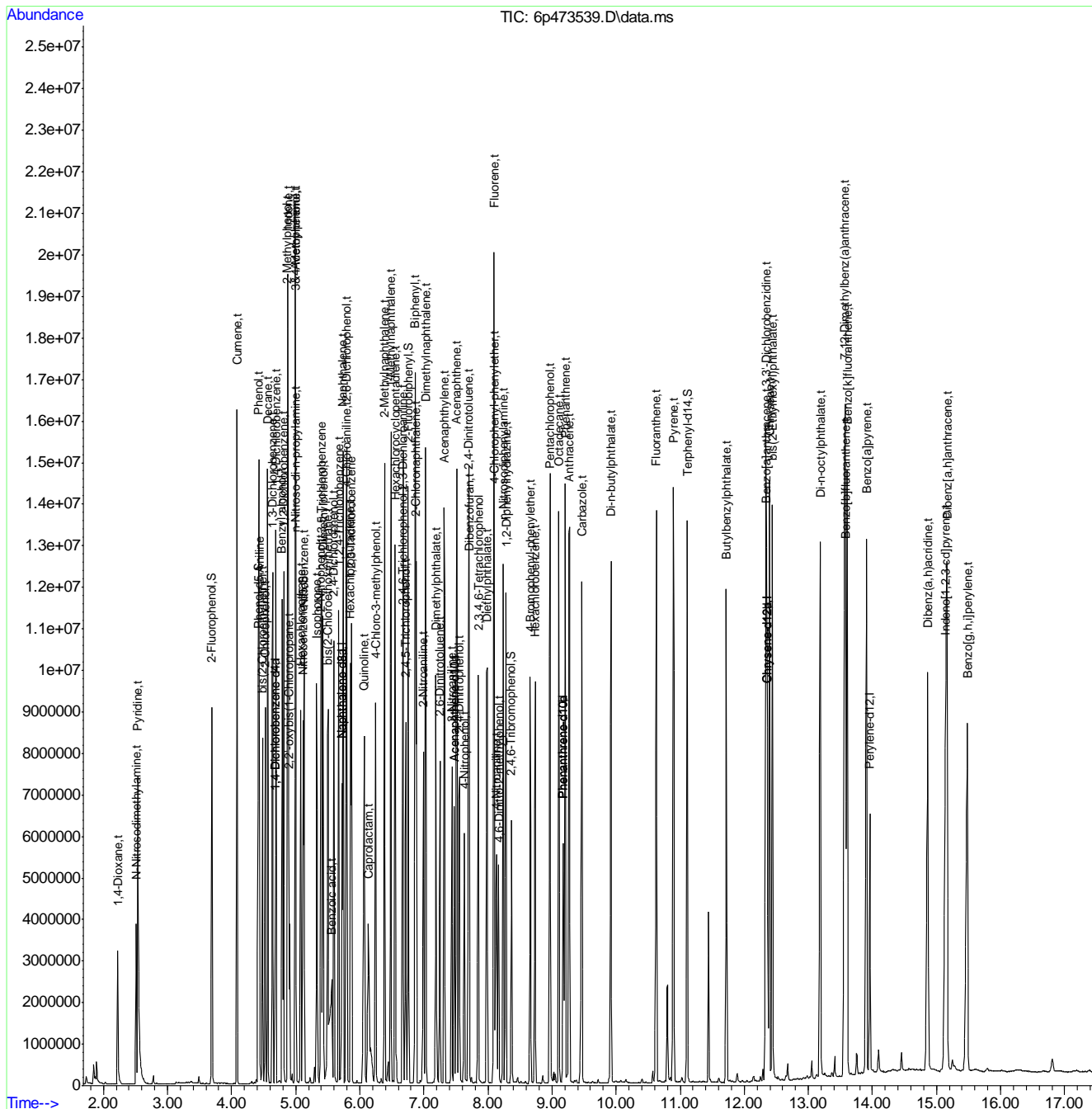
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	9.271	178	6010834	91.88	ppm	98
79) Carbazole	9.469	167	5847028	92.21	ppm	100
80) Di-n-butylphthalate	9.918	149	6897540	104.10	ppm	99
81) Fluoranthene	10.630	202	6370166	99.91	ppm	96
82) Octadecane	9.105	57	2974928	85.28	ppm	96
84) Pyrene	10.897	202	6697991	89.59	ppm	98
86) Butylbenzylphthalate	11.726	149	3189598	105.57	ppm	92
87) Benzo[a]anthracene	12.347	228	6151862	93.04	ppm	99
88) 3,3'-Dichlorobenzidine	12.336	252	2368593	111.91	ppm	98
89) Chrysene	12.395	228	6002816	89.65	ppm	98
90) bis(2-Ethylhexyl)phtha...	12.438	149	4286285	96.85	ppm	98
92) Di-n-octylphthalate	13.186	149	7300188	94.63	ppm	98
93) Benzo[b]fluoranthene	13.582	252	7497427	110.41	ppm	96
94) Benzo[k]fluoranthene	13.609	252	5517952	84.06	ppm	95
95) Benzo[a]pyrene	13.909	252	5980403	97.92	ppm	97
96) Indeno[1,2,3-cd]pyrene	15.144	276	7746283	114.28	ppm	92
97) Dibenz(a,h)acridine	14.866	279	5675816	101.14	ppm	99
98) Dibenz[a,h]anthracene	15.165	278	6734293	112.61	ppm	93
99) 7,12-Dimethylbenz(a)an...	13.572	256	3059578	96.55	ppm	97
100) Benzo[g,h,i]perylene	15.481	276	6052318	111.33	ppm	94

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473539.D
 Acq On : 6 Jun 2018 1:08 pm
 Operator : christc2
 Sample : ic2235-100
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 06 18:19:58 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration



Manual Integration Approval Summary

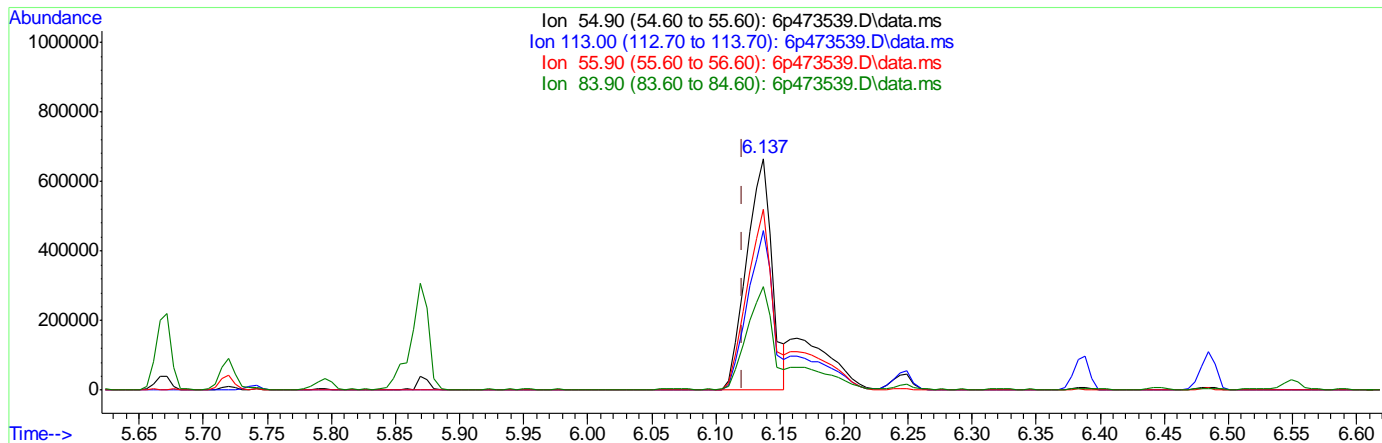
Sample Number: E6P2235-IC2235 Method: SW846 8270D
Lab FileID: 6P473539.D Analyst approved: 06/07/18 10:52 Sean Block
Injection Time: 06/06/18 13:08 Supervisor approved: 06/07/18 15:04 Nina Pandya

Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		5.56	Split peak
Caprolactam	105-60-2		6.14	Split peak

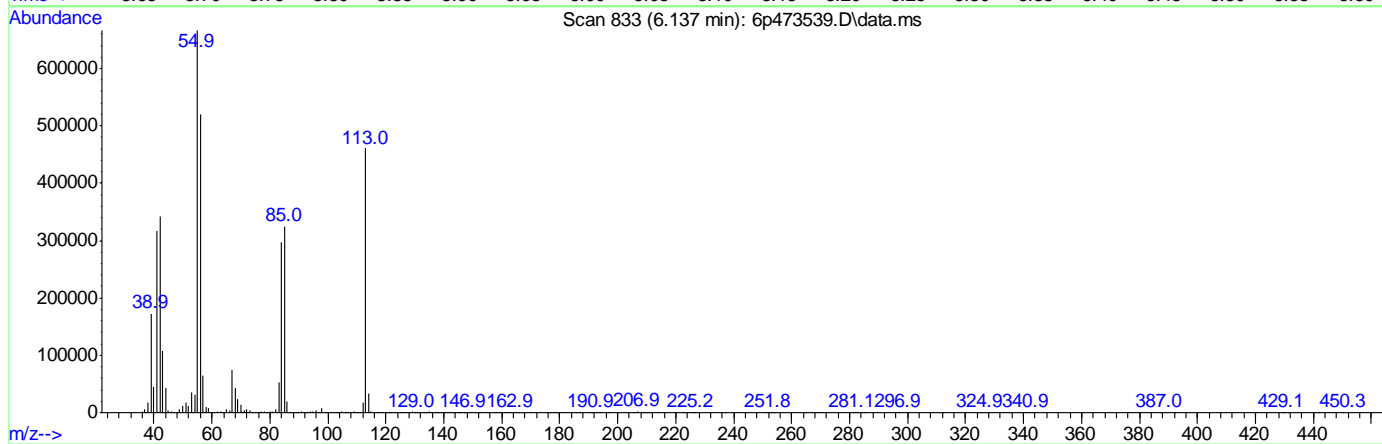
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473539.D
 Acq On : 6 Jun 2018 1:08 pm
 Operator : christc2
 Sample : ic2235-100
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 06 18:17:56 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration



9.5.12
9



TIC: 6p473539.D\data.ms

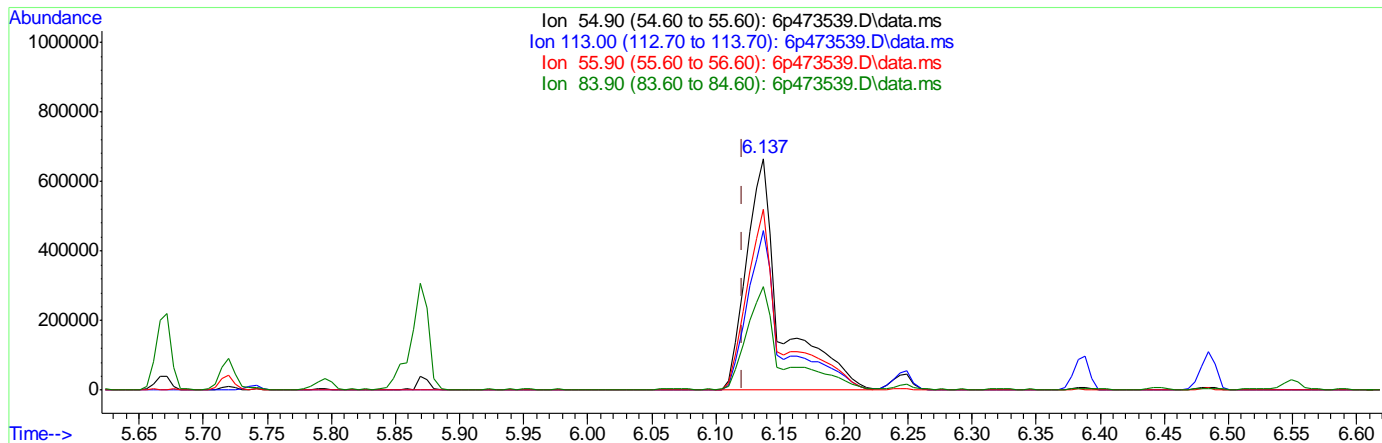
(41) Caprolactam (t)
 6.137min (+0.016) 75.54ppm
 response 922686

Ion	Exp%	Act%
54.90	100	100
113.00	65.60	69.42
55.90	78.30	78.03
83.90	44.30	44.36

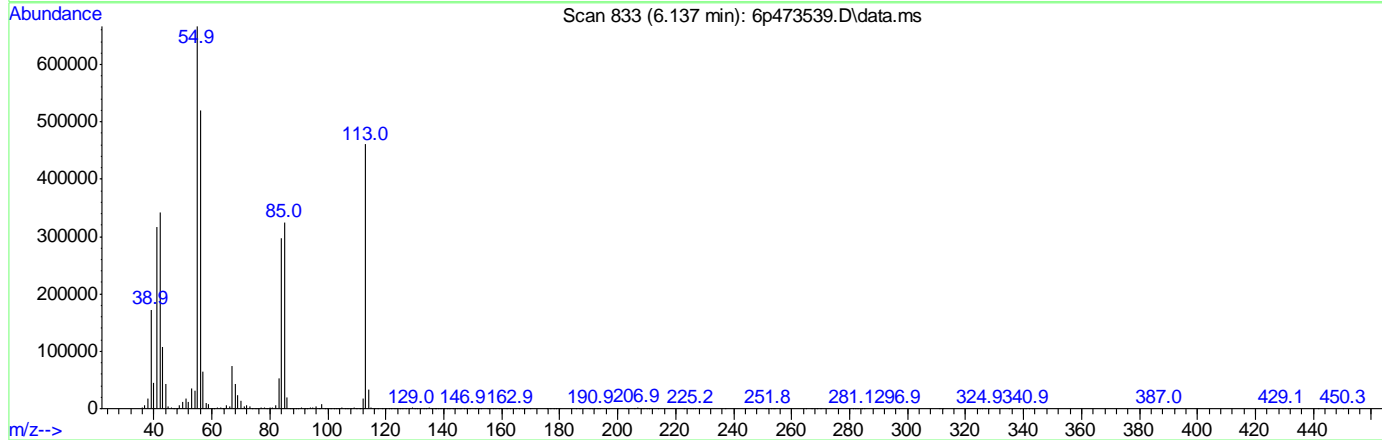
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473539.D
 Acq On : 6 Jun 2018 1:08 pm
 Operator : christc2
 Sample : ic2235-100
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 06 18:17:56 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration



9.5.1.3
9



TIC: 6p473539.D\data.ms

(41) Caprolactam (t)

6.137min (+0.016) 104.11ppm m

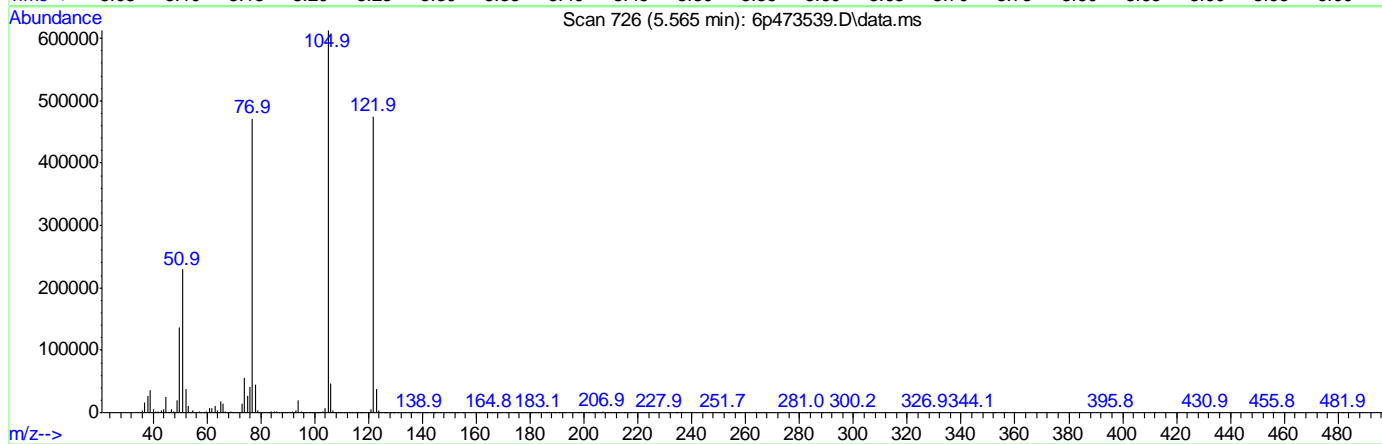
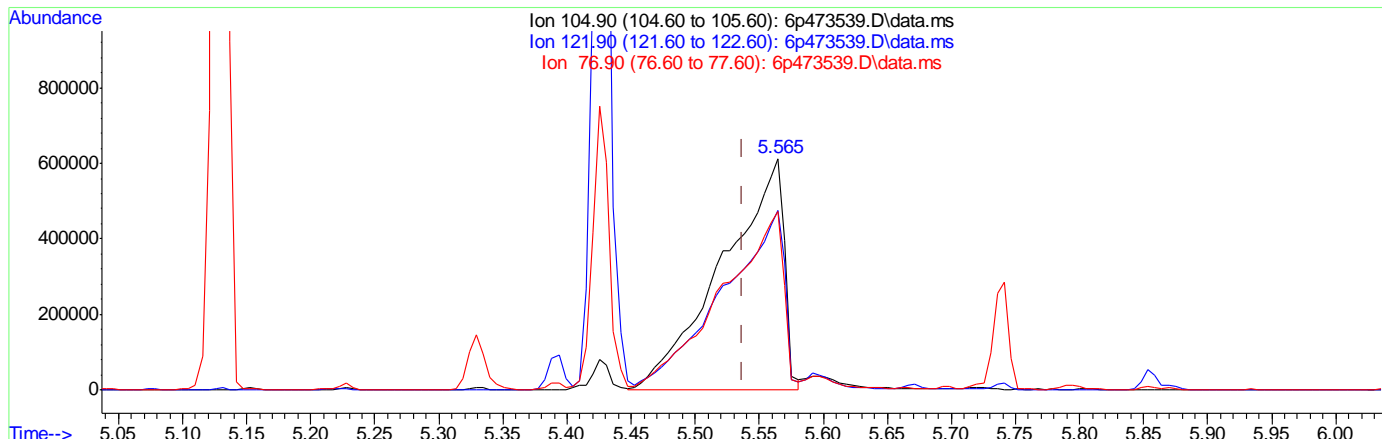
response 1271657

Ion	Exp%	Act%
54.90	100	100
113.00	65.60	69.10
55.90	78.30	78.00
83.90	44.30	44.58

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473539.D
 Acq On : 6 Jun 2018 1:08 pm
 Operator : christc2
 Sample : ic2235-100
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 06 18:18:23 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration



(31) Benzoic acid (t)
 5.565min (+0.028) 109.09ppm
 response 2030264

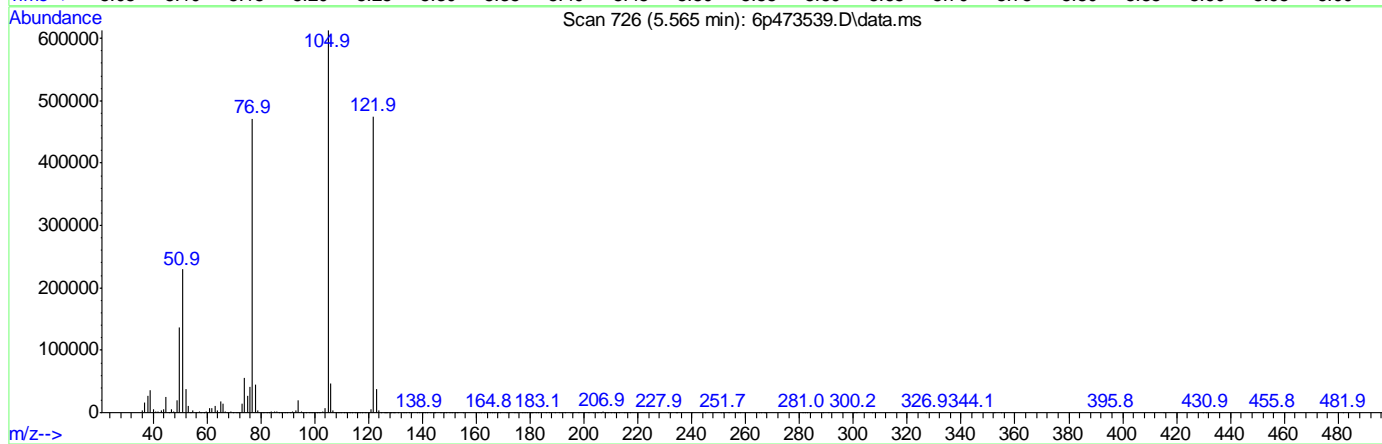
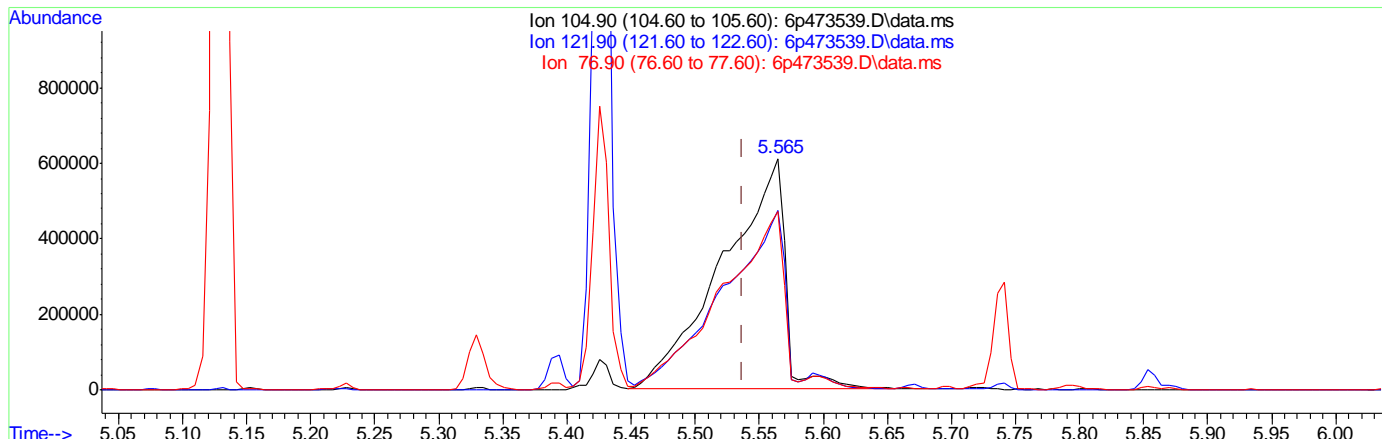
Ion	Exp%	Act%
104.90	100	100
121.90	73.40	75.64
76.90	78.10	76.15
0.00	0.00	0.00

9.5.1.4
 9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473539.D
 Acq On : 6 Jun 2018 1:08 pm
 Operator : christc2
 Sample : ic2235-100
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 06 18:18:23 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration



(31) Benzoic acid (t)
 5.565min (+0.028) 112.17ppm m
 response 2088544

Ion	Exp%	Act%
104.90	100	100
121.90	73.40	77.54
76.90	78.10	76.94
0.00	0.00	0.00

9.5.1.5
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473540.D
 Acq On : 6 Jun 2018 1:32 pm
 Operator : christc2
 Sample : ic2235-80
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 06 18:19:29 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	647779	40.00	ppm	-0.01	
24) Naphthalene-d8	5.720	136	2592466	40.00	ppm	-0.01	
47) Acenaphthene-d10	7.474	164	1371055	40.00	ppm	-0.01	
69) Phenanthrene-d10	9.175	188	2240200	40.00	ppm	-0.01	
83) Chrysene-d12	12.357	240	2158566	40.00	ppm	-0.01	
91) Perylene-d12	13.956	264	2246396	40.00	ppm	-0.01	
101) 1,4-Dichlorobenzene-d4a	4.677	152	647779	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.474	164	1371055	40.00	ppm	0.00	
105) Phenanthrene-d10a	9.175	188	2240200	40.00	ppm	0.00	
109) Chrysene-d12a	12.357	240	2158566	40.00	ppm	0.00	
111) Naphthalene-d8a	5.720	136	2592466	40.00	ppm	0.00	
113) Phenanthrene-d10b	9.175	188	2240200	40.00	ppm	0.00	
115) Chrysene-d12b	12.357	240	2158566	40.00	ppm	0.00	
System Monitoring Compounds							
5) 2-Fluorophenol	3.687	112	1738952	78.51	ppm	-0.01	
Spiked Amount	50.000		Recovery	=	157.02%		
8) Phenol-d5	4.409	99	2314108	76.33	ppm	0.00	
Spiked Amount	50.000		Recovery	=	152.66%		
25) Nitrobenzene-d5	5.110	82	2118428	77.59	ppm	-0.01	
Spiked Amount	50.000		Recovery	=	155.18%		
51) 2-Fluorobiphenyl	6.757	172	3615945	71.11	ppm	-0.01	
Spiked Amount	50.000		Recovery	=	142.22%		
73) 2,4,6-Tribromophenol	8.362	330	487500	99.38	ppm	-0.01	
Spiked Amount	50.000		Recovery	=	198.76%		
85) Terphenyl-d14	11.106	244	3726270	80.95	ppm	-0.01	
Spiked Amount	50.000		Recovery	=	161.90%		
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm		
107) o-terphenyl	0.000	230	0	0.00	ppm		
Target Compounds							
2) 1,4-Dioxane	2.216	88	894467	71.63	ppm		Qvalue 100
3) Pyridine	2.537	79	2342734	75.84	ppm		100
4) N-Nitrosodimethylamine	2.505	74	1358771	74.69	ppm		99
6) Indene	4.875	116	2567939	64.84	ppm		98
7) Cumene	4.083	105	4239308	67.91	ppm		98
9) Phenol	4.420	94	2440785	69.30	ppm		93
10) Aniline	4.431	93	2439831	63.64	ppm		98
11) bis(2-Chloroethyl)ether	4.479	93	1794404	72.76	ppm		99
12) 2-Chlorophenol	4.521	128	1841053	76.66	ppm		98
13) Decane	4.564	43	1754066	60.97	ppm		97
14) 1,3-Dichlorobenzene	4.634	146	1929585	71.59	ppm		99
15) 1,4-Dichlorobenzene	4.693	146	1914530	70.53	ppm		98
16) Benzyl alcohol	4.784	108	1303986	79.87	ppm		98
17) 1,2-Dichlorobenzene	4.810	146	1802825	69.89	ppm		99
18) Acetophenone	4.992	105	2070927	63.12	ppm		96
19) 2-Methylphenol	4.875	108	1551013	68.32	ppm		99
20) 2,2'-oxybis(1-Chloropr...	4.885	121	553954	73.44	ppm		92
21) 3&4-Methylphenol	4.992	108	1449564	64.77	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473540.D
 Acq On : 6 Jun 2018 1:32 pm
 Operator : christc2
 Sample : ic2235-80
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 06 18:19:29 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	4.998	70	1147457	63.48	ppm	98
23) Hexachloroethane	5.078	201	579352	77.31	ppm	93
26) Nitrobenzene	5.126	77	2024350	73.08	ppm	99
27) Quinoline	6.062	129	3673258	75.95	ppm	99
28) Isophorone	5.324	82	3486418	73.10	ppm	98
29) 2-Nitrophenol	5.388	139	977385	89.38	ppm	94
30) 2,4-Dimethylphenol	5.425	107	1778558	80.02	ppm	98
31) Benzoic acid	5.548	105	1643514m	91.87	ppm	
32) bis(2-Chloroethoxy)met...	5.500	93	1949268	70.98	ppm	100
33) 2,4-Dichlorophenol	5.597	162	1453161	80.76	ppm	96
34) 2,6-Dichlorophenol	5.794	162	1337491	75.39	ppm	98
35) 1,3,5-Trichlorobenzene	5.399	180	1503013	71.67	ppm	96
36) 1,2,4-Trichlorobenzene	5.666	180	1461594	73.40	ppm	98
37) 1,2,3-Trichlorobenzene	5.869	180	1423657	71.84	ppm	96
38) Naphthalene	5.736	128	4881252	67.21	ppm	98
39) 4-Chloroaniline	5.784	127	2031822	68.91	ppm	98
40) 2,3-Dichloroaniline	6.666	161	1676101	72.99	ppm	99
41) Caprolactam	6.126	55	991533	84.17	ppm	99
42) Hexachlorobutadiene	5.853	225	726571	75.43	ppm	99
43) 4-Chloro-3-methylphenol	6.244	107	1635376	81.72	ppm	98
44) 2-Methylnaphthalene	6.383	141	2820506	71.52	ppm	97
45) 1-Methylnaphthalene	6.484	141	2929271	70.58	ppm	100
46) Dimethylnaphthalene	7.025	156	3019745	72.94	ppm	99
48) Hexachlorocyclopentadiene	6.549	237	1545332	175.03	ppm	97
49) 2,4,6-Trichlorophenol	6.672	196	934795	83.31	ppm	96
50) 2,4,5-Trichlorophenol	6.709	196	1041698	85.41	ppm	99
52) 2-Chloronaphthalene	6.880	162	2957561	69.54	ppm	99
53) Biphenyl	6.859	154	4087390	69.48	ppm	99
54) 2-Nitroaniline	6.987	65	1146336	82.75	ppm	91
55) Dimethylphthalate	7.190	163	3351065	74.84	ppm	99
56) Acenaphthylene	7.319	152	4934984	73.17	ppm	98
57) 2,6-Dinitrotoluene	7.249	165	804591	82.59	ppm	90
58) 3-Nitroaniline	7.431	138	1024345	84.74	ppm	98
59) Acenaphthene	7.511	153	3206437	70.38	ppm	97
60) 2,4-Dinitrophenol	7.543	184	824831	160.94	ppm	86
61) 4-Nitrophenol	7.629	109	532220	86.00	ppm	89
62) Dibenzofuran	7.704	168	4240215	70.28	ppm	100
63) 2,4-Dinitrotoluene	7.693	165	1083532	81.30	ppm	94
64) 2,3,4,6-Tetrachlorophenol	7.843	232	879970	89.59	ppm	96
65) Diethylphthalate	7.982	149	3320599	75.79	ppm	99
66) Fluorene	8.089	166	3262582	69.39	ppm	99
67) 4-Chlorophenyl-phenyle...	8.094	204	1490739	72.79	ppm	95
68) 4-Nitroaniline	8.126	138	1038487	82.07	ppm	96
70) 4,6-Dinitro-2-methylph...	8.159	198	573823	80.49	ppm	99
71) n-Nitrosodiphenylamine	8.233	169	2647470	78.89	ppm	97
72) 1,2-Diphenylhydrazine	8.276	77	3862173	72.32	ppm	95
74) 4-Bromophenyl-phenylether	8.656	248	952851	84.95	ppm	93
75) Hexachlorobenzene	8.731	284	1052790	84.33	ppm	94
76) Pentachlorophenol	8.966	266	1515606	176.19	ppm	98
77) Phenanthrene	9.202	178	4877434	73.54	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473540.D
 Acq On : 6 Jun 2018 1:32 pm
 Operator : christc2
 Sample : ic2235-80
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 06 18:19:29 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

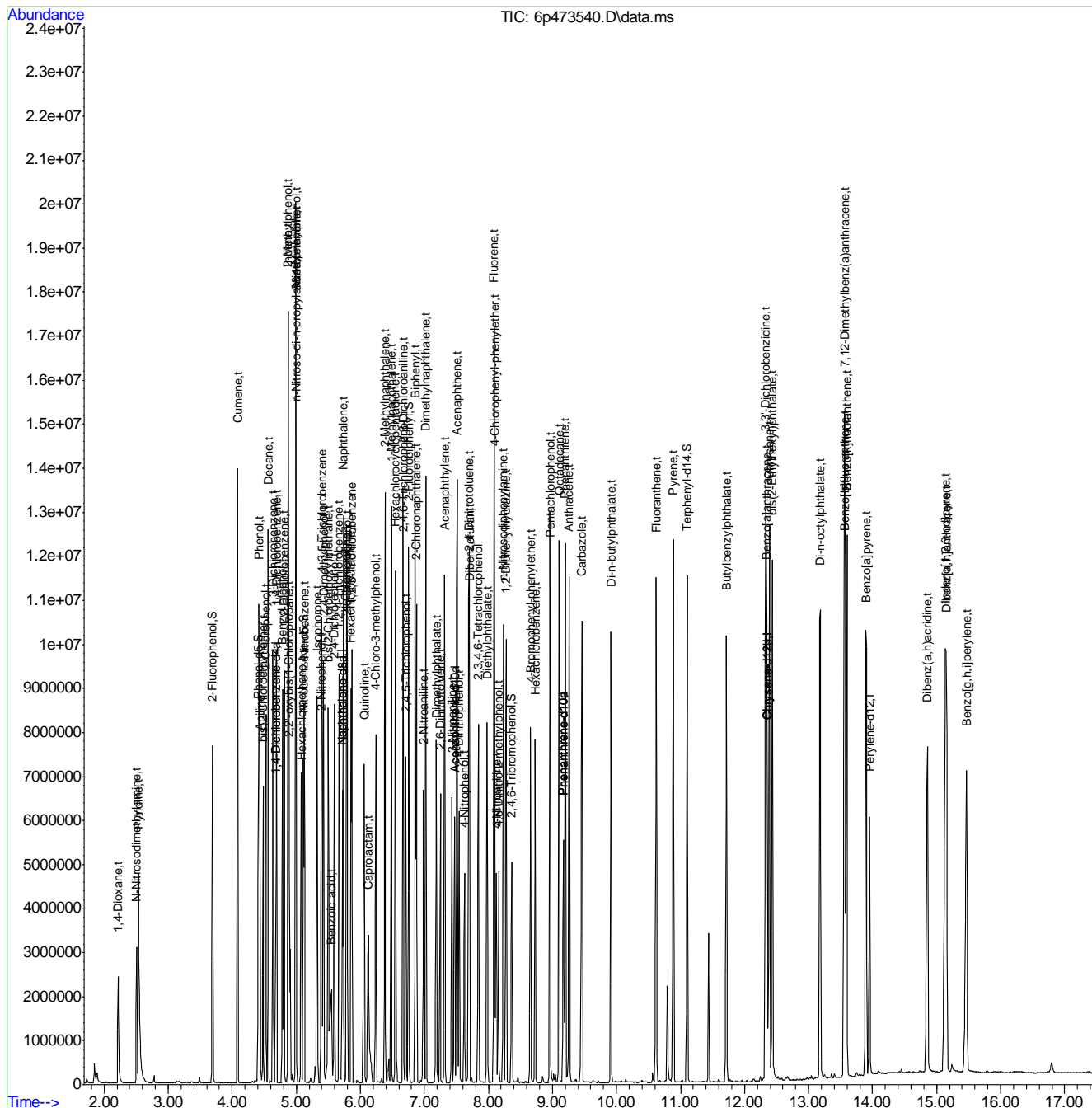
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	9.260	178	4912061	76.74	ppm	99
79) Carbazole	9.458	167	4712123	75.96	ppm	99
80) Di-n-butylphthalate	9.913	149	5541421	85.48	ppm	99
81) Fluoranthene	10.624	202	5156240	82.66	ppm	98
82) Octadecane	9.105	57	2503487	73.35	ppm	96
84) Pyrene	10.892	202	5372264	74.65	ppm	98
86) Butylbenzylphthalate	11.715	149	2555392	87.86	ppm	98
87) Benzo[a]anthracene	12.341	228	4987150	78.35	ppm	99
88) 3,3'-Dichlorobenzidine	12.331	252	1924385	94.45	ppm	98
89) Chrysene	12.389	228	4850286	75.25	ppm	99
90) bis(2-Ethylhexyl)phtha...	12.432	149	3473669	79.49	ppm	98
92) Di-n-octylphthalate	13.181	149	5987240	78.25	ppm	98
93) Benzo[b]fluoranthene	13.571	252	5681661	86.75	ppm	97
94) Benzo[k]fluoranthene	13.598	252	4745463	74.96	ppm	97
95) Benzo[a]pyrene	13.903	252	4678105	79.50	ppm	96
96) Indeno[1,2,3-cd]pyrene	15.139	276	5954416	91.08	ppm	92
97) Dibenz(a,h)acridine	14.855	279	4333846	80.96	ppm	99
98) Dibenz[a,h]anthracene	15.155	278	5173691	89.70	ppm	95
99) 7,12-Dimethylbenz(a)an...	13.566	256	2424238	79.45	ppm	98
100) Benzo[g,h,i]perylene	15.470	276	4646739	88.62	ppm	95

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473540.D
 Acq On : 6 Jun 2018 1:32 pm
 Operator : christc2
 Sample : ic2235-80
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 06 18:19:29 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration



9.5.2
9

Manual Integration Approval Summary

Sample Number: E6P2235-IC2235 Method: SW846 8270D
Lab FileID: 6P473540.D Analyst approved: 06/07/18 10:52 Sean Block
Injection Time: 06/06/18 13:32 Supervisor approved: 06/07/18 15:04 Nina Pandya

Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		5.55	Split peak

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473541.D
 Acq On : 6 Jun 2018 1:57 pm
 Operator : christc2
 Sample : icc2235-50
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 06 18:21:30 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	678143	40.00	ppm	-0.01	
24) Naphthalene-d8	5.714	136	2641382	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.469	164	1442910	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.169	188	2372325	40.00	ppm	-0.02	
83) Chrysene-d12	12.352	240	2230089	40.00	ppm	-0.02	
91) Perylene-d12	13.951	264	2262568	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.677	152	678143	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.469	164	1442910	40.00	ppm	0.00	
105) Phenanthrene-d10a	9.169	188	2372325	40.00	ppm	0.00	
109) Chrysene-d12a	12.352	240	2230089	40.00	ppm	0.00	
111) Naphthalene-d8a	5.714	136	2641382	40.00	ppm	0.00	
113) Phenanthrene-d10b	9.169	188	2372325	40.00	ppm	0.00	
115) Chrysene-d12b	12.352	240	2230089	40.00	ppm	0.00	
System Monitoring Compounds							
5) 2-Fluorophenol	3.687	112	1155103	49.82	ppm	-0.01	
Spiked Amount	50.000		Recovery	=	99.64%		
8) Phenol-d5	4.404	99	1551161	48.87	ppm	-0.01	
Spiked Amount	50.000		Recovery	=	97.74%		
25) Nitrobenzene-d5	5.110	82	1421494	51.10	ppm	-0.01	
Spiked Amount	50.000		Recovery	=	102.20%		
51) 2-Fluorobiphenyl	6.752	172	2457061	45.91	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	91.82%		
73) 2,4,6-Tribromophenol	8.362	330	305547	58.82	ppm	-0.01	
Spiked Amount	50.000		Recovery	=	117.64%		
85) Terphenyl-d14	11.100	244	2371610	49.87	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	99.74%		
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm		
107) o-terphenyl	0.000	230	0	0.00	ppm		
Target Compounds							
2) 1,4-Dioxane	2.216	88	600962	45.97	ppm		Qvalue 97
3) Pyridine	2.532	79	1562186	48.31	ppm		98
4) N-Nitrosodimethylamine	2.505	74	904598	47.50	ppm		98
6) Indene	4.875	116	1867268	45.03	ppm		99
7) Cumene	4.083	105	3007560	46.02	ppm		98
9) Phenol	4.415	94	1701894	46.16	ppm		98
10) Aniline	4.431	93	1631553	40.65	ppm		96
11) bis(2-Chloroethyl)ether	4.479	93	1194697	46.27	ppm		97
12) 2-Chlorophenol	4.522	128	1237214	49.21	ppm		96
13) Decane	4.559	43	1310112	43.50	ppm		95
14) 1,3-Dichlorobenzene	4.634	146	1317101	46.68	ppm		99
15) 1,4-Dichlorobenzene	4.687	146	1310553	46.12	ppm		99
16) Benzyl alcohol	4.784	108	867876	50.78	ppm		96
17) 1,2-Dichlorobenzene	4.805	146	1249135	46.26	ppm		98
18) Acetophenone	4.987	105	1507019	43.87	ppm		95
19) 2-Methylphenol	4.869	108	1101123	46.33	ppm		97
20) 2,2'-oxybis(1-Chloropr...	4.885	121	369043	46.73	ppm		99
21) 3&4-Methylphenol	4.987	108	1072265	45.77	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473541.D
 Acq On : 6 Jun 2018 1:57 pm
 Operator : christc2
 Sample : icc2235-50
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 06 18:21:30 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	4.992	70	827319	43.72	ppm	99
23) Hexachloroethane	5.072	201	387007	49.33	ppm	93
26) Nitrobenzene	5.126	77	1358967	48.15	ppm	94
27) Quinoline	6.051	129	2424123	49.19	ppm	99
28) Isophorone	5.318	82	2361977	48.60	ppm	99
29) 2-Nitrophenol	5.388	139	655232	58.81	ppm	91
30) 2,4-Dimethylphenol	5.420	107	1153878	50.96	ppm	96
31) Benzoic acid	5.527	105	1036195	57.62	ppm	95
32) bis(2-Chloroethoxy)met...	5.495	93	1325284	47.37	ppm	99
33) 2,4-Dichlorophenol	5.591	162	951896	51.92	ppm	97
34) 2,6-Dichlorophenol	5.789	162	908716	50.27	ppm	96
35) 1,3,5-Trichlorobenzene	5.399	180	1011544	47.34	ppm	95
36) 1,2,4-Trichlorobenzene	5.666	180	967488	47.69	ppm	99
37) 1,2,3-Trichlorobenzene	5.864	180	948310	46.97	ppm	96
38) Naphthalene	5.736	128	3370810	45.55	ppm	99
39) 4-Chloroaniline	5.778	127	1392108	46.34	ppm	98
40) 2,3-Dichloroaniline	6.661	161	1123845	48.03	ppm	99
41) Caprolactam	6.110	55	646124	53.83	ppm	98
42) Hexachlorobutadiene	5.853	225	490162	49.94	ppm	98
43) 4-Chloro-3-methylphenol	6.233	107	1076728	52.81	ppm	96
44) 2-Methylnaphthalene	6.383	141	1900893	47.31	ppm	99
45) 1-Methylnaphthalene	6.479	141	2029953	48.01	ppm	99
46) Dimethylnaphthalene	7.019	156	2039612	48.36	ppm	98
48) Hexachlorocyclopentadiene	6.549	237	968068	104.18	ppm	100
49) 2,4,6-Trichlorophenol	6.666	196	622154	52.69	ppm	97
50) 2,4,5-Trichlorophenol	6.704	196	679325	52.92	ppm	96
52) 2-Chloronaphthalene	6.875	162	2011423	44.94	ppm	98
53) Biphenyl	6.854	154	2805608	45.32	ppm	98
54) 2-Nitroaniline	6.982	65	758234	52.01	ppm	93
55) Dimethylphthalate	7.185	163	2227135	47.26	ppm	99
56) Acenaphthylene	7.314	152	3340549	47.06	ppm	99
57) 2,6-Dinitrotoluene	7.244	165	514895	49.66	ppm	94
58) 3-Nitroaniline	7.426	138	668003	52.51	ppm	99
59) Acenaphthene	7.506	153	2159778	45.04	ppm	99
60) 2,4-Dinitrophenol	7.538	184	504939	100.74	ppm	78
61) 4-Nitrophenol	7.618	109	347719	53.39	ppm	99
62) Dibenzofuran	7.699	168	2859976	45.05	ppm	99
63) 2,4-Dinitrotoluene	7.688	165	709767	49.91	ppm	95
64) 2,3,4,6-Tetrachlorophenol	7.838	232	549851	53.19	ppm	96
65) Diethylphthalate	7.977	149	2229682	48.36	ppm	100
66) Fluorene	8.084	166	2304600	46.57	ppm	99
67) 4-Chlorophenyl-phenyle...	8.089	204	1019445	47.30	ppm	98
68) 4-Nitroaniline	8.116	138	677782	50.89	ppm	95
70) 4,6-Dinitro-2-methylph...	8.153	198	363639	49.38	ppm	98
71) n-Nitrosodiphenylamine	8.228	169	1733775	48.79	ppm	97
72) 1,2-Diphenylhydrazine	8.271	77	2638661	46.66	ppm	100
74) 4-Bromophenyl-phenylether	8.656	248	624369	52.56	ppm	96
75) Hexachlorobenzene	8.731	284	667885	50.52	ppm	89
76) Pentachlorophenol	8.961	266	953356	105.27	ppm	99
77) Phenanthrene	9.202	178	3242898	46.17	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473541.D
 Acq On : 6 Jun 2018 1:57 pm
 Operator : christc2
 Sample : icc2235-50
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 06 18:21:30 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

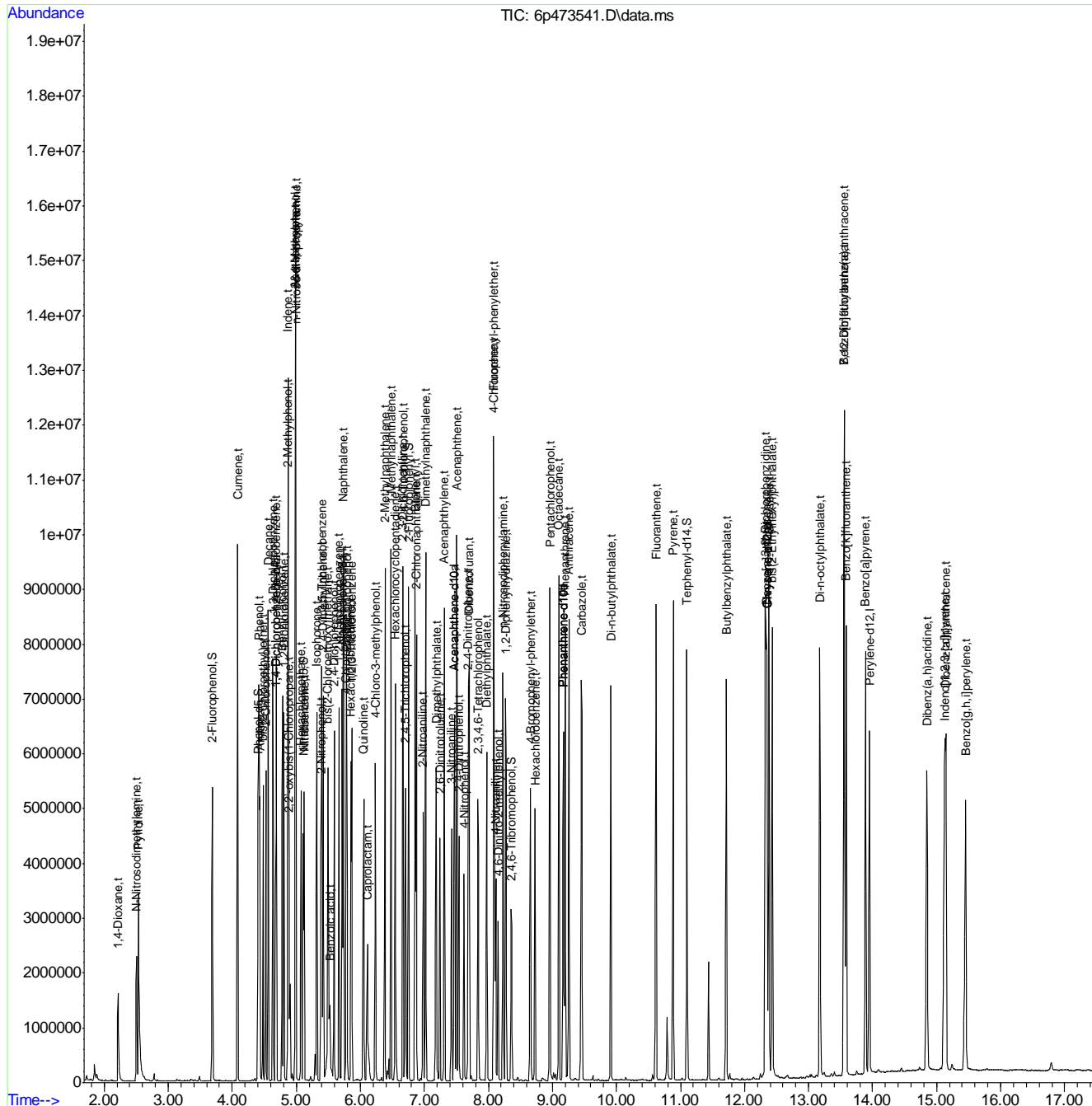
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	9.260	178	3251132	47.96	ppm	99
79) Carbazole	9.453	167	3139769	47.79	ppm	99
80) Di-n-butylphthalate	9.913	149	3820280	55.65	ppm	100
81) Fluoranthene	10.619	202	3435063	52.00	ppm	99
82) Octadecane	9.100	57	1799556	49.79	ppm	98
84) Pyrene	10.886	202	3601866	48.44	ppm	99
86) Butylbenzylphthalate	11.715	149	1709146	56.88	ppm	96
87) Benzo[a]anthracene	12.336	228	3251223	49.44	ppm	99
88) 3,3'-Dichlorobenzidine	12.325	252	1219952	57.95	ppm	100
89) Chrysene	12.384	228	3185236	47.83	ppm	99
90) bis(2-Ethylhexyl)phtha...	12.432	149	2360160	50.33	ppm	98
92) Di-n-octylphthalate	13.176	149	3977428	49.58	ppm	99
93) Benzo[b]fluoranthene	13.555	252	3412117	51.72	ppm	99
94) Benzo[k]fluoranthene	13.587	252	3236955	50.76	ppm	99
95) Benzo[a]pyrene	13.892	252	2984022	50.52	ppm	99
96) Indeno[1,2,3-cd]pyrene	15.123	276	3711765	56.37	ppm	95
97) Dibenz(a,h)acridine	14.850	279	2743783	51.85	ppm	98
98) Dibenz[a,h]anthracene	15.144	278	3198138	55.05	ppm	97
99) 7,12-Dimethylbenz(a)an...	13.555	256	1506349	49.29	ppm	97
100) Benzo[g,h,i]perylene	15.454	276	2890319	54.73	ppm	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473541.D
 Acq On : 6 Jun 2018 1:57 pm
 Operator : christc2
 Sample : icc2235-50
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 4 Sample Multiplier: 1

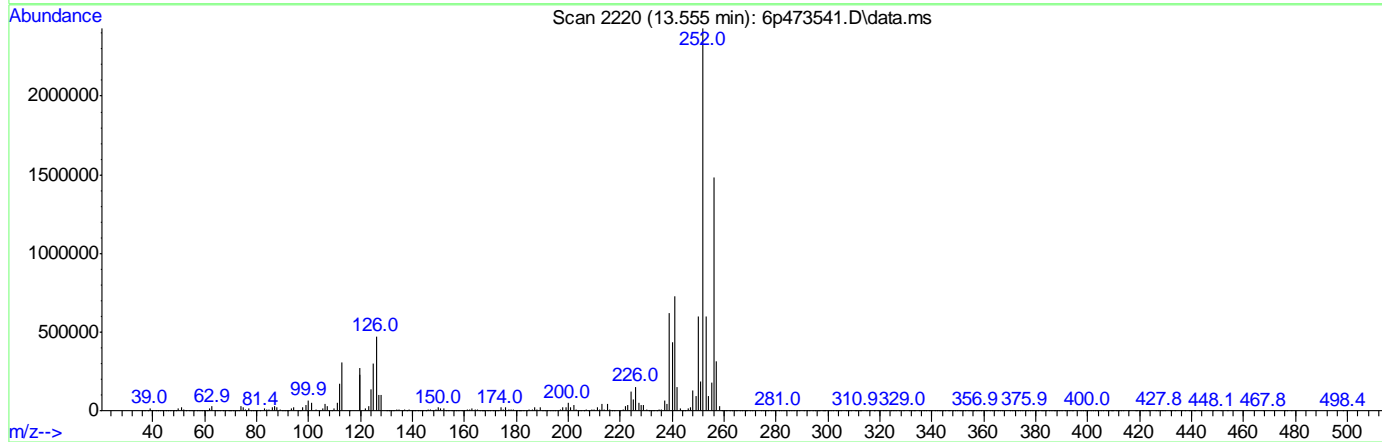
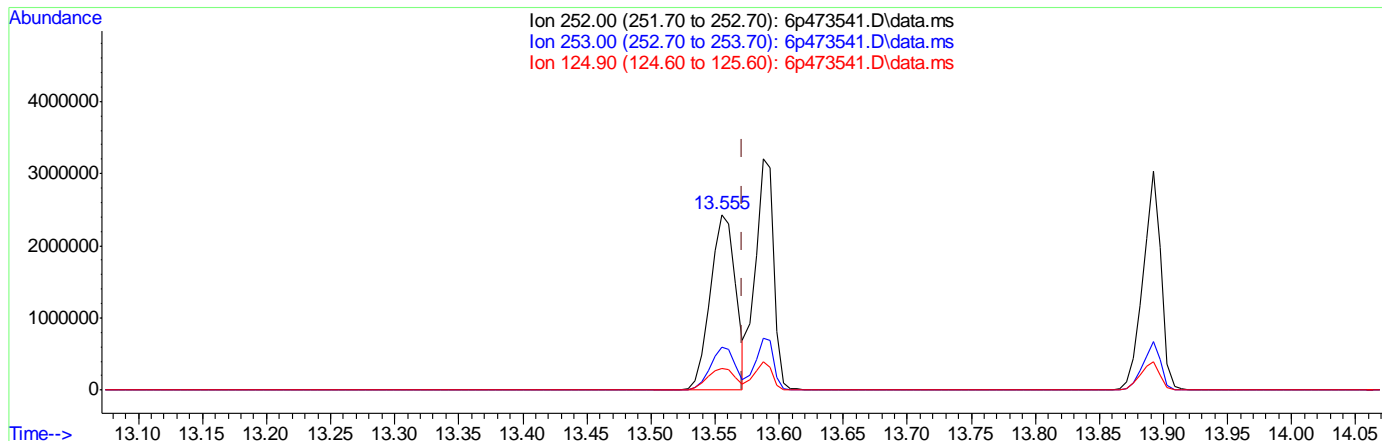
Quant Time: Jun 06 18:21:30 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473541.D
 Acq On : 6 Jun 2018 1:57 pm
 Operator : christc2
 Sample : icc2235-50
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 06 14:14:58 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration



(93) Benzo[b]fluoranthene (t)

13.555min (-0.016) 51.72ppm

response 3412117

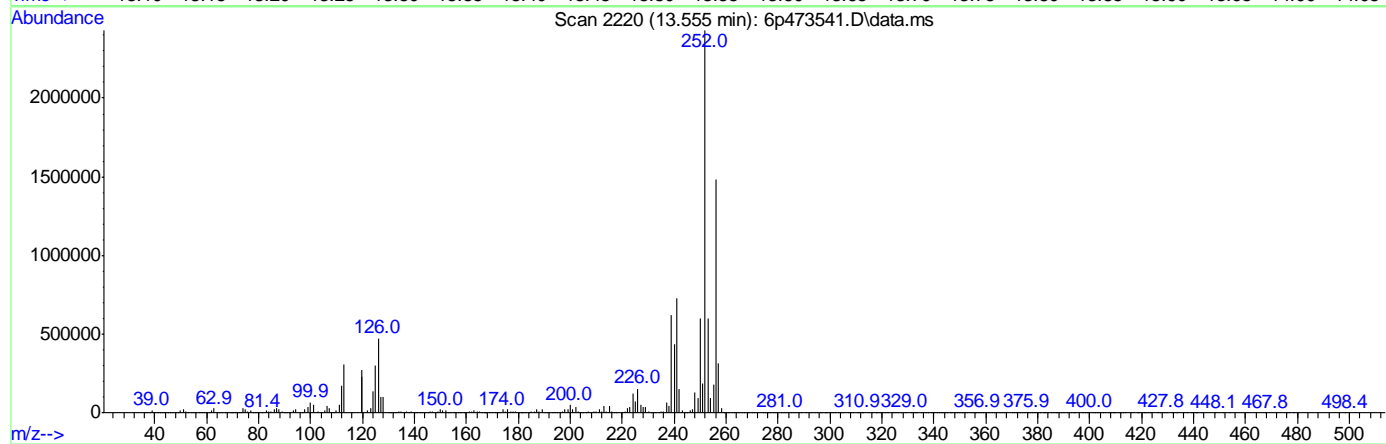
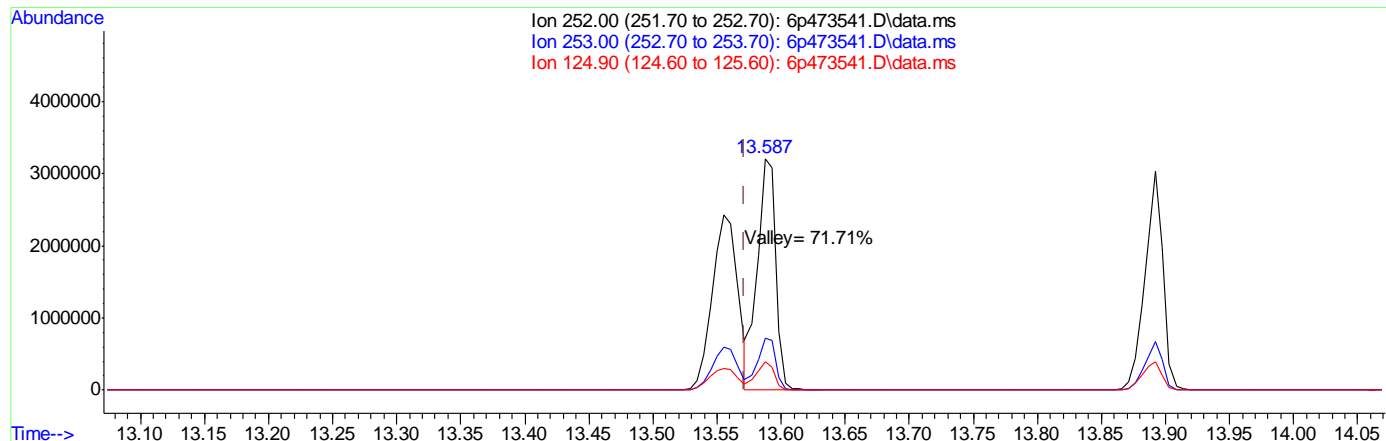
Ion	Exp%	Act%
252.00	100	100
253.00	25.30	24.96
124.90	13.10	12.11
0.00	0.00	0.00

9.5.3.1
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473541.D
 Acq On : 6 Jun 2018 1:57 pm
 Operator : christc2
 Sample : icc2235-50
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 06 14:14:58 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration



TIC: 6p473541.D\data.ms

(93) Benzo[b]fluoranthene (t)

13.555min (-0.016) 51.72ppm

response 3412117

Ion	Exp%	Act%
252.00	100	100
253.00	25.30	24.96
124.90	13.10	12.11
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473542.D
 Acq On : 6 Jun 2018 2:22 pm
 Operator : christc2
 Sample : ic2235-25
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 06 18:22:00 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	682050	40.00	ppm	-0.01	
24) Naphthalene-d8	5.714	136	2621128	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.469	164	1395065	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.170	188	2285311	40.00	ppm	-0.02	
83) Chrysene-d12	12.347	240	2174677	40.00	ppm	-0.02	
91) Perylene-d12	13.946	264	2204057	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.677	152	682050	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.469	164	1395065	40.00	ppm	0.00	
105) Phenanthrene-d10a	9.170	188	2285311	40.00	ppm	0.00	
109) Chrysene-d12a	12.347	240	2174677	40.00	ppm	0.00	
111) Naphthalene-d8a	5.714	136	2621128	40.00	ppm	0.00	
113) Phenanthrene-d10b	9.170	188	2285311	40.00	ppm	0.00	
115) Chrysene-d12b	12.347	240	2174643	40.00	ppm	0.00	
System Monitoring Compounds							
5) 2-Fluorophenol	3.687	112	595641	25.54	ppm	-0.01	
Spiked Amount	50.000		Recovery	=	51.08%		
8) Phenol-d5	4.404	99	807893	25.31	ppm	-0.01	
Spiked Amount	50.000		Recovery	=	50.62%		
25) Nitrobenzene-d5	5.105	82	725337	26.27	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	52.54%		
51) 2-Fluorobiphenyl	6.752	172	1265770	24.46	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	48.92%		
73) 2,4,6-Tribromophenol	8.357	330	142623	28.50	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	57.00%		
85) Terphenyl-d14	11.100	244	1167275	25.17	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	50.34%		
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm		
107) o-terphenyl	0.000	230	0	0.00	ppm		
Target Compounds							
2) 1,4-Dioxane	2.216	88	300865	22.88	ppm		Qvalue 97
3) Pyridine	2.537	79	778810	23.95	ppm		99
4) N-Nitrosodimethylamine	2.505	74	466596	24.36	ppm		94
6) Indene	4.875	116	1045592	25.07	ppm		99
7) Cumene	4.083	105	1603334	24.39	ppm		98
9) Phenol	4.415	94	898776	24.24	ppm		95
10) Aniline	4.425	93	923860	22.89	ppm		99
11) bis(2-Chloroethyl)ether	4.474	93	623281	24.00	ppm		99
12) 2-Chlorophenol	4.516	128	638483	25.25	ppm		96
13) Decane	4.559	43	723136	23.87	ppm		96
14) 1,3-Dichlorobenzene	4.634	146	676065	23.82	ppm		99
15) 1,4-Dichlorobenzene	4.687	146	686849	24.03	ppm		99
16) Benzyl alcohol	4.778	108	429841	25.00	ppm		95
17) 1,2-Dichlorobenzene	4.805	146	641103	23.61	ppm		99
18) Acetophenone	4.987	105	845516	24.47	ppm		98
19) 2-Methylphenol	4.869	108	599945	25.10	ppm		97
20) 2,2'-oxybis(1-Chloropr...	4.885	121	191136	24.07	ppm		93
21) 3&4-Methylphenol	4.982	108	601621	25.53	ppm		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473542.D
 Acq On : 6 Jun 2018 2:22 pm
 Operator : christc2
 Sample : ic2235-25
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 06 18:22:00 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS, zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	4.987	70	470776	24.74	ppm	99
23) Hexachloroethane	5.073	201	194136	24.60	ppm	89
26) Nitrobenzene	5.121	77	713207	25.46	ppm	99
27) Quinoline	6.041	129	1240160	25.36	ppm	99
28) Isophorone	5.313	82	1244915	25.82	ppm	99
29) 2-Nitrophenol	5.383	139	331068	29.94	ppm	98
30) 2,4-Dimethylphenol	5.415	107	566689	25.22	ppm	99
31) Benzoic acid	5.500	105	491486	28.67	ppm	96
32) bis(2-Chloroethoxy)met...	5.495	93	687007	24.74	ppm	100
33) 2,4-Dichlorophenol	5.586	162	485567	26.69	ppm	98
34) 2,6-Dichlorophenol	5.789	162	469198	26.16	ppm	99
35) 1,3,5-Trichlorobenzene	5.399	180	528192	24.91	ppm	95
36) 1,2,4-Trichlorobenzene	5.666	180	498451	24.76	ppm	98
37) 1,2,3-Trichlorobenzene	5.864	180	483763	24.14	ppm	99
38) Naphthalene	5.730	128	1783767	24.29	ppm	99
39) 4-Chloroaniline	5.779	127	751334	25.20	ppm	98
40) 2,3-Dichloroaniline	6.661	161	597120	25.72	ppm	99
41) Caprolactam	6.094	55	326962	27.45	ppm	97
42) Hexachlorobutadiene	5.853	225	240738	24.72	ppm	98
43) 4-Chloro-3-methylphenol	6.228	107	554892	27.42	ppm	97
44) 2-Methylnaphthalene	6.378	141	1003896	25.18	ppm	98
45) 1-Methylnaphthalene	6.479	141	1053139	25.10	ppm	99
46) Dimethylnaphthalene	7.019	156	1074810	25.68	ppm	98
48) Hexachlorocyclopentadiene	6.543	237	452716	50.39	ppm	97
49) 2,4,6-Trichlorophenol	6.666	196	316362	27.71	ppm	97
50) 2,4,5-Trichlorophenol	6.699	196	329927	26.58	ppm	98
52) 2-Chloronaphthalene	6.870	162	1042845	24.10	ppm	98
53) Biphenyl	6.854	154	1485510	24.82	ppm	100
54) 2-Nitroaniline	6.977	65	380942	27.03	ppm	94
55) Dimethylphthalate	7.180	163	1139195	25.00	ppm	100
56) Acenaphthylene	7.308	152	1739120	25.34	ppm	100
57) 2,6-Dinitrotoluene	7.239	165	258535	25.73	ppm	96
58) 3-Nitroaniline	7.421	138	326533	26.55	ppm	98
59) Acenaphthene	7.506	153	1134620	24.47	ppm	98
60) 2,4-Dinitrophenol	7.533	184	202678	47.66	ppm #	60
61) 4-Nitrophenol	7.608	109	168488	26.76	ppm	99
62) Dibenzofuran	7.693	168	1478360	24.08	ppm	98
63) 2,4-Dinitrotoluene	7.683	165	358242	25.98	ppm	90
64) 2,3,4,6-Tetrachlorophenol	7.838	232	272618	27.28	ppm	95
65) Diethylphthalate	7.972	149	1151656	25.83	ppm	99
66) Fluorene	8.079	166	1212371	25.34	ppm	100
67) 4-Chlorophenyl-phenyle...	8.089	204	526306	25.26	ppm	97
68) 4-Nitroaniline	8.105	138	345163	26.81	ppm	96
70) 4,6-Dinitro-2-methylph...	8.143	198	159467	23.81	ppm	95
71) n-Nitrosodiphenylamine	8.223	169	891568	26.04	ppm	98
72) 1,2-Diphenylhydrazine	8.271	77	1386022	25.44	ppm	97
74) 4-Bromophenyl-phenylether	8.651	248	310021	27.09	ppm	94
75) Hexachlorobenzene	8.726	284	324021	25.44	ppm	98
76) Pentachlorophenol	8.956	266	434266	51.02	ppm	98
77) Phenanthrene	9.196	178	1670687	24.69	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473542.D
 Acq On : 6 Jun 2018 2:22 pm
 Operator : christc2
 Sample : ic2235-25
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 06 18:22:00 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration

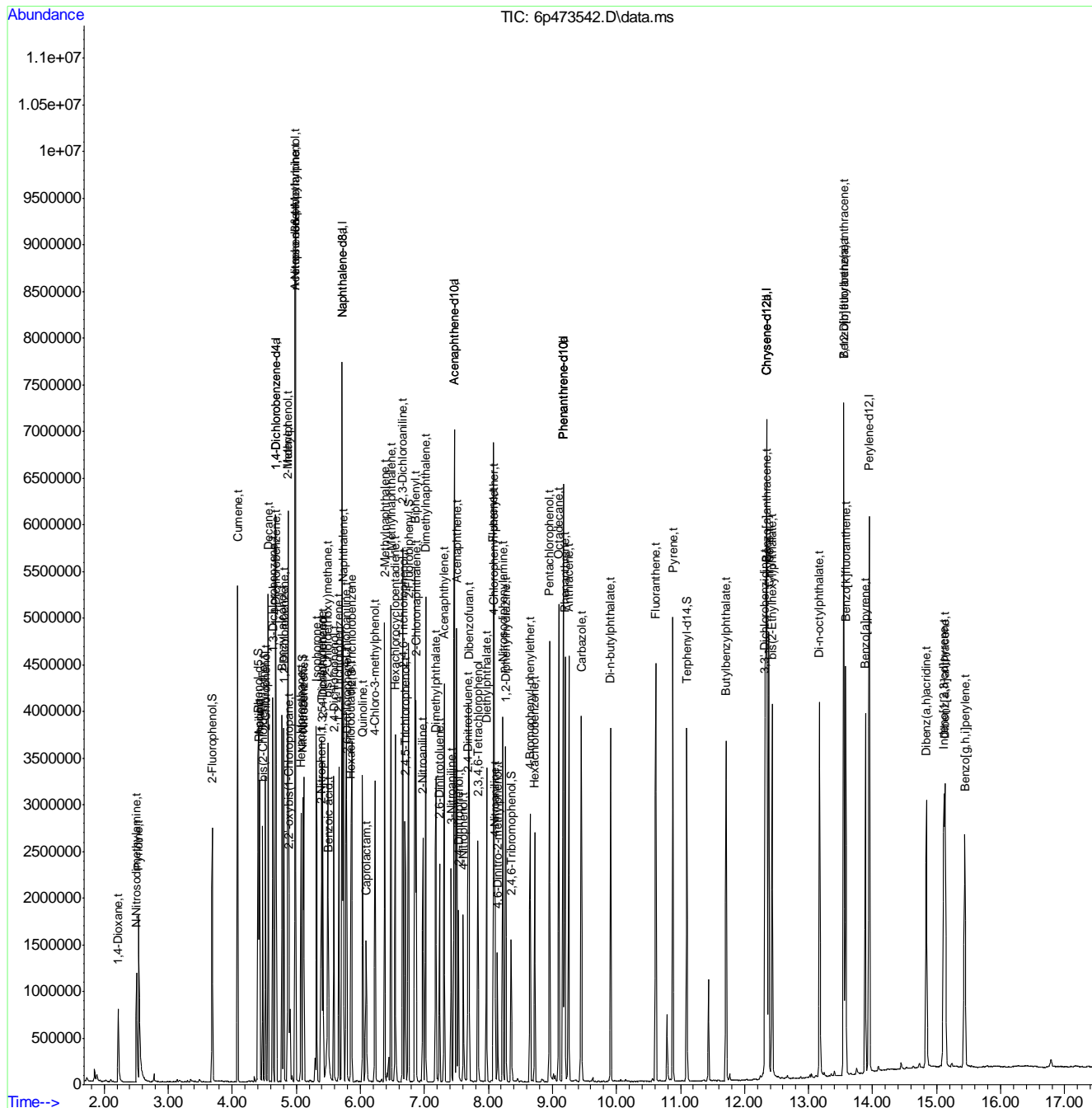
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	9.255	178	1700812	26.05	ppm	99
79) Carbazole	9.453	167	1646893	26.02	ppm	99
80) Di-n-butylphthalate	9.908	149	1932655	29.22	ppm	99
81) Fluoranthene	10.614	202	1732044	27.22	ppm	98
82) Octadecane	9.100	57	970339	27.87	ppm	99
84) Pyrene	10.881	202	1820156	25.10	ppm	98
86) Butylbenzylphthalate	11.710	149	849445	28.99	ppm	98
87) Benzo[a]anthracene	12.336	228	1658320	25.86	ppm	99
88) 3,3'-Dichlorobenzidine	12.320	252	581948	28.35	ppm	96
89) Chrysene	12.379	228	1607661	24.76	ppm	99
90) bis(2-Ethylhexyl)phtha...	12.432	149	1198717	25.71	ppm	99
92) Di-n-octylphthalate	13.170	149	2052788	26.04	ppm	100
93) Benzo[b]fluoranthene	13.550	252	1728987	26.91	ppm	98
94) Benzo[k]fluoranthene	13.582	252	1587672	25.56	ppm	99
95) Benzo[a]pyrene	13.887	252	1451181	25.46	ppm	99
96) Indeno[1,2,3-cd]pyrene	15.112	276	1800271	28.07	ppm	97
97) Dibenz(a,h)acridine	14.839	279	1340748	26.68	ppm	100
98) Dibenz[a,h]anthracene	15.133	278	1538073	27.18	ppm	99
99) 7,12-Dimethylbenz(a)an...	13.550	256	736844	25.11	ppm	97
100) Benzo[g,h,i]perylene	15.444	276	1402018	27.25	ppm	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473542.D
 Acq On : 6 Jun 2018 2:22 pm
 Operator : christc2
 Sample : ic2235-25
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 06 18:22:00 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473543.D
 Acq On : 6 Jun 2018 2:47 pm
 Operator : christc2
 Sample : ic2235-10
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 06 18:22:37 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	704585	40.00	ppm	-0.01	
24) Naphthalene-d8	5.714	136	2700985	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.469	164	1434961	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.170	188	2409242	40.00	ppm	-0.02	
83) Chrysene-d12	12.347	240	2220349	40.00	ppm	-0.02	
91) Perylene-d12	13.946	264	2294231	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.677	152	704585	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.469	164	1434961	40.00	ppm	0.00	
105) Phenanthrene-d10a	9.170	188	2409242	40.00	ppm	0.00	
109) Chrysene-d12a	12.347	240	2220349	40.00	ppm	0.00	
111) Naphthalene-d8a	5.714	136	2700985	40.00	ppm	0.00	
113) Phenanthrene-d10b	9.170	188	2409242	40.00	ppm	0.00	
115) Chrysene-d12b	12.347	240	2220349	40.00	ppm	0.00	
System Monitoring Compounds							
5) 2-Fluorophenol	3.687	112	262829	10.91	ppm	-0.01	
Spiked Amount	50.000		Recovery	=	21.82%		
8) Phenol-d5	4.399	99	360073	10.92	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	21.84%		
25) Nitrobenzene-d5	5.105	82	313466	11.02	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	22.04%		
51) 2-Fluorobiphenyl	6.747	172	553408	10.40	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	20.80%		
73) 2,4,6-Tribromophenol	8.357	330	56676	10.74	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	21.48%		
85) Terphenyl-d14	11.095	244	502335	10.61	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	21.22%		
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm		
107) o-terphenyl	0.000	230	0	0.00	ppm		
Target Compounds							
2) 1,4-Dioxane	2.222	88	136935	10.08	ppm		Qvalue 99
3) Pyridine	2.543	79	356286	10.60	ppm		98
4) N-Nitrosodimethylamine	2.505	74	202065	10.21	ppm		99
6) Indene	4.875	116	474635	11.02	ppm		99
7) Cumene	4.083	105	726466	10.70	ppm		99
9) Phenol	4.409	94	404051	10.55	ppm		99
10) Aniline	4.425	93	433781	10.40	ppm		100
11) bis(2-Chloroethyl)ether	4.473	93	276631	10.31	ppm		98
12) 2-Chlorophenol	4.516	128	279205	10.69	ppm		98
13) Decane	4.559	43	335561	10.72	ppm		93
14) 1,3-Dichlorobenzene	4.634	146	312398	10.66	ppm		99
15) 1,4-Dichlorobenzene	4.687	146	307884	10.43	ppm		99
16) Benzyl alcohol	4.778	108	189536	10.67	ppm		99
17) 1,2-Dichlorobenzene	4.805	146	287477	10.25	ppm		98
18) Acetophenone	4.982	105	390544	10.94	ppm		91
19) 2-Methylphenol	4.864	108	269537	10.92	ppm		98
20) 2,2'-oxybis(1-Chloropr...	4.885	121	84293	10.27	ppm		99
21) 3&4-Methylphenol	4.982	108	281476	11.56	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473543.D
 Acq On : 6 Jun 2018 2:47 pm
 Operator : christc2
 Sample : ic2235-10
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 06 18:22:37 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	4.982	70	218427	11.11	ppm	93
23) Hexachloroethane	5.073	201	85556	10.50	ppm	90
26) Nitrobenzene	5.121	77	317519	11.00	ppm	98
27) Quinoline	6.035	129	548005	10.88	ppm	98
28) Isophorone	5.313	82	546291	10.99	ppm	98
29) 2-Nitrophenol	5.383	139	142110	12.47	ppm	99
30) 2,4-Dimethylphenol	5.415	107	234085	10.11	ppm	98
31) Benzoic acid	5.479	105	178094	11.51	ppm	97
32) bis(2-Chloroethoxy)met...	5.495	93	304860	10.66	ppm	100
33) 2,4-Dichlorophenol	5.586	162	209080	11.15	ppm	97
34) 2,6-Dichlorophenol	5.784	162	205557	11.12	ppm	93
35) 1,3,5-Trichlorobenzene	5.393	180	229095	10.49	ppm	94
36) 1,2,4-Trichlorobenzene	5.666	180	218836	10.55	ppm	99
37) 1,2,3-Trichlorobenzene	5.864	180	217282	10.52	ppm	99
38) Naphthalene	5.730	128	812285	10.73	ppm	100
39) 4-Chloroaniline	5.773	127	339873	11.06	ppm	96
40) 2,3-Dichloroaniline	6.661	161	260332	10.88	ppm	99
41) Caprolactam	6.078	55	139800	11.39	ppm	99
42) Hexachlorobutadiene	5.848	225	107910	10.75	ppm	96
43) 4-Chloro-3-methylphenol	6.228	107	240302	11.53	ppm	98
44) 2-Methylnaphthalene	6.378	141	451638	10.99	ppm	99
45) 1-Methylnaphthalene	6.474	141	468053	10.83	ppm	97
46) Dimethylnaphthalene	7.014	156	471103	10.92	ppm	99
48) Hexachlorocyclopentadiene	6.543	237	174747	18.91	ppm	96
49) 2,4,6-Trichlorophenol	6.661	196	133484	11.37	ppm	96
50) 2,4,5-Trichlorophenol	6.699	196	141893	11.12	ppm	98
52) 2-Chloronaphthalene	6.870	162	469902	10.56	ppm	98
53) Biphenyl	6.854	154	653481	10.61	ppm	99
54) 2-Nitroaniline	6.971	65	161046	11.11	ppm	99
55) Dimethylphthalate	7.175	163	487398	10.40	ppm	100
56) Acenaphthylene	7.308	152	775435	10.99	ppm	99
57) 2,6-Dinitrotoluene	7.233	165	107685	10.61	ppm	98
58) 3-Nitroaniline	7.415	138	142255	11.24	ppm	98
59) Acenaphthene	7.501	153	503892	10.57	ppm	97
60) 2,4-Dinitrophenol	7.533	184	56541	18.40	ppm #	56
61) 4-Nitrophenol	7.608	109	68265	10.54	ppm	87
62) Dibenzofuran	7.693	168	661864	10.48	ppm	99
63) 2,4-Dinitrotoluene	7.677	165	146380	10.57	ppm	95
64) 2,3,4,6-Tetrachlorophenol	7.832	232	115174	11.20	ppm	96
65) Diethylphthalate	7.966	149	498751	10.88	ppm	98
66) Fluorene	8.078	166	538796	10.95	ppm	98
67) 4-Chlorophenyl-phenyle...	8.089	204	224049	10.45	ppm	95
68) 4-Nitroaniline	8.100	138	147241	11.12	ppm	99
70) 4,6-Dinitro-2-methylph...	8.143	198	53860	9.15	ppm	99
71) n-Nitrosodiphenylamine	8.223	169	393281	10.90	ppm	99
72) 1,2-Diphenylhydrazine	8.266	77	606484	10.56	ppm	98
74) 4-Bromophenyl-phenylether	8.651	248	128136	10.62	ppm	90
75) Hexachlorobenzene	8.720	284	139184	10.37	ppm	93
76) Pentachlorophenol	8.950	266	174478	21.06	ppm	97
77) Phenanthrene	9.191	178	731817	10.26	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473543.D
 Acq On : 6 Jun 2018 2:47 pm
 Operator : christc2
 Sample : ic2235-10
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 06 18:22:37 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

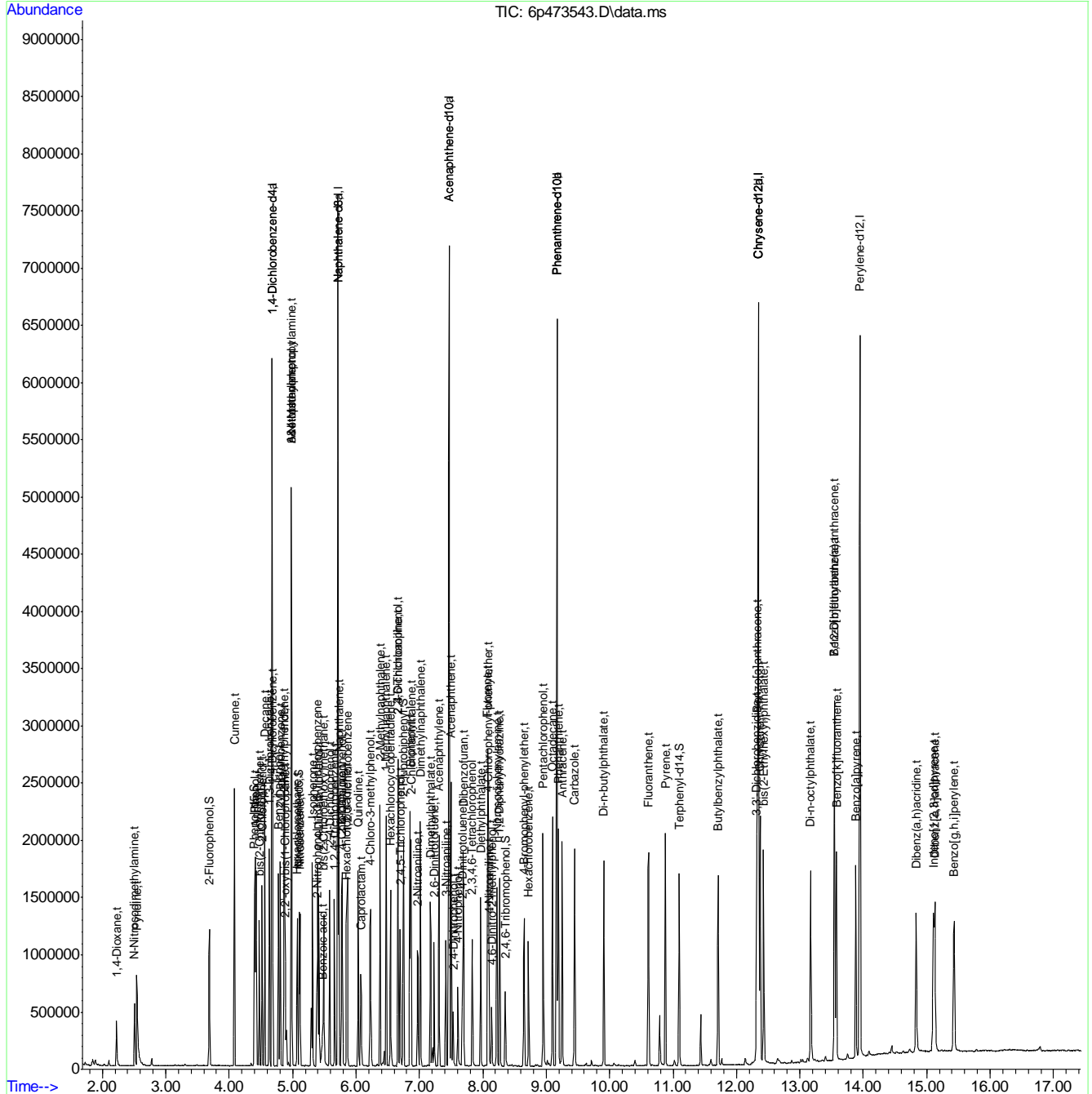
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	9.250	178	745329	10.83	ppm	100
79) Carbazole	9.448	167	712235	10.68	ppm	99
80) Di-n-butylphthalate	9.908	149	836068	11.99	ppm	99
81) Fluoranthene	10.614	202	753286	11.23	ppm	98
82) Octadecane	9.100	57	427350	11.64	ppm	99
84) Pyrene	10.881	202	797874	10.78	ppm	99
86) Butylbenzylphthalate	11.710	149	365345	12.21	ppm	96
87) Benzo[a]anthracene	12.331	228	710579	10.85	ppm	98
88) 3,3'-Dichlorobenzidine	12.320	252	249629	11.91	ppm	97
89) Chrysene	12.373	228	702635	10.60	ppm	97
90) bis(2-Ethylhexyl)phtha...	12.427	149	513776	11.08	ppm	98
92) Di-n-octylphthalate	13.170	149	863144	11.30	ppm	99
93) Benzo[b]fluoranthene	13.545	252	724656	10.83	ppm	97
94) Benzo[k]fluoranthene	13.577	252	680097	10.52	ppm	99
95) Benzo[a]pyrene	13.882	252	619599	10.72	ppm	98
96) Indeno[1,2,3-cd]pyrene	15.107	276	742111	11.11	ppm	99
97) Dibenz(a,h)acridine	14.834	279	550869	11.05	ppm	100
98) Dibenz[a,h]anthracene	15.128	278	651314	11.06	ppm	98
99) 7,12-Dimethylbenz(a)an...	13.545	256	283006	9.72	ppm	98
100) Benzo[g,h,i]perylene	15.433	276	597880	11.16	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
Data File : 6p473543.D
Acq On : 6 Jun 2018 2:47 pm
Operator : christc2
Sample : ic2235-10
Misc : op8717,e6p2235,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 06 18:22:37 2018
Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
QLast Update : Tue Jun 05 21:55:52 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473544.D
 Acq On : 6 Jun 2018 3:12 pm
 Operator : christc2
 Sample : ic2235-5
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 06 18:23:34 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	576687	40.00	ppm	-0.01	
24) Naphthalene-d8	5.714	136	2283177	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.469	164	1102523	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.164	188	1960941	40.00	ppm	-0.02	
83) Chrysene-d12	12.341	240	1866392	40.00	ppm	-0.03	
91) Perylene-d12	13.946	264	1901063	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.677	152	576687	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.469	164	1102523	40.00	ppm	0.00	
105) Phenanthrene-d10a	9.164	188	1960941	40.00	ppm	-0.01	
109) Chrysene-d12a	12.341	240	1866392	40.00	ppm	-0.01	
111) Naphthalene-d8a	5.714	136	2283177	40.00	ppm	0.00	
113) Phenanthrene-d10b	9.164	188	1960941	40.00	ppm	-0.01	
115) Chrysene-d12b	12.341	240	1866392	40.00	ppm	-0.01	
System Monitoring Compounds							
5) 2-Fluorophenol	3.687	112	122727	6.22	ppm	-0.01	
Spiked Amount	50.000		Recovery	=	12.44%		
8) Phenol-d5	4.399	99	167741	6.21	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	12.42%		
25) Nitrobenzene-d5	5.105	82	149332	6.21	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	12.42%		
51) 2-Fluorobiphenyl	6.747	172	262485	6.42	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	12.84%		
73) 2,4,6-Tribromophenol	8.351	330	26622	6.20	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	12.40%		
85) Terphenyl-d14	11.095	244	232855	5.85	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	11.70%		
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm		
107) o-terphenyl	0.000	230	0	0.00	ppm		
Target Compounds							
2) 1,4-Dioxane	2.222	88	63104	5.68	ppm		Qvalue 99
3) Pyridine	2.553	79	156245	5.68	ppm		99
4) N-Nitrosodimethylamine	2.511	74	95662	5.91	ppm		97
6) Indene	4.875	116	219252	6.22	ppm		98
7) Cumene	4.083	105	336827	6.06	ppm		99
9) Phenol	4.409	94	192233	6.13	ppm		96
10) Aniline	4.425	93	222343	6.51	ppm		99
11) bis(2-Chloroethyl)ether	4.474	93	131179	5.97	ppm		98
12) 2-Chlorophenol	4.516	128	133177	6.23	ppm		99
13) Decane	4.559	43	155586	6.08	ppm		95
14) 1,3-Dichlorobenzene	4.634	146	145166	6.05	ppm		100
15) 1,4-Dichlorobenzene	4.688	146	145157	6.01	ppm		97
16) Benzyl alcohol	4.778	108	88919	6.12	ppm		94
17) 1,2-Dichlorobenzene	4.805	146	135300	5.89	ppm		99
18) Acetophenone	4.982	105	186847	6.40	ppm		92
19) 2-Methylphenol	4.864	108	127509	6.31	ppm		95
20) 2,2'-oxybis(1-Chloropr...	4.885	121	40431	6.02	ppm		93
21) 3&4-Methylphenol	4.982	108	131189	6.58	ppm		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473544.D
 Acq On : 6 Jun 2018 3:12 pm
 Operator : christc2
 Sample : ic2235-5
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 06 18:23:34 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	4.982	70	106868	6.64	ppm	94
23) Hexachloroethane	5.073	201	39077	5.86	ppm	94
26) Nitrobenzene	5.115	77	147546	6.05	ppm	96
27) Quinoline	6.030	129	258099	6.06	ppm	99
28) Isophorone	5.313	82	260735	6.21	ppm	97
29) 2-Nitrophenol	5.383	139	62958	6.54	ppm	94
30) 2,4-Dimethylphenol	5.415	107	121618	6.21	ppm	99
31) Benzoic acid	5.458	105	67073m	6.35	ppm	
32) bis(2-Chloroethoxy)met...	5.490	93	146132	6.04	ppm	96
33) 2,4-Dichlorophenol	5.586	162	98879	6.24	ppm	98
34) 2,6-Dichlorophenol	5.784	162	97451	6.24	ppm	97
35) 1,3,5-Trichlorobenzene	5.394	180	111255	6.02	ppm	95
36) 1,2,4-Trichlorobenzene	5.661	180	101506	5.79	ppm	98
37) 1,2,3-Trichlorobenzene	5.864	180	102574	5.88	ppm	97
38) Naphthalene	5.731	128	382630	5.98	ppm	99
39) 4-Chloroaniline	5.773	127	166795	6.42	ppm	96
40) 2,3-Dichloroaniline	6.656	161	125133	6.19	ppm	96
41) Caprolactam	6.067	55	65762	6.34	ppm	99
42) Hexachlorobutadiene	5.848	225	50734	5.98	ppm	96
43) 4-Chloro-3-methylphenol	6.223	107	112802	6.40	ppm	96
44) 2-Methylnaphthalene	6.378	141	208713	6.01	ppm	97
45) 1-Methylnaphthalene	6.474	141	218857	5.99	ppm	99
46) Dimethylnaphthalene	7.014	156	224959	6.17	ppm	97
48) Hexachlorocyclopentadiene	6.544	237	73513	10.35	ppm	100
49) 2,4,6-Trichlorophenol	6.661	196	61421	6.81	ppm	96
50) 2,4,5-Trichlorophenol	6.693	196	64311	6.56	ppm	98
52) 2-Chloronaphthalene	6.870	162	224167	6.55	ppm	98
53) Biphenyl	6.848	154	310994	6.57	ppm	99
54) 2-Nitroaniline	6.971	65	71362	6.41	ppm	96
55) Dimethylphthalate	7.175	163	233883	6.50	ppm	100
56) Acenaphthylene	7.308	152	363899	6.71	ppm	99
57) 2,6-Dinitrotoluene	7.234	165	48308	6.37	ppm	95
58) 3-Nitroaniline	7.415	138	63769	6.56	ppm	98
59) Acenaphthene	7.501	153	235948	6.44	ppm	98
60) 2,4-Dinitrophenol	7.528	184	14110	10.83	ppm #	66
61) 4-Nitrophenol	7.603	109	28151	5.66	ppm	98
62) Dibenzofuran	7.693	168	319675	6.59	ppm	98
63) 2,4-Dinitrotoluene	7.677	165	64394	6.27	ppm	96
64) 2,3,4,6-Tetrachlorophenol	7.833	232	51022	6.46	ppm	95
65) Diethylphthalate	7.966	149	238319	6.76	ppm	99
66) Fluorene	8.079	166	256734	6.79	ppm	99
67) 4-Chlorophenyl-phenyle...	8.084	204	105541	6.41	ppm	96
68) 4-Nitroaniline	8.095	138	65108	6.40	ppm	92
70) 4,6-Dinitro-2-methylph...	8.137	198	17311	4.95	ppm	86
71) n-Nitrosodiphenylamine	8.218	169	186141	6.34	ppm	99
72) 1,2-Diphenylhydrazine	8.266	77	280118	5.99	ppm	99
74) 4-Bromophenyl-phenylether	8.651	248	60829	6.20	ppm	96
75) Hexachlorobenzene	8.720	284	65073	5.95	ppm	96
76) Pentachlorophenol	8.950	266	78579	12.84	ppm	99
77) Phenanthrene	9.191	178	357861	6.16	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473544.D
 Acq On : 6 Jun 2018 3:12 pm
 Operator : christc2
 Sample : ic2235-5
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 06 18:23:34 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

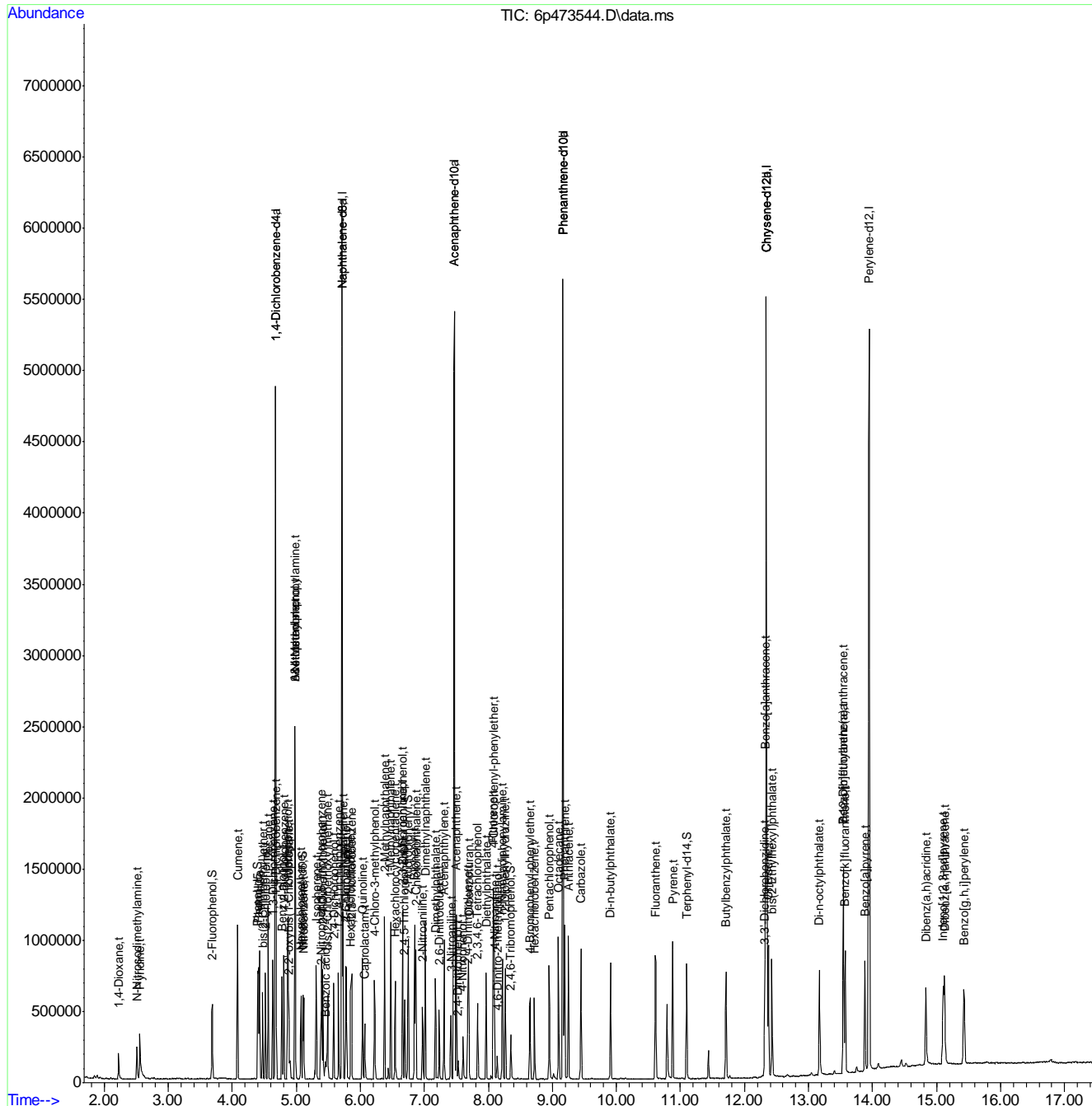
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	9.250	178	354238	6.32	ppm	98
79) Carbazole	9.448	167	340404	6.27	ppm	100
80) Di-n-butylphthalate	9.908	149	390050	6.87	ppm	98
81) Fluoranthene	10.614	202	343387	6.29	ppm	99
82) Octadecane	9.095	57	198169	6.63	ppm	98
84) Pyrene	10.881	202	380728	6.12	ppm	97
86) Butylbenzylphthalate	11.710	149	164508	6.54	ppm	99
87) Benzo[a]anthracene	12.331	228	327582	5.95	ppm	99
88) 3,3'-Dichlorobenzidine	12.315	252	114590	6.50	ppm	93
89) Chrysene	12.374	228	320545	5.75	ppm	99
90) bis(2-Ethylhexyl)phtha...	12.427	149	226482	6.18	ppm	99
92) Di-n-octylphthalate	13.170	149	379571	6.77	ppm	99
93) Benzo[b]fluoranthene	13.545	252	345189	6.23	ppm	98
94) Benzo[k]fluoranthene	13.572	252	299566	5.59	ppm	98
95) Benzo[a]pyrene	13.882	252	287205	6.20	ppm	98
96) Indeno[1,2,3-cd]pyrene	15.101	276	341121	6.17	ppm	98
97) Dibenz(a,h)acridine	14.834	279	250420	6.41	ppm	99
98) Dibenz[a,h]anthracene	15.123	278	296039	6.06	ppm	99
99) 7,12-Dimethylbenz(a)an...	13.545	256	137968	6.02	ppm	98
100) Benzo[g,h,i]perylene	15.428	276	276411	6.23	ppm	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473544.D
 Acq On : 6 Jun 2018 3:12 pm
 Operator : christc2
 Sample : ic2235-5
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 06 18:23:34 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration



Manual Integration Approval Summary

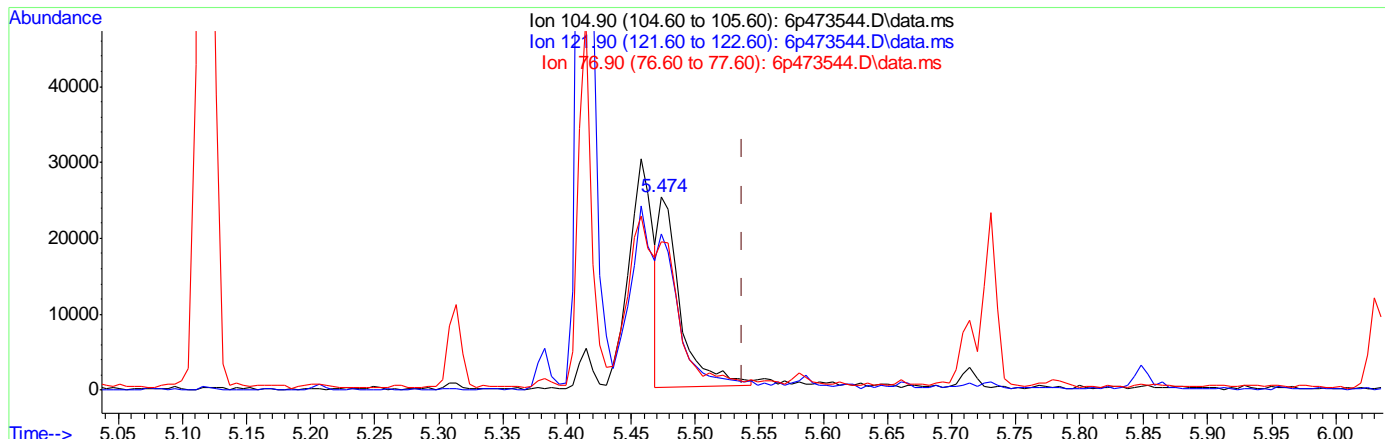
Sample Number: E6P2235-IC2235 Method: SW846 8270D
Lab FileID: 6P473544.D Analyst approved: 06/07/18 10:52 Sean Block
Injection Time: 06/06/18 15:12 Supervisor approved: 06/07/18 15:04 Nina Pandya

Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		5.46	Split peak

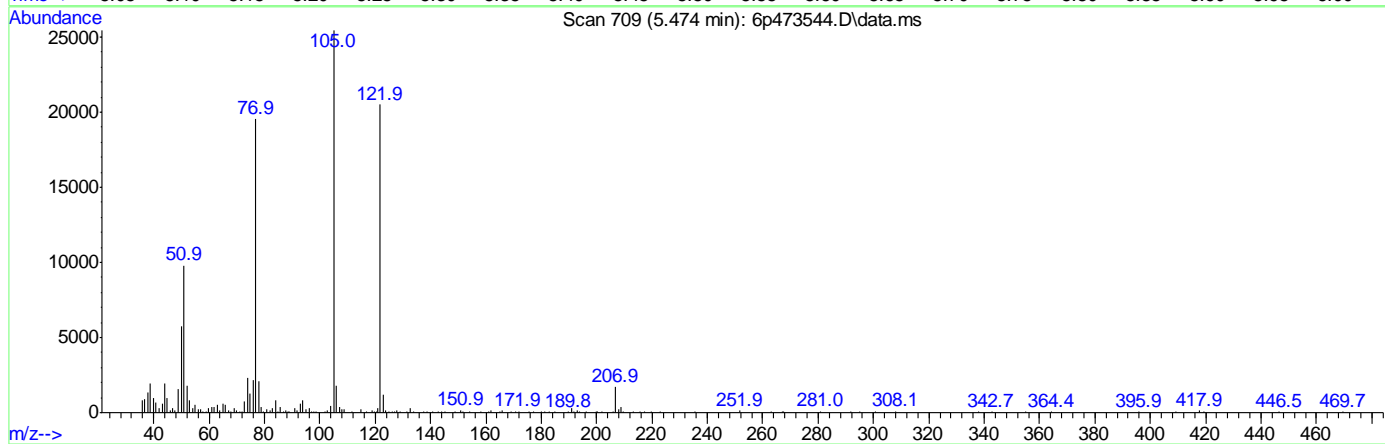
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473544.D
 Acq On : 6 Jun 2018 3:12 pm
 Operator : christc2
 Sample : ic2235-5
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 06 18:23:15 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration



9.5.6.2
9



(31) Benzoic acid (t)

5.474min (-0.063) 4.01ppm

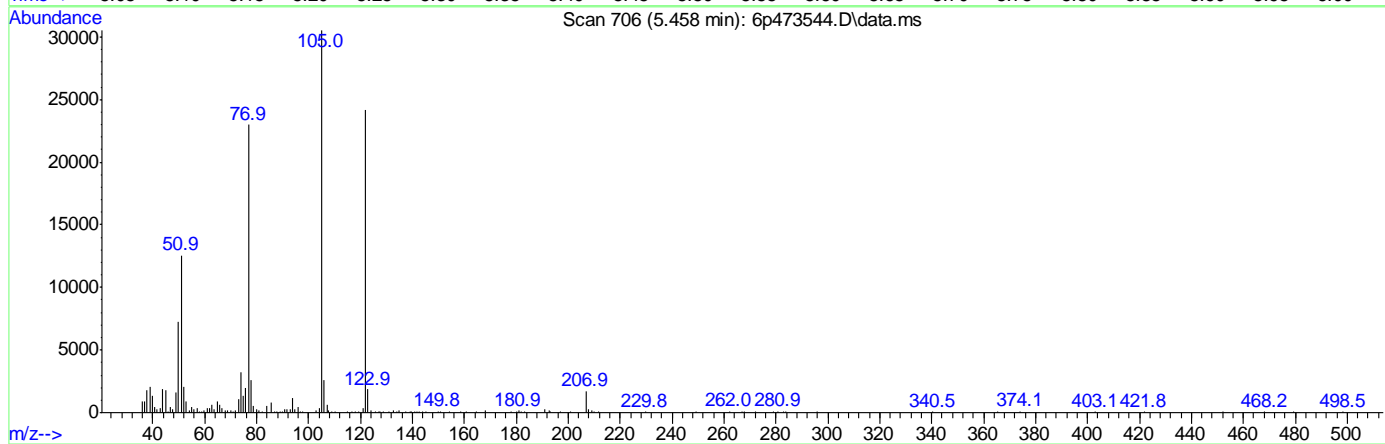
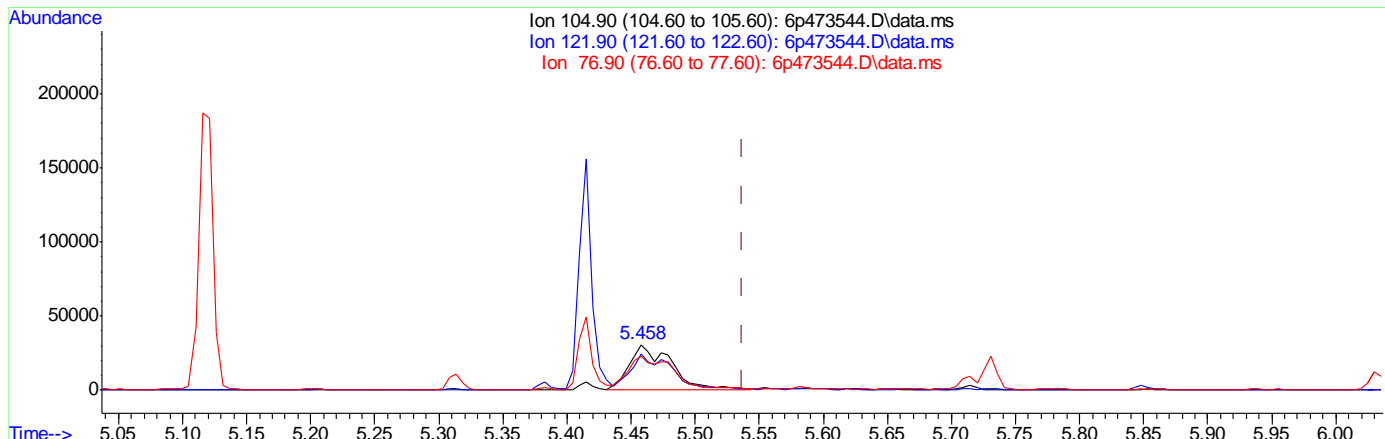
response 29094

Ion	Exp%	Act%
104.90	100	100
121.90	73.40	74.23
76.90	78.10	66.21
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473544.D
 Acq On : 6 Jun 2018 3:12 pm
 Operator : christc2
 Sample : ic2235-5
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 06 18:23:15 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration



(31) Benzoic acid (t)

5.458min (-0.079) 6.35ppm m

response 67073

Ion	Exp%	Act%
104.90	100	100
121.90	73.40	79.32
76.90	78.10	75.28
0.00	0.00	0.00

9.5.6.3
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473545.D
 Acq On : 6 Jun 2018 3:37 pm
 Operator : christc2
 Sample : ic2235-2
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 06 18:24:15 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	694348	40.00	ppm	-0.01	
24) Naphthalene-d8	5.714	136	2632659	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.469	164	1354710	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.164	188	2300664	40.00	ppm	-0.02	
83) Chrysene-d12	12.341	240	2088898	40.00	ppm	-0.03	
91) Perylene-d12	13.946	264	2142848	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.677	152	694348	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.469	164	1354710	40.00	ppm	0.00	
105) Phenanthrene-d10a	9.164	188	2300664	40.00	ppm	-0.01	
109) Chrysene-d12a	12.341	240	2088898	40.00	ppm	-0.01	
111) Naphthalene-d8a	5.714	136	2632659	40.00	ppm	0.00	
113) Phenanthrene-d10b	9.164	188	2300664	40.00	ppm	-0.01	
115) Chrysene-d12b	12.341	240	2088898	40.00	ppm	-0.01	
System Monitoring Compounds							
5) 2-Fluorophenol	3.687	112	47211	1.99	ppm	-0.01	
Spiked Amount	50.000		Recovery	=	3.98%		
8) Phenol-d5	4.399	99	68730	2.11	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	4.22%		
25) Nitrobenzene-d5	5.105	82	58731	2.12	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	4.24%		
51) 2-Fluorobiphenyl	6.747	172	107559	2.14	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	4.28%		
73) 2,4,6-Tribromophenol	8.351	330	9222	1.83	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	3.66%		
85) Terphenyl-d14	11.095	244	88105	1.98	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	3.96%		
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	2.227	88	26077	1.95	ppm		97
3) Pyridine	2.564	79	62644	1.89	ppm		94
4) N-Nitrosodimethylamine	2.510	74	38310	1.96	ppm		98
6) Indene	4.875	116	90961	2.14	ppm		98
7) Cumene	4.083	105	137036	2.05	ppm		98
9) Phenol	4.409	94	78080	2.07	ppm		96
10) Aniline	4.425	93	89508	2.18	ppm		96
11) bis(2-Chloroethyl)ether	4.473	93	53517	2.02	ppm		99
12) 2-Chlorophenol	4.516	128	53196	2.07	ppm		99
13) Decane	4.559	43	63714	2.07	ppm		95
14) 1,3-Dichlorobenzene	4.634	146	57805	2.00	ppm		95
15) 1,4-Dichlorobenzene	4.687	146	62020	2.13	ppm		99
16) Benzyl alcohol	4.778	108	34348	1.96	ppm		96
17) 1,2-Dichlorobenzene	4.805	146	55992	2.03	ppm		100
18) Acetophenone	4.982	105	77082	2.19	ppm		93
19) 2-Methylphenol	4.864	108	49864	2.05	ppm		100
20) 2,2'-oxybis(1-Chloropr...	4.885	121	16287	2.01	ppm	#	87
21) 3&4-Methylphenol	4.982	108	52436	2.19	ppm		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473545.D
 Acq On : 6 Jun 2018 3:37 pm
 Operator : christc2
 Sample : ic2235-2
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 06 18:24:15 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	4.982	70	42842	2.21	ppm	96
23) Hexachloroethane	5.072	201	15508	1.93	ppm	87
26) Nitrobenzene	5.121	77	59647	2.12	ppm	97
27) Quinoline	6.030	129	102774	2.09	ppm	100
28) Isophorone	5.313	82	103194	2.13	ppm	97
29) 2-Nitrophenol	5.383	139	22782	2.05	ppm	96
30) 2,4-Dimethylphenol	5.415	107	41575	1.84	ppm	95
31) Benzoic acid	5.452	105	18667	3.21	ppm	82
32) bis(2-Chloroethoxy)met...	5.490	93	58285	2.09	ppm	96
33) 2,4-Dichlorophenol	5.586	162	37797	2.07	ppm	94
34) 2,6-Dichlorophenol	5.784	162	39727	2.21	ppm	91
35) 1,3,5-Trichlorobenzene	5.393	180	45119	2.12	ppm	98
36) 1,2,4-Trichlorobenzene	5.661	180	40718	2.01	ppm	96
37) 1,2,3-Trichlorobenzene	5.864	180	42026	2.09	ppm	100
38) Naphthalene	5.730	128	155554	2.11	ppm	99
39) 4-Chloroaniline	5.773	127	65047	2.17	ppm	97
40) 2,3-Dichloroaniline	6.656	161	50408	2.16	ppm	96
41) Caprolactam	6.062	55	25303	2.12	ppm	97
42) Hexachlorobutadiene	5.848	225	20629	2.11	ppm	95
43) 4-Chloro-3-methylphenol	6.222	107	41004	2.02	ppm	97
44) 2-Methylnaphthalene	6.378	141	83533	2.09	ppm	95
45) 1-Methylnaphthalene	6.474	141	88505	2.10	ppm	99
46) Dimethylnaphthalene	7.014	156	85364	2.03	ppm	95
48) Hexachlorocyclopentadiene	6.543	237	24366	2.79	ppm	98
49) 2,4,6-Trichlorophenol	6.661	196	23956	2.16	ppm	94
50) 2,4,5-Trichlorophenol	6.693	196	24841	2.06	ppm	96
52) 2-Chloronaphthalene	6.870	162	86914	2.07	ppm	98
53) Biphenyl	6.848	154	124788	2.15	ppm	97
54) 2-Nitroaniline	6.971	65	25354	1.85	ppm	98
55) Dimethylphthalate	7.174	163	94185	2.13	ppm	98
56) Acenaphthylene	7.308	152	142743	2.14	ppm	99
57) 2,6-Dinitrotoluene	7.233	165	16789	2.11	ppm	99
58) 3-Nitroaniline	7.415	138	21668	1.81	ppm	95
59) Acenaphthene	7.501	153	91551	2.03	ppm	99
60) 2,4-Dinitrophenol	7.533	184	2513	7.69	ppm #	24
61) 4-Nitrophenol	7.602	109	8720	1.43	ppm	97
62) Dibenzofuran	7.693	168	128156	2.15	ppm	95
63) 2,4-Dinitrotoluene	7.677	165	20959	2.06	ppm	98
64) 2,3,4,6-Tetrachlorophenol	7.832	232	19089	1.97	ppm	93
65) Diethylphthalate	7.966	149	90663	2.09	ppm	98
66) Fluorene	8.078	166	99915	2.15	ppm	99
67) 4-Chlorophenyl-phenyle...	8.084	204	43079	2.13	ppm	96
68) 4-Nitroaniline	8.094	138	22710	1.82	ppm	86
70) 4,6-Dinitro-2-methylph...	8.137	198	3750	2.71	ppm	74
71) n-Nitrosodiphenylamine	8.217	169	70658	2.05	ppm	98
72) 1,2-Diphenylhydrazine	8.266	77	110009	2.01	ppm	99
74) 4-Bromophenyl-phenylether	8.651	248	23820	2.07	ppm	98
75) Hexachlorobenzene	8.720	284	25066	1.96	ppm	98
76) Pentachlorophenol	8.950	266	25176	5.45	ppm	89
77) Phenanthrene	9.191	178	148105	2.17	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473545.D
 Acq On : 6 Jun 2018 3:37 pm
 Operator : christc2
 Sample : ic2235-2
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 06 18:24:15 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

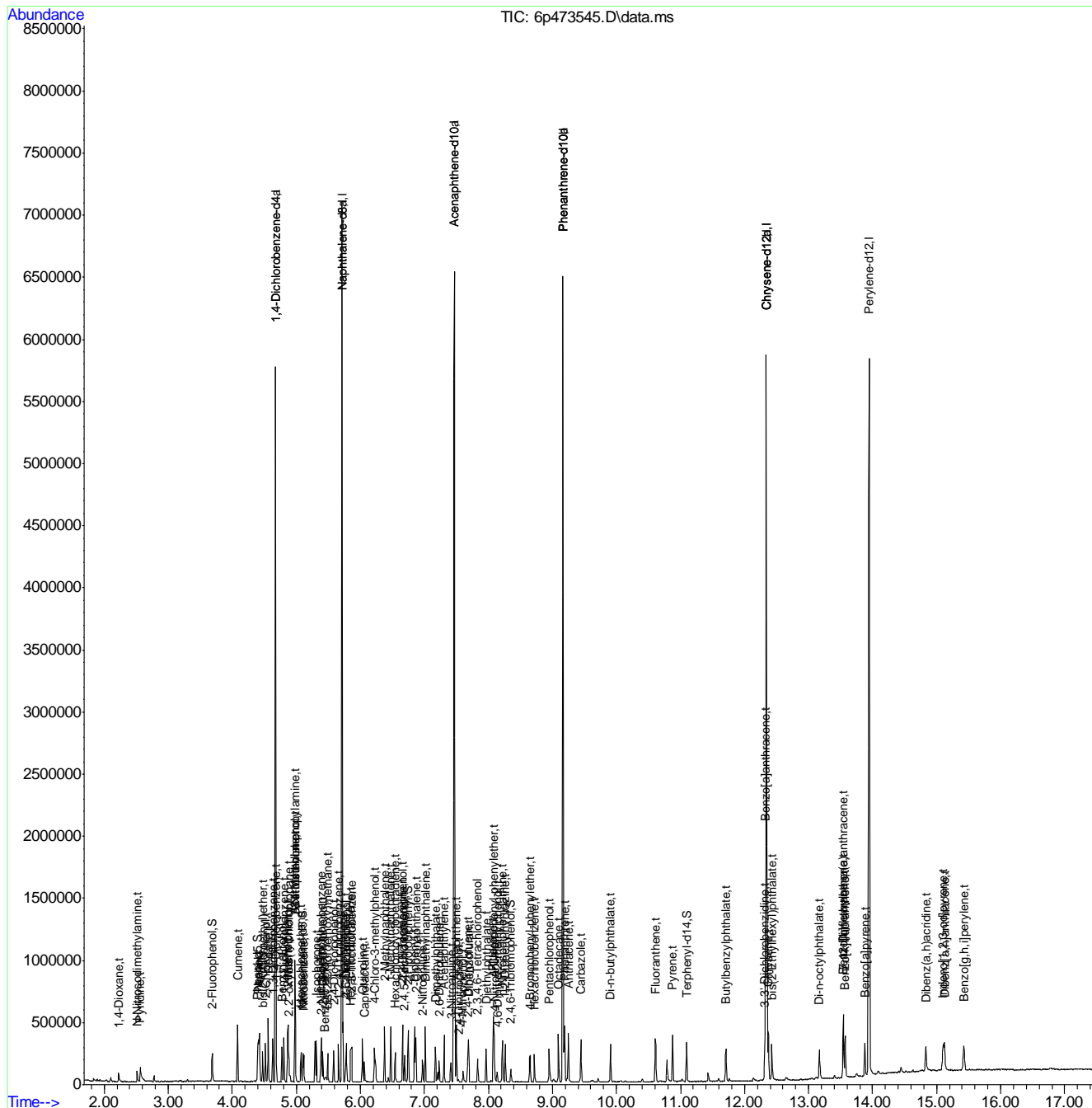
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	9.250	178	139732	2.13	ppm	100
79) Carbazole	9.448	167	133758	2.10	ppm	99
80) Di-n-butylphthalate	9.908	149	144951	2.18	ppm	99
81) Fluoranthene	10.608	202	135875	2.12	ppm	96
82) Octadecane	9.095	57	73525	2.10	ppm	98
84) Pyrene	10.876	202	150303	2.16	ppm	98
86) Butylbenzylphthalate	11.710	149	59801	2.12	ppm	99
87) Benzo[a]anthracene	12.331	228	127892	2.08	ppm	98
88) 3,3'-Dichlorobenzidine	12.315	252	41281	2.09	ppm	93
89) Chrysene	12.368	228	130552	2.09	ppm	96
90) bis(2-Ethylhexyl)phtha...	12.427	149	79900	2.53	ppm	96
92) Di-n-octylphthalate	13.170	149	134918	3.30	ppm	100
93) Benzo[b]fluoranthene	13.545	252	121911	1.95	ppm	96
94) Benzo[k]fluoranthene	13.571	252	125036	2.07	ppm	94
95) Benzo[a]pyrene	13.882	252	108403	2.39	ppm	100
96) Indeno[1,2,3-cd]pyrene	15.101	276	133476	2.14	ppm	99
97) Dibenz(a,h)acridine	14.834	279	95988	2.67	ppm	99
98) Dibenz[a,h]anthracene	15.123	278	111061	2.02	ppm	95
99) 7,12-Dimethylbenz(a)an...	13.539	256	41742	2.14	ppm	96
100) Benzo[g,h,i]perylene	15.427	276	107630	2.15	ppm	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473545.D
 Acq On : 6 Jun 2018 3:37 pm
 Operator : christc2
 Sample : ic2235-2
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 06 18:24:15 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473546.D
 Acq On : 6 Jun 2018 4:02 pm
 Operator : christc2
 Sample : ic2235-1
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 06 18:24:52 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.677	152	724418	40.00	ppm	-0.01
24) Naphthalene-d8	5.715	136	2700627	40.00	ppm	-0.02
47) Acenaphthene-d10	7.469	164	1433966	40.00	ppm	-0.02
69) Phenanthrene-d10	9.164	188	2389715	40.00	ppm	-0.02
83) Chrysene-d12	12.341	240	2163489	40.00	ppm	-0.03
91) Perylene-d12	13.946	264	2199820	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	4.677	152	724418	40.00	ppm	0.00
103) Acenaphthene-d10a	7.469	164	1433966	40.00	ppm	0.00
105) Phenanthrene-d10a	9.164	188	2389715	40.00	ppm	-0.01
109) Chrysene-d12a	12.341	240	2163489	40.00	ppm	-0.01
111) Naphthalene-d8a	5.715	136	2700627	40.00	ppm	0.00
113) Phenanthrene-d10b	9.164	188	2389715	40.00	ppm	-0.01
115) Chrysene-d12b	12.341	240	2163489	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.687	112	24697	1.00	ppm	-0.01
Spiked Amount	50.000		Recovery	=	2.00%	
8) Phenol-d5	4.399	99	36200	1.07	ppm	-0.02
Spiked Amount	50.000		Recovery	=	2.14%	
25) Nitrobenzene-d5	5.105	82	30200	1.06	ppm	-0.02
Spiked Amount	50.000		Recovery	=	2.12%	
51) 2-Fluorobiphenyl	6.747	172	56612	1.06	ppm	-0.02
Spiked Amount	50.000		Recovery	=	2.12%	
73) 2,4,6-Tribromophenol	8.351	330	4995	0.95	ppm	-0.02
Spiked Amount	50.000		Recovery	=	1.90%	
85) Terphenyl-d14	11.095	244	46397	1.01	ppm	-0.02
Spiked Amount	50.000		Recovery	=	2.02%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						
2) 1,4-Dioxane	2.227	88	14082	1.01	ppm	97
3) Pyridine	2.575	79	32627	0.94	ppm	93
4) N-Nitrosodimethylamine	2.516	74	20769	1.02	ppm	94
6) Indene	4.875	116	47938	1.08	ppm	97
7) Cumene	4.083	105	74630	1.07	ppm	99
9) Phenol	4.409	94	40269	1.02	ppm	95
10) Aniline	4.425	93	47183	1.10	ppm	96
11) bis(2-Chloroethyl)ether	4.474	93	28756	1.04	ppm	99
12) 2-Chlorophenol	4.516	128	27422	1.02	ppm	93
13) Decane	4.559	43	33953	1.06	ppm	92
14) 1,3-Dichlorobenzene	4.634	146	30427	1.01	ppm	100
15) 1,4-Dichlorobenzene	4.688	146	33105	1.09	ppm	94
16) Benzyl alcohol	4.779	108	18491	1.01	ppm	97
17) 1,2-Dichlorobenzene	4.805	146	30399	1.05	ppm	99
18) Acetophenone	4.982	105	40267	1.10	ppm	98
19) 2-Methylphenol	4.864	108	26937	1.06	ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.885	121	9028	1.07	ppm	96
21) 3&4-Methylphenol	4.982	108	27142	1.08	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473546.D
 Acq On : 6 Jun 2018 4:02 pm
 Operator : christc2
 Sample : ic2235-1
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 06 18:24:52 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018

QLast Update : Tue Jun 05 21:55:52 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	4.982	70	23036	1.14	ppm	98
23) Hexachloroethane	5.073	201	8461	1.01	ppm	89
26) Nitrobenzene	5.115	77	31371	1.09	ppm	94
27) Quinoline	6.030	129	53835	1.07	ppm	96
28) Isophorone	5.313	82	53675	1.08	ppm	93
29) 2-Nitrophenol	5.383	139	11125	0.98	ppm	93
30) 2,4-Dimethylphenol	5.415	107	19197	0.83	ppm	97
31) Benzoic acid	5.447	105	8691	2.67	ppm	92
32) bis(2-Chloroethoxy)met...	5.490	93	30224	1.06	ppm	97
33) 2,4-Dichlorophenol	5.586	162	19148	1.02	ppm	96
34) 2,6-Dichlorophenol	5.784	162	20214	1.09	ppm	93
35) 1,3,5-Trichlorobenzene	5.394	180	24166	1.11	ppm	98
36) 1,2,4-Trichlorobenzene	5.661	180	22703	1.09	ppm	96
37) 1,2,3-Trichlorobenzene	5.864	180	22948	1.11	ppm	91
38) Naphthalene	5.731	128	85543	1.13	ppm	98
39) 4-Chloroaniline	5.773	127	33760	1.10	ppm	98
40) 2,3-Dichloroaniline	6.656	161	26750	1.12	ppm	94
41) Caprolactam	6.062	55	12620	1.03	ppm	93
42) Hexachlorobutadiene	5.848	225	10929	1.09	ppm	94
43) 4-Chloro-3-methylphenol	6.223	107	21480	1.03	ppm	95
44) 2-Methylnaphthalene	6.378	141	43204	1.05	ppm	93
45) 1-Methylnaphthalene	6.474	141	45982	1.06	ppm	98
46) Dimethylnaphthalene	7.014	156	46426	1.08	ppm	97
48) Hexachlorocyclopentadiene	6.544	237	11772	1.27	ppm	99
49) 2,4,6-Trichlorophenol	6.661	196	12445	1.06	ppm	91
50) 2,4,5-Trichlorophenol	6.693	196	11854	0.93	ppm	98
52) 2-Chloronaphthalene	6.870	162	46708	1.05	ppm	97
53) Biphenyl	6.848	154	65172	1.06	ppm	99
54) 2-Nitroaniline	6.971	65	12780	0.88	ppm	98
55) Dimethylphthalate	7.175	163	47864	1.02	ppm	99
56) Acenaphthylene	7.308	152	74084	1.05	ppm	99
57) 2,6-Dinitrotoluene	7.234	165	7357	1.13	ppm	94
58) 3-Nitroaniline	7.415	138	10842	0.86	ppm	88
59) Acenaphthene	7.501	153	51571	1.08	ppm	97
61) 4-Nitrophenol	7.603	109	4037	0.62	ppm	85
62) Dibenzofuran	7.688	168	66362	1.05	ppm	99
63) 2,4-Dinitrotoluene	7.677	165	9085	1.17	ppm	93
64) 2,3,4,6-Tetrachlorophenol	7.833	232	8863	0.86	ppm	96
65) Diethylphthalate	7.966	149	46876	1.02	ppm	98
66) Fluorene	8.079	166	51539	1.05	ppm	99
67) 4-Chlorophenyl-phenyle...	8.084	204	22757	1.06	ppm	93
68) 4-Nitroaniline	8.095	138	10974	0.83	ppm	90
70) 4,6-Dinitro-2-methylph...	8.137	198	1454	2.40	ppm	96
71) n-Nitrosodiphenylamine	8.218	169	36041	1.01	ppm	97
72) 1,2-Diphenylhydrazine	8.266	77	57056	1.00	ppm	97
74) 4-Bromophenyl-phenylether	8.651	248	12209	1.02	ppm	97
75) Hexachlorobenzene	8.720	284	13641	1.02	ppm	97
76) Pentachlorophenol	8.950	266	12051	3.95	ppm	99
77) Phenanthrene	9.191	178	78909	1.12	ppm	97
78) Anthracene	9.250	178	72727	1.07	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473546.D
 Acq On : 6 Jun 2018 4:02 pm
 Operator : christc2
 Sample : ic2235-1
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 06 18:24:52 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration

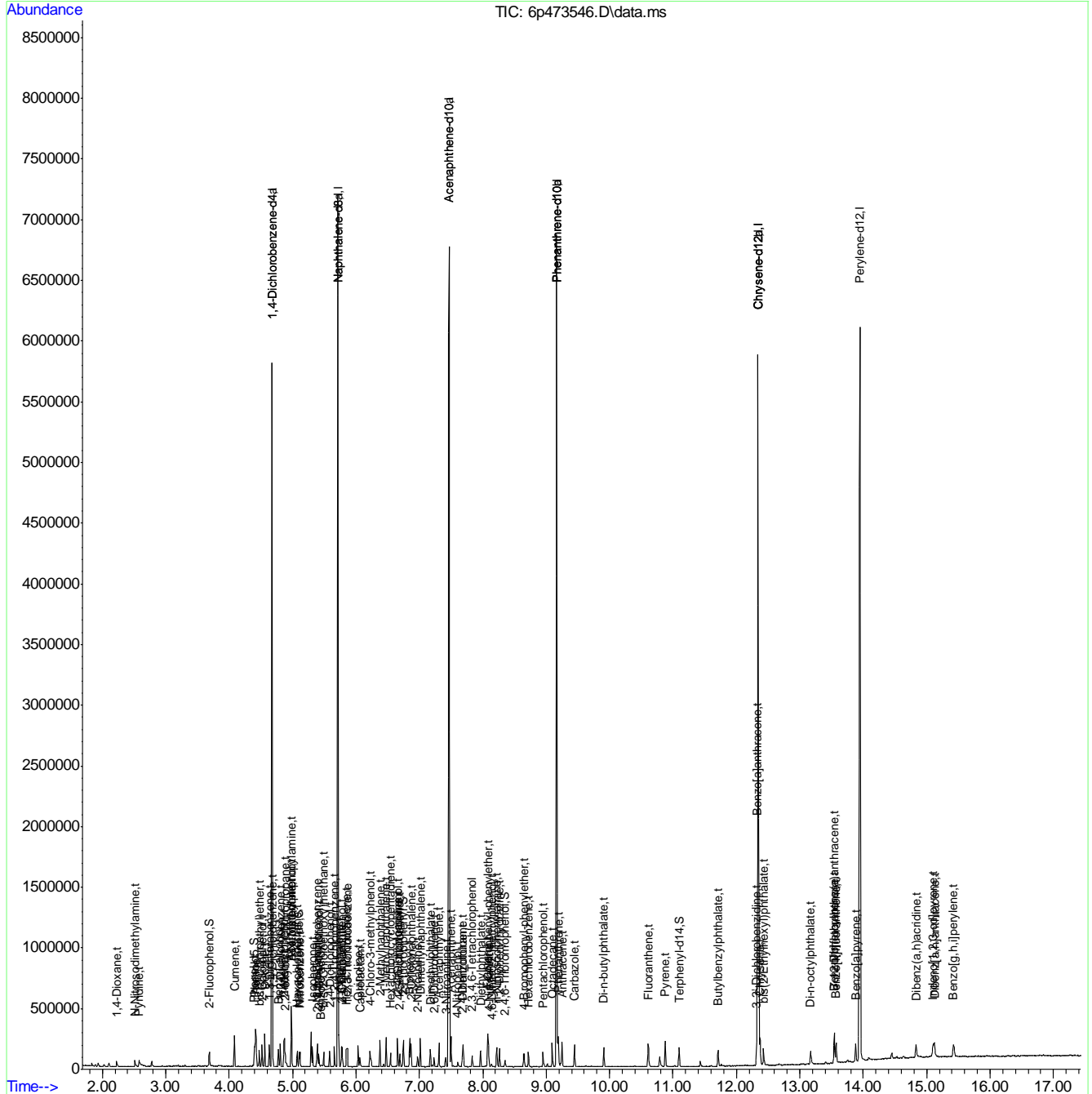
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79) Carbazole	9.448	167	68562	1.04	ppm	96
80) Di-n-butylphthalate	9.908	149	74208	1.07	ppm	98
81) Fluoranthene	10.609	202	70286	1.06	ppm	97
82) Octadecane	9.095	57	36055	0.99	ppm	96
84) Pyrene	10.876	202	78806	1.09	ppm	98
86) Butylbenzylphthalate	11.710	149	29165	1.00	ppm	96
87) Benzo[a]anthracene	12.331	228	71629	1.12	ppm	97
88) 3,3'-Dichlorobenzidine	12.315	252	18283	0.90	ppm	95
89) Chrysene	12.374	228	68594	1.06	ppm	98
90) bis(2-Ethylhexyl)phtha...	12.427	149	39844	1.66	ppm	96
92) Di-n-octylphthalate	13.171	149	63881	2.45	ppm	96
93) Benzo[b]fluoranthene	13.545	252	62228	0.97	ppm	97
94) Benzo[k]fluoranthene	13.572	252	61359	0.99	ppm	95
95) Benzo[a]pyrene	13.882	252	56726	1.45	ppm	96
96) Indeno[1,2,3-cd]pyrene	15.101	276	69718	1.09	ppm	95
97) Dibenz(a,h)acridine	14.834	279	50112	1.72	ppm	91
98) Dibenz[a,h]anthracene	15.123	278	58965	1.04	ppm	97
99) 7,12-Dimethylbenz(a)an...	13.540	256	19599	1.37	ppm	97
100) Benzo[g,h,i]perylene	15.422	276	55894	1.09	ppm	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473546.D
 Acq On : 6 Jun 2018 4:02 pm
 Operator : christc2
 Sample : ic2235-1
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 06 18:24:52 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuTue Jun 05 21:55:52 2018
 QLast Update : Tue Jun 05 21:55:52 2018
 Response via : Initial Calibration



9.5.8
6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473547.D
 Acq On : 6 Jun 2018 4:27 pm
 Operator : christc2
 Sample : icv2235-50
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 07 10:12:13 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 10:11:12 2018
 QLast Update : Thu Jun 07 10:11:12 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.677	152	792313	40.00	ppm	-0.01
24) Naphthalene-d8	5.714	136	3121578	40.00	ppm	-0.02
47) Acenaphthene-d10	7.469	164	1506466	40.00	ppm	-0.02
69) Phenanthrene-d10	9.164	188	2628310	40.00	ppm	-0.02
83) Chrysene-d12	12.341	240	2100290	40.00	ppm	-0.03
91) Perylene-d12	13.946	264	2016434	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	4.677	152	792313	40.00	ppm	0.00
103) Acenaphthene-d10a	7.469	164	1506466	40.00	ppm	0.00
105) Phenanthrene-d10a	9.164	188	2628310	40.00	ppm	-0.01
109) Chrysene-d12a	12.341	240	2100290	40.00	ppm	-0.01
111) Naphthalene-d8a	5.714	136	3121578	40.00	ppm	0.00
113) Phenanthrene-d10b	9.164	188	2628310	40.00	ppm	-0.01
115) Chrysene-d12b	12.341	240	2100290	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.693	112	1463045	52.18	ppm	0.00
Spiked Amount	50.000		Recovery	=	104.36%	
8) Phenol-d5	4.404	99	1943967	50.45	ppm	-0.01
Spiked Amount	50.000		Recovery	=	100.90%	
25) Nitrobenzene-d5	5.105	82	1747194	50.30	ppm	-0.02
Spiked Amount	50.000		Recovery	=	100.60%	
51) 2-Fluorobiphenyl	6.752	172	2861460	50.56	ppm	-0.02
Spiked Amount	50.000		Recovery	=	101.12%	
73) 2,4,6-Tribromophenol	8.357	330	311253	48.11	ppm	-0.02
Spiked Amount	50.000		Recovery	=	96.22%	
85) Terphenyl-d14	11.101	244	2436935	53.00	ppm	-0.02
Spiked Amount	50.000		Recovery	=	106.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	

Target Compounds Qvalue

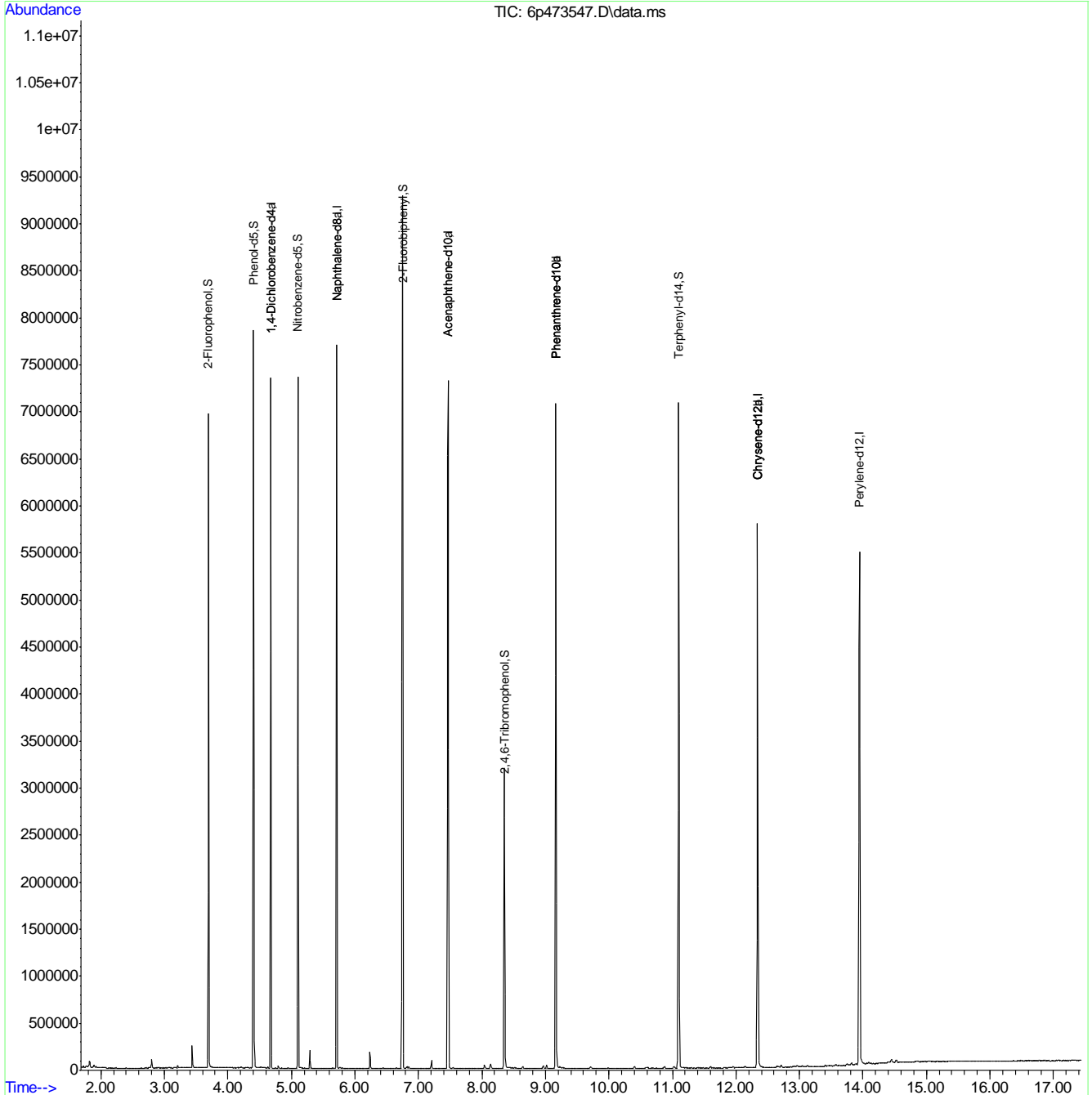
 (#) = qualifier out of range (m) = manual integration (+) = signals summed

9.5.9
 9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473547.D
 Acq On : 6 Jun 2018 4:27 pm
 Operator : christc2
 Sample : icv2235-50
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 07 10:12:13 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 10:11:12 2018
 QLast Update : Thu Jun 07 10:11:12 2018
 Response via : Initial Calibration



6.59

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473548.D
 Acq On : 6 Jun 2018 4:52 pm
 Operator : christc2
 Sample : icv2235-50
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 07 10:13:41 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 10:11:12 2018
 QLast Update : Thu Jun 07 10:11:12 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.677	152	537478	40.00	ppm	-0.01
24) Naphthalene-d8	5.714	136	2145040	40.00	ppm	-0.02
47) Acenaphthene-d10	7.469	164	1048420	40.00	ppm	-0.02
69) Phenanthrene-d10	9.170	188	1900338	40.00	ppm	-0.02
83) Chrysene-d12	12.347	240	1771060	40.00	ppm	-0.02
91) Perylene-d12	13.946	264	1894984	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	4.677	152	537478	40.00	ppm	0.00
103) Acenaphthene-d10a	7.469	164	1048420	40.00	ppm	0.00
105) Phenanthrene-d10a	9.170	188	1900338	40.00	ppm	0.00
109) Chrysene-d12a	12.347	240	1771060	40.00	ppm	0.00
111) Naphthalene-d8a	5.714	136	2145040	40.00	ppm	0.00
113) Phenanthrene-d10b	9.170	188	1900338	40.00	ppm	0.00
115) Chrysene-d12b	12.347	240	1771060	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%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
107) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						
2) 1,4-Dioxane	2.216	88	464300	46.31	ppm	Qvalue 99
3) Pyridine	2.532	79	1240557	49.20	ppm	99
4) N-Nitrosodimethylamine	2.505	74	698840	46.28	ppm	96
9) Phenol	4.415	94	1363921	47.31	ppm	97
10) Aniline	4.431	93	1572962	49.05	ppm	97
11) bis(2-Chloroethyl)ether	4.479	93	1010713	49.64	ppm	94
12) 2-Chlorophenol	4.522	128	976689	47.60	ppm	95
14) 1,3-Dichlorobenzene	4.634	146	1020905	46.25	ppm	97
15) 1,4-Dichlorobenzene	4.687	146	1009916	44.81	ppm	100
16) Benzyl alcohol	4.778	108	707784	50.57	ppm	98
17) 1,2-Dichlorobenzene	4.805	146	969236	46.15	ppm	98
18) Acetophenone	4.987	105	1199756	49.68	ppm	98
19) 2-Methylphenol	4.869	108	954608	50.67	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.885	121	326718	52.16	ppm	# 85
21) 3&4-Methylphenol	4.987	108	893239	52.78	ppm	90
22) n-Nitroso-di-n-propyla...	4.987	70	642100	48.29	ppm	99
23) Hexachloroethane	5.072	201	307417	48.91	ppm	96
26) Nitrobenzene	5.121	77	1044305	44.26	ppm	99

9.5.10
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473548.D
 Acq On : 6 Jun 2018 4:52 pm
 Operator : christc2
 Sample : icv2235-50
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 07 10:13:41 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 10:11:12 2018

QLast Update : Thu Jun 07 10:11:12 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
28) Isophorone	5.319	82	1995425	48.82	ppm	95
29) 2-Nitrophenol	5.383	139	500569	48.52	ppm	99
30) 2,4-Dimethylphenol	5.420	107	980781	53.30	ppm	95
32) bis(2-Chloroethoxy)met...	5.495	93	1193984	52.13	ppm	99
33) 2,4-Dichlorophenol	5.591	162	746559	47.28	ppm	95
34) 2,6-Dichlorophenol	5.789	162	716614	46.33	ppm	97
36) 1,2,4-Trichlorobenzene	5.666	180	750201	45.22	ppm	95
38) Naphthalene	5.736	128	2702177	45.19	ppm	99
39) 4-Chloroaniline	5.779	127	1170690	45.56	ppm	98
41) Caprolactam	6.094	55	483296	45.28	ppm	98
42) Hexachlorobutadiene	5.853	225	374668	45.43	ppm	97
43) 4-Chloro-3-methylphenol	6.233	107	840708	47.12	ppm	100
44) 2-Methylnaphthalene	6.383	141	1558567	47.27	ppm	97
45) 1-Methylnaphthalene	6.479	141	1531751	44.17	ppm	100
48) Hexachlorocyclopentadiene	6.549	237	400743	59.92	ppm	99
49) 2,4,6-Trichlorophenol	6.666	196	482420	50.88	ppm	97
50) 2,4,5-Trichlorophenol	6.704	196	502129	50.00	ppm	97
52) 2-Chloronaphthalene	6.875	162	1653577	50.69	ppm	98
53) Biphenyl	6.854	154	2210557	47.27	ppm	99
54) 2-Nitroaniline	6.982	65	643341	58.06	ppm	81
55) Dimethylphthalate	7.185	163	1737110	49.41	ppm	100
56) Acenaphthylene	7.314	152	2543721	47.47	ppm	99
57) 2,6-Dinitrotoluene	7.239	165	407231	54.77	ppm	98
58) 3-Nitroaniline	7.421	138	516859	53.27	ppm	99
59) Acenaphthene	7.506	153	1672763	47.79	ppm	98
60) 2,4-Dinitrophenol	7.533	184	167262	50.37	ppm #	58
61) 4-Nitrophenol	7.613	109	254301	52.48	ppm	95
62) Dibenzofuran	7.699	168	2243556	47.05	ppm	93
63) 2,4-Dinitrotoluene	7.683	165	548235	52.21	ppm	96
64) 2,3,4,6-Tetrachlorophenol	7.838	232	422174	52.00	ppm	97
65) Diethylphthalate	7.971	149	1755857	50.03	ppm	99
66) Fluorene	8.084	166	1835448	48.36	ppm	99
67) 4-Chlorophenyl-phenyle...	8.089	204	797956	49.76	ppm	99
68) 4-Nitroaniline	8.111	138	542959	54.46	ppm	99
70) 4,6-Dinitro-2-methylph...	8.148	198	248968	43.49	ppm	97
71) n-Nitrosodiphenylamine	8.228	169	1611358	54.23	ppm	98
72) 1,2-Diphenylhydrazine	8.271	77	2072471	45.82	ppm	96
74) 4-Bromophenyl-phenylether	8.656	248	485504	47.45	ppm	96
75) Hexachlorobenzene	8.726	284	517895	46.76	ppm	95
76) Pentachlorophenol	8.956	266	339556	47.16	ppm	96
77) Phenanthrene	9.196	178	2621728	45.62	ppm	99
78) Anthracene	9.255	178	2739143	48.31	ppm	100
79) Carbazole	9.453	167	2504938	46.02	ppm	99
80) Di-n-butylphthalate	9.913	149	2958764	47.16	ppm	100
81) Fluoranthene	10.614	202	2762877	48.24	ppm	99
84) Pyrene	10.886	202	2785424	45.60	ppm	99
86) Butylbenzylphthalate	11.716	149	1315686	48.77	ppm	92
87) Benzo[a]anthracene	12.336	228	2649022	48.48	ppm	99
88) 3,3'-Dichlorobenzidine	12.325	252	928208	49.21	ppm	98
89) Chrysene	12.379	228	2487706	46.45	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473548.D
 Acq On : 6 Jun 2018 4:52 pm
 Operator : christc2
 Sample : icv2235-50
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 07 10:13:41 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 10:11:12 2018
 QLast Update : Thu Jun 07 10:11:12 2018
 Response via : Initial Calibration

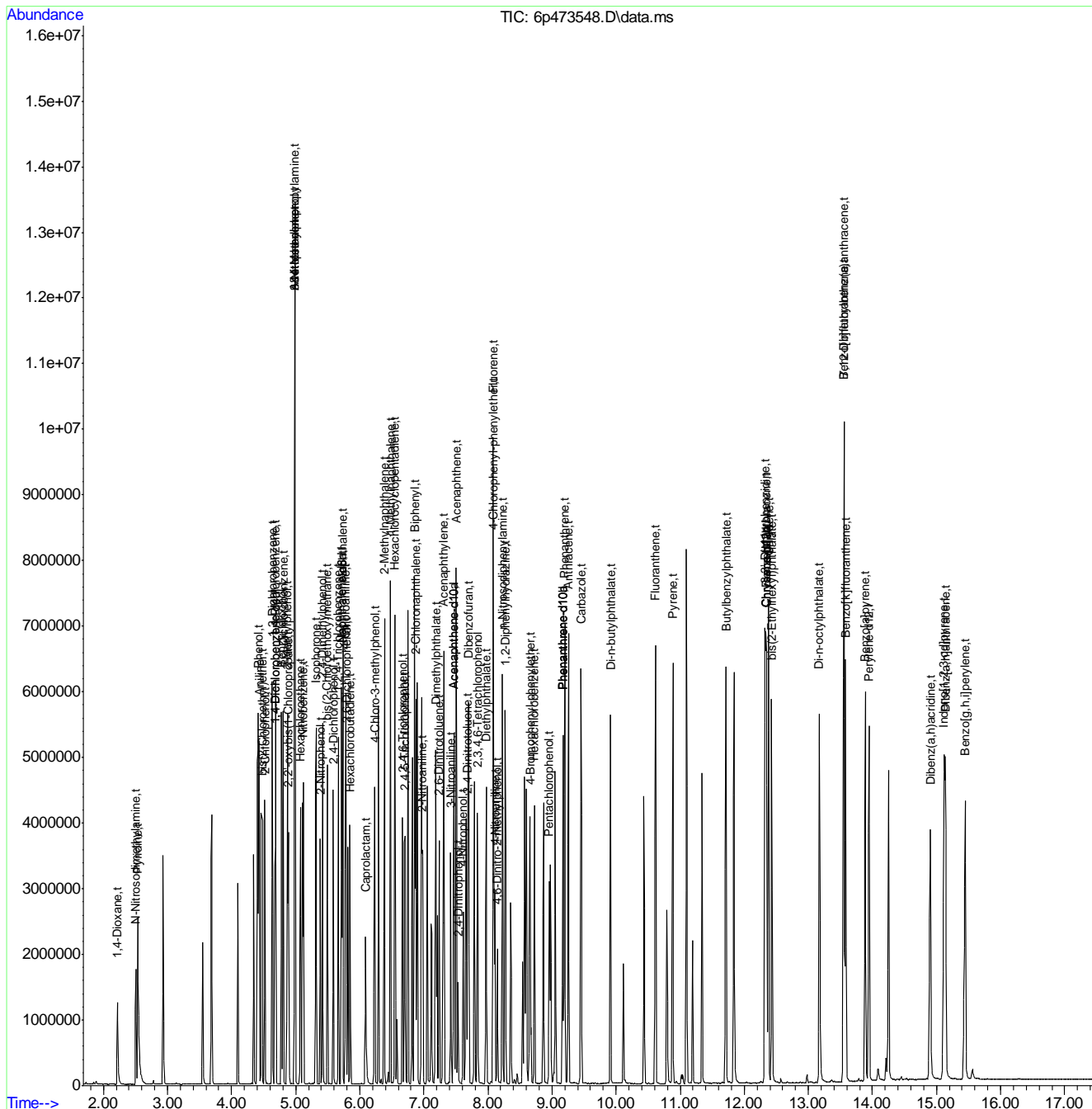
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
90) bis(2-Ethylhexyl)phtha...	12.432	149	1790539	48.32	ppm	98
92) Di-n-octylphthalate	13.170	149	3049893	46.80	ppm	100
93) Benzo[b]fluoranthene	13.550	252	2860126	48.30	ppm	99
94) Benzo[k]fluoranthene	13.588	252	2407499	45.02	ppm	97
95) Benzo[a]pyrene	13.892	252	2520100	50.01	ppm	97
96) Indeno[1,2,3-cd]pyrene	15.117	276	2965225	47.61	ppm	96
97) Dibenz(a,h)acridine	14.903	279	2136344	46.83	ppm	99
98) Dibenz[a,h]anthracene	15.139	278	2500666	46.68	ppm	96
99) 7,12-Dimethylbenz(a)an...	13.555	256	1250199	53.41	ppm	98
100) Benzo[g,h,i]perylene	15.449	276	2478606	50.19	ppm	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473548.D
 Acq On : 6 Jun 2018 4:52 pm
 Operator : christc2
 Sample : icv2235-50
 Misc : op8717,e6p2235,1000,,1,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 07 10:13:41 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 10:11:12 2018
 QLast Update : Thu Jun 07 10:11:12 2018
 Response via : Initial Calibration



9.5.10
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473549.D
 Acq On : 6 Jun 2018 5:17 pm
 Operator : christc2
 Sample : icv2235-50
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 07 10:14:55 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 10:11:12 2018
 QLast Update : Thu Jun 07 10:11:12 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	669099	40.00	ppm	-0.01	
24) Naphthalene-d8	5.714	136	2721550	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.469	164	1238856	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.164	188	2147837	40.00	ppm	-0.02	
83) Chrysene-d12	12.341	240	1752285	40.00	ppm	-0.03	
91) Perylene-d12	13.946	264	1669341	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.677	152	669099	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.469	164	1238856	40.00	ppm	0.00	
105) Phenanthrene-d10a	9.164	188	2147837	40.00	ppm	-0.01	
109) Chrysene-d12a	12.341	240	1752285	40.00	ppm	-0.01	
111) Naphthalene-d8a	5.714	136	2721550	40.00	ppm	0.00	
113) Phenanthrene-d10b	9.164	188	2147837	40.00	ppm	-0.01	
115) Chrysene-d12b	12.341	240	1752285	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							
6) Indene	4.875	116	2086448	51.38	ppm		Qvalue 100
7) Cumene	4.088	105	2827226	44.38	ppm		97
13) Decane	4.565	43	1212724	42.59	ppm		98
27) Quinoline	6.030	129	2300869	43.80	ppm		99
40) 2,3-Dichloroaniline	6.661	161	977604	39.17	ppm		100
45) 1-Methylnaphthalene	6.479	141	1765718	40.13	ppm		99
46) Dimethylnaphthalene	7.020	156	1913562	43.06	ppm		99
82) Octadecane	9.100	57	1584098	46.05	ppm		96

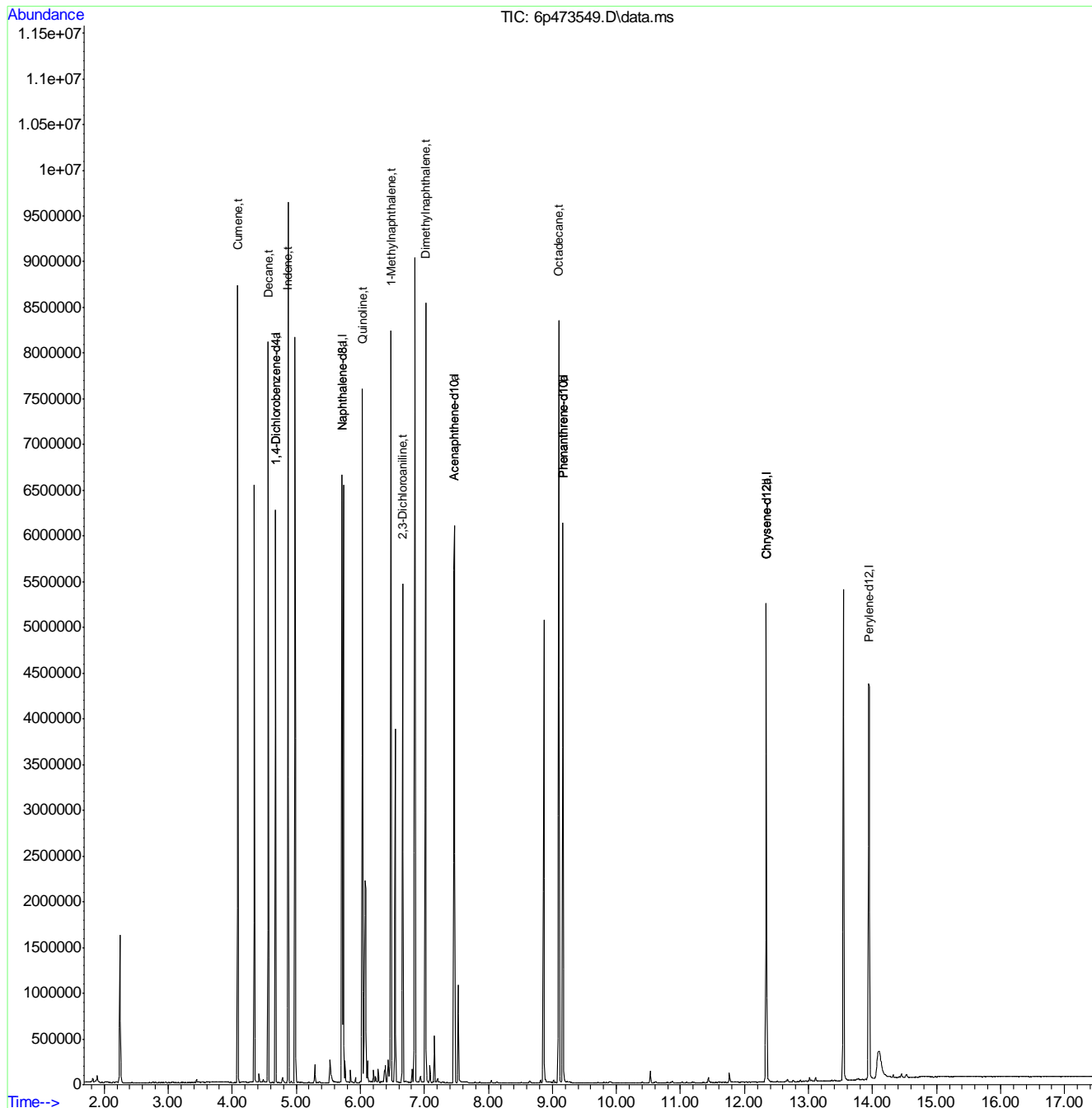
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.5.11
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473549.D
 Acq On : 6 Jun 2018 5:17 pm
 Operator : christc2
 Sample : icv2235-50
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 07 10:14:55 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 10:11:12 2018
 QLast Update : Thu Jun 07 10:11:12 2018
 Response via : Initial Calibration



9.5.11
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473550.D
 Acq On : 6 Jun 2018 5:56 pm
 Operator : christc2
 Sample : icv2235-50
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 07 10:16:05 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS, zb-5msi 30m x .25mm x .25MoTuThu Jun 07 10:11:12 2018

QLast Update : Thu Jun 07 10:11:12 2018

Response via : Initial Calibration

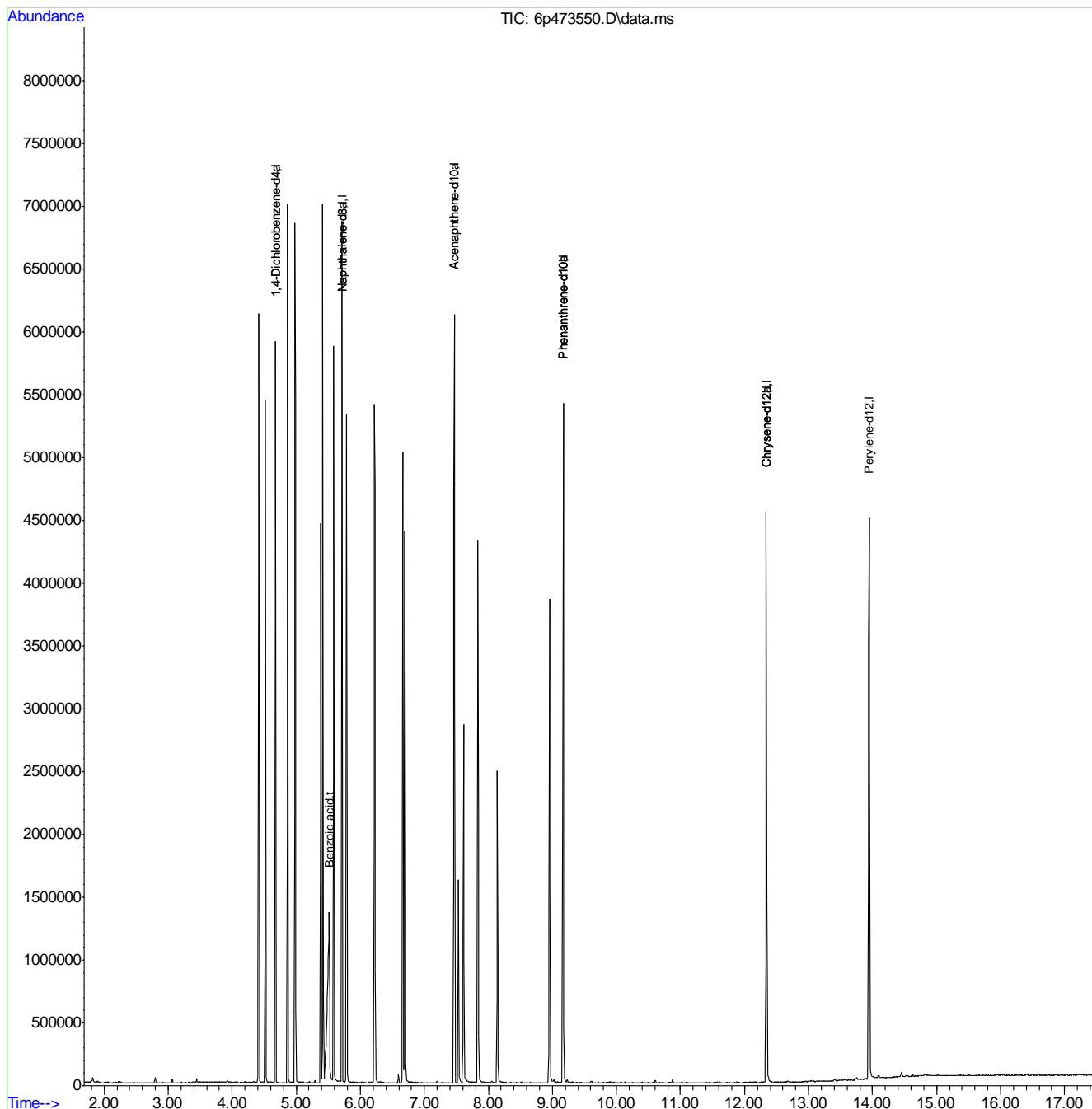
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	631726	40.00	ppm	-0.01	
24) Naphthalene-d8	5.714	136	2409377	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.469	164	1234249	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.170	188	1941358	40.00	ppm	-0.02	
83) Chrysene-d12	12.341	240	1617058	40.00	ppm	-0.03	
91) Perylene-d12	13.946	264	1592242	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.677	152	631726	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.469	164	1234249	40.00	ppm	0.00	
105) Phenanthrene-d10a	9.170	188	1941358	40.00	ppm	0.00	
109) Chrysene-d12a	12.341	240	1617058	40.00	ppm	-0.01	
111) Naphthalene-d8a	5.714	136	2409377	40.00	ppm	0.00	
113) Phenanthrene-d10b	9.170	188	1941358	40.00	ppm	0.00	
115) Chrysene-d12b	12.341	240	1617058	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	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
31) Benzoic acid	5.517	105	812032	46.48	ppm		97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2235\
 Data File : 6p473550.D
 Acq On : 6 Jun 2018 5:56 pm
 Operator : christc2
 Sample : icv2235-50
 Misc : op8717,e6p2235,1000,,,1,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 07 10:16:05 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 10:11:12 2018
 QLast Update : Thu Jun 07 10:11:12 2018
 Response via : Initial Calibration



9.5.12
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473553.D
 Acq On : 6 Jun 2018 9:53 pm
 Operator : chriss2
 Sample : ic2236-100
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 07 11:05:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Jun 06 18:35:09 2018
 QLast Update : Wed Jun 06 18:35:09 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.677	152	526235	40.00	ppm	-0.01
24) Naphthalene-d8	5.714	136	2083133	40.00	ppm	-0.02
47) Acenaphthene-d10	7.463	164	977298	40.00	ppm	-0.02
69) Phenanthrene-d10	9.164	188	1665921	40.00	ppm	-0.02
83) Chrysene-d12	12.341	240	1516652	40.00	ppm	-0.03
91) Perylene-d12	13.946	264	1556442	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	4.677	152	526235	40.00	ppm	0.00
103) Acenaphthene-d10a	7.463	164	977298	40.00	ppm	-0.01
105) Phenanthrene-d10a	9.164	188	1665921	40.00	ppm	-0.01
109) Chrysene-d12a	12.341	240	1516652	40.00	ppm	-0.01
111) Naphthalene-d8a	5.714	136	2083133	40.00	ppm	0.00
113) Phenanthrene-d10b	9.164	188	1665921	40.00	ppm	-0.01
115) Chrysene-d12b	12.341	240	1516791	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	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%	
106) 1-chlorooctadecane	10.539	57	1591373	94.56	ppm	0.00
107) o-terphenyl	9.651	230	2319429	103.16	ppm	0.00
Target Compounds						
102) Benzaldehyde	4.350	105	1538702	92.45	ppm	94
104) 1,2,4,5-Tetrachloroben...	6.554	216	1325570	96.11	ppm	100
108) Atrazine	8.870	215	487635	120.11	ppm	# 86
110) benzidine	10.796	184	3285131	104.85	ppm	99
112) Hydroquinone	6.089	110	1803762	98.28	ppm	98
114) Pentachloronitrobenzene	8.977	295	169788	121.11	ppm	99

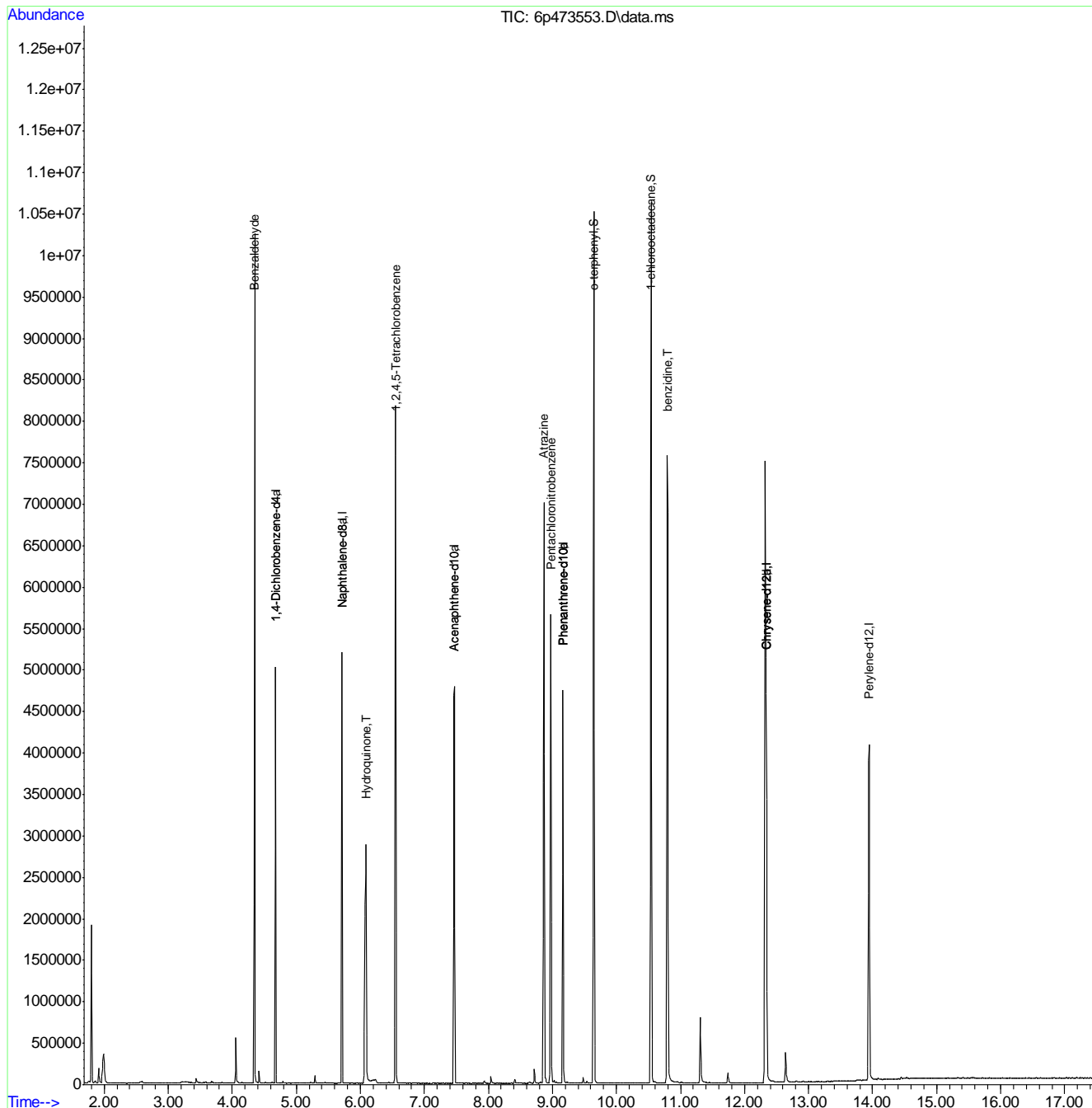
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.513
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473553.D
 Acq On : 6 Jun 2018 9:53 pm
 Operator : chriss2
 Sample : ic2236-100
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 07 11:05:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Jun 06 18:35:09 2018
 QLast Update : Wed Jun 06 18:35:09 2018
 Response via : Initial Calibration



9.5.13
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473554.D
 Acq On : 6 Jun 2018 10:17 pm
 Operator : chriss2
 Sample : ic2236-80
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 07 11:06:43 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Jun 06 18:35:09 2018

QLast Update : Wed Jun 06 18:35:09 2018

Response via : Initial Calibration

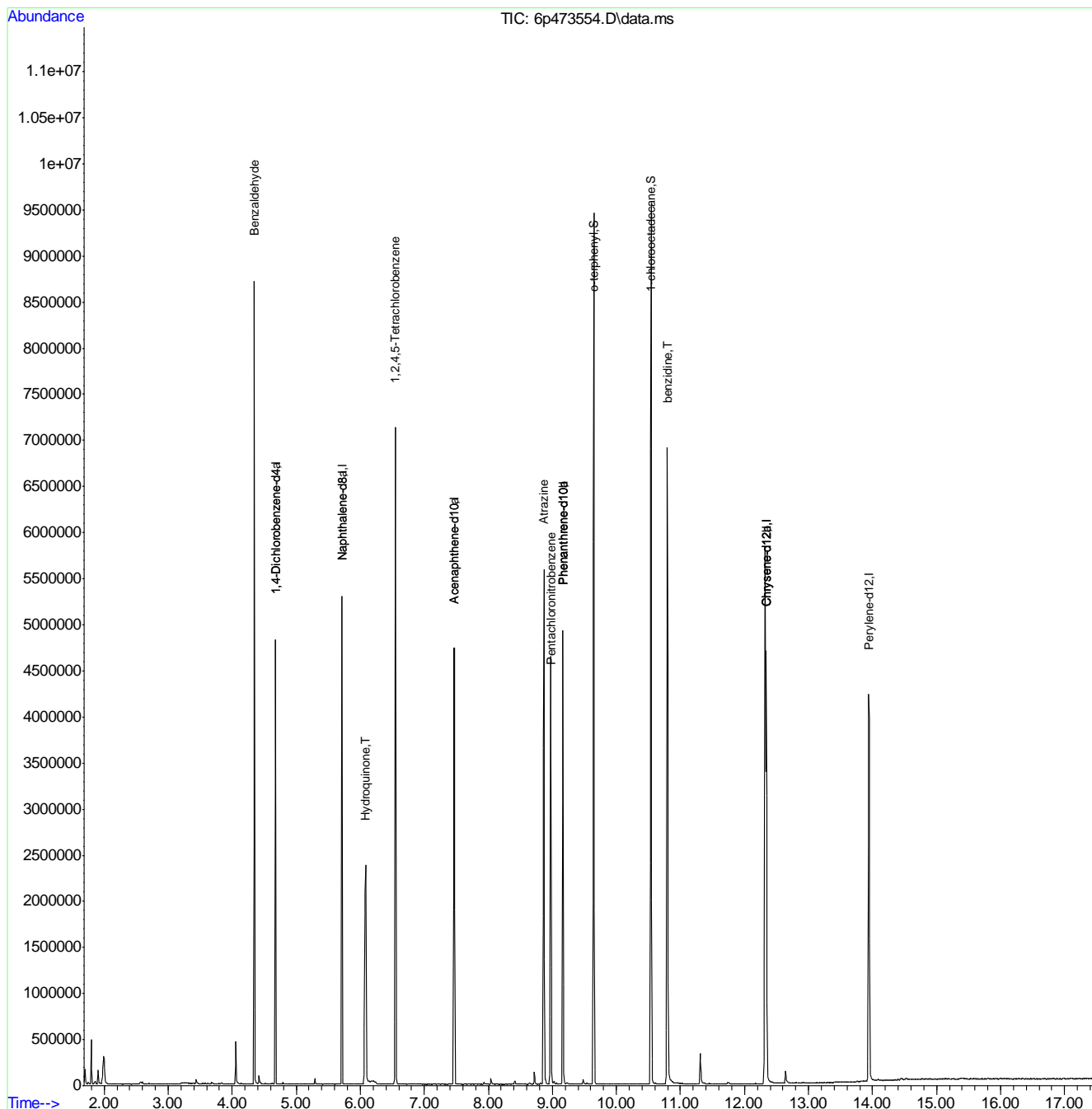
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	533846	40.00	ppm	-0.01	
24) Naphthalene-d8	5.714	136	2133241	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.463	164	992316	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.164	188	1742113	40.00	ppm	-0.02	
83) Chrysene-d12	12.341	240	1567761	40.00	ppm	-0.03	
91) Perylene-d12	13.941	264	1598312	40.00	ppm	-0.03	
101) 1,4-Dichlorobenzene-d4a	4.677	152	533846	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.463	164	992316	40.00	ppm	-0.01	
105) Phenanthrene-d10a	9.164	188	1742113	40.00	ppm	-0.01	
109) Chrysene-d12a	12.341	240	1567761	40.00	ppm	-0.01	
111) Naphthalene-d8a	5.714	136	2133241	40.00	ppm	0.00	
113) Phenanthrene-d10b	9.164	188	1742113	40.00	ppm	-0.01	
115) Chrysene-d12b	12.341	240	1567739	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	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%		
106) 1-chlorooctadecane	10.539	57	1331272	75.64	ppm	0.00	
107) o-terphenyl	9.646	230	1896537	80.66	ppm	-0.01	
Target Compounds							
102) Benzaldehyde	4.345	105	1271948	75.33	ppm		Qvalue 97
104) 1,2,4,5-Tetrachloroben...	6.549	216	1112366	79.43	ppm		99
108) Atrazine	8.870	215	387351	91.24	ppm	#	82
110) benzidine	10.796	184	2785196	84.74	ppm		99
112) Hydroquinone	6.084	110	1428318	76.00	ppm		98
114) Pentachloronitrobenzene	8.977	295	143695	98.01	ppm		94

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
Data File : 6p473554.D
Acq On : 6 Jun 2018 10:17 pm
Operator : chriss2
Sample : ic2236-80
Misc : op8717,e6p2236,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 07 11:06:43 2018
Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Jun 06 18:35:09 2018
QLast Update : Wed Jun 06 18:35:09 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473555.D
 Acq On : 6 Jun 2018 10:42 pm
 Operator : chriss2
 Sample : ic2236-50
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 07 11:07:16 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS, zb-5msi 30m x .25mm x .25MoTuWed Jun 06 18:35:09 2018

QLast Update : Wed Jun 06 18:35:09 2018

Response via : Initial Calibration

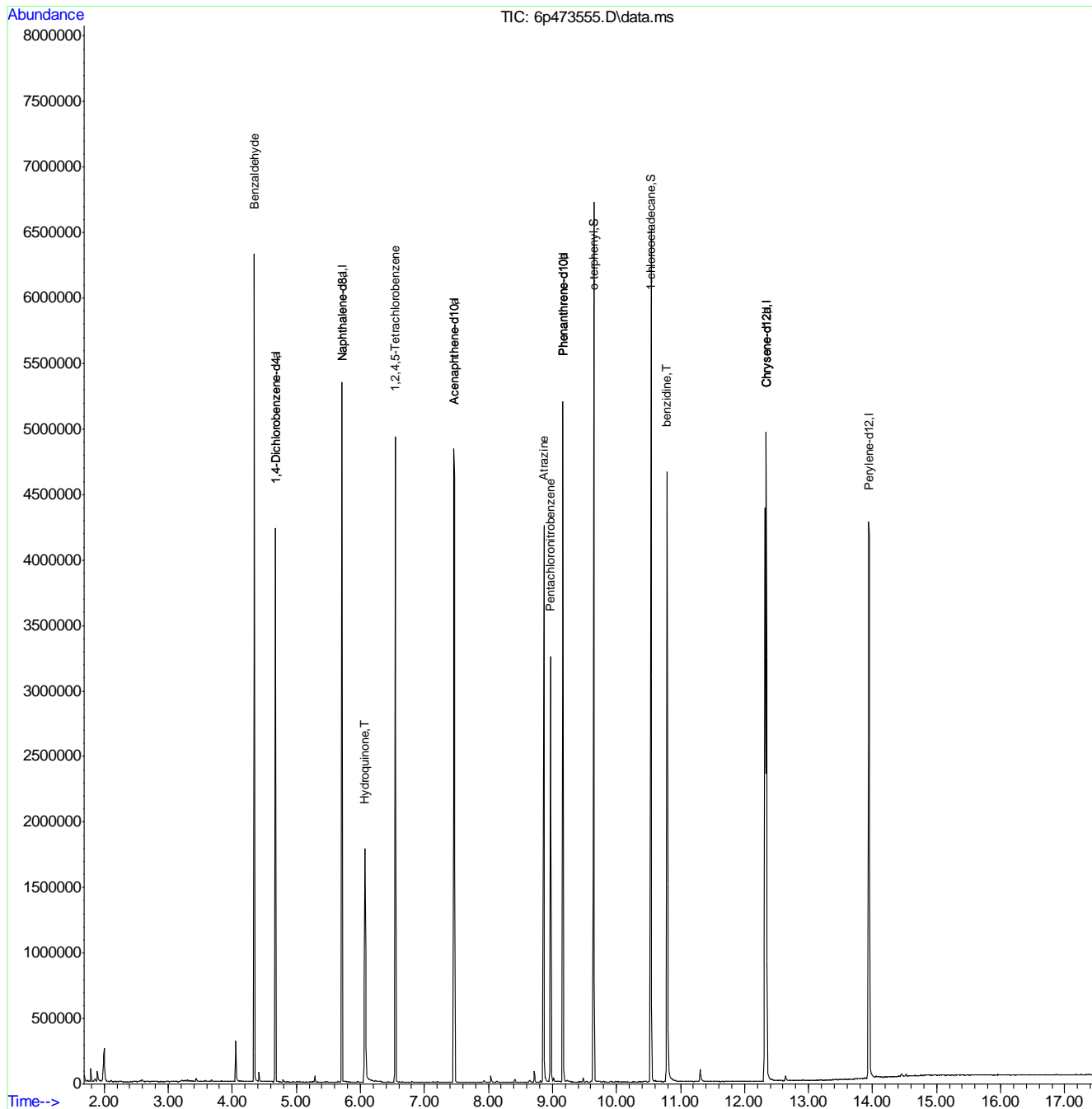
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	537902	40.00	ppm	-0.01	
24) Naphthalene-d8	5.714	136	2126554	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.463	164	990598	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.164	188	1766223	40.00	ppm	-0.02	
83) Chrysene-d12	12.341	240	1650368	40.00	ppm	-0.03	
91) Perylene-d12	13.946	264	1650831	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.677	152	537902	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.463	164	990598	40.00	ppm	-0.01	
105) Phenanthrene-d10a	9.164	188	1766223	40.00	ppm	-0.01	
109) Chrysene-d12a	12.341	240	1650368	40.00	ppm	-0.01	
111) Naphthalene-d8a	5.714	136	2126554	40.00	ppm	0.00	
113) Phenanthrene-d10b	9.164	188	1766223	40.00	ppm	-0.01	
115) Chrysene-d12b	12.341	240	1650368	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	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%		
106) 1-chlorooctadecane	10.539	57	900551	50.47	ppm	0.00	
107) o-terphenyl	9.646	230	1261122	52.90	ppm	-0.01	
Target Compounds							
102) Benzaldehyde	4.345	105	828890	48.72	ppm		96
104) 1,2,4,5-Tetrachloroben...	6.549	216	706226	50.52	ppm		98
108) Atrazine	8.865	215	256512	59.59	ppm	#	82
110) benzidine	10.790	184	1906984	54.29	ppm		99
112) Hydroquinone	6.073	110	893645	47.70	ppm		99
114) Pentachloronitrobenzene	8.972	295	89627	60.30	ppm		94

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473555.D
 Acq On : 6 Jun 2018 10:42 pm
 Operator : chriss2
 Sample : ic2236-50
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 07 11:07:16 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Jun 06 18:35:09 2018
 QLast Update : Wed Jun 06 18:35:09 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473556.D
 Acq On : 6 Jun 2018 11:07 pm
 Operator : chriss2
 Sample : ic2236-25
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 07 11:07:46 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Jun 06 18:35:09 2018

QLast Update : Wed Jun 06 18:35:09 2018

Response via : Initial Calibration

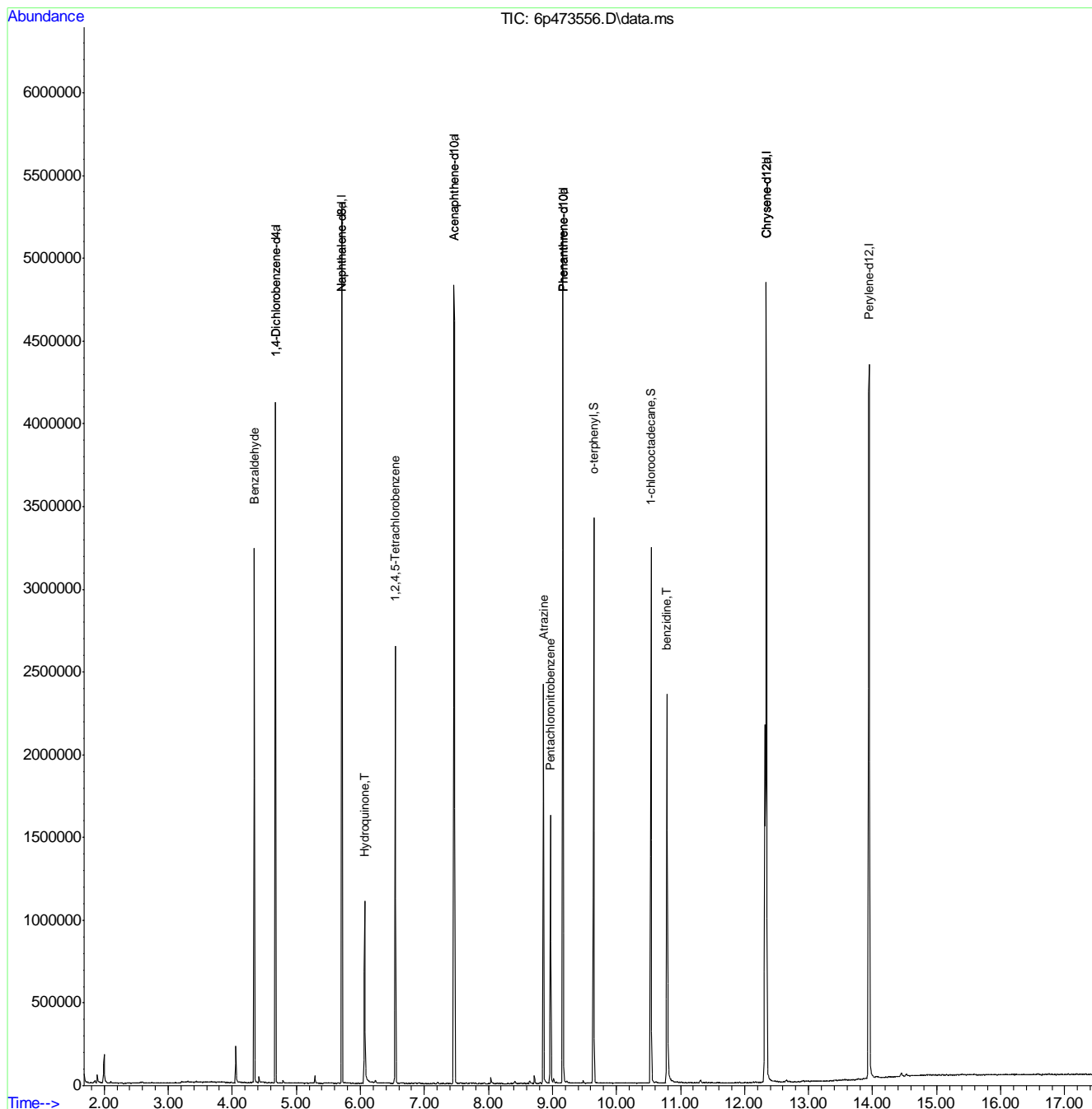
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	529510	40.00	ppm	-0.01	
24) Naphthalene-d8	5.709	136	2064075	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.463	164	1012658	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.164	188	1736620	40.00	ppm	-0.02	
83) Chrysene-d12	12.341	240	1637612	40.00	ppm	-0.03	
91) Perylene-d12	13.946	264	1645609	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.677	152	529510	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.463	164	1012658	40.00	ppm	-0.01	
105) Phenanthrene-d10a	9.164	188	1736620	40.00	ppm	-0.01	
109) Chrysene-d12a	12.341	240	1637612	40.00	ppm	-0.01	
111) Naphthalene-d8a	5.709	136	2064075	40.00	ppm	-0.01	
113) Phenanthrene-d10b	9.164	188	1736620	40.00	ppm	-0.01	
115) Chrysene-d12b	12.341	240	1637612	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	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%		
106) 1-chlorooctadecane	10.534	57	468951	26.73	ppm	-0.01	
107) o-terphenyl	9.646	230	645386	27.54	ppm	-0.01	
Target Compounds							
102) Benzaldehyde	4.345	105	429757	25.66	ppm		Qvalue 96
104) 1,2,4,5-Tetrachloroben...	6.549	216	364594	25.51	ppm		100
108) Atrazine	8.859	215	125848	29.74	ppm		88
110) benzidine	10.790	184	948885	27.58	ppm		98
112) Hydroquinone	6.067	110	416440	22.90	ppm		99
114) Pentachloronitrobenzene	8.972	295	41493	28.39	ppm		100

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
Data File : 6p473556.D
Acq On : 6 Jun 2018 11:07 pm
Operator : chriss2
Sample : ic2236-25
Misc : op8717,e6p2236,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 07 11:07:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Jun 06 18:35:09 2018
QLast Update : Wed Jun 06 18:35:09 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473557.D
 Acq On : 6 Jun 2018 11:32 pm
 Operator : chriss2
 Sample : ic2236-10
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 07 11:08:17 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS, zb-5msi 30m x .25mm x .25MoTuWed Jun 06 18:35:09 2018

QLast Update : Wed Jun 06 18:35:09 2018

Response via : Initial Calibration

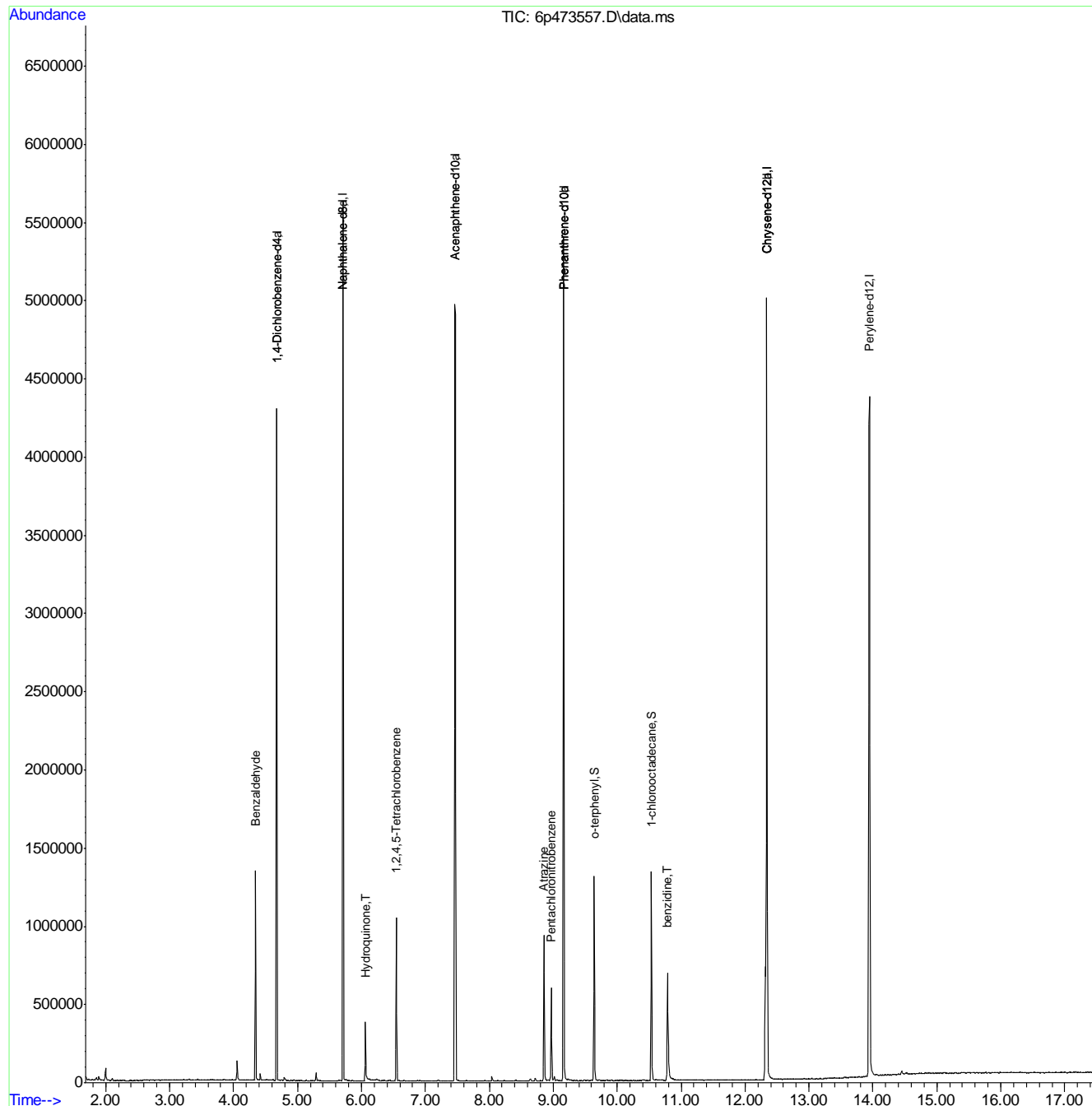
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	551746	40.00	ppm	-0.01	
24) Naphthalene-d8	5.709	136	2165168	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.463	164	1054284	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.164	188	1868648	40.00	ppm	-0.02	
83) Chrysene-d12	12.341	240	1706865	40.00	ppm	-0.03	
91) Perylene-d12	13.946	264	1685618	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.677	152	551746	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.463	164	1054284	40.00	ppm	-0.01	
105) Phenanthrene-d10a	9.164	188	1868648	40.00	ppm	-0.01	
109) Chrysene-d12a	12.341	240	1706865	40.00	ppm	-0.01	
111) Naphthalene-d8a	5.709	136	2165168	40.00	ppm	-0.01	
113) Phenanthrene-d10b	9.164	188	1868648	40.00	ppm	-0.01	
115) Chrysene-d12b	12.341	240	1706865	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	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%		
106) 1-chlorooctadecane	10.534	57	179108	9.49	ppm	-0.01	
107) o-terphenyl	9.646	230	258043	10.23	ppm	-0.01	
Target Compounds							
102) Benzaldehyde	4.345	105	178713	10.24	ppm		Qvalue 96
104) 1,2,4,5-Tetrachloroben...	6.549	216	145525	9.78	ppm		97
108) Atrazine	8.854	215	46976	10.32	ppm		96
110) benzidine	10.790	184	319791	10.14	ppm		99
112) Hydroquinone	6.062	110	124891	6.55	ppm		97
114) Pentachloronitrobenzene	8.972	295	14350	9.13	ppm		97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473557.D
 Acq On : 6 Jun 2018 11:32 pm
 Operator : chriss2
 Sample : ic2236-10
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 07 11:08:17 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Jun 06 18:35:09 2018
 QLast Update : Wed Jun 06 18:35:09 2018
 Response via : Initial Calibration



9.5.17
 9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473558.D
 Acq On : 6 Jun 2018 11:56 pm
 Operator : chriss2
 Sample : ic2236-5
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 07 11:08:46 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Jun 06 18:35:09 2018

QLast Update : Wed Jun 06 18:35:09 2018

Response via : Initial Calibration

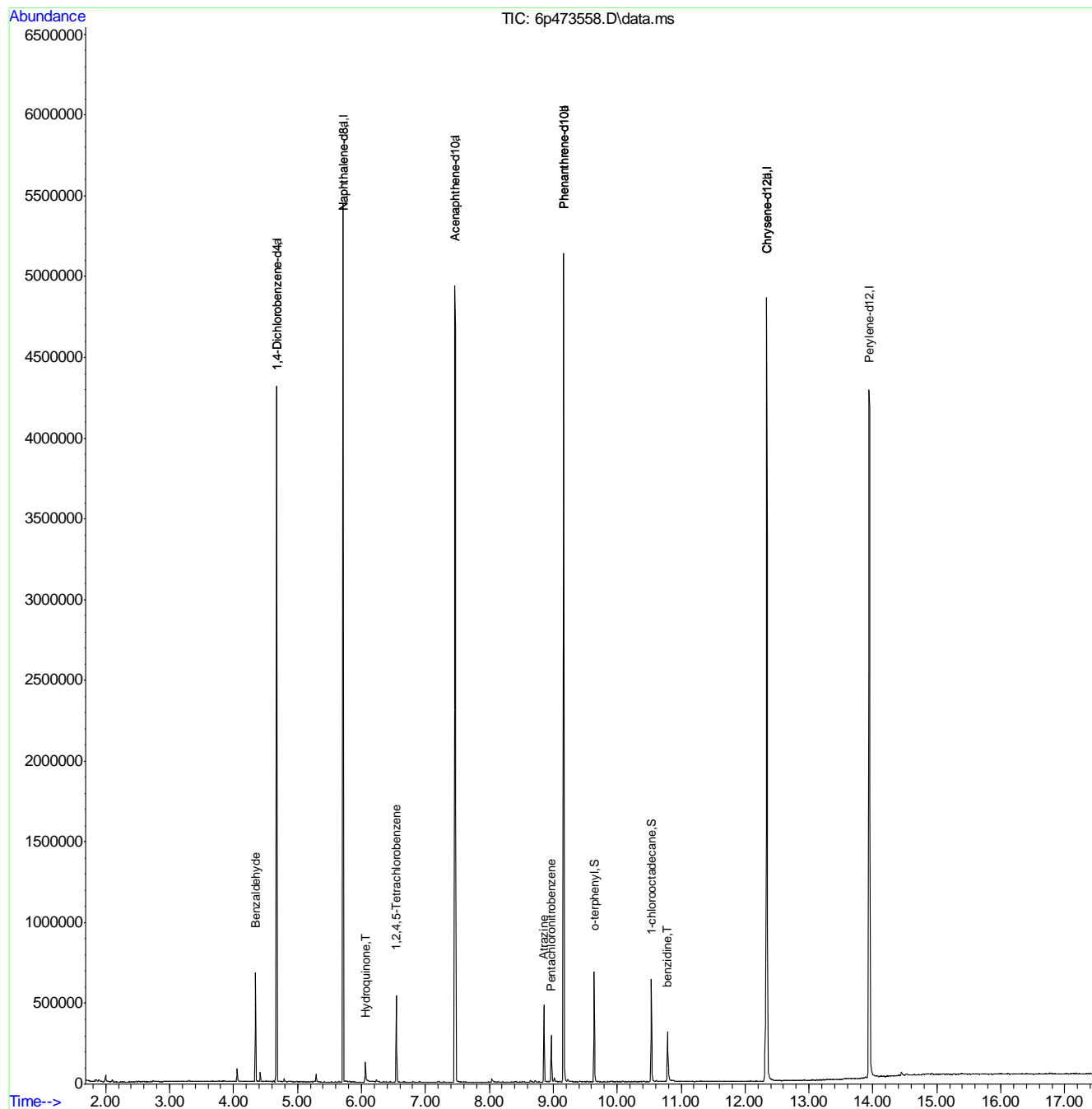
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.677	152	557237	40.00	ppm	-0.01
24) Naphthalene-d8	5.714	136	2131032	40.00	ppm	-0.02
47) Acenaphthene-d10	7.463	164	1018421	40.00	ppm	-0.02
69) Phenanthrene-d10	9.164	188	1797617	40.00	ppm	-0.02
83) Chrysene-d12	12.341	240	1667129	40.00	ppm	-0.03
91) Perylene-d12	13.946	264	1662717	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4a	4.677	152	557237	40.00	ppm	0.00
103) Acenaphthene-d10a	7.463	164	1018421	40.00	ppm	-0.01
105) Phenanthrene-d10a	9.164	188	1797617	40.00	ppm	-0.01
109) Chrysene-d12a	12.341	240	1667129	40.00	ppm	-0.01
111) Naphthalene-d8a	5.714	136	2131032	40.00	ppm	0.00
113) Phenanthrene-d10b	9.164	188	1797617	40.00	ppm	-0.01
115) Chrysene-d12b	12.341	240	1667129	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	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%	
106) 1-chlorooctadecane	10.533	57	85668	4.72	ppm	-0.01
107) o-terphenyl	9.646	230	132664	5.47	ppm	-0.01
Target Compounds						
102) Benzaldehyde	4.345	105	88338	5.01	ppm	96
104) 1,2,4,5-Tetrachloroben...	6.549	216	77105	5.36	ppm	98
108) Atrazine	8.854	215	23046	5.26	ppm	96
110) benzidine	10.790	184	134628	5.49	ppm	98
112) Hydroquinone	6.062	110	44574	2.37	ppm	97
114) Pentachloronitrobenzene	8.972	295	6529	4.32	ppm	93

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
Data File : 6p473558.D
Acq On : 6 Jun 2018 11:56 pm
Operator : chriss2
Sample : ic2236-5
Misc : op8717,e6p2236,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 07 11:08:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Jun 06 18:35:09 2018
QLast Update : Wed Jun 06 18:35:09 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473559.D
 Acq On : 7 Jun 2018 12:21 am
 Operator : chriss2
 Sample : ic2236-2
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 07 11:11:52 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS, zb-5msi 30m x .25mm x .25MoTuWed Jun 06 18:35:09 2018

QLast Update : Wed Jun 06 18:35:09 2018

Response via : Initial Calibration

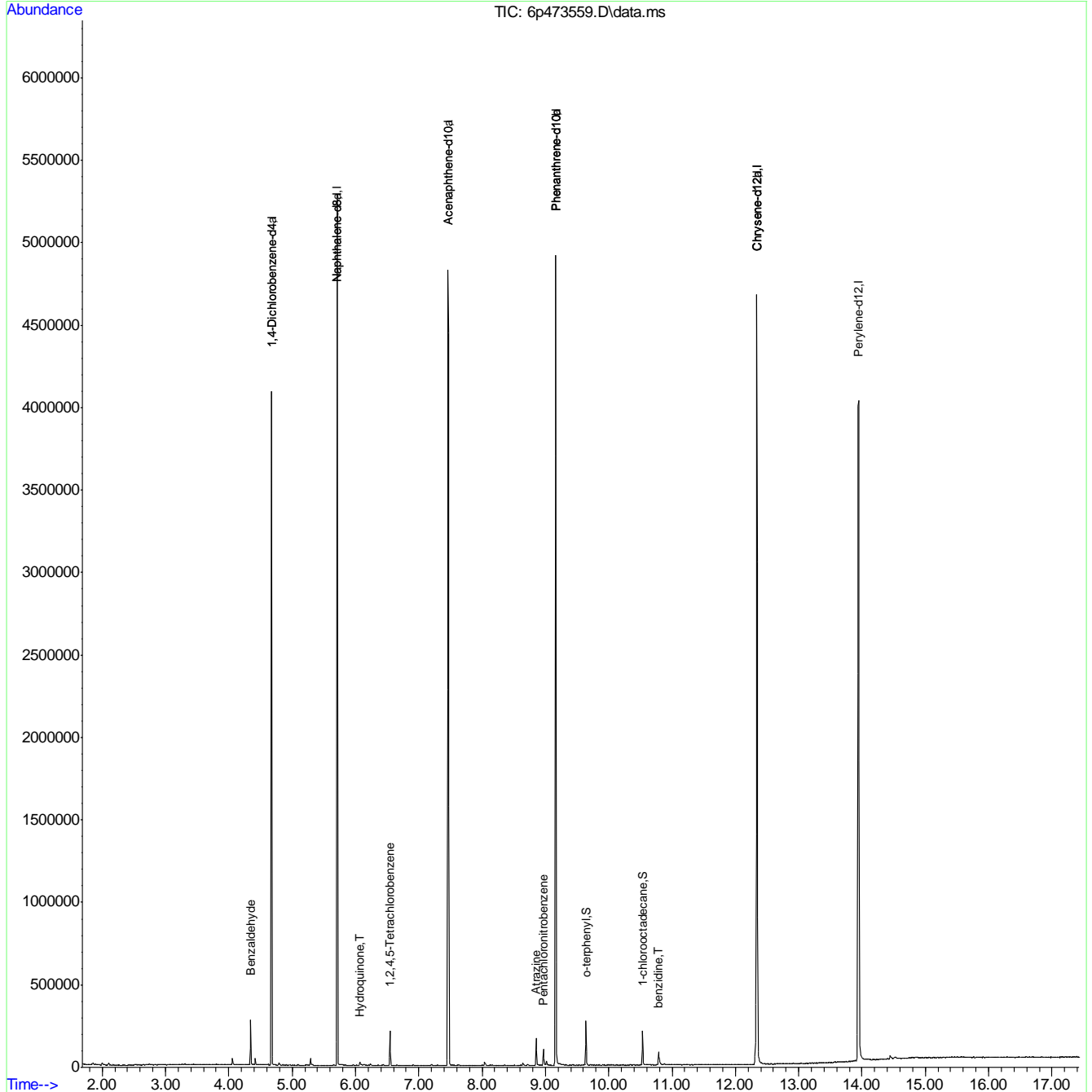
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	524378	40.00	ppm	-0.01	
24) Naphthalene-d8	5.709	136	2079188	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.463	164	976340	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.164	188	1718970	40.00	ppm	-0.02	
83) Chrysene-d12	12.341	240	1576235	40.00	ppm	-0.03	
91) Perylene-d12	13.946	264	1571661	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.677	152	524378	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.463	164	976340	40.00	ppm	-0.01	
105) Phenanthrene-d10a	9.164	188	1718970	40.00	ppm	-0.01	
109) Chrysene-d12a	12.341	240	1576235	40.00	ppm	-0.01	
111) Naphthalene-d8a	5.709	136	2079188	40.00	ppm	-0.01	
113) Phenanthrene-d10b	9.164	188	1718970	40.00	ppm	-0.01	
115) Chrysene-d12b	12.341	240	1576235	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	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%		
106) 1-chlorooctadecane	10.534	57	28094	1.62	ppm	-0.01	
107) o-terphenyl	9.640	230	49049	2.11	ppm	-0.02	
Target Compounds							
102) Benzaldehyde	4.345	105	36072	2.17	ppm		Qvalue 97
104) 1,2,4,5-Tetrachloroben...	6.549	216	30233	2.19	ppm		97
108) Atrazine	8.854	215	8491	2.03	ppm		90
110) benzidine	10.790	184	36148	2.98	ppm		98
112) Hydroquinone	6.067	110	9867	0.54	ppm		87
114) Pentachloronitrobenzene	8.972	295	2451	1.69	ppm		97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473559.D
 Acq On : 7 Jun 2018 12:21 am
 Operator : chriss2
 Sample : ic2236-2
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 07 11:11:52 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Jun 06 18:35:09 2018
 QLast Update : Wed Jun 06 18:35:09 2018
 Response via : Initial Calibration



9.5.19
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473560.D
 Acq On : 7 Jun 2018 12:46 am
 Operator : chriss2
 Sample : ic2236-1
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 07 11:12:31 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Jun 06 18:35:09 2018
 QLast Update : Wed Jun 06 18:35:09 2018
 Response via : Initial Calibration

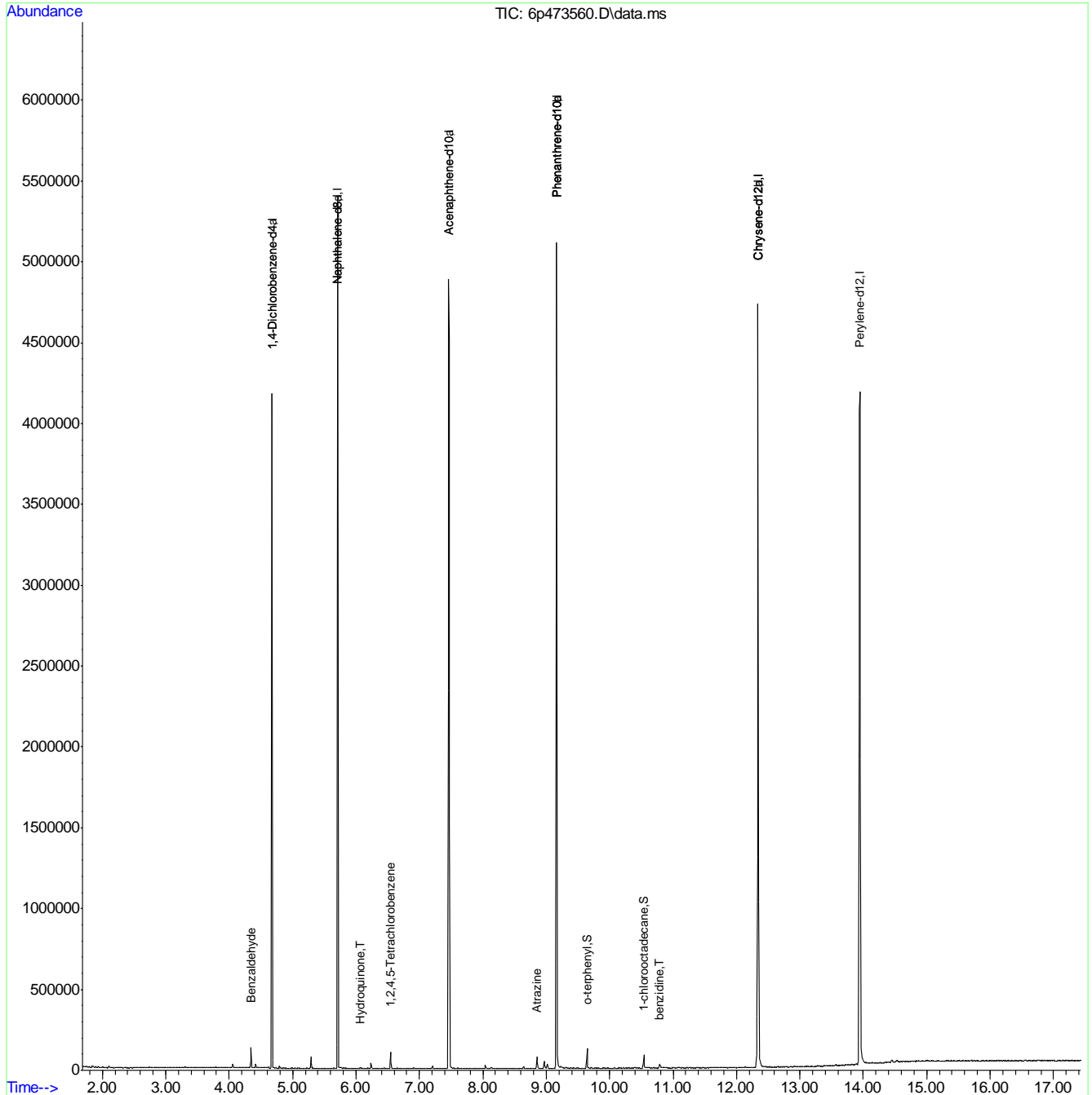
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	528258	40.00	ppm	-0.01	
24) Naphthalene-d8	5.709	136	2067858	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.463	164	994004	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.164	188	1741481	40.00	ppm	-0.02	
83) Chrysene-d12	12.341	240	1598959	40.00	ppm	-0.03	
91) Perylene-d12	13.946	264	1605220	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.677	152	528258	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.463	164	994004	40.00	ppm	-0.01	
105) Phenanthrene-d10a	9.164	188	1741481	40.00	ppm	-0.01	
109) Chrysene-d12a	12.341	240	1598959	40.00	ppm	-0.01	
111) Naphthalene-d8a	5.709	136	2067858	40.00	ppm	-0.01	
113) Phenanthrene-d10b	9.164	188	1741481	40.00	ppm	-0.01	
115) Chrysene-d12b	12.341	240	1598959	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	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%		
106) 1-chlorooctadecane	10.539	57	12079	0.69	ppm	0.00	
107) o-terphenyl	9.646	230	23440	1.00	ppm	-0.01	
Target Compounds							
102) Benzaldehyde	4.345	105	17020	1.02	ppm		Qvalue 95
104) 1,2,4,5-Tetrachloroben...	6.549	216	15739	1.12	ppm		98
108) Atrazine	8.854	215	4008	0.94	ppm		83
110) benzidine	10.790	184	13086	2.34	ppm		95
112) Hydroquinone	6.067	110	2675	0.15	ppm		68

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
Data File : 6p473560.D
Acq On : 7 Jun 2018 12:46 am
Operator : chriss2
Sample : ic2236-1
Misc : op8717,e6p2236,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 07 11:12:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuWed Jun 06 18:35:09 2018
QLast Update : Wed Jun 06 18:35:09 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473561.D
 Acq On : 7 Jun 2018 1:11 am
 Operator : chriss2
 Sample : icv2236-50
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 07 11:20:16 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	520462	40.00	ppm	-0.01	
24) Naphthalene-d8	5.714	136	2047153	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.469	164	996501	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.170	188	1853218	40.00	ppm	-0.02	
83) Chrysene-d12	12.347	240	1699781	40.00	ppm	-0.02	
91) Perylene-d12	13.946	264	1769486	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.677	152	520462	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.469	164	996501	40.00	ppm	0.00	
105) Phenanthrene-d10a	9.170	188	1853218	40.00	ppm	0.00	
109) Chrysene-d12a	12.347	240	1699781	40.00	ppm	0.00	
111) Naphthalene-d8a	5.714	136	2047153	40.00	ppm	0.00	
113) Phenanthrene-d10b	9.170	188	1853218	40.00	ppm	0.00	
115) Chrysene-d12b	12.347	240	1699781	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%		
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm		
107) o-terphenyl	0.000	230	0	0.00	ppm		
Target Compounds							Qvalue
104) 1,2,4,5-Tetrachloroben...	6.549	216	683386	47.09	ppm		98
108) Atrazine	8.865	215	257768	52.10	ppm		92
114) Pentachloronitrobenzene	8.977	295	86167	50.58	ppm		96

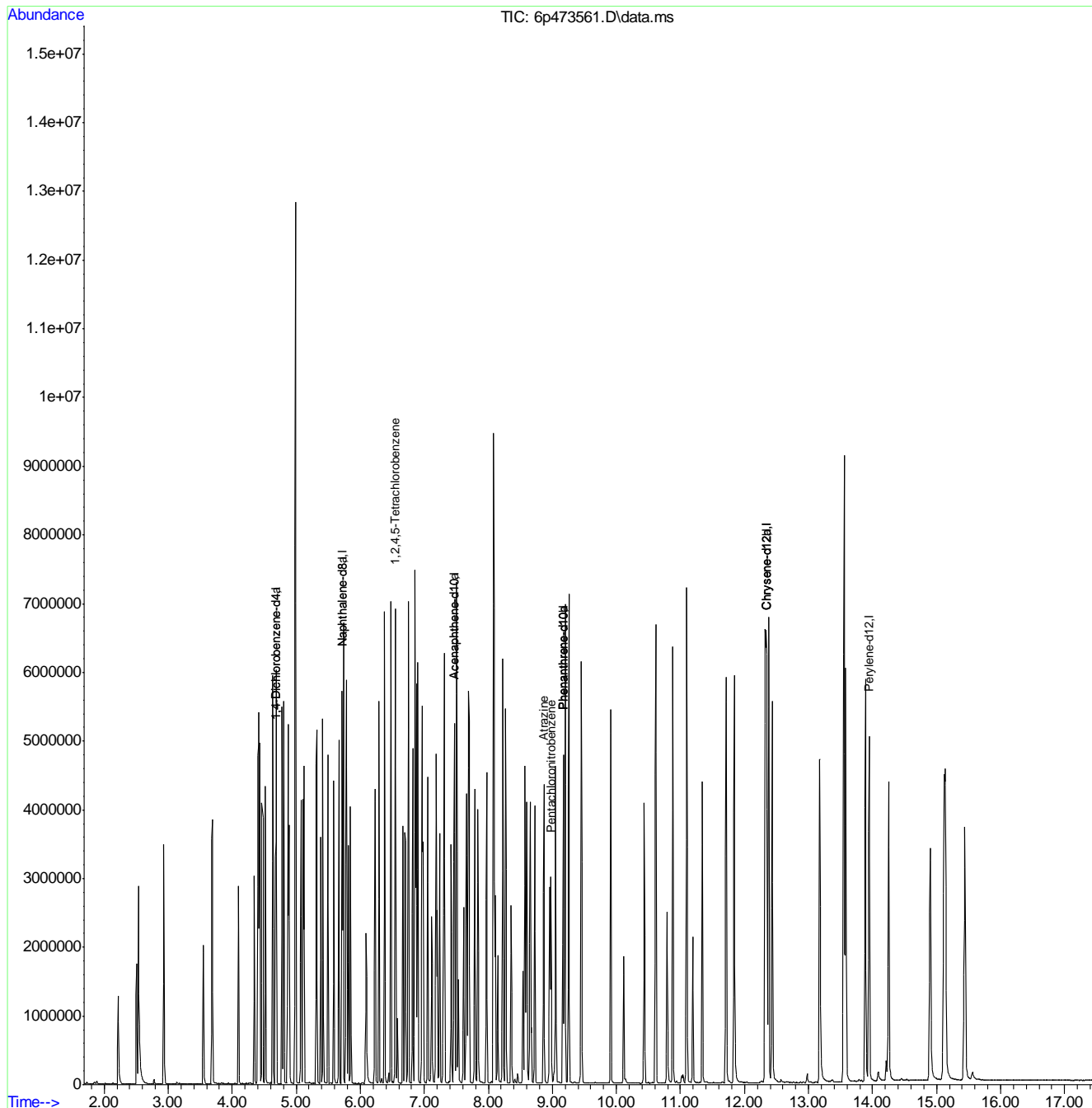
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.5.21
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473561.D
 Acq On : 7 Jun 2018 1:11 am
 Operator : chriss2
 Sample : icv2236-50
 Misc : op8717,e6p2236,1000,,1,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 07 11:20:16 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration



9.5.21
 9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473562.D
 Acq On : 7 Jun 2018 1:35 am
 Operator : chriss2
 Sample : icv2236-50
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 07 11:20:48 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	796267	40.00	ppm	-0.01	
24) Naphthalene-d8	5.714	136	3010455	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.469	164	1577641	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.164	188	2670290	40.00	ppm	-0.02	
83) Chrysene-d12	12.347	240	2502049	40.00	ppm	-0.02	
91) Perylene-d12	13.946	264	2499543	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.677	152	796267	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.469	164	1577641	40.00	ppm	0.00	
105) Phenanthrene-d10a	9.164	188	2670290	40.00	ppm	-0.01	
109) Chrysene-d12a	12.347	240	2502049	40.00	ppm	0.00	
111) Naphthalene-d8a	5.714	136	3010455	40.00	ppm	0.00	
113) Phenanthrene-d10b	9.164	188	2670290	40.00	ppm	-0.01	
115) Chrysene-d12b	12.347	240	2501992	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%		
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm		
107) o-terphenyl	0.000	230	0	0.00	ppm		
Target Compounds							
110) benzidine	10.795	184	2547375	44.20	ppm	99	Qvalue

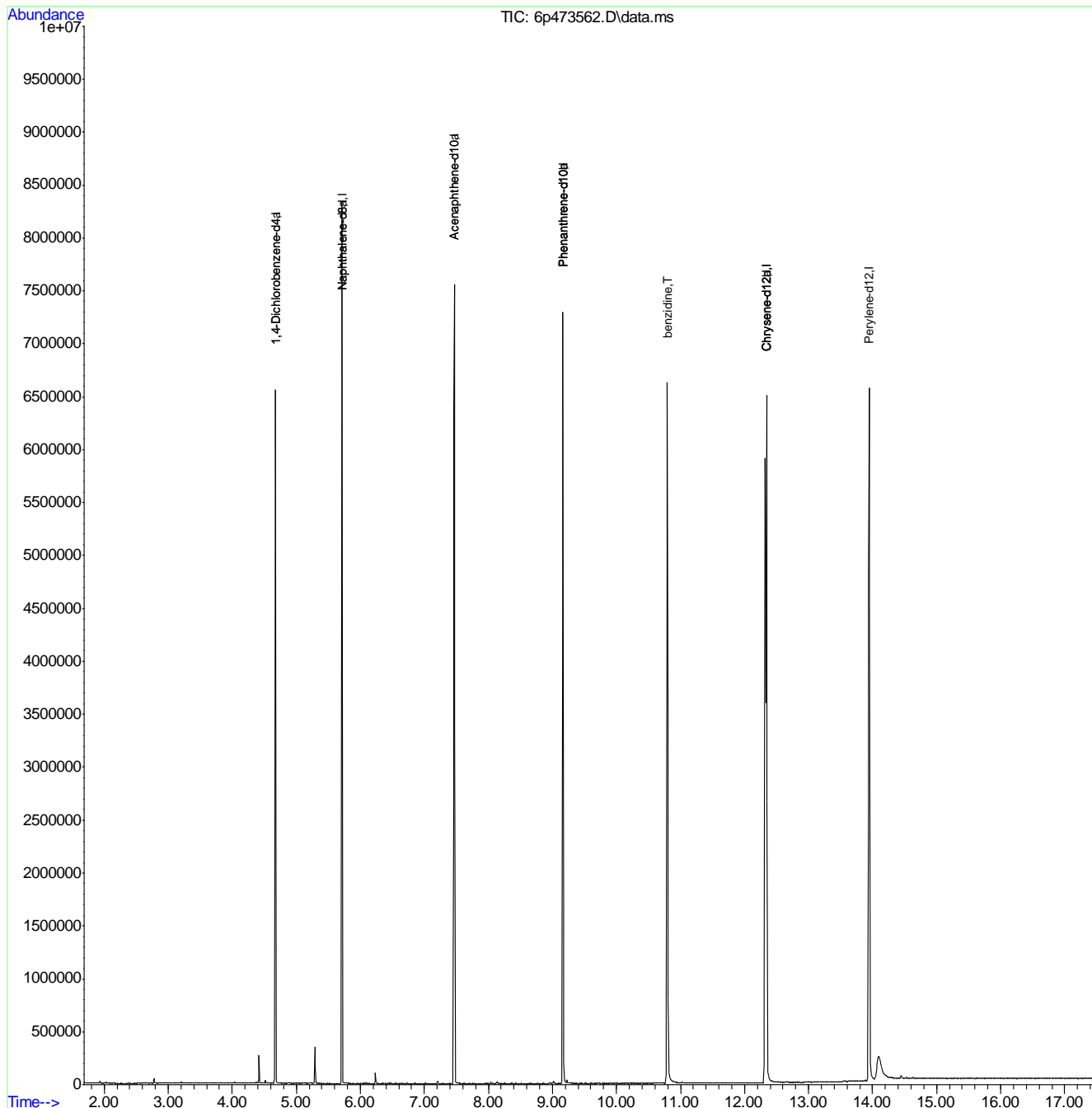
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.5.22
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473562.D
 Acq On : 7 Jun 2018 1:35 am
 Operator : chriss2
 Sample : icv2236-50
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 07 11:20:48 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration



9.5.22
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473563.D
 Acq On : 7 Jun 2018 2:00 am
 Operator : chriss2
 Sample : icv2236-50
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 07 11:21:22 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	799795	40.00	ppm	-0.01	
24) Naphthalene-d8	5.714	136	3053773	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.469	164	1442819	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.164	188	2559134	40.00	ppm	-0.02	
83) Chrysene-d12	12.341	240	2431610	40.00	ppm	-0.03	
91) Perylene-d12	13.946	264	2277603	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.677	152	799795	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.469	164	1442819	40.00	ppm	0.00	
105) Phenanthrene-d10a	9.164	188	2559134	40.00	ppm	-0.01	
109) Chrysene-d12a	12.341	240	2431610	40.00	ppm	-0.01	
111) Naphthalene-d8a	5.714	136	3053773	40.00	ppm	0.00	
113) Phenanthrene-d10b	9.164	188	2559134	40.00	ppm	-0.01	
115) Chrysene-d12b	12.341	240	2431610	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	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%		
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	6.084	110	1280294	53.38	ppm		99

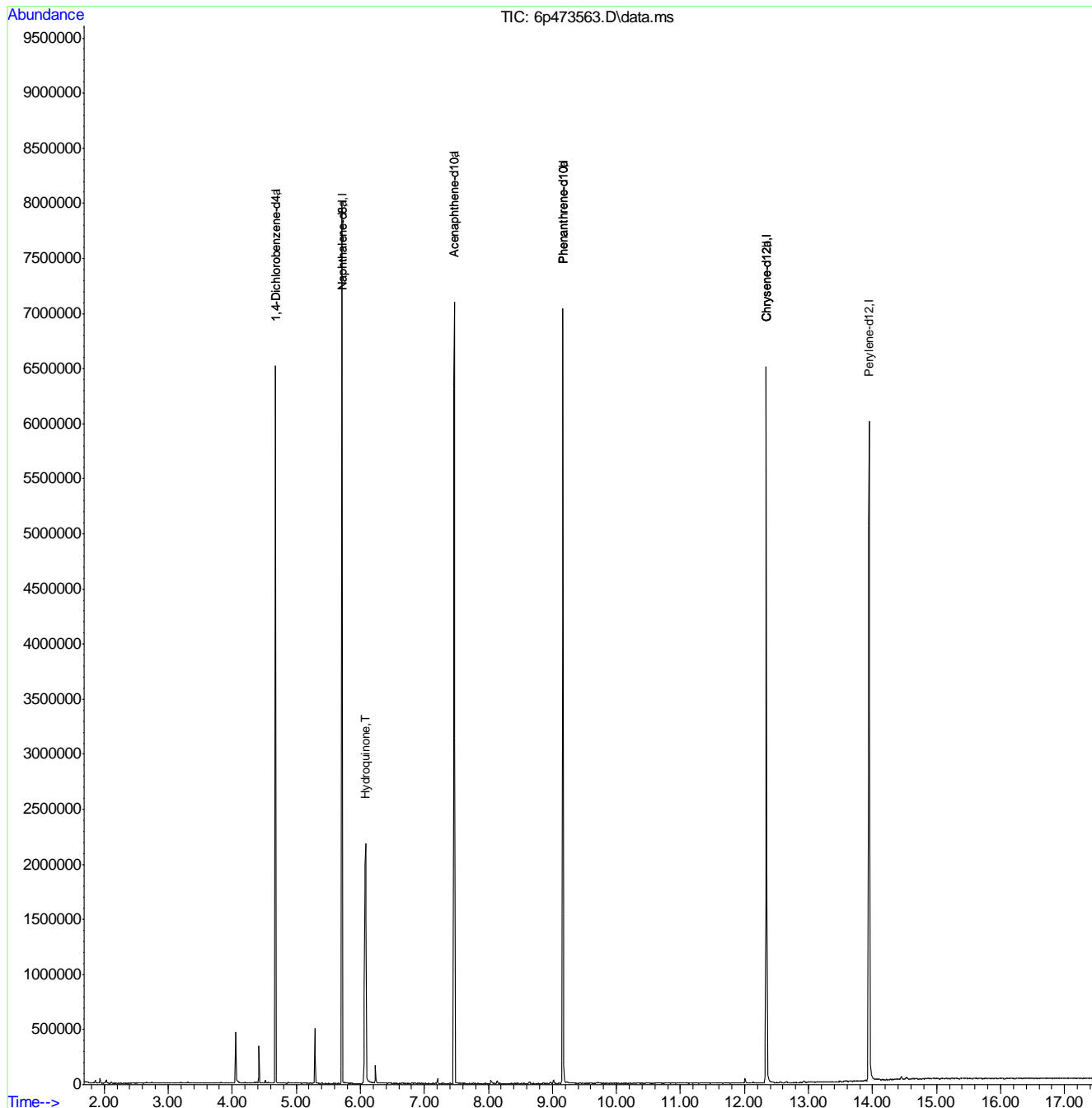
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.5.23
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473563.D
 Acq On : 7 Jun 2018 2:00 am
 Operator : chriss2
 Sample : icv2236-50
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 07 11:21:22 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration



9.5.23
 9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473564.D
 Acq On : 7 Jun 2018 2:25 am
 Operator : chriss2
 Sample : icv2236-50
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 07 11:22:19 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.677	152	550720	40.00	ppm	-0.01	
24) Naphthalene-d8	5.715	136	2144377	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.463	164	1136467	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.164	188	1872137	40.00	ppm	-0.02	
83) Chrysene-d12	12.341	240	1753016	40.00	ppm	-0.03	
91) Perylene-d12	13.946	264	1734939	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.677	152	550720	40.00	ppm	0.00	
103) Acenaphthene-d10a	7.463	164	1136467	40.00	ppm	-0.01	
105) Phenanthrene-d10a	9.164	188	1872137	40.00	ppm	-0.01	
109) Chrysene-d12a	12.341	240	1753016	40.00	ppm	-0.01	
111) Naphthalene-d8a	5.715	136	2144377	40.00	ppm	0.00	
113) Phenanthrene-d10b	9.164	188	1872137	40.00	ppm	-0.01	
115) Chrysene-d12b	12.341	240	1753016	40.00	ppm	-0.01	
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							
102) Benzaldehyde	4.345	105	807051	46.34	ppm		Qvalue 96

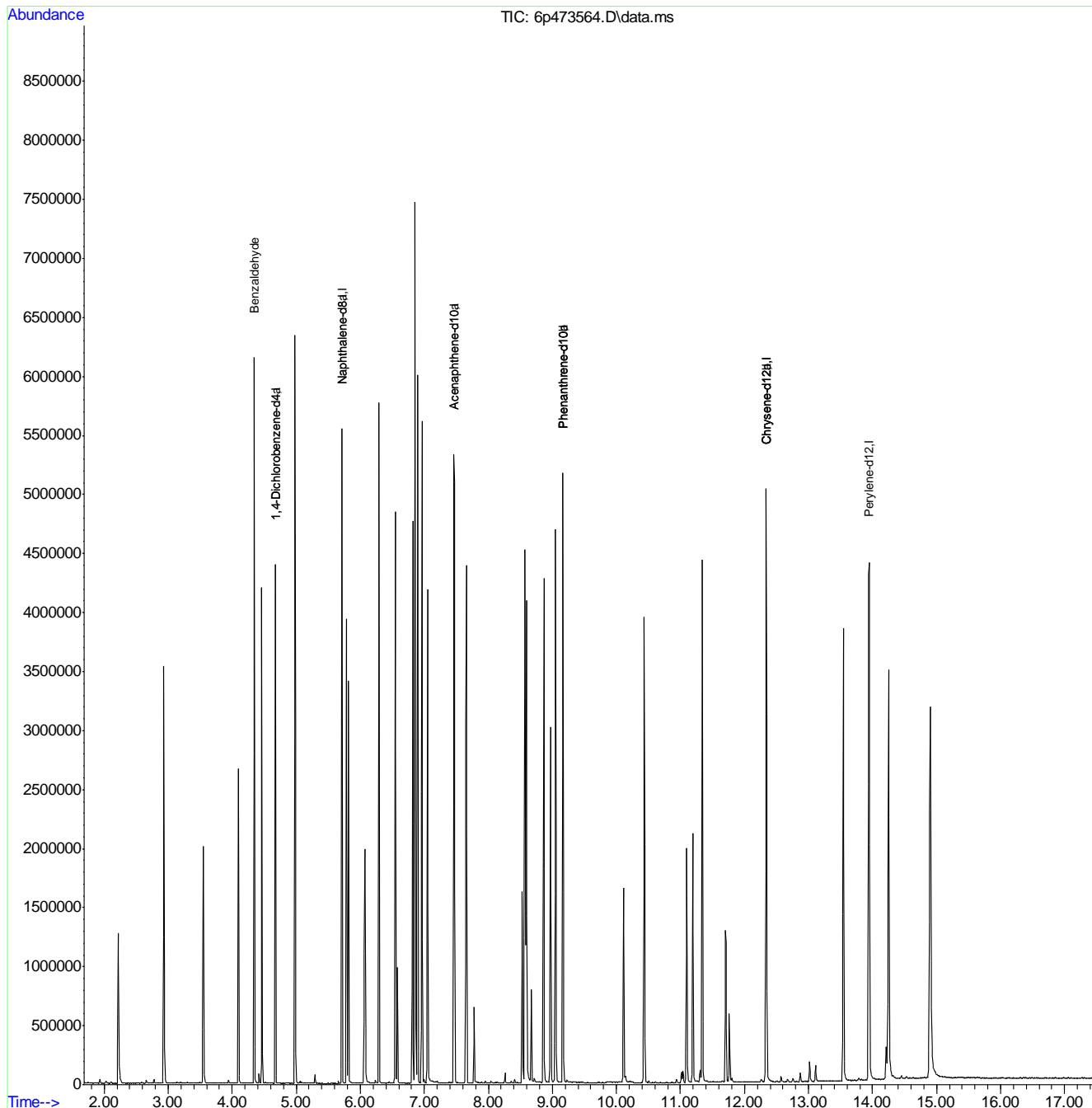
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.5.24
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2236\
 Data File : 6p473564.D
 Acq On : 7 Jun 2018 2:25 am
 Operator : chriss2
 Sample : icv2236-50
 Misc : op8717,e6p2236,1000,,,1,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 07 11:22:19 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration



9.5.24
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473589.D
 Acq On : 8 Jun 2018 12:19 am
 Operator : georges
 Sample : cc2235-25
 Misc : op8717,e6p2238,1000,,,1,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 08 12:05:54 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018

QLast Update : Thu Jun 07 11:19:34 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.672	152	706274	40.00	ppm	-0.02	
24) Naphthalene-d8	5.709	136	2857574	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.463	164	1627947	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.164	188	2725685	40.00	ppm	-0.02	
83) Chrysene-d12	12.347	240	2602442	40.00	ppm	-0.02	
91) Perylene-d12	13.946	264	2625522	40.00	ppm	-0.02	
101) 1,4-Dichlorobenzene-d4a	4.672	152	706274	40.00	ppm	-0.01	
103) Acenaphthene-d10a	7.463	164	1627947	40.00	ppm	-0.01	
105) Phenanthrene-d10a	9.164	188	2725685	40.00	ppm	-0.01	
109) Chrysene-d12a	12.347	240	2602442	40.00	ppm	0.00	
111) Naphthalene-d8a	5.709	136	2857574	40.00	ppm	-0.01	
113) Phenanthrene-d10b	9.164	188	2725685	40.00	ppm	-0.01	
115) Chrysene-d12b	12.347	240	2602420	40.00	ppm	0.00	
System Monitoring Compounds							
5) 2-Fluorophenol	3.682	112	650709	26.03	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	52.06%		
8) Phenol-d5	4.399	99	898628	26.16	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	52.32%		
25) Nitrobenzene-d5	5.099	82	836638	26.31	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	52.62%		
51) 2-Fluorobiphenyl	6.747	172	1431495	23.41	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	46.82%		
73) 2,4,6-Tribromophenol	8.351	330	170178	25.37	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	50.74%		
85) Terphenyl-d14	11.095	244	1441189	25.30	ppm	-0.02	
Spiked Amount	50.000		Recovery	=	50.60%		
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm		
107) o-terphenyl	0.000	230	0	0.00	ppm		
Target Compounds							
2) 1,4-Dioxane	2.216	88	333618	25.32	ppm		Qvalue 100
3) Pyridine	2.537	79	843176	25.45	ppm		97
4) N-Nitrosodimethylamine	2.505	74	510875	25.74	ppm		96
6) Indene	4.869	116	1118368	26.09	ppm		99
7) Cumene	4.078	105	1713132	25.48	ppm		99
9) Phenol	4.409	94	983599	25.96	ppm		99
10) Aniline	4.425	93	977788	23.20	ppm		99
11) bis(2-Chloroethyl)ether	4.474	93	685303	25.62	ppm		97
12) 2-Chlorophenol	4.516	128	707969	26.26	ppm		98
13) Decane	4.559	43	770458	25.64	ppm		99
14) 1,3-Dichlorobenzene	4.629	146	740224	25.52	ppm		100
15) 1,4-Dichlorobenzene	4.682	146	740193	24.99	ppm		97
16) Benzyl alcohol	4.778	108	491719	26.74	ppm		98
17) 1,2-Dichlorobenzene	4.805	146	696182	25.23	ppm		100
18) Acetophenone	4.982	105	940801	27.15	ppm		93
19) 2-Methylphenol	4.864	108	661411	26.72	ppm		96
20) 2,2'-oxybis(1-Chloropr...	4.880	121	212832	25.86	ppm		99
21) 3&4-Methylphenol	4.982	108	662501	26.67	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473589.D
 Acq On : 8 Jun 2018 12:19 am
 Operator : georges
 Sample : cc2235-25
 Misc : op8717,e6p2238,1000,,,1,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 08 12:05:54 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018

QLast Update : Thu Jun 07 11:19:34 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	4.982	70	518005	27.62	ppm	98
23) Hexachloroethane	5.067	201	210936	25.54	ppm	91
26) Nitrobenzene	5.115	77	811677	25.82	ppm	98
27) Quinoline	6.035	129	1437145	26.06	ppm	100
28) Isophorone	5.308	82	1431631	26.29	ppm	100
29) 2-Nitrophenol	5.378	139	384681	27.99	ppm	98
30) 2,4-Dimethylphenol	5.415	107	639712	26.10	ppm	97
31) Benzoic acid	5.506	105	634648	30.63	ppm	97
32) bis(2-Chloroethoxy)met...	5.490	93	787959	25.83	ppm	100
33) 2,4-Dichlorophenol	5.586	162	554290	26.35	ppm	96
34) 2,6-Dichlorophenol	5.784	162	531964	25.82	ppm	98
35) 1,3,5-Trichlorobenzene	5.394	180	561478	23.96	ppm	93
36) 1,2,4-Trichlorobenzene	5.661	180	534620	24.19	ppm	96
37) 1,2,3-Trichlorobenzene	5.859	180	541108	24.60	ppm	97
38) Naphthalene	5.731	128	1991566	25.00	ppm	100
39) 4-Chloroaniline	5.773	127	862291	25.19	ppm	99
40) 2,3-Dichloroaniline	6.656	161	669547	25.55	ppm	99
41) Caprolactam	6.089	55	396991	27.92	ppm	99
42) Hexachlorobutadiene	5.848	225	265229	24.14	ppm	98
43) 4-Chloro-3-methylphenol	6.228	107	657468	27.66	ppm	98
44) 2-Methylnaphthalene	6.372	141	1142581	26.01	ppm	97
45) 1-Methylnaphthalene	6.474	141	1218434	26.38	ppm	99
46) Dimethylnaphthalene	7.014	156	1238806	26.55	ppm	98
48) Hexachlorocyclopentadiene	6.538	237	585131	56.34	ppm	96
49) 2,4,6-Trichlorophenol	6.661	196	362089	24.60	ppm	98
50) 2,4,5-Trichlorophenol	6.699	196	400810	25.70	ppm	99
52) 2-Chloronaphthalene	6.864	162	1205377	23.80	ppm	98
53) Biphenyl	6.848	154	1692143	23.31	ppm	100
54) 2-Nitroaniline	6.971	65	467116	27.15	ppm	94
55) Dimethylphthalate	7.175	163	1356840	24.86	ppm	99
56) Acenaphthylene	7.308	152	2038189	24.50	ppm	99
57) 2,6-Dinitrotoluene	7.234	165	316732	27.43	ppm	98
58) 3-Nitroaniline	7.415	138	420170	27.89	ppm	98
59) Acenaphthene	7.501	153	1298765	23.89	ppm	98
60) 2,4-Dinitrophenol	7.528	184	334477	62.62	ppm	89
61) 4-Nitrophenol	7.608	109	222073	29.52	ppm	98
62) Dibenzofuran	7.688	168	1744202	23.56	ppm	97
63) 2,4-Dinitrotoluene	7.677	165	442940	26.47	ppm	95
64) 2,3,4,6-Tetrachlorophenol	7.833	232	330219	26.19	ppm	99
65) Diethylphthalate	7.966	149	1412863	25.92	ppm	97
66) Fluorene	8.079	166	1431727	24.30	ppm	100
67) 4-Chlorophenyl-phenyle...	8.084	204	591314	23.75	ppm	95
68) 4-Nitroaniline	8.105	138	426386	27.54	ppm	98
70) 4,6-Dinitro-2-methylph...	8.143	198	235326	29.61	ppm	99
71) n-Nitrosodiphenylamine	8.218	169	1073818	25.20	ppm	99
72) 1,2-Diphenylhydrazine	8.266	77	1664556	25.66	ppm	99
74) 4-Bromophenyl-phenylether	8.646	248	354820	24.18	ppm	89
75) Hexachlorobenzene	8.720	284	385573	24.27	ppm	97
76) Pentachlorophenol	8.950	266	544850	52.75	ppm	98
77) Phenanthrene	9.191	178	2008792	24.37	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473589.D
 Acq On : 8 Jun 2018 12:19 am
 Operator : georges
 Sample : cc2235-25
 Misc : op8717,e6p2238,1000,,,1,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 08 12:05:54 2018

Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M

Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018

QLast Update : Thu Jun 07 11:19:34 2018

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	9.250	178	2038925	25.07	ppm	100
79) Carbazole	9.448	167	2011396	25.76	ppm	99
80) Di-n-butylphthalate	9.908	149	2454101	27.27	ppm	99
81) Fluoranthene	10.608	202	2132551	25.96	ppm	98
82) Octadecane	9.095	57	1167232	26.74	ppm	99
84) Pyrene	10.881	202	2241906	24.98	ppm	98
86) Butylbenzylphthalate	11.710	149	1120377	28.26	ppm	94
87) Benzo[a]anthracene	12.331	228	1996373	24.87	ppm	99
88) 3,3'-Dichlorobenzidine	12.320	252	741449	26.75	ppm	97
89) Chrysene	12.374	228	1961368	24.92	ppm	100
90) bis(2-Ethylhexyl)phtha...	12.427	149	1511697	27.76	ppm	99
92) Di-n-octylphthalate	13.171	149	2608349	28.89	ppm	99
93) Benzo[b]fluoranthene	13.545	252	2038497	24.85	ppm	98
94) Benzo[k]fluoranthene	13.577	252	1973909	26.64	ppm	98
95) Benzo[a]pyrene	13.882	252	1802527	25.82	ppm	99
96) Indeno[1,2,3-cd]pyrene	15.107	276	2184252	25.31	ppm	97
97) Dibenz(a,h)acridine	14.834	279	1606146	25.41	ppm	100
98) Dibenz[a,h]anthracene	15.128	278	1876921	25.29	ppm	99
99) 7,12-Dimethylbenz(a)an...	13.545	256	854808	26.36	ppm	97
100) Benzo[g,h,i]perylene	15.433	276	1728910	25.27	ppm	100

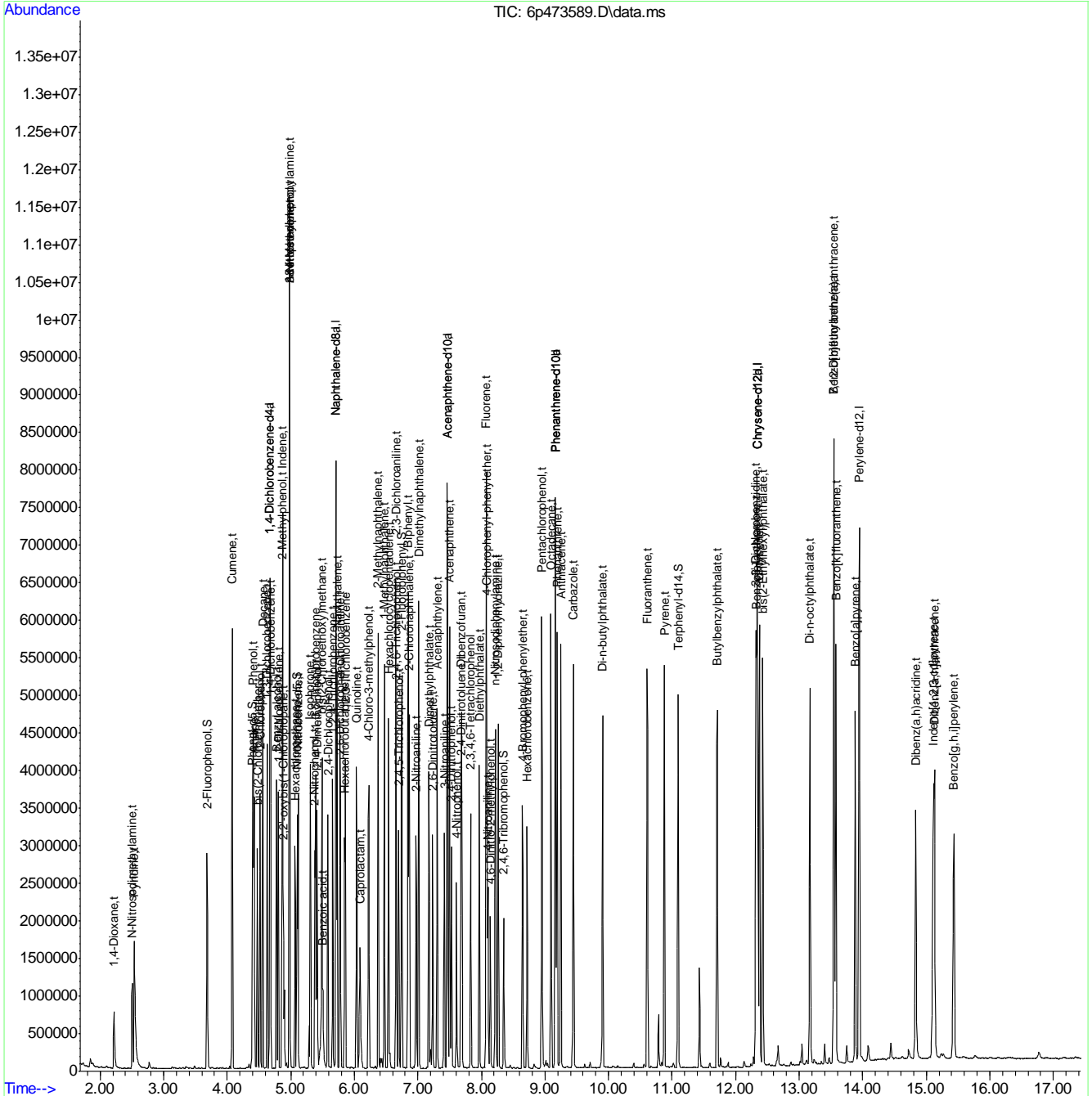
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.5.25
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473589.D
 Acq On : 8 Jun 2018 12:19 am
 Operator : georges
 Sample : cc2235-25
 Misc : op8717,e6p2238,1000,,,1,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 08 12:05:54 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration



9.5.25
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473590.D
 Acq On : 8 Jun 2018 12:44 am
 Operator : georges
 Sample : cc2236-25
 Misc : op8717,e6p2238,1000,,,1,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 08 17:59:44 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.671	152	728775	40.00	ppm	-0.02	
24) Naphthalene-d8	5.709	136	2768787	40.00	ppm	-0.02	
47) Acenaphthene-d10	7.463	164	1507320	40.00	ppm	-0.02	
69) Phenanthrene-d10	9.164	188	2774732	40.00	ppm	-0.02	
83) Chrysene-d12	12.341	240	2731115	40.00	ppm	-0.03	
91) Perylene-d12	13.941	264	2661406	40.00	ppm	-0.03	
101) 1,4-Dichlorobenzene-d4a	4.671	152	728775	40.00	ppm	-0.01	
103) Acenaphthene-d10a	7.463	164	1507320	40.00	ppm	-0.01	
105) Phenanthrene-d10a	9.164	188	2774732	40.00	ppm	-0.01	
109) Chrysene-d12a	12.341	240	2731115	40.00	ppm	-0.01	
111) Naphthalene-d8a	5.709	136	2768787	40.00	ppm	-0.01	
113) Phenanthrene-d10b	9.164	188	2774732	40.00	ppm	-0.01	
115) Chrysene-d12b	12.341	240	2731115	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	0	0.00	ppm		
Spiked Amount	50.000		Recovery	=	0.00%		
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm		
Spiked Amount	50.000		Recovery	=	0.00%		
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm		
Spiked Amount	50.000		Recovery	=	0.00%		
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm		
Spiked Amount	50.000		Recovery	=	0.00%		
85) Terphenyl-d14	0.000	244	0	0.00	ppm		
Spiked Amount	50.000		Recovery	=	0.00%		
106) 1-chlorooctadecane	10.534	57	750675	29.12	ppm	-0.01	
107) o-terphenyl	9.640	230	933920	23.83	ppm	-0.02	
Target Compounds							
102) Benzaldehyde	4.340	105	493349	21.40	ppm		98
104) 1,2,4,5-Tetrachloroben...	6.543	216	479618	21.85	ppm		98
108) Atrazine	8.859	215	192805	26.03	ppm		86
110) benzidine	10.790	184	1147967	18.48	ppm		99
112) Hydroquinone	6.067	110	732979	33.71	ppm		100
114) Pentachloronitrobenzene	8.972	295	63814	25.02	ppm		99

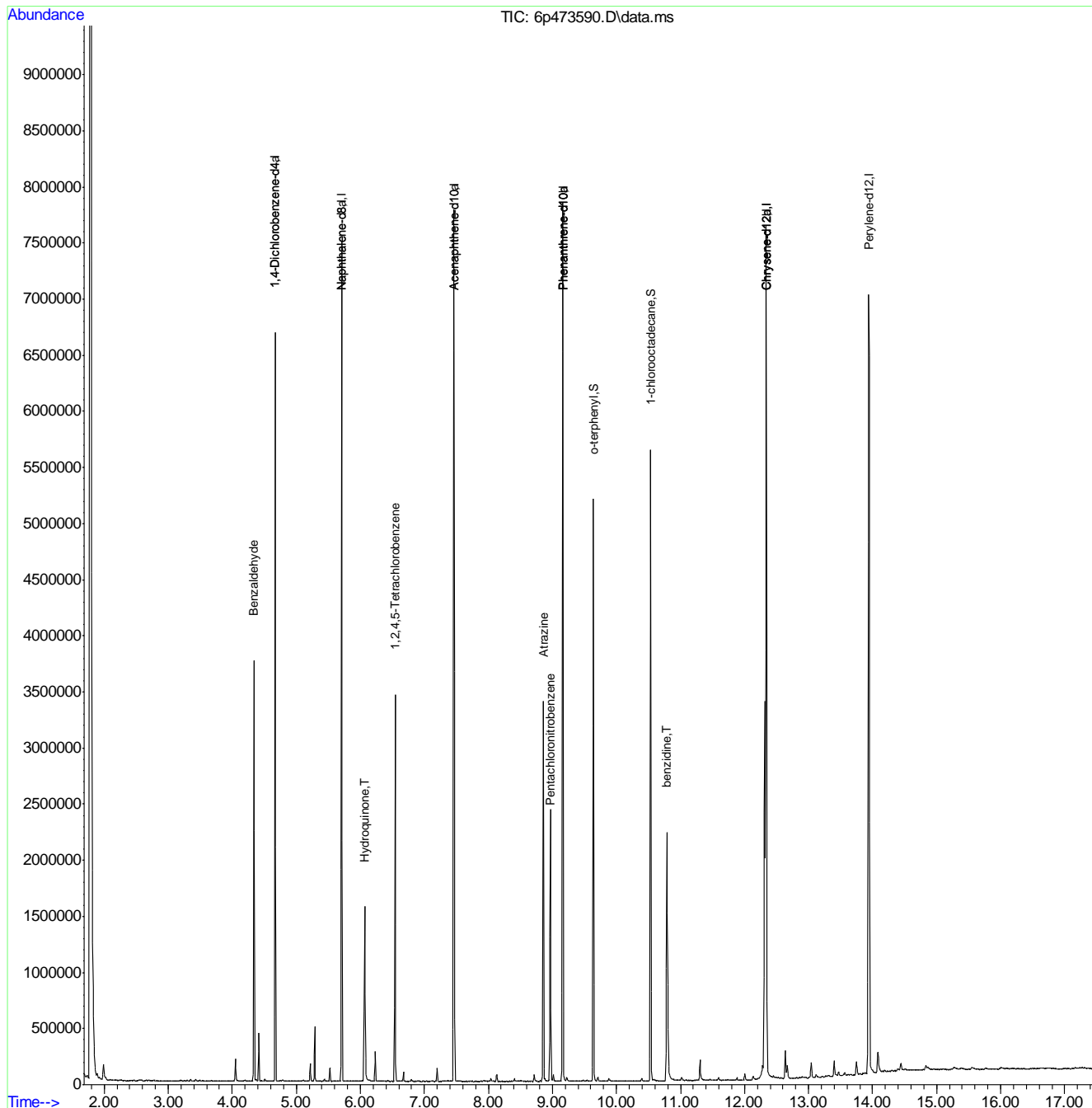
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.5.26
9

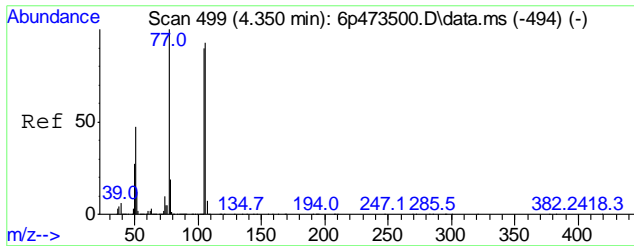
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E6P2238\
 Data File : 6p473590.D
 Acq On : 8 Jun 2018 12:44 am
 Operator : georges
 Sample : cc2236-25
 Misc : op8717,e6p2238,1000,,,1,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 08 17:59:44 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M6P2235.M
 Quant Title : Semi Volatile GC/MS,zb-5msi 30m x .25mm x .25MoTuThu Jun 07 11:19:34 2018
 QLast Update : Thu Jun 07 11:19:34 2018
 Response via : Initial Calibration

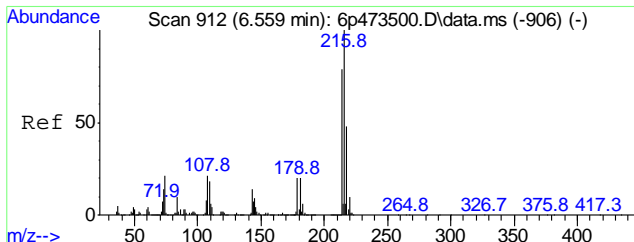
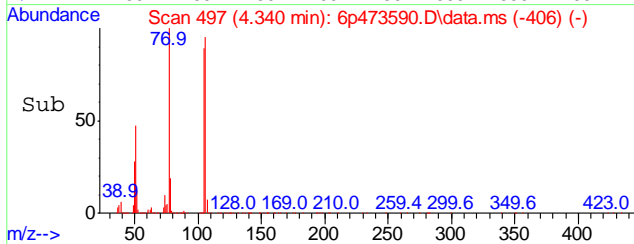
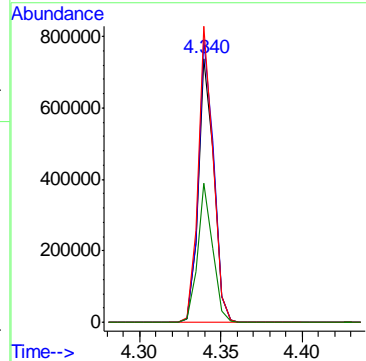
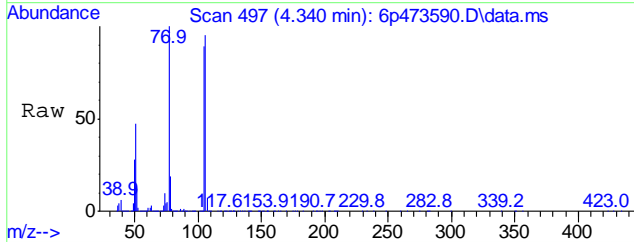


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9



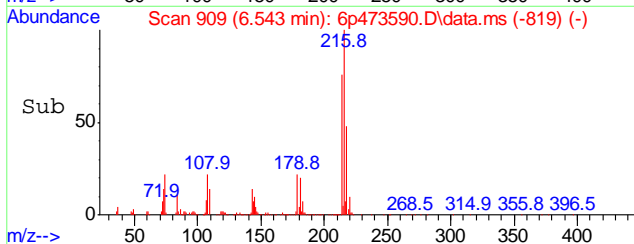
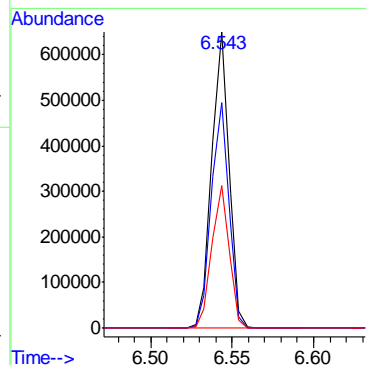
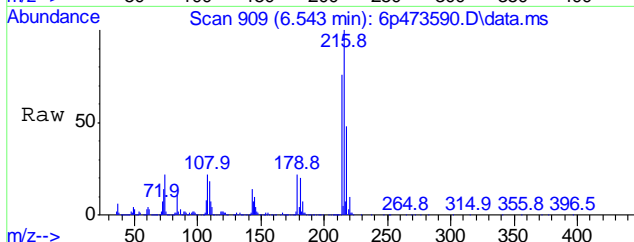
#102
 Benzaldehyde
 Concen: 21.40 ppm
 RT: 4.340 min Scan# 497
 Delta R.T. -0.011 min
 Lab File: 6p473590.D
 Acq: 8 Jun 2018 12:44 am

Tgt Ion	Resp	Lower	Upper
105	493349		
105	100		
106	107.2	73.7	133.7
77	112.3	81.4	141.4
51	52.9	22.7	82.7

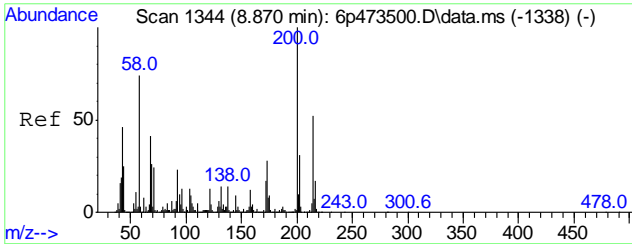


#104
 1,2,4,5-Tetrachlorobenzene
 Concen: 21.85 ppm
 RT: 6.543 min Scan# 909
 Delta R.T. -0.016 min
 Lab File: 6p473590.D
 Acq: 8 Jun 2018 12:44 am

Tgt Ion	Resp	Lower	Upper
216	479618		
216	100		
214	76.3	48.8	108.8
218	48.3	18.2	78.2

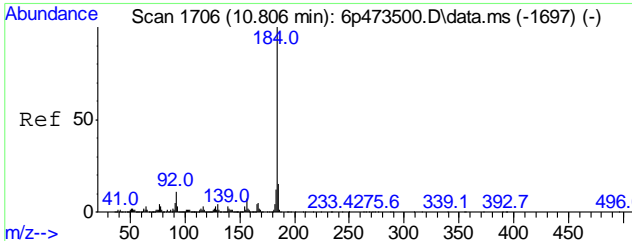
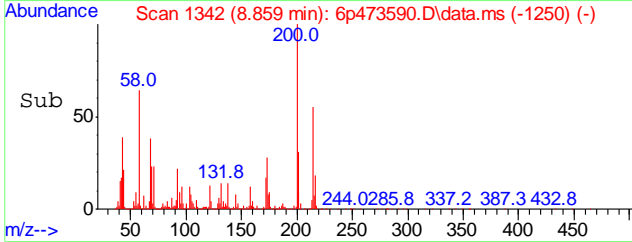
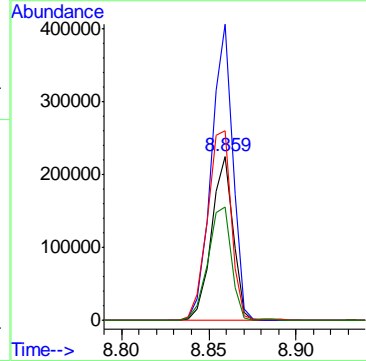
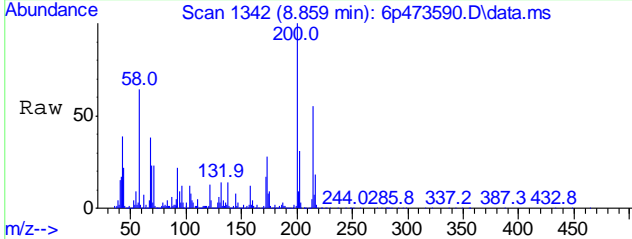


9.5.26
9



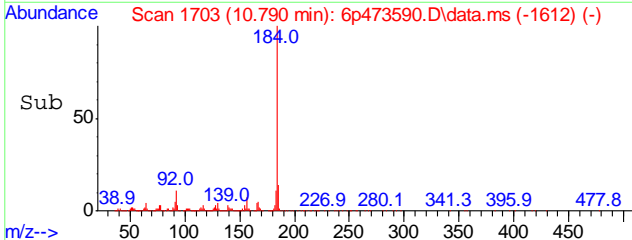
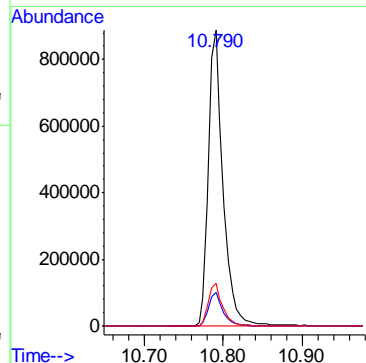
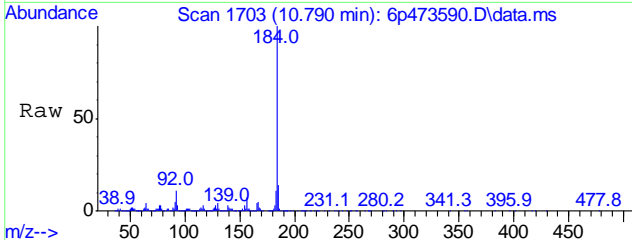
#108
 Atrazine
 Concen: 26.03 ppm
 RT: 8.859 min Scan# 1342
 Delta R.T. -0.011 min
 Lab File: 6p473590.D
 Acq: 8 Jun 2018 12:44 am

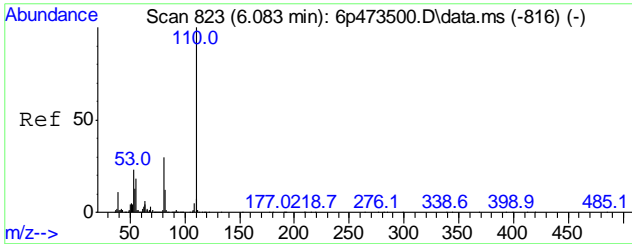
Tgt Ion	Ratio	Lower	Upper
215	100		
200	180.6	163.2	223.2
58	115.3	112.7	172.7
68	68.9	50.1	110.1



#110
 benzidine
 Concen: 18.48 ppm
 RT: 10.790 min Scan# 1703
 Delta R.T. -0.016 min
 Lab File: 6p473590.D
 Acq: 8 Jun 2018 12:44 am

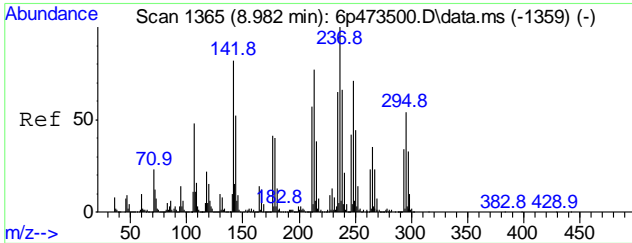
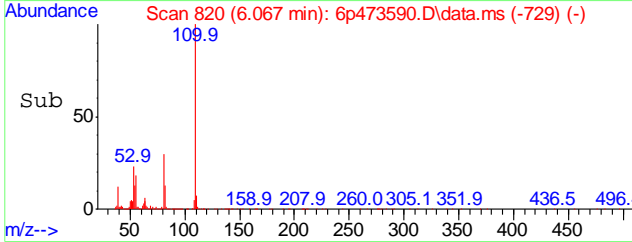
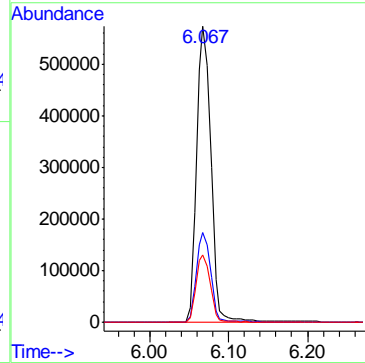
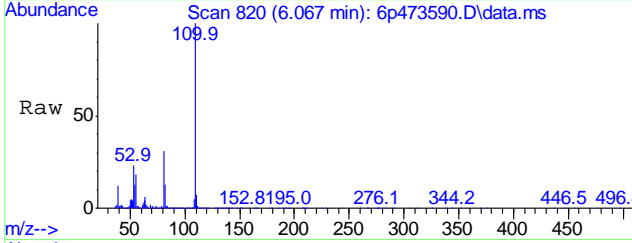
Tgt Ion	Ratio	Lower	Upper
184	100		
183	11.4	0.0	41.8
185	14.5	0.0	44.9





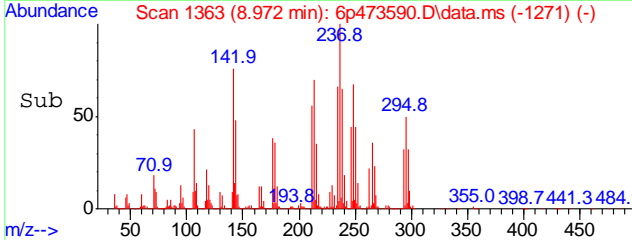
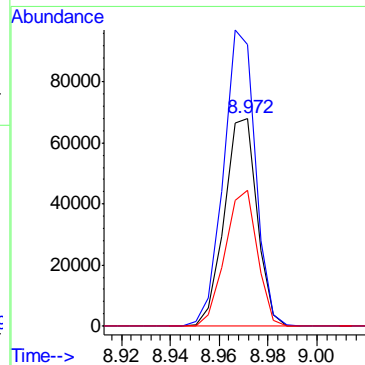
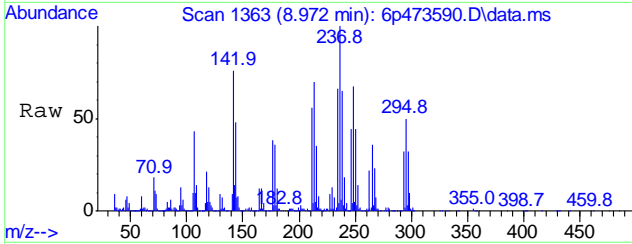
#112
 Hydroquinone
 Concen: 33.71 ppm
 RT: 6.067 min Scan# 820
 Delta R.T. -0.016 min
 Lab File: 6p473590.D
 Acq: 8 Jun 2018 12:44 am

Tgt Ion	Ratio	Lower	Upper
110	100		
81	30.5	0.2	60.2
53	22.7	0.0	52.8



#114
 Pentachloronitrobenzene
 Concen: 25.02 ppm
 RT: 8.972 min Scan# 1363
 Delta R.T. -0.010 min
 Lab File: 6p473590.D
 Acq: 8 Jun 2018 12:44 am

Tgt Ion	Ratio	Lower	Upper
295	100		
249	139.3	110.8	166.2
297	64.4	50.2	75.2



GCMS Semi Volatile Run Log

Instrument ID: GCMS6P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
dfpp	sv172359-61	50ppm	DCM	Fisher-182955	---
			ISTD	A0136190	4000ppm

Column: Initial Calib Date: Sequence Loaded By: Quant Method/s: SW846 8270 D
 EPA 625
 Batch ID: Analysis Date: Data Processed By: Injection Volume:
 Approved By: Approved Date:

Data File	Sample ID	OP Batch ID	Test	MTX	A L S	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
6P 473538	DFTPP				1					OK	12:33am
6P 473539	IC2235-100		bnr		2					OK	sv182451-1a
6P 473540	IC2235-80				3					OK	sv182451-1b
6P 473541	ICC2235-50				4					OK	sv182451-1c
6P 473542	IC2235-25				5					OK	sv182451-1d
6P 473543	IC2235-10				6					OK	sv182451-1e
6P 473544	IC2235-5				7					OK	sv182451-26a
6P 473545	IC2235-2				8					OK	sv182451-1h
6P 473546	IC2235-1				9					OK	sv182451-1i
6P 473547	ICV2235-50		abn surr		10					OK	op182158-123

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 473548	ICV2235-50		625.1		11					OK	sv182451-33p
6P 473549	ICV2235-50		bn2		12					OK	op182158-78
6P 473550	ICV2235-50		Acids		13					OK	op182158-79; 5:56pm

GCMS Semi Volatile Run Log

Instrument ID: GCMS6P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
df1pp	sv172359-61	50ppm	DCM	Fisher-182955	---
			ISTD	A0136190	4000ppm

Column: Initial Calib Date: Sequence Loaded By: Quant Method/s: SW846 8270 D
 Batch ID: Analysis Date: Data Processed By: Injection Volume: EPA 625
 Approved By: Approved Date:

Data File	Sample ID	OP Batch ID	Test	MTX	A L S	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
6P 473551	DFTPP				1					NO	dirty spectra, rerun
6P 473552	DFTPP				1					OK	9.05pm
6P 473553	IC2236-100		TCL42		2					OK	sv182451-31a
6P 473554	IC2236-80				3					OK	sv182451-31b
6P 473555	ICC2236-50				4					OK	sv182451-31c
6P 473556	IC2236-25				5					OK	sv182451-31d
6P 473557	IC2236-10				6					OK	sv182451-31e
6P 473558	IC2236-5				7					OK	sv182451-31g
6P 473559	IC2236-2				8					OK	sv182451-31h
6P 473560	IC2236-1				9					OK	sv182451-31i

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 473561	ICV2236-50		625.1		10					OK	sv182451-33c
6P 473562	ICV2236-50		bzd 3rd		11					OK	sv172359-37
6P 473563	ICV2236-50		HQ 2nd		12					OK	op182158-42
6P 473564	ICV2236-50		AP9 Mix #2		13					OK	sv172359-102; 2.25am

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
dfpp	sv172359-61	50ppm	DCM	Fisher-182955	---
bona	sv182451-1O	25ppm	ISTD	A0136190	4000ppm
tcl42	sv182451-3R	25ppm			

Column: i5silms30mx.25mmx.25 Initial Calib Date: 6/4/18 Sequence Loaded By: Georges Quant Method/s: SW846 8270 D
 Batch ID: E6P2238 Analysis Date: 6/7/2018 Data Processed By: ying li Injection Volume: 1.0ul
 Approved By: NINAP Approved Date: 3/20/18 10:18:26

Data File	Sample ID	OP Batch ID	Test	MTX	A L S	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
6P 473588	DFTPP				1					ok	12:04am
6P 473589	CC2235-25		BNA		2					ok	
6P 473590	CC2236-25		TCL42		3					ok	
6P 473591	OP12596-MB1	OP12596	AB8270NJTCL20+.BMS+MNAP	AQ	4		X	Y	Y	ok	
6P 473592	OP12596-BS1	OP12596	AB8270NJTCL20+.BMS+MNAP	AQ	5		X	Y	Y	ok	
6P 473593	OP12596-BSD	OP12596	AB8270NJTCL20+.BMS+MNAP	AQ	6		X	Y	Y	ok	
6P 473594	OP12443-MB1	OP12443	AB8270TCL20-14DX.B8270NJTCL20+	AQ	7		X	Y	Y	ok	
6P 473595	OP12443-BS1	OP12443	AB8270TCL20-14DX.B8270NJTCL20+	AQ	8		X	Y	Y	ok	
6P 473596	OP12443-BSD	OP12443	AB8270TCL20-14DX.B8270NJTCL20+	AQ	9		X	Y	Y	ok	
6P 473597	JC67002-3	OP12443	B8270NJTCL20+	AQ	10		X	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 473598	JC67002-4	OP12443	B8270NJTCL20+	AQ	11		X	y	y	ok	
6P 473599	JC67002-5	OP12443	B8270NJTCL20+	AQ	12		X	y	y	ok	
6P 473600	JC67002-6	OP12443	B8270NJTCL20+	AQ	13		X	y	y	ok	
6P 473601	JC67003-1	OP12443	AB8270TCL20-14DX	AQ	14			y	y	ok	
6P 473602	JC67003-2	OP12443	AB8270TCL20-14DX	AQ	15			y	y	ok	
6P 473603	JC67003-3	OP12443	AB8270TCL20-14DX	AQ	16			y	y	ok	
6P 473604	JC67003-7	OP12443	AB8270TCL20-14DX	AQ	17			y	y	ok	
6P 473605	JC67069-10	OP12596	AB8270NJTCL20+.BMS+MNAP	AQ	18		X	y	y	n	RE not spike acid sur
6P 473606	JC67069-11	OP12596	AB8270NJTCL20+.BMS+MNAP	AQ	19		X	n	y	n	RE not spike acid sur
6P 473607	JC67367-2	OP12596	B8270NJTCL20+	AQ	20		X	n	y	ok	
6P 473608	JC67367-4	OP12596	B8270NJTCL20+	AQ	21		X	y	y	ok	
6P 473609	JC67367-5	OP12596	B8270NJTCL20+	AQ	22		X	y	y	ok	
6P 473610	JC67367-6	OP12596	B8270NJTCL20+	AQ	23		X	y	y	ok	
6P 473611	JC67367-7	OP12596	B8270NJTCL20+	AQ	24		X	y	y	ok	
6P 473612	JC67367-9	OP12596	B8270NJTCL20+	AQ	25		X	y	y	ok	
6P 473613	JC67367-8	OP12596	B8270NJTCL20+	AQ	26		X	y	y	ok	
6P 473614	JC67002-1	OP12443	B8270NJTCL20+	AQ	27		X	y	n	ok/r	corr rr 2x int out
6P 473615	JC67002-2	OP12443	B8270NJTCL20+	AQ	28		X	y	y	n	corr rr 1x tic c/o
6P 473616	JC67219-1	OP12596	AB8270NJTCL20+	AQ	29	5	X	n	n	ok/r	corr rr 10x int/sur out 1:25am

2-22-05

LOGBOOK ID:

Date Started: 6-1-18
Date Finished: 6-1-18
Time Started: 16:00
Time Finished: 17:35

ABN Aqueous Extraction Logbook

Extract Method (CHECK OFF ✓ / DO NOT CIRCLE):
 Separatory Funnel: SW846 5516C/CLP/Phos. 3510C SIM ✓
 Continuous Liquid Liquid: SW846 3520C/CLP/Phos.

BATCH # **MS 12443** RACK# **V05**

Setup by: **RC**
 Extracted by: **RC**
 Concentrated by: **RC, SA**
 Final Vol. Top-up: **RC**
 Viald by: **RC**

Supervisor Review: **RC** 6/1/18

Equipment Range	ID	Observed Temp (°C)	Correction Factor (°C)	Corrected Temp (°C)	Pressure/Fluoride
Buich (65-71°C)					
Buich Chiller					
Waterbath (70-80°C)	36	71.74	+4.1	75.25	
Waterbath Chiller (60M)	F3	-2	-	-	
NEVAP (22-24°C, LPM)	4	35.0	0	35	10

Subrogate: **182158134** CONC (ppm) **50** AMT (mL) **1.0**

ABN: **182158102** CONC (ppm) **50** AMT (mL) **1.0**

ABN DOD SIM: **182158116** CONC (ppm) **50** AMT (mL) **1.0**

WITNESS SIGN: **RF**

MATRIX SPIKE: **182158128** CONC (ppm) **50** AMT (mL) **1.0**

Acid: **182158115** CONC (ppm) **50** AMT (mL) **1.0**

Acid (for SIM): **182158138** CONC (ppm) **50** AMT (mL) **1.0**

Base #1: **182158115** CONC (ppm) **50** AMT (mL) **1.0**

Base #2: **182158138** CONC (ppm) **50** AMT (mL) **1.0**

Antibios: **182158138** CONC (ppm) **50** AMT (mL) **1.0**

BSIM: **182158138** CONC (ppm) **50** AMT (mL) **1.0**

WITNESS SIGN: **AF**

SOLVENT: **182158138** BRAND **Fisher** AMT (mL) **6000**

METH CHLOR: **182158138** BRAND **Fisher** AMT (mL) **6000**

REAGENT: **182158138** BRAND **Fisher** AMT (mL) **6000**

NaOH: **182158138** BRAND **Fisher** AMT (mL) **6000**

PERO4: **182158138** BRAND **Fisher** AMT (mL) **6000**

Sodium Sulfate: **182158138** BRAND **Fisher** AMT (mL) **6000**

Glass Wool: **182158138** BRAND **Fisher** AMT (mL) **6000**

Filter Paper: **182158138** BRAND **Fisher** AMT (mL) **6000**

Ball caps: **182158138** BRAND **Fisher** AMT (mL) **6000**

Sample #	Analysis Type	Sample Bottle #	Sample Description	Sample Volume (mL)	pH Adjusted	Final Extract	Misc.	Comments
MSD	MSD	1	1.42110w	1050	1	1.42110w		
MSD	MSD	2	1.42110w	1050	1	1.42110w		
MSD	MSD	3	1.42110w	1050	1	1.42110w		
MSD	MSD	4	1.42110w	1050	1	1.42110w		
MSD	MSD	5	1.42110w	1050	1	1.42110w		
MSD	MSD	6	1.42110w	1050	1	1.42110w		
MSD	MSD	7	1.42110w	1050	1	1.42110w		
MSD	MSD	8	1.42110w	1050	1	1.42110w		
MSD	MSD	9	1.42110w	1050	1	1.42110w		
MSD	MSD	10	1.42110w	1050	1	1.42110w		
MSD	MSD	11	1.42110w	1050	1	1.42110w		
MSD	MSD	12	1.42110w	1050	1	1.42110w		
MSD	MSD	13	1.42110w	1050	1	1.42110w		
MSD	MSD	14	1.42110w	1050	1	1.42110w		
MSD	MSD	15	1.42110w	1050	1	1.42110w		
MSD	MSD	16	1.42110w	1050	1	1.42110w		
MSD	MSD	17	1.42110w	1050	1	1.42110w		
MSD	MSD	18	1.42110w	1050	1	1.42110w		
MSD	MSD	19	1.42110w	1050	1	1.42110w		
MSD	MSD	20	1.42110w	1050	1	1.42110w		

Special Client Spike Instructions

QC ID# for Special Spikes	Amt to Spike	Lot #	Conc.	Amt. Spiked

WITNESS SIGN: _____
 Manager/Supervisor/Team Lead Approval: _____

SPECIAL PROCESSING INSTRUCTIONS

Rx Reason: _____

Spiking: _____

Weights/Volumes: _____

Required MS/MSD: _____

Final Volume: _____

Other: _____

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SGS Form: OP022A-12

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: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12449-MB1	6G56980.D	1	06/06/18	RK	06/01/18	OP12449	G6G1701

The QC reported here applies to the following samples:

Method: SW846 8081B

JC67003-1, JC67003-2, JC67003-3, JC67003-7

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.0067	0.0034	ug/l	
319-84-6	alpha-BHC	ND	0.0067	0.0035	ug/l	
319-85-7	beta-BHC	ND	0.0067	0.0053	ug/l	
319-86-8	delta-BHC	ND	0.0067	0.0044	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.0067	0.0040	ug/l	
5103-71-9	alpha-Chlordane	ND	0.0067	0.0033	ug/l	
5103-74-2	gamma-Chlordane	ND	0.0067	0.0028	ug/l	
60-57-1	Dieldrin	ND	0.0067	0.0051	ug/l	
72-54-8	4,4'-DDD	ND	0.0067	0.0038	ug/l	
72-55-9	4,4'-DDE	ND	0.0067	0.0034	ug/l	
50-29-3	4,4'-DDT	ND	0.0067	0.0046	ug/l	
72-20-8	Endrin	ND	0.0067	0.0040	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.0067	0.0036	ug/l	
7421-93-4	Endrin aldehyde	ND	0.0067	0.0045	ug/l	
53494-70-5	Endrin ketone	ND	0.0067	0.0041	ug/l	
959-98-8	Endosulfan-I	ND	0.0067	0.0035	ug/l	
33213-65-9	Endosulfan-II	ND	0.0067	0.0033	ug/l	
76-44-8	Heptachlor	ND	0.0067	0.0030	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.0067	0.0040	ug/l	
72-43-5	Methoxychlor	ND	0.013	0.0045	ug/l	
8001-35-2	Toxaphene	ND	0.17	0.11	ug/l	

CAS No.	Surrogate Recoveries	Limits	
877-09-8	Tetrachloro-m-xylene	71%	13-153%
877-09-8	Tetrachloro-m-xylene	80%	13-153%
2051-24-3	Decachlorobiphenyl	46%	10-138%
2051-24-3	Decachlorobiphenyl	48%	10-138%

Method Blank Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12449-MB1	8G15849.D	1	06/12/18	DS	06/01/18	OP12449	G8G513

The QC reported here applies to the following samples:

Method: SW846 8081B

JC67003-1, JC67003-2, JC67003-3, JC67003-7

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.0067	0.0034	ug/l	
319-84-6	alpha-BHC	ND	0.0067	0.0035	ug/l	
319-85-7	beta-BHC	ND	0.0067	0.0053	ug/l	
319-86-8	delta-BHC	ND	0.0067	0.0044	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.0067	0.0040	ug/l	
5103-71-9	alpha-Chlordane	ND	0.0067	0.0033	ug/l	
5103-74-2	gamma-Chlordane	ND	0.0067	0.0028	ug/l	
60-57-1	Dieldrin	ND	0.0067	0.0051	ug/l	
72-54-8	4,4'-DDD	ND	0.0067	0.0038	ug/l	
72-55-9	4,4'-DDE	ND	0.0067	0.0034	ug/l	
50-29-3	4,4'-DDT	ND	0.0067	0.0046	ug/l	
72-20-8	Endrin	ND	0.0067	0.0040	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.0067	0.0036	ug/l	
7421-93-4	Endrin aldehyde	ND	0.0067	0.0045	ug/l	
53494-70-5	Endrin ketone	ND	0.0067	0.0041	ug/l	
959-98-8	Endosulfan-I	ND	0.0067	0.0035	ug/l	
33213-65-9	Endosulfan-II	ND	0.0067	0.0033	ug/l	
76-44-8	Heptachlor	ND	0.0067	0.0030	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.0067	0.0040	ug/l	
72-43-5	Methoxychlor	ND	0.013	0.0045	ug/l	
8001-35-2	Toxaphene	ND	0.17	0.11	ug/l	

CAS No.	Surrogate Recoveries	Limits	
877-09-8	Tetrachloro-m-xylene	76%	13-153%
877-09-8	Tetrachloro-m-xylene	87%	13-153%
2051-24-3	Decachlorobiphenyl	50%	10-138%
2051-24-3	Decachlorobiphenyl	56%	10-138%

Method Blank Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12448-MB1	XX229849.D	1	06/03/18	EAL	06/01/18	OP12448	GXX6375

The QC reported here applies to the following samples:

Method: SW846 8082A

JC67003-1, JC67003-2, JC67003-3, JC67003-7

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.33	0.13	ug/l	
11104-28-2	Aroclor 1221	ND	0.33	0.28	ug/l	
11141-16-5	Aroclor 1232	ND	0.33	0.17	ug/l	
53469-21-9	Aroclor 1242	ND	0.33	0.15	ug/l	
12672-29-6	Aroclor 1248	ND	0.33	0.084	ug/l	
11097-69-1	Aroclor 1254	ND	0.33	0.28	ug/l	
11096-82-5	Aroclor 1260	ND	0.33	0.10	ug/l	
11100-14-4	Aroclor 1268	ND	0.33	0.12	ug/l	
37324-23-5	Aroclor 1262	ND	0.33	0.13	ug/l	

CAS No.	Surrogate Recoveries	Limits	
877-09-8	Tetrachloro-m-xylene	73%	11-166%
877-09-8	Tetrachloro-m-xylene	77%	11-166%
2051-24-3	Decachlorobiphenyl	55%	10-150%
2051-24-3	Decachlorobiphenyl	55%	10-150%

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12449-BS1	6G56981.D	1	06/06/18	RK	06/01/18	OP12449	G6G1701
OP12449-BSD	6G56982.D	1	06/06/18	RK	06/01/18	OP12449	G6G1701

The QC reported here applies to the following samples:

Method: SW846 8081B

JC67003-1, JC67003-2, JC67003-3, JC67003-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	0.167	0.12	72	0.14	84	15	13-135/52
319-84-6	alpha-BHC	0.167	0.13	78	0.15	90	14	36-139/42
319-85-7	beta-BHC	0.167	0.13	78	0.14	84	7	44-136/40
319-86-8	delta-BHC	0.167	0.086	52	0.096	58	11	40-139/45
58-89-9	gamma-BHC (Lindane)	0.167	0.13	78	0.15	90	14	43-136/45
5103-71-9	alpha-Chlordane	0.167	0.13	78	0.15	90	14	32-140/46
5103-74-2	gamma-Chlordane	0.167	0.12	72	0.14	84	15	28-143/47
60-57-1	Dieldrin	0.167	0.13	78	0.15	90	14	39-142/41
72-54-8	4,4'-DDD	0.167	0.13	78	0.15	90	14	36-142/39
72-55-9	4,4'-DDE	0.167	0.13	78	0.14	84	7	27-140/43
50-29-3	4,4'-DDT	0.167	0.13	78	0.14	84	7	30-144/39
72-20-8	Endrin	0.167	0.14	84	0.16	96	13	44-151/49
1031-07-8	Endosulfan sulfate	0.167	0.12	72	0.13	78	8	41-144/39
7421-93-4	Endrin aldehyde	0.167	0.13	78	0.15	90	7	42-144/42
53494-70-5	Endrin ketone	0.167	0.12	72	0.13	78	8	41-149/42
959-98-8	Endosulfan-I	0.167	0.13	78	0.14	84	7	40-136/45
33213-65-9	Endosulfan-II	0.167	0.15	90	0.17	102	13	42-140/42
76-44-8	Heptachlor	0.167	0.13	78	0.14	84	7	11-140/52
1024-57-3	Heptachlor epoxide	0.167	0.12	72	0.14	84	15	41-138/38
72-43-5	Methoxychlor	0.167	0.12	72	0.14	84	15	31-149/42

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	62%	69%	13-153%
877-09-8	Tetrachloro-m-xylene	65%	74%	13-153%
2051-24-3	Decachlorobiphenyl	41%	40%	10-138%
2051-24-3	Decachlorobiphenyl	42%	43%	10-138%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12448-BS1	XX229850.D	1	06/03/18	EAL	06/01/18	OP12448	GXX6375
OP12448-BSD	XX229851.D	1	06/03/18	EAL	06/01/18	OP12448	GXX6375

The QC reported here applies to the following samples:

Method: SW846 8082A

JC67003-1, JC67003-2, JC67003-3, JC67003-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	1.33	1.3	97	1.2	90	8	37-164/43
11104-28-2	Aroclor 1221		ND		ND		nc	70-130/20
11141-16-5	Aroclor 1232		ND		ND		nc	70-130/20
53469-21-9	Aroclor 1242		ND		ND		nc	70-130/20
12672-29-6	Aroclor 1248		ND		ND		nc	70-130/20
11097-69-1	Aroclor 1254		ND		ND		nc	70-130/20
11096-82-5	Aroclor 1260	1.33	1.2	90	1.2	90	0	36-155/46
11100-14-4	Aroclor 1268		ND		ND		nc	-/20
37324-23-5	Aroclor 1262		ND		ND		nc	-/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	86%	81%	11-166%
877-09-8	Tetrachloro-m-xylene	90%	87%	11-166%
2051-24-3	Decachlorobiphenyl	56%	52%	10-150%
2051-24-3	Decachlorobiphenyl	57%	53%	10-150%

* = Outside of Control Limits.

10.2.2 10

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: JC67003

Account: BBLNYS Arcadis

Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12449-MS	6G56990.D	1	06/06/18	RK	06/01/18	OP12449	G6G1701
OP12449-MSD	6G56991.D	1	06/06/18	RK	06/01/18	OP12449	G6G1701
JC67110-4	6G56989.D	1	06/06/18	RK	06/01/18	OP12449	G6G1701

The QC reported here applies to the following samples:

Method: SW846 8081B

JC67003-1, JC67003-2, JC67003-3, JC67003-7

CAS No.	Compound	JC67110-4 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	ND	0.167	0.11	66	0.167	0.13	78	17	10-157/46
319-84-6	alpha-BHC	ND	0.167	0.12	72	0.167	0.14	84	15	33-154/45
319-85-7	beta-BHC	ND	0.167	0.13	78	0.167	0.14	84	7	36-154/45
319-86-8	delta-BHC	ND	0.167	0.088	53	0.167	0.096	58	9	29-165/50
58-89-9	gamma-BHC (Lindane)	ND	0.167	0.13	78	0.167	0.14	84	7	33-154/43
5103-71-9	alpha-Chlordane	ND	0.167	0.13	78	0.167	0.14	84	7	26-158/44
5103-74-2	gamma-Chlordane	ND	0.167	0.12	72	0.167	0.14	84	15	20-163/44
60-57-1	Dieldrin	ND	0.167	0.13	78	0.167	0.14	84	7	24-165/44
72-54-8	4,4'-DDD	ND	0.167	0.12	72	0.167	0.14	84	15	27-157/45
72-55-9	4,4'-DDE	ND	0.167	0.11	66	0.167	0.13	78	17	13-164/43
50-29-3	4,4'-DDT	ND	0.167	0.11	66	0.167	0.13	78	17	11-169/44
72-20-8	Endrin	ND	0.167	0.14	84	0.167	0.16	96	13	39-170/42
1031-07-8	Endosulfan sulfate	ND	0.167	0.12	72	0.167	0.13	78	8	22-164/49
7421-93-4	Endrin aldehyde	ND	0.167	0.14	84	0.167	0.15	90	7	21-176/48
53494-70-5	Endrin ketone	ND	0.167	0.14	84	0.167	0.15	90	7	33-166/45
959-98-8	Endosulfan-I	ND	0.167	0.13	78	0.167	0.14	84	7	23-161/44
33213-65-9	Endosulfan-II	ND	0.167	0.15	90	0.167	0.17	102	13	30-161/43
76-44-8	Heptachlor	ND	0.167	0.12	72	0.167	0.14	84	15	10-158/47
1024-57-3	Heptachlor epoxide	ND	0.167	0.13	78	0.167	0.14	84	7	29-163/43
72-43-5	Methoxychlor	ND	0.167	0.12	72	0.167	0.14	84	15	15-164/46
8001-35-2	Toxaphene	ND		ND			ND		nc	50-150/30

CAS No.	Surrogate Recoveries	MS	MSD	JC67110-4	Limits
877-09-8	Tetrachloro-m-xylene	58%	64%	51%	13-153%
877-09-8	Tetrachloro-m-xylene	63%	68%	56%	13-153%
2051-24-3	Decachlorobiphenyl	44%	46%	39%	10-138%
2051-24-3	Decachlorobiphenyl	49%	50%	43%	10-138%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12448-MS	XX229843.D	1	06/03/18	EAL	06/01/18	OP12448	GXX6375
OP12448-MSD	XX229844.D	1	06/03/18	EAL	06/01/18	OP12448	GXX6375
JC67110-4	XX229842.D	1	06/03/18	EAL	06/01/18	OP12448	GXX6375

The QC reported here applies to the following samples:

Method: SW846 8082A

JC67003-1, JC67003-2, JC67003-3, JC67003-7

CAS No.	Compound	JC67110-4 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND	1.33	1.2	90	1.33	1.3	97	8	18-187/42
11104-28-2	Aroclor 1221	ND		ND			ND		nc	70-130/50
11141-16-5	Aroclor 1232	ND		ND			ND		nc	70-130/50
53469-21-9	Aroclor 1242	ND		ND			ND		nc	70-130/50
12672-29-6	Aroclor 1248	ND		ND			ND		nc	70-130/50
11097-69-1	Aroclor 1254	ND		ND			ND		nc	70-130/50
11096-82-5	Aroclor 1260	ND	1.33	1.1	82	1.33	1.2	90	9	10-185/46
11100-14-4	Aroclor 1268	ND		ND			ND		nc	-/50
37324-23-5	Aroclor 1262	ND		ND			ND		nc	-/50

CAS No.	Surrogate Recoveries	MS	MSD	JC67110-4	Limits
877-09-8	Tetrachloro-m-xylene	81%	85%	55%	11-166%
877-09-8	Tetrachloro-m-xylene	89%	93%	63%	11-166%
2051-24-3	Decachlorobiphenyl	64%	70%	43%	10-150%
2051-24-3	Decachlorobiphenyl	65%	71%	44%	10-150%

* = Outside of Control Limits.

10.3.2 10

Internal Standard Area Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	G6G1701-CC1671	Injection Date:	06/06/18
Lab File ID:	6G56977.D	Injection Time:	09:54
Instrument ID:	GC6G	Method:	SW846 8081B

IS 1	IS 2		
AREA	RT	AREA	RT

Check Std	254177032	2.13	340849520	1.94
Upper Limit ^a	508354064	2.63	681699040	2.44
Lower Limit ^b	127088516	1.63	170424760	1.44

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT
OP12449-MB1	258969733	2.14	379694367	1.94
OP12449-BS1	272599408	2.14	391705283	1.94
OP12449-BSD	262136421	2.14	382331820	1.94
JC67003-1	272284231	2.14	105150197	2.01
JC67003-2	270967588	2.14	349239917	1.94
JC67003-3	243779920	2.13	354226492	1.94
JC67003-7	252916074	2.14	300416120	1.94
ZZZZZZ	263165780	2.14	372005853	1.94
ZZZZZZ	272692304	2.13	398054592	1.94
JC67110-4	254878892	2.14	361366726	1.94
OP12449-MS	260694600	2.14	374484324	1.94
OP12449-MSD	264319373	2.14	377315304	1.94
ZZZZZZ	261723624	2.14	385448104	1.94
ZZZZZZ	242248916	2.14	346419868	1.94
ZZZZZZ	292017352	2.13	357304947	1.93
ZZZZZZ	285718730	2.14	352877323	1.94
ZZZZZZ	303811813	2.14	367505893	1.94
ZZZZZZ	247411337	2.14	341994728	1.94
ZZZZZZ	314458193	2.14	433204768	1.94

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.

10.4.1
10

Internal Standard Area Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	G8G513-CC511	Injection Date:	06/12/18
Lab File ID:	8G15833.D	Injection Time:	08:47
Instrument ID:	GC8G	Method:	SW846 8081B

IS 1		IS 2	
AREA	RT	AREA	RT

Check Std	371545102 2.27	175174036 1.88
Upper Limit ^a	743090204 2.77	350348072 2.38
Lower Limit ^b	185772551 1.77	87587018 1.38

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT
OP12536-MB2	365555504	2.26	177958713	1.88
ZZZZZZ	366881644	2.26	182345538	1.87
ZZZZZZ	396272071	2.26	207230709	1.87
ZZZZZZ	378605676	2.27	184032786	1.88
ZZZZZZ	389697040	2.27	183691840	1.87
ZZZZZZ	384423788	2.27	188607522	1.87
ZZZZZZ	392814226	2.26	189523046	1.87
OP12466-MB2	382244916	2.27	175087950	1.88
ZZZZZZ	380996559	2.26	183456185	1.87
ZZZZZZ	377086224	2.27	176348395	1.88
ZZZZZZ	395184037	2.27	201309105	1.88
ZZZZZZ	377969528	2.26	180597241	1.87
ZZZZZZ	426629226	2.26	196590980	1.88
ZZZZZZ	409941963	2.26	185985317	1.87
OP12449-MB1	655760775	2.27	325243242	1.88
JC67003-1 ^c	444131955	2.27	203212560	1.88

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.
- (c) Confirmation run.

10.4.2 10

DDT/Endrin Breakdown Check

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample:	G6G1671-DDT	Injection Date:	04/30/18
Lab File ID:	6G55778.D	Injection Time:	10:46
Instrument ID:	GC6G		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	11318971	7536013
4,4'-DDE	11688813	6661386
4,4'-DDT	697113892	431734229

DDT Breakdown ^a	3.2 %	3.2 %
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Endrin aldehyde	0	0
Endrin ketone	3648777	6453656
Endrin	397383387	243111166

Endrin Breakdown ^b	0.9 %	2.6 %
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(a) Calculated as: $(DDD + DDE) / (DDD + DDE + DDT) \times 100$

(b) Calculated as: $(\text{Endrin Aldehyde} + \text{Endrin Ketone}) / (\text{Endrin Aldehyde} + \text{Endrin Ketone} + \text{Endrin}) \times 100$

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
G6G1671-IC1671	6G55780.D	04/30/18	11:25	00:39	Initial cal 1
G6G1671-IC1671	6G55781.D	04/30/18	11:43	00:57	Initial cal 2
G6G1671-IC1671	6G55782.D	04/30/18	12:01	01:15	Initial cal 5
G6G1671-IC1671	6G55783.D	04/30/18	12:18	01:33	Initial cal 10
G6G1671-ICC1671	6G55784.D	04/30/18	12:36	01:50	Initial cal 25
G6G1671-IC1671	6G55785.D	04/30/18	12:54	02:08	Initial cal 50
G6G1671-IC1671	6G55786.D	04/30/18	13:12	02:26	Initial cal 75
G6G1671-IC1671	6G55787.D	04/30/18	13:29	02:44	Initial cal 100
G6G1671-IC1671	6G55788.D	04/30/18	13:47	03:02	Initial cal 500
G6G1671-IC1671	6G55789.D	04/30/18	14:05	03:19	Initial cal 500
G6G1671-ICV1671	6G55790.D	04/30/18	14:23	03:37	Initial cal verification 25
G6G1671-ICV1671	6G55791.D	04/30/18	14:41	03:55	Initial cal verification 500
G6G1671-ICV1671	6G55792.D	04/30/18	14:58	04:13	Initial cal verification 500
G6G1671-ICV1671	6G55793.D	04/30/18	15:16	04:31	Initial cal verification 50
G6G1671-ICV1671	6G55794.D	04/30/18	15:34	04:48	Initial cal verification 50

DDT/Endrin Breakdown Check

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample:	G6G1701-DDT	Injection Date:	06/06/18
Lab File ID:	6G56976.D	Injection Time:	09:36
Instrument ID:	GC6G		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	12430560	9204443
4,4'-DDE	10184294	8215854
4,4'-DDT	593478080	390909614

DDT Breakdown ^a	3.7 %	4.3 %
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Endrin aldehyde	2591023	1454611
Endrin ketone	3375620	2361375
Endrin	366782301	241078839

Endrin Breakdown ^b	1.6 %	1.6 %
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(a) Calculated as: $(DDD + DDE) / (DDD + DDE + DDT) \times 100$

(b) Calculated as: $(\text{Endrin Aldehyde} + \text{Endrin Ketone}) / (\text{Endrin Aldehyde} + \text{Endrin Ketone} + \text{Endrin}) \times 100$

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
G6G1701-CC1671	6G56977.D	06/06/18	09:54	00:18	Continuing cal 50
OP12449-MB1	6G56980.D	06/06/18	10:48	01:12	Method Blank
OP12449-BS1	6G56981.D	06/06/18	11:05	01:29	Blank Spike
OP12449-BSD	6G56982.D	06/06/18	11:23	01:47	Blank Spike Duplicate
JC67003-1	6G56983.D	06/06/18	11:41	02:05	MW-104
JC67003-2	6G56984.D	06/06/18	11:59	02:23	MW-101
JC67003-3	6G56985.D	06/06/18	12:17	02:41	MW-105
JC67003-7	6G56986.D	06/06/18	12:35	02:59	MW-107
ZZZZZZ	6G56987.D	06/06/18	12:53	03:17	(unrelated sample)
ZZZZZZ	6G56988.D	06/06/18	13:11	03:34	(unrelated sample)
JC67110-4	6G56989.D	06/06/18	13:28	03:52	(used for QC only; not part of job JC67003)
OP12449-MS	6G56990.D	06/06/18	13:46	04:10	Matrix Spike
OP12449-MSD	6G56991.D	06/06/18	14:04	04:28	Matrix Spike Duplicate
ZZZZZZ	6G56992.D	06/06/18	14:22	04:46	(unrelated sample)
ZZZZZZ	6G56993.D	06/06/18	14:40	05:04	(unrelated sample)
ZZZZZZ	6G56994.D	06/06/18	14:58	05:22	(unrelated sample)
ZZZZZZ	6G56995.D	06/06/18	15:16	05:40	(unrelated sample)
ZZZZZZ	6G56996.D	06/06/18	15:34	05:58	(unrelated sample)
ZZZZZZ	6G56997.D	06/06/18	15:52	06:15	(unrelated sample)
ZZZZZZ	6G56998.D	06/06/18	16:09	06:33	(unrelated sample)

DDT/Endrin Breakdown Check

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample:	G8G511-DDT	Injection Date:	06/11/18
Lab File ID:	8G15805.D	Injection Time:	11:20
Instrument ID:	GC8G		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	5064050	10304193
4,4'-DDE	7820307	16485256
4,4'-DDT	411035615	684107719

DDT Breakdown ^a	3 %	3.8 %
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Endrin aldehyde	586825	1941265
Endrin ketone	1936459	2752330
Endrin	213794709	405059351

Endrin Breakdown ^b	1.2 %	1.1 %
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(a) Calculated as: $(\text{DDD} + \text{DDE}) / (\text{DDD} + \text{DDE} + \text{DDT}) \times 100$

(b) Calculated as: $(\text{Endrin Aldehyde} + \text{Endrin Ketone}) / (\text{Endrin Aldehyde} + \text{Endrin Ketone} + \text{Endrin}) \times 100$

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
G8G511-IC511	8G15807.D	06/11/18	11:58	00:38	Initial cal 1
G8G511-IC511	8G15808.D	06/11/18	12:14	00:54	Initial cal 2
G8G511-IC511	8G15809.D	06/11/18	12:30	01:10	Initial cal 5
G8G511-IC511	8G15810.D	06/11/18	12:47	01:27	Initial cal 10
G8G511-ICC511	8G15811.D	06/11/18	13:03	01:43	Initial cal 25
G8G511-IC511	8G15812.D	06/11/18	13:19	01:59	Initial cal 50
G8G511-IC511	8G15813.D	06/11/18	13:36	02:16	Initial cal 75
G8G511-IC511	8G15814.D	06/11/18	13:52	02:32	Initial cal 100
G8G511-IC511	8G15815.D	06/11/18	14:08	02:48	Initial cal 500
G8G511-IC511	8G15816.D	06/11/18	14:24	03:04	Initial cal 500
G8G511-ICV511	8G15817.D	06/11/18	14:41	03:21	Initial cal verification 25
G8G511-ICV511	8G15818.D	06/11/18	14:57	03:37	Initial cal verification 500
G8G511-ICV511	8G15819.D	06/11/18	15:13	03:53	Initial cal verification 500
G8G511-ICV511	8G15820.D	06/11/18	15:30	04:10	Initial cal verification 50
G8G511-ICV511	8G15821.D	06/11/18	15:46	04:26	Initial cal verification 50
G8G512-CC511	8G15822.D	06/11/18	16:02	04:42	Continuing cal 25
OP12536-MB1	8G15824.D	06/11/18	16:35	05:15	Method Blank
ZZZZZZ	8G15825.D	06/11/18	16:51	05:31	(unrelated sample)
ZZZZZZ	8G15826.D	06/11/18	17:07	05:47	(unrelated sample)
ZZZZZZ	8G15827.D	06/11/18	17:24	06:04	(unrelated sample)
OP12466-MB1	8G15828.D	06/11/18	17:40	06:20	Method Blank
ZZZZZZ	8G15829.D	06/11/18	17:56	06:36	(unrelated sample)
ZZZZZZ	8G15830.D	06/11/18	18:13	06:53	(unrelated sample)
ZZZZZZ	8G15831.D	06/11/18	18:29	07:09	(unrelated sample)

DDT/Endrin Breakdown Check

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample:	G8G513-DDT	Injection Date:	06/12/18
Lab File ID:	8G15832.D	Injection Time:	08:31
Instrument ID:	GC8G		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	4868068	11069441
4,4'-DDE	4175972	8823603
4,4'-DDT	373481953	708157706

DDT Breakdown ^a	2.4 %	2.7 %
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Endrin aldehyde	632249	1361496
Endrin ketone	5022410	3258753
Endrin	196554671	413069338

Endrin Breakdown ^b	2.8 %	1.1 %
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(a) Calculated as: $(\text{DDD} + \text{DDE}) / (\text{DDD} + \text{DDE} + \text{DDT}) \times 100$

(b) Calculated as: $(\text{Endrin Aldehyde} + \text{Endrin Ketone}) / (\text{Endrin Aldehyde} + \text{Endrin Ketone} + \text{Endrin}) \times 100$

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
G8G513-CC511	8G15833.D	06/12/18	08:47	00:16	Continuing cal 50
OP12536-MB2	8G15835.D	06/12/18	09:20	00:49	Method Blank
ZZZZZZ	8G15836.D	06/12/18	09:37	01:06	(unrelated sample)
ZZZZZZ	8G15837.D	06/12/18	09:53	01:22	(unrelated sample)
ZZZZZZ	8G15838.D	06/12/18	10:09	01:38	(unrelated sample)
ZZZZZZ	8G15839.D	06/12/18	10:26	01:55	(unrelated sample)
ZZZZZZ	8G15840.D	06/12/18	10:42	02:11	(unrelated sample)
ZZZZZZ	8G15841.D	06/12/18	10:58	02:27	(unrelated sample)
OP12466-MB2	8G15842.D	06/12/18	11:14	02:43	Method Blank
ZZZZZZ	8G15843.D	06/12/18	11:31	03:00	(unrelated sample)
ZZZZZZ	8G15844.D	06/12/18	11:47	03:16	(unrelated sample)
ZZZZZZ	8G15845.D	06/12/18	12:03	03:32	(unrelated sample)
ZZZZZZ	8G15846.D	06/12/18	12:20	03:49	(unrelated sample)
ZZZZZZ	8G15847.D	06/12/18	12:38	04:07	(unrelated sample)
ZZZZZZ	8G15848.D	06/12/18	12:54	04:23	(unrelated sample)
OP12449-MB1	8G15849.D	06/12/18	13:11	04:40	Method Blank
JC67003-1	8G15850.D	06/12/18	13:27	04:56	MW-104

GC Identification Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	G6G1701-CC1671	Injection Date:	06/06/18
Lab File ID:	6G56977.D	Injection Time:	09:54
Instrument ID:	GC6G	Method:	SW846 8081B

Sample ID:	OP12449-BS1	Injection Date:	06/06/18
Lab File ID:	6G56981.D	Injection Time:	11:05
Client ID:	Blank Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aldrin	1 ^a	4.08	4.08	0.12		ug/l	0.0
Aldrin	2	4.92	4.92	0.12		ug/l	
alpha-BHC	1 ^a	2.98	2.98	0.13		ug/l	
alpha-BHC	2	3.53	3.53	0.13		ug/l	0.0
beta-BHC	1 ^a	3.34	3.34	0.13		ug/l	
beta-BHC	2	4.02	4.02	0.13		ug/l	0.0
delta-BHC	1 ^a	3.52	3.52	0.086		ug/l	
delta-BHC	2	4.40	4.40	0.093		ug/l	7.8
gamma-BHC (Lindane)	1 ^a	3.27	3.27	0.13		ug/l	
gamma-BHC (Lindane)	2	3.94	3.94	0.13		ug/l	0.0
alpha-Chlordane	1 ^a	5.10	5.10	0.13		ug/l	
alpha-Chlordane	2	6.20	6.20	0.14		ug/l	7.4
gamma-Chlordane	1 ^a	4.94	4.93	0.12		ug/l	
gamma-Chlordane	2	5.98	5.98	0.15		ug/l	22.2
Dieldrin	1 ^a	5.60	5.60	0.13		ug/l	
Dieldrin	2	6.72	6.72	0.14		ug/l	7.4
4,4'-DDD	1 ^a	6.04	6.04	0.13		ug/l	
4,4'-DDD	2	7.39	7.39	0.14		ug/l	7.4
4,4'-DDE	1 ^a	5.21	5.21	0.13		ug/l	
4,4'-DDE	2	6.46	6.46	0.14		ug/l	7.4
4,4'-DDT	1	6.45	6.45	0.13		ug/l	
4,4'-DDT	2 ^a	7.91	7.91	0.13		ug/l	0.0
Endrin	1	5.92	5.92	0.14		ug/l	
Endrin	2 ^a	7.21	7.21	0.14		ug/l	0.0
Endosulfan sulfate	1 ^a	7.53	7.53	0.12		ug/l	
Endosulfan sulfate	2	8.57	8.57	0.13		ug/l	8.0
Endrin aldehyde	1	6.85	6.85	0.14		ug/l	
Endrin aldehyde	2 ^a	8.11	8.11	0.13		ug/l	7.4
Endrin ketone	1	7.96	7.96	0.13		ug/l	
Endrin ketone	2 ^a	9.52	9.52	0.12		ug/l	8.0
Endosulfan-I	1 ^a	5.28	5.28	0.13		ug/l	
Endosulfan-I	2	6.29	6.29	0.13		ug/l	0.0
Endosulfan-II	1 ^a	6.23	6.23	0.15		ug/l	
Endosulfan-II	2	7.55	7.55	0.16		ug/l	6.5
Heptachlor	1	3.75	3.75	0.13		ug/l	
Heptachlor	2 ^a	4.49	4.49	0.13		ug/l	0.0
Heptachlor epoxide	1 ^a	4.77	4.77	0.12		ug/l	
Heptachlor epoxide	2	5.71	5.71	0.13		ug/l	8.0
Methoxychlor	1	7.23	7.23	0.13		ug/l	
Methoxychlor	2 ^a	9.14	9.14	0.12		ug/l	8.0

(a) QC results reported from this column.

10.6.1 10

GC Identification Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	G6G1701-CC1671	Injection Date:	06/06/18
Lab File ID:	6G56977.D	Injection Time:	09:54
Instrument ID:	GC6G	Method:	SW846 8081B

Sample ID:	OP12449-BSD	Injection Date:	06/06/18
Lab File ID:	6G56982.D	Injection Time:	11:23
Client ID:	Blank Spike Duplicate		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aldrin	1 ^a	4.08	4.08	0.14		ug/l	0.0
Aldrin	2	4.92	4.92	0.14		ug/l	
alpha-BHC	1 ^a	2.98	2.98	0.15		ug/l	0.0
alpha-BHC	2	3.53	3.53	0.15		ug/l	
beta-BHC	1 ^a	3.34	3.34	0.14		ug/l	6.9
beta-BHC	2	4.02	4.02	0.15		ug/l	
delta-BHC	1 ^a	3.52	3.52	0.096		ug/l	4.1
delta-BHC	2	4.40	4.40	0.10		ug/l	
gamma-BHC (Lindane)	1 ^a	3.27	3.27	0.15		ug/l	0.0
gamma-BHC (Lindane)	2	3.94	3.94	0.15		ug/l	
alpha-Chlordane	1 ^a	5.10	5.10	0.15		ug/l	0.0
alpha-Chlordane	2	6.20	6.20	0.15		ug/l	
gamma-Chlordane	1 ^a	4.94	4.93	0.14		ug/l	6.9
gamma-Chlordane	2	5.98	5.98	0.15		ug/l	
Dieldrin	1 ^a	5.60	5.60	0.15		ug/l	6.5
Dieldrin	2	6.72	6.72	0.16		ug/l	
4,4'-DDD	1 ^a	6.04	6.04	0.15		ug/l	0.0
4,4'-DDD	2	7.39	7.39	0.15		ug/l	
4,4'-DDE	1 ^a	5.21	5.21	0.14		ug/l	13.3
4,4'-DDE	2	6.46	6.46	0.16		ug/l	
4,4'-DDT	1	6.45	6.45	0.14		ug/l	0.0
4,4'-DDT	2 ^a	7.91	7.91	0.14		ug/l	
Endrin	1	5.92	5.92	0.16		ug/l	0.0
Endrin	2 ^a	7.21	7.21	0.16		ug/l	
Endosulfan sulfate	1 ^a	7.53	7.53	0.13		ug/l	7.4
Endosulfan sulfate	2	8.57	8.57	0.14		ug/l	
Endrin aldehyde	1 ^a	6.85	6.85	0.15		ug/l	0.0
Endrin aldehyde	2	8.11	8.11	0.15		ug/l	
Endrin ketone	1	7.96	7.96	0.14		ug/l	7.4
Endrin ketone	2 ^a	9.52	9.52	0.13		ug/l	
Endosulfan-I	1 ^a	5.28	5.28	0.14		ug/l	6.9
Endosulfan-I	2	6.29	6.29	0.15		ug/l	
Endosulfan-II	1 ^a	6.23	6.23	0.17		ug/l	5.7
Endosulfan-II	2	7.55	7.55	0.18		ug/l	
Heptachlor	1 ^a	3.75	3.75	0.14		ug/l	0.0
Heptachlor	2	4.49	4.49	0.14		ug/l	
Heptachlor epoxide	1 ^a	4.77	4.77	0.14		ug/l	6.9
Heptachlor epoxide	2	5.71	5.71	0.15		ug/l	
Methoxychlor	1	7.23	7.23	0.14		ug/l	0.0
Methoxychlor	2 ^a	9.14	9.14	0.14		ug/l	

(a) QC results reported from this column.

10.6.2 10

GC Identification Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	G6G1701-CC1671	Injection Date:	06/06/18
Lab File ID:	6G56977.D	Injection Time:	09:54
Instrument ID:	GC6G	Method:	SW846 8081B

Sample ID:	OP12449-MS	Injection Date:	06/06/18
Lab File ID:	6G56990.D	Injection Time:	13:46
Client ID:	Matrix Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aldrin	1 ^a	4.08	4.08	0.11		ug/l	16.7
Aldrin	2	4.92	4.92	0.13		ug/l	
alpha-BHC	1 ^a	2.98	2.98	0.12		ug/l	8.0
alpha-BHC	2	3.53	3.53	0.13		ug/l	
beta-BHC	1 ^a	3.34	3.34	0.13		ug/l	7.4
beta-BHC	2	4.02	4.02	0.14		ug/l	
delta-BHC	1 ^a	3.52	3.52	0.088		ug/l	5.5
delta-BHC	2	4.40	4.40	0.093		ug/l	
gamma-BHC (Lindane)	1 ^a	3.27	3.27	0.13		ug/l	0.0
gamma-BHC (Lindane)	2	3.94	3.94	0.13		ug/l	
alpha-Chlordane	1 ^a	5.10	5.10	0.13		ug/l	0.0
alpha-Chlordane	2	6.20	6.20	0.13		ug/l	
gamma-Chlordane	1 ^a	4.94	4.93	0.12		ug/l	15.4
gamma-Chlordane	2	5.98	5.98	0.14		ug/l	
Dieldrin	1 ^a	5.60	5.60	0.13		ug/l	7.4
Dieldrin	2	6.72	6.72	0.14		ug/l	
4,4'-DDD	1 ^a	6.04	6.04	0.12		ug/l	8.0
4,4'-DDD	2	7.39	7.39	0.13		ug/l	
4,4'-DDE	1 ^a	5.22	5.21	0.11		ug/l	8.7
4,4'-DDE	2	6.46	6.46	0.12		ug/l	
4,4'-DDT	1 ^a	6.45	6.45	0.11		ug/l	0.0
4,4'-DDT	2	7.91	7.91	0.11		ug/l	
Endrin	1 ^a	5.92	5.92	0.14		ug/l	0.0
Endrin	2	7.21	7.21	0.14		ug/l	
Endosulfan sulfate	1 ^a	7.53	7.53	0.12		ug/l	8.0
Endosulfan sulfate	2	8.57	8.57	0.13		ug/l	
Endrin aldehyde	1 ^a	6.85	6.85	0.14		ug/l	0.0
Endrin aldehyde	2	8.11	8.11	0.14		ug/l	
Endrin ketone	1 ^a	7.96	7.96	0.14		ug/l	7.4
Endrin ketone	2	9.52	9.52	0.13		ug/l	
Endosulfan-I	1 ^a	5.28	5.28	0.13		ug/l	7.4
Endosulfan-I	2	6.29	6.29	0.14		ug/l	
Endosulfan-II	1 ^a	6.23	6.23	0.15		ug/l	6.5
Endosulfan-II	2	7.55	7.55	0.16		ug/l	
Heptachlor	1 ^a	3.75	3.75	0.12		ug/l	0.0
Heptachlor	2	4.49	4.49	0.12		ug/l	
Heptachlor epoxide	1 ^a	4.77	4.77	0.13		ug/l	7.4
Heptachlor epoxide	2	5.71	5.71	0.14		ug/l	
Methoxychlor	1 ^a	7.23	7.23	0.12		ug/l	0.0
Methoxychlor	2	9.14	9.14	0.12		ug/l	

(a) QC results reported from this column.

10.6.3 10

GC Identification Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	G6G1701-CC1671	Injection Date:	06/06/18
Lab File ID:	6G56977.D	Injection Time:	09:54
Instrument ID:	GC6G	Method:	SW846 8081B

Sample ID:	OP12449-MSD	Injection Date:	06/06/18
Lab File ID:	6G56991.D	Injection Time:	14:04
Client ID:	Matrix Spike Duplicate		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aldrin	1 ^a	4.08	4.08	0.13		ug/l	7.4
Aldrin	2	4.92	4.92	0.14		ug/l	
alpha-BHC	1 ^a	2.98	2.98	0.14		ug/l	0.0
alpha-BHC	2	3.53	3.53	0.14		ug/l	
beta-BHC	1 ^a	3.34	3.34	0.14		ug/l	6.9
beta-BHC	2	4.02	4.02	0.15		ug/l	
delta-BHC	1 ^a	3.52	3.52	0.096		ug/l	4.1
delta-BHC	2	4.40	4.40	0.10		ug/l	
gamma-BHC (Lindane)	1 ^a	3.27	3.27	0.14		ug/l	0.0
gamma-BHC (Lindane)	2	3.94	3.94	0.14		ug/l	
alpha-Chlordane	1 ^a	5.10	5.10	0.14		ug/l	6.9
alpha-Chlordane	2	6.20	6.20	0.15		ug/l	
gamma-Chlordane	1 ^a	4.94	4.93	0.14		ug/l	13.3
gamma-Chlordane	2	5.98	5.98	0.16		ug/l	
Dieldrin	1 ^a	5.60	5.60	0.14		ug/l	13.3
Dieldrin	2	6.72	6.72	0.16		ug/l	
4,4'-DDD	1 ^a	6.04	6.04	0.14		ug/l	0.0
4,4'-DDD	2	7.39	7.39	0.14		ug/l	
4,4'-DDE	1 ^a	5.22	5.21	0.13		ug/l	7.4
4,4'-DDE	2	6.46	6.46	0.14		ug/l	
4,4'-DDT	1 ^a	6.45	6.45	0.13		ug/l	0.0
4,4'-DDT	2	7.91	7.91	0.13		ug/l	
Endrin	1 ^a	5.91	5.92	0.16		ug/l	0.0
Endrin	2	7.20	7.21	0.16		ug/l	
Endosulfan sulfate	1 ^a	7.53	7.53	0.13		ug/l	7.4
Endosulfan sulfate	2	8.57	8.57	0.14		ug/l	
Endrin aldehyde	1 ^a	6.85	6.85	0.15		ug/l	0.0
Endrin aldehyde	2	8.11	8.11	0.15		ug/l	
Endrin ketone	1 ^a	7.96	7.96	0.15		ug/l	6.9
Endrin ketone	2	9.52	9.52	0.14		ug/l	
Endosulfan-I	1 ^a	5.28	5.28	0.14		ug/l	6.9
Endosulfan-I	2	6.29	6.29	0.15		ug/l	
Endosulfan-II	1 ^a	6.23	6.23	0.17		ug/l	0.0
Endosulfan-II	2	7.55	7.55	0.17		ug/l	
Heptachlor	1 ^a	3.75	3.75	0.14		ug/l	0.0
Heptachlor	2	4.49	4.49	0.14		ug/l	
Heptachlor epoxide	1 ^a	4.77	4.77	0.14		ug/l	6.9
Heptachlor epoxide	2	5.71	5.71	0.15		ug/l	
Methoxychlor	1 ^a	7.23	7.23	0.14		ug/l	0.0
Methoxychlor	2	9.14	9.14	0.14		ug/l	

(a) QC results reported from this column.

10.6.4
10

GC Identification Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	GXX6375-CC6349	Injection Date:	06/03/18
Lab File ID:	XX229847.D	Injection Time:	03:38
Instrument ID:	GCXX	Method:	SW846 8082A

Sample ID:	OP12448-BS1	Injection Date:	06/03/18
Lab File ID:	XX229850.D	Injection Time:	04:28
Client ID:	Blank Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aroclor 1016	1 ^a			1.3		ug/l	20.7
Aroclor 1016	2			1.6		ug/l	
AR1016-B	1	3.57	3.57	1.4		ug/l	
AR1016-B	2	4.77	4.75	2.1		ug/l	
AR1016-C	1	4.13	4.12	1.2		ug/l	
AR1016-C	2	5.39	5.39	1.3		ug/l	
AR1016-D	1	4.29	4.28	1.4		ug/l	
AR1016-D	2	5.58	5.57	1.5		ug/l	
AR1016-E	1	4.77	4.77	1.3		ug/l	
AR1016-E	2	6.23	6.23	1.3		ug/l	
Aroclor 1260	1 ^a			1.2		ug/l	8.0
Aroclor 1260	2			1.3		ug/l	
AR1260-A	1	7.12	7.12	1.0		ug/l	
AR1260-A	2	8.83	8.83	1.1		ug/l	
AR1260-B	1	7.26	7.26	1.4		ug/l	
AR1260-B	2	8.95	8.95	1.4		ug/l	
AR1260-C	1	7.59	7.60	1.4		ug/l	
AR1260-C	2	9.38	9.38	1.3		ug/l	
AR1260-D	1	8.03	8.04	1.2		ug/l	
AR1260-D	2	9.73	9.74	1.3		ug/l	
AR1260-E	1	8.43	8.46	1.2		ug/l	
AR1260-E	2	10.27	10.28	1.4		ug/l	

(a) QC results reported from this column.

10.6.5
10

GC Identification Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std: GXX6375-CC6349	Injection Date: 06/03/18
Lab File ID: XX229847.D	Injection Time: 03:38
Instrument ID: GCXX	Method: SW846 8082A

Sample ID: OP12448-BSD	Injection Date: 06/03/18
Lab File ID: XX229851.D	Injection Time: 04:45
Client ID: Blank Spike Duplicate	

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aroclor 1016	1 ^a			1.2		ug/l	22.2
Aroclor 1016	2			1.5		ug/l	
AR1016-B	1	3.57	3.57	1.2		ug/l	
AR1016-B	2	4.77	4.75	1.9		ug/l	
AR1016-C	1	4.14	4.12	1.1		ug/l	
AR1016-C	2	5.39	5.39	1.3		ug/l	
AR1016-D	1	4.29	4.28	1.3		ug/l	
AR1016-D	2	5.58	5.57	1.4		ug/l	
AR1016-E	1	4.77	4.77	1.2		ug/l	
AR1016-E	2	6.23	6.23	1.2		ug/l	
Aroclor 1260	1 ^a			1.2		ug/l	0.0
Aroclor 1260	2			1.2		ug/l	
AR1260-A	1	7.12	7.12	0.94		ug/l	
AR1260-A	2	8.83	8.83	1.0		ug/l	
AR1260-B	1	7.26	7.26	1.3		ug/l	
AR1260-B	2	8.95	8.95	1.4		ug/l	
AR1260-C	1	7.59	7.60	1.2		ug/l	
AR1260-C	2	9.38	9.38	1.3		ug/l	
AR1260-D	1	8.03	8.04	1.2		ug/l	
AR1260-D	2	9.73	9.74	1.3		ug/l	
AR1260-E	1	8.43	8.46	1.2		ug/l	
AR1260-E	2	10.27	10.28	1.3		ug/l	

(a) QC results reported from this column.

10.6.6
10

GC Identification Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	GXX6375-CC6349	Injection Date:	06/03/18
Lab File ID:	XX229836.D	Injection Time:	00:34
Instrument ID:	GCXX	Method:	SW846 8082A

Sample ID:	OP12448-MS	Injection Date:	06/03/18
Lab File ID:	XX229843.D	Injection Time:	02:31
Client ID:	Matrix Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aroclor 1016	1 ^a			1.2		ug/l	34.5
Aroclor 1016	2			1.7		ug/l	
AR1016-A	1	3.19	3.19	1.2		ug/l	
AR1016-A	2	4.20	4.20	2.3		ug/l	
AR1016-B	1	3.57	3.57	1.2		ug/l	
AR1016-B	2	4.77	4.75	2.2		ug/l	
AR1016-C	1	4.12	4.13	1.1		ug/l	
AR1016-C	2	5.39	5.39	1.3		ug/l	
AR1016-D	1	4.28	4.28	1.2		ug/l	
AR1016-D	2	5.57	5.58	1.5		ug/l	
AR1016-E	1	4.77	4.77	1.1		ug/l	
AR1016-E	2	6.23	6.23	1.3		ug/l	
Aroclor 1260	1 ^a			1.1		ug/l	8.7
Aroclor 1260	2			1.2		ug/l	
AR1260-A	1	7.10	7.12	0.90		ug/l	
AR1260-A	2	8.83	8.83	0.99		ug/l	
AR1260-B	1	7.25	7.26	1.2		ug/l	
AR1260-B	2	8.95	8.95	1.3		ug/l	
AR1260-C	1	7.59	7.59	1.2		ug/l	
AR1260-C	2	9.38	9.38	1.2		ug/l	
AR1260-D	1	8.02	8.04	1.1		ug/l	
AR1260-D	2	9.73	9.73	1.2		ug/l	
AR1260-E	1	8.41	8.46	1.1		ug/l	
AR1260-E	2	10.27	10.28	1.2		ug/l	

(a) QC results reported from this column.

10.6.7
10

GC Identification Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	GXX6375-CC6349	Injection Date:	06/03/18
Lab File ID:	XX229836.D	Injection Time:	00:34
Instrument ID:	GCXX	Method:	SW846 8082A

Sample ID:	OP12448-MSD	Injection Date:	06/03/18
Lab File ID:	XX229844.D	Injection Time:	02:48
Client ID:	Matrix Spike Duplicate		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Aroclor 1016	1 ^a			1.3		ug/l	32.3
Aroclor 1016	2			1.8		ug/l	
AR1016-A	1	3.19	3.19	1.3		ug/l	
AR1016-A	2	4.19	4.20	2.4		ug/l	
AR1016-B	1	3.57	3.57	1.3		ug/l	
AR1016-B	2	4.77	4.75	2.3		ug/l	
AR1016-C	1	4.12	4.13	1.2		ug/l	
AR1016-C	2	5.39	5.39	1.4		ug/l	
AR1016-D	1	4.28	4.28	1.3		ug/l	
AR1016-D	2	5.58	5.58	1.5		ug/l	
AR1016-E	1	4.77	4.77	1.2		ug/l	
AR1016-E	2	6.23	6.23	1.4		ug/l	
Aroclor 1260	1 ^a			1.2		ug/l	8.0
Aroclor 1260	2			1.3		ug/l	
AR1260-A	1	7.11	7.12	0.96		ug/l	
AR1260-A	2	8.83	8.83	1.1		ug/l	
AR1260-B	1	7.25	7.26	1.4		ug/l	
AR1260-B	2	8.95	8.95	1.3		ug/l	
AR1260-C	1	7.59	7.59	1.3		ug/l	
AR1260-C	2	9.38	9.38	1.4		ug/l	
AR1260-D	1	8.02	8.04	1.2		ug/l	
AR1260-D	2	9.73	9.73	1.3		ug/l	
AR1260-E	1	8.41	8.46	1.2		ug/l	
AR1260-E	2	10.27	10.28	1.3		ug/l	

(a) QC results reported from this column.

10.6.8
10

Surrogate Recovery Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Method: SW846 8081B	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b	S2 ^a	S2 ^b
JC67003-1	8G15850.D	85	89	55	54
JC67003-1	6G56983.D	3* ^c	60	1* ^c	38
JC67003-2	6G56984.D	70	69	53	53
JC67003-3	6G56985.D	62	68	34	38
JC67003-7	6G56986.D	71	65	38	40
OP12449-BS1	6G56981.D	62	65	41	42
OP12449-BSD	6G56982.D	69	74	40	43
OP12449-MB1	6G56980.D	71	80	46	48
OP12449-MB1	8G15849.D	76	87	50	56
OP12449-MS	6G56990.D	58	63	44	49
OP12449-MSD	6G56991.D	64	68	46	50

Surrogate Compounds	Recovery Limits
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S1 = Tetrachloro-m-xylene	13-153%
S2 = Decachlorobiphenyl	10-138%

- (a) Recovery from GC signal #1
- (b) Recovery from GC signal #2
- (c) Outside control limits due to matrix interference with the internal standard.

10.7.1
10

Surrogate Recovery Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Method: SW846 8082A	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b	S2 ^a	S2 ^b
JC67003-1	XX229852.D	63	60	34	36
JC67003-2	XX229853.D	69	73	52	53
JC67003-3	XX229854.D	76	83	46	45
JC67003-7	XX229855.D	65	73	35	38
OP12448-BS1	XX229850.D	86	90	56	57
OP12448-BSD	XX229851.D	81	87	52	53
OP12448-MB1	XX229849.D	73	77	55	55
OP12448-MS	XX229843.D	81	89	64	65
OP12448-MSD	XX229844.D	85	93	70	71

Surrogate Compounds Recovery Limits

S1 = Tetrachloro-m-xylene 11-166%
 S2 = Decachlorobiphenyl 10-150%

(a) Recovery from GC signal #1
 (b) Recovery from GC signal #2

10.7.2
10

GC Surrogate Retention Time Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	GXX6375-CC6349	Injection Date:	06/03/18
Lab File ID:	XX229836.D	Injection Time:	00:34
Instrument ID:	GCXX	Method:	SW846 8082A

	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
Check Std	2.82	3.55	9.94	11.94

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
ZZZZZZ	XX229838.D	06/03/18	01:08	2.82	3.55	9.92	11.94
ZZZZZZ	XX229839.D	06/03/18	01:24	2.82	3.55	9.93	11.94
ZZZZZZ	XX229840.D	06/03/18	01:41	2.82	3.55	9.93	11.93
ZZZZZZ	XX229841.D	06/03/18	01:58	2.82	3.55	9.93	11.94
JC67110-4	XX229842.D	06/03/18	02:15	2.82	3.55	9.93	11.94
OP12448-MS	XX229843.D	06/03/18	02:31	2.82	3.55	9.93	11.94
OP12448-MSD	XX229844.D	06/03/18	02:48	2.82	3.55	9.93	11.93

Surrogate
Compounds

S1 = Tetrachloro-m-xylene
 S2 = Decachlorobiphenyl

- (a) Retention time from GC signal #1
- (b) Retention time from GC signal #2

10.8.1
10

GC Surrogate Retention Time Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std: G6G1701-CC1671	Injection Date: 06/06/18
Lab File ID: 6G56977.D	Injection Time: 09:54
Instrument ID: GC6G	Method: SW846 8081B

	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
Check Std	2.52	2.91	9.77	11.66

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
OP12449-MB1	6G56980.D	06/06/18	10:48	2.52	2.91	9.77	11.65
OP12449-BS1	6G56981.D	06/06/18	11:05	2.52	2.91	9.77	11.65
OP12449-BSD	6G56982.D	06/06/18	11:23	2.52	2.91	9.77	11.65
JC67003-1	6G56983.D	06/06/18	11:41	2.52	2.91	9.77	11.65
JC67003-2	6G56984.D	06/06/18	11:59	2.52	2.91	9.77	11.65
JC67003-3	6G56985.D	06/06/18	12:17	2.52	2.91	9.77	11.65
JC67003-7	6G56986.D	06/06/18	12:35	2.52	2.91	9.77	11.65
ZZZZZZ	6G56987.D	06/06/18	12:53	2.52	2.91	9.77	11.66
ZZZZZZ	6G56988.D	06/06/18	13:11	2.52	2.91	9.77	11.65
JC67110-4	6G56989.D	06/06/18	13:28	2.52	2.91	9.77	11.65
OP12449-MS	6G56990.D	06/06/18	13:46	2.52	2.91	9.77	11.65
OP12449-MSD	6G56991.D	06/06/18	14:04	2.52	2.91	9.77	11.65
ZZZZZZ	6G56992.D	06/06/18	14:22	2.52	2.91	9.77	11.65
ZZZZZZ	6G56993.D	06/06/18	14:40	2.52	2.92	9.77	11.65
ZZZZZZ	6G56994.D	06/06/18	14:58	2.52	2.91	9.77	11.65
ZZZZZZ	6G56995.D	06/06/18	15:16	2.52	2.91	9.77	11.65
ZZZZZZ	6G56996.D	06/06/18	15:34	2.52	2.91	9.77	11.65
ZZZZZZ	6G56997.D	06/06/18	15:52	2.52	2.91	9.77	11.65
ZZZZZZ	6G56998.D	06/06/18	16:09	2.52	2.91	9.77	11.65

Surrogate
Compounds

S1 = Tetrachloro-m-xylene

S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1

(b) Retention time from GC signal #2

10.8.2
10

GC Surrogate Retention Time Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std: G8G513-CC511	Injection Date: 06/12/18
Lab File ID: 8G15833.D	Injection Time: 08:47
Instrument ID: GC8G	Method: SW846 8081B

	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
Check Std	2.64	3.29	10.92	13.31

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
OP12536-MB2	8G15835.D	06/12/18	09:20	2.64	3.29	10.92	13.31
ZZZZZZ	8G15836.D	06/12/18	09:37	2.63	3.29	10.92	13.31
ZZZZZZ	8G15837.D	06/12/18	09:53	2.63	3.29	10.92	13.31
ZZZZZZ	8G15838.D	06/12/18	10:09	2.64	3.29	10.92	13.30
ZZZZZZ	8G15839.D	06/12/18	10:26	2.64	3.29	10.92	13.30
ZZZZZZ	8G15840.D	06/12/18	10:42	2.63	3.29	10.92	13.30
ZZZZZZ	8G15841.D	06/12/18	10:58	2.63	3.29	10.92	13.30
OP12466-MB2	8G15842.D	06/12/18	11:14	2.64	3.29	10.92	13.30
ZZZZZZ	8G15843.D	06/12/18	11:31	2.63	3.29	10.91	13.30
ZZZZZZ	8G15844.D	06/12/18	11:47	2.64	3.29	10.92	13.30
ZZZZZZ	8G15845.D	06/12/18	12:03	2.64	3.29	10.91	13.30
ZZZZZZ	8G15846.D	06/12/18	12:20	2.63	3.29	10.91	13.30
ZZZZZZ	8G15847.D	06/12/18	12:38	2.64	3.29	10.92	13.30
ZZZZZZ	8G15848.D	06/12/18	12:54	2.63	3.29	10.92	13.30
OP12449-MB1	8G15849.D	06/12/18	13:11	2.63	3.29	10.92	13.30
JC67003-1	8G15850.D	06/12/18	13:27	2.63	3.29	10.92	13.30

Surrogate
Compounds

S1 = Tetrachloro-m-xylene
 S2 = Decachlorobiphenyl

- (a) Retention time from GC signal #1
- (b) Retention time from GC signal #2

10.8.3
10

GC Surrogate Retention Time Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	GXX6375-CC6349	Injection Date:	06/03/18
Lab File ID:	XX229847.D	Injection Time:	03:38
Instrument ID:	GCXX	Method:	SW846 8082A

	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
Check Std	2.82	3.55	9.94	11.94

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT	S2 ^a RT	S2 ^b RT
OP12448-MB1	XX229849.D	06/03/18	04:12	2.82	3.55	9.93	11.94
OP12448-BS1	XX229850.D	06/03/18	04:28	2.82	3.55	9.93	11.94
OP12448-BSD	XX229851.D	06/03/18	04:45	2.82	3.55	9.93	11.94
JC67003-1	XX229852.D	06/03/18	05:02	2.82	3.55	9.93	11.94
JC67003-2	XX229853.D	06/03/18	05:18	2.82	3.55	9.93	11.94
JC67003-3	XX229854.D	06/03/18	05:35	2.82	3.55	9.93	11.93
JC67003-7	XX229855.D	06/03/18	05:51	2.82	3.55	9.93	11.94

**Surrogate
Compounds**

S1 = Tetrachloro-m-xylene
 S2 = Decachlorobiphenyl

- (a) Retention time from GC signal #1
- (b) Retention time from GC signal #2

10.8.4
10

Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G6G1671-ICC1671
 Lab FileID: 6G55784.D

Response Factor Report GC6G

Method : C:\msdchem\1\methods\6PST1671.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Mon Apr 30 17:34:19 2018
 Response via : Initial Calibration

Calibration Files

5 =6g55782.d 10 =6g55783.d 25 =6g55784.d 50 =6g55785.d
 100 =6g55787.d 1 =6g55780.d 75 =6g55786.d 2 =6g55781.d
 = =

Compound	5	10	25	50	100	1	75	2	Avg	%RSD
1) I 1-bromo-2-nitrobenzen -----ISTD-----										
2) Tetrachloro-m-xylene	0.937	0.914	0.936	0.973	1.007	1.084	0.982	0.943	0.972	5.57
3) hexachlorobenzene	1.022	1.033	1.042	1.079	1.085	1.271	1.095	1.053	1.085	7.34
4) alpha-BHC	1.184	1.208	1.340	1.459	1.524	1.314	1.516	1.163	1.338	11.04
5) gamma-BHC	1.132	1.137	1.236	1.325	1.368	1.415	1.374	1.152	1.267	9.25
6) Heptachlor	1.099	1.099	1.172	1.249	1.270	1.305	1.276	1.109	1.197	7.32
7) beta-BHC	0.560	0.531	0.543	0.559	0.560	0.645	0.568	0.567	0.567	6.05
8) delta-BHC	0.969	1.003	1.123	1.228	1.293	1.083	1.279	0.962	1.117	12.18
9) Aldrin	1.052	1.060	1.150	1.238	1.265	1.222	1.274	1.047	1.164	8.51
10) alachlor	0.145	0.140	0.140	0.142	0.134		0.140		0.140	2.52
11) Heptachlor Epoxide	1.019	0.991	1.060	1.124	1.145	1.121	1.155	0.991	1.076	6.40
12) gamma-Chlordane	0.964	0.976	1.051	1.129	1.174	1.059	1.174	0.952	1.060	8.65
13) alpha-Chlordane	1.019	0.982	1.040	1.103	1.136	1.224	1.139	1.039	1.085	7.33
14) Endosulfan I	0.944	0.924	0.979	1.039	1.058	1.118	1.068	0.963	1.012	6.79
15) 4,4'-DDE	0.934	0.922	1.009	1.096	1.140	1.095	1.140	0.931	1.033	9.24
16) Dieldrin	0.993	0.994	1.079	1.165	1.187	1.144	1.206	0.997	1.096	8.36
17) Endrin	0.953	0.899	0.964	1.033	1.049	1.054	1.068	0.913	0.992	6.79
18) 4,4'-DDD	0.797	0.774	0.836	0.900	0.920	0.899	0.934	0.788	0.856	7.56
19) Endosulfan II	0.970	0.933	0.963	1.012	1.017	1.406	1.039	1.074	1.052	14.27
20) 4,4'-DDT	0.737	0.743	0.802	0.870	0.903	0.844	0.914	0.751	0.821	8.84
21) Endrin Aldehyde	0.803	0.770	0.796	0.836	0.833	0.945	0.855	0.824	0.833	6.32
22) Endosulfan Sulfate	0.791	0.758	0.792	0.833	0.841	0.925	0.858	0.801	0.825	6.29
23) Methoxychlor										

10.9.1
10

Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G6G1671-ICC1671
 Lab FileID: 6G55784.D

24)	Mirex	0.516 0.458 0.468 0.480 0.473 0.552 0.487 0.482	0.490	6.24
25)	Endrin Ketone	0.833 0.792 0.774 0.785 0.773 1.050 0.798 0.858	0.833	11.13
26)	Decachlorobiphenyl	0.924 0.912 0.956 1.006 1.005 1.086 1.029 0.931	0.981	6.17
		0.983 0.929 0.914 0.922 0.892 1.300 0.929 1.055	0.991	13.66
27)	I 1-bromo-2-nitrobenzen	-----ISTD-----		
28)	Toxaphene{A}	0.016	0.016	0.00
29)	Toxaphene{B}	0.041	0.041	0.00
30)	Toxaphene{C}	0.033	0.033	0.00
31)	Toxaphene{D}	0.026	0.026	0.00
32)	Toxaphene{E}	0.027	0.027	0.00
33)	I 1-bromo-2-nitrobenzen	-----ISTD-----		
34)	Chlordane {A}	0.054	0.054	0.00
35)	Chlordane {B}	0.045	0.045	0.00
36)	Chlordane {C}	0.145	0.145	0.00
37)	Chlordane {D}	0.228	0.228	0.00
38)	Chlordane {E}	0.026	0.026	0.00

Signal #2

1)	I 1-bromo-2-nitrobenzen	-----ISTD-----		
2)	Tetrachloro-m-xylene	0.878 0.885 0.907 0.945 1.004 0.981 0.968 0.882	0.931	5.35
3)	hexachlorobenzene	1.120 1.130 1.119 1.146 1.192 1.299 1.165 1.172	1.168	5.06
4)	alpha-BHC	1.073 1.128 1.243 1.360 1.490 1.146 1.430 1.045	1.239	13.63
5)	gamma-BHC	1.031 1.065 1.150 1.242 1.352 1.136 1.298 1.023	1.162	10.67
6)	Heptachlor	1.093 1.097 1.153 1.225 1.303 1.223 1.267 1.097	1.182	7.06
7)	beta-BHC	0.513 0.510 0.515 0.527 0.550 0.604 0.537 0.514	0.534	5.92
8)	delta-BHC	0.923 0.964 1.051 1.160 1.279 1.110 1.225 0.921	1.079	12.73
9)	Aldrin	0.939 0.957 1.022 1.101 1.190 1.050 1.147 0.919	1.041	9.61
10)	alachlor	0.152 0.138 0.135 0.135 0.133 0.134	0.138	5.09
11)	Heptachlor Epoxide	0.953 0.942 0.979 1.034 1.098 1.030 1.065 0.948	1.006	5.86
12)	gamma-Chlordane	0.951 0.927 0.976 1.036 1.112 0.910 1.074 0.902	0.986	8.03
13)	alpha-Chlordane	0.936 0.896 0.970 1.012 1.066 0.939 1.032 0.827	0.960	8.08

10.9.1
10

Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G6G1671-ICC1671
 Lab FileID: 6G55784.D

14)	Endosulfan I	0.892	0.845	0.882	0.932	0.994	0.993	0.955	0.844	0.917	6.61
15)	4,4'-DDE	0.839	0.863	0.923	0.997	1.085	0.903	1.044	0.802	0.932	10.82
16)	Dieldrin	0.884	0.904	0.959	1.034	1.124	0.978	1.078	0.912	0.984	8.86
17)	Endrin	0.872	0.882	0.909	0.976	1.050	1.138	1.020	0.881	0.966	10.03
18)	4,4'-DDD	0.736	0.733	0.765	0.820	0.889	0.891	0.858	0.731	0.803	8.76
19)	Endosulfan II	0.900	0.876	0.885	0.926	0.978	1.323	0.951	0.983	0.978	14.84
20)	4,4'-DDT	0.670	0.708	0.760	0.820	0.901	0.776	0.863	0.703	0.775	10.51
21)	Endrin Aldehyde	0.703	0.697	0.710	0.734	0.774	0.847	0.755	0.721	0.743	6.71
22)	Endosulfan Sulfate	0.687	0.695	0.715	0.747	0.796	0.836	0.774	0.700	0.744	7.26
23)	Methoxychlor	0.423	0.429	0.438	0.449	0.467	0.431	0.460	0.426	0.440	3.73
24)	Mirex	0.734	0.730	0.711	0.712	0.735	0.885	0.725	0.736	0.746	7.67
25)	Endrin Ketone	0.879	0.850	0.879	0.915	0.975	1.451	0.953	0.981	0.985	19.70
26)	Decachlorobiphenyl	0.924	0.908	0.866	0.875	0.893	1.128	0.885	0.952	0.929	9.16
27)	I 1-bromo-2-nitrobenzen	-----ISTD-----									
28)	Toxaphene{A}				0.019					0.019	0.00
29)	Toxaphene{B}				0.025					0.025	0.00
30)	Toxaphene{C}				0.047					0.047	0.00
31)	Toxaphene{D}				0.026					0.026	0.00
32)	Toxaphene{E}				0.023					0.023	0.00
33)	I 1-bromo-2-nitrobenzen	-----ISTD-----									
34)	Chlordane {A}				0.054					0.054	0.00
35)	Chlordane {B}				0.040					0.040	0.00
36)	Chlordane {C}				0.126					0.126	0.00
37)	Chlordane {D}				0.206					0.206	0.00
38)	Chlordane {E}				0.021					0.021	0.00

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

6PST1671.M

Mon Apr 30 17:43:44 2018

10.9.1
10

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G6G1671-ICV1671
 Lab FileID: 6G55790.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G1671\6g55790.d\ECD1A.CH Vial: 13
 Signal #2 : C:\msdchem\1\data\G6G1671\6g55790.d\ECD2B.CH
 Acq On : 30-Apr-18, 14:23:25 Operator: dharas
 Sample : icv1671-25 Inst : GC6G
 Misc : OP11619,g6g1671,1000,,,5,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\msdchem\1\methods\6PST1671.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Mon Apr 30 17:34:19 2018
 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	102	-0.02	1.44-	2.44
2 SAB	Tetrachloro-m-xylene	0.972	1.010	-3.9	110	-0.02	2.50-	2.56
4 A	alpha-BHC	1.338	1.571	-17.4	119	-0.01	2.97-	3.03
5 MA	gamma-BHC	1.267	1.426	-12.5	117	-0.01	3.26-	3.32
6 MA	Heptachlor	1.197	1.362	-13.8	118	-0.01	3.75-	3.81
7 B	beta-BHC	0.567	0.628	-10.8	118	-0.01	3.33-	3.39
8 B	delta-BHC	1.117	1.334	-19.4	121	-0.01	3.51-	3.57
9 MB	Aldrin	1.164	1.327	-14.0	117	-0.01	4.08-	4.14
11 B	Heptachlor Epoxide	1.076	1.233	-14.6	118	-0.01	4.78-	4.84
12 B	gamma-Chlordane	1.060	1.261	-19.0	122	-0.01	4.95-	5.01
13 B	alpha-Chlordane	1.085	1.229	-13.3	120	-0.01	5.12-	5.18
14 A	Endosulfan I	1.012	1.180	-16.6	123	-0.01	5.29-	5.35
15 B	4,4'-DDE	1.033	1.198	-16.0	121	-0.01	5.23-	5.29
16 MA	Dieldrin	1.096	1.269	-15.8	120	-0.01	5.61-	5.67
17 MA	Endrin	0.992	1.152	-16.1	122	-0.01	5.93-	5.99
18 A	4,4'-DDD	0.856	0.999	-16.7	122	-0.01	6.06-	6.12
19 B	Endosulfan II	1.052	1.107	-5.2	117	-0.01	6.25-	6.31
20 MA	4,4'-DDT	0.821	0.930	-13.3	118	-0.01	6.47-	6.53
21 B	Endrin Aldehyde	0.833	0.937	-12.5	120	-0.01	6.88-	6.94
22 B	Endosulfan Sulfate	0.825	0.962	-16.6	124	-0.01	7.56-	7.62
23 A	Methoxychlor	0.490	0.535	-9.2	116	-0.01	7.26-	7.32
24	Mirex	0.833	0.886	-6.4	117	-0.01	7.41-	7.47
25 B	Endrin Ketone	0.981	1.108	-12.9	118	-0.01	8.00-	8.06
26 SA	Decachlorobiphenyl	0.991	1.025	-3.4	114	-0.01	9.81-	9.87

***** Signal #2 *****

1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	-0.01	1.65-	2.65
2 SAB	Tetrachloro-m-xylene	0.931	0.973	-4.5	107	0.00	2.90-	2.96
4 A	alpha-BHC	1.239	1.459	-17.8	117	0.00	3.53-	3.59
5 MA	gamma-BHC	1.162	1.337	-15.1	116	0.00	3.94-	4.00
6 MA	Heptachlor	1.182	1.342	-13.5	116	0.00	4.50-	4.56
7 B	beta-BHC	0.534	0.593	-11.0	115	0.00	4.02-	4.08
8 B	delta-BHC	1.079	1.250	-15.8	118	0.00	4.40-	4.46
9 MB	Aldrin	1.041	1.180	-13.4	115	0.00	4.93-	4.99
11 B	Heptachlor Epoxide	1.006	1.143	-13.6	116	0.00	5.73-	5.79
12 B	gamma-Chlordane	0.986	1.164	-18.1	119	0.00	6.01-	6.07
13 B	alpha-Chlordane	0.960	1.122	-16.9	115	0.00	6.23-	6.29

Initial Calibration Verification

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: G6G1671-ICV1671
Lab FileID: 6G55790.D

14	A	Endosulfan I	0.917	1.067	-16.4	120	0.00	6.32-	6.38
15	B	4,4'-DDE	0.932	1.097	-17.7	118	0.00	6.49-	6.55
16	MA	Dieldrin	0.984	1.136	-15.4	118	0.00	6.75-	6.81
17	MA	Endrin	0.966	1.101	-14.0	120	-0.01	7.24-	7.30
18	A	4,4'-DDD	0.803	0.923	-14.9	120	0.00	7.42-	7.48
19	B	Endosulfan II	0.978	1.021	-4.4	115	0.00	7.58-	7.64
20	MA	4,4'-DDT	0.775	0.887	-14.5	116	-0.01	7.95-	8.01
21	B	Endrin Aldehyde	0.743	0.843	-13.5	118	-0.01	8.15-	8.21
22	B	Endosulfan Sulfate	0.744	0.875	-17.6	122	-0.01	8.61-	8.67
23	A	Methoxychlor	0.440	0.516	-17.3	117	-0.02	9.18-	9.24
24		Mirex	0.746	0.824	-10.5	115	-0.02	9.49-	9.55
25	B	Endrin Ketone	0.985	1.028	-4.4	116	-0.02	9.56-	9.62
26	SA	Decachlorobiphenyl	0.929	0.998	-7.4	115	-0.02	11.69-	11.75

(#) = Out of Range
6g55784.d 6PST1671.M

SPCC's out = 0 CCC's out = 0
Mon Apr 30 17:38:40 2018

10.9.2
10

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G6G1671-ICV1671
 Lab FileID: 6G55791.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G1671\6g55791.d\ECD1A.CH Vial: 14
 Signal #2 : C:\msdchem\1\data\G6G1671\6g55791.d\ECD2B.CH
 Acq On : 30-Apr-18, 14:41:11 Operator: dharas
 Sample : icv1671-500 Inst : GC6G
 Misc : OP11619,g6g1671,1000,,,5,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\msdchem\1\methods\6PST1671.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Mon Apr 30 17:34:19 2018
 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
33 I 1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	-0.02	1.44- 2.44
34 Chlordane {A}	0.054	0.063	-16.7	117	-0.01	3.68- 3.88
35 Chlordane {B}	0.045	0.039	13.3	88	-0.01	4.15- 4.35
36 Chlordane {C}	0.145	0.145	0.0	99	-0.01	4.87- 5.07
37 Chlordane {D}	0.228	0.230	-0.9	101	-0.01	5.04- 5.24
38 Chlordane {E}	0.026	0.028	-7.7	110	-0.01	5.92- 6.12

***** Signal #2 *****

33 I 1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	-0.01	1.65- 2.65
34 Chlordane {A}	0.054	0.064	-18.5	116	0.00	4.43- 4.63
35 Chlordane {B}	0.040	0.036	10.0	89	0.00	5.05- 5.25
36 Chlordane {C}	0.126	0.128	-1.6	100	0.00	5.94- 6.14
37 Chlordane {D}	0.206	0.208	-1.0	100	0.00	6.16- 6.36
38 Chlordane {E}	0.021	0.023	-9.5	108	0.00	7.30- 7.50

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 6g55785.d 6PST1671.M Mon Apr 30 17:38:57 2018

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G6G1671-ICV1671
 Lab FileID: 6G55792.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\G6G1671\6g55792.d\ECD1A.CH Vial: 15
 Acq On : 30-Apr-18, 14:58:58 Operator: dharas
 Sample : icv1671-500 Inst : GC6G
 Misc : OP11619,g6g1671,1000,,,5,1 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\msdchem\1\data\G6G1671\6g55792.d\ECD2B.CH Vial: 0
 Acq On : 30-Apr-18, 14:58:59 Operator: dharas
 Sample : icv1671-500 Inst : GC6G
 Misc : OP11619,g6g1671,1000,,,5,1 Multiplr: 1.00
 IntFile : autoint2.e

Method : C:\msdchem\1\methods\6PST1671.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Mon Apr 30 17:34:19 2018
 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
27 I 1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	-0.02	1.44	2.44
28 L8 Toxaphene{A}	0.016	0.017	-6.3	107	-0.01	5.55	5.75
29 L8 Toxaphene{B}	0.041	0.044	-7.3	108	-0.01	6.17	6.37
30 L8 Toxaphene{C}	0.033	0.035	-6.1	107	0.00	6.35	6.55
31 L8 Toxaphene{D}	0.026	0.026	0.0	103	-0.01	6.69	6.89
32 L8 Toxaphene{E}	0.027	0.029	-7.4	110	-0.01	7.33	7.53

***** Signal #2 *****

27 I 1-bromo-2-nitrobenzene	1.000	1.000	0.0	101	0.00	1.65	2.65
28 L8 Toxaphene{A}	0.019	0.021	-10.5	108	0.00	6.64	6.84
29 L8 Toxaphene{B}	0.025	0.026	-4.0	102	-0.01	7.48	7.68
30 L8 Toxaphene{C}	0.047	0.046	2.1	98	-0.01	7.64	7.84
31 L8 Toxaphene{D}	0.026	0.027	-3.8	104	-0.01	8.08	8.28
32 L8 Toxaphene{E}	0.023	0.024	-4.3	101	-0.02	8.97	9.17

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 6g55785.d 6PST1671.M Mon Apr 30 17:38:59 2018

10.9.4
10

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G6G1671-ICV1671
 Lab FileID: 6G55793.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G1671\6g55793.d\ECD1A.CH Vial: 16
 Signal #2 : C:\msdchem\1\data\G6G1671\6g55793.d\ECD2B.CH
 Acq On : 30-Apr-18, 15:16:44 Operator: dharas
 Sample : icv1671-50 Inst : GC6G
 Misc : OP11619,g6g1671,1000,,,5,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\msdchem\1\methods\6PST1671.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Mon Apr 30 17:34:19 2018
 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	-0.02	1.44	2.44
10	alachlor	0.140	0.155	-10.7	109	-0.01	4.22	4.28

***** Signal #2 *****

1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	98	-0.01	1.65	2.65
10	alachlor	0.138	0.150	-8.7	109	0.00	4.75	4.81

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 6g55785.d 6PST1671.M Mon Apr 30 17:39:01 2018

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G6G1671-ICV1671
 Lab FileID: 6G55794.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G1671\6g55794.d\ECD1A.CH Vial: 17
 Signal #2 : C:\msdchem\1\data\G6G1671\6g55794.d\ECD2B.CH
 Acq On : 30-Apr-18, 15:34:38 Operator: dharas
 Sample : icv1671-50 Inst : GC6G
 Misc : OP11619,g6g1671,1000,,,5,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\msdchem\1\methods\6PST1671.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Mon Apr 30 17:34:19 2018
 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	-0.02	1.44	2.44
3	hexachlorobenzene	1.085	1.076	0.8	102	-0.01	2.83	2.89

***** Signal #2 *****

1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	-0.01	1.65	2.65
3	hexachlorobenzene	1.168	1.139	2.5	99	0.00	3.38	3.44

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 6g55785.d 6PST1671.M Mon Apr 30 17:39:03 2018

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G6G1701-CC1671
 Lab FileID: 6G56977.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G1701\6g56977.d\ECD1A.CH Vial: 4
 Signal #2 : C:\msdchem\1\data\G6G1701\6g56977.d\ECD2B.CH
 Acq On : 06-Jun-18, 09:54:26 Operator: rebeccak
 Sample : cc1671-50 Inst : GC6G
 Misc : OP12431,g6g1701,15.2,,,10,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\msdchem\1\methods\6PST1671.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Wed Jun 06 14:34:42 2018
 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	85	0.00	1.44	2.44
2 SAB	Tetrachloro-m-xylene	0.972	0.970	0.2	84	0.00	2.49	2.55
3	hexachlorobenzene	1.085	1.038	4.3	81	0.00	2.81	2.87
4 A	alpha-BHC	1.338	1.409	-5.3	82	0.00	2.95	3.01
5 MA	gamma-BHC	1.267	1.217	3.9	78	0.00	3.24	3.30
6 MA	Heptachlor	1.197	1.265	-5.7	86	0.00	3.72	3.78
7 B	beta-BHC	0.567	0.503	11.3	76	0.00	3.31	3.37
8 B	delta-BHC	1.117	1.095	2.0	75	0.00	3.49	3.55
9 MB	Aldrin	1.164	1.210	-4.0	83	0.00	4.05	4.11
10	alachlor	0.140	0.142	-1.4	85	0.00	4.18	4.24
11 B	Heptachlor Epoxide	1.076	1.041	3.3	78	0.00	4.74	4.80
12 B	gamma-Chlordane	1.060	1.041	1.8	78	0.00	4.90	4.96
13 B	alpha-Chlordane	1.085	1.053	2.9	81	0.00	5.07	5.13
14 A	Endosulfan I	1.012	1.010	0.2	82	0.00	5.25	5.31
15 B	4,4'-DDE	1.033	1.066	-3.2	82	0.00	5.18	5.24
16 MA	Dieldrin	1.096	1.112	-1.5	81	0.00	5.57	5.63
17 MA	Endrin	0.992	1.079	-8.8	88	0.00	5.89	5.95
18 A	4,4'-DDD	0.856	0.890	-4.0	84	0.00	6.01	6.07
19 B	Endosulfan II	1.052	0.974	7.4	81	0.00	6.20	6.26
20 MA	4,4'-DDT	0.821	0.849	-3.4	83	0.00	6.42	6.48
21 B	Endrin Aldehyde	0.833	0.790	5.2	80	0.00	6.82	6.88
22 B	Endosulfan Sulfate	0.825	0.839	-1.7	85	0.00	7.50	7.56
23 A	Methoxychlor	0.490	0.513	-4.7	90	0.00	7.20	7.26
24	Mirex	0.833	0.768	7.8	83	0.00	7.35	7.41
25 B	Endrin Ketone	0.981	0.960	2.1	81	0.00	7.93	7.99
26 SA	Decachlorobiphenyl	0.991	0.839	15.3	77	0.00	9.74	9.80

***** Signal #2 *****

1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.63	2.63
2 SAB	Tetrachloro-m-xylene	0.931	0.941	-1.1	100	0.00	2.88	2.94
3	hexachlorobenzene	1.168	1.164	0.3	102	0.00	3.36	3.42
4 A	alpha-BHC	1.239	1.309	-5.6	96	0.00	3.50	3.56
5 MA	gamma-BHC	1.162	1.164	-0.2	94	0.00	3.91	3.97
6 MA	Heptachlor	1.182	1.151	2.6	94	0.00	4.46	4.52
7 B	beta-BHC	0.534	0.489	8.4	93	0.00	3.99	4.05
8 B	delta-BHC	1.079	1.042	3.4	90	0.00	4.37	4.43
9 MB	Aldrin	1.041	1.016	2.4	92	0.00	4.89	4.95
10	alachlor	0.138	0.123	10.9	92	0.00	4.71	4.77

10.9.7
10

Continuing Calibration Summary

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: G6G1701-CC1671
Lab FileID: 6G56977.D

11	B	Heptachlor Epoxide	1.006	0.951	5.5	92	0.00	5.68- 5.74
12	B	gamma-Chlordane	0.986	0.950	3.7	92	0.00	5.95- 6.01
13	B	alpha-Chlordane	0.960	1.009	-5.1	100	0.00	6.17- 6.23
14	A	Endosulfan I	0.917	0.878	4.3	94	0.00	6.26- 6.32
15	B	4,4'-DDE	0.932	0.938	-0.6	94	0.00	6.43- 6.49
16	MA	Dieldrin	0.984	0.969	1.5	94	0.00	6.69- 6.75
17	MA	Endrin	0.966	0.949	1.8	97	0.00	7.18- 7.24
18	A	4,4'-DDD	0.803	0.783	2.5	96	0.00	7.36- 7.42
19	B	Endosulfan II	0.978	0.872	10.8	94	0.00	7.52- 7.58
20	MA	4,4'-DDT	0.775	0.726	6.3	89	0.00	7.88- 7.94
21	B	Endrin Aldehyde	0.743	0.691	7.0	94	0.00	8.08- 8.14
22	B	Endosulfan Sulfate	0.744	0.731	1.7	98	0.00	8.54- 8.60
23	A	Methoxychlor	0.440	0.399	9.3	89	0.00	9.11- 9.17
24		Mirex	0.746	0.654	12.3	92	0.00	9.42- 9.48
25	B	Endrin Ketone	0.985	0.847	14.0	93	0.00	9.49- 9.55
26	SA	Decachlorobiphenyl	0.929	0.826	11.1	94	0.00	11.63-11.69

(#) = Out of Range
6g56894.d 6PST1671.M

SPCC's out = 0 CCC's out = 0
Wed Jun 06 16:35:06 2018

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G6G1701-CC1671
 Lab FileID: 6G57000.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\G6G1701\6g57000.d\ECD1A.CH Vial: 2
 Signal #2 : C:\msdchem\1\data\G6G1701\6g57000.d\ECD2B.CH
 Acq On : 06-Jun-18, 23:43:24 Operator: christp
 Sample : cc1671-25 Inst : GC6G
 Misc : OP12508,g6g1701,15.4,,,10,5 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\msdchem\1\methods\6PST1671.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Wed Jun 06 14:34:42 2018
 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	84	0.01	1.45	2.45
2 SAB	Tetrachloro-m-xylene	0.972	1.005	-3.4	91	0.01	2.50	2.56
3	hexachlorobenzene	1.085	1.077	0.7	87	0.00	2.82	2.88
4 A	alpha-BHC	1.338	1.386	-3.6	87	0.00	2.96	3.02
5 MA	gamma-BHC	1.267	1.271	-0.3	87	0.00	3.24	3.30
6 MA	Heptachlor	1.197	1.297	-8.4	93	0.00	3.72	3.78
7 B	beta-BHC	0.567	0.546	3.7	85	0.01	3.32	3.38
8 B	delta-BHC	1.117	1.031	7.7	77	0.00	3.50	3.56
9 MB	Aldrin	1.164	1.235	-6.1	91	0.00	4.05	4.11
10	alachlor	0.140	0.150	-7.1	90	0.00	4.19	4.25
11 B	Heptachlor Epoxide	1.076	1.067	0.8	85	0.00	4.75	4.81
12 B	gamma-Chlordane	1.060	1.069	-0.8	86	0.00	4.91	4.97
13 B	alpha-Chlordane	1.085	1.089	-0.4	88	0.00	5.08	5.14
14 A	Endosulfan I	1.012	1.044	-3.2	90	0.00	5.25	5.31
15 B	4,4'-DDE	1.033	1.071	-3.7	90	0.00	5.19	5.25
16 MA	Dieldrin	1.096	1.137	-3.7	89	0.00	5.57	5.63
17 MA	Endrin	0.992	1.081	-9.0	95	0.00	5.89	5.95
18 A	4,4'-DDD	0.856	0.897	-4.8	91	0.00	6.01	6.07
19 B	Endosulfan II	1.052	1.003	4.7	88	0.00	6.21	6.27
20 MA	4,4'-DDT	0.821	0.792	3.5	83	0.00	6.43	6.49
21 B	Endrin Aldehyde	0.833	0.856	-2.8	91	0.00	6.82	6.88
22 B	Endosulfan Sulfate	0.825	0.798	3.3	85	0.00	7.50	7.56
23 A	Methoxychlor	0.490	0.477	2.7	86	0.00	7.20	7.26
24	Mirex	0.833	0.801	3.8	87	0.00	7.35	7.41
25 B	Endrin Ketone	0.981	0.988	-0.7	87	0.00	7.94	8.00
26 SA	Decachlorobiphenyl	0.991	0.908	8.4	84	0.00	9.74	9.80

***** Signal #2 *****

1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.65	2.65
2 SAB	Tetrachloro-m-xylene	0.931	0.970	-4.2	107	0.00	2.89	2.95
3	hexachlorobenzene	1.168	1.244	-6.5	112	0.00	3.37	3.43
4 A	alpha-BHC	1.239	1.305	-5.3	105	0.00	3.51	3.57
5 MA	gamma-BHC	1.162	1.199	-3.2	105	0.00	3.91	3.97
6 MA	Heptachlor	1.182	1.227	-3.8	107	0.00	4.46	4.52
7 B	beta-BHC	0.534	0.529	0.9	103	0.00	4.00	4.06
8 B	delta-BHC	1.079	0.996	7.7	95	0.00	4.37	4.43
9 MB	Aldrin	1.041	1.107	-6.3	109	0.00	4.89	4.95

10:9.8
10

Continuing Calibration Summary

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: G6G1701-CC1671
Lab FileID: 6G57000.D

10	alachlor	0.138	0.139	-0.7	103	0.00	4.71-	4.77
11 B	Heptachlor Epoxide	1.006	1.036	-3.0	106	0.00	5.68-	5.74
12 B	gamma-Chlordane	0.986	1.034	-4.9	106	0.00	5.96-	6.02
13 B	alpha-Chlordane	0.960	1.024	-6.7	106	0.00	6.17-	6.23
14 A	Endosulfan I	0.917	0.947	-3.3	108	0.00	6.26-	6.32
15 B	4,4'-DDE	0.932	1.009	-8.3	110	0.00	6.43-	6.49
16 MA	Dieldrin	0.984	1.037	-5.4	109	0.00	6.69-	6.75
17 MA	Endrin	0.966	0.993	-2.8	110	0.00	7.18-	7.24
18 A	4,4'-DDD	0.803	0.819	-2.0	107	0.00	7.36-	7.42
19 B	Endosulfan II	0.978	0.939	4.0	107	0.00	7.52-	7.58
20 MA	4,4'-DDT	0.775	0.696	10.2	92	0.00	7.89-	7.95
21 B	Endrin Aldehyde	0.743	0.739	0.5	105	0.00	8.08-	8.14
22 B	Endosulfan Sulfate	0.744	0.721	3.1	101	0.00	8.54-	8.60
23 A	Methoxychlor	0.440	0.399	9.3	92	0.00	9.11-	9.17
24	Mirex	0.746	0.732	1.9	103	0.00	9.42-	9.48
25 B	Endrin Ketone	0.985	0.884	10.3	101	0.00	9.49-	9.55
26 SA	Decachlorobiphenyl	0.929	0.882	5.1	102	0.00	11.62-	11.68

(#) = Out of Range
6g55784.d 6PST1671.M

SPCC's out = 0 CCC's out = 0
Thu Jun 07 15:24:53 2018

10.9.8
10

Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G8G511-ICC511
 Lab FileID: 8G15811.D

Response Factor Report GC8G

Method : C:\MSDCHEM\1\METHODS\8PST511.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration

Calibration Files

2 =8g15808.d 5 =8g15809.d 10 =8g15810.d 25 =8g15811.d
 50 =8g15812.d 100 =8g15814.d 1 =8g15807.d 75 =8g15813.d

Compound	2	5	10	25	50	100	1	75	Avg	%RSD
1) I 1-bromo-2-nitrobenzen -----ISTD-----										
2) Tetrachloro-	0.975	0.927	0.924	0.973	1.090	1.092	1.124	1.029	1.017	7.69
3) hexachlorobe	1.415	1.331	1.306	1.334	1.456	1.411	1.500	1.348	1.387	4.94
4) alpha-BHC	1.059	1.044	1.057	1.258	1.508	1.603	1.198	1.472	1.275	17.65
5) gamma-BHC	1.132	1.050	1.058	1.209	1.421	1.476	1.253	1.367	1.246	13.10
6) Heptachlor	1.306	1.224	1.201	1.327	1.515	1.548	1.441	1.446	1.376	9.48
7) beta-BHC	0.617	0.584	0.560	0.584	0.639	0.623	0.670	0.592	0.609	5.85
8) delta-BHC	0.888	0.869	0.873	1.052	1.255	1.328	0.971	1.213	1.056	17.60
9) Aldrin	1.018	1.029	1.045	1.169	1.371	1.432	1.120	1.330	1.189	13.99
10)alachlor		0.181	0.180	0.169	0.177	0.162		0.159	0.171	5.43
11) Heptachlor E	1.101	1.089	1.070	1.113	1.312	1.330	1.264	1.247	1.191	9.06
12) gamma-Chlord	1.060	1.077	1.063	1.122	1.344	1.382	1.157	1.288	1.186	11.11
13) alpha-Chlord	1.057	1.114	1.085	1.119	1.318	1.346	1.104	1.255	1.175	9.65
14) Endosulfan I	0.960	0.980	0.943	1.013	1.195	1.216	1.214	1.138	1.082	11.08
15) 4,4'-DDE	0.971	0.975	0.966	1.058	1.288	1.348	1.164	1.247	1.127	13.80
16) Dieldrin	1.018	1.011	1.002	1.078	1.309	1.363	1.069	1.263	1.139	12.98
17) Endrin	0.971	0.951	0.923	0.980	1.170	1.216	1.017	1.129	1.045	10.61
18) 4,4'-DDD	0.810	0.804	0.788	0.837	1.021	1.061	0.834	0.982	0.892	12.34
19) Endosulfan I	1.184	1.042	0.986	1.008	1.173	1.182	1.399	1.109	1.135	11.69
20) 4,4'-DDT	0.852	0.832	0.825	0.900	1.091	1.136	0.821	1.053	0.939	14.09
21) Endrin Aldeh	0.950	0.873	0.875	0.855	0.989	0.966	1.118	0.916	0.943	9.06
22) Endosulfan S	0.884	0.835	0.822	0.840	0.973	0.955	0.919	0.897	0.891	6.33
23) Methoxychlor	0.595	0.593	0.594	0.575	0.650	0.623	0.647	0.598	0.609	4.50
24) Mirex	1.030	1.003	1.015	0.936	1.037	0.983	1.172	0.942	1.015	7.29
25) Endrin Keton	1.010	0.986	0.998	1.015	1.195	1.183	1.109	1.106	1.075	7.83
26) Decachlorobi	1.283	1.237	1.275	1.207	1.260	1.216	1.400	1.149	1.253	5.83
27) I 1-bromo-2-nitrobenzen -----ISTD-----										
28) Toxaphene{A}					0.017			0.017		0.00
29) Toxaphene{B}					0.046			0.046		0.00
30) Toxaphene{C}					0.034			0.034		0.00
31) Toxaphene{D}					0.025			0.025		0.00
32) Toxaphene{E}					0.029			0.029		0.00
33) I 1-bromo-2-nitrobenzen -----ISTD-----										
34) Chlordane {A}					0.074			0.074		0.00
35) Chlordane {B}					0.045			0.045		0.00
36) Chlordane {C}					0.167			0.167		0.00
37) Chlordane {D}					0.264			0.264		0.00
38) Chlordane {E}					0.036			0.036		0.00

Signal #2

1) I 1-bromo-2-nitrobenzen -----ISTD-----										
2) Tetrachloro-	0.947	0.971	0.966	0.985	1.088	1.037	1.018	1.013	1.003	4.55

10.9.9
10

Initial Calibration Summary

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: G8G511-ICC511
Lab FileID: 8G15811.D

3)	hexachlorobe	1.280	1.143	1.140	1.130	1.233	1.159	1.321	1.141	1.193	6.22
4)	alpha-BHC	1.221	1.211	1.238	1.357	1.562	1.549	1.279	1.496	1.364	11.01
5)	gamma-BHC	1.170	1.139	1.156	1.258	1.431	1.404	1.215	1.359	1.267	9.20
6)	Heptachlor	1.242	1.223	1.218	1.271	1.421	1.394	1.322	1.345	1.305	5.99
7)	beta-BHC	0.623	0.619	0.599	0.589	0.636	0.599	0.697	0.589	0.619	5.77
8)	delta-BHC	0.990	0.975	0.998	1.107	1.275	1.266	1.169	1.217	1.125	11.14
9)	Aldrin	1.078	1.068	1.074	1.140	1.300	1.284	1.207	1.242	1.174	8.22
10)	alachlor		0.176	0.169	0.164	0.174	0.158		0.159	0.167	4.41
11)	Heptachlor E	1.064	1.032	1.036	1.067	1.188	1.170	1.194	1.136	1.111	6.17
12)	gamma-Chlord	1.088	1.060	1.050	1.070	1.196	1.171	1.303	1.134	1.134	7.63
13)	alpha-Chlord	1.065	1.034	1.031	1.045	1.156	1.122	1.122	1.089	1.083	4.33
14)	Endosulfan I	0.973	0.943	0.939	0.971	1.076	1.048	1.083	1.019	1.007	5.73
15)	4,4'-DDE	0.935	0.939	0.953	0.999	1.137	1.132	1.066	1.092	1.032	8.29
16)	Dieldrin	0.971	0.939	0.966	1.035	1.183	1.168	1.051	1.124	1.055	8.98
17)	Endrin	0.847	0.877	0.878	0.927	1.037	1.030	0.928	0.975	0.937	7.58
18)	4,4'-DDD	0.774	0.757	0.770	0.804	0.903	0.891	0.889	0.848	0.830	7.28
19)	Endosulfan I	0.963	0.919	0.897	0.917	1.000	0.967	1.082	0.922	0.958	6.30
20)	4,4'-DDT	0.736	0.717	0.754	0.793	0.876	0.870	0.957	0.830	0.817	10.07
21)	Endrin Aldeh	0.734	0.739	0.761	0.758	0.825	0.788	0.852	0.771	0.779	5.31
22)	Endosulfan S	0.689	0.698	0.693	0.725	0.801	0.771	0.743	0.751	0.734	5.47
23)	Methoxychlor	0.413	0.434	0.438	0.441	0.472	0.451	0.496	0.444	0.449	5.65
24)	Mirex	0.620	0.605	0.613	0.584	0.620	0.588	0.702	0.574	0.613	6.51
25)	Endrin Keton	0.809	0.785	0.798	0.804	0.885	0.863	0.753	0.843	0.817	5.27
26)	Decachlorobi	0.805	0.705	0.671	0.659	0.691	0.652	0.820	0.648	0.706	9.66
27)	I 1-bromo-2-nitrobenzen	-----ISTD-----									
28)	Toxaphene{A}					0.016			0.016	0.00	
29)	Toxaphene{B}					0.020			0.020	0.00	
30)	Toxaphene{C}					0.039			0.039	0.00	
31)	Toxaphene{D}					0.023			0.023	0.00	
32)	Toxaphene{E}					0.020			0.020	0.00	
33)	I 1-bromo-2-nitrobenzen	-----ISTD-----									
34)	Chlordane {A}					0.072			0.072	0.00	
35)	Chlordane {B}					0.040			0.040	0.00	
36)	Chlordane {C}					0.136			0.136	0.00	
37)	Chlordane {D}					0.220			0.220	0.00	
38)	Chlordane {E}					0.030			0.030	0.00	

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

8PST511.M

Tue Jun 12 07:31:11 2018

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G8G511-ICV511
 Lab FileID: 8G15817.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\8G511\8g15817.d\ECD1A.ch Vial: 13
 Signal #2 : C:\msdchem\1\data\8G511\8g15817.d\ECD2B.ch
 Acq On : 11 Jun 2018 2:41 pm Operator: dharas
 Sample : icv511-25 Inst : GC8G
 Misc : opl2386,g8g511,15.1,,,10,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\8PST511.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Mon Jun 11 14:59:42 2018
 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 : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.00	1.37-	2.37
2 SAB	Tetrachloro-m-xylene	1.017	0.907	10.8	92	0.00	2.60-	2.66
4 A	alpha-BHC	1.275	1.221	4.2	96	0.00	3.17-	3.24
5 MA	gamma-BHC	1.246	1.159	7.0	95	0.00	3.53-	3.59
6 MA	Heptachlor	1.376	1.290	6.2	96	0.00	4.10-	4.16
7 B	beta-BHC	0.609	0.573	5.9	97	0.00	3.61-	3.67
8 B	delta-BHC	1.056	0.999	5.4	94	0.00	3.83-	3.89
9 MB	Aldrin	1.189	1.130	5.0	96	0.00	4.49-	4.55
11 B	Heptachlor Epoxide	1.191	1.113	6.5	99	0.00	5.31-	5.37
12 B	gamma-Chlordane	1.186	1.149	3.1	101	0.00	5.49-	5.55
13 B	alpha-Chlordane	1.175	1.139	3.1	101	0.00	5.69-	5.75
14 A	Endosulfan I	1.082	1.044	3.5	102	0.00	5.89-	5.95
15 B	4,4'-DDE	1.127	1.077	4.4	101	0.00	5.81-	5.87
16 MA	Dieldrin	1.139	1.076	5.5	99	0.00	6.26-	6.32
17 MA	Endrin	1.045	0.999	4.4	101	0.00	6.62-	6.68
18 A	4,4'-DDD	0.892	0.855	4.1	101	0.00	6.74-	6.80
19 B	Endosulfan II	1.135	0.991	12.7	97	0.00	6.98-	7.04
20 MA	4,4'-DDT	0.939	0.880	6.3	97	0.00	7.21-	7.27
21 B	Endrin Aldehyde	0.943	0.864	8.4	100	0.00	7.69-	7.75
22 B	Endosulfan Sulfate	0.891	0.866	2.8	102	0.00	8.46-	8.52
23 A	Methoxychlor	0.609	0.571	6.2	98	0.00	8.08-	8.14
24	Mirex	1.015	0.945	6.9	100	0.00	8.28-	8.34
25 B	Endrin Ketone	1.075	1.014	5.7	99	0.00	8.95-	9.01
26 SA	Decachlorobiphenyl	1.253	1.215	3.0	100	0.00	10.89-	10.95

***** Signal #2 *****

1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	102	0.00	1.76-	2.76
2 SAB	Tetrachloro-m-xylene	1.003	0.924	7.9	95	0.00	3.26-	3.32
4 A	alpha-BHC	1.364	1.354	0.7	101	0.00	4.06-	4.12
5 MA	gamma-BHC	1.267	1.242	2.0	100	0.00	4.57-	4.63
6 MA	Heptachlor	1.305	1.258	3.6	101	0.00	5.24-	5.30
7 B	beta-BHC	0.619	0.591	4.5	102	0.00	4.66-	4.72
8 B	delta-BHC	1.125	1.089	3.2	100	0.00	5.13-	5.19
9 MB	Aldrin	1.174	1.134	3.4	101	0.00	5.77-	5.83
11 B	Heptachlor Epoxide	1.111	1.074	3.3	102	0.00	6.72-	6.78
12 B	gamma-Chlordane	1.134	1.089	4.0	103	0.00	7.04-	7.10
13 B	alpha-Chlordane	1.083	1.048	3.2	102	0.00	7.29-	7.35

Initial Calibration Verification

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: G8G511-ICV511
Lab FileID: 8G15817.D

14	A	Endosulfan I	1.007	0.995	1.2	104	0.00	7.41- 7.47
15	B	4,4'-DDE	1.032	1.014	1.7	103	0.00	7.58- 7.64
16	MA	Dieldrin	1.055	1.032	2.2	101	0.00	7.91- 7.97
17	MA	Endrin	0.937	0.948	-1.2	104	0.00	8.48- 8.54
18	A	4,4'-DDD	0.830	0.816	1.7	103	0.00	8.64- 8.70
19	B	Endosulfan II	0.958	0.896	6.5	99	0.00	8.87- 8.93
20	MA	4,4'-DDT	0.817	0.774	5.3	99	0.00	9.24- 9.30
21	B	Endrin Aldehyde	0.779	0.756	3.0	101	0.00	9.50- 9.56
22	B	Endosulfan Sulfate	0.734	0.745	-1.5	104	0.00	10.02-10.08
23	A	Methoxychlor	0.449	0.434	3.3	100	0.00	10.58-10.64
24		Mirex	0.613	0.598	2.4	104	0.00	11.02-11.08
25	B	Endrin Ketone	0.817	0.802	1.8	101	0.00	11.07-11.13
26	SA	Decachlorobiphenyl	0.706	0.641	9.2	99	0.00	13.28-13.34

(#) = Out of Range
8g15811.d 8PST511.M

SPCC's out = 0 CCC's out = 0
Tue Jun 12 07:24:54 2018

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G8G511-ICV511
 Lab FileID: 8G15818.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\8G511\8g15818.d\ECD1A.ch Vial: 14
 Signal #2 : C:\msdchem\1\data\8G511\8g15818.d\ECD2B.ch
 Acq On : 11 Jun 2018 2:57 pm Operator: dharas
 Sample : icv511-500 Inst : GC8G
 Misc : op12386,g8g511,15.1,,,10,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\8PST511.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Mon Jun 11 14:59:42 2018
 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 : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	111	0.00	1.37-	2.37
2 SAB	Tetrachloro-m-xylene	1.017	0.897	11.8	91	0.00	2.60-	2.66
26 SA	Decachlorobiphenyl	1.253	1.141	8.9	100	0.00	10.89-	10.95
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	104	0.01	1.37-	2.37
34	Chlordane {A}	0.074	0.069	6.8	98	0.00	4.03-	4.23
35	Chlordane {B}	0.045	0.042	6.7	96	0.00	4.59-	4.79
36	Chlordane {C}	0.167	0.150	10.2	94	0.00	5.42-	5.62
37	Chlordane {D}	0.264	0.240	9.1	95	0.00	5.61-	5.81
38	Chlordane {E}	0.036	0.032	11.1	92	0.00	6.81-	7.01

***** Signal #2 *****

1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	109	0.00	1.76-	2.76
2 SAB	Tetrachloro-m-xylene	1.003	0.898	10.5	90	0.00	3.26-	3.32
26 SA	Decachlorobiphenyl	0.706	0.621	12.0	98	0.00	13.28-	13.34
33 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00	1.76-	2.76
34	Chlordane {A}	0.072	0.069	4.2	95	0.00	5.17-	5.37
35	Chlordane {B}	0.040	0.038	5.0	95	0.00	5.92-	6.12
36	Chlordane {C}	0.136	0.130	4.4	96	0.00	6.97-	7.17
37	Chlordane {D}	0.220	0.213	3.2	97	0.00	7.22-	7.42
38	Chlordane {E}	0.030	0.029	3.3	97	0.00	8.89-	9.09

(#) = Out of Range
 8g15812.d 8PST511.M

SPCC's out = 0 CCC's out = 0
 Tue Jun 12 07:25:20 2018

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G8G511-ICV511
 Lab FileID: 8G15819.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\8G511\8g15819.d\ECD1A.ch Vial: 15
 Signal #2 : C:\msdchem\1\data\8G511\8g15819.d\ECD2B.ch
 Acq On : 11 Jun 2018 3:13 pm Operator: dharas
 Sample : icv511-500 Inst : GC8G
 Misc : opl2386,g8g511,15.1,,,10,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\8PST511.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Mon Jun 11 14:59:42 2018
 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 : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	106	0.02	1.38- 2.38
2 SAB	Tetrachloro-m-xylene	1.017	0.900	11.5	88	0.01	2.60- 2.66
26 SA	Decachlorobiphenyl	1.253	1.198	4.4	101	0.00	10.89-10.95
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	95	0.00	1.38- 2.38
28 L8	Toxaphene{A}	0.017	0.014	17.6	80	0.00	6.20- 6.40
29 L8	Toxaphene{B}	0.046	0.046	0.0	95	0.00	6.90- 7.10
30 L8	Toxaphene{C}	0.034	0.035	-2.9	95	0.00	7.10- 7.30
31 L8	Toxaphene{D}	0.025	0.026	-4.0	97	0.00	7.48- 7.68
32 L8	Toxaphene{E}	0.029	0.030	-3.4	97	0.00	8.21- 8.41

***** Signal #2 *****

1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	111	0.01	1.77- 2.77
2 SAB	Tetrachloro-m-xylene	1.003	0.910	9.3	93	0.00	3.26- 3.32
26 SA	Decachlorobiphenyl	0.706	0.614	13.0	99	0.00	13.28-13.34
27 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.00	1.77- 2.77
28 L8	Toxaphene{A}	0.016	0.016	0.0	100	0.00	7.79- 7.99
29 L8	Toxaphene{B}	0.020	0.020	0.0	97	0.00	8.76- 8.96
30 L8	Toxaphene{C}	0.039	0.038	2.6	97	0.00	8.94- 9.14
31 L8	Toxaphene{D}	0.023	0.022	4.3	96	0.00	9.43- 9.63
32 L8	Toxaphene{E}	0.020	0.018	10.0	90	0.00	10.43-10.63

(#) = Out of Range
 8g15812.d 8PST511.M

SPCC's out = 0 CCC's out = 0
 Tue Jun 12 07:25:22 2018

10.9.12
 10

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G8G511-ICV511
 Lab FileID: 8G15820.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\8G511\8g15820.d\ECD1A.ch Vial: 16
 Signal #2 : C:\msdchem\1\data\8G511\8g15820.d\ECD2B.ch
 Acq On : 11 Jun 2018 3:30 pm Operator: dharas
 Sample : icv511-50 Inst : GC8G
 Misc : op12386,g8g511,15.1,,,10,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\8PST511.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Mon Jun 11 14:59:42 2018
 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 : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	111	0.01	1.37-	2.37
10	alachlor	0.171	0.170	0.6	107	0.00	4.66-	4.72

***** Signal #2 *****

1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	112	0.00	1.76-	2.76
10	alachlor	0.167	0.164	1.8	105	0.00	5.54-	5.60

(#) = Out of Range
 8g15812.d 8PST511.M

SPCC's out = 0 CCC's out = 0
 Tue Jun 12 07:25:24 2018

10.9.13
10

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G8G511-ICV511
 Lab FileID: 8G15821.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\8G511\8g15821.d\ECD1A.ch Vial: 17
 Signal #2 : C:\msdchem\1\data\8G511\8g15821.d\ECD2B.ch
 Acq On : 11 Jun 2018 3:46 pm Operator: dharas
 Sample : icv511-50 Inst : GC8G
 Misc : op12386,g8g511,15.1,,,10,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\8PST511.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Mon Jun 11 14:59:42 2018
 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 : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	115	0.01	1.37-	2.37
3	hexachlorobenzene	1.387	1.331	4.0	105	0.00	3.00-	3.06

***** Signal #2 *****

1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	110	0.01	1.77-	2.77
3	hexachlorobenzene	1.193	1.160	2.8	104	0.00	3.87-	3.93

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 8g15812.d 8PST511.M Tue Jun 12 07:25:26 2018

10.9.14
10

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: G8G513-CC511
 Lab FileID: 8G15833.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\data\8G513\8g15833.d\ECD1A.ch Vial: 4
 Signal #2 : C:\msdchem\1\data\8G513\8g15833.d\ECD2B.ch
 Acq On : 12 Jun 2018 8:47 am Operator: dharas
 Sample : cc511-50 Inst : GC8G
 Misc : opl2466,g8g513,15.0,,,10,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\8PST511.M (ChemStation Integrator)
 Title : PEST/PCB
 Last Update : Mon Jun 11 14:59:42 2018
 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 : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.02	1.38	2.38
2 SAB	Tetrachloro-m-xylene	1.017	1.108	-8.9	101	0.02	2.61	2.67
3	hexachlorobenzene	1.387	1.474	-6.3	100	0.01	3.01	3.07
4 A	alpha-BHC	1.275	1.551	-21.6#	102	0.01	3.18	3.24
5 MA	gamma-BHC	1.246	1.458	-17.0	102	0.00	3.53	3.59
6 MA	Heptachlor	1.376	1.546	-12.4	101	0.00	4.11	4.17
7 B	beta-BHC	0.609	0.630	-3.4	98	0.00	3.62	3.68
8 B	delta-BHC	1.056	1.268	-20.1#	100	0.00	3.83	3.89
9 MB	Aldrin	1.189	1.430	-20.3#	103	0.00	4.50	4.56
10	alachlor	0.171	0.174	-1.8	98	0.00	4.66	4.72
11 B	Heptachlor Epoxide	1.191	1.267	-6.4	96	0.00	5.31	5.37
12 B	gamma-Chlordane	1.186	1.259	-6.2	93	0.00	5.50	5.56
13 B	alpha-Chlordane	1.175	1.290	-9.8	97	0.00	5.69	5.75
14 A	Endosulfan I	1.082	1.197	-10.6	99	0.00	5.89	5.95
15 B	4,4'-DDE	1.127	1.270	-12.7	98	0.00	5.81	5.87
16 MA	Dieldrin	1.139	1.298	-14.0	98	0.00	6.26	6.32
17 MA	Endrin	1.045	1.208	-15.6	102	0.00	6.63	6.69
18 A	4,4'-DDD	0.892	1.017	-14.0	99	0.00	6.75	6.81
19 B	Endosulfan II	1.135	1.143	-0.7	97	0.00	6.99	7.05
20 MA	4,4'-DDT	0.939	1.089	-16.0	99	0.00	7.22	7.28
21 B	Endrin Aldehyde	0.943	0.932	1.2	94	0.00	7.69	7.75
22 B	Endosulfan Sulfate	0.891	0.997	-11.9	102	0.00	8.46	8.52
23 A	Methoxychlor	0.609	0.632	-3.8	96	0.00	8.08	8.14
24	Mirex	1.015	0.974	4.0	93	0.00	8.29	8.35
25 B	Endrin Ketone	1.075	1.184	-10.1	98	0.00	8.95	9.01
26 SA	Decachlorobiphenyl	1.253	1.231	1.8	97	0.00	10.89	10.95

***** Signal #2 *****

1 I	1-bromo-2-nitrobenzene	1.000	1.000	0.0	99	0.02	1.77	2.77
2 SAB	Tetrachloro-m-xylene	1.003	1.108	-10.5	101	0.01	3.26	3.32
3	hexachlorobenzene	1.193	1.257	-5.4	101	0.00	3.88	3.94
4 A	alpha-BHC	1.364	1.603	-17.5	102	0.00	4.06	4.12
5 MA	gamma-BHC	1.267	1.471	-16.1	102	0.00	4.57	4.63
6 MA	Heptachlor	1.305	1.504	-15.2	105	0.00	5.24	5.30
7 B	beta-BHC	0.619	0.638	-3.1	99	0.00	4.66	4.72
8 B	delta-BHC	1.125	1.333	-18.5	103	0.00	5.13	5.19
9 MB	Aldrin	1.174	1.360	-15.8	103	0.00	5.77	5.83

10.9.15 10

Continuing Calibration Summary

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: G8G513-CC511
Lab FileID: 8G15833.D

10	alachlor	0.167	0.177	-6.0	100	0.00	5.54- 5.60
11 B	Heptachlor Epoxide	1.111	1.255	-13.0	104	0.00	6.72- 6.78
12 B	gamma-Chlordane	1.134	1.249	-10.1	103	0.00	7.04- 7.10
13 B	alpha-Chlordane	1.083	1.191	-10.0	102	0.00	7.29- 7.35
14 A	Endosulfan I	1.007	1.123	-11.5	103	0.00	7.41- 7.47
15 B	4,4'-DDE	1.032	1.171	-13.5	102	0.00	7.57- 7.63
16 MA	Dieldrin	1.055	1.216	-15.3	102	0.00	7.90- 7.96
17 MA	Endrin	0.937	1.123	-19.9	107	0.00	8.48- 8.54
18 A	4,4'-DDD	0.830	0.933	-12.4	102	0.00	8.64- 8.70
19 B	Endosulfan II	0.958	1.038	-8.4	103	0.00	8.86- 8.92
20 MA	4,4'-DDT	0.817	0.951	-16.4	107	0.00	9.24- 9.30
21 B	Endrin Aldehyde	0.779	0.839	-7.7	101	0.00	9.50- 9.56
22 B	Endosulfan Sulfate	0.734	0.860	-17.2	106	0.00	10.02-10.08
23 A	Methoxychlor	0.449	0.501	-11.6	105	0.00	10.58-10.64
24	Mirex	0.613	0.677	-10.4	108	0.00	11.01-11.07
25 B	Endrin Ketone	0.817	0.966	-18.2	108	0.00	11.07-11.13
26 SA	Decachlorobiphenyl	0.706	0.739	-4.7	106	0.00	13.28-13.34

(#) = Out of Range
8g15812.d 8PST511.M

SPCC's out = 0 CCC's out = 0
Wed Jun 13 08:29:42 2018

10.9.15
10

Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: GXX6349-ICC6349
 Lab FileID: XX228516.D

Response Factor Report HP G1530A

Method : C:\MSDCHEM\1\METHODS\PCB6349.M (Chemstation Integrator)
 Title :
 Last Update : Tue May 15 08:36:20 2018
 Response via : Initial Calibration

Calibration Files

50 =xx228513.D 250 =xx228514.D 500 =xx228515.D 1000=xx228516.D
 2000 =xx228517.D 3000 =xx228518.D

Compound	50	250	500	1000	2000	3000	Avg	%RSD
1) S Tetrachloro-m-xylen	1.055	1.057	1.088	1.107	1.074	1.080	1.077	E7 1.83
2) AR1221-A				6.419			6.419	E4 0.00
3) AR1221-B				1.204			1.204	E5 0.00
4) AR1221-C				3.668			3.668	E5 0.00
5) AR1221-D				3.710			3.710	E4 0.00
6) AR1221-E				5.651			5.651	E4 0.00
7) AR1232-A				2.845			2.845	E5 0.00
8) AR1232-B				1.683			1.683	E5 0.00
9) AR1232-C				3.779			3.779	E5 0.00
10) AR1232-D				1.393			1.393	E5 0.00
11) AR1232-E				1.323			1.323	E5 0.00
12) AR1242-A				3.124			3.124	E5 0.00
13) AR1242-B				7.258			7.258	E5 0.00
14) AR1242-C				2.685			2.685	E5 0.00
15) AR1242-D				2.912			2.912	E5 0.00
16) AR1242-E				3.366			3.366	E5 0.00
17) AR1248-A				1.541			1.541	E5 0.00
18) AR1248-B				4.599			4.599	E5 0.00
19) AR1248-C				4.140			4.140	E5 0.00
20) AR1248-D				4.269			4.269	E5 0.00
21) AR1248-E				4.051			4.051	E5 0.00
22) AR1248-F				4.794			4.794	E5 0.00
23) AR1248-G				6.886			6.886	E5 0.00
24) AR1254-A				3.573			3.573	E5 0.00
25) AR1254-B				4.609			4.609	E5 0.00
26) AR1254-C				3.698			3.698	E5 0.00
27) AR1254-D				7.314			7.314	E5 0.00
28) AR1254-E				5.369			5.369	E5 0.00
29) AR1254-F				4.836			4.836	E5 0.00
30) AR1254-G				6.995			6.995	E5 0.00
31) AR1262-A				4.858			4.858	E5 0.00
32) AR1262-B				7.046			7.046	E5 0.00
33) AR1262-C				6.212			6.212	E5 0.00
34) AR1262-D				1.638			1.638	E6 0.00
35) AR1262-E				1.784			1.784	E6 0.00
36) AR1268-A				1.767			1.767	E6 0.00
37) AR1268-B				2.042			2.042	E6 0.00
38) AR1268-C				1.624			1.624	E6 0.00
39) AR1268-D				6.389			6.389	E5 0.00
40) AR1268-E				5.472			5.472	E6 0.00
41) AR1016-A	1.898	1.891	1.975	1.980	1.894	1.858	1.916	E5 2.59
42) AR1016-B	3.894	3.591	3.602	3.568	3.413	3.369	3.573	E5 5.18
43) AR1016-C	8.847	8.175	8.405	8.422	8.258	8.288	8.399	E5 2.84
44) AR1016-D	3.211	3.054	3.133	3.098	2.989	2.974	3.076	E5 2.92
45) AR1016-E	3.228	3.151	3.264	3.212	3.143	3.148	3.191	E5 1.58
46) AR1260-A	9.786	9.295	8.871	9.012	9.926	9.998	9.481	E5 5.14
47) AR1260-B	4.326	3.965	4.539	4.621	4.034	4.010	4.249	E5 6.75

10.9.16 10

Initial Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: GXX6349-ICC6349
 Lab FileID: XX228516.D

48)	AR1260-C	4.143	4.004	4.604	4.714	4.295	4.324	4.347	E5	6.20
49)	AR1260-D	1.095	1.093	1.299	1.378	1.248	1.270	1.230	E6	9.30
50)	AR1260-E	1.199	1.093	1.235	1.261	1.120	1.144	1.175	E6	5.69
51) S	Decachlorobiphenyl	1.298	1.210	1.259	1.246	1.240	1.259	1.252	E7	2.31

Signal #2

1) S	Tetrachloro-m-xylen	0.961	0.923	1.043	1.047	1.020	1.030	1.004	E7	5.02
2)	AR1221-A				6.072			6.072	E4	0.00
3)	AR1221-B				1.079			1.079	E5	0.00
4)	AR1221-C				2.810			2.810	E5	0.00
5)	AR1221-D				5.023			5.023	E4	0.00
6)	AR1221-E				3.613			3.613	E4	0.00
7)	AR1232-A				2.181			2.181	E5	0.00
8)	AR1232-B				1.633			1.633	E5	0.00
9)	AR1232-C				3.614			3.614	E5	0.00
10)	AR1232-D				1.518			1.518	E5	0.00
11)	AR1232-E				9.660			9.660	E4	0.00
12)	AR1242-A				2.916			2.916	E5	0.00
13)	AR1242-B				6.634			6.634	E5	0.00
14)	AR1242-C				2.777			2.777	E5	0.00
15)	AR1242-D				1.994			1.994	E5	0.00
16)	AR1242-E				2.624			2.624	E5	0.00
17)	AR1248-A				1.503			1.503	E5	0.00
18)	AR1248-B				4.211			4.211	E5	0.00
19)	AR1248-C				2.289			2.289	E5	0.00
20)	AR1248-D				3.080			3.080	E5	0.00
21)	AR1248-E				3.575			3.575	E5	0.00
22)	AR1248-F				4.389			4.389	E5	0.00
23)	AR1248-G				3.989			3.989	E5	0.00
24)	AR1254-A				3.757			3.757	E5	0.00
25)	AR1254-B				4.145			4.145	E5	0.00
26)	AR1254-C				3.434			3.434	E5	0.00
27)	AR1254-D				7.049			7.049	E5	0.00
28)	AR1254-E				5.449			5.449	E5	0.00
29)	AR1254-F				5.559			5.559	E5	0.00
30)	AR1254-G				7.164			7.164	E5	0.00
31)	AR1262-A				5.541			5.541	E5	0.00
32)	AR1262-B				9.113			9.113	E5	0.00
33)	AR1262-C				6.838			6.838	E5	0.00
34)	AR1262-D				1.738			1.738	E6	0.00
35)	AR1262-E				1.865			1.865	E6	0.00
36)	AR1268-A				2.072			2.072	E6	0.00
37)	AR1268-B				1.918			1.918	E6	0.00
38)	AR1268-C				1.645			1.645	E6	0.00
39)	AR1268-D				6.608			6.608	E5	0.00
40)	AR1268-E				4.781			4.781	E6	0.00
41)	AR1016-A	1.821	1.574	1.726	1.686	1.625	1.570	1.667	E5	5.85
42)	AR1016-B	3.617	3.329	3.346	3.270	3.100	3.046	3.285	E5	6.20
43)	AR1016-C	7.952	7.405	7.645	7.536	7.374	7.404	7.553	E5	2.92
44)	AR1016-D	3.464	3.148	3.185	3.113	2.981	2.964	3.142	E5	5.76
45)	AR1016-E	2.361	2.114	2.225	2.205	2.153	2.155	2.202	E5	3.97
46)	AR1260-A	1.170	0.974	0.914	0.912	0.987	0.995	0.992	E6	9.52
47)	AR1260-B	6.223	5.197	5.822	5.758	5.066	5.078	5.524	E5	8.67
48)	AR1260-C	5.195	4.910	5.268	5.267	4.886	4.917	5.074	E5	3.70
49)	AR1260-D	1.301	1.233	1.415	1.449	1.310	1.309	1.336	E6	6.00
50)	AR1260-E	1.186	1.136	1.275	1.279	1.147	1.161	1.197	E6	5.35
51) S	Decachlorobiphenyl	1.298	1.129	1.136	1.108	1.087	1.104	1.144	E7	6.79

(#) = Out of Range

10.9.16 10

Initial Calibration Summary

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: GXX6349-ICC6349
Lab FileID: XX228516.D

PCB6349.M

Tue May 15 08:44:53 2018

10.9.16

10

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: GXX6349-ICV6349
 Lab FileID: XX228523.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\gx...9\xx228523.D\ECD1A.CH Vial: 16
 Signal #2 : C:\msdchem\1\DATA\gx6349\xx228523.D\ECD2B.CH
 Acq On : 14 May 2018 7:55 pm Operator: rebeccak
 Sample : icv6349-1000 Inst : HP G1530A
 Misc : op11947,GXX6349,1.0,,,1,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\PCB6349.M (Chemstation Integrator)
 Title :
 Last Update : Tue May 15 08:36:20 2018
 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	10.770	11.667 E6	-8.3	105	0.00	2.77-	2.83
41	AR1016-A	191.609	192.916 E3	-0.7	97	0.00	3.14-	3.20
42	AR1016-B	357.258	378.181 E3	-5.9	106	0.00	3.52-	3.58
43	AR1016-C	839.914	886.117 E3	-5.5	105	0.00	4.07-	4.13
44	AR1016-D	307.649	327.530 E3	-6.5	106	0.00	4.24-	4.30
45	AR1016-E	319.093	336.218 E3	-5.4	105	0.00	4.72-	4.79
46	AR1260-A	948.136	950.486 E3	-0.2	105	0.00	7.07-	7.13
47	AR1260-B	424.911	435.415 E3	-2.5	94	0.00	7.23-	7.29
48	AR1260-C	434.730	452.194 E3	-4.0	96	0.00	7.56-	7.63
49	AR1260-D	1.230	1.312 E6	-6.7	95	0.00	7.99-	8.05
50	AR1260-E	1.175	1.192 E6	-1.4	95	0.00	8.39-	8.45
51 S	Decachlorobiphenyl	12.518	12.294 E6	1.8	99	0.00	9.91-	9.98

***** Signal #2 *****

1 S	Tetrachloro-m-xylene	10.040	11.429 E6	-13.8	109	0.00	3.50-	3.56
41	AR1016-A	166.712	178.281 E3	-6.9	106	0.00	4.16-	4.22
42	AR1016-B	328.484	354.245 E3	-7.8	108	0.00	4.71-	4.77
43	AR1016-C	755.277	820.580 E3	-8.6	109	0.00	5.35-	5.41
44	AR1016-D	314.241	340.892 E3	-8.5	110	0.00	5.54-	5.60
45	AR1016-E	220.231	236.095 E3	-7.2	107	0.00	6.19-	6.25
46	AR1260-A	0.992	0.986 E6	0.6	108	0.00	8.80-	8.86
47	AR1260-B	552.387	556.829 E3	-0.8	97	0.00	8.92-	8.98
48	AR1260-C	507.378	527.176 E3	-3.9	100	0.00	9.35-	9.41
49	AR1260-D	1.336	1.415 E6	-5.9	98	0.00	9.70-	9.76
50	AR1260-E	1.197	1.221 E6	-2.0	95	0.00	10.25-	10.31
51 S	Decachlorobiphenyl	11.436	11.200 E6	2.1	101	0.00	11.92-	11.98

(#) = Out of Range
 xx228516.D PCB6349.M

SPCC's out = 0 CCC's out = 0
 Tue May 15 08:42:33 2018

10.9.17
 10

Initial Calibration Verification

Job Number: **JC67003**
 Account: **BBLNYS Arcadis**
 Project: **National Grid, Philly Coke, Philadelphia PA**

Sample: **GXX6349-ICV6349**
 Lab FileID: **XX228524.D**

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\gx...9\xx228524.D\ECD1A.CH Vial: 17
 Signal #2 : C:\msdchem\1\DATA\gx6349\xx228524.D\ECD2B.CH
 Acq On : 14 May 2018 8:12 pm Operator: rebeccak
 Sample : icv6349-1000 Inst : HP G1530A
 Misc : opl1947,GXX6349,1.0,,,1,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\PCB6349.M (Chemstation Integrator)
 Title :
 Last Update : Tue May 15 08:36:20 2018
 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
2	AR1221-A	64.189	65.752 E3	-2.4	102	0.00	2.21-	2.41
3	AR1221-B	120.372	109.721 E3	8.8	91	0.00	2.87-	3.07
4	AR1221-C	366.833	330.157 E3	10.0	90	0.00	3.07-	3.27
5	AR1221-D	37.097	30.052 E3	19.0	81	0.00	3.46-	3.66
6	AR1221-E	56.511	46.826 E3	17.1	83	0.00	3.68-	3.88
24	AR1254-A	357.340	364.662 E3	-2.0	102	0.00	5.14-	5.34
25	AR1254-B	460.923	468.305 E3	-1.6	102	0.00	5.48-	5.68
26	AR1254-C	369.798	376.022 E3	-1.7	102	0.00	5.84-	6.04
27	AR1254-D	731.424	744.495 E3	-1.8	102	0.00	6.00-	6.20
28	AR1254-E	536.880	542.165 E3	-1.0	101	0.00	6.39-	6.59
29	AR1254-F	483.594	491.869 E3	-1.7	102	0.00	6.62-	6.82
30	AR1254-G	699.513	700.067 E3	-0.1	100	0.00	7.00-	7.20

***** Signal #2 *****

2	AR1221-A	60.722	61.553 E3	-1.4	101	0.00	2.94-	3.00
3	AR1221-B	107.885	101.668 E3	5.8	94	0.00	3.82-	4.02
4	AR1221-C	280.997	259.700 E3	7.6	92	0.00	4.09-	4.29
5	AR1221-D	50.229	44.879 E3	10.7	89	0.00	4.64-	4.84
6	AR1221-E	36.128	37.496 E3	-3.8	104	0.00	4.74-	4.94
24	AR1254-A	375.708	380.917 E3	-1.4	101	0.00	6.72-	6.92
25	AR1254-B	414.540	418.881 E3	-1.0	101	0.00	6.97-	7.17
26	AR1254-C	343.394	350.601 E3	-2.1	102	0.00	7.48-	7.68
27	AR1254-D	704.885	717.789 E3	-1.8	102	0.00	7.65-	7.85
28	AR1254-E	544.947	551.074 E3	-1.1	101	0.00	7.96-	8.16
29	AR1254-F	555.939	555.137 E3	0.1	100	-0.04	8.44-	8.64
30	AR1254-G	716.369	724.366 E3	-1.1	101	0.00	8.73-	8.93

(#) = Out of Range
 xx228516.D PCB6349.M

SPCC's out = 0 CCC's out = 0
 Tue May 15 08:42:34 2018

10.9.18
 10

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: GXX6349-ICV6349
 Lab FileID: XX228525.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\gx...9\xx228525.D\ECD1A.CH Vial: 18
 Signal #2 : C:\msdchem\1\DATA\gx6349\xx228525.D\ECD2B.CH
 Acq On : 14 May 2018 8:28 pm Operator: rebeccak
 Sample : icv6349-1000 Inst : HP G1530A
 Misc : op11947,GXX6349,1.0,,,1,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\PCB6349.M (Chemstation Integrator)
 Title :
 Last Update : Tue May 15 08:36:20 2018
 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
7	AR1232-A	284.512	284.427 E3	0.0	100	0.00	3.07-	3.27
8	AR1232-B	168.256	172.061 E3	-2.3	102	0.00	3.45-	3.65
9	AR1232-C	377.928	387.165 E3	-2.4	102	0.00	4.01-	4.21
10	AR1232-D	139.265	144.887 E3	-4.0	104	0.00	4.17-	4.37
11	AR1232-E	132.308	139.120 E3	-5.1	105	0.00	4.66-	4.86
31	AR1262-A	485.825	495.791 E3	-2.1	102	0.00	6.62-	6.82
32	AR1262-B	704.608	727.191 E3	-3.2	103	0.00	7.15-	7.35
33	AR1262-C	621.228	640.227 E3	-3.1	103	0.00	7.49-	7.69
34	AR1262-D	1.638	1.715 E6	-4.7	105	0.00	7.92-	8.12
35	AR1262-E	1.784	1.843 E6	-3.3	103	0.00	8.36-	8.56

***** Signal #2 *****

7	AR1232-A	218.137	217.957 E3	0.1	100	0.00	4.09-	4.29
8	AR1232-B	163.345	165.841 E3	-1.5	102	0.00	4.64-	4.84
9	AR1232-C	361.396	365.482 E3	-1.1	101	0.00	5.28-	5.48
10	AR1232-D	151.780	155.038 E3	-2.1	102	0.00	5.47-	5.67
11	AR1232-E	96.595	98.509 E3	-2.0	102	0.00	6.12-	6.32
31	AR1262-A	554.133	579.975 E3	-4.7	105	0.00	8.20-	8.40
32	AR1262-B	911.336	932.971 E3	-2.4	102	0.00	8.85-	9.05
33	AR1262-C	683.824	715.787 E3	-4.7	105	0.00	9.28-	9.48
34	AR1262-D	1.738	1.791 E6	-3.0	103	0.00	9.63-	9.83
35	AR1262-E	1.865	1.939 E6	-4.0	104	0.00	10.15-	10.35

(#) = Out of Range
 xx228516.D PCB6349.M

SPCC's out = 0 CCC's out = 0
 Tue May 15 08:42:35 2018

10.9.19
 10

Initial Calibration Verification

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: GXX6349-ICV6349
 Lab FileID: XX228526.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\gx...9\xx228526.D\ECD1A.CH Vial: 19
 Signal #2 : C:\msdchem\1\DATA\gx6349\xx228526.D\ECD2B.CH
 Acq On : 14 May 2018 8:45 pm Operator: rebeccak
 Sample : icv6349-1000 Inst : HP G1530A
 Misc : op11947,GXX6349,1.0,,,1,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\PCB6349.M (Chemstation Integrator)
 Title :
 Last Update : Tue May 15 08:36:20 2018
 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
12	AR1242-A	312.380	311.159 E3	0.4	100	0.00	3.45-	3.65
13	AR1242-B	725.803	716.997 E3	1.2	99	0.00	4.00-	4.20
14	AR1242-C	268.522	269.006 E3	-0.2	100	0.00	4.17-	4.37
15	AR1242-D	291.168	283.414 E3	2.7	97	0.00	4.66-	4.86
16	AR1242-E	336.646	320.780 E3	4.7	95	0.00	5.25-	5.45
36	AR1268-A	1.767	1.734 E6	1.9	98	0.00	8.36-	8.56
37	AR1268-B	2.042	2.036 E6	0.3	100	0.00	8.42-	8.62
38	AR1268-C	1.624	1.611 E6	0.8	99	0.00	8.68-	8.88
39	AR1268-D	638.903	642.421 E3	-0.6	101	0.00	9.18-	9.38
40	AR1268-E	5.472	5.403 E6	1.3	99	0.00	9.58-	9.78

***** Signal #2 *****

12	AR1242-A	291.627	288.960 E3	0.9	99	0.00	4.64-	4.84
13	AR1242-B	663.355	660.997 E3	0.4	100	0.00	5.28-	5.48
14	AR1242-C	277.744	279.070 E3	-0.5	100	0.00	5.47-	5.67
15	AR1242-D	199.433	194.049 E3	2.7	97	0.00	6.12-	6.32
16	AR1242-E	262.358	246.634 E3	6.0	94	0.00	6.73-	6.93
36	AR1268-A	2.072	2.076 E6	-0.2	100	0.00	10.15-	10.35
37	AR1268-B	1.918	1.929 E6	-0.6	101	0.00	10.22-	10.42
38	AR1268-C	1.645	1.634 E6	0.7	99	0.00	10.59-	10.79
39	AR1268-D	660.828	652.492 E3	1.3	99	0.00	10.99-	11.19
40	AR1268-E	4.781	4.700 E6	1.7	98	0.00	11.47-	11.67
11.92-11.98								

(#) = Out of Range
 xx228516.D PCB6349.M

SPCC's out = 0 CCC's out = 0
 Tue May 15 08:42:36 2018

10.9.20
 10

Initial Calibration Verification

Job Number: **JC67003**
 Account: **BBLNYS Arcadis**
 Project: **National Grid, Philly Coke, Philadelphia PA**

Sample: **GXX6349-ICV6349**
 Lab FileID: **XX228527.D**

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\gx...9\xx228527.D\ECD1A.CH Vial: 20
 Signal #2 : C:\msdchem\1\DATA\gx6349\xx228527.D\ECD2B.CH
 Acq On : 14 May 2018 9:01 pm Operator: rebeccak
 Sample : icv6349-1000 Inst : HP G1530A
 Misc : op11947,GXX6349,1.0,,,1,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\PCB6349.M (Chemstation Integrator)
 Title :
 Last Update : Tue May 15 08:36:20 2018
 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
17 AR1248-A	154.084	144.707 E3	6.1	94	0.00	3.45-	3.65
18 AR1248-B	459.884	451.507 E3	1.8	98	0.00	4.01-	4.21
19 AR1248-C	413.982	417.669 E3	-0.9	101	0.00	4.40-	4.60
20 AR1248-D	426.887	435.310 E3	-2.0	102	0.00	4.66-	4.86
21 AR1248-E	405.084	420.814 E3	-3.9	104	0.00	4.77-	4.97
22 AR1248-F	479.427	508.062 E3	-6.0	106	0.00	5.24-	5.44
23 AR1248-G	688.589	725.480 E3	-5.4	105	0.00	5.49-	5.69

***** Signal #2 *****

17 AR1248-A	150.288	140.721 E3	6.4	94	0.00	4.64-	4.84
18 AR1248-B	421.084	418.132 E3	0.7	99	0.00	5.28-	5.48
19 AR1248-C	228.906	232.279 E3	-1.5	101	0.00	5.74-	5.94
20 AR1248-D	308.024	314.020 E3	-1.9	102	0.00	6.12-	6.32
21 AR1248-E	357.500	373.449 E3	-4.5	104	0.00	6.30-	6.50
22 AR1248-F	438.873	465.179 E3	-6.0	106	0.00	6.72-	6.92
23 AR1248-G	398.897	423.790 E3	-6.2	106	0.00	7.06-	7.26

(#) = Out of Range
 xx228516.D PCB6349.M

SPCC's out = 0 CCC's out = 0
 Tue May 15 08:42:37 2018

10.9.21
10

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: GXX6375-CC6349
 Lab FileID: XX229836.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\gx...5\xx229836.D\ECD1A.CH Vial: 9
 Signal #2 : C:\msdchem\1\DATA\gxx6375\xx229836.D\ECD2B.CH
 Acq On : 03 Jun 2018 12:34 am Operator: edouarda
 Sample : cc6349-500 Inst : HP G1530A
 Misc : op12450,GXX6375,1000,,,5,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\PCB6349.M (Chemstation Integrator)
 Title :
 Last Update : Tue May 15 08:36:20 2018
 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	10.770	11.255 E6	-4.5	103	0.02	2.79-	2.85
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	191.609	199.139 E3	-3.9	101	0.03	3.16-	3.22

10.9.22
10

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: GXX6375-CC6349
 Lab FileID: XX229836.D

42	AR1016-B	357.258	371.928	E3	-4.1	103	0.02	3.54- 3.60
43	AR1016-C	839.914	805.752	E3	4.1	96	0.03	4.10- 4.16
44	AR1016-D	307.649	319.593	E3	-3.9	102	0.02	4.25- 4.31
45	AR1016-E	319.093	326.809	E3	-2.4	100	0.02	4.73- 4.80
46	AR1260-A	948.136	889.206	E3	6.2	100	0.02	7.09- 7.15
47	AR1260-B	424.911	484.913	E3	-14.1	107	0.00	7.23- 7.29
48	AR1260-C	434.730	439.906	E3	-1.2	96	0.00	7.56- 7.63
49	AR1260-D	1.230	1.397	E6	-13.6	108	0.02	8.01- 8.07
50	AR1260-E	1.175	1.186	E6	-0.9	96	0.05	8.43- 8.49
51 S	Decachlorobiphenyl	12.518	13.496	E6	-7.8	107	0.00	9.91- 9.98

***** Signal #2 *****

1 S	Tetrachloro-m-xylene	10.040	10.935	E6	-8.9	105	0.01	3.52- 3.58
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	166.712	176.299	E3	-5.8	102	0.02	4.17- 4.23
42	AR1016-B	328.484	350.957	E3	-6.8	105	0.01	4.72- 4.78
43	AR1016-C	755.277	775.842	E3	-2.7	101	0.01	5.36- 5.42
44	AR1016-D	314.241	331.339	E3	-5.4	104	0.00	5.55- 5.61
45	AR1016-E	220.231	218.650	E3	0.7	98	0.00	6.20- 6.26
46	AR1260-A	0.992	0.912	E6	8.1	100	0.00	8.80- 8.86
47	AR1260-B	552.387	597.127	E3	-8.1	103	0.00	8.92- 8.98

10.9.22 10

Continuing Calibration Summary

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: GXX6375-CC6349
Lab FileID: XX229836.D

48	AR1260-C	507.378	545.868	E3	-7.6	104	0.00	9.35- 9.41
49	AR1260-D	1.336	1.487	E6	-11.3	105	0.00	9.70- 9.76
50	AR1260-E	1.197	1.346	E6	-12.4	106	0.00	10.25-10.31
51 S	Decachlorobiphenyl	11.436	12.252	E6	-7.1	108	0.00	11.91-11.97

(#) = Out of Range
xx228515.D PCB6349.M

SPCC's out = 0 CCC's out = 0
Mon Jun 04 09:12:48 2018

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: GXX6375-CC6349
 Lab FileID: XX229847.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\gx...5\xx229847.D\ECD1A.CH Vial: 17
 Signal #2 : C:\msdchem\1\DATA\gxx6375\xx229847.D\ECD2B.CH
 Acq On : 03 Jun 2018 3:38 am Operator: edouarda
 Sample : cc6349-1000 Inst : HP G1530A
 Misc : op12448,GXX6375,300,,,2,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\PCB6349.M (Chemstation Integrator)
 Title :
 Last Update : Tue Jun 05 15:34:53 2018
 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	10.770	11.663 E6	-8.3	105	0.03	2.79-	2.85
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	191.609	193.940 E3	-1.2	98	0.03	3.16-	3.22

10.9.23

10

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: GXX6375-CC6349
 Lab FileID: XX229847.D

42	AR1016-B	357.258	382.663	E3	-7.1	107	0.02	3.54- 3.60
43	AR1016-C	839.914	857.246	E3	-2.1	102	0.03	4.09- 4.15
44	AR1016-D	307.649	334.054	E3	-8.6	108	0.02	4.25- 4.31
45	AR1016-E	319.093	348.091	E3	-9.1	108	0.02	4.73- 4.80
46	AR1260-A	948.136	925.305	E3	2.4	103	0.03	7.09- 7.15
47	AR1260-B	424.911	502.224	E3	-18.2	109	0.02	7.23- 7.29
48	AR1260-C	434.730	458.361	E3	-5.4	97	0.02	7.56- 7.63
49	AR1260-D	1.230	1.473	E6	-19.8	107	0.03	8.01- 8.07
50	AR1260-E	1.175	1.126	E6	4.2	89	0.06	8.43- 8.49
51 S	Decachlorobiphenyl	12.518	13.202	E6	-5.5	106	0.02	9.91- 9.98

***** Signal #2 *****

1 S	Tetrachloro-m-xylene	10.040	11.306	E6	-12.6	108	0.02	3.52- 3.58
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	166.712	181.542	E3	-8.9	108	0.02	4.17- 4.23
42	AR1016-B	328.484	350.776	E3	-6.8	107	0.01	4.72- 4.78
43	AR1016-C	755.277	774.157	E3	-2.5	103	0.01	5.36- 5.42
44	AR1016-D	314.241	328.092	E3	-4.4	105	0.01	5.54- 5.60
45	AR1016-E	220.231	218.638	E3	0.7	99	0.01	6.20- 6.26
46	AR1260-A	0.992	0.963	E6	2.9	106	0.01	8.80- 8.86
47	AR1260-B	552.387	620.079	E3	-12.3	108	0.01	8.92- 8.98

10.9.23 10

Continuing Calibration Summary

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: GXX6375-CC6349
Lab FileID: XX229847.D

48	AR1260-C	507.378	557.259	E3	-9.8	106	0.00	9.35- 9.41
49	AR1260-D	1.336	1.482	E6	-10.9	102	0.02	9.71- 9.77
50	AR1260-E	1.197	1.367	E6	-14.2	107	0.01	10.25-10.31
51 S	Decachlorobiphenyl	11.436	12.149	E6	-6.2	110	0.01	11.91-11.97

(#) = Out of Range
xx230003.D PCB6349.M

SPCC's out = 0 CCC's out = 0
Thu Jun 07 09:03:26 2018

Continuing Calibration Summary

Job Number: **JC67003**
 Account: **BBLNYS Arcadis**
 Project: **National Grid, Philly Coke, Philadelphia PA**

Sample: **GXX6375-CC6349**
 Lab FileID: **XX229858.D**

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\1\DATA\gx...5\xx229858.D\ECD1A.CH Vial: 25
 Signal #2 : C:\msdchem\1\DATA\gxx6375\xx229858.D\ECD2B.CH
 Acq On : 03 Jun 2018 6:42 am Operator: edouarda
 Sample : cc6349-500 Inst : HP G1530A
 Misc : op12448,GXX6375,300,,,2,1 Multiplr: 1.00
 IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e

Method : C:\MSDCHEM\1\METHODS\PCB6349.M (Chemstation Integrator)
 Title :
 Last Update : Tue Jun 05 15:34:53 2018
 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	10.770	11.935 E6	-10.8	110	0.03	2.79-	2.85
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	191.609	193.310 E3	-0.9	98	0.03	3.17-	3.23

10.9.24

10

Continuing Calibration Summary

Job Number: JC67003
 Account: BBLNYS Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

Sample: GXX6375-CC6349
 Lab FileID: XX229858.D

42	AR1016-B	357.258	402.843	E3	-12.8	112	0.03	3.55-	3.61
43	AR1016-C	839.914	817.884	E3	2.6	97	0.03	4.10-	4.16
44	AR1016-D	307.649	347.823	E3	-13.1	111	0.03	4.26-	4.32
45	AR1016-E	319.093	359.607	E3	-12.7	110	0.02	4.74-	4.81
46	AR1260-A	948.136	923.324	E3	2.6	104	0.03	7.10-	7.16
47	AR1260-B	424.911	512.783	E3	-20.7#	113	0.02	7.23-	7.29
48	AR1260-C	434.730	459.769	E3	-5.8	100	0.02	7.56-	7.63
49	AR1260-D	1.230	1.436	E6	-16.7	111	0.03	8.01-	8.07
50	AR1260-E	1.175	1.168	E6	0.6	95	0.06	8.43-	8.49
51 S	Decachlorobiphenyl	12.518	13.375	E6	-6.8	106	0.02	9.91-	9.98

***** Signal #2 *****

1 S	Tetrachloro-m-xylene	10.040	11.531	E6	-14.9	111	0.02	3.52-	3.58
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	166.712	186.841	E3	-12.1	108	0.02	4.17-	4.23
42	AR1016-B	328.484	366.626	E3	-11.6	110	0.01	4.72-	4.78
43	AR1016-C	755.277	800.943	E3	-6.0	105	0.02	5.36-	5.42
44	AR1016-D	314.241	342.073	E3	-8.9	107	0.02	5.55-	5.61
45	AR1016-E	220.231	227.054	E3	-3.1	102	0.01	6.20-	6.26
46	AR1260-A	0.992	0.945	E6	4.7	103	0.01	8.80-	8.86
47	AR1260-B	552.387	612.685	E3	-10.9	105	0.01	8.92-	8.98

10.9.24
10

Continuing Calibration Summary

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: GXX6375-CC6349
Lab FileID: XX229858.D

48	AR1260-C	507.378	569.741	E3	-12.3	108	0.00	9.35-	9.41
49	AR1260-D	1.336	1.472	E6	-10.2	104	0.02	9.71-	9.77
50	AR1260-E	1.197	1.422	E6	-18.8	112	0.01	10.25-	10.31
51 S	Decachlorobiphenyl	11.436	12.693	E6	-11.0	112	0.00	11.91-	11.97

(#) = Out of Range
xx229992.D PCB6349.M

SPCC's out = 0 CCC's out = 0
Thu Jun 07 09:03:47 2018

GC/LC Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56983.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 11:41:35
 Operator : rebeccak
 Sample : jc67003-1
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 54 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:29:38 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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...	2.008	2.138	10515.0E6	272.3E6	50.000	50.000
27) I 1-bromo-2...	2.008	2.138	10515.0E6	272.3E6	50.000	50.000
33) I 1-bromo-2...	2.008	2.138	10515.0E6	272.3E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.523	2.913	232.2E6	121.4E6	1.136	23.939m#
Spiked Amount	40.000	Range 30 - 150	Recovery =		2.84%#	59.85%
26) SA Decachlor...	9.768	11.654	111.7E6	76104064	0.536	15.045 #
Spiked Amount	40.000		Recovery =		1.34%	37.61%
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.

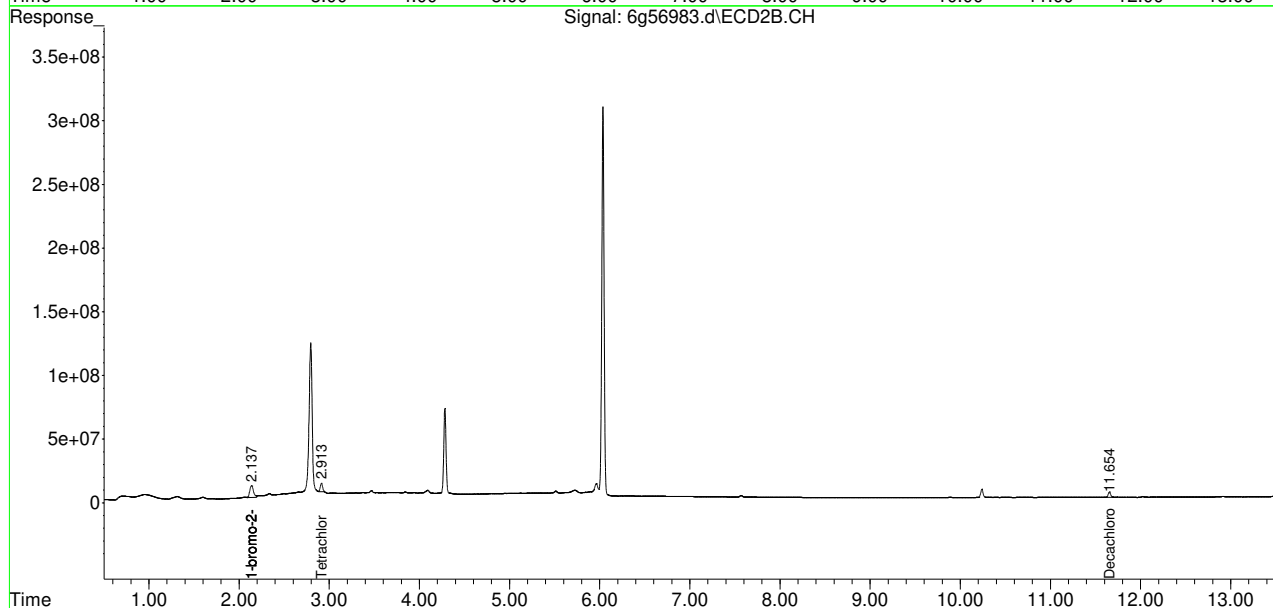
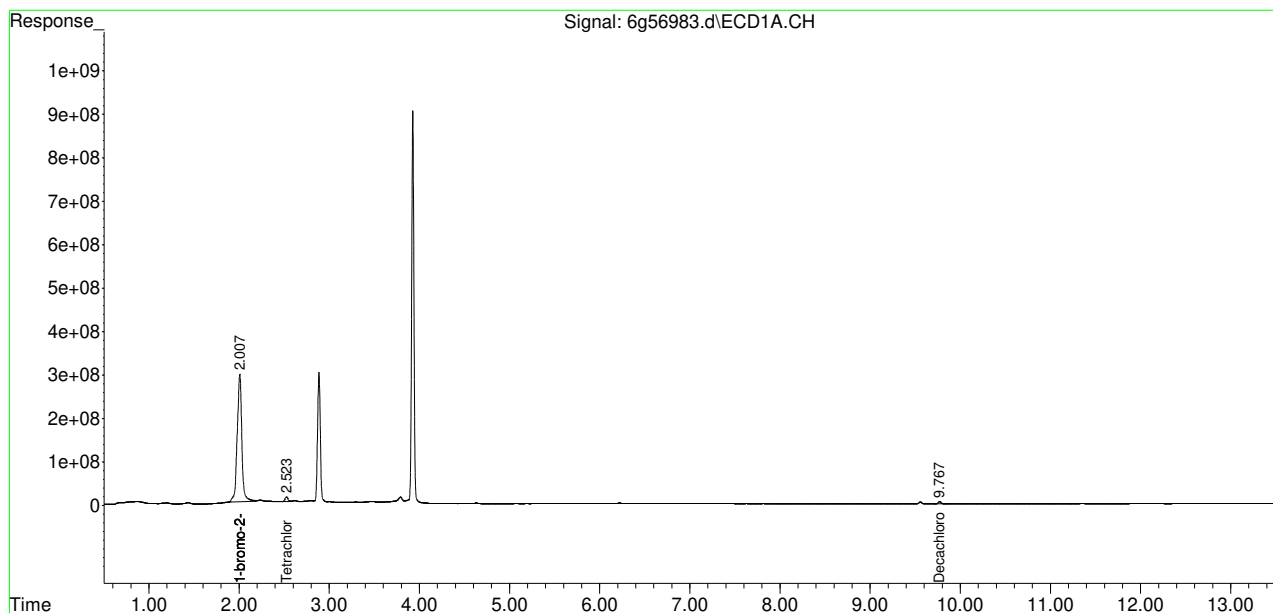
11.11
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56983.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 11:41:35
 Operator : rebeccak
 Sample : jc67003-1
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 54 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:29:38 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



11.11
11

Manual Integration Approval Summary

Sample Number: JC67003-1 Method: SW846 8081B
Lab FileID: 6G56983.D Analyst approved: 06/13/18 08:54 Dharmistha Mehta
Injection Time: 06/06/18 11:41 Supervisor approved: 06/13/18 10:13 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrachloro-m-xylene	877-09-8	2	2.91	Poorly defined baseline

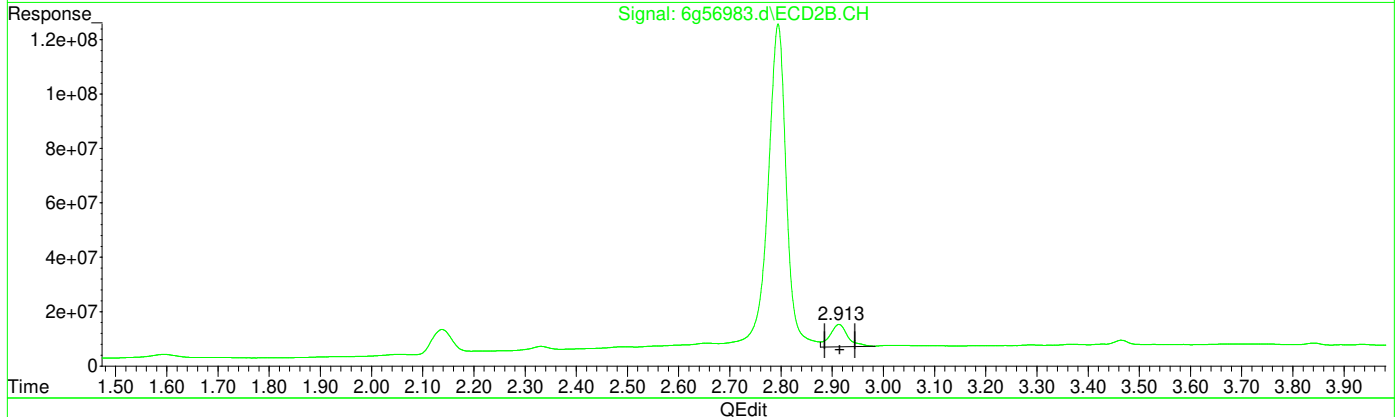
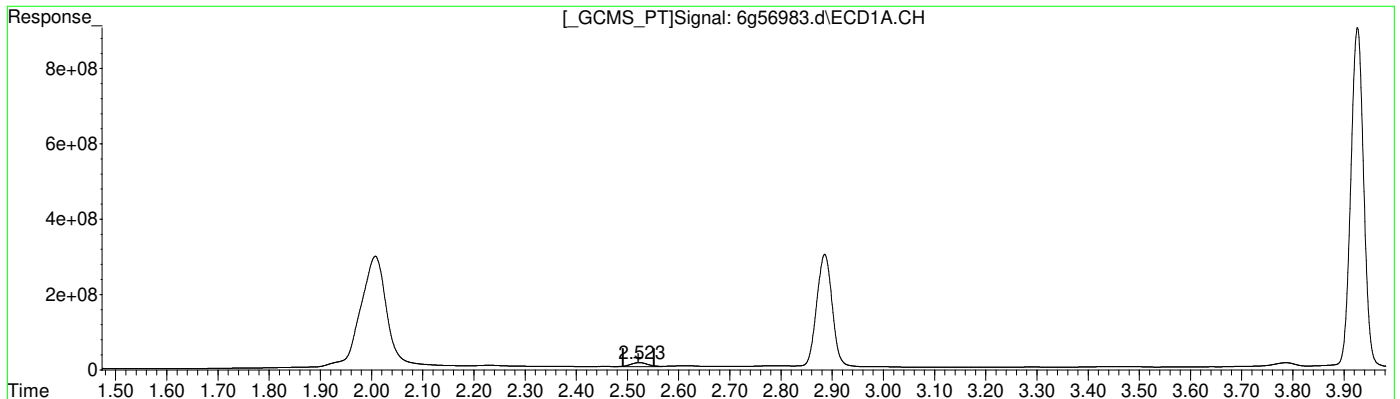
11.1.1.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56983.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 11:41:35
 Operator : rebeccak
 Sample : jc67003-1
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 54 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:28:40 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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)

2.523min 1.136 PPB
 response 232214433

(2) Tetrachloro-m-xylene #2 (SAB)

2.913min 39.669 PPB
 response 201189943

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 12:29:16 2018

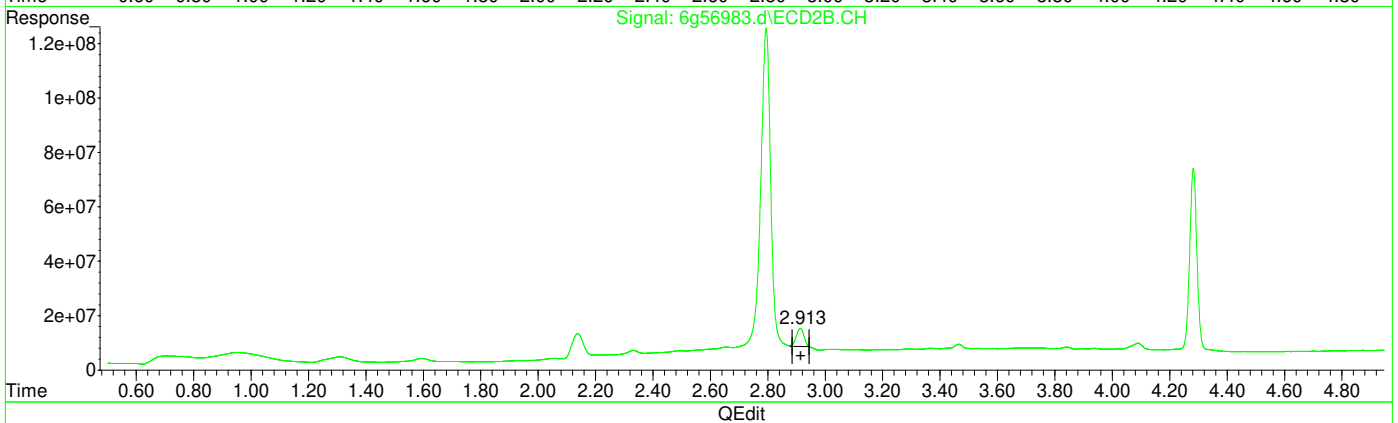
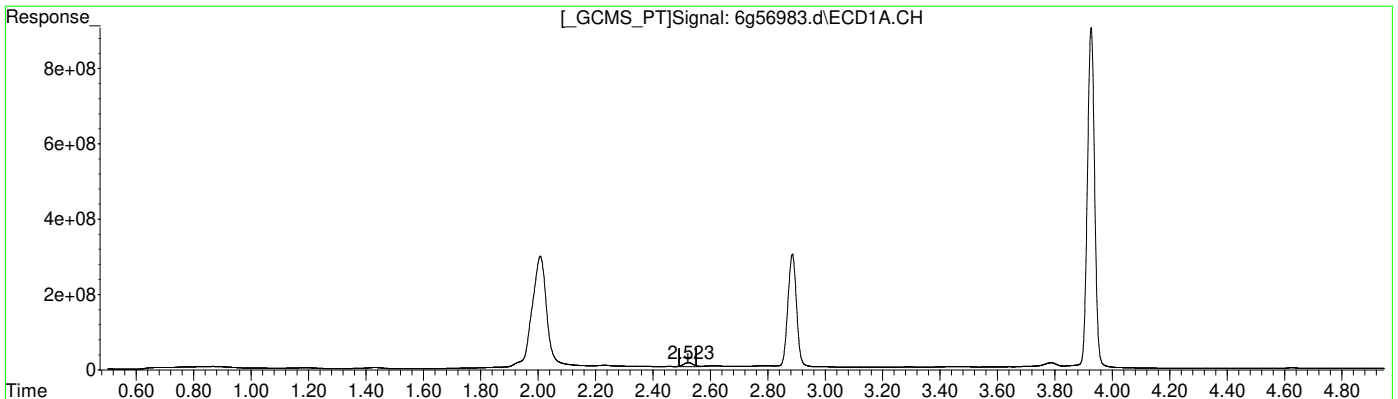
11.1.12
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56983.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 11:41:35
 Operator : rebeccak
 Sample : jc67003-1
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 54 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:28:40 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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)

2.523min 1.136 PPB
 response 232214433

(2) Tetrachloro-m-xylene #2 (SAB)

2.913min 23.939 PPB m
 response 121413730

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 12:29:26 2018

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G513\
 Data File : 8g15850.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Jun 2018 1:27 pm
 Operator : dharas
 Sample : jc67003-1
 Misc : op12449,g8g513,300,,,2,5
 ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 12 14:09:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.875	2.265	203.2E6	444.1E6	50.000	50.000
27)	I 1-bromo-2...	1.875	2.265	203.2E6	444.1E6	50.000	50.000
33)	I 1-bromo-2...	1.875	2.265	203.2E6	444.1E6	50.000	50.000
System Monitoring Compounds							
2)	SAB Tetrachlo...	2.635	3.289	28062695	63675319	6.791	7.146
	Spiked Amount	40.000	Range	30 - 150	Recovery	= 16.98%#	17.87%#
26)	SA Decachlor...	10.917	13.301	22449831	27003986	4.407	4.303m
	Spiked Amount	40.000		Recovery	= 11.02%	10.76%	

Target Compounds

SemiQuant Compounds - Not Calibrated on this Instrument

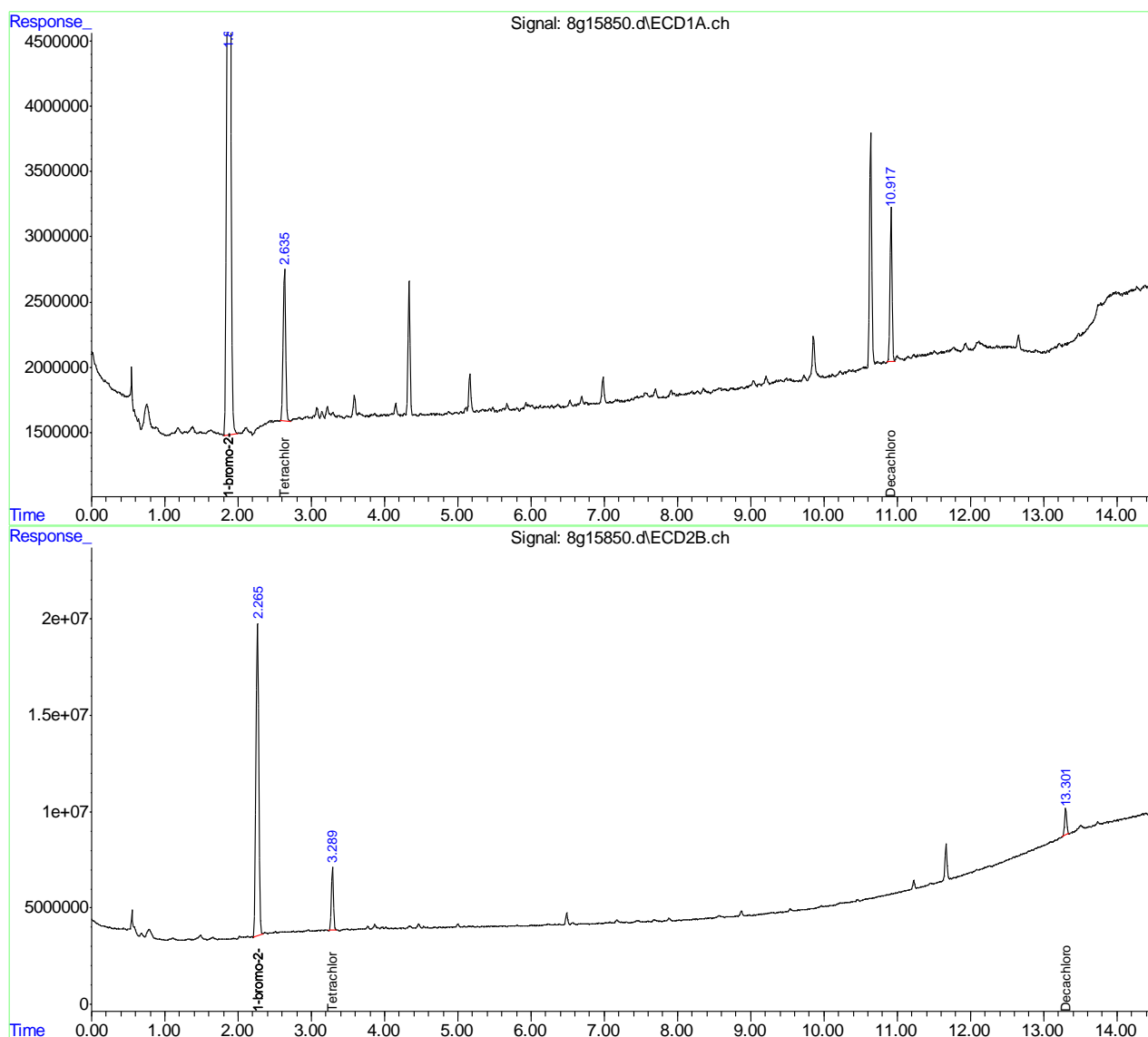
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G513\
 Data File : 8g15850.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Jun 2018 1:27 pm
 Operator : dharas
 Sample : jc67003-1
 Misc : op12449,g8g513,300,,,2,5
 ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 12 14:09:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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: JC67003-1 Method: SW846 8081B
Lab FileID: 8G15850.D Analyst approved: 06/13/18 08:51 Dharmistha Mehta
Injection Time: 06/12/18 13:27 Supervisor approved: 06/13/18 10:13 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Decachlorobiphenyl	2051-24-3	2	13.30	Poorly defined baseline

11.1.21

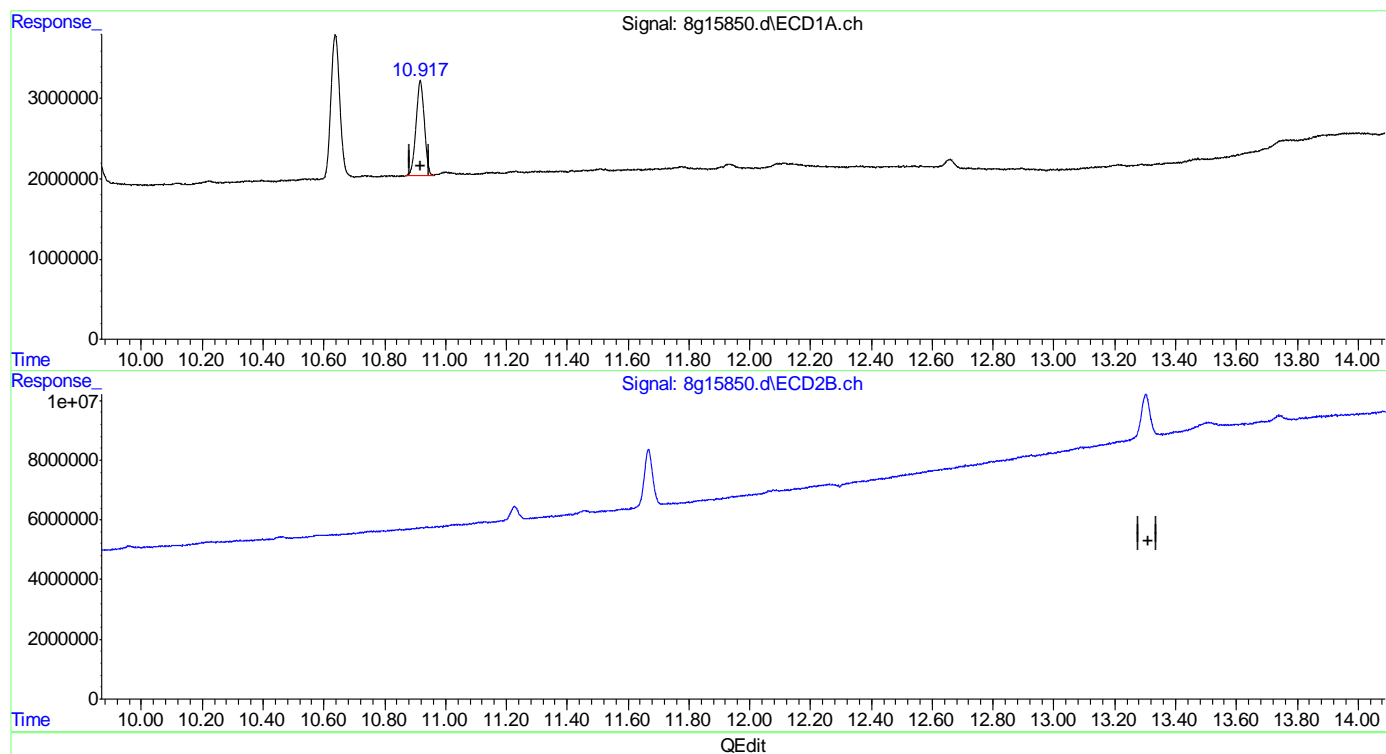
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G513\
 Data File : 8g15850.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Jun 2018 1:27 pm
 Operator : dharas
 Sample : jc67003-1
 Misc : op12449,g8g513,300,,,2,5
 ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 12 14:09:01 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



(26) Decachlorobiphenyl (SA)
 10.917min 4.407 PPB
 response 22449831

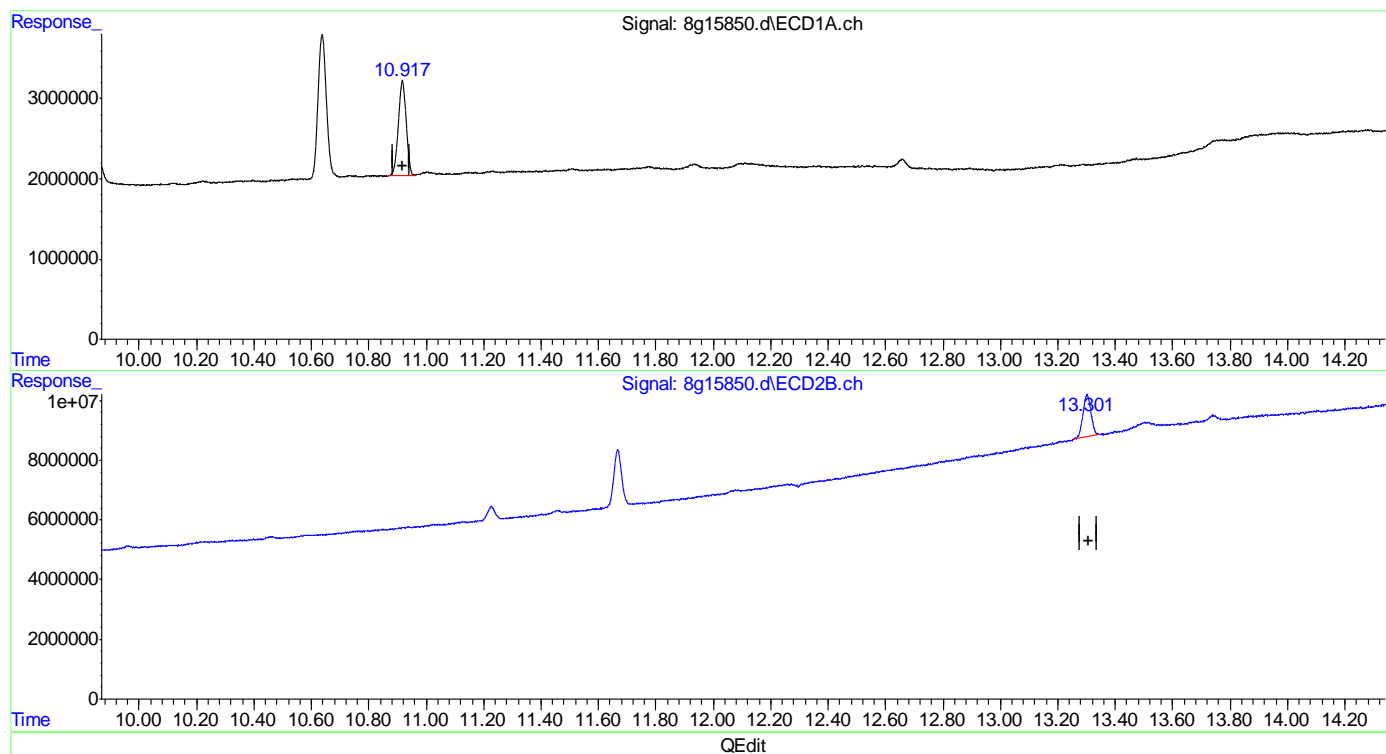
(26) Decachlorobiphenyl #2 (SA)
 0.000min 0.000 PPB
 response 0

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G513\
 Data File : 8g15850.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Jun 2018 1:27 pm
 Operator : dharas
 Sample : jc67003-1
 Misc : op12449,g8g513,300,,,2,5
 ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 12 14:09:01 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



(26) Decachlorobiphenyl (SA)
 10.917min 4.407 PPB
 response 22449831

(26) Decachlorobiphenyl #2 (SA)
 13.301min 4.303 PPB m
 response 27003986

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56984.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 11:59:33
 Operator : rebeccak
 Sample : jc67003-2
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 55 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:30:27 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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...	1.939	2.135	349.2E6	271.0E6	50.000	50.000
27) I 1-bromo-2...	1.939	2.135	349.2E6	271.0E6	50.000	50.000
33) I 1-bromo-2...	1.939	2.135	349.2E6	271.0E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.521	2.912	190.9E6	138.7E6	28.118	27.477
Spiked Amount	40.000	Range 30 - 150	Recovery =	70.30%	68.69%	
26) SA Decachlor...	9.769	11.654	147.0E6	105.9E6	21.242	21.040
Spiked Amount	40.000		Recovery =	53.11%	52.60%	
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

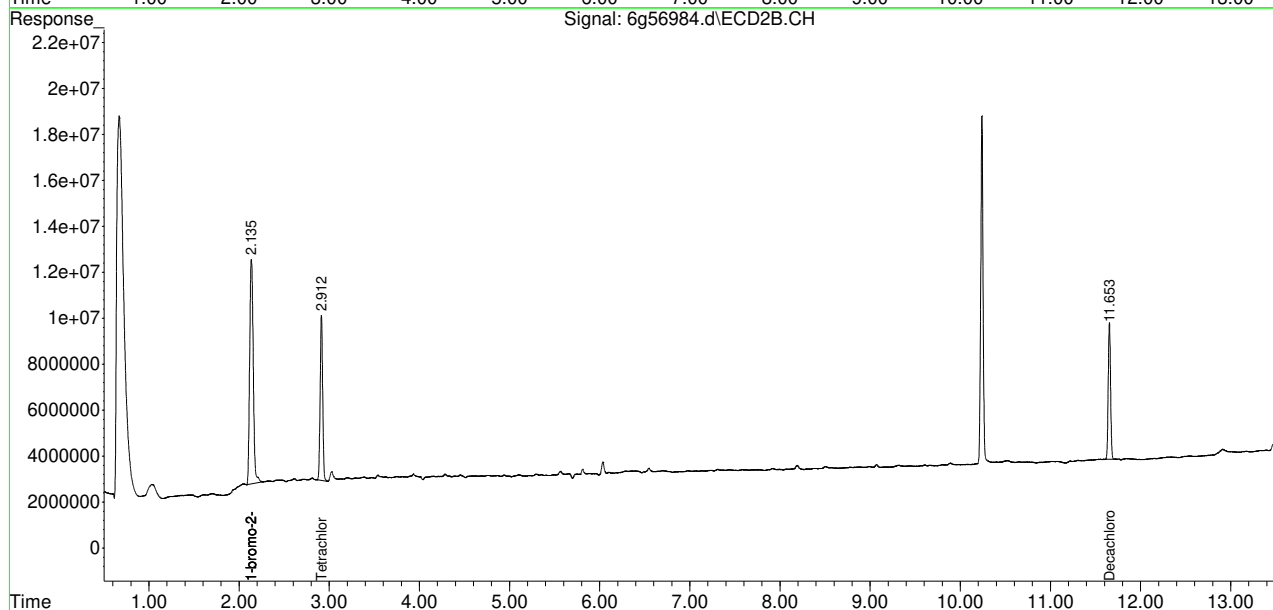
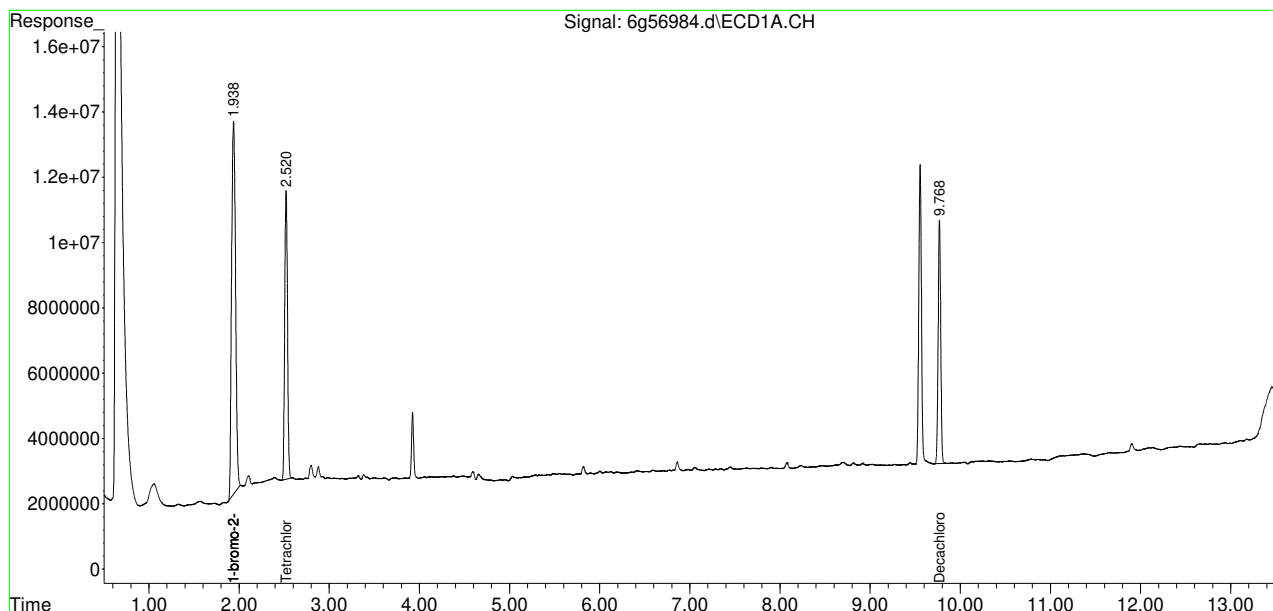
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56984.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 11:59:33
 Operator : rebeccak
 Sample : jc67003-2
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 55 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:30:27 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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\G6G1701\
 Data File : 6g56985.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 12:17:24
 Operator : rebeccak
 Sample : jc67003-3
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 56 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:31:42 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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...	1.935	2.133	354.2E6	243.8E6	50.000	50.000
27) I 1-bromo-2...	1.935	2.133	354.2E6	243.8E6	50.000	50.000
33) I 1-bromo-2...	1.935	2.133	354.2E6	243.8E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.520	2.911	171.9E6	124.4E6	24.965	27.394
Spiked Amount	40.000	Range	30 - 150	Recovery	=	62.41% 68.48%
26) SA Decachlor...	9.768	11.654	94444847	68686923	13.458m	15.166
Spiked Amount	40.000		Recovery	=	33.65%	37.91%
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.

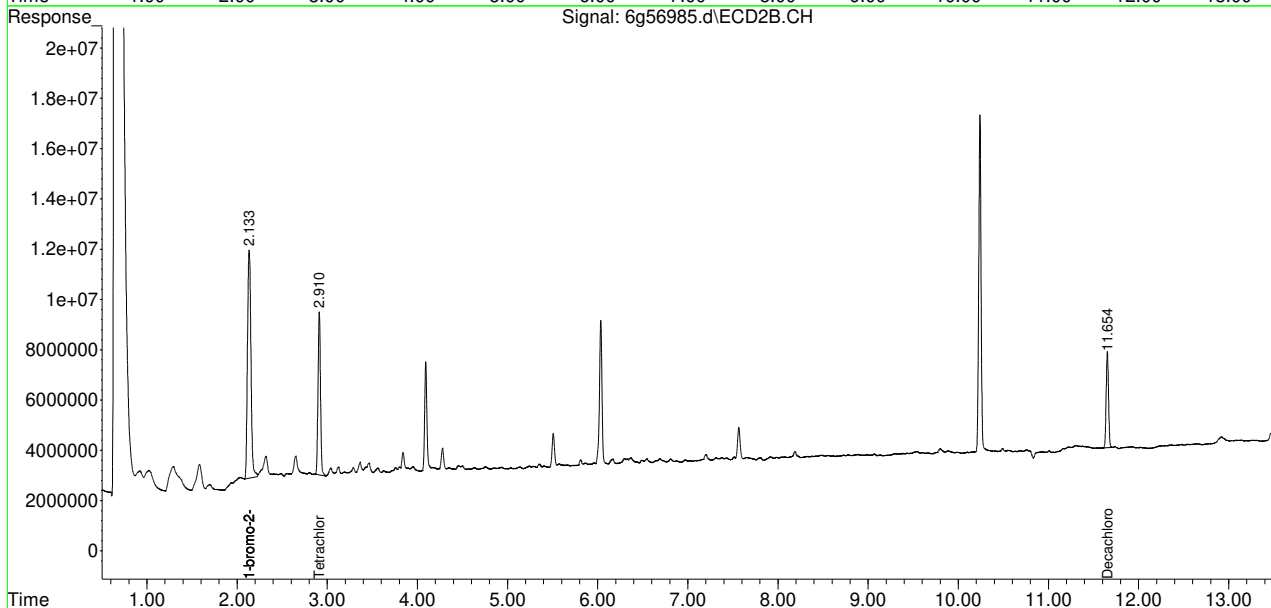
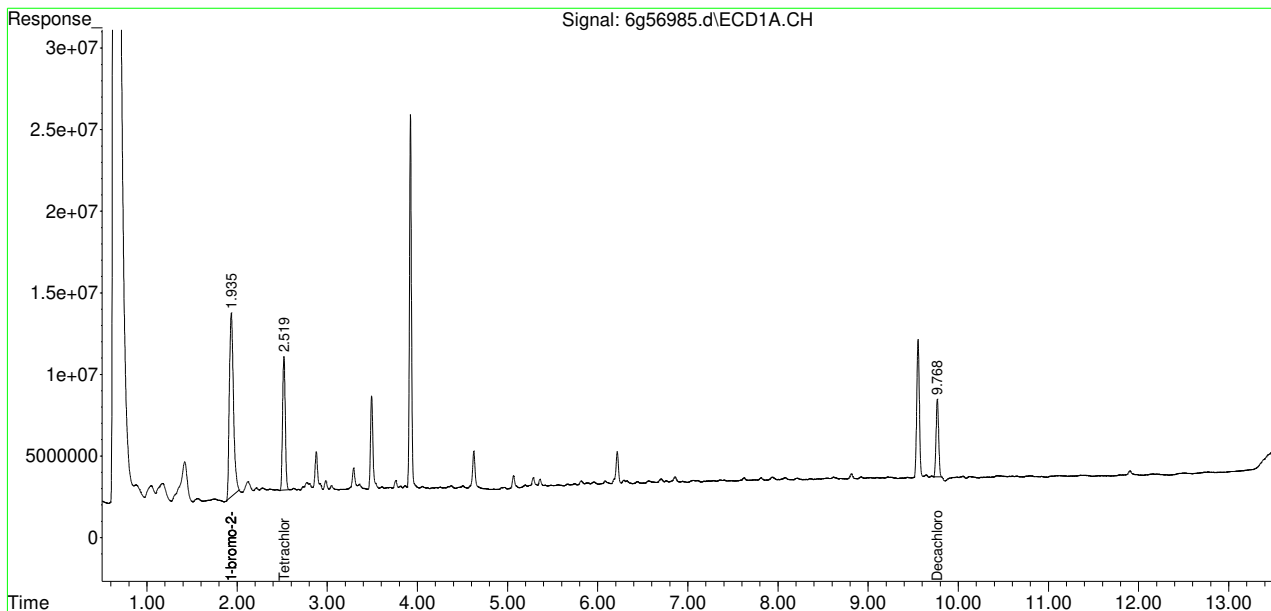
11.14
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56985.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 12:17:24
 Operator : rebeccak
 Sample : jc67003-3
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 56 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:31:42 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



11.14
11

Manual Integration Approval Summary

Sample Number: JC67003-3 Method: SW846 8081B
Lab FileID: 6G56985.D Analyst approved: 06/07/18 12:54 Dharmistha Mehta
Injection Time: 06/06/18 12:17 Supervisor approved: 06/11/18 08:17 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Decachlorobiphenyl	2051-24-3	1	9.77	Poorly defined baseline

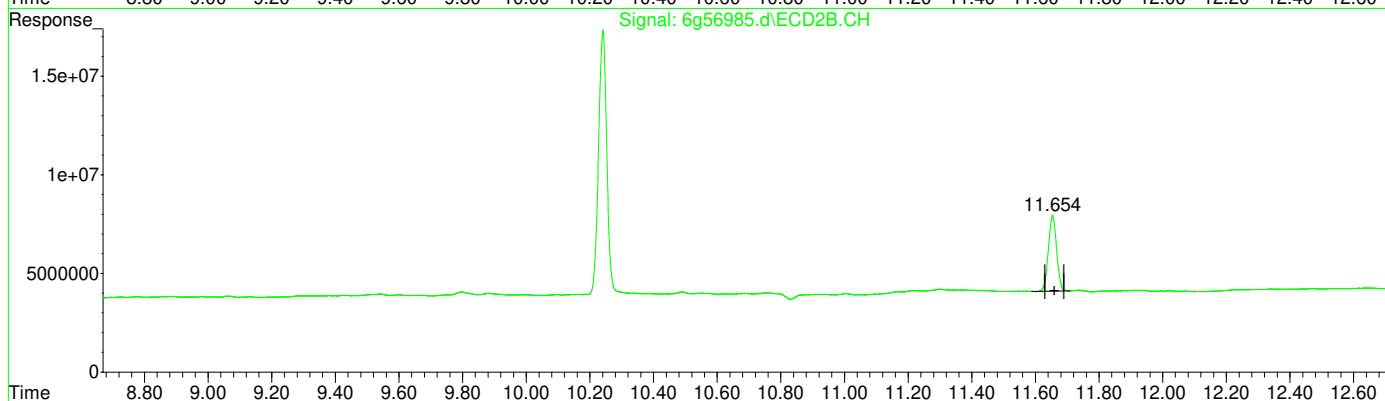
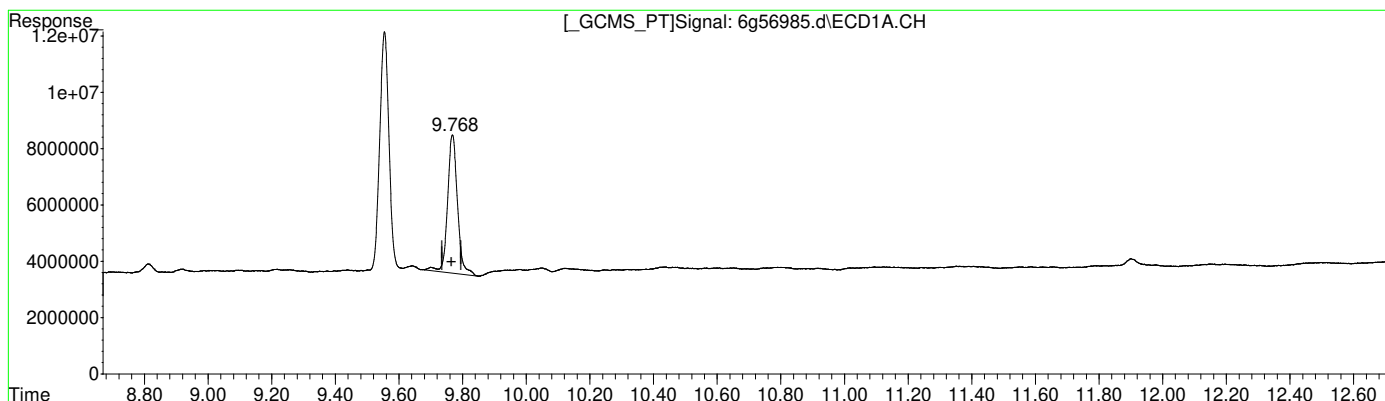
11.1.4.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56985.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 12:17:24
 Operator : rebeccak
 Sample : jc67003-3
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 56 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:30:56 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



(26) Decachlorobiphenyl (SA)

9.768min 15.148 PPB

response 106303792

(26) Decachlorobiphenyl #2 (SA)

11.654min 15.166 PPB

response 68686923

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 12:31:37 2018

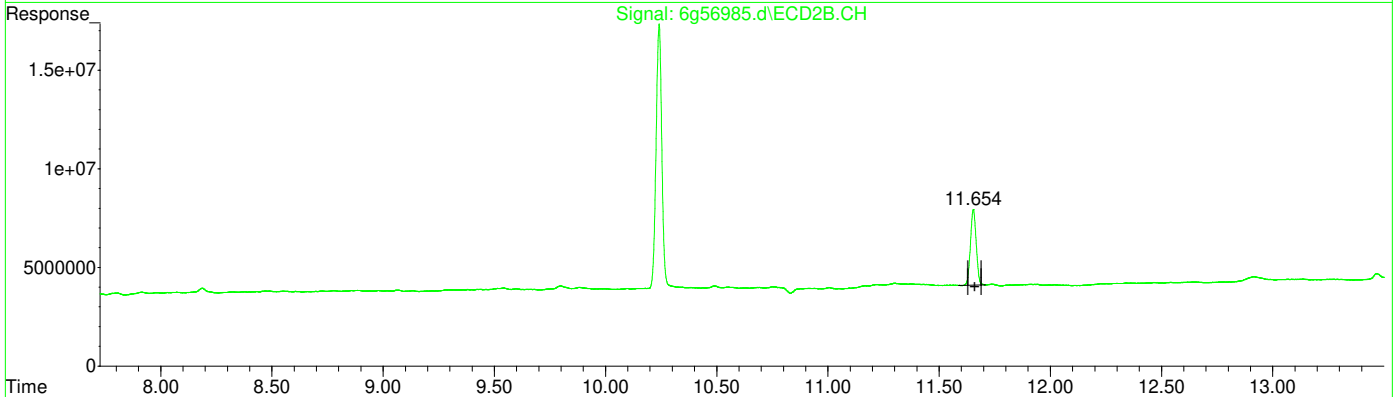
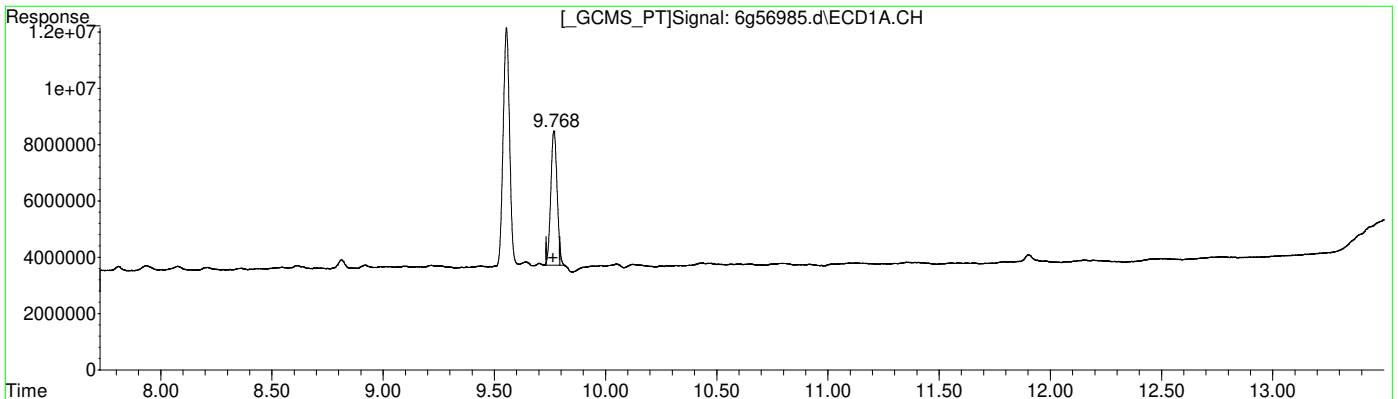
11.1.4.2
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56985.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 12:17:24
 Operator : rebeccak
 Sample : jc67003-3
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 56 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:30:56 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



QEedit

(26) Decachlorobiphenyl (SA)	9.768min	13.458 PPB m	response 94444847
(26) Decachlorobiphenyl #2 (SA)	11.654min	15.166 PPB	response 68686923

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 12:31:46 2018



11.1.4.3
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56986.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 12:35:15
 Operator : rebeccak
 Sample : jc67003-7
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 57 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:39:53 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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...	1.942	2.139	300.4E6	252.9E6	50.000m	50.000
27) I 1-bromo-2...	1.942	2.139	296.2E6	252.9E6	50.000m	50.000
33) I 1-bromo-2...	1.942	2.139	278.2E6	252.9E6	50.000m	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.521	2.913	165.6E6	123.1E6	28.358	26.121
Spiked Amount	40.000	Range 30 - 150	Recovery =	70.89%	65.30%	
26) SA Decachlor...	9.768	11.654	91282532	76090856	15.337	16.194
Spiked Amount	40.000		Recovery =	38.34%	40.48%	
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.

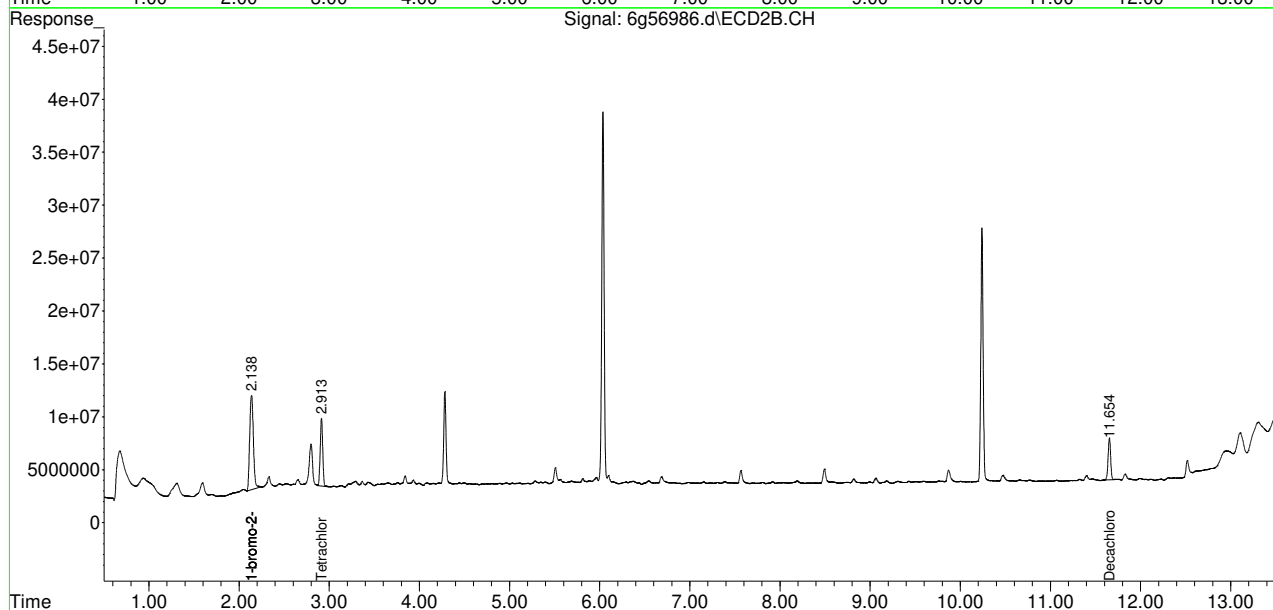
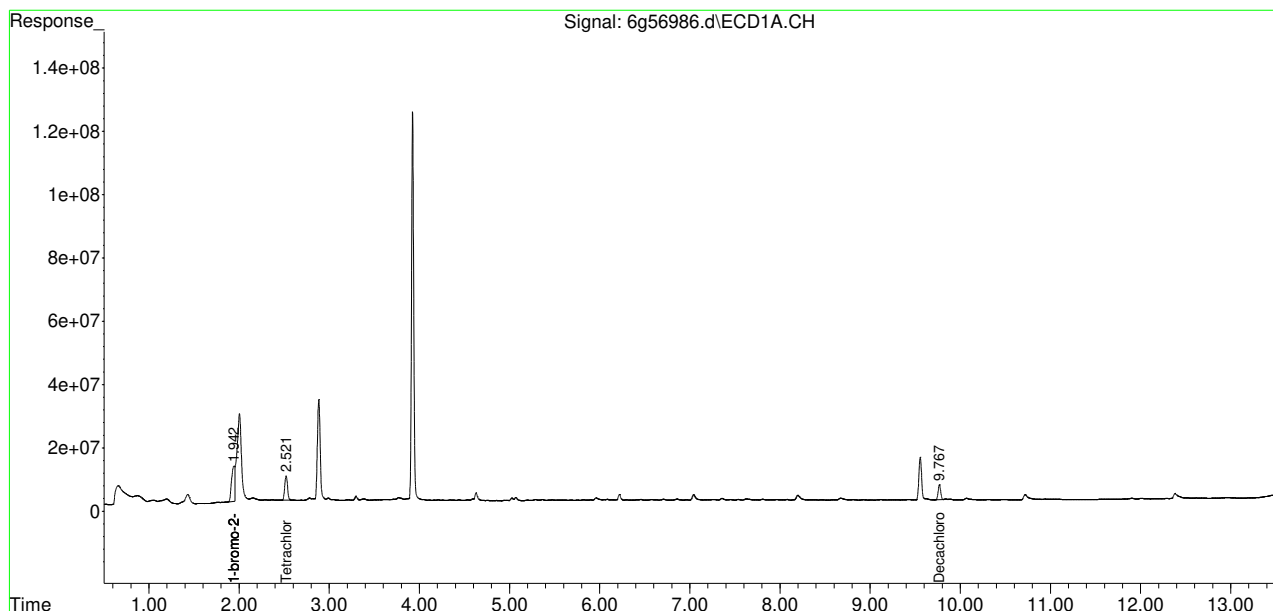
11.15
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56986.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 12:35:15
 Operator : rebeccak
 Sample : jc67003-7
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 57 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:39:53 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



11.15
11

Manual Integration Approval Summary

Sample Number: JC67003-7 Method: SW846 8081B
Lab FileID: 6G56986.D Analyst approved: 06/07/18 12:54 Dharmistha Mehta
Injection Time: 06/06/18 12:35 Supervisor approved: 06/11/18 08:17 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
1-Bromo-2-nitrobenzene	577-19-5	1	1.94	Poorly defined baseline

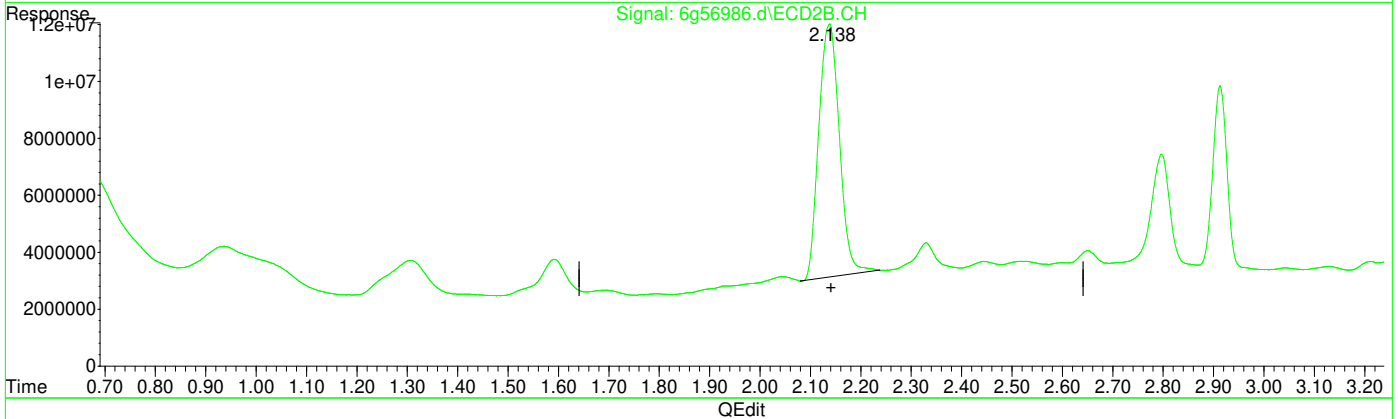
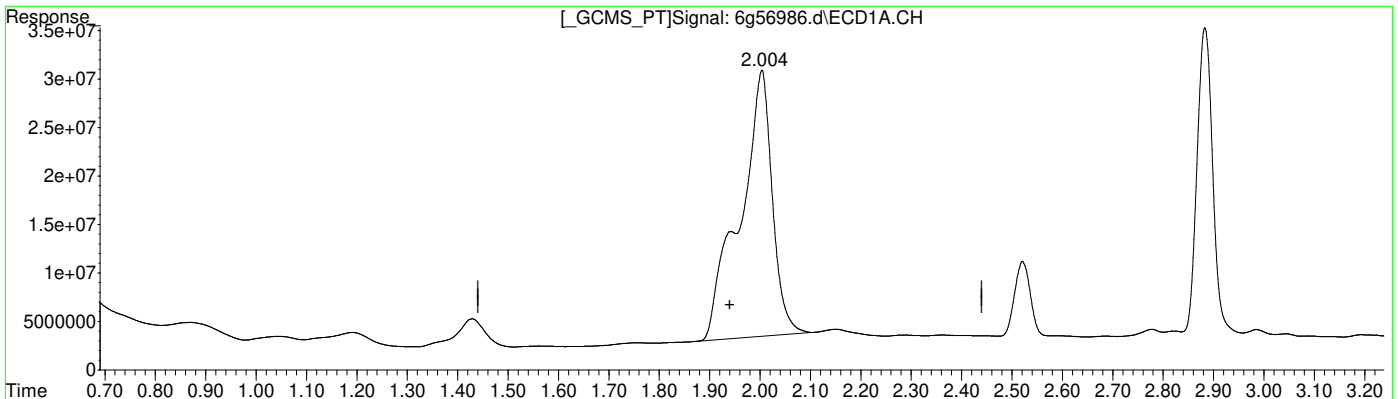
11.1.5.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56986.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 12:35:15
 Operator : rebeccak
 Sample : jc67003-7
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 57 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:38:03 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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 (I)

2.004min 50.000 PPB

response 1218312394

(1) 1-bromo-2-nitrobenzene #2 (I)

2.139min 50.000 PPB

response 252916074

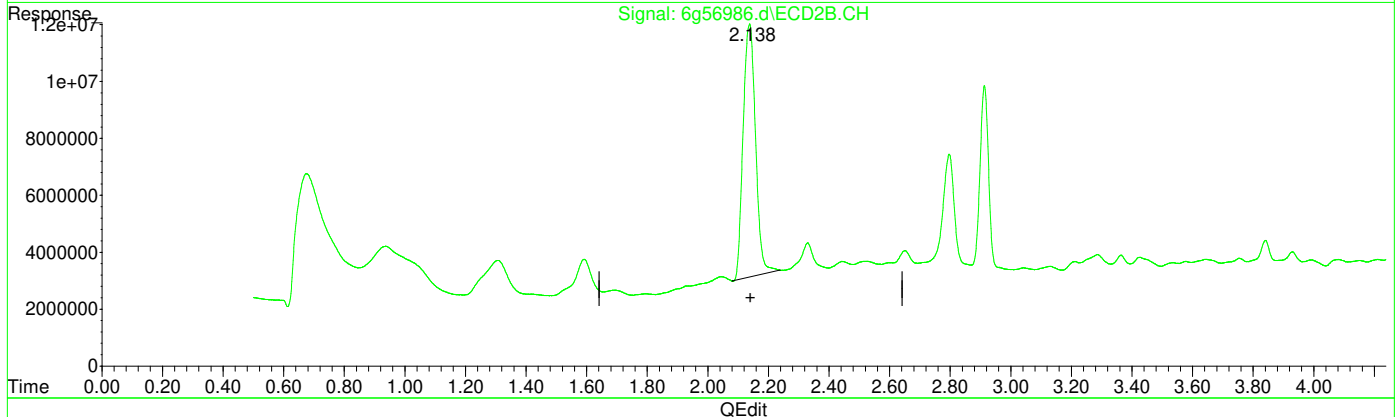
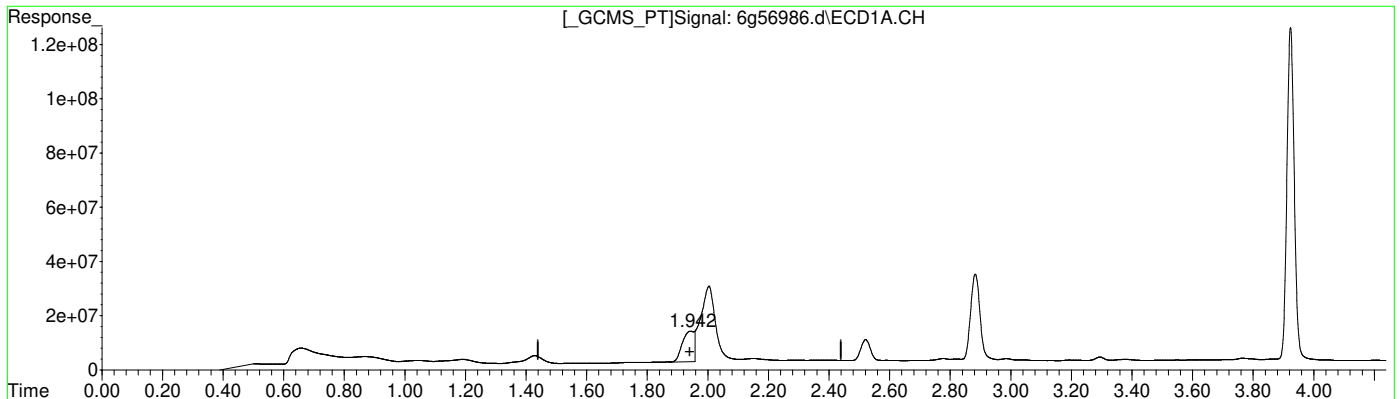
(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 12:38:25 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56986.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 12:35:15
 Operator : rebeccak
 Sample : jc67003-7
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 57 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:38:03 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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 (I)

1.942min 50.000 PPB m

response 300416120

(1) 1-bromo-2-nitrobenzene #2 (I)

2.139min 50.000 PPB

response 252916074

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 12:38:43 2018

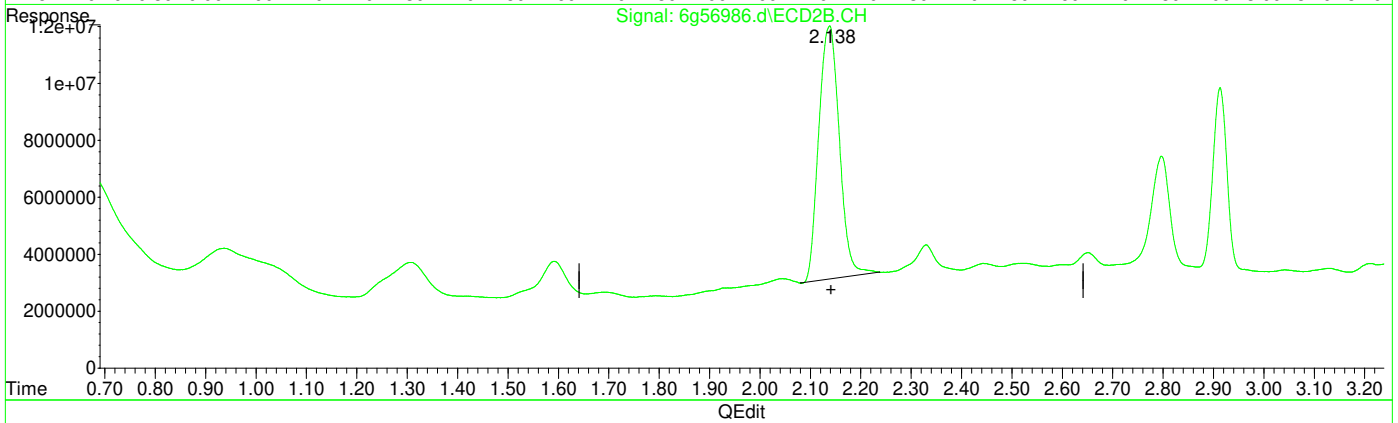
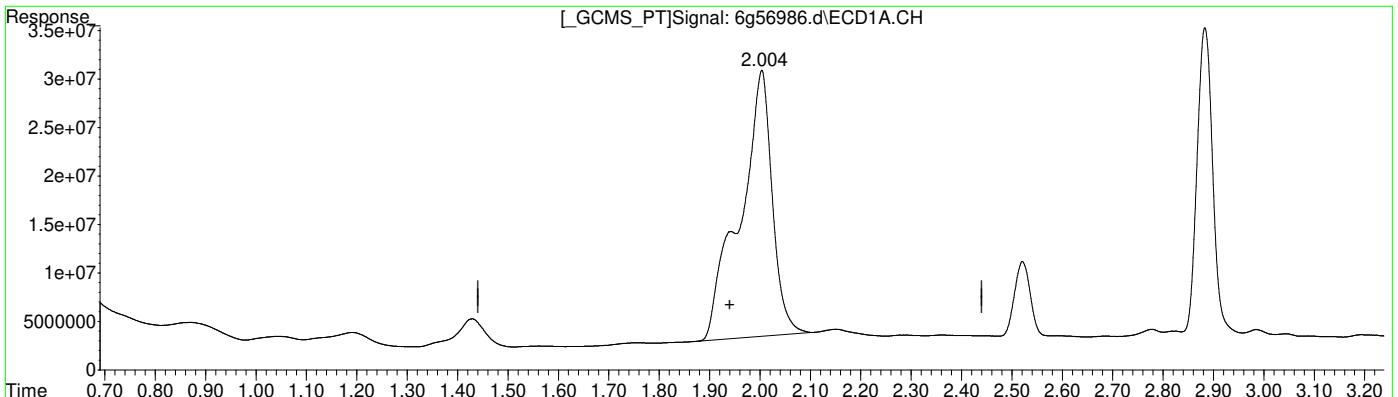
11.1.5.3
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56986.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 12:35:15
 Operator : rebeccak
 Sample : jc67003-7
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 57 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:38:03 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



(27) 1-bromo-2-nitrobenzeneA (I)

2.004min 50.000 PPB

response 1218312394

(27) 1-bromo-2-nitrobenzeneA #2 (I)

2.139min 50.000 PPB

response 252916074

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 12:39:00 2018

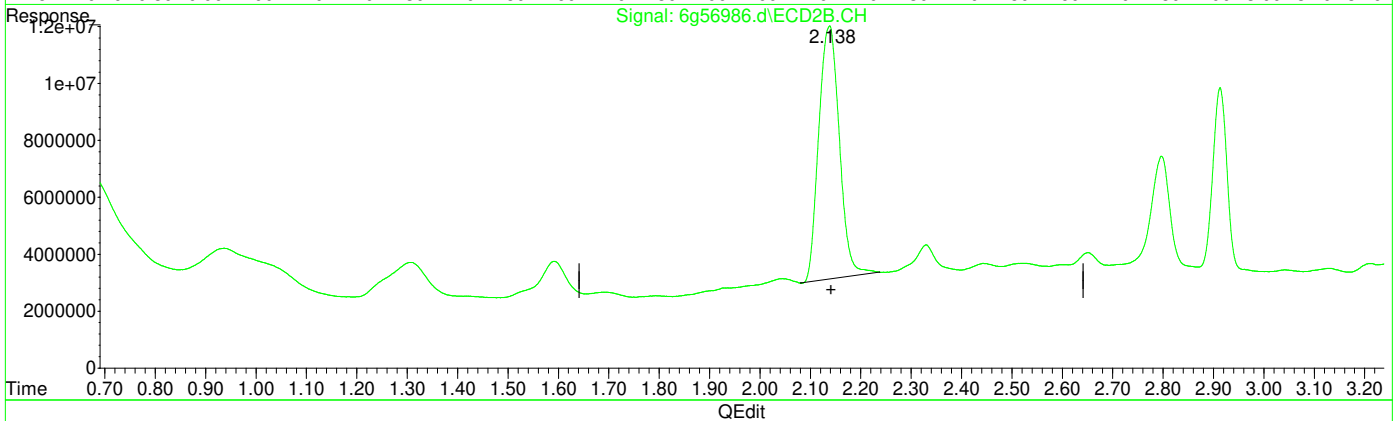
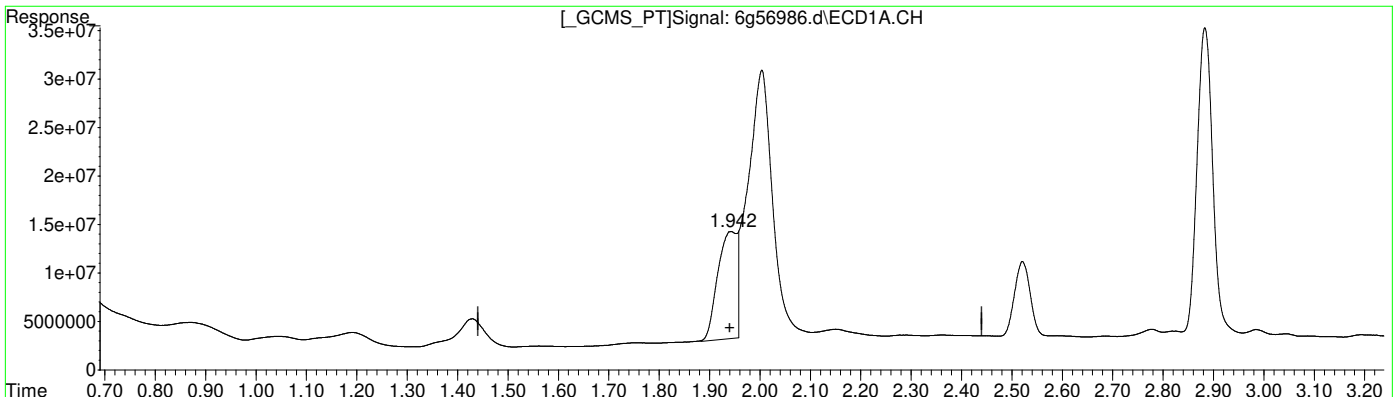
11.1.5.4
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56986.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 12:35:15
 Operator : rebeccak
 Sample : jc67003-7
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 57 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:38:03 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



(27) 1-bromo-2-nitrobenzeneA (I)

1.942min 50.000 PPB m

response 296231204

(27) 1-bromo-2-nitrobenzeneA #2 (I)

2.139min 50.000 PPB

response 252916074

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 12:39:18 2018

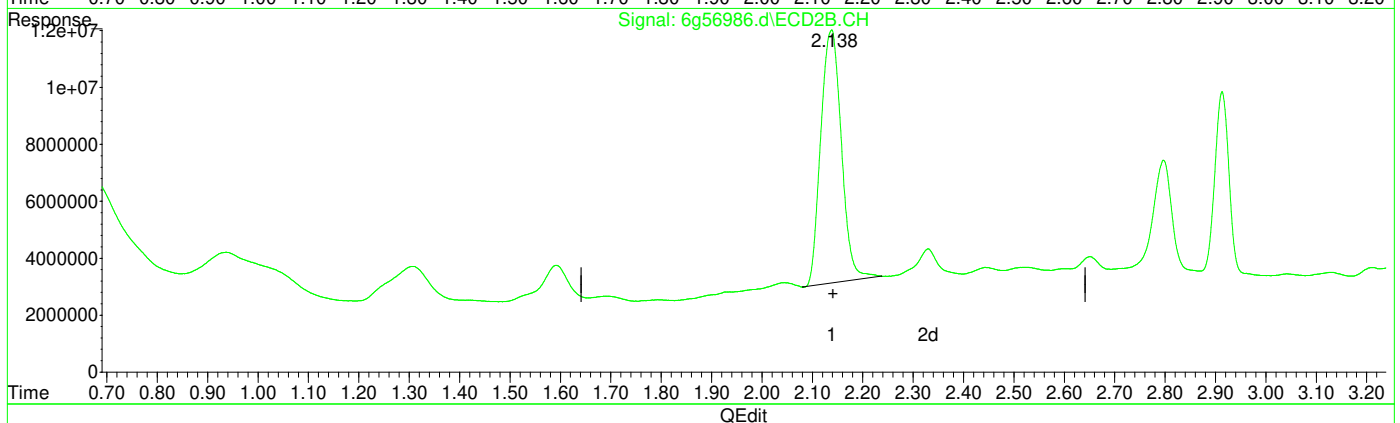
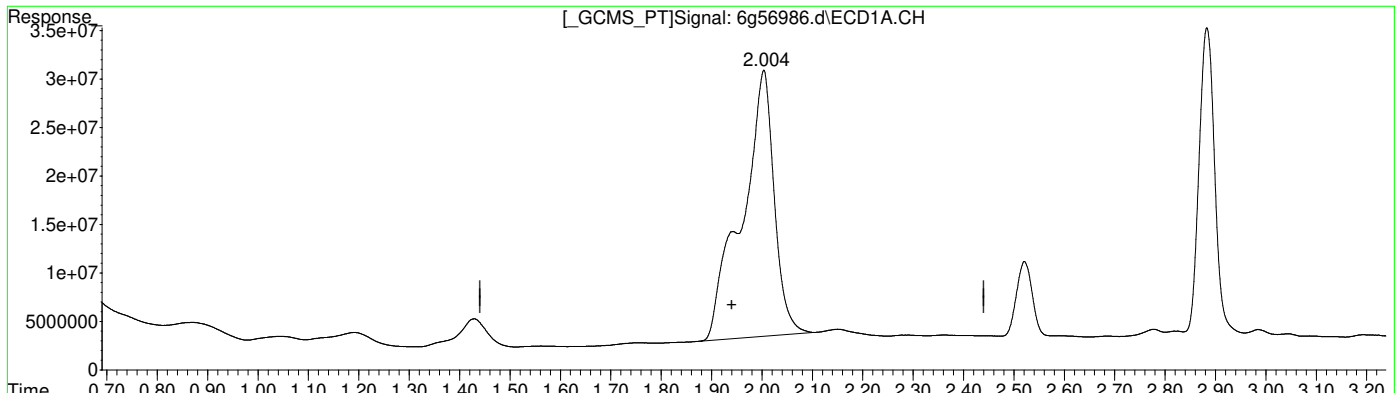
11.1.5.5
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56986.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 12:35:15
 Operator : rebeccak
 Sample : jc67003-7
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 57 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:38:03 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



(33) 1-bromo-2-nitrobenzeneB (I)

2.004min 50.000 PPB

response 1218312394

(33) 1-bromo-2-nitrobenzeneB #2 (I)

2.139min 50.000 PPB

response 252916074

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 12:39:31 2018

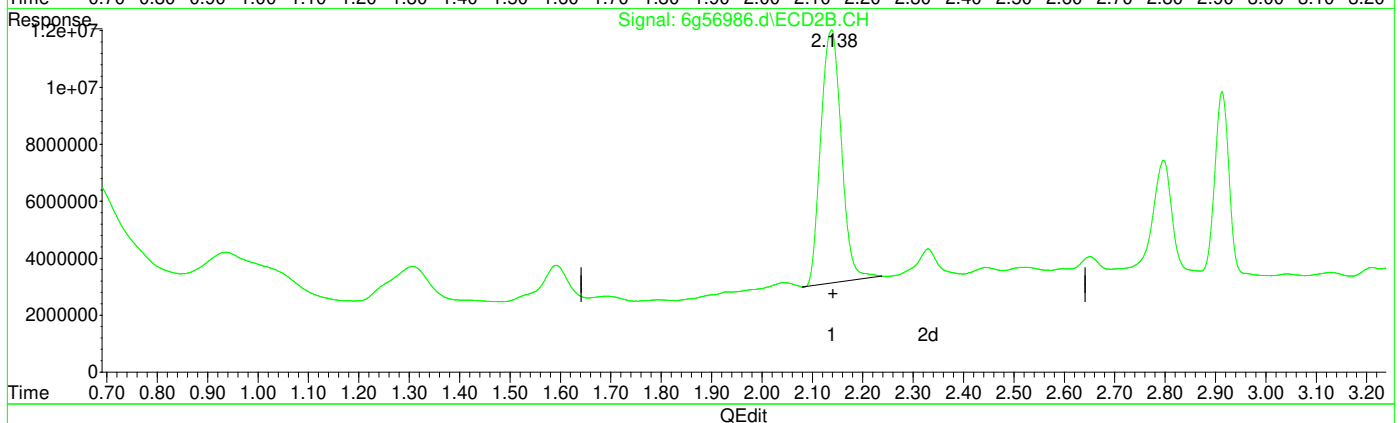
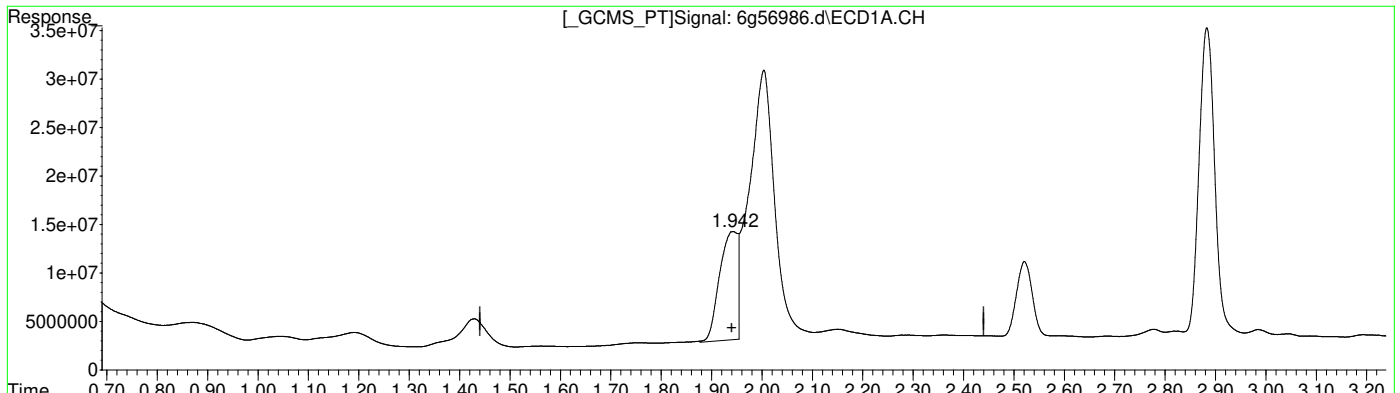
11.1.5.6
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56986.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 12:35:15
 Operator : rebeccak
 Sample : jc67003-7
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 57 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:38:03 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



(33) 1-bromo-2-nitrobenzeneB (I)

1.942min 50.000 PPB m

response 278186284

(33) 1-bromo-2-nitrobenzeneB #2 (I)

2.139min 50.000 PPB

response 252916074

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 12:39:47 2018

11.1.5.7
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229852.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 5:02 am
 Operator : edouarda
 Sample : jc67003-1
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:09:02 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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...	2.822	3.550	273.0E6	239.6E6	25.343	23.862m
Spiked Amount	40.000		Recovery	=	63.36%	59.65%
51) S Decachlor...	9.930	11.937	172.1E6	165.3E6	13.746	14.456
Spiked Amount	40.000		Recovery	=	34.37%	36.14%

Target Compounds

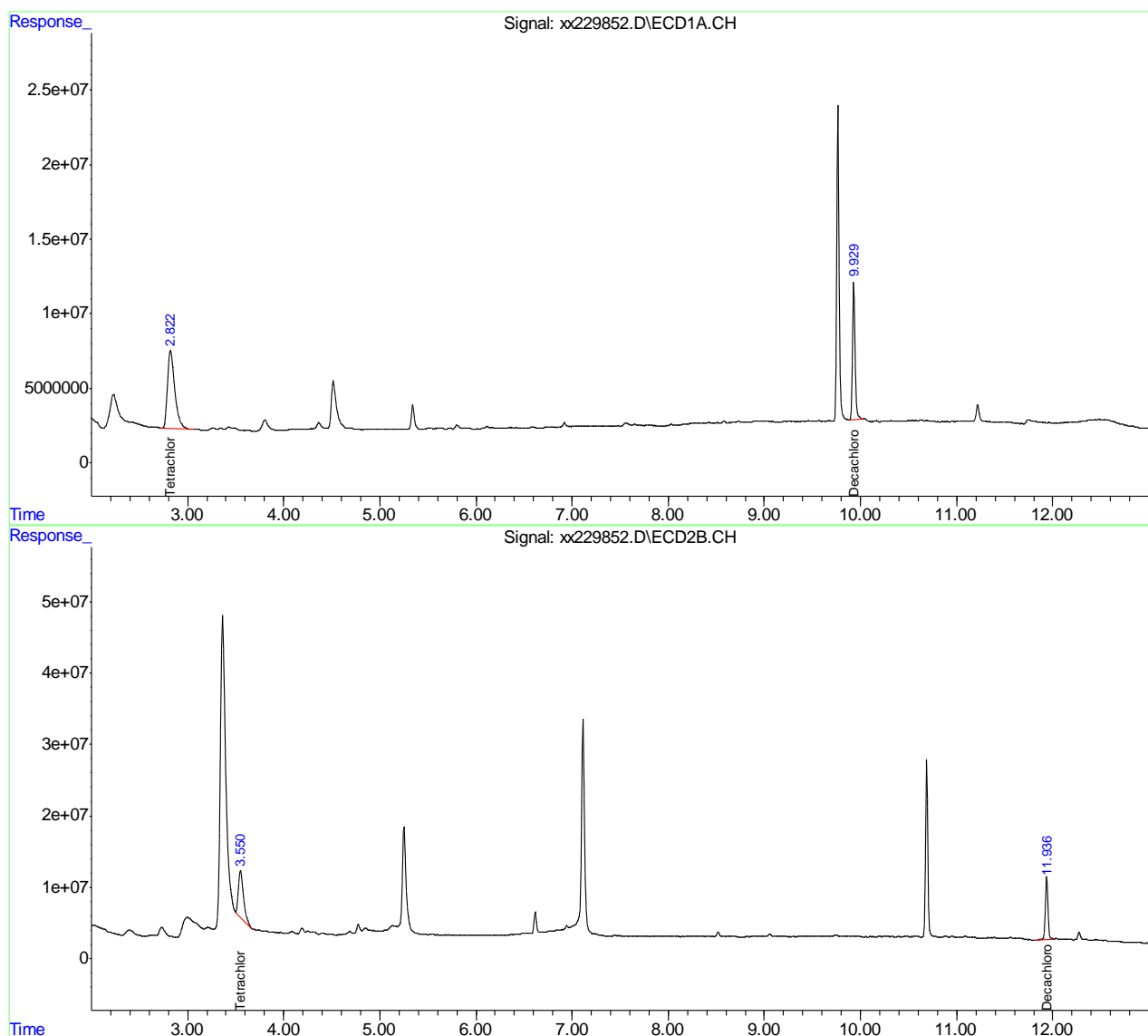
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
Data File : xx229852.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03 Jun 2018 5:02 am
Operator : edouarda
Sample : jc67003-1
Misc : op12448,GXX6375,300,,,2,1
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 05 09:09:02 2018
Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
Quant Title :
QLast Update : Tue Jun 05 08:44:33 2018
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: JC67003-1 Method: SW846 8082A
Lab FileID: XX229852.D Analyst approved: 06/05/18 09:16 Tianwei Ruan
Injection Time: 06/03/18 05:02 Supervisor approved: 06/05/18 13:54 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrachloro-m-xylene	877-09-8	2	3.55	Poorly defined baseline

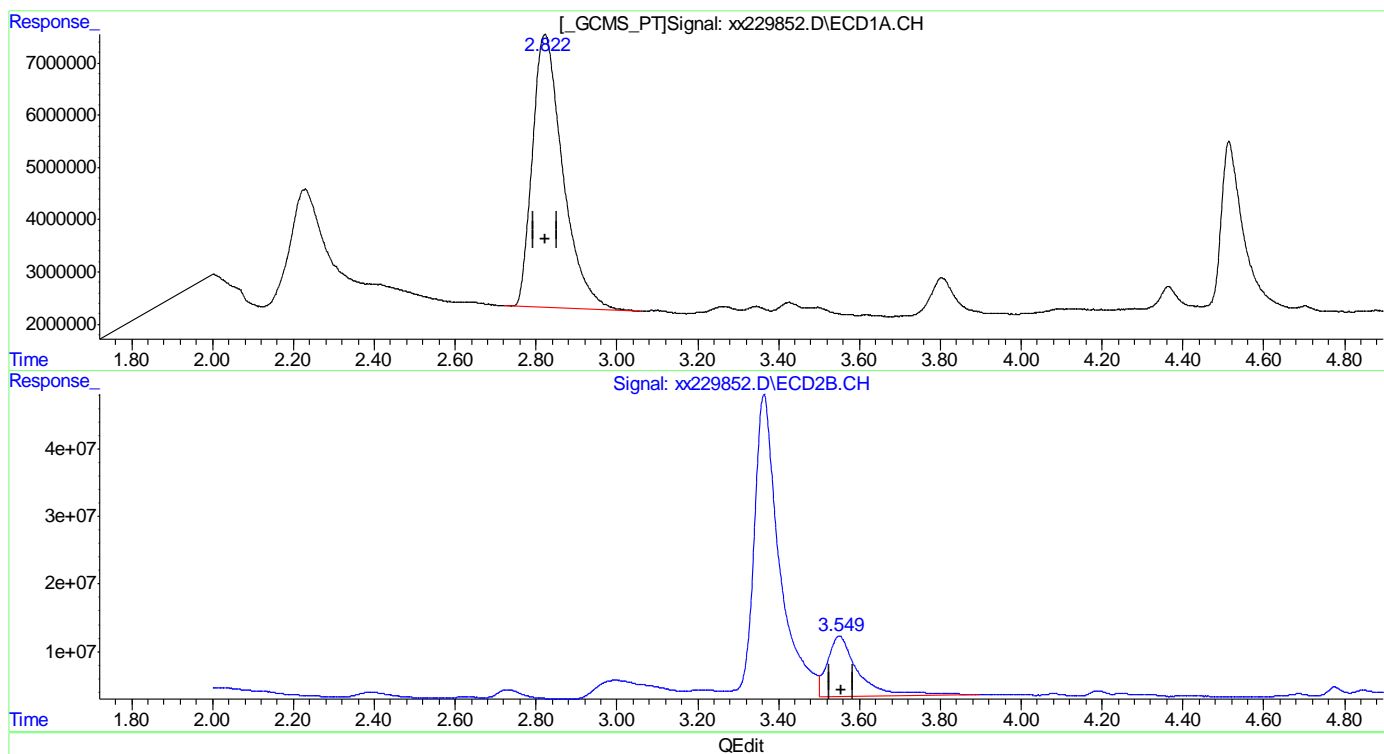
11.1.6.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229852.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 5:02 am
 Operator : edouarda
 Sample : jc67003-1
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:08:48 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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 (S)

2.822min 25.343ppb
 response 272957811

(1) Tetrachloro-m-xylene #2 (S)

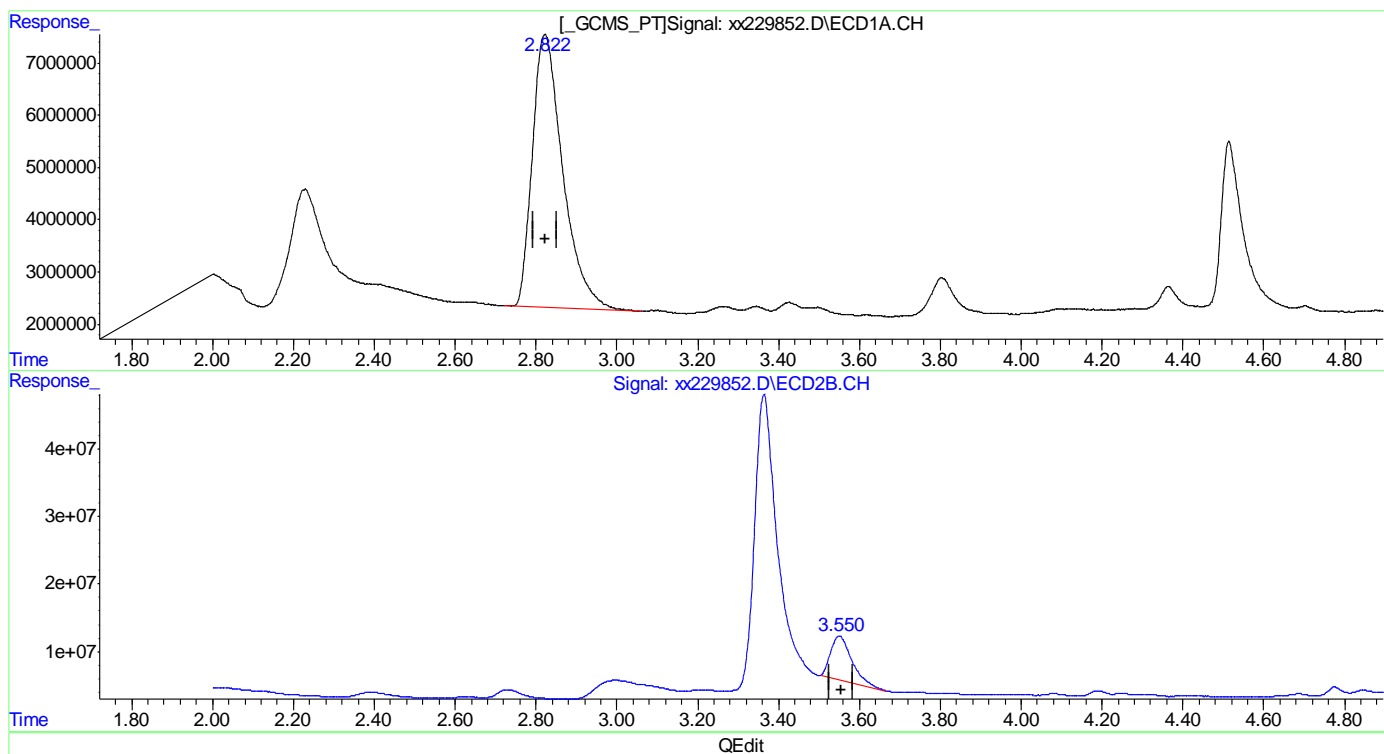
3.549min 46.632ppb
 response 468188994

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229852.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 5:02 am
 Operator : edouarda
 Sample : jc67003-1
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:08:48 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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 (S)

2.822min 25.343ppb
 response 272957811

(1) Tetrachloro-m-xylene #2 (S)

3.550min 23.862ppb m
 response 239575006

(+) = Expected Retention Time

PCB6349.M Tue Jun 05 09:09:03 2018

Page: 1

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229853.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 5:18 am
 Operator : edouarda
 Sample : jc67003-2
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 22 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:09:16 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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...	2.823	3.552	298.9E6	295.1E6	27.752	29.391
Spiked Amount	40.000		Recovery	=	69.38%	73.48%
51) S Decachlor...	9.928	11.937	258.1E6	243.2E6	20.623	21.269
Spiked Amount	40.000		Recovery	=	51.56%	53.17%

Target Compounds

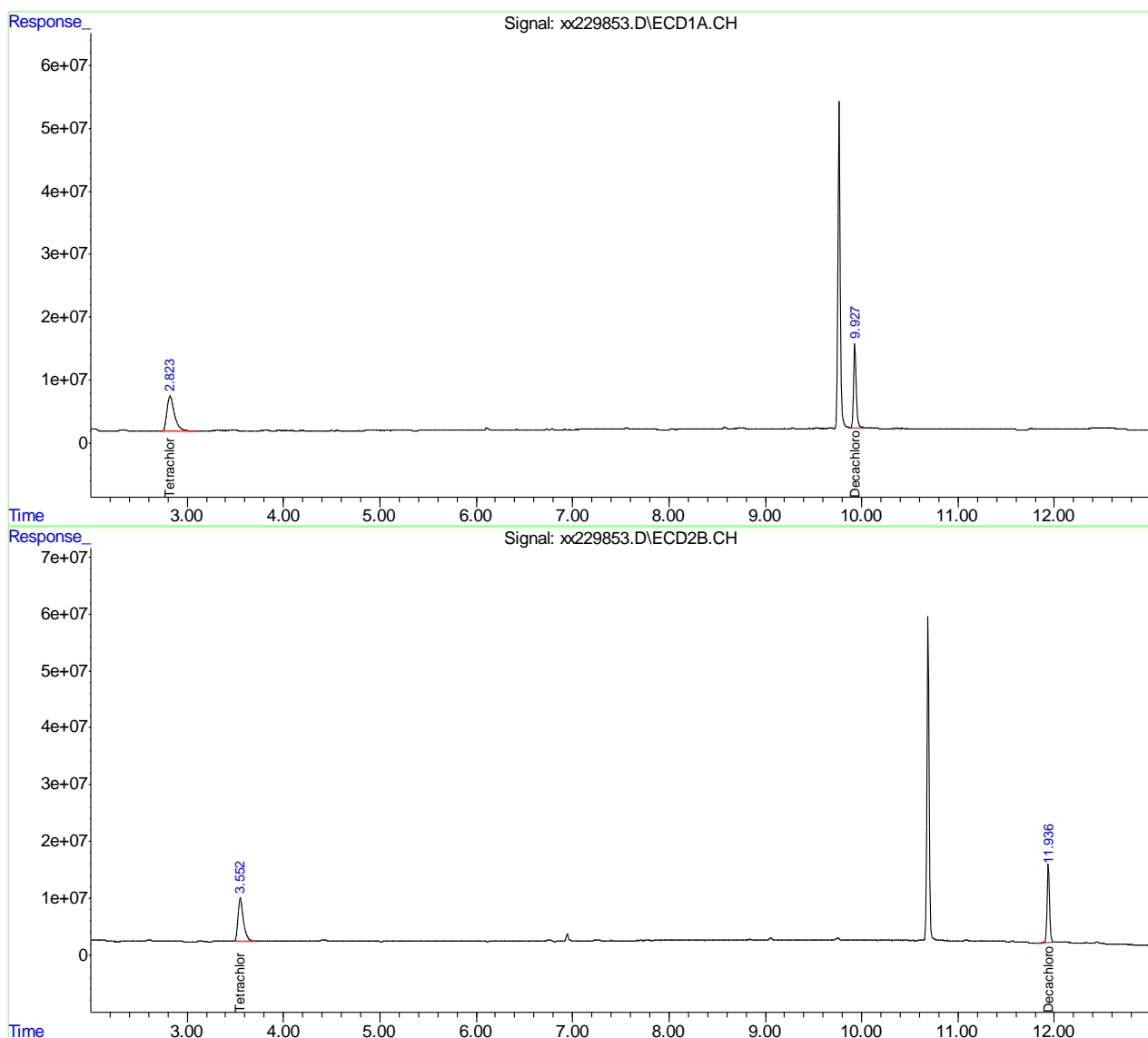
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
Data File : xx229853.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03 Jun 2018 5:18 am
Operator : edouarda
Sample : jc67003-2
Misc : op12448,GXX6375,300,,,2,1
ALS Vial : 22 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 05 09:09:16 2018
Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
Quant Title :
QLast Update : Tue Jun 05 08:44:33 2018
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)



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229854.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 5:35 am
 Operator : edouarda
 Sample : jc67003-3
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:09:48 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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...	2.820	3.552	327.6E6	332.3E6	30.421	33.100
Spiked Amount	40.000		Recovery	=	76.05%	82.75%
51) S Decachlor...	9.928	11.935	231.0E6	204.7E6	18.451	17.897
Spiked Amount	40.000		Recovery	=	46.13%	44.74%

Target Compounds

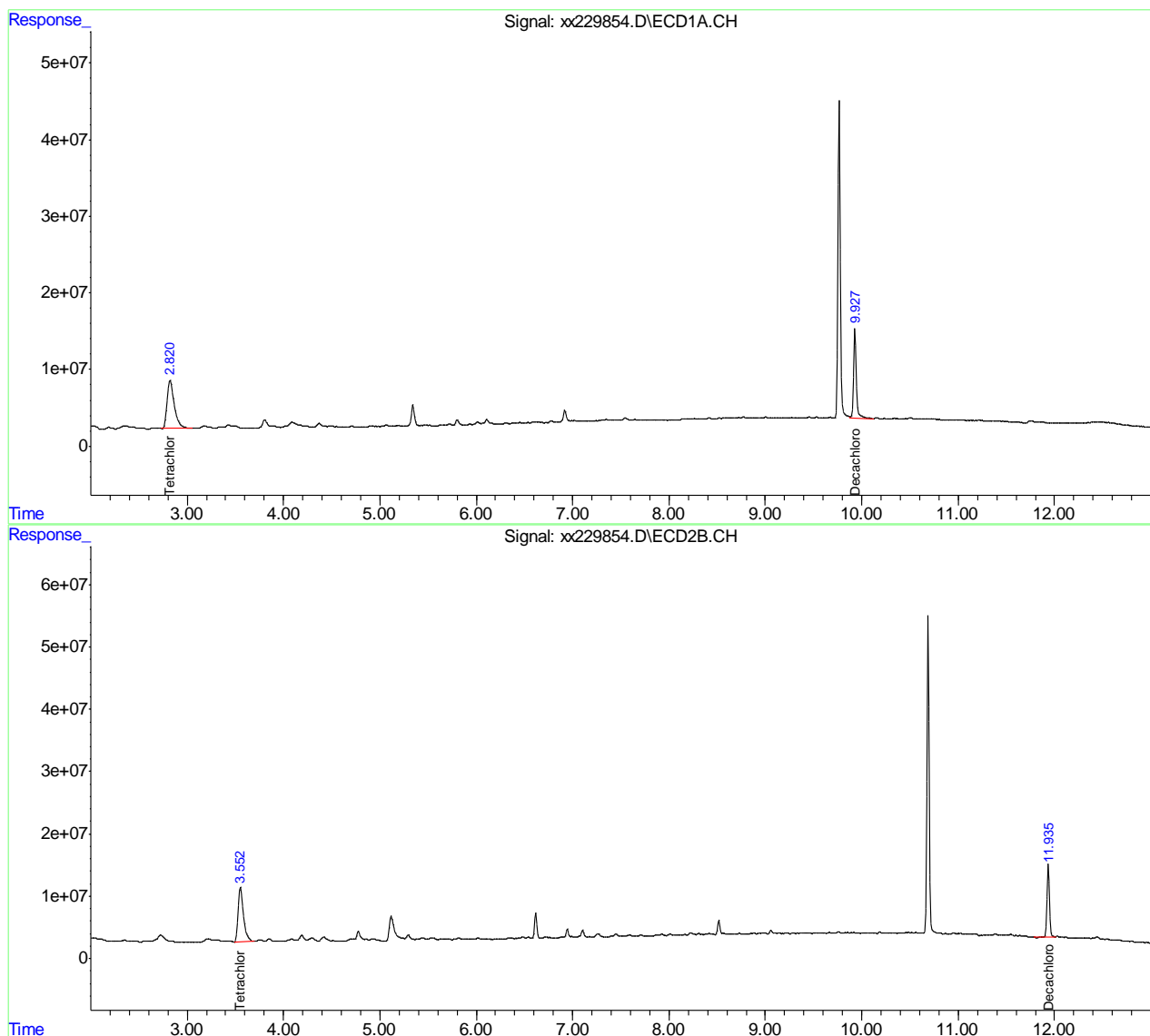
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
Data File : xx229854.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03 Jun 2018 5:35 am
Operator : edouarda
Sample : jc67003-3
Misc : op12448,GXX6375,300,,,2,1
ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 05 09:09:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
Quant Title :
QLast Update : Tue Jun 05 08:44:33 2018
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)



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229855.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 5:51 am
 Operator : edouarda
 Sample : jc67003-7
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:10:11 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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...	2.820	3.550	281.1E6	292.0E6	26.103	29.088
Spiked Amount	40.000		Recovery	=	65.26%	72.72%
51) S Decachlor...	9.929	11.937	176.5E6	173.3E6	14.103	15.151m
Spiked Amount	40.000		Recovery	=	35.26%	37.88%

Target Compounds

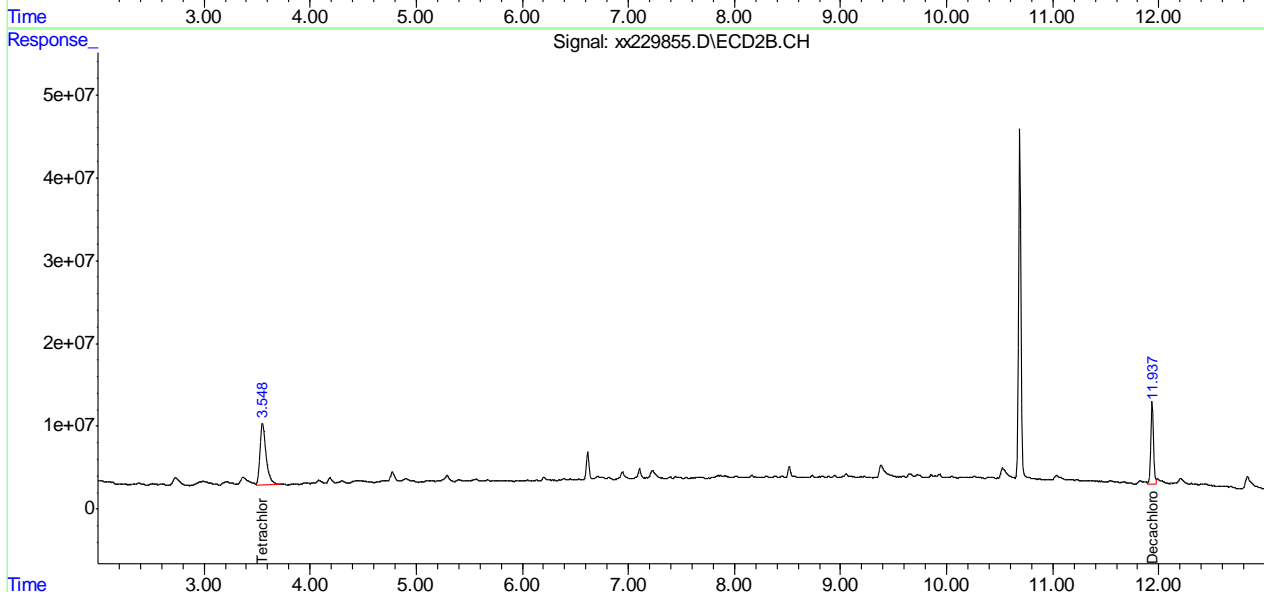
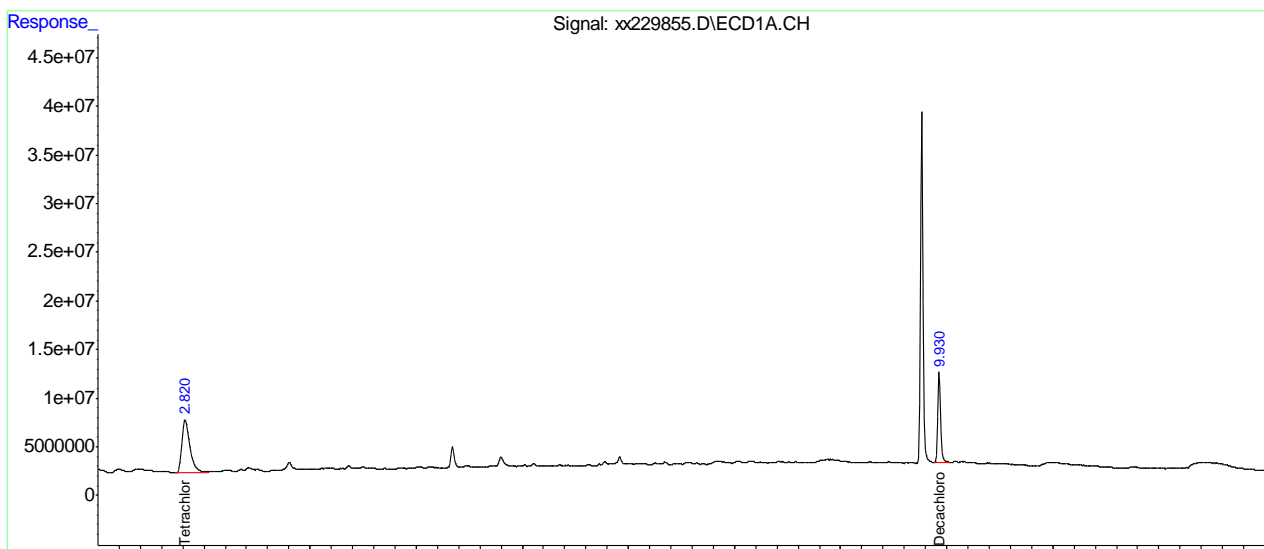
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229855.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 5:51 am
 Operator : edouarda
 Sample : jc67003-7
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:10:11 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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: JC67003-7 Method: SW846 8082A
Lab FileID: XX229855.D Analyst approved: 06/05/18 09:16 Tianwei Ruan
Injection Time: 06/03/18 05:51 Supervisor approved: 06/05/18 13:54 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Decachlorobiphenyl	2051-24-3	2	11.94	Poorly defined baseline

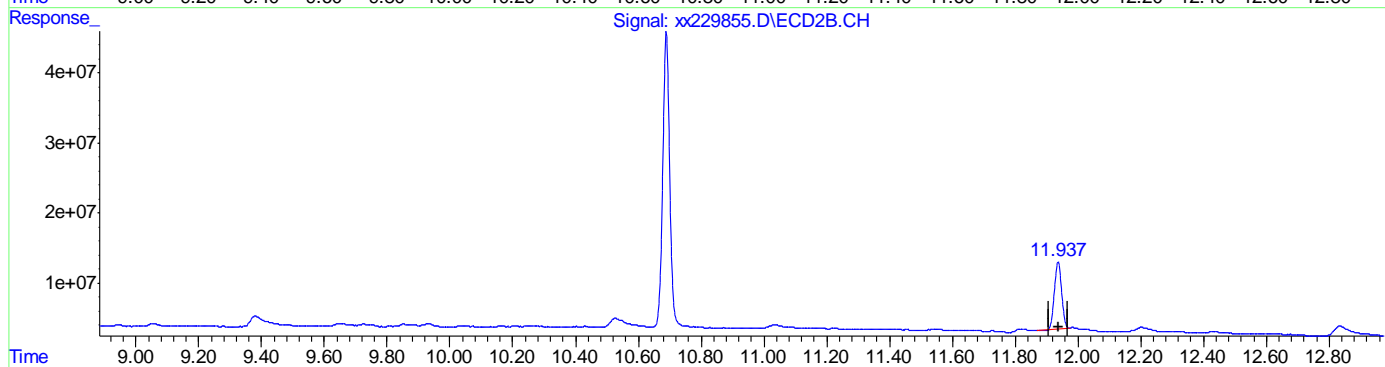
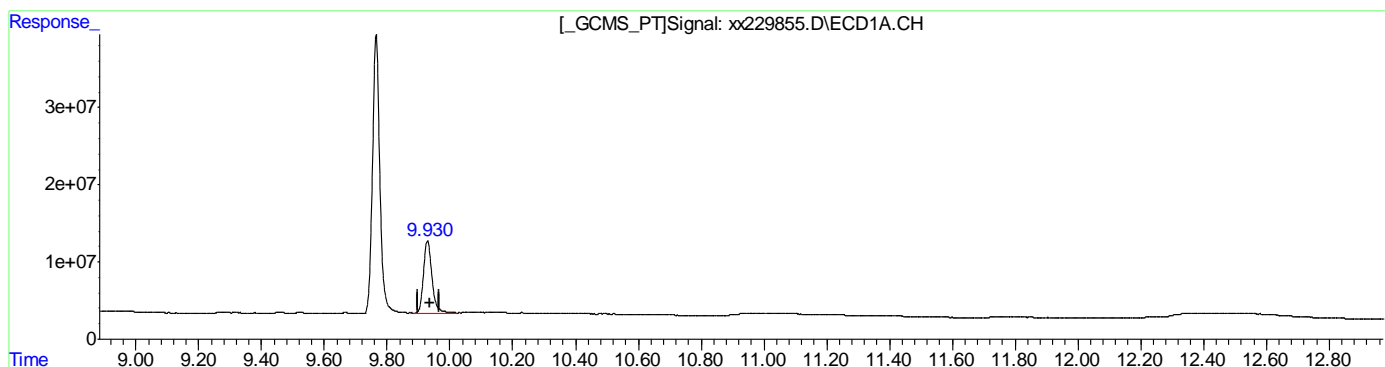
11.1.9.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229855.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 5:51 am
 Operator : edouarda
 Sample : jc67003-7
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:09:55 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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)



(51) Decachlorobiphenyl (S)
 9.929min 14.103ppb
 response 176537912

(51) Decachlorobiphenyl #2 (S)
 11.937min 13.223ppb
 response 151219884

(+) = Expected Retention Time
 PCB6349.M Tue Jun 05 09:10:07 2018

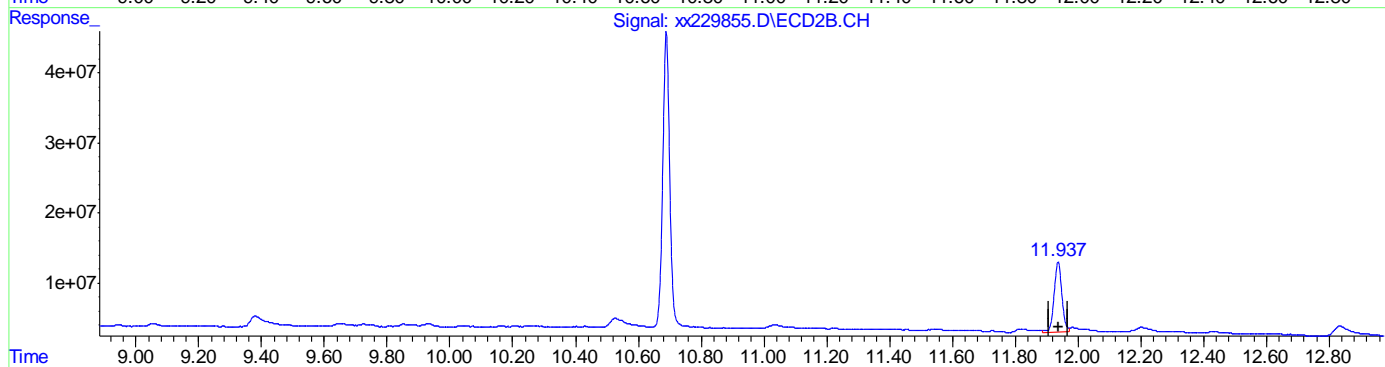
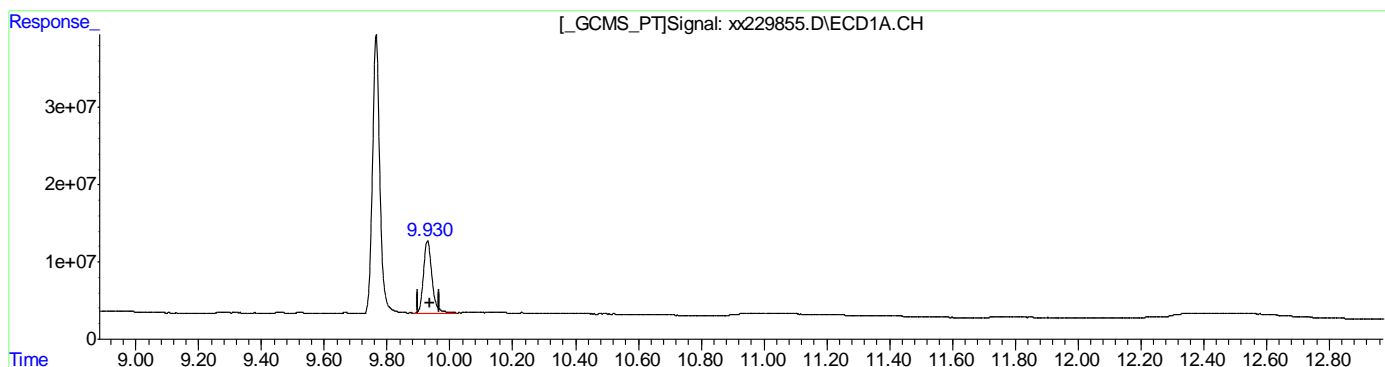
11.1.9.2
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229855.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 5:51 am
 Operator : edouarda
 Sample : jc67003-7
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:09:55 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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)



(51) Decachlorobiphenyl (S)
 9.929min 14.103ppb
 response 176537912

(51) Decachlorobiphenyl #2 (S)
 11.937min 15.151ppb m
 response 173272061

(+) = Expected Retention Time
 PCB6349.M Tue Jun 05 09:10:12 2018

11.1.9.3
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56980.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 10:48:06
 Operator : rebeccak
 Sample : op12449-mb1
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 51 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:24:12 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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...	1.938	2.136	379.7E6	259.0E6	50.000	50.000
27) I 1-bromo-2...	1.938	2.136	379.7E6	259.0E6	50.000	50.000
33) I 1-bromo-2...	1.938	2.136	379.7E6	259.0E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.520	2.912	209.6E6	154.0E6	28.400	31.926
Spiked Amount	40.000	Range 30 - 150	Recovery =	71.00%	79.81%	
26) SA Decachlor...	9.768	11.654	137.4E6	92938922	18.260	19.317
Spiked Amount	40.000		Recovery =	45.65%	48.29%	
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.

11.21
11

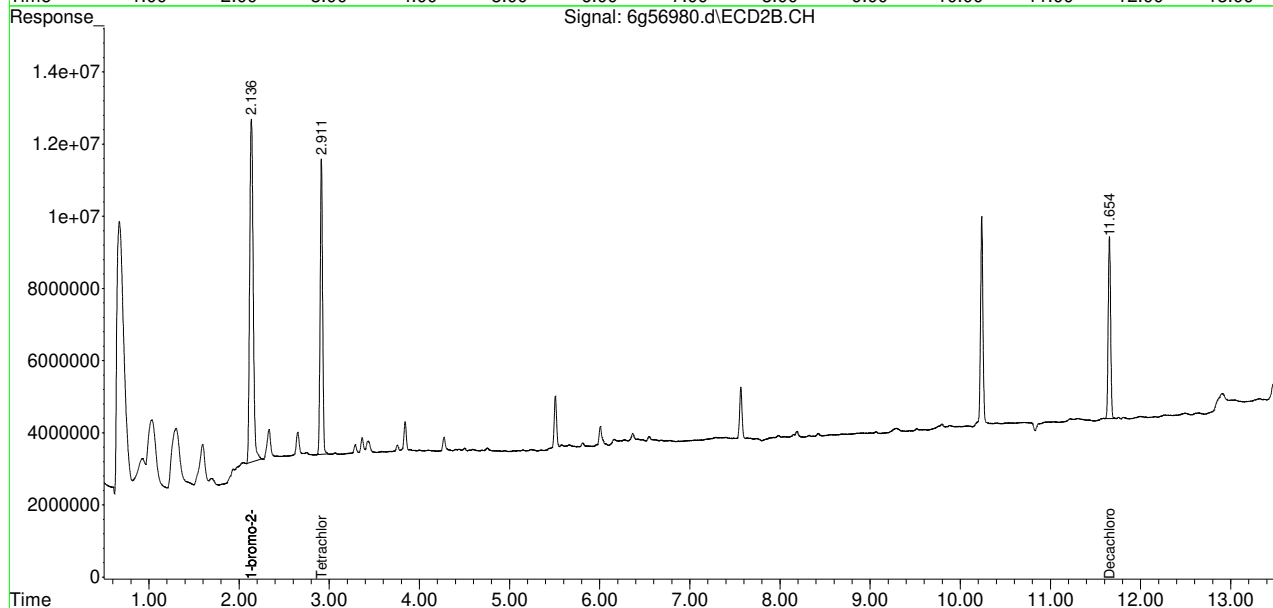
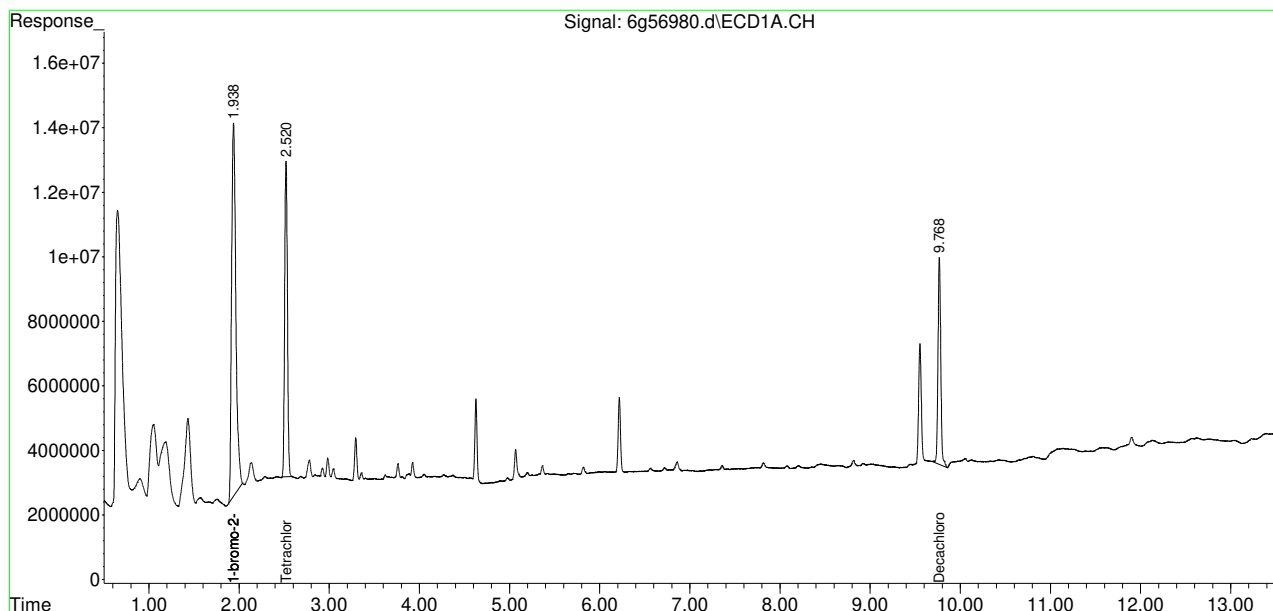


Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56980.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 10:48:06
 Operator : rebeccak
 Sample : op12449-mb1
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 51 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:24:12 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



11.21
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G513\
 Data File : 8g15849.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Jun 2018 1:11 pm
 Operator : dharas
 Sample : op12449-mb1
 Misc : op12449,g8g513,300,,,2,1
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 12 14:08:27 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.876	2.266	325.2E6	655.8E6	50.000	50.000
27) I 1-bromo-2...	1.876	2.266	325.2E6	655.8E6	50.000	50.000
33) I 1-bromo-2...	1.876	2.266	325.2E6	655.8E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.634	3.289	200.1E6	455.3E6	30.260	34.607
Spiked Amount	40.000	Range 30 - 150	Recovery =	75.65%	86.52%	
26) SA Decachlor...	10.918	13.302	161.5E6	207.3E6	19.808	22.370
Spiked Amount	40.000		Recovery =	49.52%	55.93%	

Target Compounds

SemiQuant Compounds - Not Calibrated on this Instrument

 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

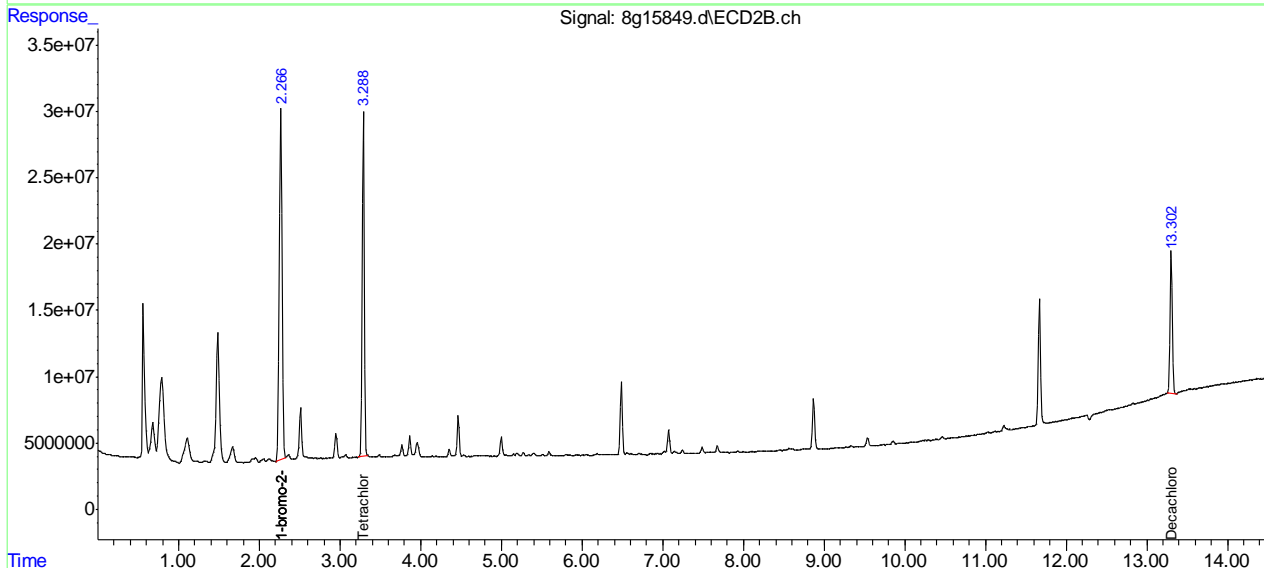
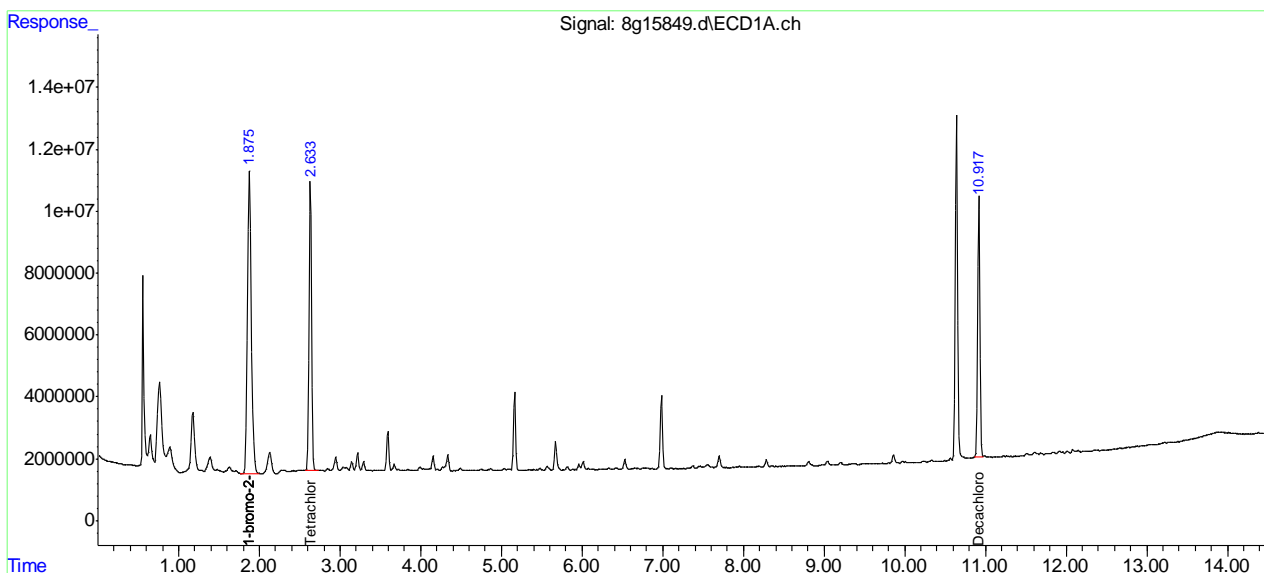
11.22
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G513\
 Data File : 8g15849.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Jun 2018 1:11 pm
 Operator : dharas
 Sample : op12449-mb1
 Misc : op12449,g8g513,300,,,2,1
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 12 14:08:27 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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\gxx6375\
 Data File : xx229849.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:12 am
 Operator : edouarda
 Sample : op12448-mb1
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:06:08 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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...	2.822	3.553	313.3E6	309.7E6	29.087	30.848
Spiked Amount	40.000		Recovery	=	72.72%	77.12%
51) S Decachlor...	9.931	11.939	273.8E6	249.4E6	21.875	21.806
Spiked Amount	40.000		Recovery	=	54.69%	54.52%

Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

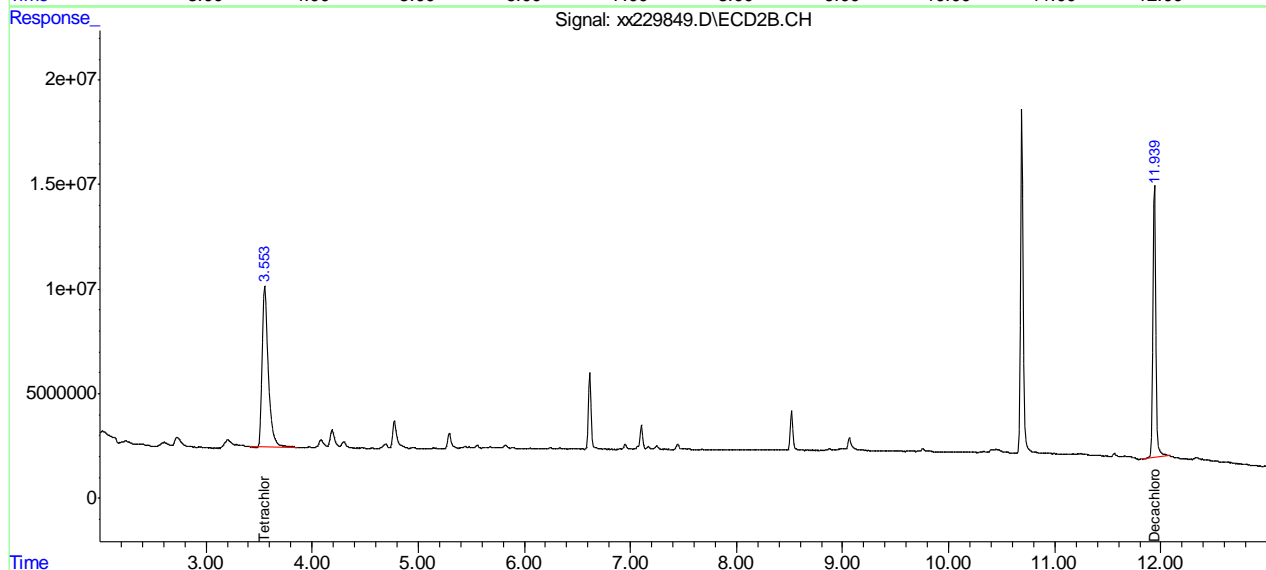
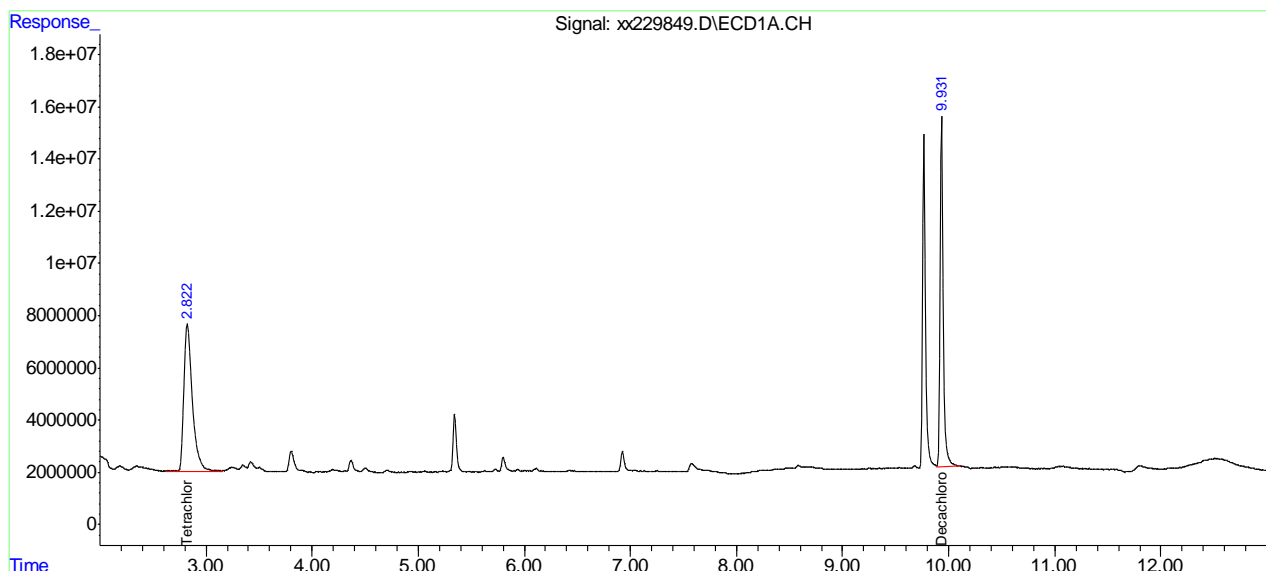
11.23
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229849.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:12 am
 Operator : edouarda
 Sample : op12448-mb1
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:06:08 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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)



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56981.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 11:05:56
 Operator : rebeccak
 Sample : op12449-bs1
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 52 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 12 08:51:23 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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...	1.939	2.136	391.7E6	272.6E6	50.000	50.000
27) I 1-bromo-2...	1.939	2.136	391.7E6	272.6E6	50.000	50.000
33) I 1-bromo-2...	1.939	2.136	391.7E6	272.6E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.520	2.912	187.8E6	132.8E6	24.665	26.154
Spiked Amount	40.000	Range 30 - 150	Recovery =		61.66%	65.39%
26) SA Decachlor...	9.768	11.655	126.9E6	84934254	16.348	16.771
Spiked Amount	40.000		Recovery =		40.87%	41.93%
Target Compounds						
3) hexachlor...	2.842	3.390	143.1E6	138.3E6	16.836	21.717 #
4) A alpha-BHC	2.979	3.534	198.1E6	134.2E6	18.890	19.864
5) MA gamma-BHC	3.267	3.938	196.4E6	125.6E6	19.776	19.821
6) MA Heptachlor	3.749	4.486	178.9E6	122.5E6	19.075	19.004
7) B beta-BHC	3.341	4.020	85038684	58789324	19.159	20.200
8) B delta-BHC	3.520	4.395	113.1E6	81674986	12.925	13.882
9) MB Aldrin	4.077	4.918	163.9E6	105.4E6	17.982	18.579
10) alachlor	4.211	4.737	20683520	15674134	18.812m	20.852
11) B Heptachlo...	4.774	5.707	152.8E6	110.0E6	18.136	20.053
12) B gamma-Chl...	4.935	5.983	151.4E6	122.4E6	18.237	22.771
13) B alpha-Chl...	5.104	6.203	171.4E6	106.3E6	20.160	20.323
14) A Endosulfan I	5.279	6.293	152.1E6	99093786	19.197	19.821
15) B 4,4'-DDE	5.215	6.463	154.2E6	103.4E6	19.048	20.338
16) MA Dieldrin	5.596	6.716	169.0E6	111.6E6	19.693	20.805
17) MA Endrin	5.915	7.205	166.2E6	109.8E6	21.401	20.845
18) A 4,4'-DDD	6.039	7.391	133.4E6	89244133	19.893	20.387
19) B Endosulfa...	6.232	7.551	190.5E6	127.3E6	23.121	23.877
20) MA 4,4'-DDT	6.452	7.914	124.6E6	79795201	19.384	18.881
21) B Endrin Al...	6.852	8.111	133.9E6	79658458	20.520	19.674
22) B Endosulfa...	7.527	8.573	117.2E6	77992168	18.133	19.236
23) A Methoxychlor	7.230	9.142	73722545	44254852	19.221	18.435
25) B Endrin Ke...	7.964	9.516	148.1E6	97805004	19.271	18.205
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.

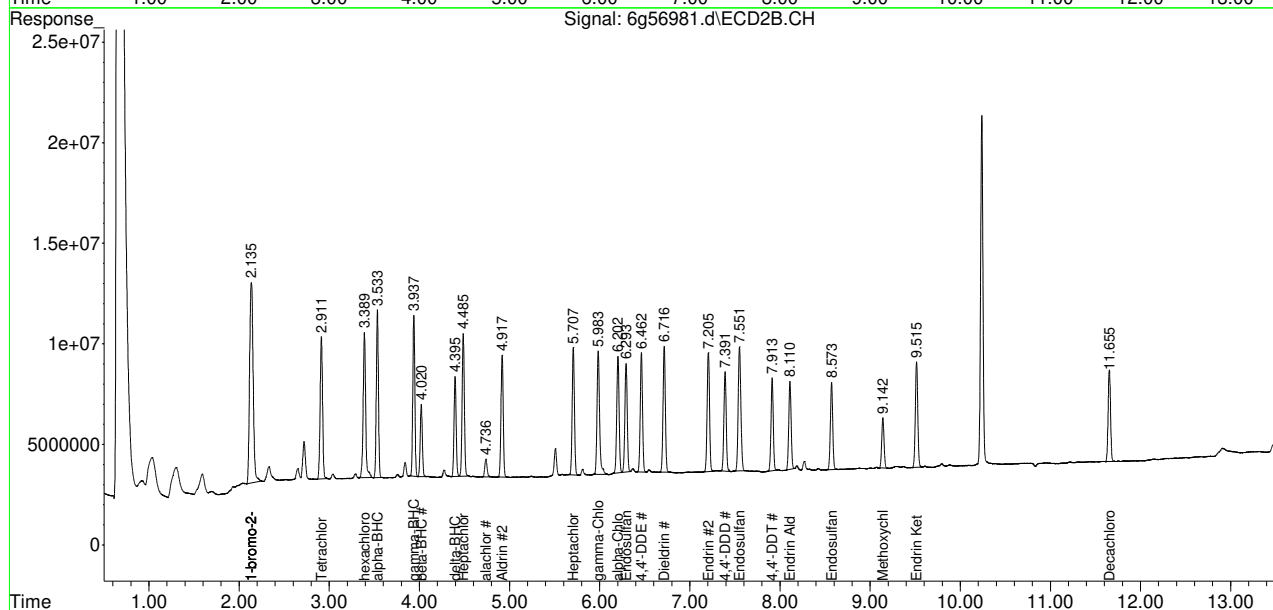
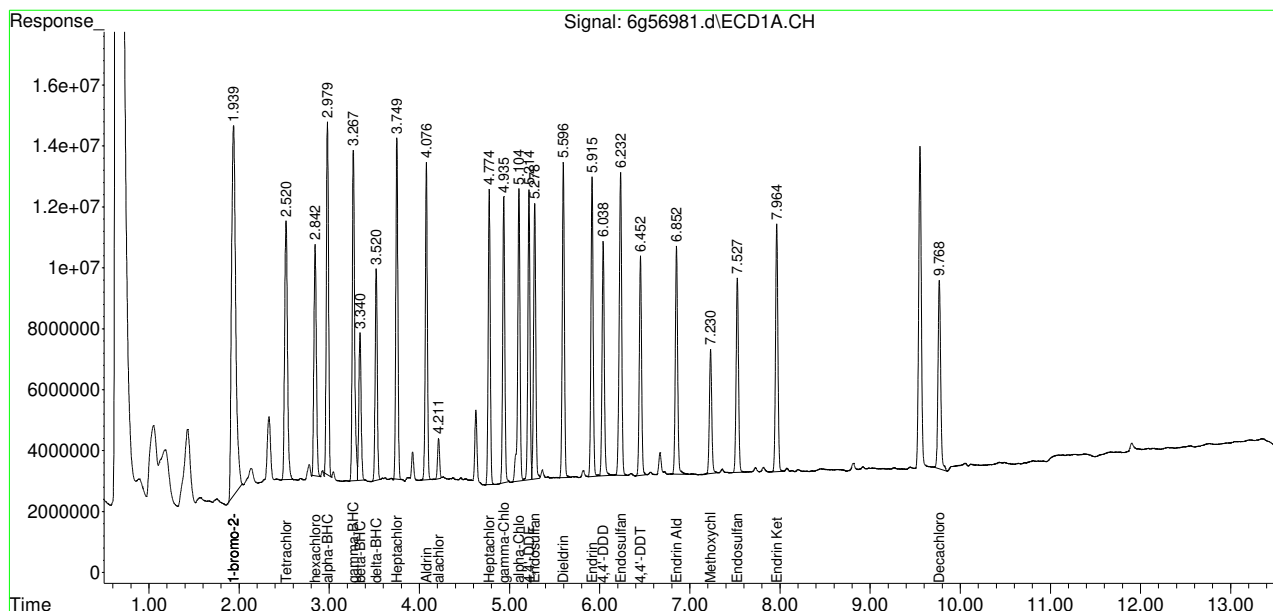
11.3.1
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56981.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 11:05:56
 Operator : rebeccak
 Sample : op12449-bs1
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 52 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 12 08:51:23 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



11.3.1
11

Manual Integration Approval Summary

Sample Number: OP12449-BS1 Method: SW846 8081B
Lab FileID: 6G56981.D Analyst approved: 06/12/18 08:53 Dharmistha Mehta
Injection Time: 06/06/18 11:05 Supervisor approved: 06/12/18 09:25 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Alachlor	15972-60-8	1	4.21	Poorly defined baseline

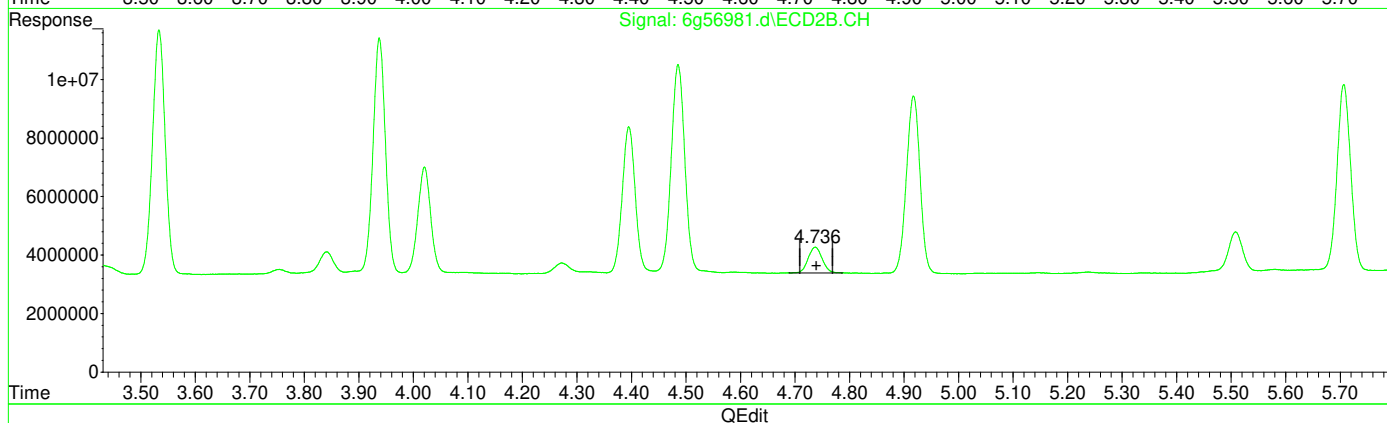
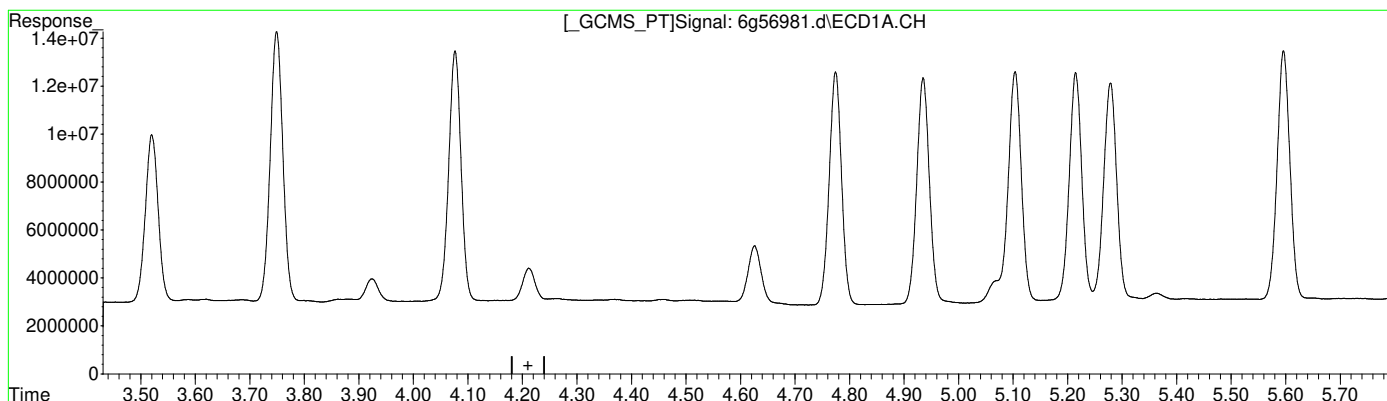
11.3.1.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56981.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 11:05:56
 Operator : rebeccak
 Sample : op12449-bs1
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 52 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:24:26 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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
 4.737min 20.852 PPB
 response 15674134

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 12:25:04 2018

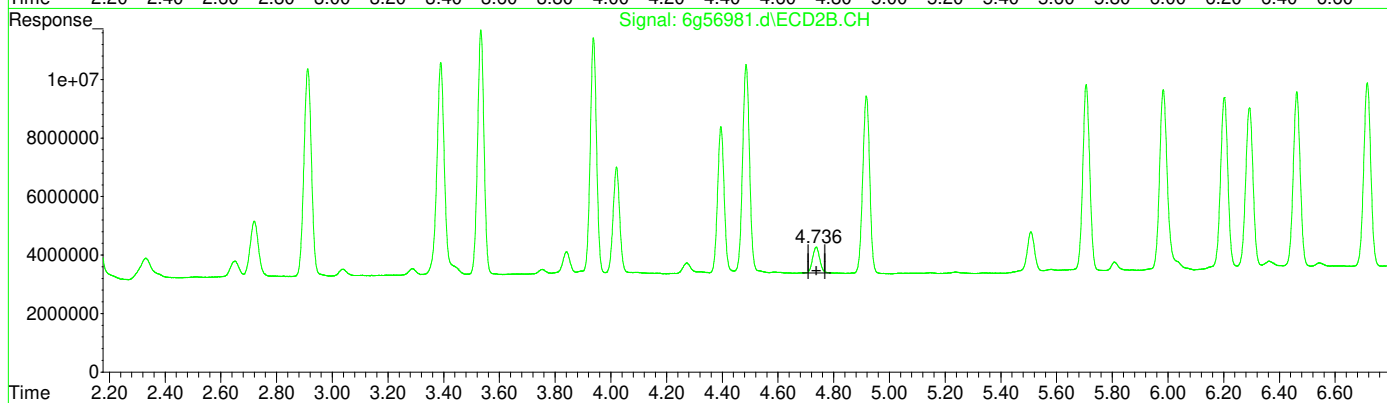
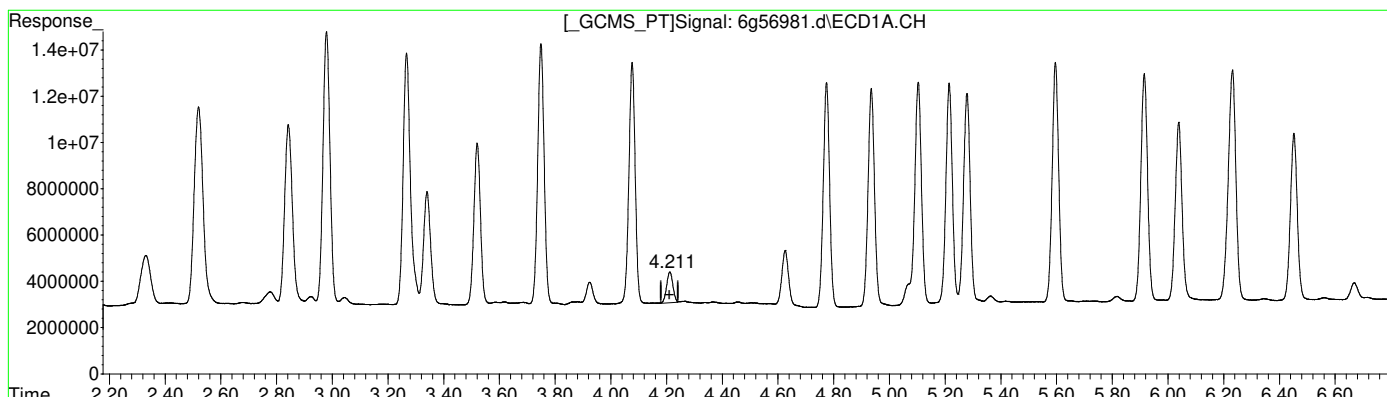
11.3.12
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56981.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 11:05:56
 Operator : rebeccak
 Sample : op12449-bs1
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 52 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:24:26 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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
 4.211min 18.812 PPB m
 response 20683520

(10)alachlor #2
 4.737min 20.852 PPB
 response 15674134

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 12:25:12 2018

11.3.13
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56982.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 11:23:45
 Operator : rebeccak
 Sample : op12449-bsd
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 53 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 14:04:44 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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...	1.938	2.137	382.3E6	262.1E6	50.000	50.000
27)	I 1-bromo-2...	1.938	2.137	382.3E6	262.1E6	50.000	50.000
33)	I 1-bromo-2...	1.938	2.137	382.3E6	262.1E6	50.000	50.000
System Monitoring Compounds							
2)	SAB Tetrachlo...	2.521	2.913	206.1E6	145.0E6	27.737	29.706
	Spiked Amount	40.000	Range 30 - 150	Recovery =		69.34%	74.27%
26)	SA Decachlor...	9.770	11.654	120.1E6	83021618	15.850	17.048
	Spiked Amount	40.000		Recovery =		39.63%	42.62%
Target Compounds							
3)	hexachlor...	2.844	3.390	160.9E6	154.7E6	19.398	25.269 #
4)	A alpha-BHC	2.980	3.533	223.4E6	150.0E6	21.829	23.092
5)	MA gamma-BHC	3.268	3.938	219.9E6	140.0E6	22.696	22.976
6)	MA Heptachlor	3.749	4.486	197.8E6	134.5E6	21.606	21.699
7)	B beta-BHC	3.341	4.020	93639998	64194408	21.614	22.937
8)	B delta-BHC	3.521	4.395	123.1E6	87988393	14.404	15.552
9)	MB Aldrin	4.077	4.917	180.3E6	117.0E6	20.262	21.442
10)	alachlor	4.212	4.737	23416684	17352016	21.820m	24.006
11)	B Heptachlo...	4.775	5.708	169.8E6	122.0E6	20.646	23.121
12)	B gamma-Chl...	4.936	5.984	165.7E6	112.6E6	20.446	21.776
13)	B alpha-Chl...	5.104	6.203	187.0E6	116.5E6	22.532	23.146
14)	A Endosulfan I	5.279	6.293	166.1E6	109.9E6	21.473	22.859
15)	B 4,4'-DDE	5.214	6.463	167.4E6	113.8E6	21.178	23.288
16)	MA Dieldrin	5.597	6.716	186.0E6	124.3E6	22.197	24.085
17)	MA Endrin	5.915	7.206	182.3E6	121.3E6	24.043	23.941
18)	A 4,4'-DDD	6.039	7.391	144.5E6	96552411	22.082	22.936
19)	B Endosulfa...	6.232	7.551	207.4E6	138.9E6	25.788	27.096
20)	MA 4,4'-DDT	6.452	7.914	135.0E6	86349165	21.509	21.248
21)	B Endrin Al...	6.852	8.111	143.3E6	88499456	22.506	22.731
22)	B Endosulfa...	7.528	8.574	123.8E6	82819938	19.624	21.242
23)	A Methoxychlor	7.231	9.142	80173327	48929687	21.415	21.196
25)	B Endrin Ke...	7.965	9.516	157.7E6	104.5E6	21.023	20.219
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

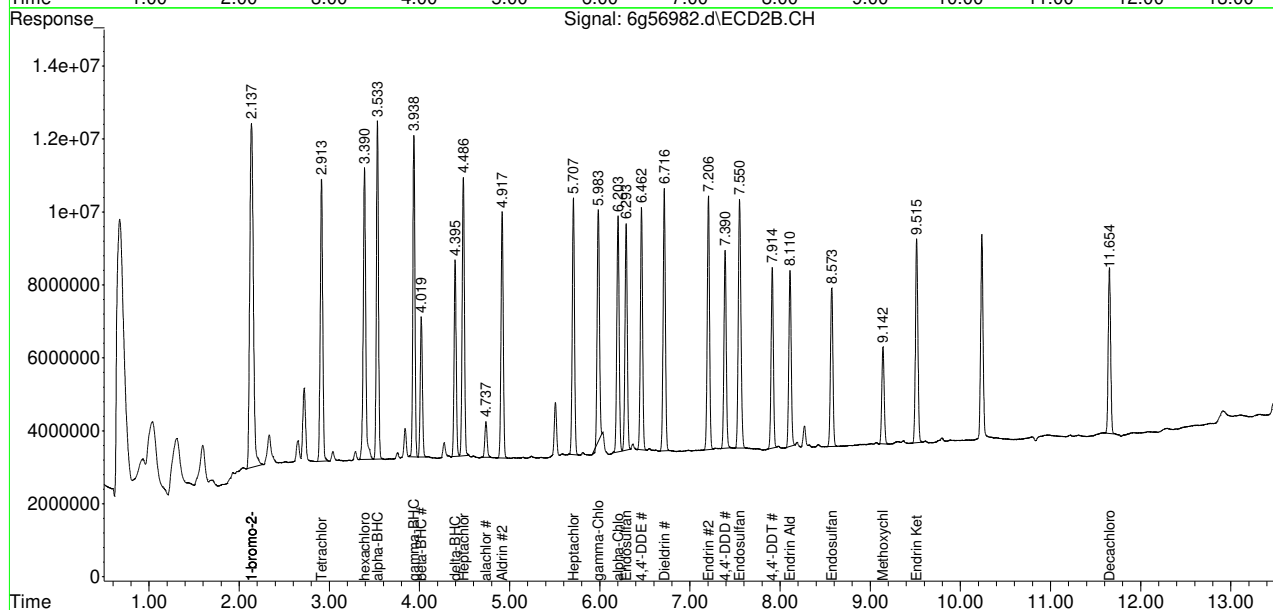
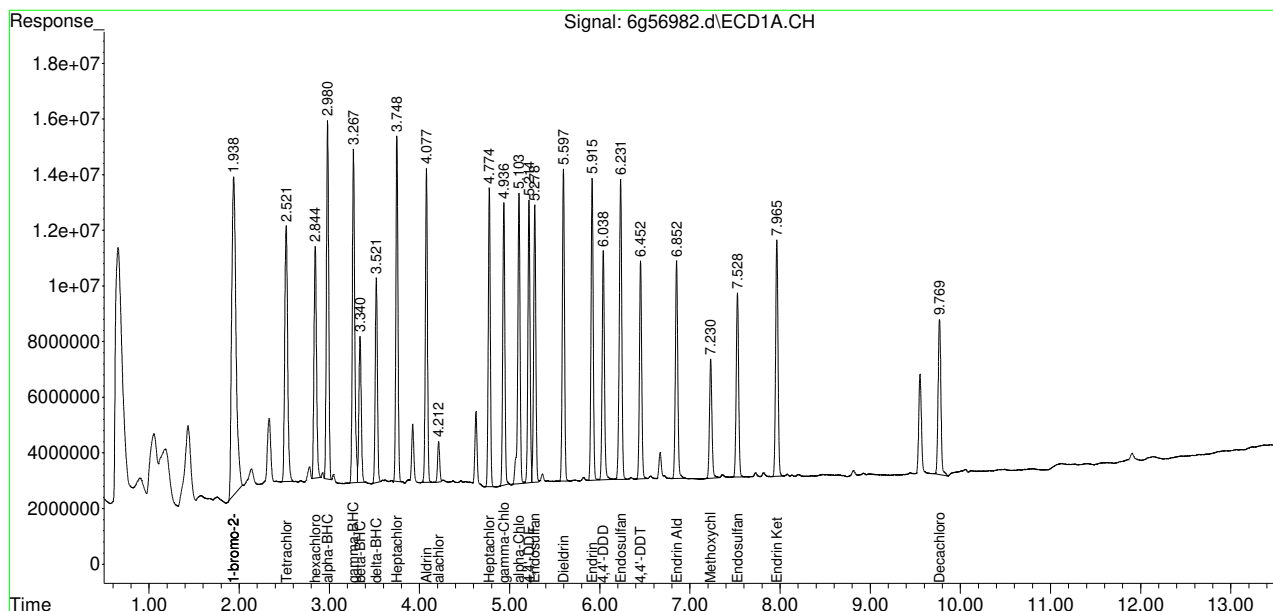
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56982.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 11:23:45
 Operator : rebeccak
 Sample : op12449-bsd
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 53 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 14:04:44 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



11.32 11

Manual Integration Approval Summary

Sample Number: OP12449-BSD Method: SW846 8081B
Lab FileID: 6G56982.D Analyst approved: 06/07/18 14:08 Dharmistha Mehta
Injection Time: 06/06/18 11:23 Supervisor approved: 06/11/18 08:17 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Alachlor	15972-60-8	1	4.21	Poorly defined baseline

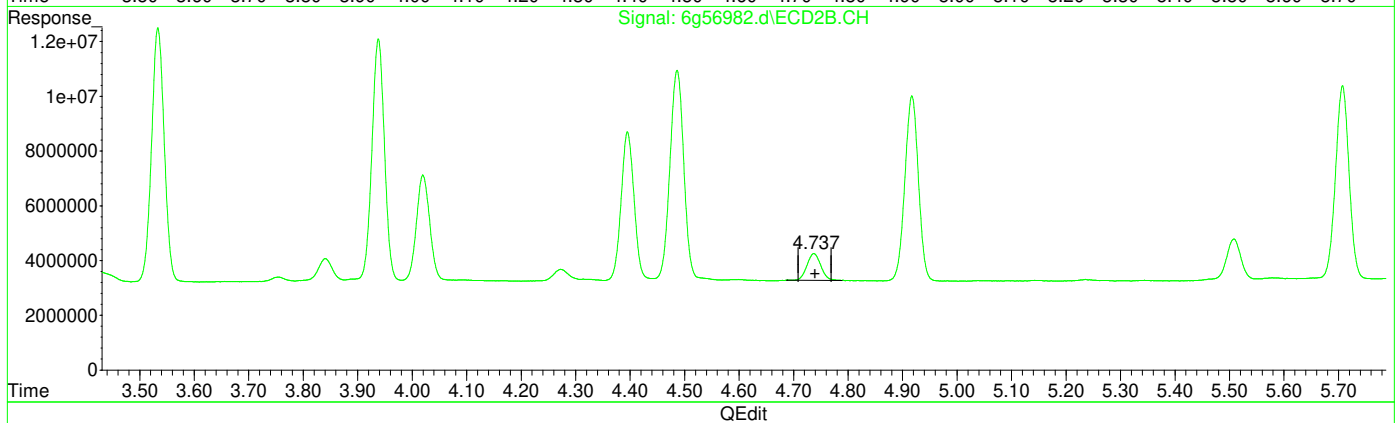
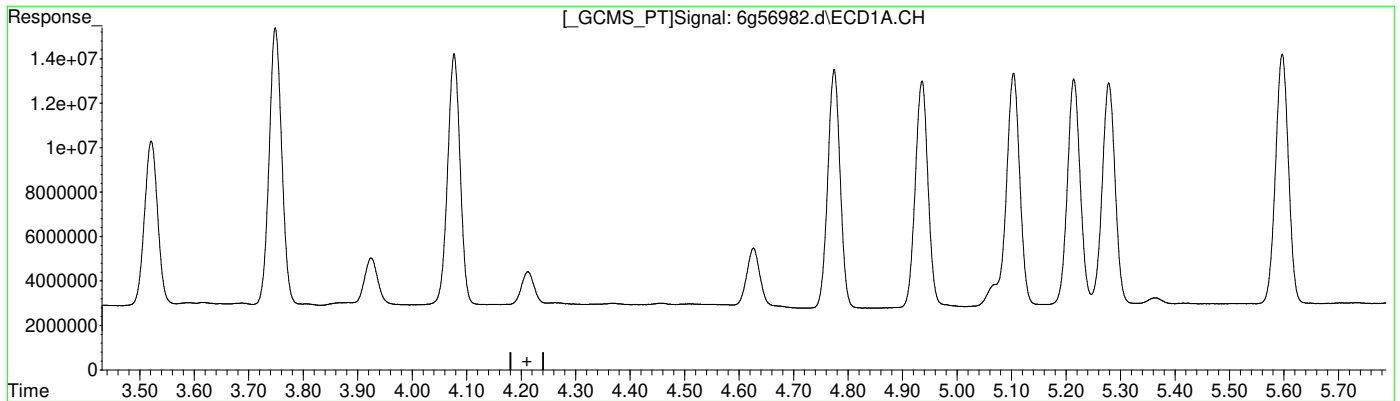
11.3.21
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56982.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 11:23:45
 Operator : rebeccak
 Sample : op12449-bsd
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 53 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:26:53 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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
 4.737min 24.006 PPB
 response 17352016

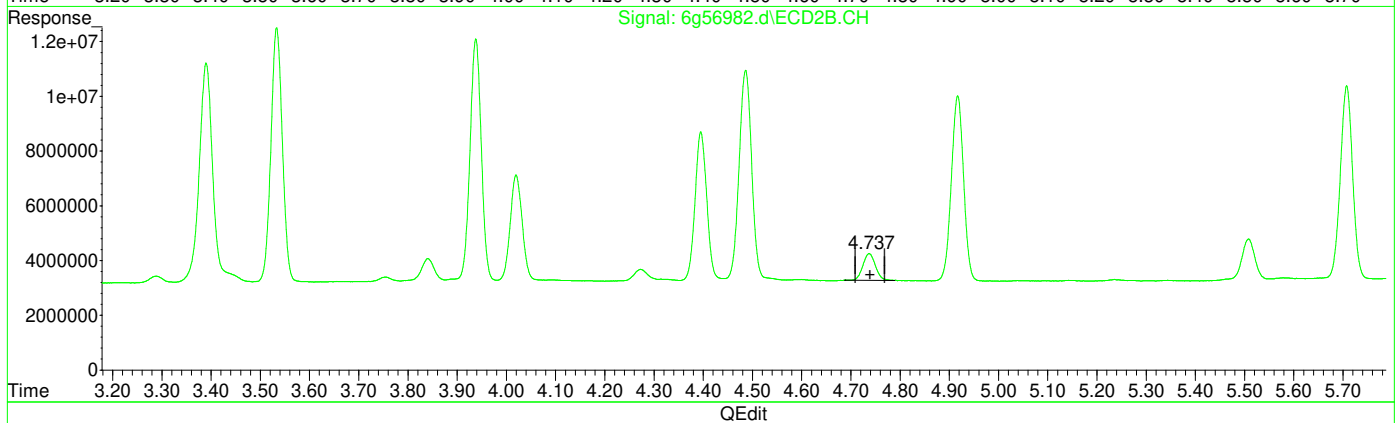
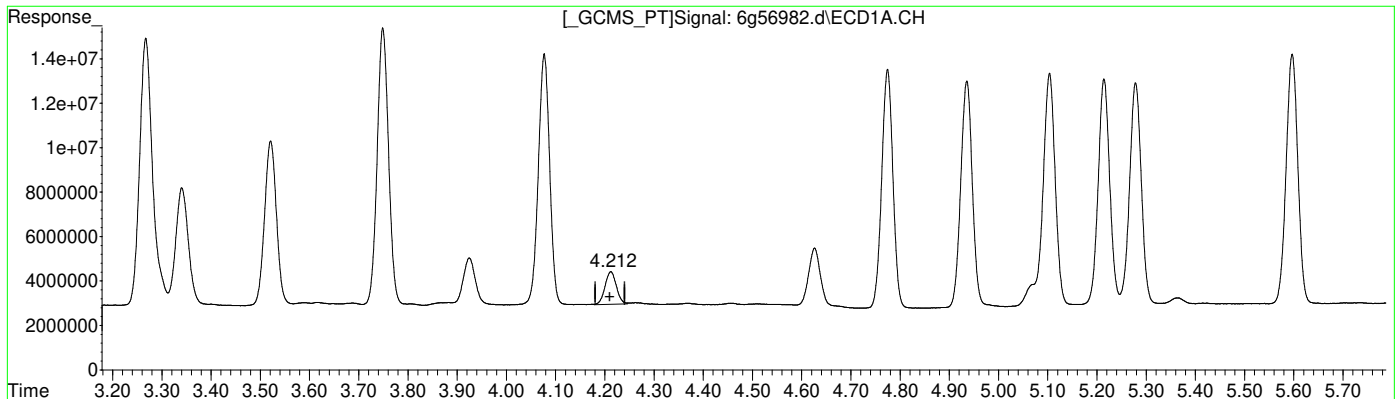
(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 12:27:06 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56982.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 11:23:45
 Operator : rebeccak
 Sample : op12449-bsd
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 53 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 12:26:53 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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
 4.212min 21.820 PPB m
 response 23416684

(10)alachlor #2
 4.737min 24.006 PPB
 response 17352016

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 12:27:18 2018

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229850.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:28 am
 Operator : edouarda
 Sample : op12448-bs1
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:07:17 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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...	2.822	3.552	369.4E6	360.7E6	34.298	35.923
Spiked Amount	40.000		Recovery	=	85.75%	89.81%
51) S Decachlor...	9.933	11.936	279.2E6	258.8E6	22.307	22.630
Spiked Amount	40.000		Recovery	=	55.77%	56.57%
Target Compounds						
42) AR1016-B	3.572	4.771f	75263969	105.5E6	210.671	321.313 #
43) AR1016-C	4.133	5.391	153.9E6	150.4E6	183.281m	199.164
44) AR1016-D	4.289	5.576	62543880	69564518	203.296	221.373
45) AR1016-E	4.773	6.229	63902008	41708354	200.261	189.384
46) AR1260-A	7.118	8.831	141.6E6	165.3E6	149.354	166.592m
47) AR1260-B	7.258	8.946	87077968	117.1E6	204.932	211.925
48) AR1260-C	7.594	9.380	90476184	102.7E6	208.120	202.372
49) AR1260-D	8.033	9.729	229.1E6	268.8E6	186.160	201.133m
50) AR1260-E	8.429f	10.274	215.4E6	243.6E6	183.319m	203.441m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

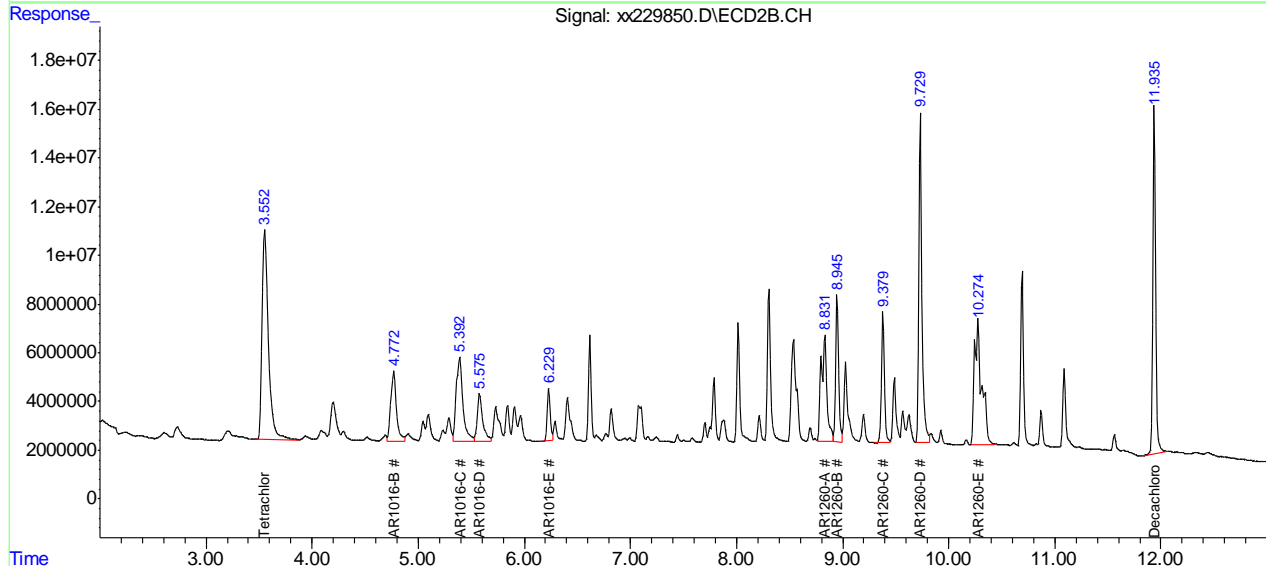
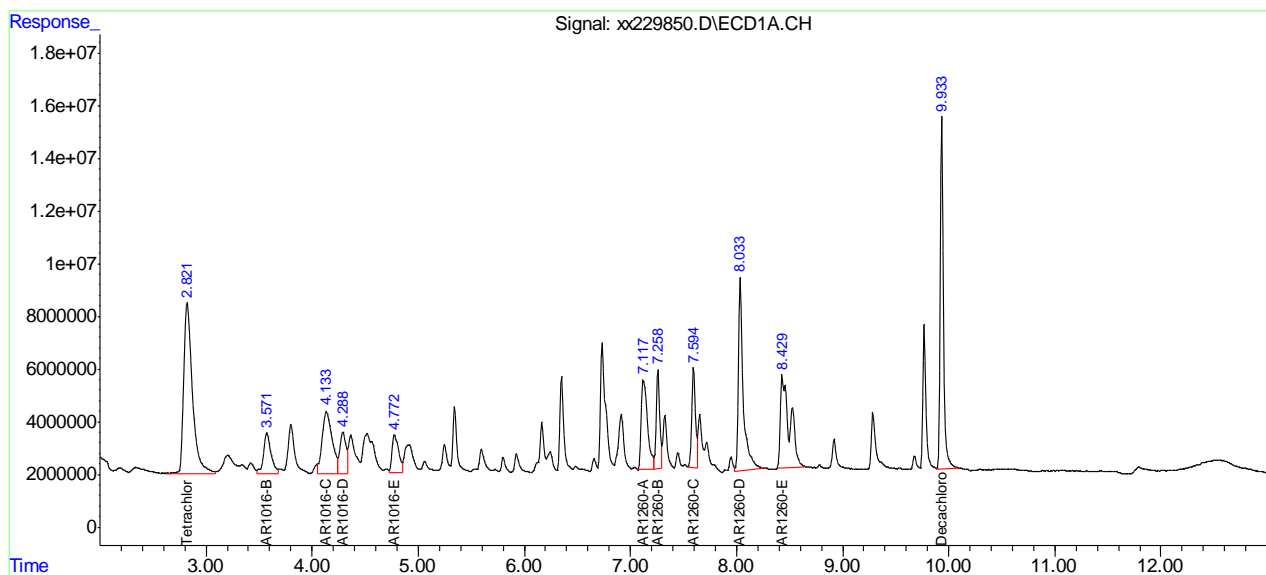
11.3.3
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229850.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:28 am
 Operator : edouarda
 Sample : op12448-bs1
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:07:17 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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: OP12448-BS1 Method: SW846 8082A
Lab FileID: XX229850.D Analyst approved: 06/05/18 09:16 Tianwei Ruan
Injection Time: 06/03/18 04:28 Supervisor approved: 06/05/18 13:54 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		1	4.13	Split peak
AR1260-E		1	8.43	Split peak
AR1260-A		2	8.83	Split peak
AR1260-D		2	9.73	Split peak
AR1260-E		2	10.27	Split peak

11.3.3.1

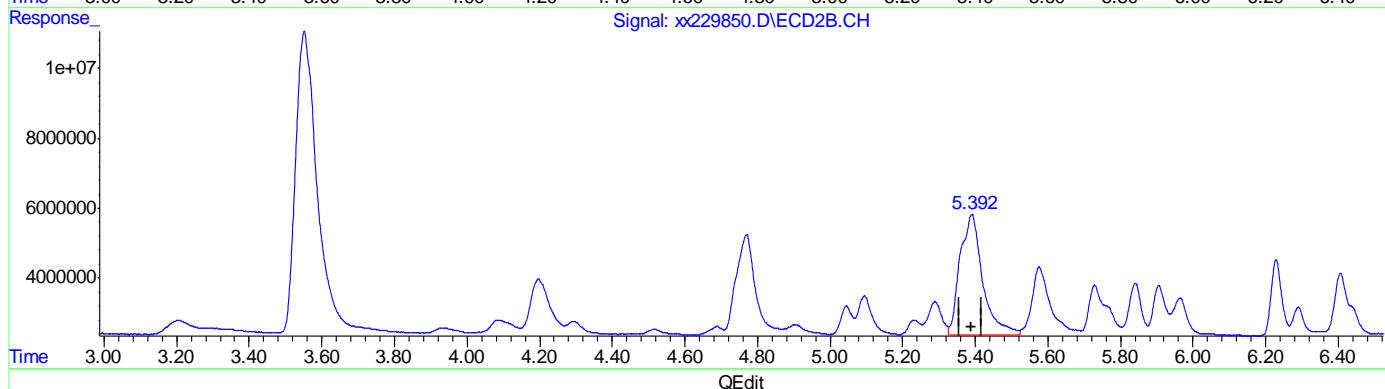
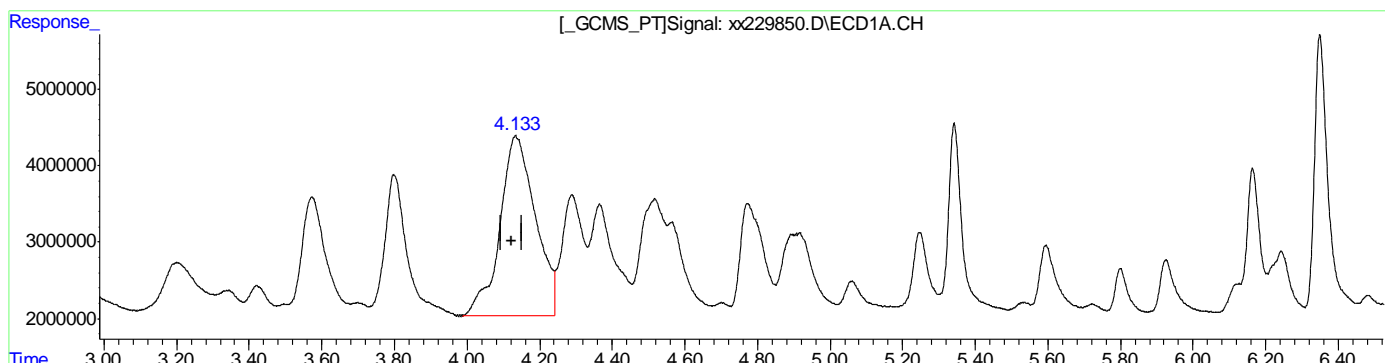
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229850.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:28 am
 Operator : edouarda
 Sample : op12448-bs1
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:06:15 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 4.133min 190.860PPB
 response 160305873

(43) AR1016-C #2
 5.391min 199.164PPB
 response 150423999

(+) = Expected Retention Time
 PCB6349.M Tue Jun 05 09:06:45 2018

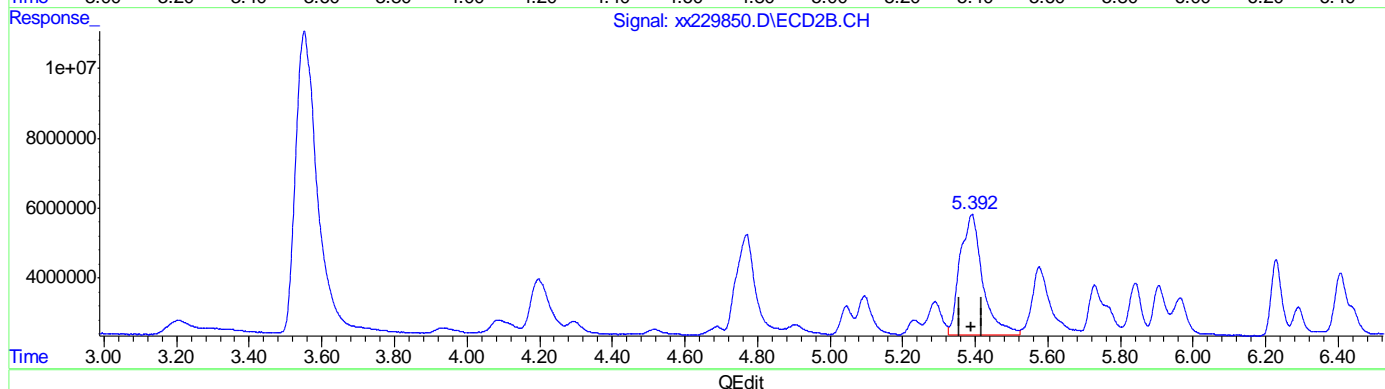
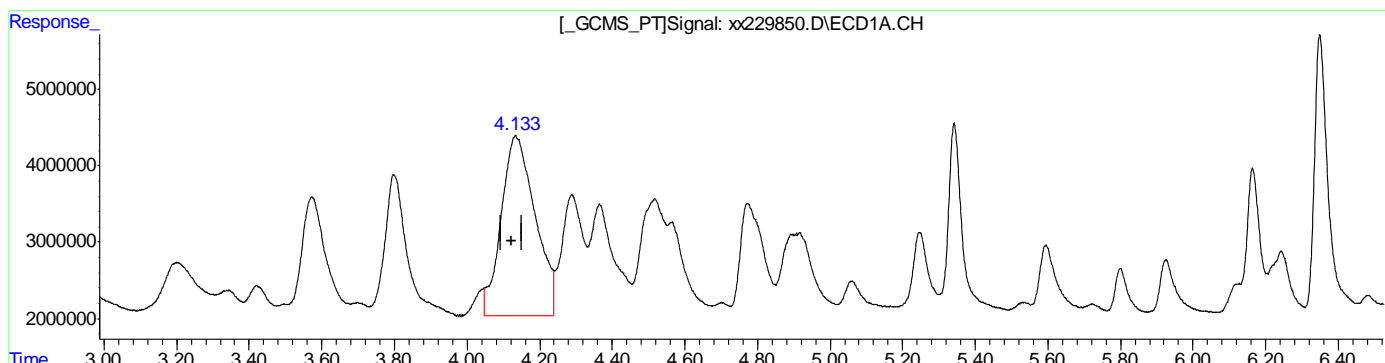
11.3.32
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229850.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:28 am
 Operator : edouarda
 Sample : op12448-bs1
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:06:15 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 4.133min 183.281PPB m
 response 153939947

(43) AR1016-C #2
 5.391min 199.164PPB
 response 150423999

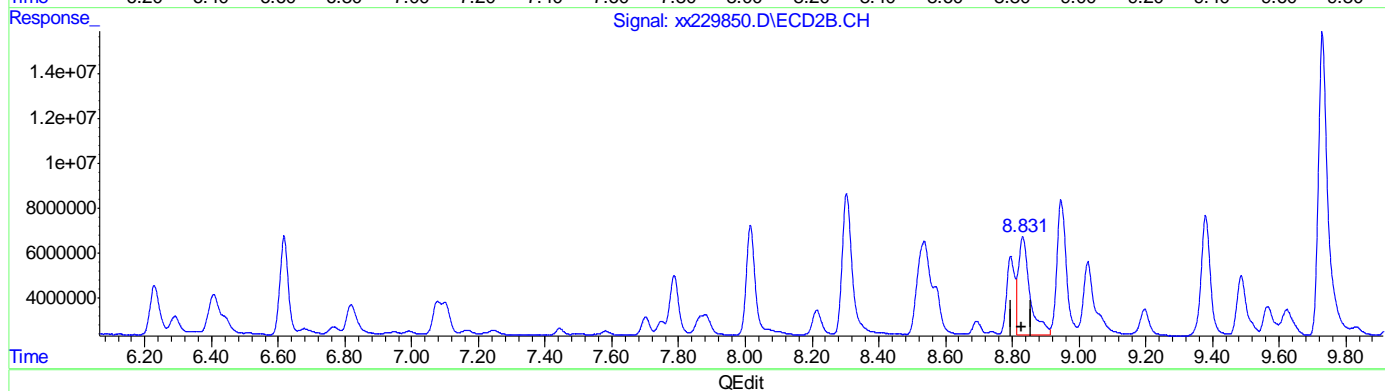
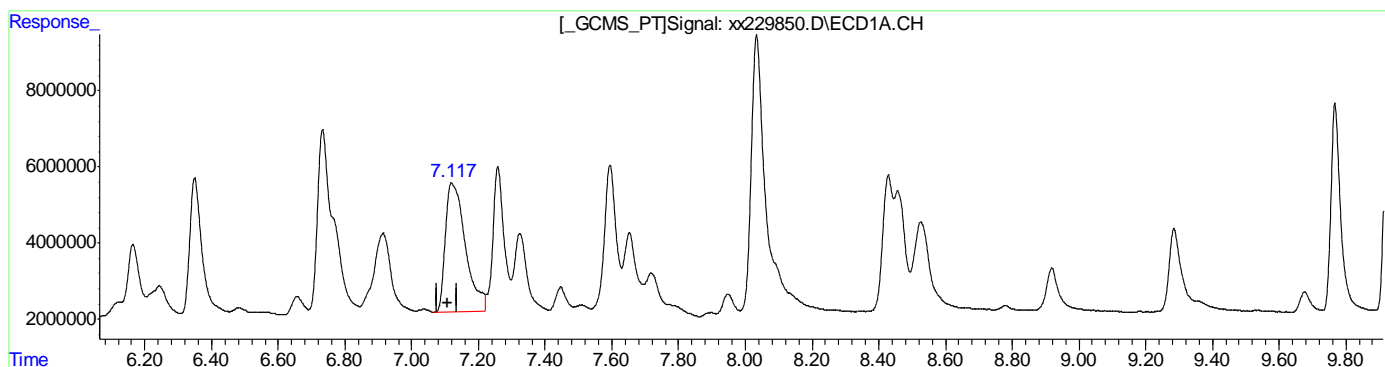
11.3.33
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229850.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:28 am
 Operator : edouarda
 Sample : op12448-bs1
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:06:15 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 7.118min 149.354PPB
 response 141607534

(46) AR1260-A #2
 8.832min 107.830PPB
 response 106969967

(+) = Expected Retention Time
 PCB6349.M Tue Jun 05 09:06:54 2018

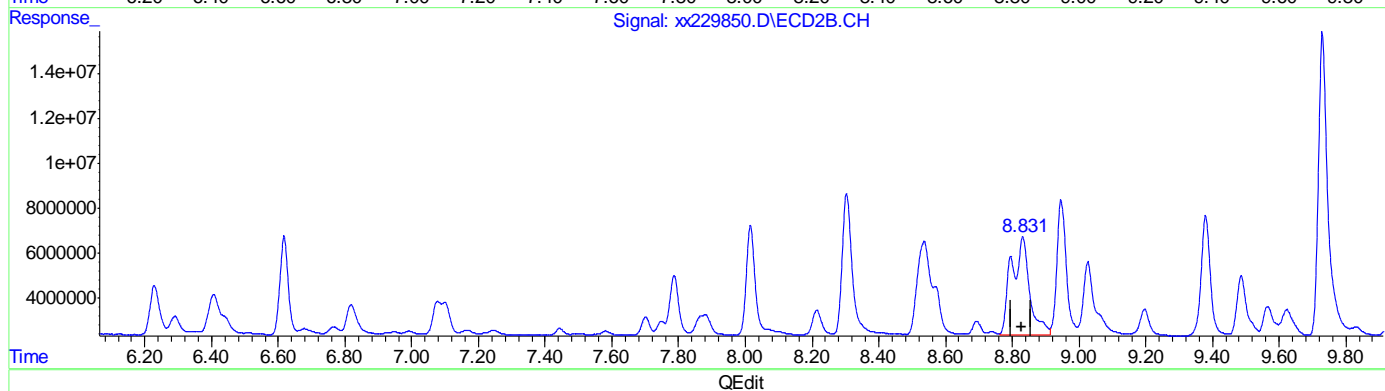
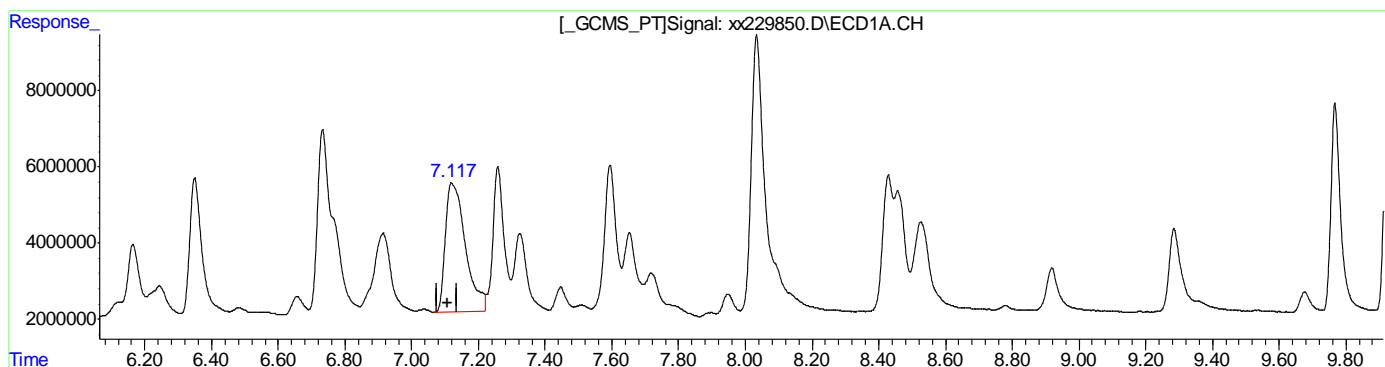
11.3.3.4
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229850.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:28 am
 Operator : edouarda
 Sample : op12448-bs1
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:06:15 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 7.118min 149.354PPB
 response 141607534

(46) AR1260-A #2
 8.831min 166.592PPB m
 response 165264169

(+) = Expected Retention Time
 PCB6349.M Tue Jun 05 09:06:59 2018

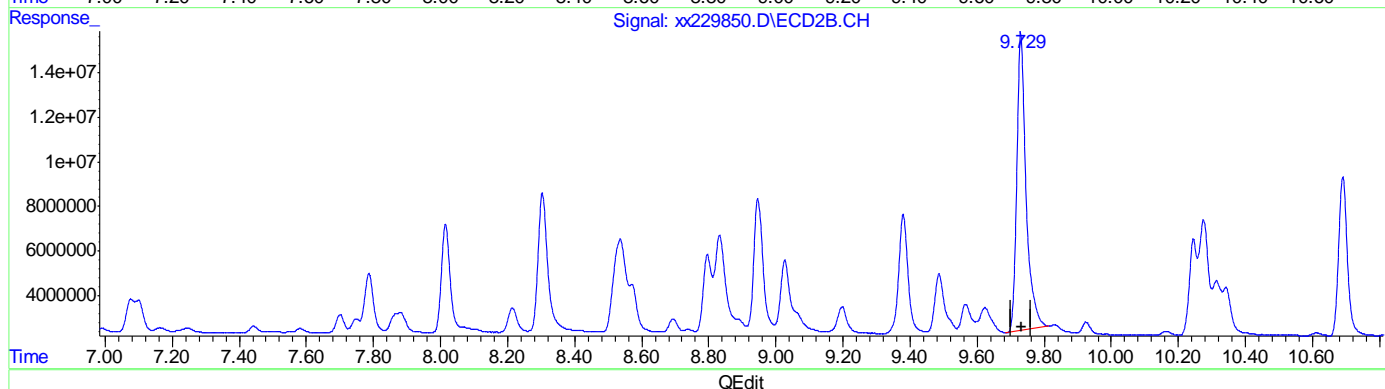
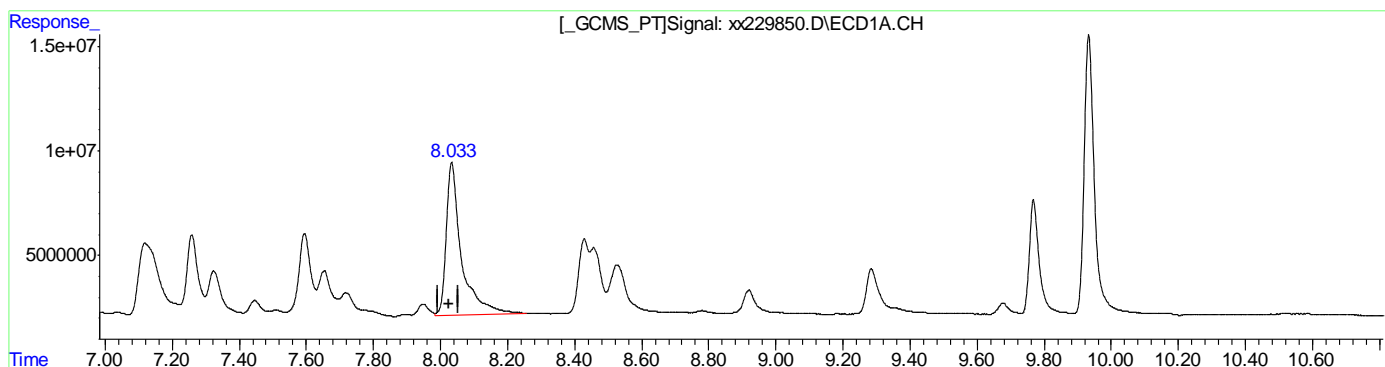
11.3.35
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229850.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:28 am
 Operator : edouarda
 Sample : op12448-bs1
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:06:15 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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)



(49) AR1260-D
 8.033min 186.160PPB
 response 229054554

(49) AR1260-D #2
 9.730min 191.039PPB
 response 255267500

(+) = Expected Retention Time
 PCB6349.M Tue Jun 05 09:07:06 2018

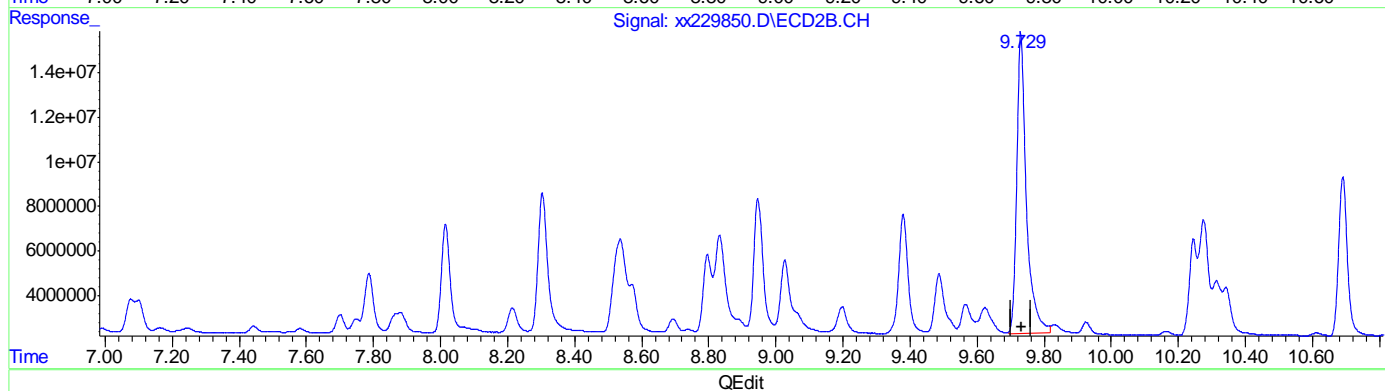
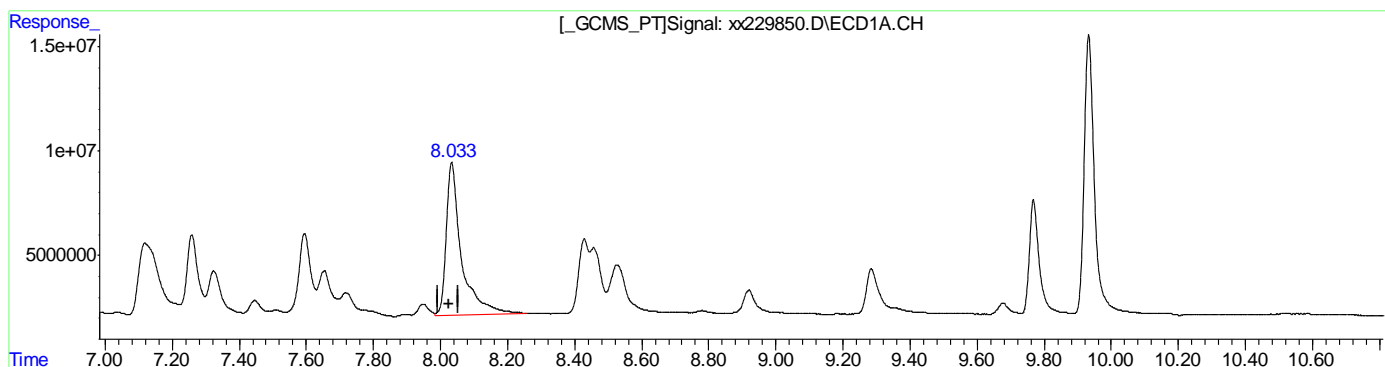
11.3.3.6
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229850.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:28 am
 Operator : edouarda
 Sample : op12448-bs1
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:06:15 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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)



(49) AR1260-D
 8.033min 186.160PPB
 response 229054554

(49) AR1260-D #2
 9.729min 201.133PPB m
 response 268756068

(+) = Expected Retention Time
 PCB6349.M Tue Jun 05 09:07:10 2018

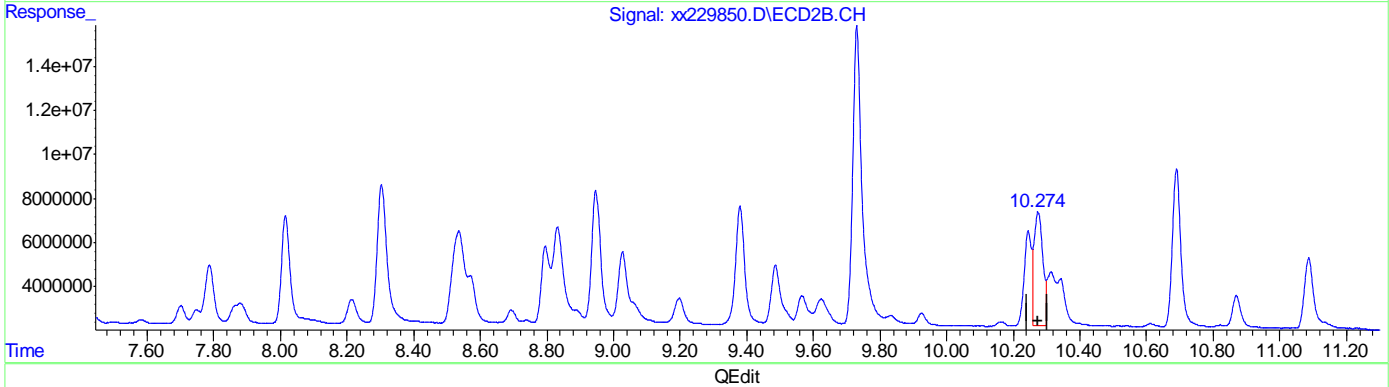
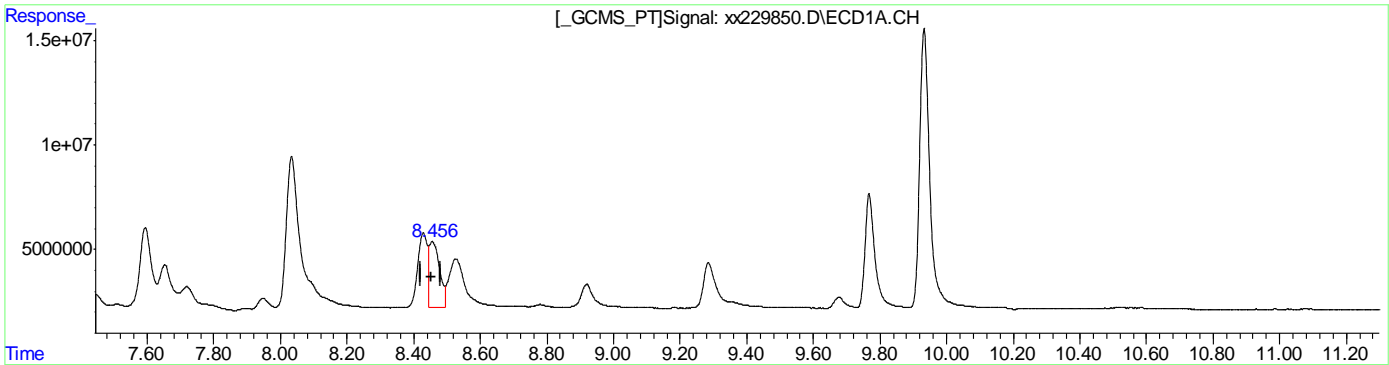
11.3.37
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229850.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:28 am
 Operator : edouarda
 Sample : op12448-bs1
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:06:15 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 8.457min 57.528PPB
 response 67609109

(50) AR1260-E #2
 10.275min 81.933PPB
 response 98092425

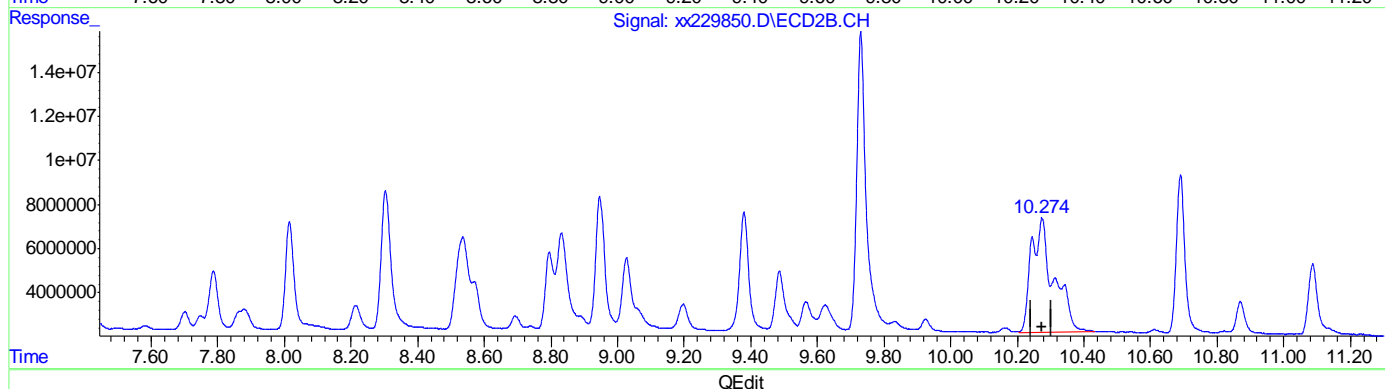
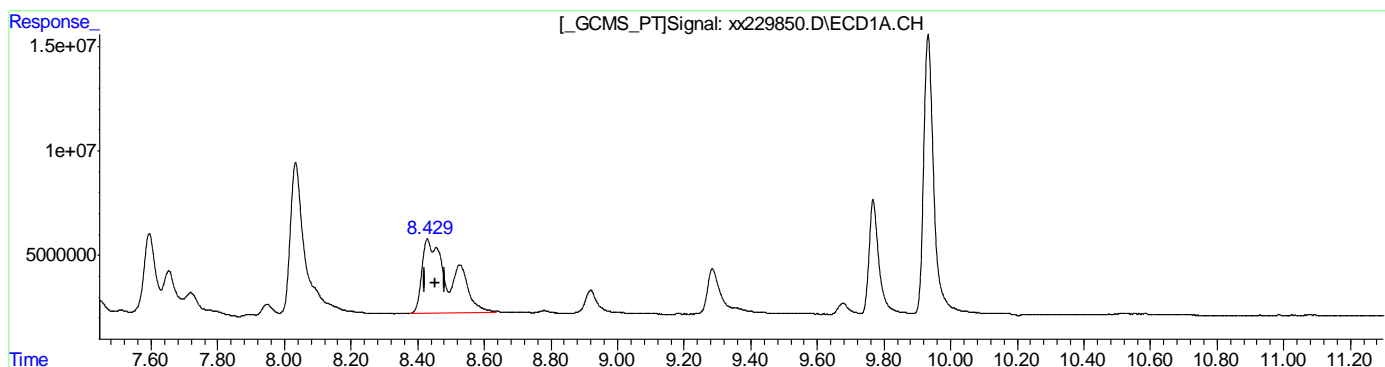
(+) = Expected Retention Time
 PCB6349.M Tue Jun 05 09:07:12 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229850.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:28 am
 Operator : edouarda
 Sample : op12448-bs1
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:06:15 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 8.429min 183.319PPB m
 response 215443024

(50) AR1260-E #2
 10.274min 203.441PPB m
 response 243563862

(+) = Expected Retention Time
 PCB6349.M Tue Jun 05 09:07:19 2018

11.3.3.9
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229851.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:45 am
 Operator : edouarda
 Sample : op12448-bsd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:08:32 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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...	2.825	3.549	348.5E6	347.6E6	32.353	34.625
Spiked Amount	40.000		Recovery	=	80.88%	86.56%
51) S Decachlor...	9.932	11.938	259.3E6	242.2E6	20.716	21.183
Spiked Amount	40.000		Recovery	=	51.79%	52.96%
Target Compounds						
42) AR1016-B	3.570	4.773f	64772536	95088845	181.305m	289.478m#
43) AR1016-C	4.136	5.392	140.8E6	142.0E6	167.581m	188.024
44) AR1016-D	4.290	5.579	58338367	66609007	189.626	211.968
45) AR1016-E	4.774	6.229	59697931	39861294	187.086	180.997
46) AR1260-A	7.116	8.832	133.8E6	148.3E6	141.151	149.491m
47) AR1260-B	7.261	8.947	81369190	111.9E6	191.497	202.541
48) AR1260-C	7.595	9.379	79735495	97488324	183.414	192.141
49) AR1260-D	8.034	9.730	216.4E6	253.5E6	175.869	189.688m
50) AR1260-E	8.425f	10.274	210.6E6	228.4E6	179.229m	190.739m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

11.34

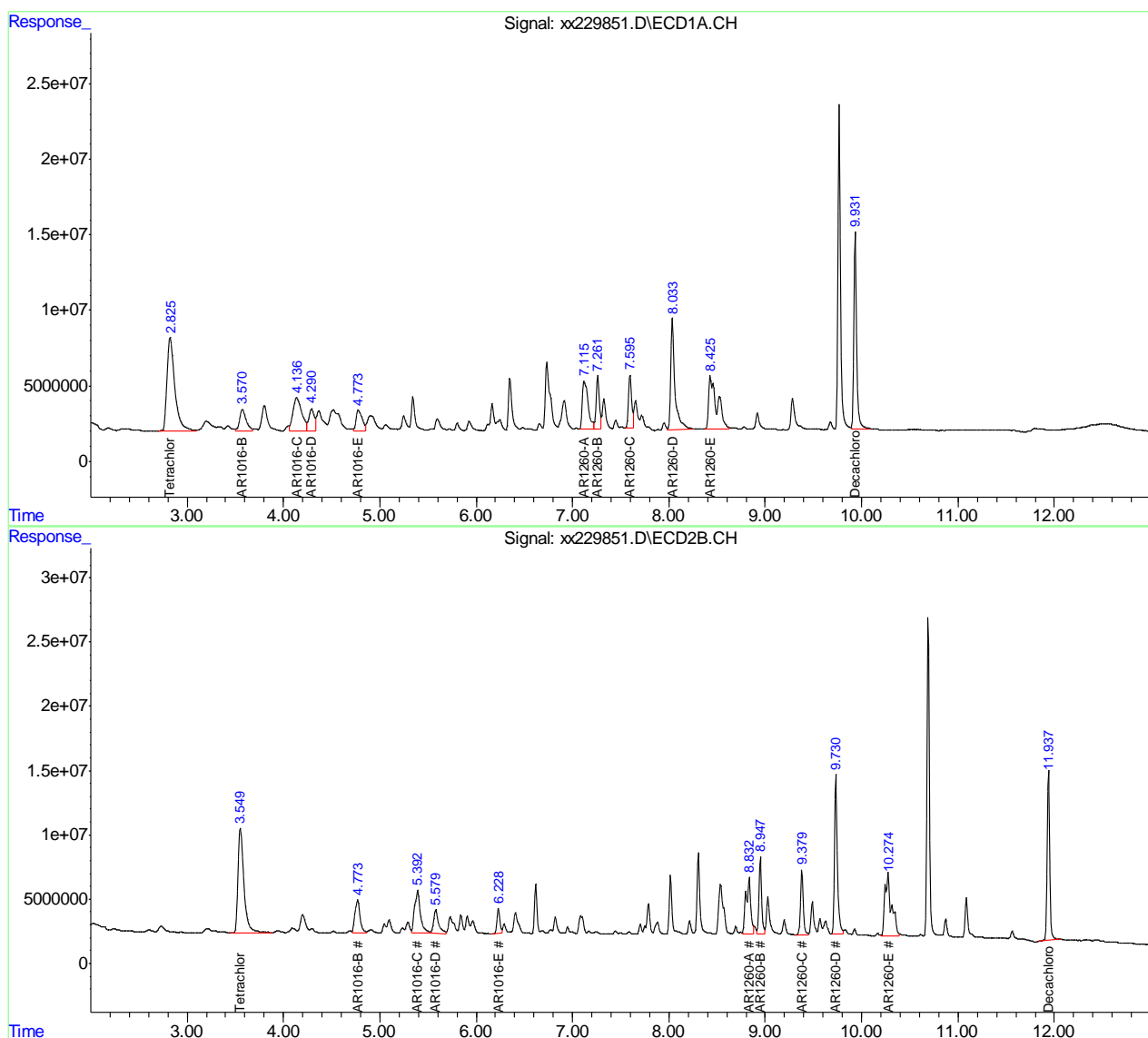
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229851.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:45 am
 Operator : edouarda
 Sample : op12448-bsd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:08:32 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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: OP12448-BSD Method: SW846 8082A
Lab FileID: XX229851.D Analyst approved: 06/05/18 09:16 Tianwei Ruan
Injection Time: 06/03/18 04:45 Supervisor approved: 06/05/18 13:54 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-B		1	3.57	Split peak
AR1016-C		1	4.14	Split peak
AR1016-B		2	4.77	Split peak
AR1260-E		1	8.43	Split peak
AR1260-A		2	8.83	Split peak
AR1260-D		2	9.73	Split peak
AR1260-E		2	10.27	Split peak

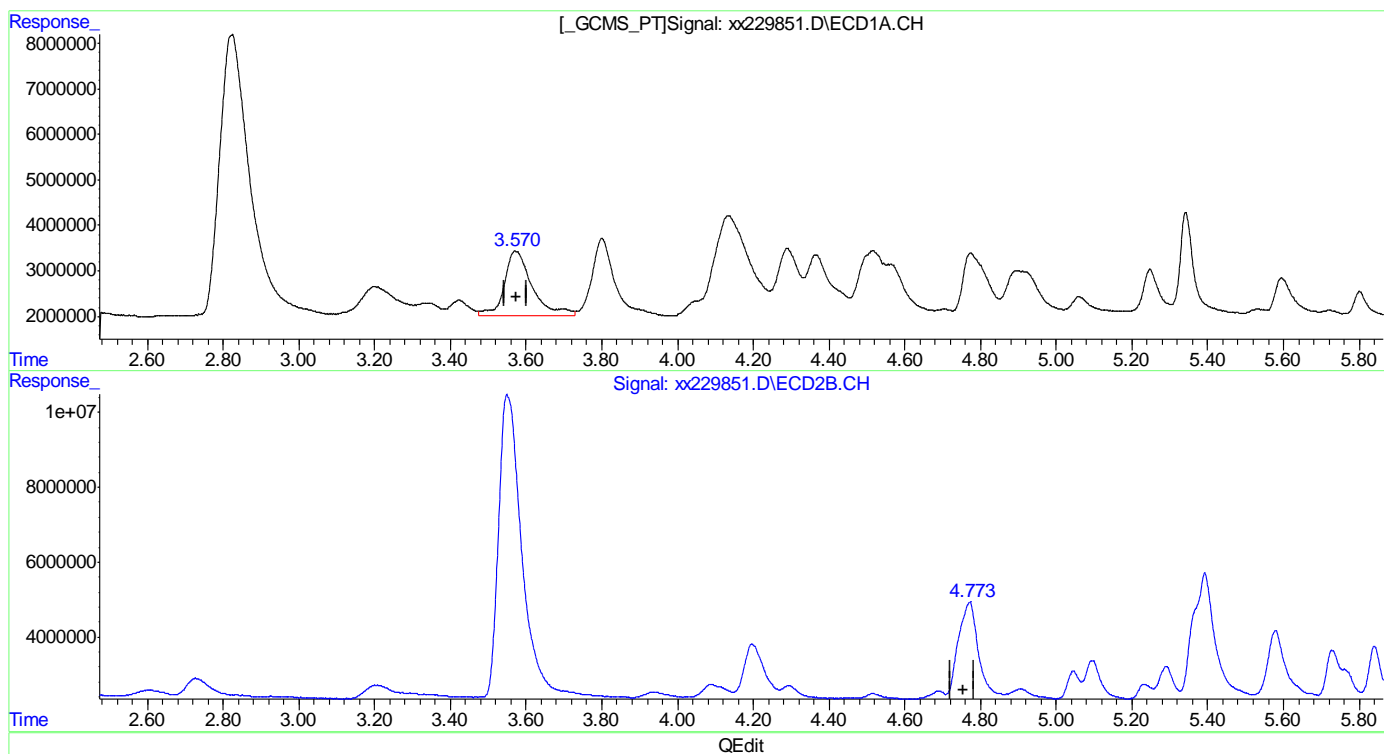
11.3.4.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229851.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:45 am
 Operator : edouarda
 Sample : op12448-bsd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:07:36 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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)



(42) AR1016-B
 3.571min 205.600PPB
 response 73452322

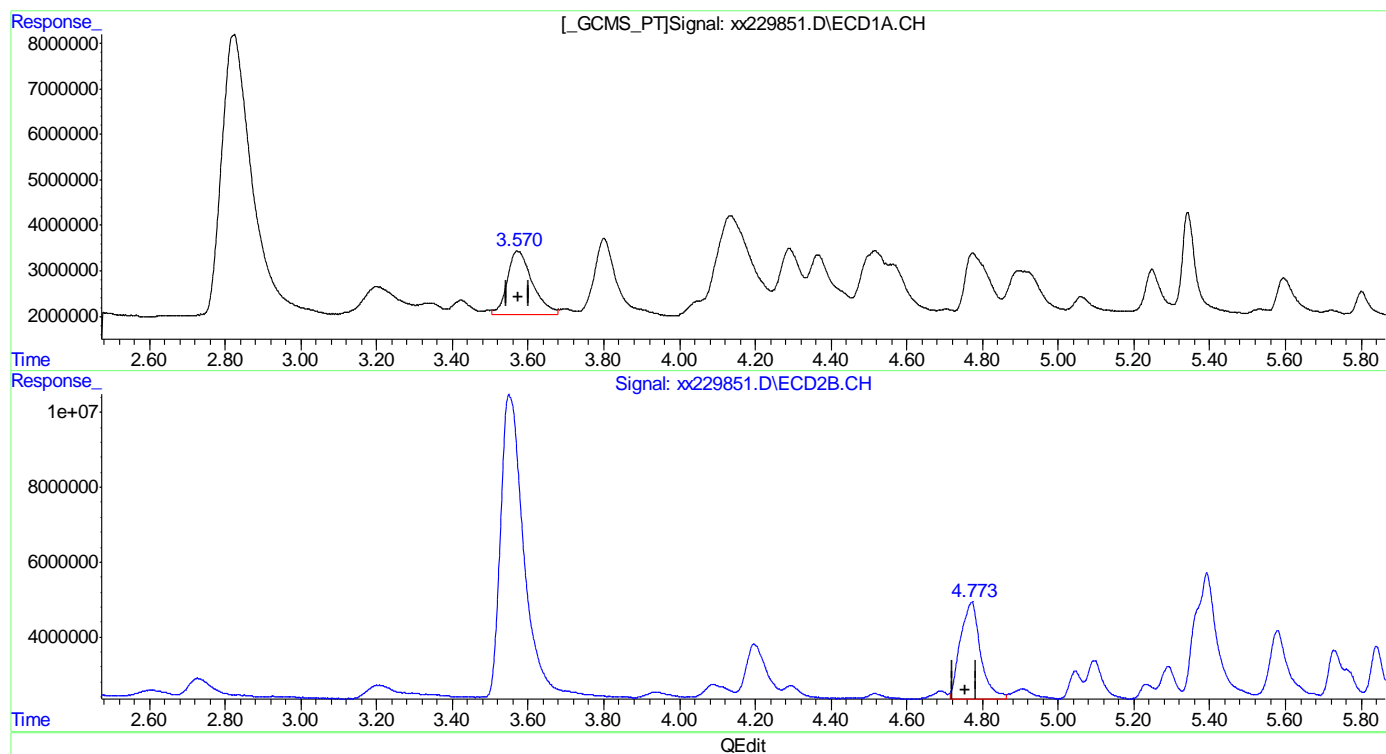
(42) AR1016-B #2
 4.772min 295.587PPB
 response 97095655

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229851.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:45 am
 Operator : edouarda
 Sample : op12448-bsd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:07:36 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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)



(42) AR1016-B
 3.570min 181.305PPB m
 response 64772536

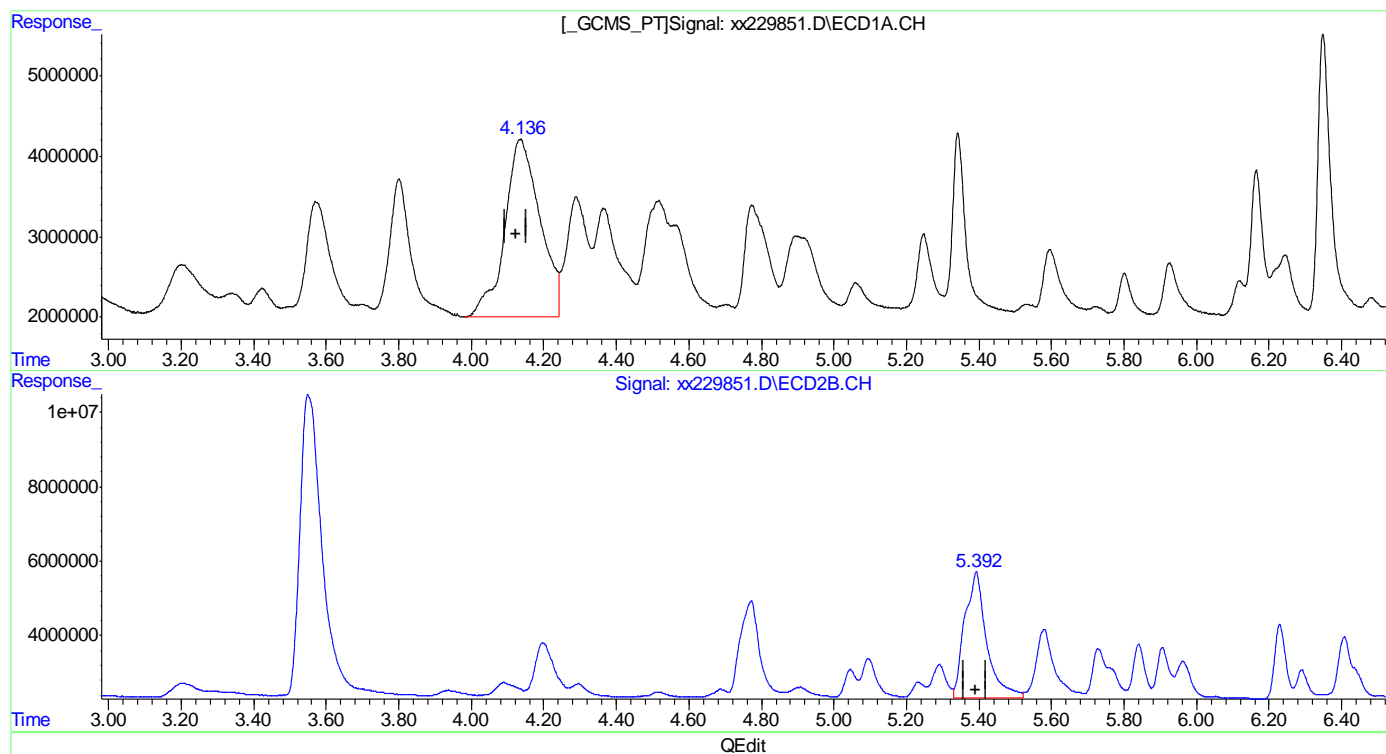
(42) AR1016-B #2
 4.773min 289.478PPB m
 response 95088845

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229851.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:45 am
 Operator : edouarda
 Sample : op12448-bsd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:07:36 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 4.136min 177.015PPB
 response 148677352

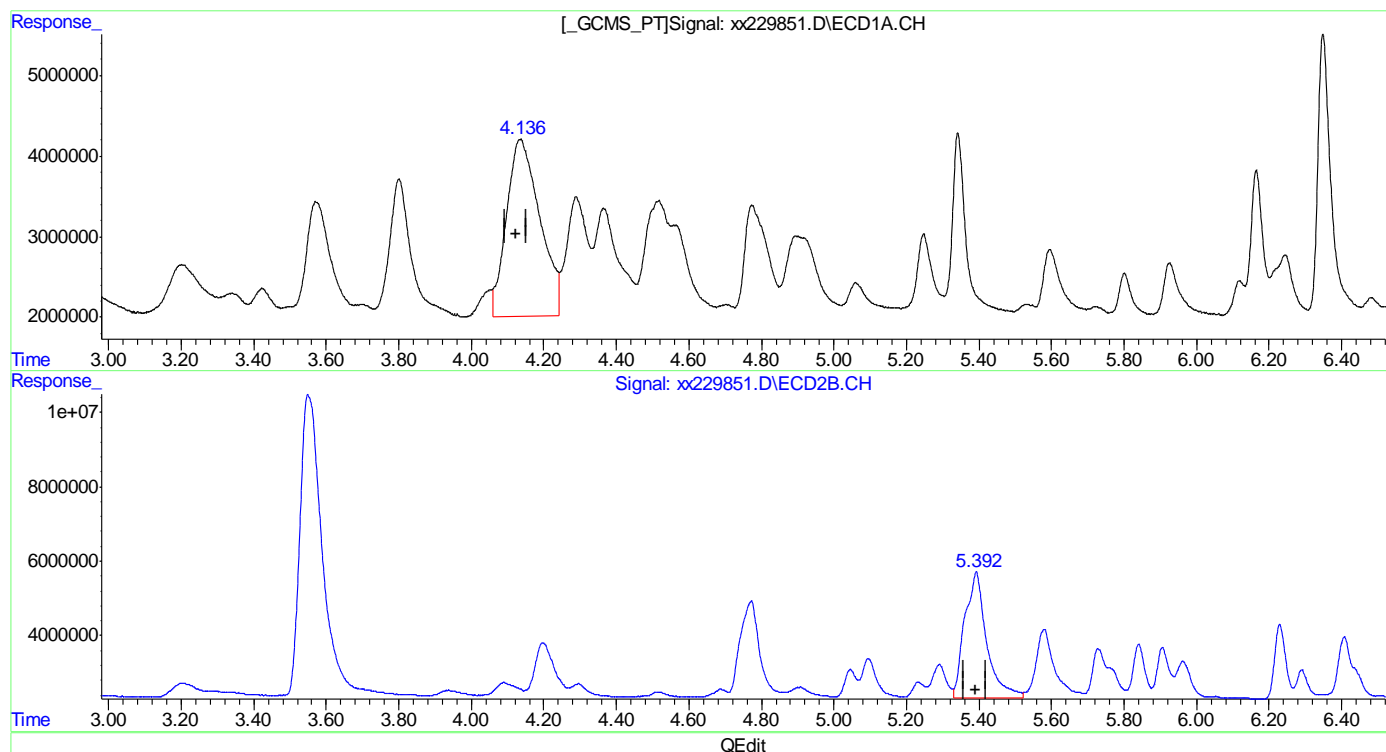
(43) AR1016-C #2
 5.392min 188.024PPB
 response 142010034

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229851.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:45 am
 Operator : edouarda
 Sample : op12448-bsd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:07:36 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 4.136min 167.581PPB m
 response 140753311

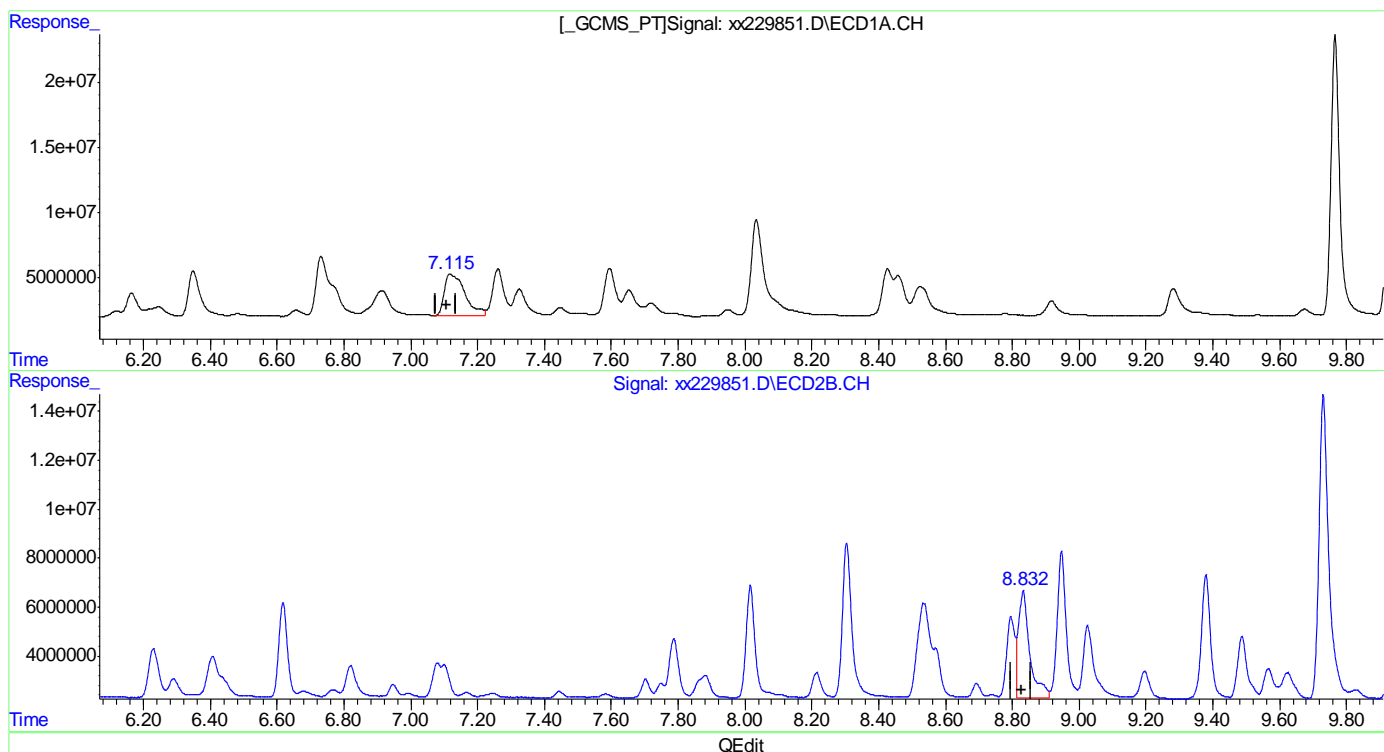
(43) AR1016-C #2
 5.392min 188.024PPB
 response 142010034

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229851.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:45 am
 Operator : edouarda
 Sample : op12448-bsd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:07:36 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 7.116min 141.151PPB
 response 133830762

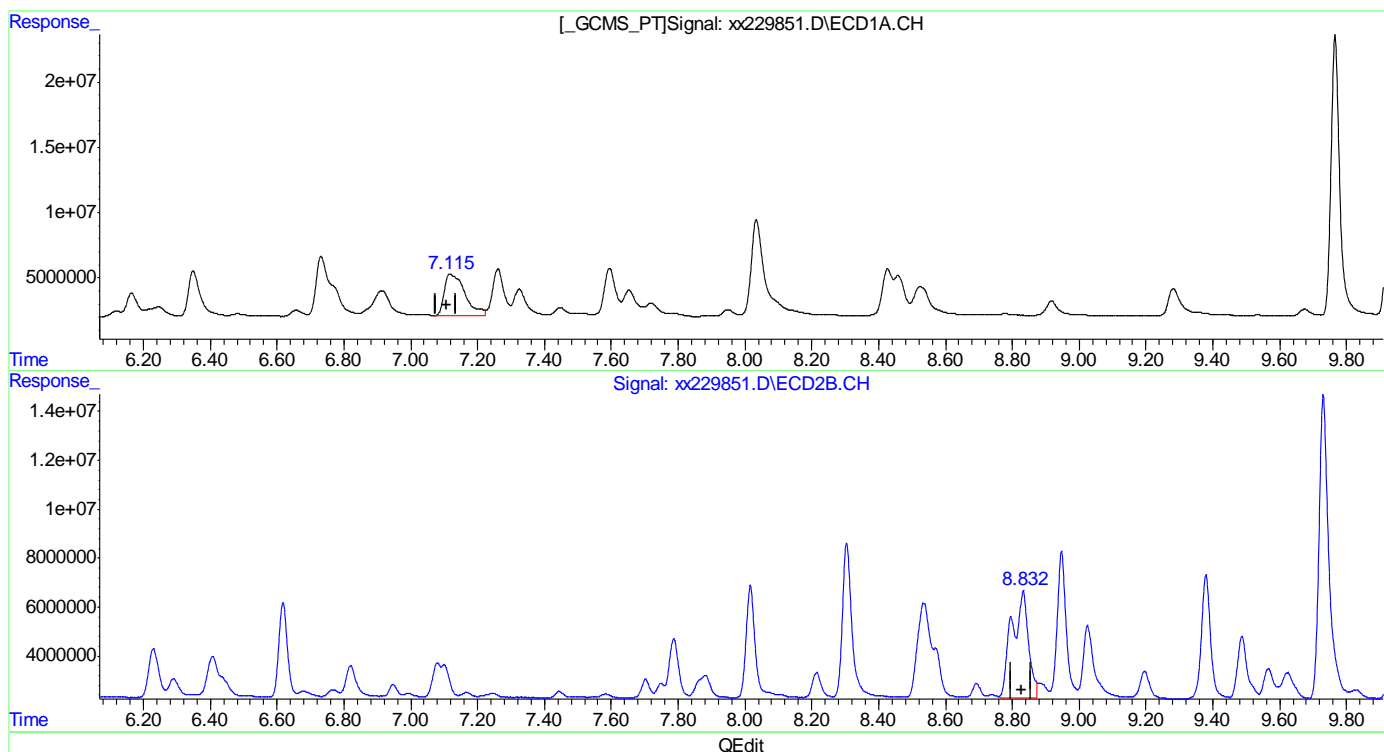
(46) AR1260-A #2
 8.832min 105.993PPB
 response 105147703

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229851.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:45 am
 Operator : edouarda
 Sample : op12448-bsd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:07:36 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 7.116min 141.151PPB
 response 133830762

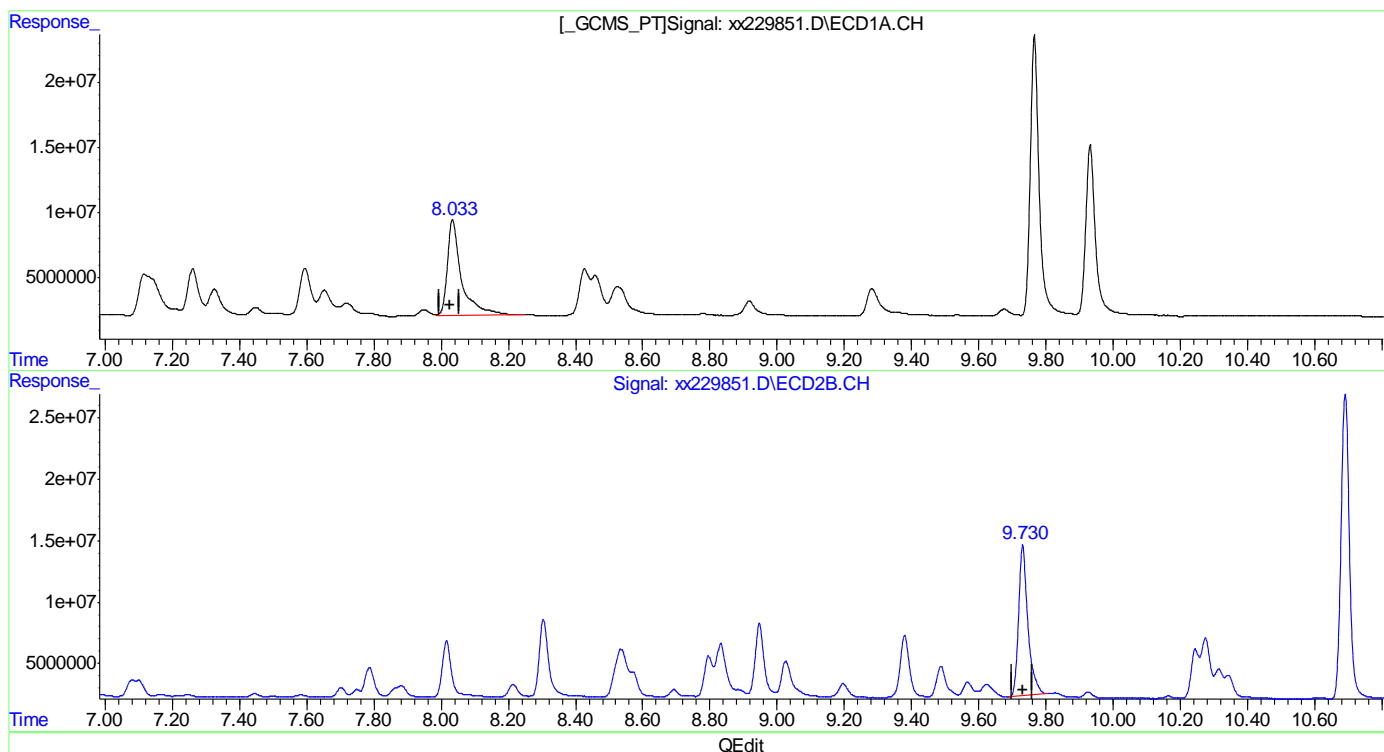
(46) AR1260-A #2
 8.832min 149.491PPB m
 response 148299225

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229851.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:45 am
 Operator : edouarda
 Sample : op12448-bsd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:07:36 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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)



(49) AR1260-D
 8.034min 175.869PPB
 response 216392557

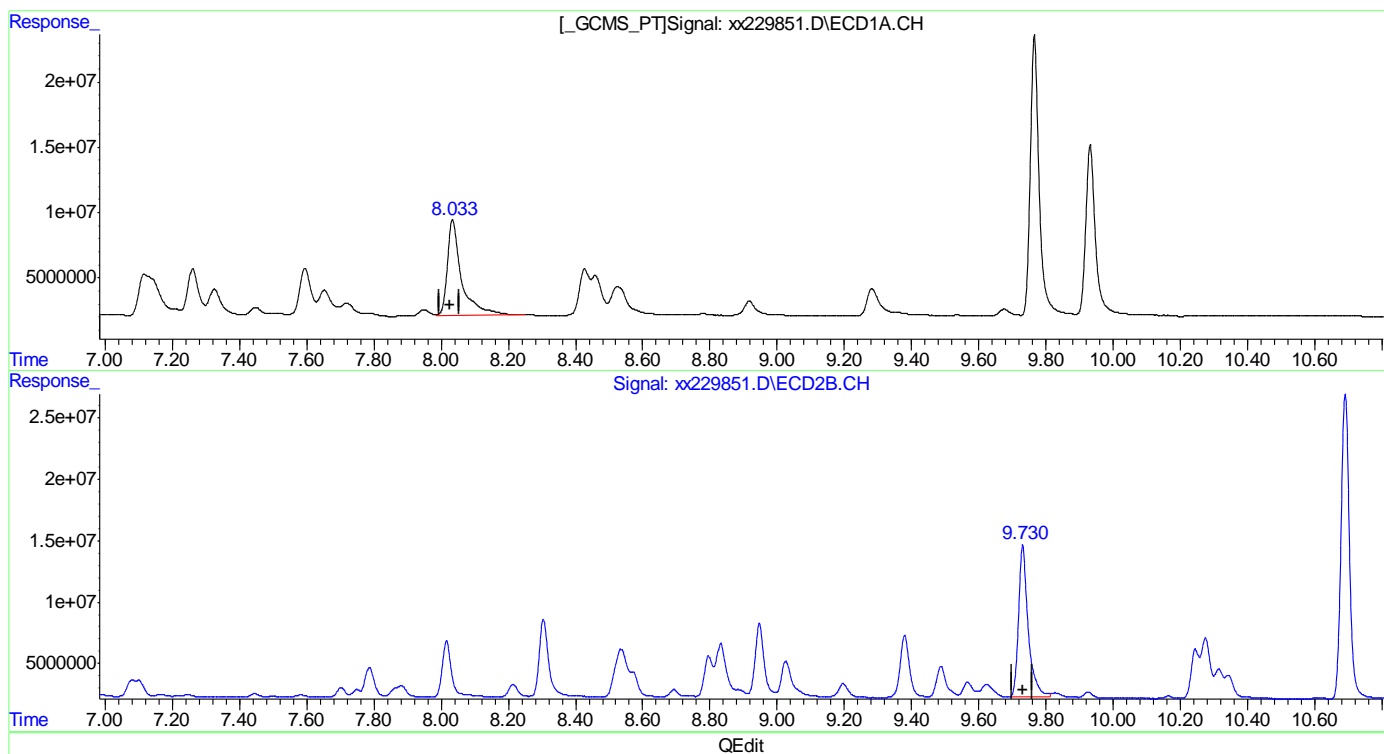
(49) AR1260-D #2
 9.731min 181.389PPB
 response 242373624

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229851.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:45 am
 Operator : edouarda
 Sample : op12448-bsd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:07:36 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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)



(49) AR1260-D
 8.034min 175.869PPB
 response 216392557

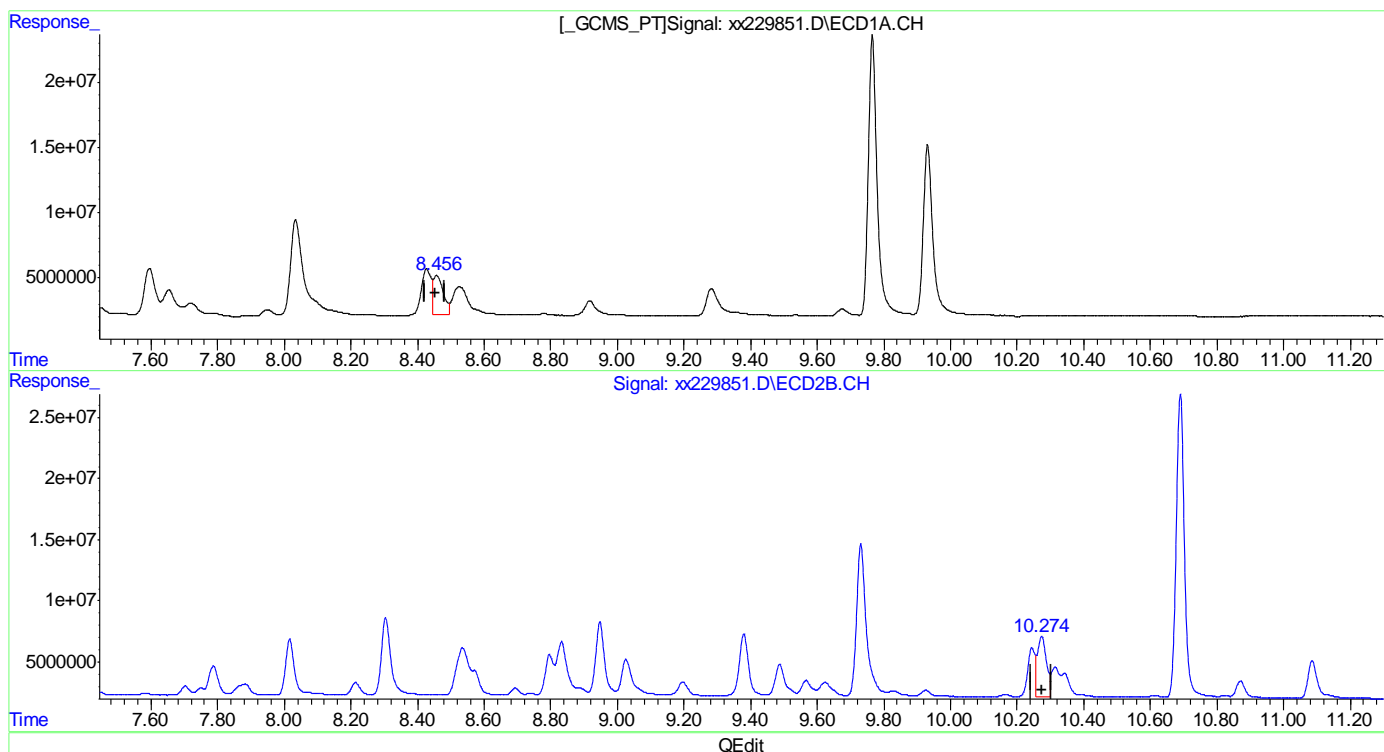
(49) AR1260-D #2
 9.730min 189.688PPB m
 response 253462812

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229851.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:45 am
 Operator : edouarda
 Sample : op12448-bsd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:07:36 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 8.457min 53.284PPB
 response 62621692

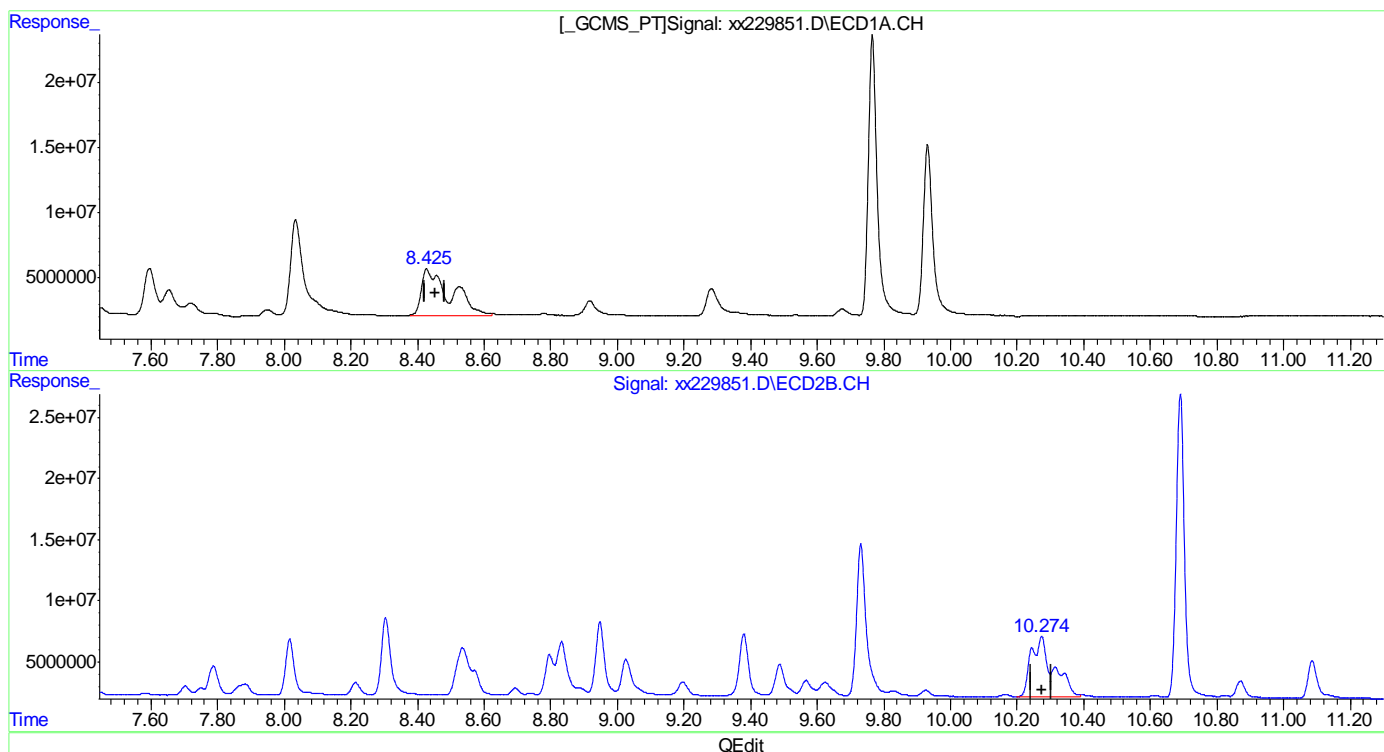
(50) AR1260-E #2
 10.274min 77.220PPB
 response 92449512

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229851.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 4:45 am
 Operator : edouarda
 Sample : op12448-bsd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:07:36 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 8.425min 179.229PPB m
 response 210636559

(50) AR1260-E #2
 10.274min 190.739PPB m
 response 228356770

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56990.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 13:46:47
 Operator : rebeccak
 Sample : op12449-ms
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 61 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 14:11:52 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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...	1.938	2.136	374.5E6	260.7E6	50.000	50.000
27) I 1-bromo-2...	1.938	2.136	374.5E6	260.7E6	50.000	50.000
33) I 1-bromo-2...	1.938	2.136	374.5E6	260.7E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.521	2.912	169.8E6	122.4E6	23.323	25.197
Spiked Amount	40.000	Range 30 - 150	Recovery =		58.31%	62.99%
26) SA Decachlor...	9.768	11.653	130.1E6	93960419	17.533	19.401
Spiked Amount	40.000		Recovery =		43.83%	48.50%
Target Compounds						
3) hexachlor...	2.844	3.390	141.8E6	133.8E6	17.451	21.983 #
4) A alpha-BHC	2.981	3.534	183.8E6	124.6E6	18.337	19.279
5) MA gamma-BHC	3.268	3.938	186.9E6	120.1E6	19.693	19.823
6) MA Heptachlor	3.750	4.486	164.9E6	114.0E6	18.390	18.502
7) B beta-BHC	3.342	4.021	81187005	56772664	19.133	20.398
8) B delta-BHC	3.521	4.395	110.2E6	78085171	13.169	13.878
9) MB Aldrin	4.077	4.917	149.7E6	102.0E6	17.173	18.793
10) alachlor	4.211	4.737	21345451	14469284	20.307m	20.128
11) B Heptachlo...	4.775	5.708	154.0E6	109.5E6	19.118	20.871
12) B gamma-Chl...	4.936	5.984	144.9E6	110.7E6	18.249	21.525
13) B alpha-Chl...	5.104	6.202	159.9E6	100.9E6	19.672	20.166
14) A Endosulfan I	5.278	6.293	145.3E6	98202428	19.181	20.540
15) B 4,4'-DDE	5.216	6.463	131.2E6	90694608	16.950	18.662
16) MA Dieldrin	5.597	6.716	162.1E6	111.3E6	19.755	21.688
17) MA Endrin	5.916	7.205	158.5E6	107.5E6	21.343	21.337
18) A 4,4'-DDD	6.038	7.391	118.1E6	81019034	18.421	19.353
19) B Endosulfa...	6.232	7.550	179.4E6	122.6E6	22.766	24.051
20) MA 4,4'-DDT	6.452	7.914	104.8E6	69449349	17.060	17.184
21) B Endrin Al...	6.852	8.110	130.9E6	80354744	20.977	20.753
22) B Endosulfa...	7.526	8.573	112.0E6	75767740	18.134	19.541
23) A Methoxychlor	7.230	9.142	67804215	41985336	18.491	18.288
25) B Endrin Ke...	7.963	9.516	150.7E6	99917876	20.504	19.447
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.

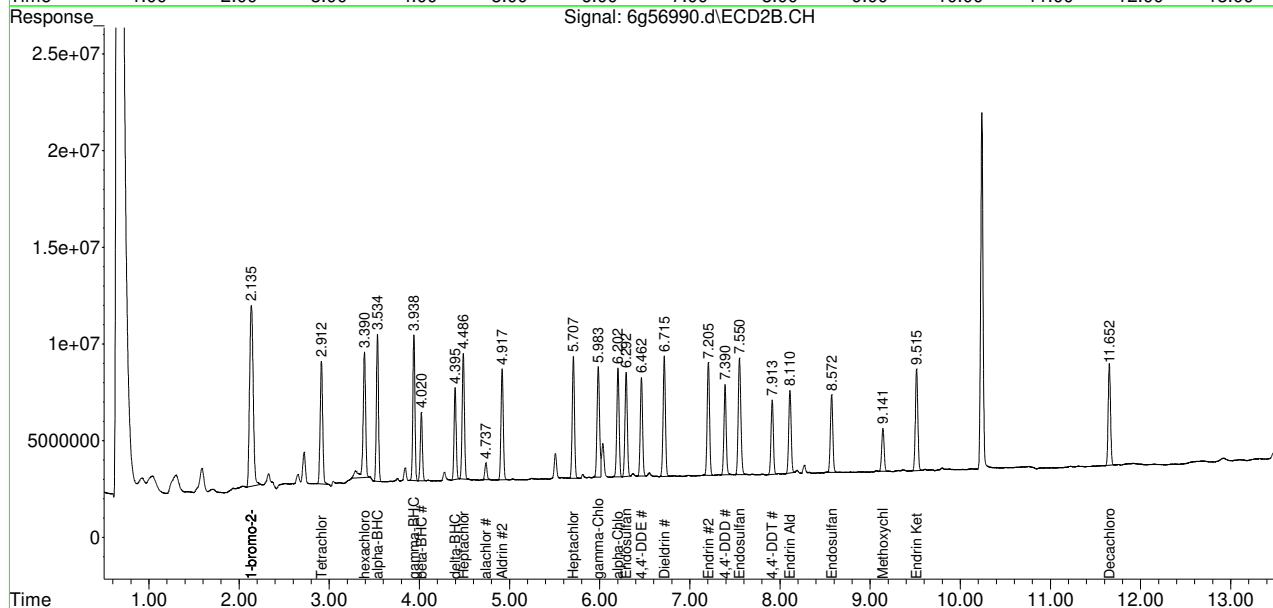
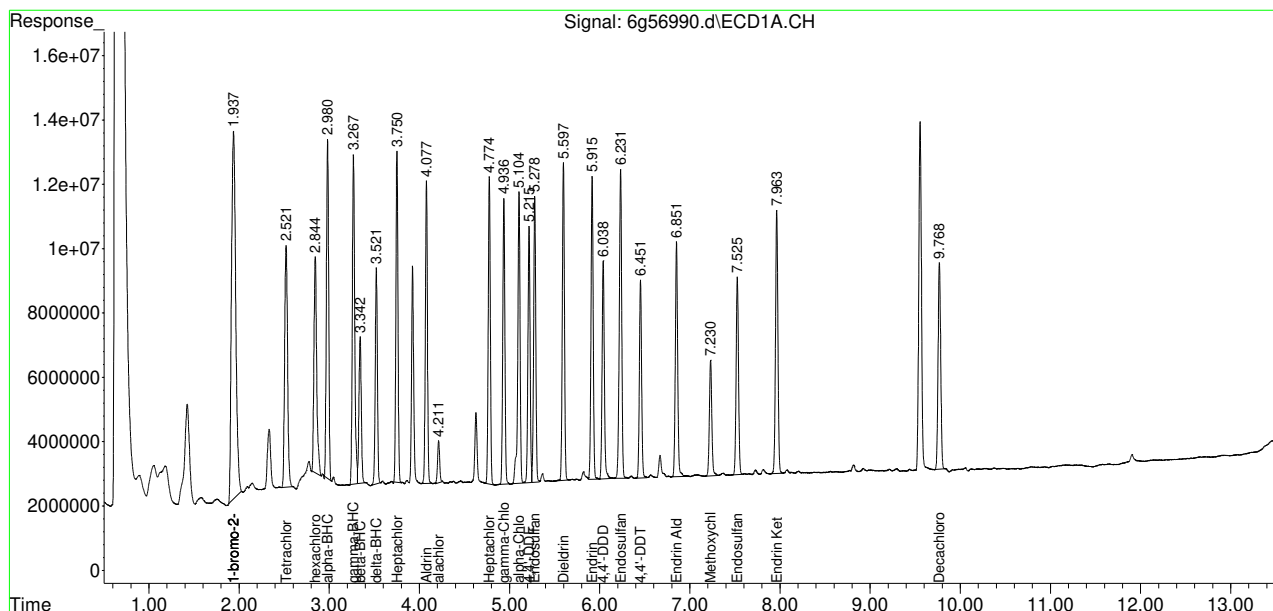
11.4.1
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56990.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 13:46:47
 Operator : rebeccak
 Sample : op12449-ms
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 61 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 14:11:52 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



11.4.1
11



Manual Integration Approval Summary

Sample Number: OP12449-MS Method: SW846 8081B
Lab FileID: 6G56990.D Analyst approved: 06/07/18 14:27 Dharmistha Mehta
Injection Time: 06/06/18 13:46 Supervisor approved: 06/11/18 08:17 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Alachlor	15972-60-8	1	4.21	Poorly defined baseline

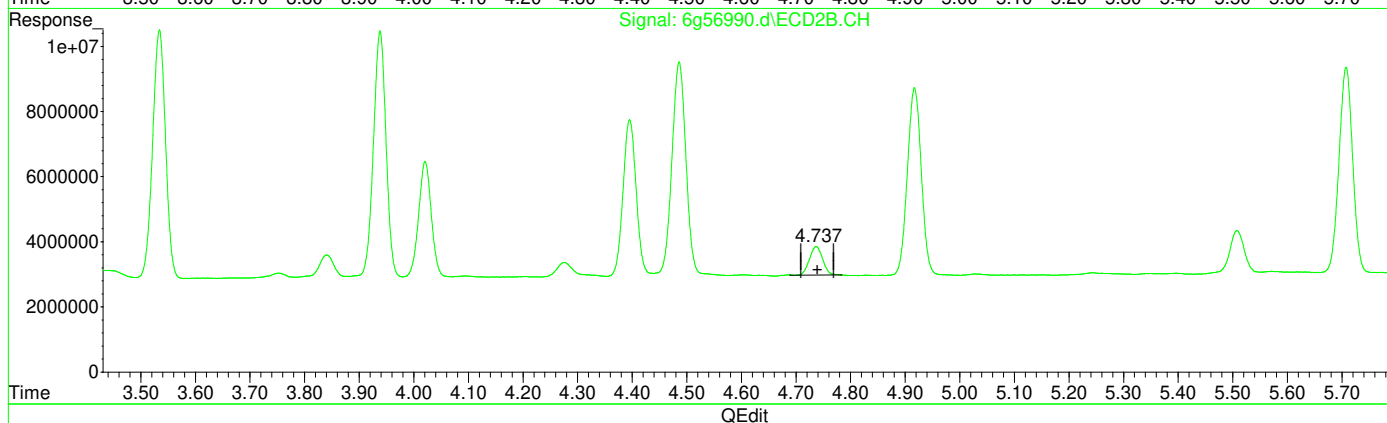
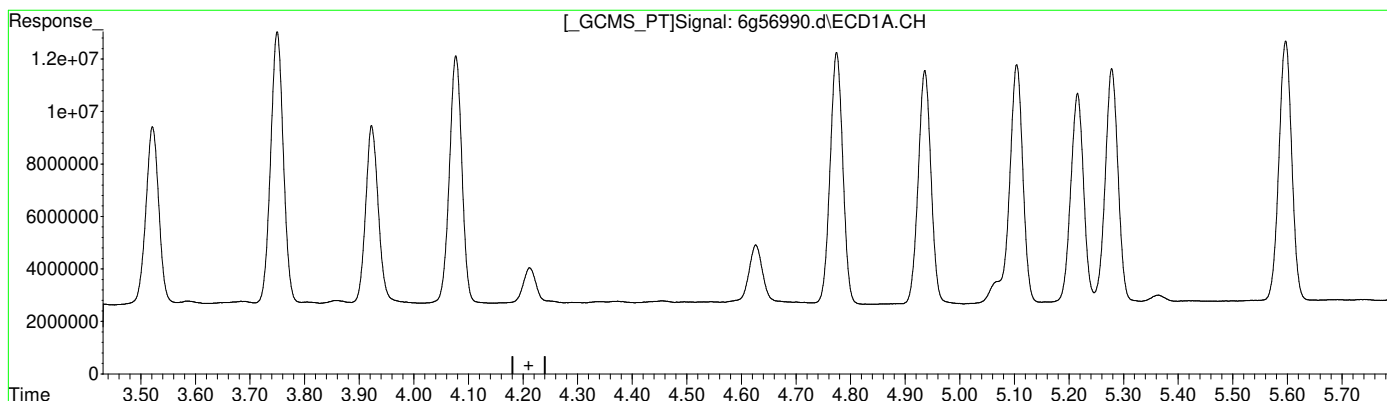
11.4.1.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56990.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 13:46:47
 Operator : rebeccak
 Sample : op12449-ms
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 61 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 14:10:34 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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	4.737min	20.128 PPB
response	14469284	

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 14:10:46 2018

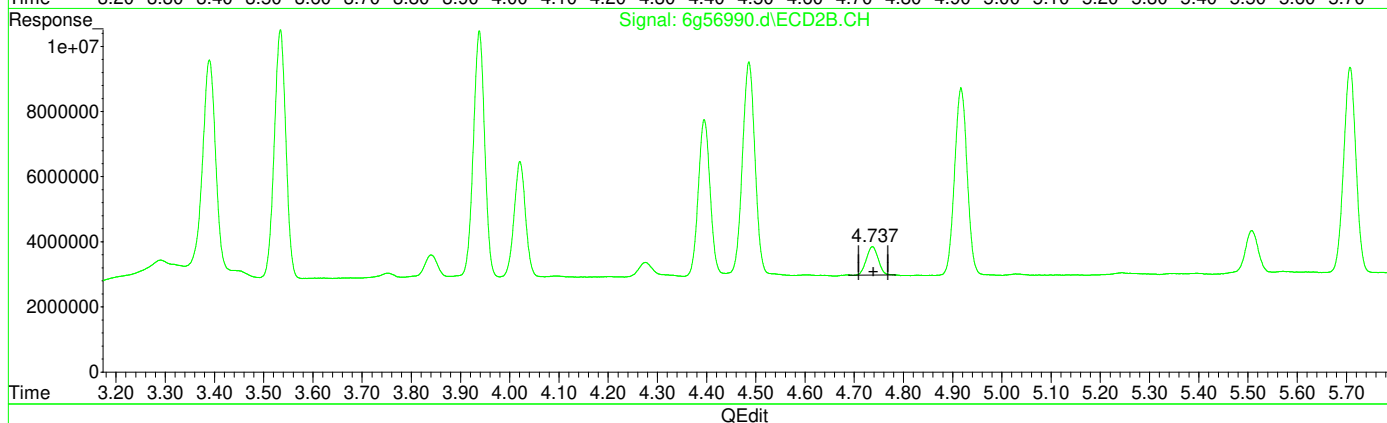
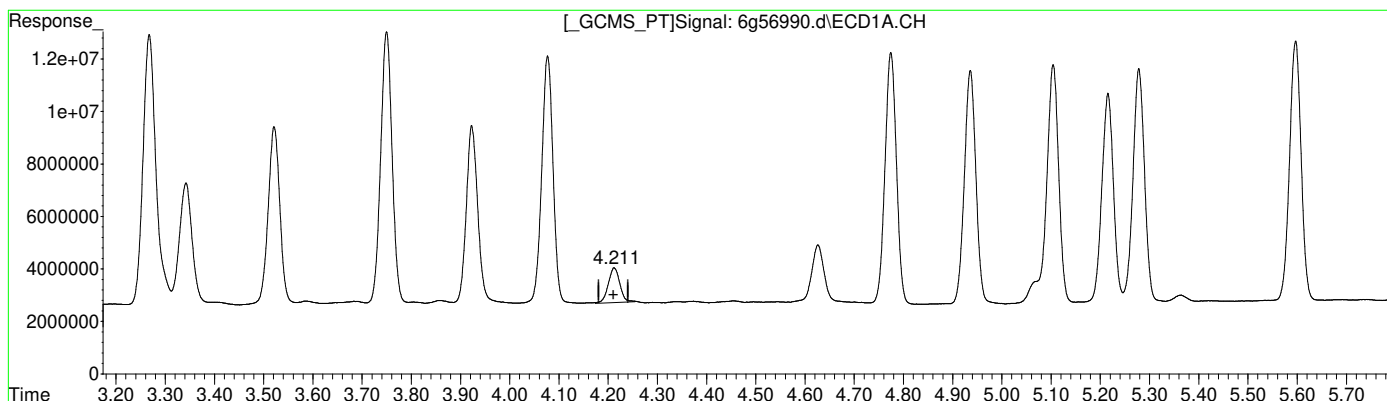
11.4.12
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56990.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 13:46:47
 Operator : rebeccak
 Sample : op12449-ms
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 61 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 14:10:34 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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
 4.211min 20.307 PPB m
 response 21345451

(10)alachlor #2
 4.737min 20.128 PPB
 response 14469284

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 14:11:04 2018

11.4.13
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56991.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 14:04:38
 Operator : rebeccak
 Sample : op12449-msd
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 62 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 14:12:48 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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...	1.938	2.135	377.3E6	264.3E6	50.000	50.000
27)	I 1-bromo-2...	1.938	2.135	377.3E6	264.3E6	50.000	50.000
33)	I 1-bromo-2...	1.938	2.135	377.3E6	264.3E6	50.000	50.000
System Monitoring Compounds							
2)	SAB Tetrachlo...	2.521	2.912	186.9E6	134.0E6	25.490	27.209
	Spiked Amount	40.000	Range 30 - 150	Recovery =	63.73%	68.02%	
26)	SA Decachlor...	9.768	11.655	136.9E6	98416915	18.313	20.042
	Spiked Amount	40.000		Recovery =	45.78%	50.10%	
Target Compounds							
3)	hexachlor...	2.843	3.390	151.7E6	134.0E6	18.534	21.700
4)	A alpha-BHC	2.980	3.534	206.4E6	140.0E6	20.434	21.365
5)	MA gamma-BHC	3.267	3.938	207.4E6	132.9E6	21.688	21.623
6)	MA Heptachlor	3.749	4.486	184.6E6	129.4E6	20.427	20.698
7)	B beta-BHC	3.341	4.020	90777713	62343328	21.232	22.092
8)	B delta-BHC	3.521	4.396	121.9E6	88428627	14.454	15.501
9)	MB Aldrin	4.077	4.917	168.5E6	114.5E6	19.190	20.815
10)	alachlor	4.212	4.736	23858352	15926870	22.527m	21.852
11)	B Heptachlo...	4.774	5.706	171.2E6	120.3E6	21.088	22.616
12)	B gamma-Chl...	4.936	5.983	163.3E6	125.4E6	20.413	24.057
13)	B alpha-Chl...	5.104	6.201	176.9E6	112.3E6	21.603	22.125
14)	A Endosulfan I	5.278	6.293	160.0E6	108.0E6	20.957	22.276
15)	B 4,4'-DDE	5.216	6.463	148.2E6	103.0E6	19.001	20.900
16)	MA Dieldrin	5.597	6.716	179.2E6	122.7E6	21.677	23.576
17)	MA Endrin	5.915	7.205	174.9E6	118.9E6	23.369	23.277
18)	A 4,4'-DDD	6.038	7.390	134.1E6	91106928	20.763	21.464
19)	B Endosulfa...	6.231	7.550	197.4E6	134.7E6	24.862	26.065
20)	MA 4,4'-DDT	6.453	7.914	118.6E6	79221562	19.152	19.333
21)	B Endrin Al...	6.852	8.111	142.2E6	89386666	22.623	22.769
22)	B Endosulfa...	7.527	8.573	124.5E6	84743319	20.007	21.556
23)	A Methoxychlor	7.230	9.141	75264164	47438368	20.371	20.380
25)	B Endrin Ke...	7.964	9.517	166.3E6	111.1E6	22.462	21.331
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

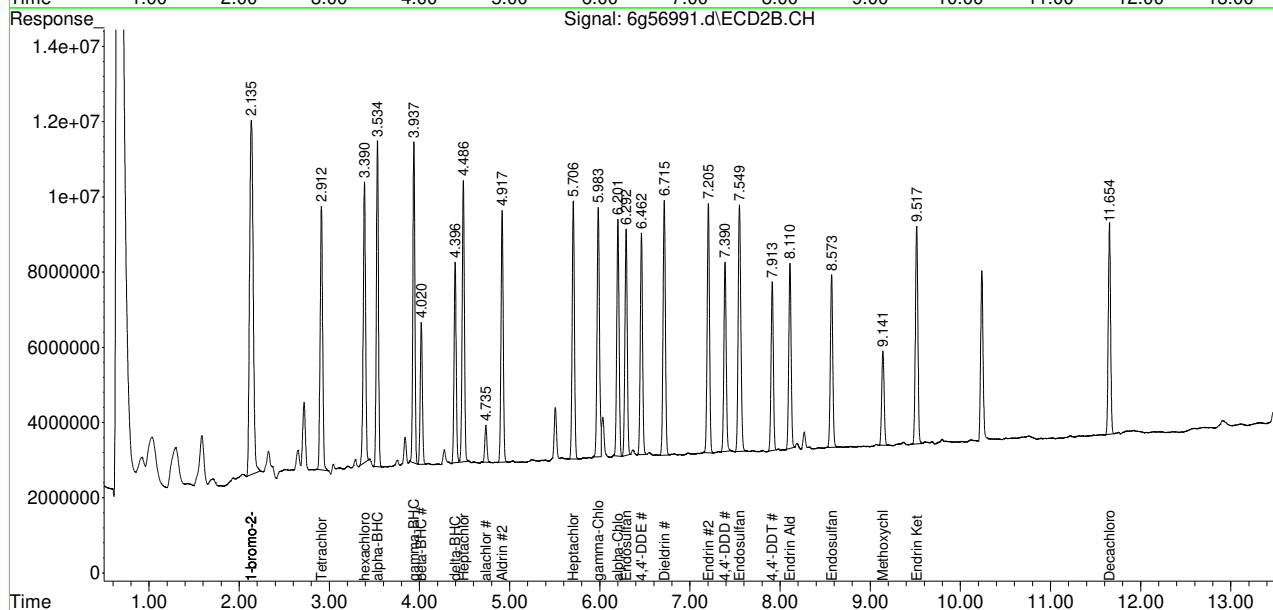
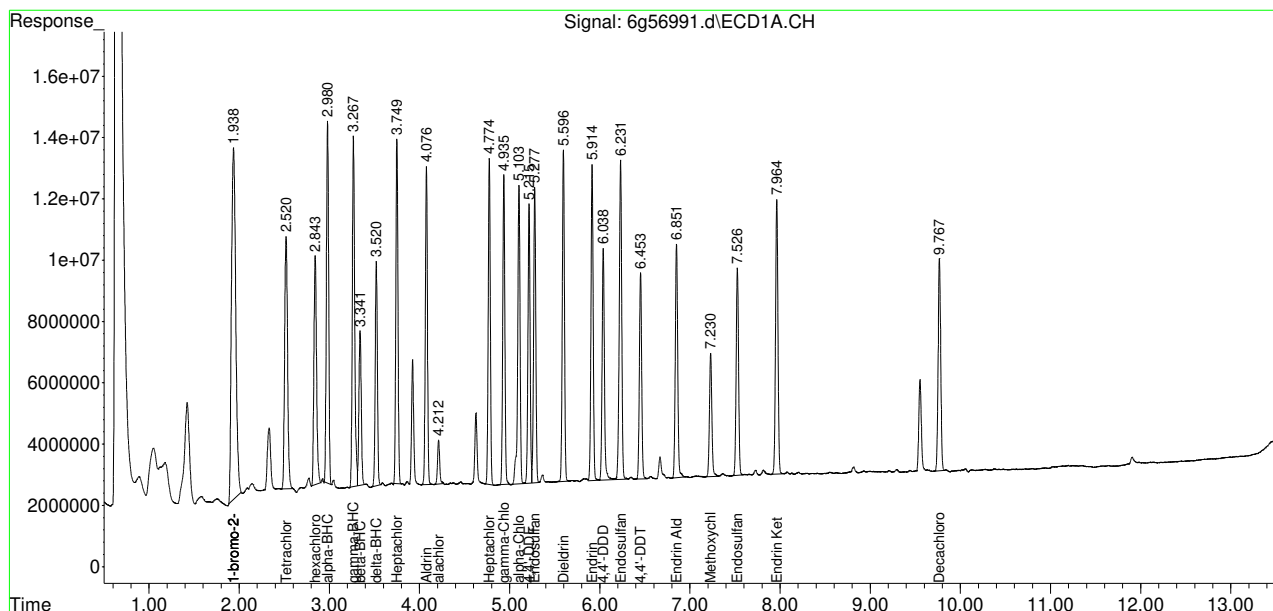
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56991.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 14:04:38
 Operator : rebeccak
 Sample : op12449-msd
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 62 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 14:12:48 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



11.42 11



Manual Integration Approval Summary

Sample Number: OP12449-MSD Method: SW846 8081B
Lab FileID: 6G56991.D Analyst approved: 06/07/18 14:27 Dharmistha Mehta
Injection Time: 06/06/18 14:04 Supervisor approved: 06/11/18 08:17 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Alachlor	15972-60-8	1	4.21	Poorly defined baseline

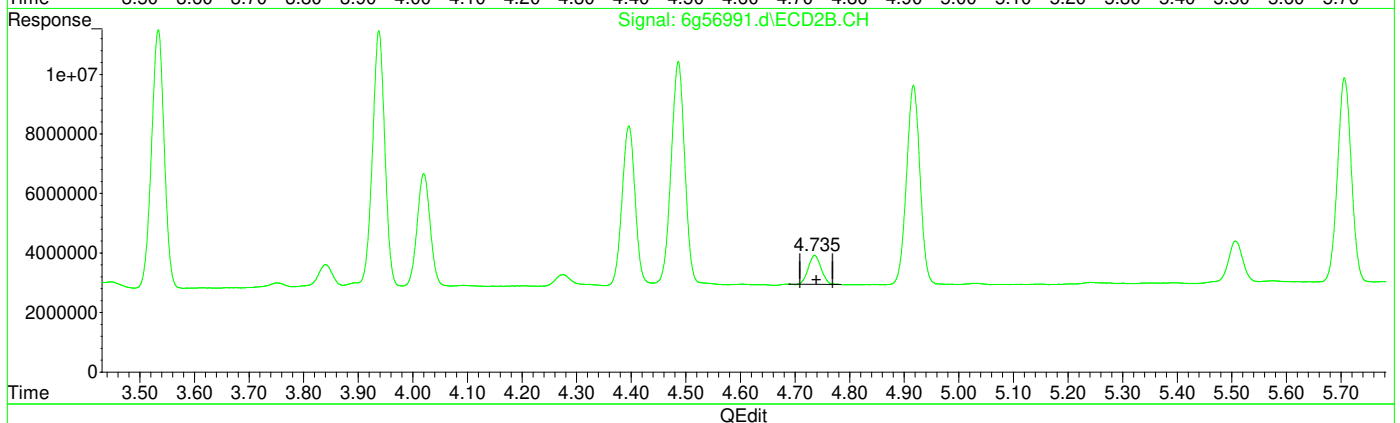
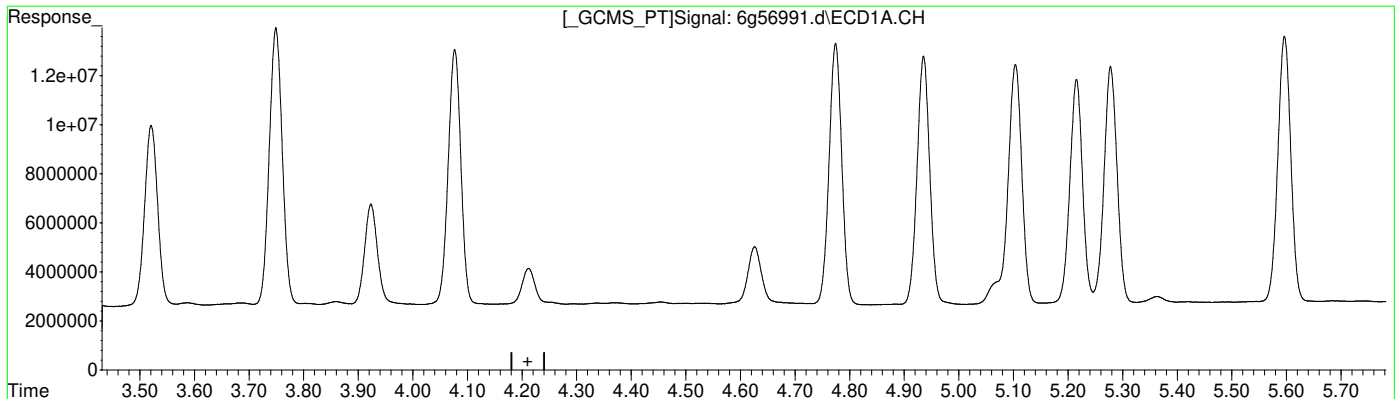
11.4.2.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56991.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 14:04:38
 Operator : rebeccak
 Sample : op12449-msd
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 62 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 14:12:14 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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
 4.736min 21.852 PPB
 response 15926870

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 14:12:45 2018

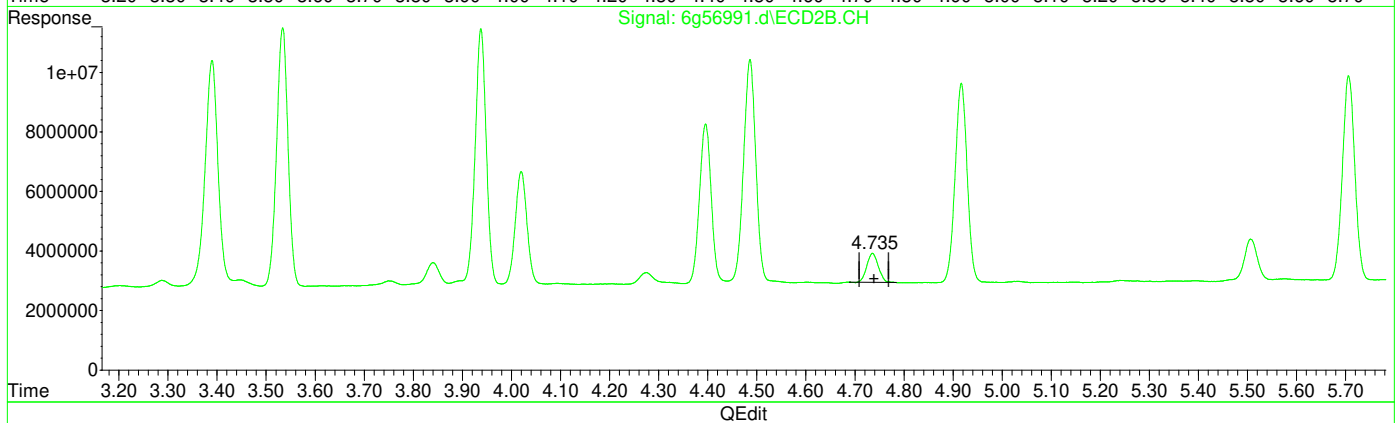
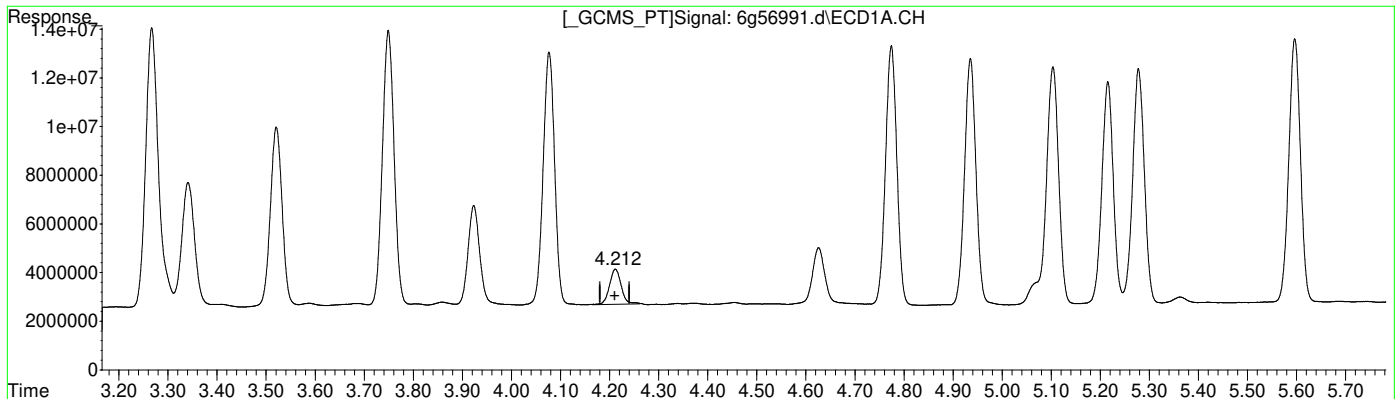
11.4.22
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56991.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 14:04:38
 Operator : rebeccak
 Sample : op12449-msd
 Misc : OP12449,g6g1701,300,,,2,1
 ALS Vial : 62 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 07 14:12:14 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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
 4.212min 22.527 PPB m
 response 23858352

(10)alachlor #2
 4.736min 21.852 PPB
 response 15926870

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 14:12:56 2018

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229843.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 2:31 am
 Operator : edouarda
 Sample : op12448-ms
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:02:21 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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...	2.820	3.550	349.5E6	357.3E6	32.453	35.587
Spiked Amount	40.000		Recovery	=	81.13%	88.97%
51) S Decachlor...	9.928	11.936	322.7E6	298.6E6	25.781	26.112
Spiked Amount	40.000		Recovery	=	64.45%	65.28%
Target Compounds						
41) AR1016-A	3.193	4.195	34180419	57160395	178.386	342.870 #
42) AR1016-B	3.569	4.770f	66911288	106.4E6	187.291	323.885 #
43) AR1016-C	4.124	5.387	140.8E6	145.7E6	167.696	192.872
44) AR1016-D	4.281	5.574	56073875	68546145	182.266	218.132
45) AR1016-E	4.768	6.227	53817252	43255334	168.657	196.409
46) AR1260-A	7.104	8.829	128.1E6	146.8E6	135.137	148.013m
47) AR1260-B	7.252	8.945	79413275	104.7E6	186.894	189.614
48) AR1260-C	7.587	9.378	80315348	92120427	184.747	181.562
49) AR1260-D	8.021	9.728	202.5E6	239.8E6	164.558	179.431
50) AR1260-E	8.412f	10.272	195.1E6	220.3E6	166.007m	184.042m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

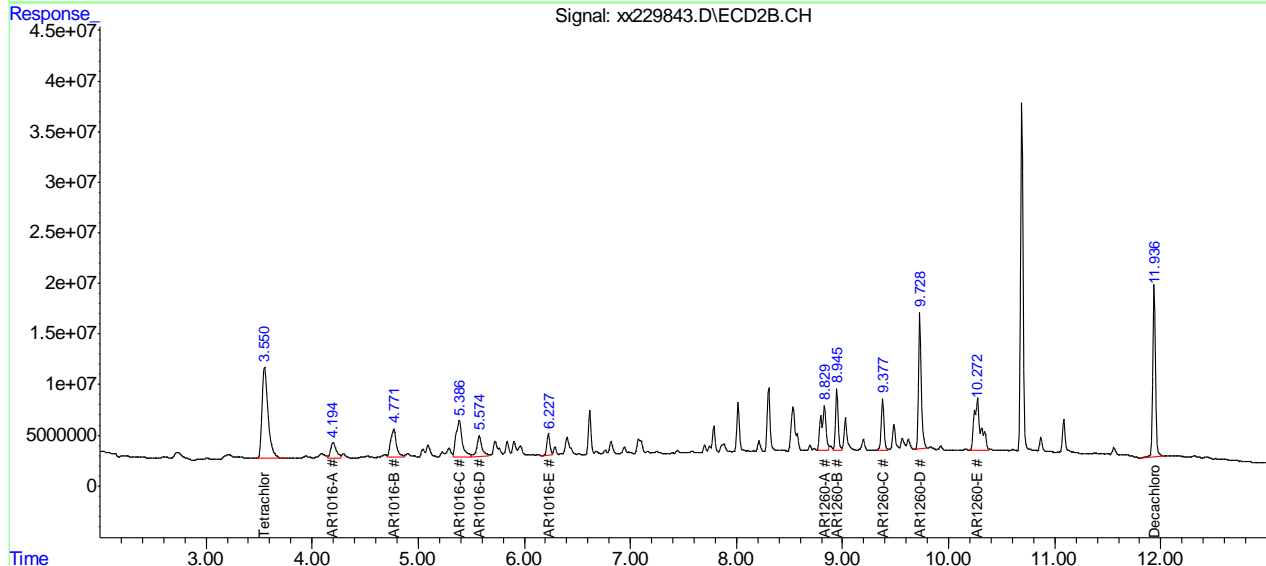
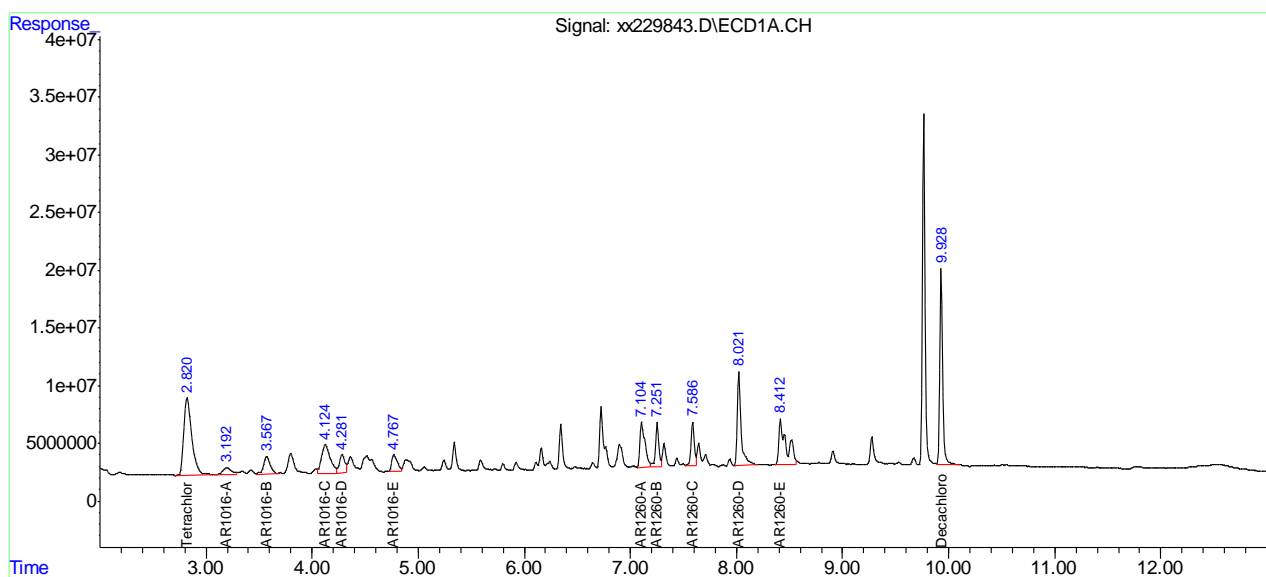
11.4.3
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229843.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 2:31 am
 Operator : edouarda
 Sample : op12448-ms
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:02:21 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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: OP12448-MS Method: SW846 8082A
Lab FileID: XX229843.D Analyst approved: 06/05/18 09:16 Tianwei Ruan
Injection Time: 06/03/18 02:31 Supervisor approved: 06/05/18 13:54 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1260-E		1	8.41	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.27	Split peak

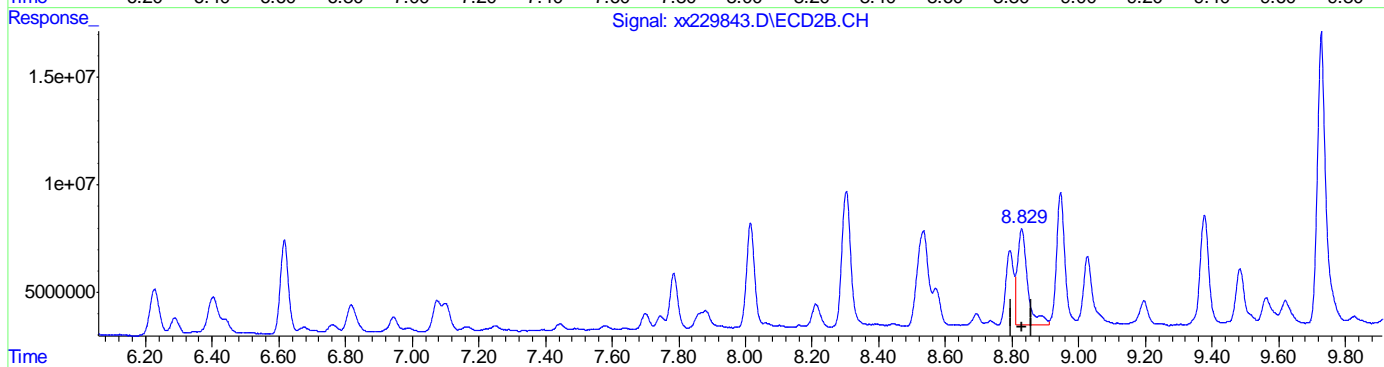
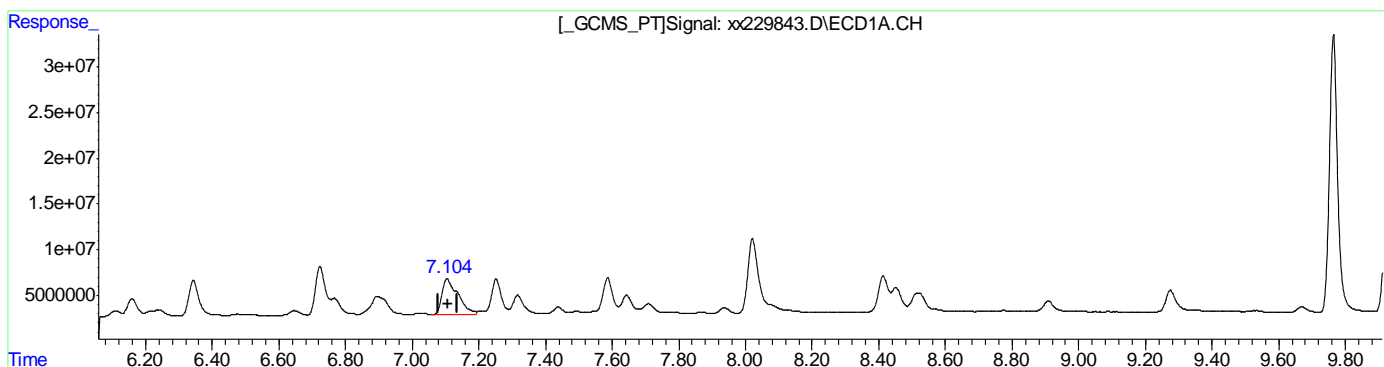
11.4.3.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229843.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 2:31 am
 Operator : edouarda
 Sample : op12448-ms
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:01:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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	7.104min	135.137PPB	response 128128590
(46) AR1260-A #2	8.829min	96.432PPB	response 95662910

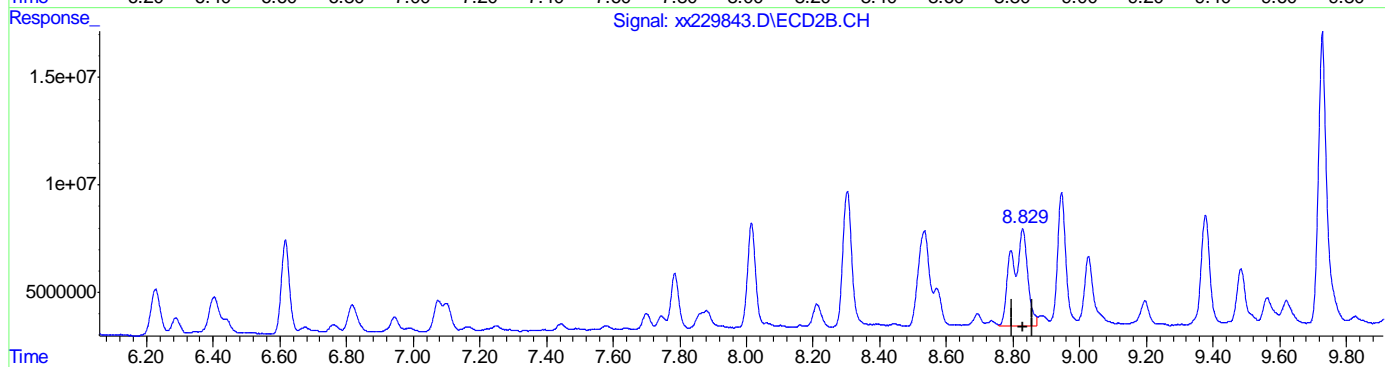
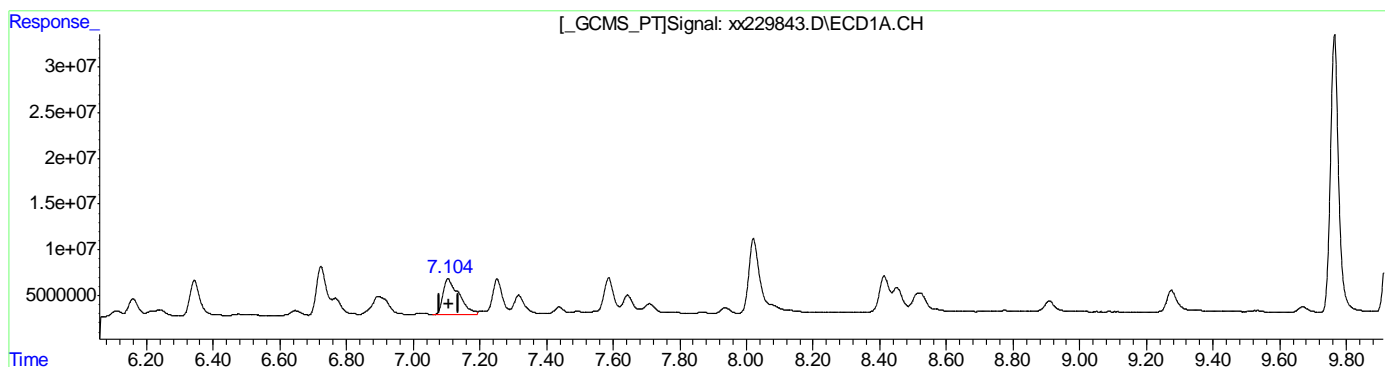
11.4.3.2
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229843.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 2:31 am
 Operator : edouarda
 Sample : op12448-ms
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:01:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 7.104min 135.137PPB
 response 128128590

(46) AR1260-A #2
 8.829min 148.013PPB m
 response 146832970

(+) = Expected Retention Time
 PCB6349.M Tue Jun 05 09:02:10 2018

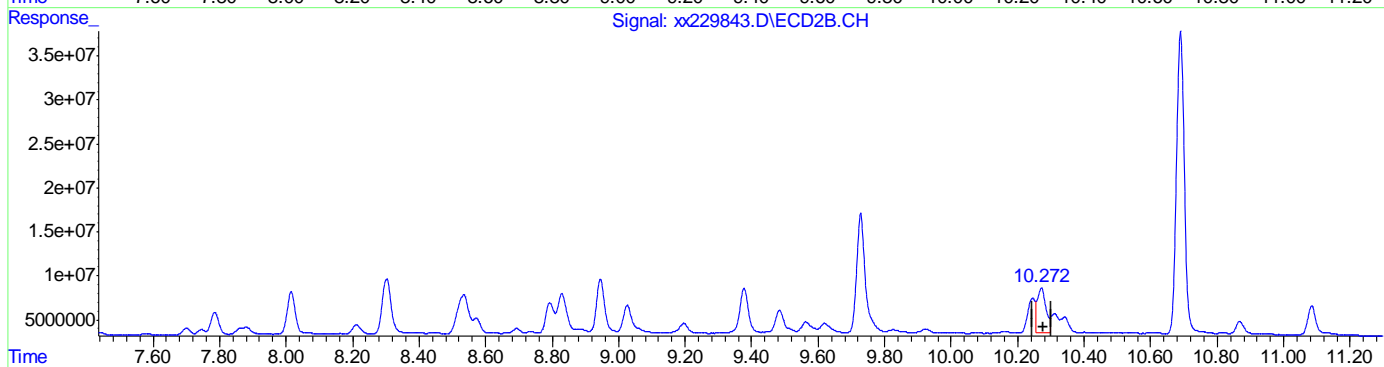
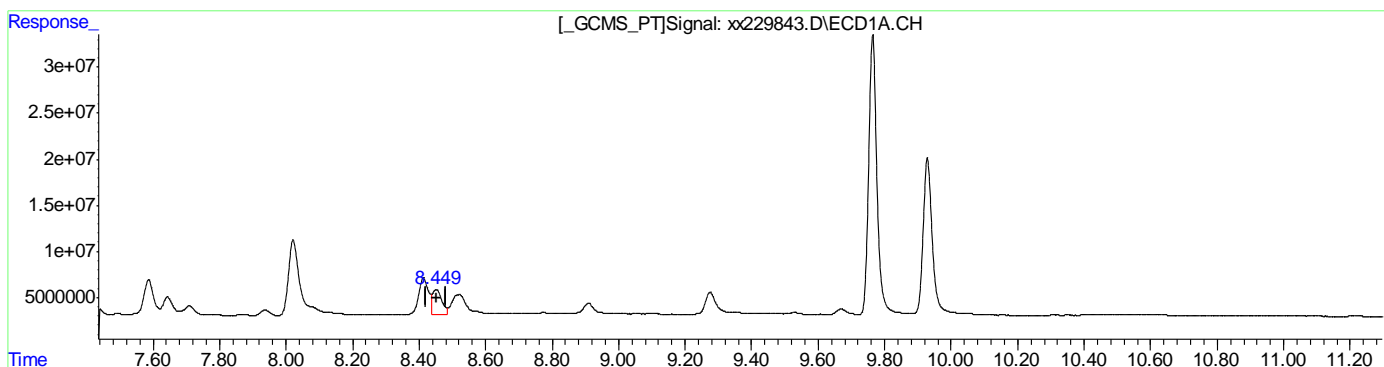
11.4.3.3
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229843.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 2:31 am
 Operator : edouarda
 Sample : op12448-ms
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:01:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
8.451min 45.451PPB
response 53415669
(50) AR1260-E #2
10.272min 76.791PPB
response 91936115

(+) = Expected Retention Time
 PCB6349.M Tue Jun 05 09:02:14 2018

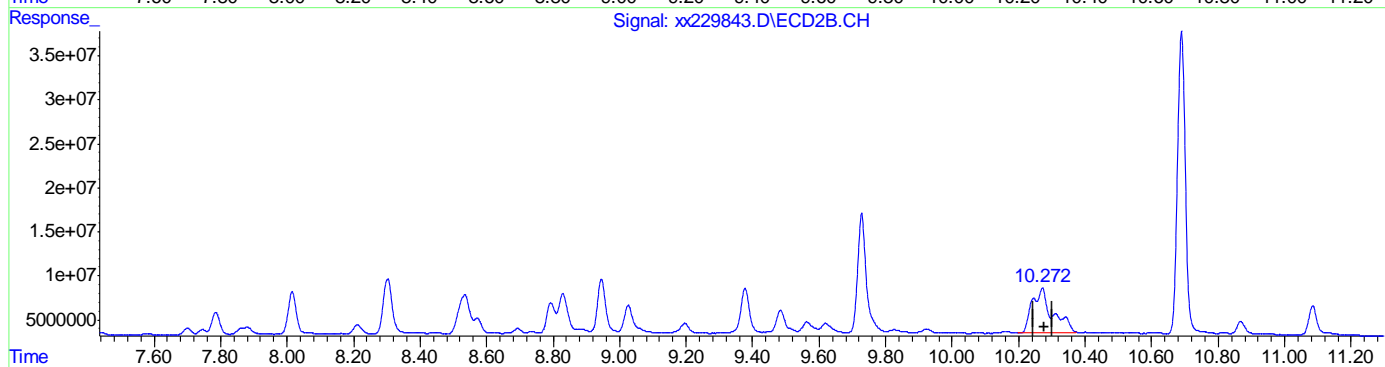
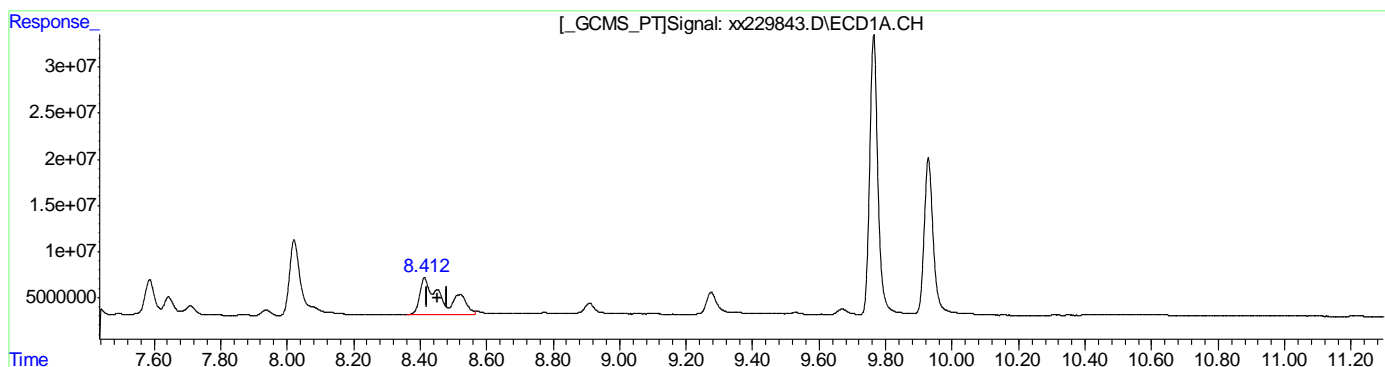
11.4.3.4 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229843.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 2:31 am
 Operator : edouarda
 Sample : op12448-ms
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:01:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 8.412min 166.007PPB m
 response 195097353

(50) AR1260-E #2
 10.272min 184.042PPB m
 response 220338694

11.4.3.5
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229844.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 2:48 am
 Operator : edouarda
 Sample : op12448-msd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:03:06 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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...	2.821	3.551	365.3E6	375.3E6	33.914	37.385
Spiked Amount	40.000		Recovery	=	84.78%	93.46%
51) S Decachlor...	9.928	11.934	350.1E6	325.2E6	27.968	28.439
Spiked Amount	40.000		Recovery	=	69.92%	71.10%
Target Compounds						
41) AR1016-A	3.192	4.195	36788714	60991364	191.999	365.850 #
42) AR1016-B	3.569	4.771f	68004543	112.7E6	190.351	343.190 #
43) AR1016-C	4.122	5.390	151.1E6	153.3E6	179.880m	202.934
44) AR1016-D	4.284	5.576	58957356	71101886	191.638	226.265
45) AR1016-E	4.768	6.225	59332392	44877591	185.941	203.775
46) AR1260-A	7.107	8.827	136.4E6	156.5E6	143.853	157.710m
47) AR1260-B	7.252	8.945	86560799	111.3E6	203.715	201.544
48) AR1260-C	7.587	9.376	87667265	104.5E6	201.659	206.036
49) AR1260-D	8.021	9.726	217.7E6	257.8E6	176.912	192.898
50) AR1260-E	8.412f	10.271	207.2E6	232.6E6	176.304m	194.263m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

11.44

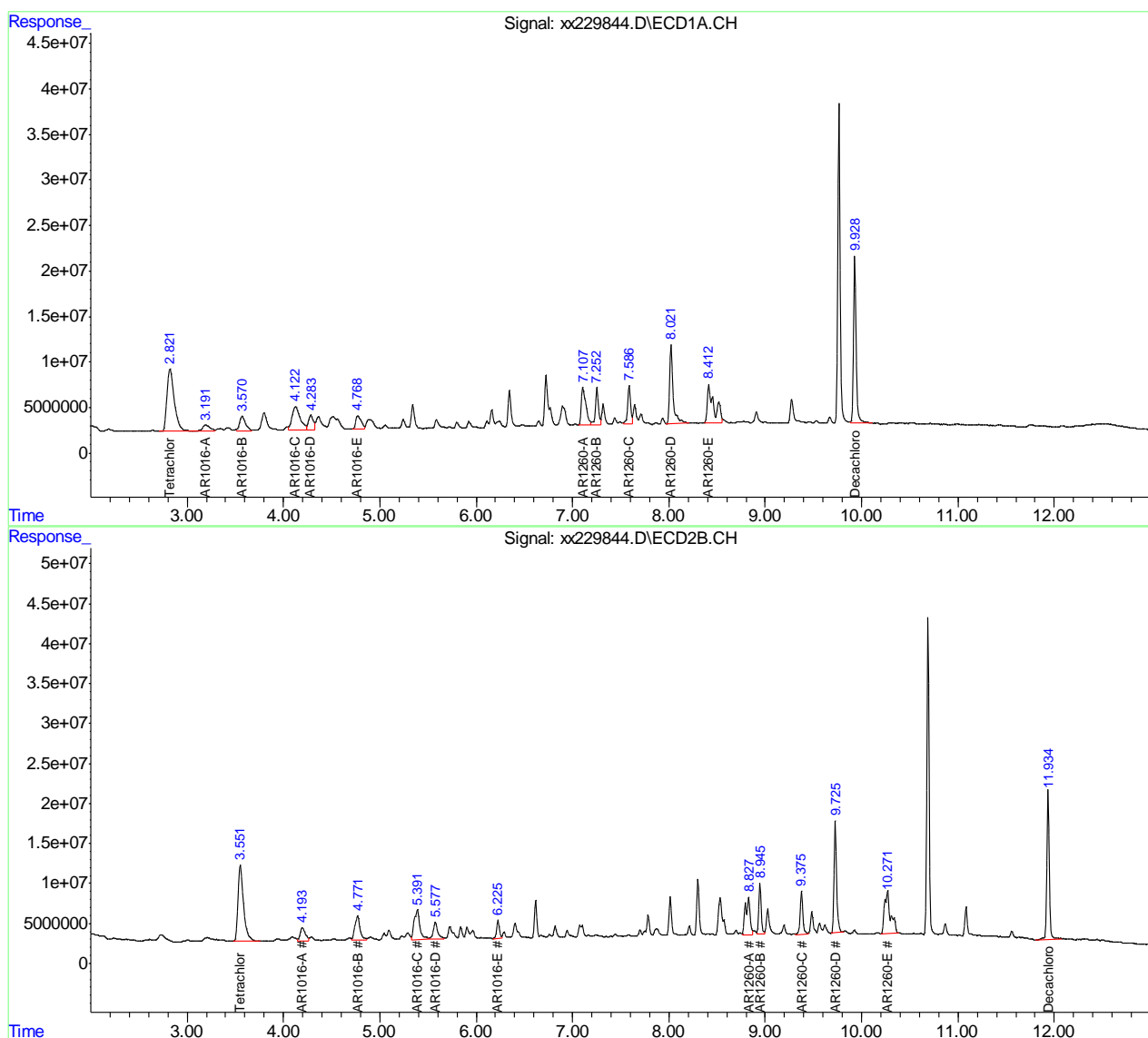
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229844.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 2:48 am
 Operator : edouarda
 Sample : op12448-msd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:03:06 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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: OP12448-MSD Method: SW846 8082A
Lab FileID: XX229844.D Analyst approved: 06/05/18 09:16 Tianwei Ruan
Injection Time: 06/03/18 02:48 Supervisor approved: 06/05/18 13:54 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		1	4.12	Split peak
AR1260-E		1	8.41	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.27	Split peak

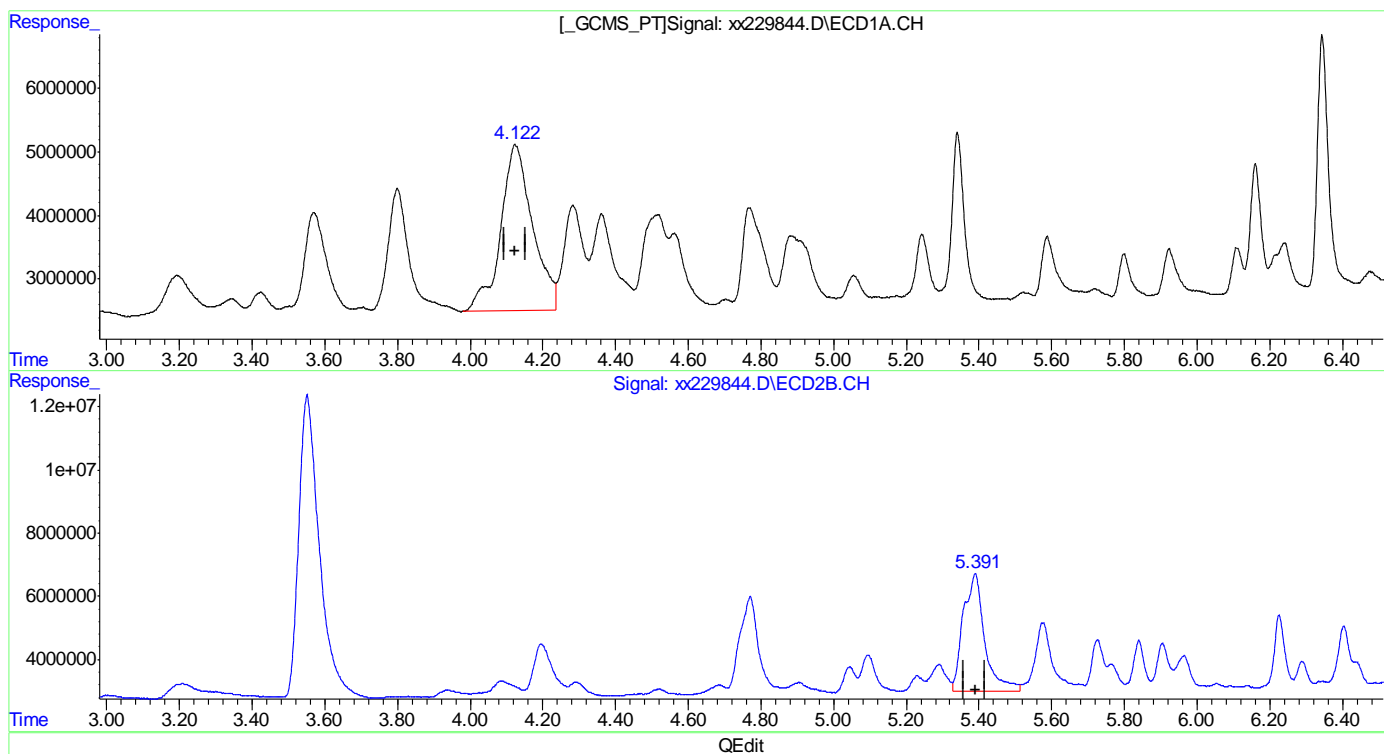
11.4.4.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229844.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 2:48 am
 Operator : edouarda
 Sample : op12448-msd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:02:35 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 4.123min 189.849PPB
 response 159457188

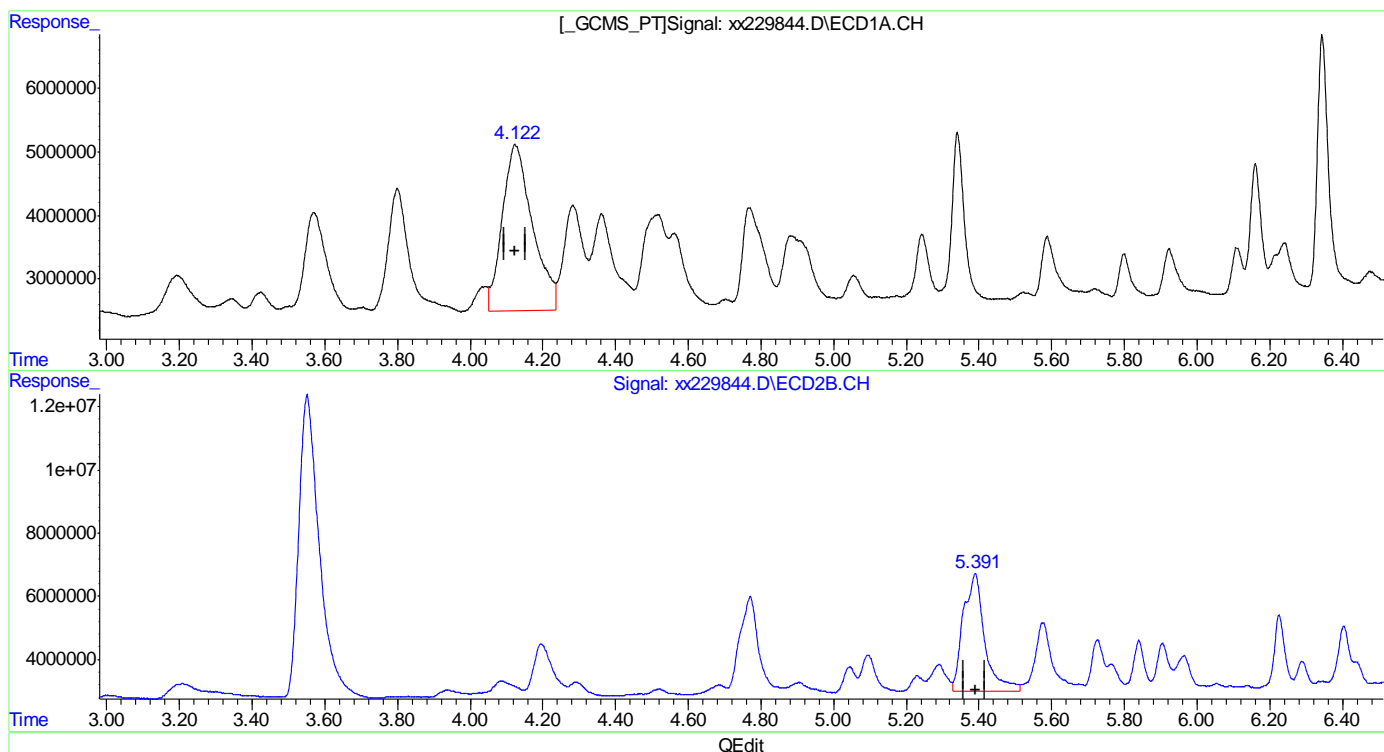
(43) AR1016-C #2
 5.390min 202.934PPB
 response 153271285

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229844.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 2:48 am
 Operator : edouarda
 Sample : op12448-msd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:02:35 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 4.122min 179.880PPB m
 response 151083490

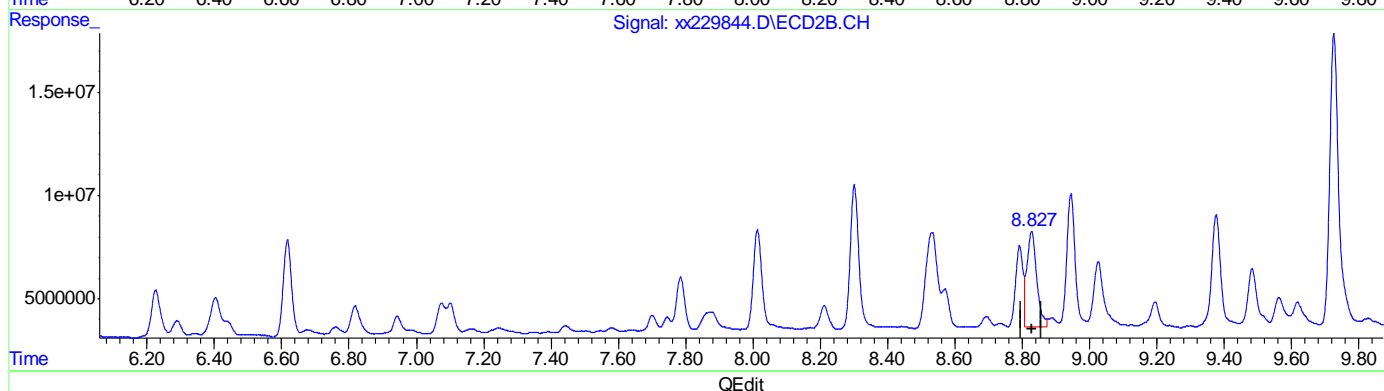
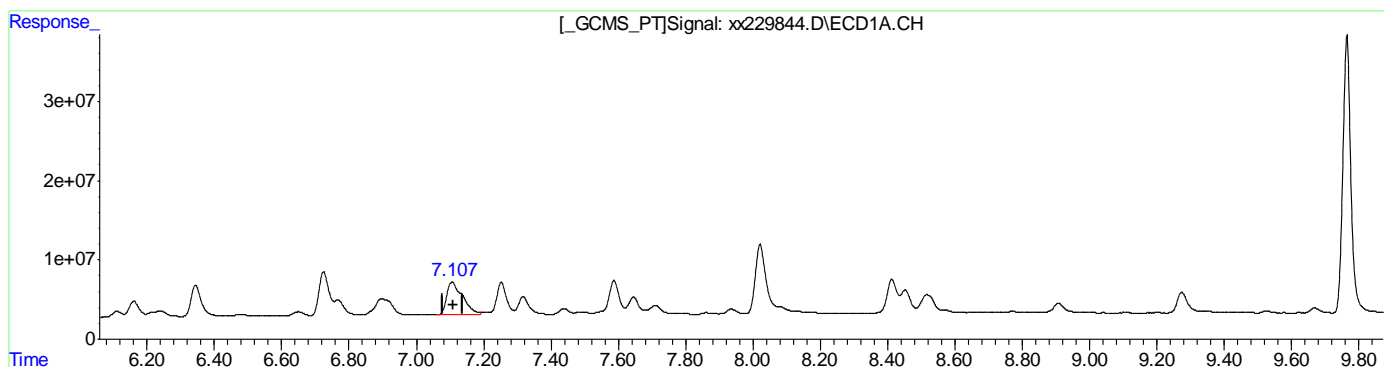
(43) AR1016-C #2
 5.390min 202.934PPB
 response 153271285

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229844.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 2:48 am
 Operator : edouarda
 Sample : op12448-msd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:02:35 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 7.107min 143.853PPB
 response 136392672

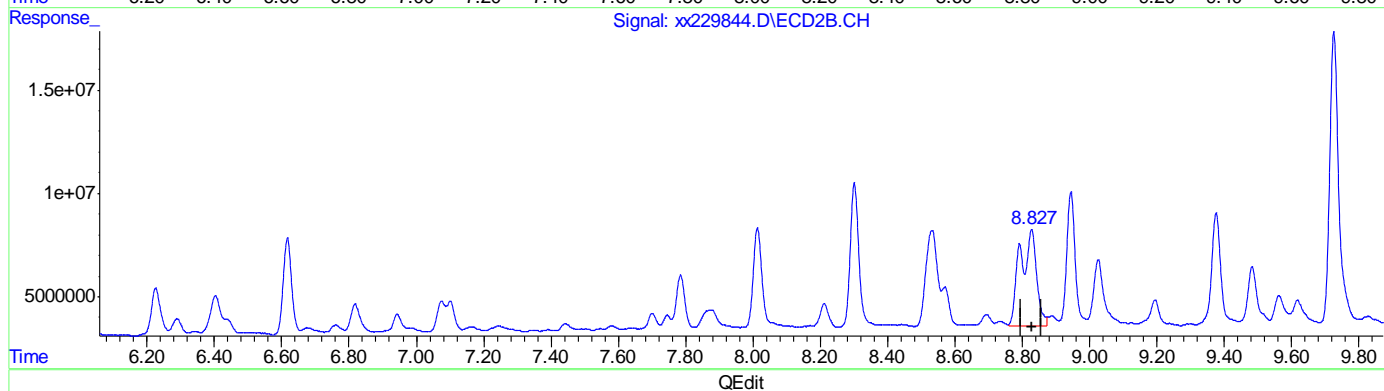
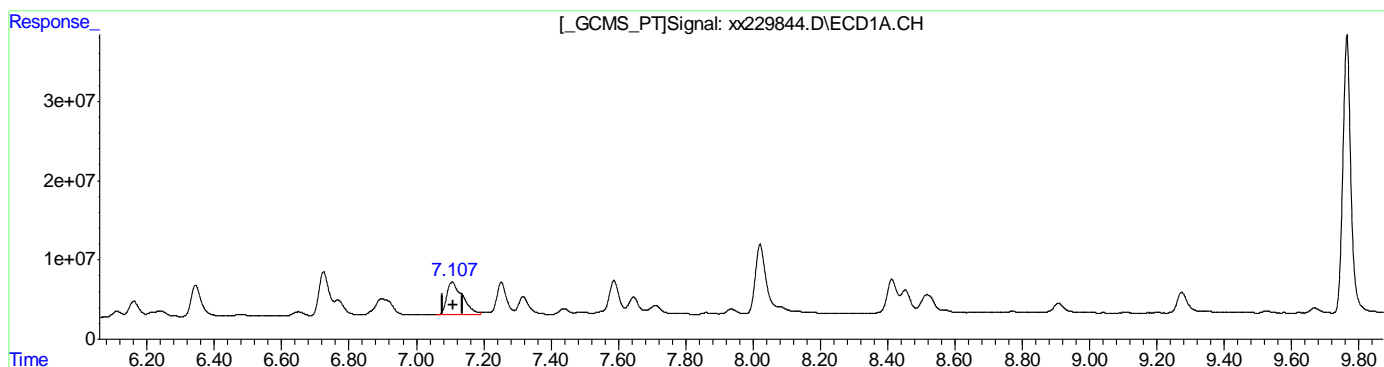
(46) AR1260-A #2
 8.828min 94.156PPB
 response 93405225

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229844.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 2:48 am
 Operator : edouarda
 Sample : op12448-msd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:02:35 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 7.107min 143.853PPB
 response 136392672

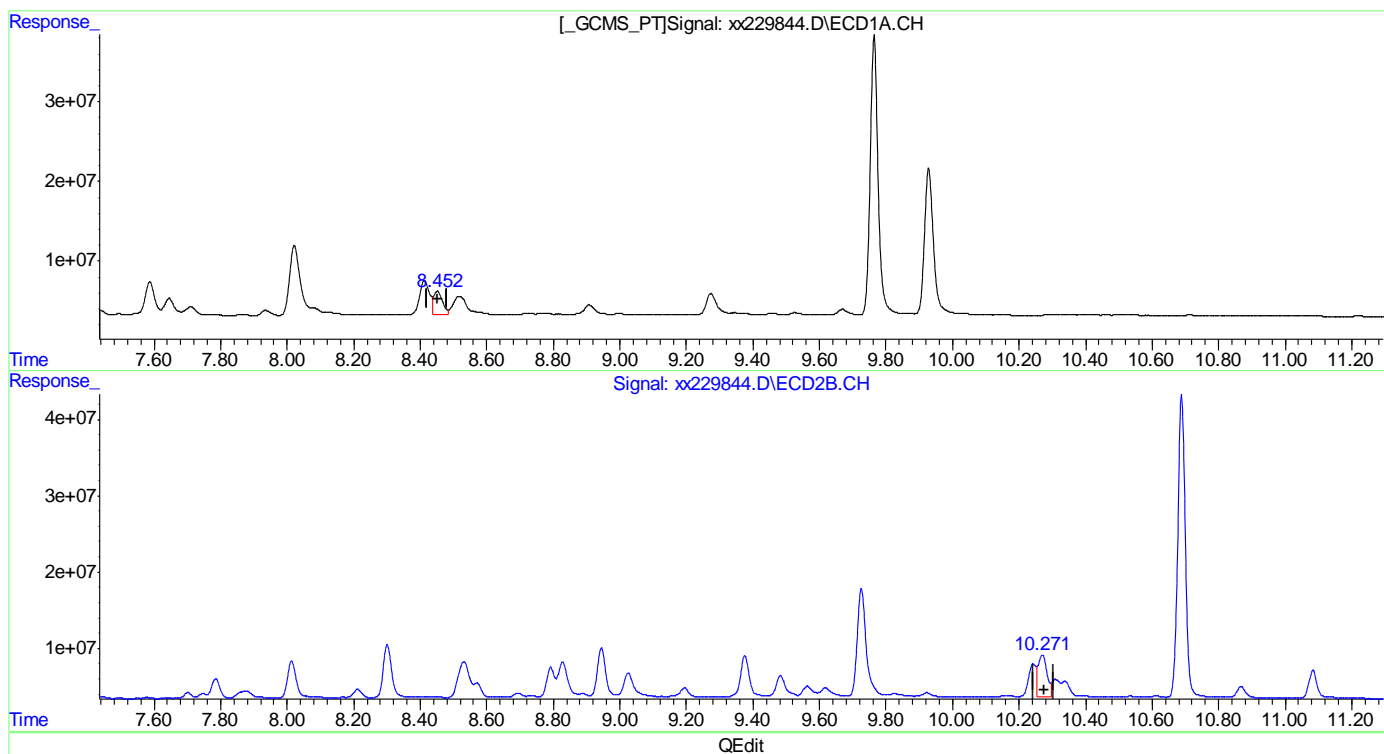
(46) AR1260-A #2
 8.827min 157.710PPB m
 response 156452884

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229844.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 2:48 am
 Operator : edouarda
 Sample : op12448-msd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:02:35 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 8.452min 47.566PPB
 response 55901029

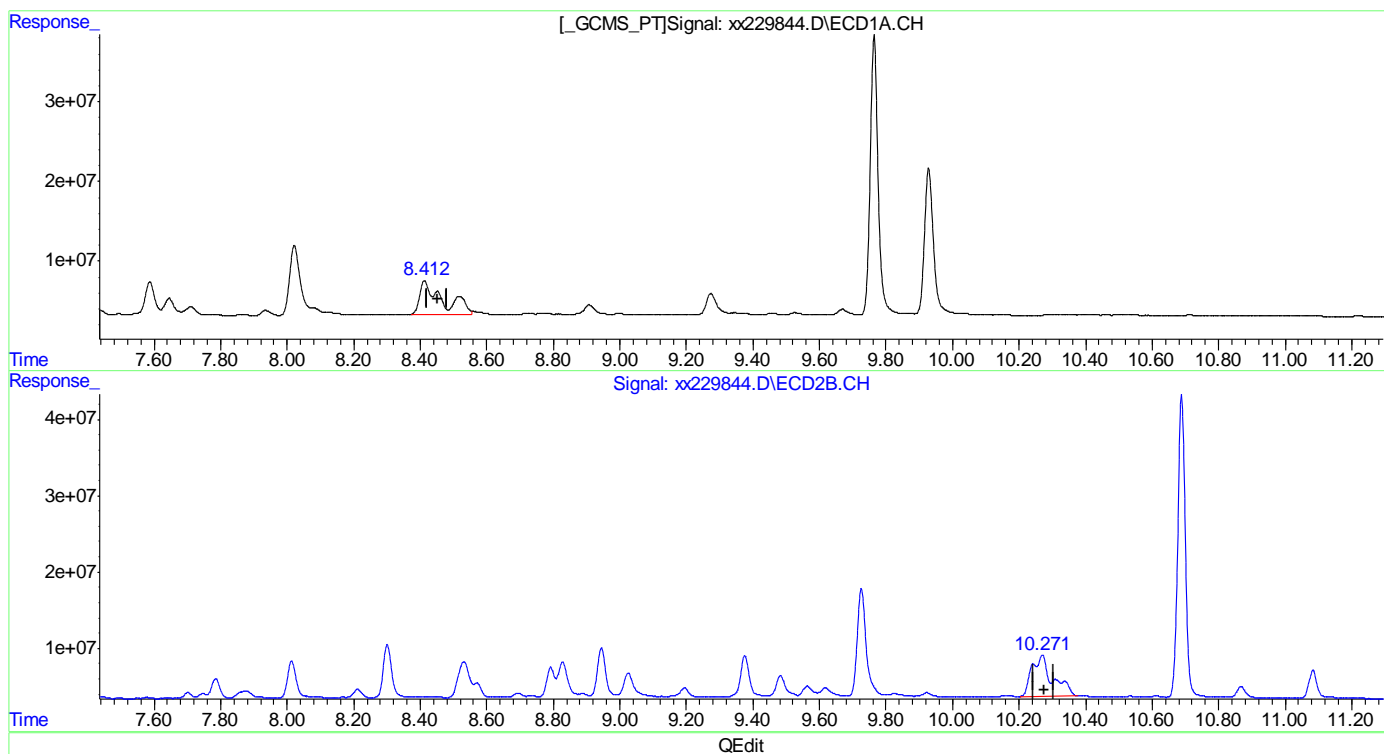
(50) AR1260-E #2
 10.271min 85.542PPB
 response 102412697

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229844.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 2:48 am
 Operator : edouarda
 Sample : op12448-msd
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 05 09:02:35 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue Jun 05 08:44:33 2018
 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
 8.412min 176.304PPB m
 response 207198897

(50) AR1260-E #2
 10.271min 194.263PPB m
 response 232575386

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55778.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 10:46:12
 Operator : dharas
 Sample : ddt
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:42:32 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 17:34:19 2018
 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...	1.942	2.147	385.2E6	251.7E6	50.000	50.000
27)	I 1-bromo-2...	1.942	2.147	385.2E6	251.7E6	50.000	50.000
33)	I 1-bromo-2...	1.942	2.147	385.2E6	251.7E6	50.000	50.000
System Monitoring Compounds							
2)	SAB Tetrachlo...	2.529f	2.933	370.3E6	235.5E6	49.464	50.237
	Spiked Amount	40.000	Range 30 - 150	Recovery	=	123.66%	125.59%
26)	SA Decachlor...	9.835f	11.722f	348.8E6	211.9E6	45.707	45.314
	Spiked Amount	40.000		Recovery	=	114.27%	113.29%
Target Compounds							
15)	B 4,4'-DDE	5.254	6.521	11688813	6661386	1.468	1.420
17)	MA Endrin	5.961f	7.269	397.4E6	243.1E6	52.024	49.988
18)	A 4,4'-DDD	6.083f	7.454	11318971	7536013	1.717	1.864
20)	MA 4,4'-DDT	6.500f	7.981	697.1E6	431.7E6	110.287	110.638
25)	B Endrin Ke...	8.022f	9.588	3648777	6453656	0.483m	1.301m#
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

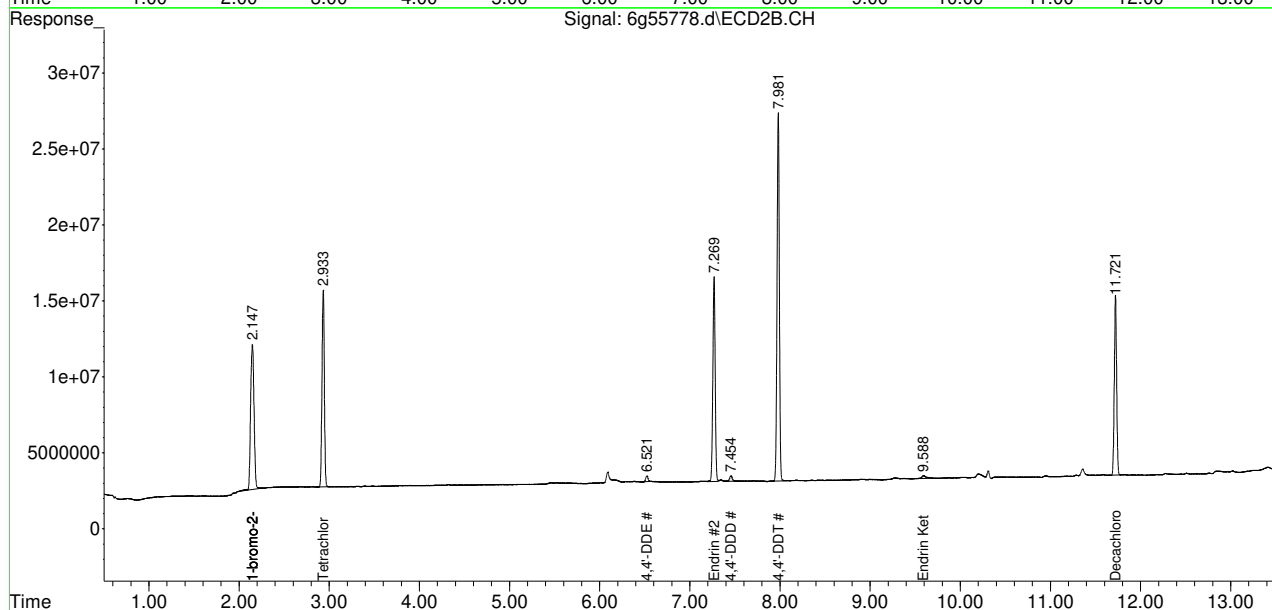
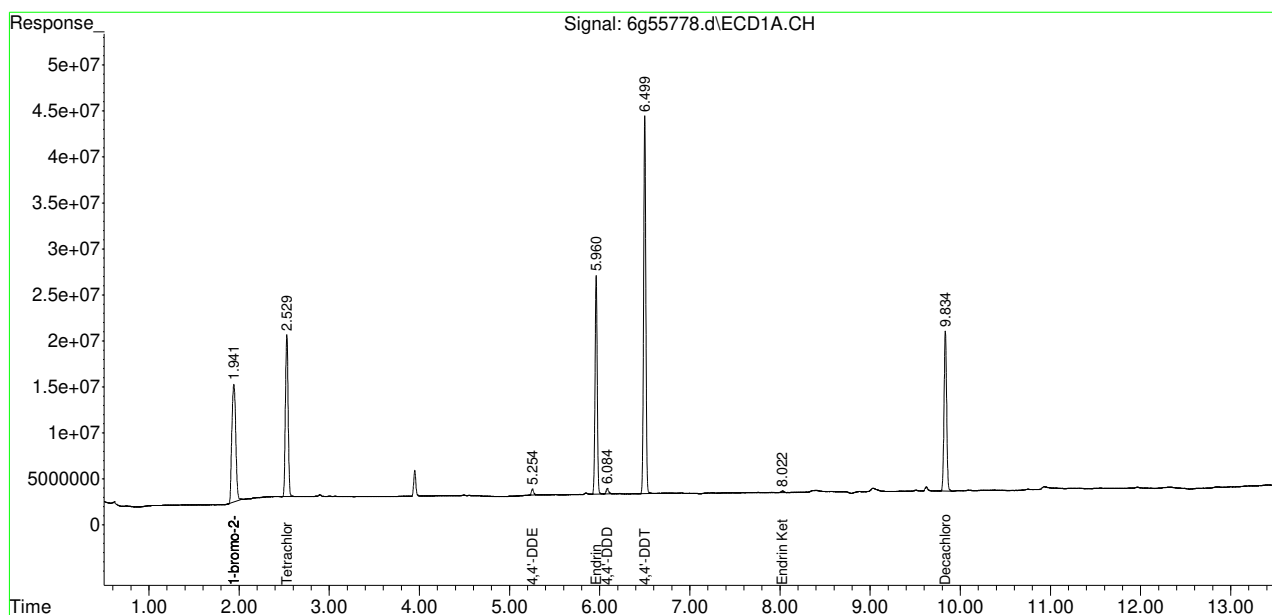
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55778.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 10:46:12
 Operator : dharas
 Sample : ddt
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:42:32 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 17:34:19 2018
 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: G6G1671-DDT Method: EPA 608
Lab FileID: 6G55778.D Analyst approved: 04/30/18 17:43 Rebecca Krug
Injection Time: 04/30/18 10:46 Supervisor approved: 05/01/18 08:39 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Endrin ketone	53494-70-5	1	8.02	Poorly defined baseline
Endrin ketone	53494-70-5	2	9.59	Poorly defined baseline

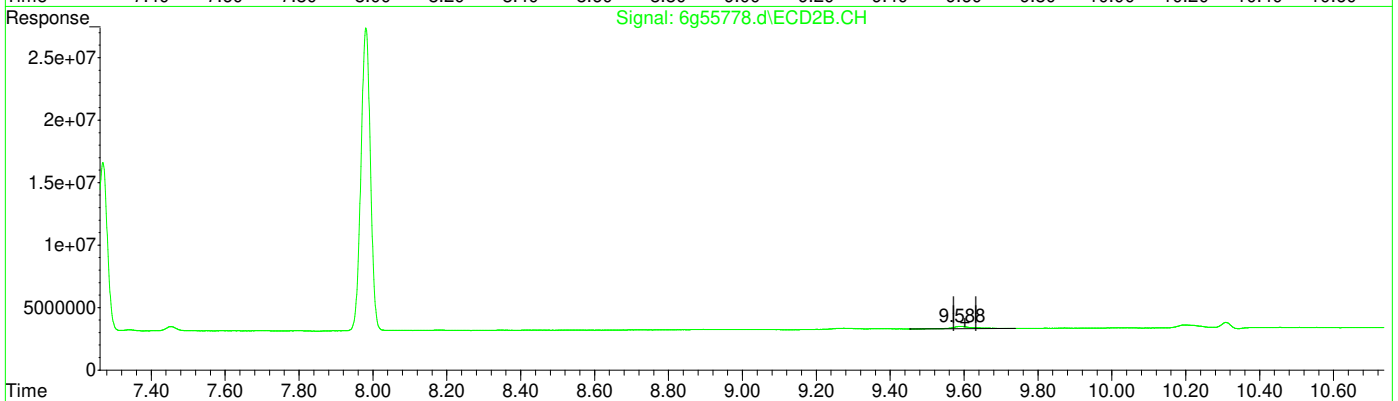
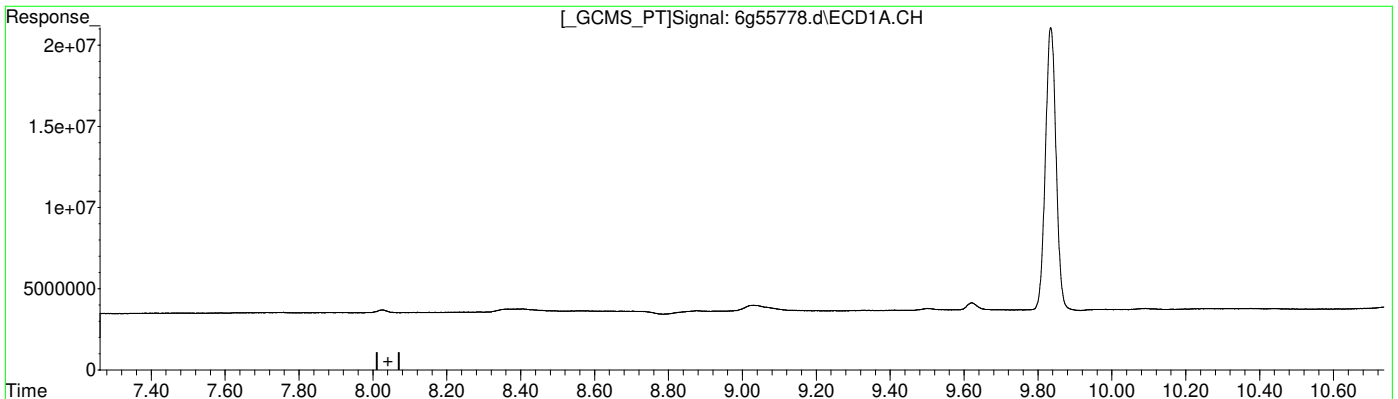
11.5.1.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55778.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 10:46:12
 Operator : dharas
 Sample : ddt
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:41:59 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 17:34:19 2018
 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



(25) Endrin Ketone (B)
 0.000min 0.000 PPB
 response 0

(25) Endrin Ketone #2 (B)
 9.590min 1.526 PPB
 response 7570610

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:42:24 2018

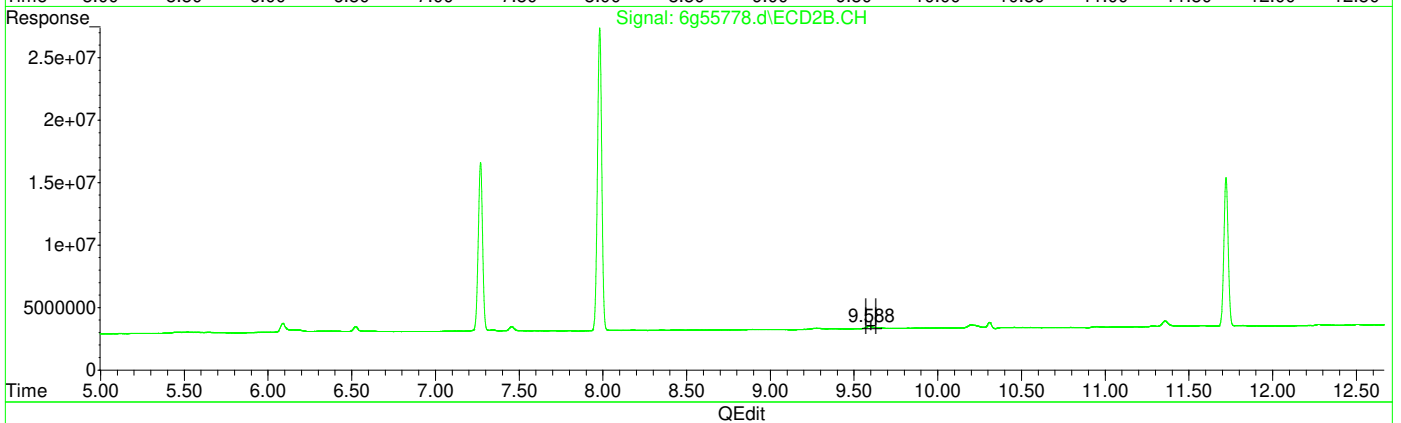
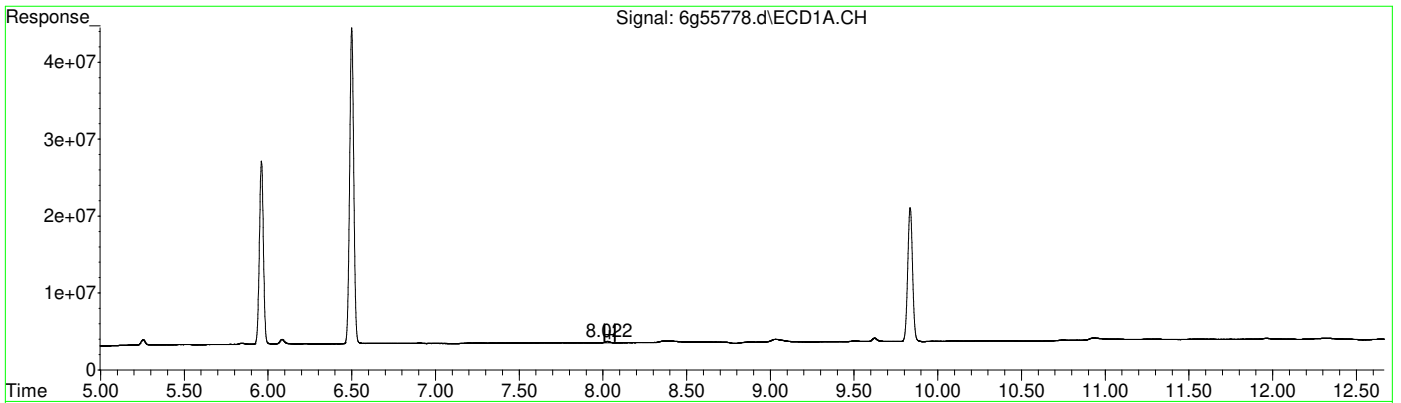
11.5.12
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55778.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 10:46:12
 Operator : dharas
 Sample : ddt
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:41:59 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 17:34:19 2018
 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



(25) Endrin Ketone (B)

8.022min 0.483 PPB m

response 3648777

(25) Endrin Ketone #2 (B)

9.588min 1.301 PPB m

response 6453656

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:42:34 2018

Page: 1

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56976.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 09:36:36
 Operator : rebeccak
 Sample : ddt
 Misc : OP12431,g6g1701,15.2,,,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: Jun 06 16:33:10 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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...	1.938	2.136	327.8E6	246.6E6	50.000	50.000
27)	I 1-bromo-2...	1.938	2.136	327.8E6	246.6E6	50.000	50.000
33)	I 1-bromo-2...	1.938	2.136	327.8E6	246.6E6	50.000	50.000
System Monitoring Compounds							
2)	SAB Tetrachlo...	2.521	2.913	326.0E6	240.5E6	51.166	52.355
	Spiked Amount	40.000	Range 30 - 150	Recovery =	127.92%	130.89%	
26)	SA Decachlor...	9.767	11.653	303.7E6	212.4E6	46.768	46.355
	Spiked Amount	40.000		Recovery =	116.92%	115.89%	
Target Compounds							
15)	B 4,4'-DDE	5.214	6.464	10184294	8215854	1.503	1.787m
17)	MA Endrin	5.915	7.206	366.8E6	241.1E6	56.419	50.596
18)	A 4,4'-DDD	6.037	7.392	12430560	9204443	2.215	2.324m
20)	MA 4,4'-DDT	6.451	7.914	593.5E6	390.9E6	110.319	102.249
21)	B Endrin Al...	6.823f	8.111	2591023	1454611	0.474m	0.397m
25)	B Endrin Ke...	7.966	9.544f	3375620	2361375	0.525	0.486m
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

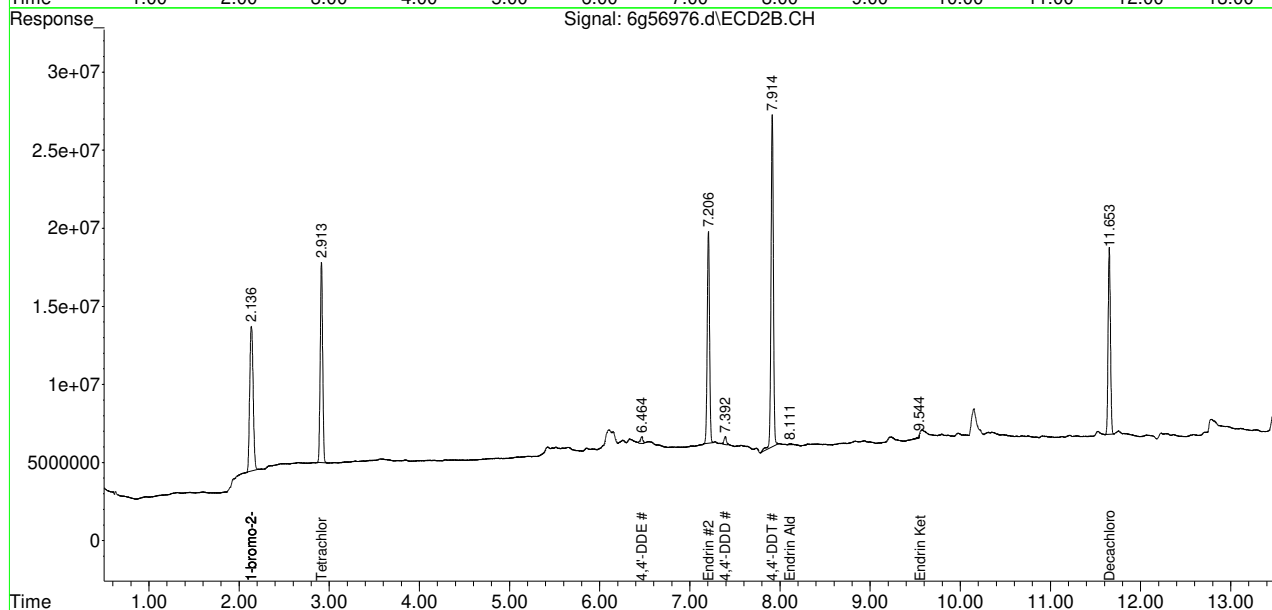
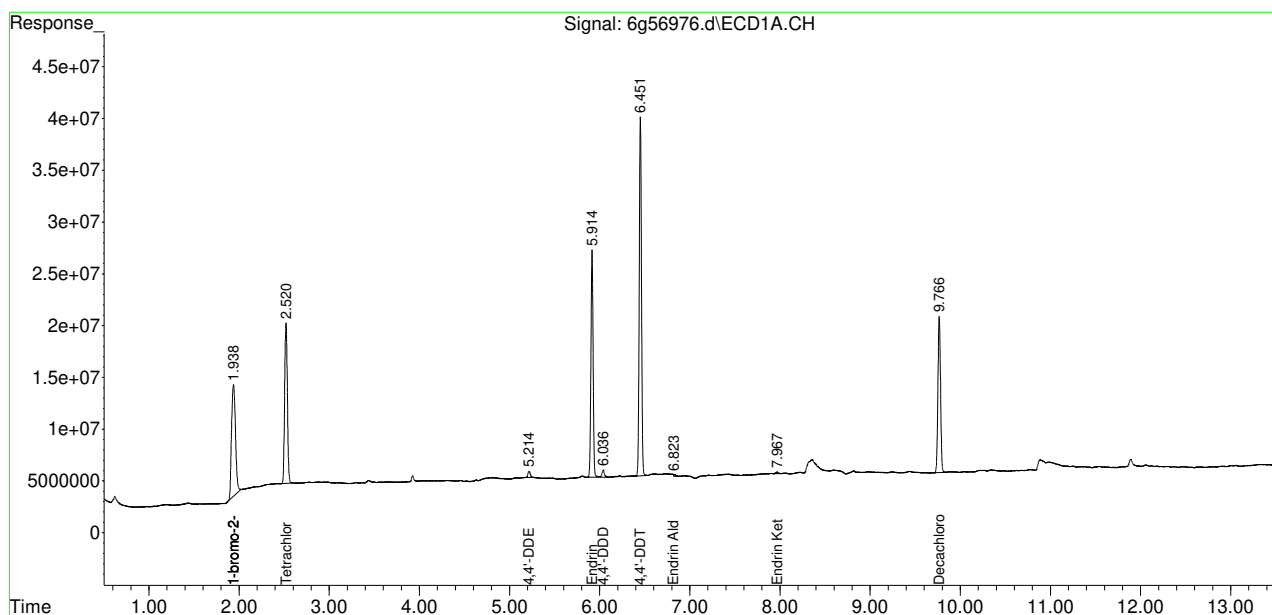
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56976.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 09:36:36
 Operator : rebeccak
 Sample : ddt
 Misc : OP12431,g6g1701,15.2,,,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: Jun 06 16:33:10 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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: G6G1701-DDT Method: SW846 8081B
Lab FileID: 6G56976.D Analyst approved: 06/06/18 16:36 Dharmistha Mehta
Injection Time: 06/06/18 09:36 Supervisor approved: 06/06/18 17:04 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
4,4'-DDE	72-55-9	2	6.46	Poorly defined baseline
Endrin aldehyde	7421-93-4	1	6.82	Poorly defined baseline
4,4'-DDD	72-54-8	2	7.39	Poorly defined baseline
Endrin aldehyde	7421-93-4	2	8.11	Poorly defined baseline
Endrin ketone	53494-70-5	2	9.54	Poorly defined baseline

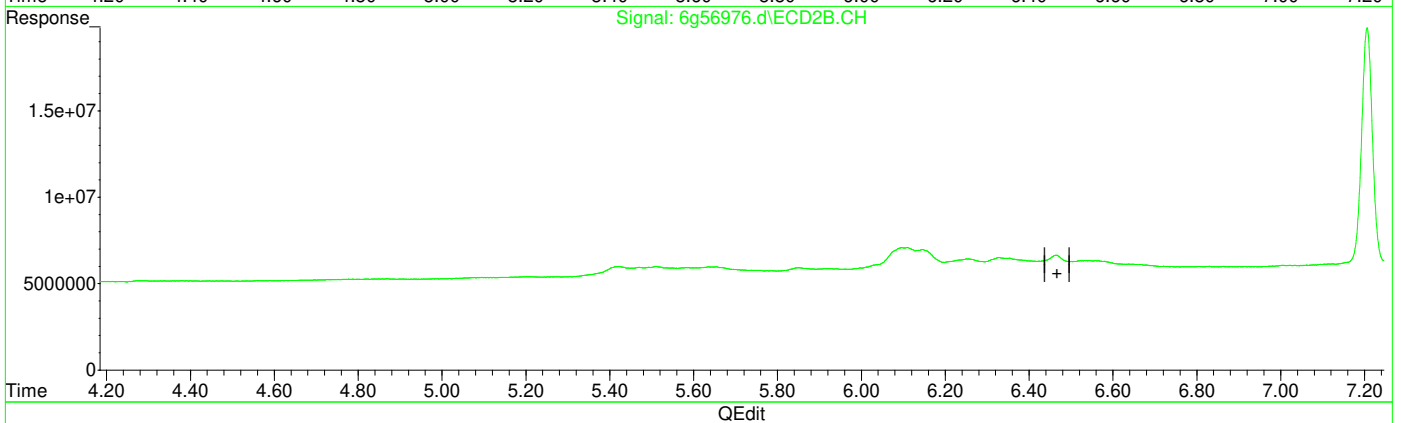
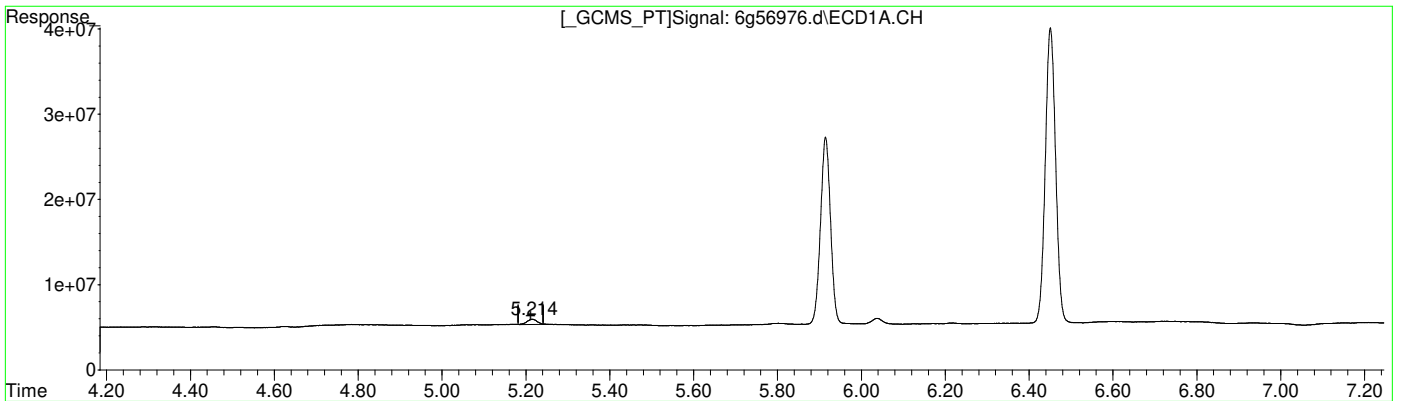
11.5.21
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56976.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 09:36:36
 Operator : rebeccak
 Sample : ddt
 Misc : OP12431,g6g1701,15.2,,,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: Jun 06 16:30:48 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



(15) 4,4'-DDE (B)
 5.214min 1.503 PPB
 response 10184294

(15) 4,4'-DDE #2 (B)
 0.000min 0.000 PPB
 response 0

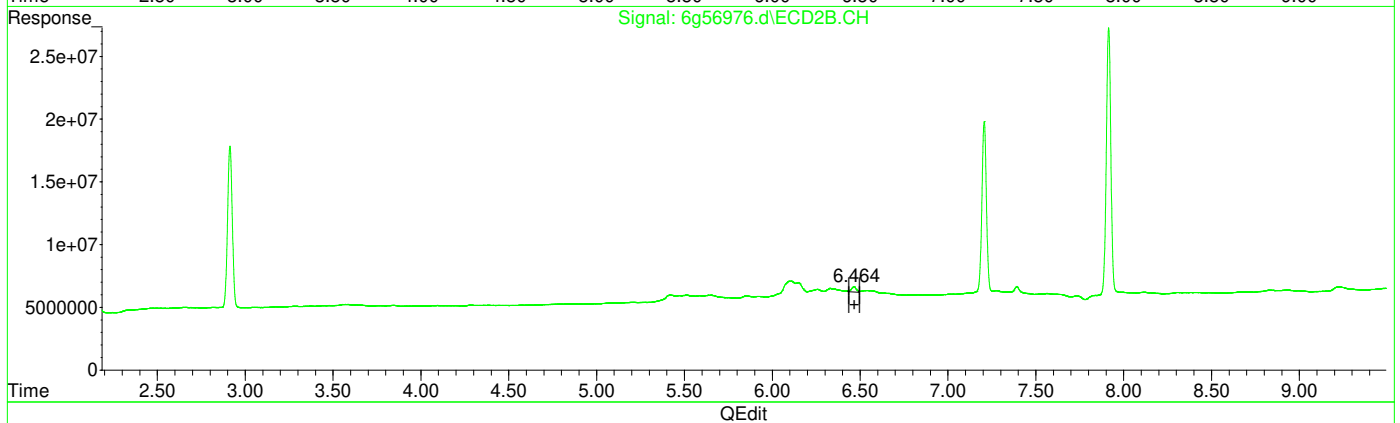
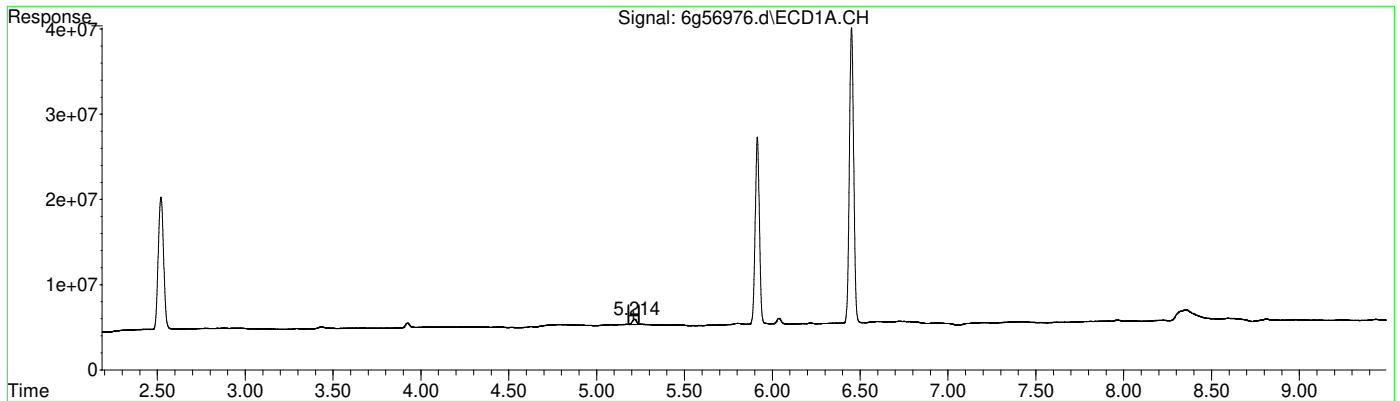
(+) = Expected Retention Time
 6PST1671.M Wed Jun 06 16:31:05 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56976.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 09:36:36
 Operator : rebeccak
 Sample : ddt
 Misc : OP12431,g6g1701,15.2,,,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: Jun 06 16:30:48 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



(15) 4,4'-DDE (B)
 5.214min 1.503 PPB
 response 10184294

(15) 4,4'-DDE #2 (B)
 6.464min 1.787 PPB m
 response 8215854

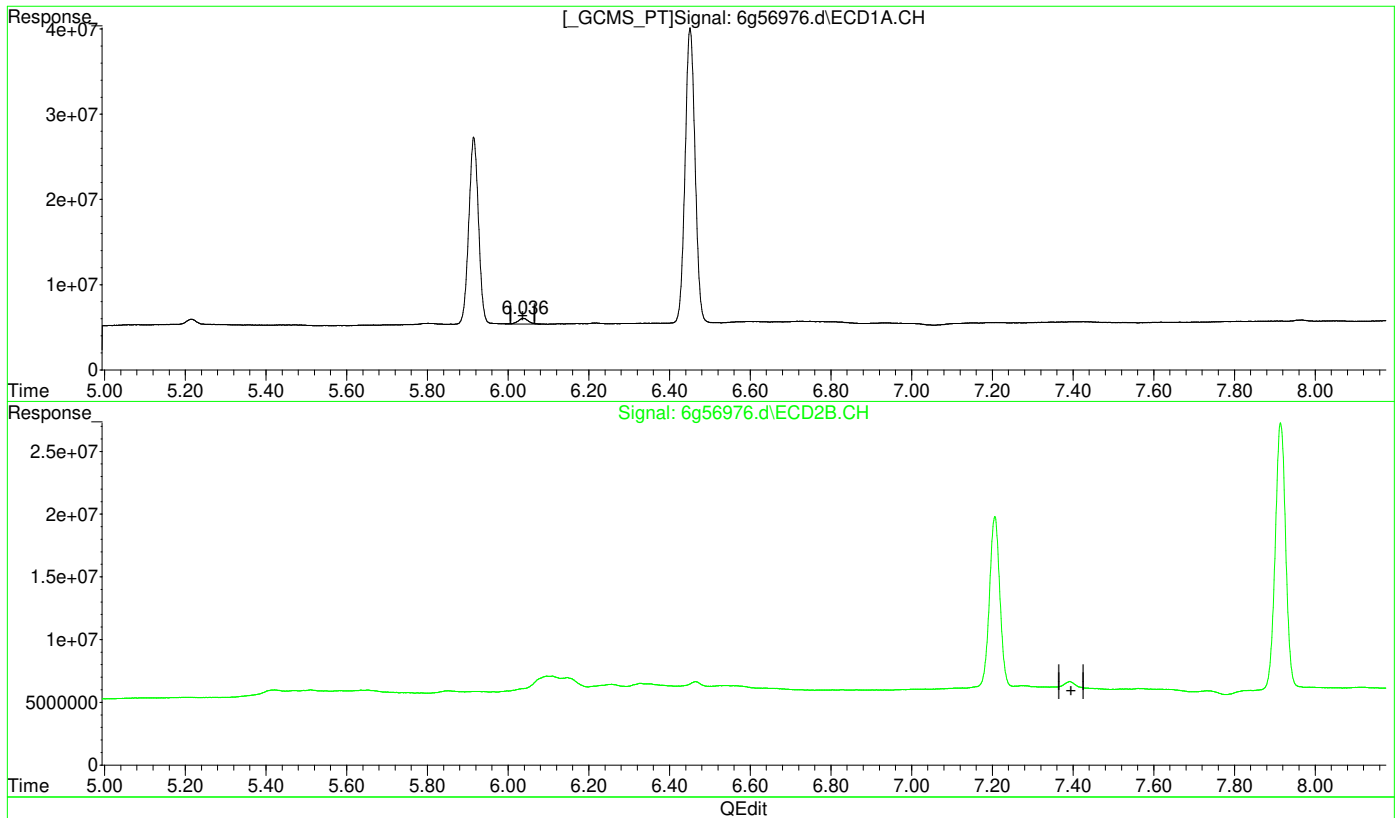
(+) = Expected Retention Time
 6PST1671.M Wed Jun 06 16:31:19 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56976.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 09:36:36
 Operator : rebeccak
 Sample : ddt
 Misc : OP12431,g6g1701,15.2,,,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: Jun 06 16:30:48 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



(18) 4,4'-DDD (A)
 6.037min 2.215 PPB
 response 12430560

(18) 4,4'-DDD #2 (A)
 0.000min 0.000 PPB
 response 0

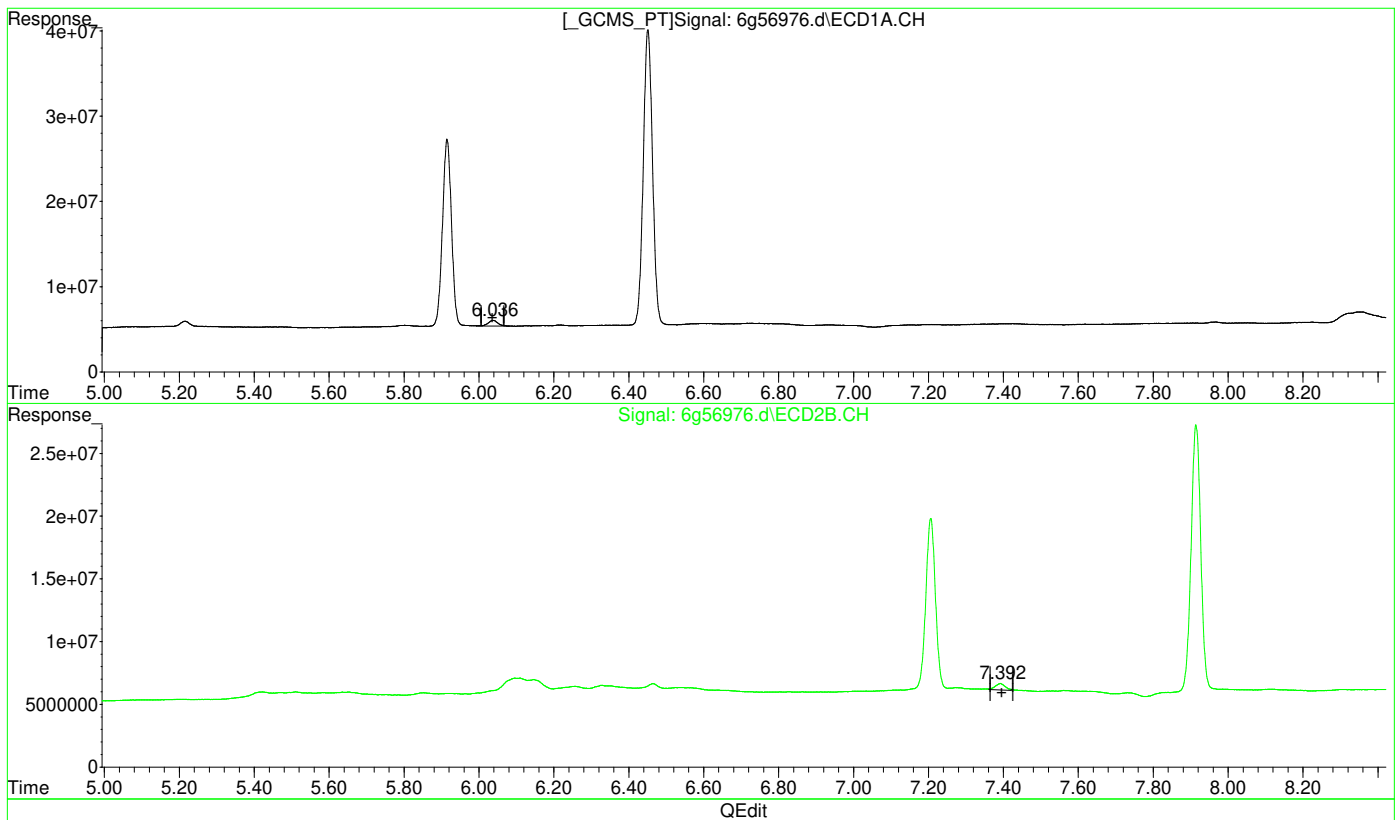
(+) = Expected Retention Time
 6PST1671.M Wed Jun 06 16:31:31 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56976.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 09:36:36
 Operator : rebeccak
 Sample : ddt
 Misc : OP12431,g6g1701,15.2,,,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: Jun 06 16:30:48 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



(18) 4,4'-DDD (A)

6.037min 2.215 PPB

response 12430560

(18) 4,4'-DDD #2 (A)

7.392min 2.324 PPB m

response 9204443

(+) = Expected Retention Time
 6PST1671.M Wed Jun 06 16:31:43 2018

Page: 1

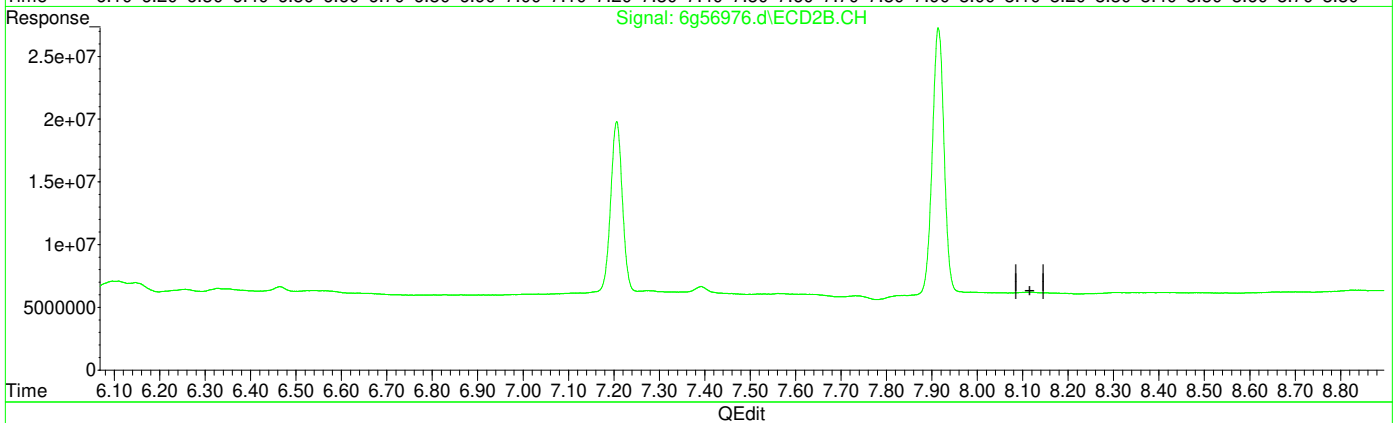
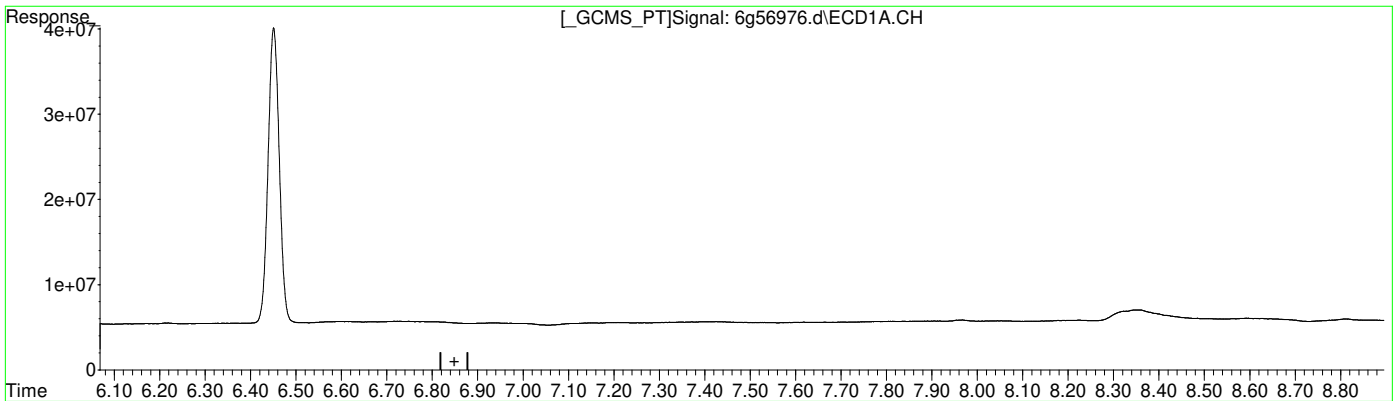
SGS 663 of 1259

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56976.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 09:36:36
 Operator : rebeccak
 Sample : ddt
 Misc : OP12431,g6g1701,15.2,,,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: Jun 06 16:30:48 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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)

0.000min 0.000 PPB

response 0

(21) Endrin Aldehyde #2 (B)

0.000min 0.000 PPB

response 0

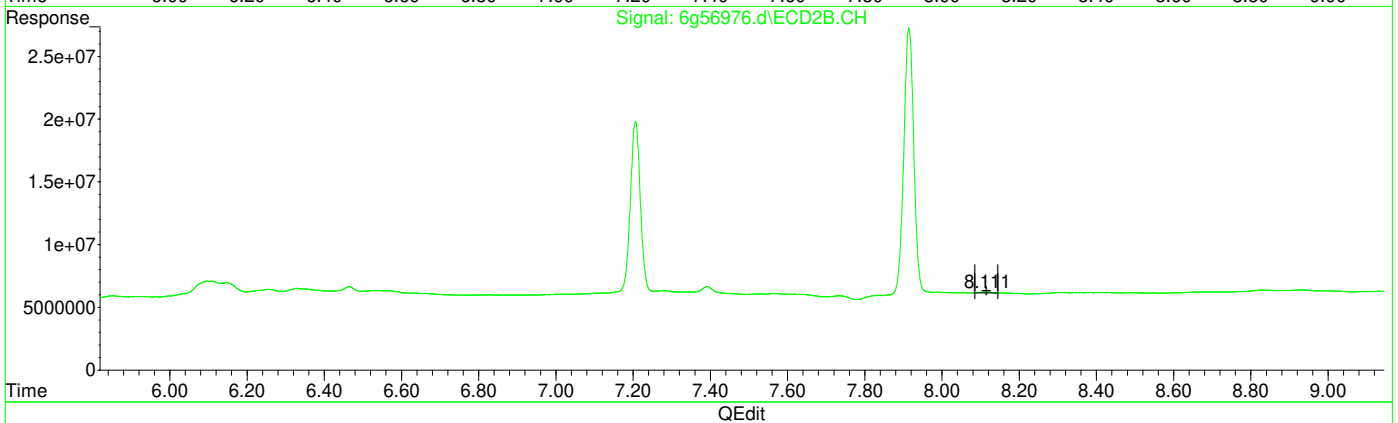
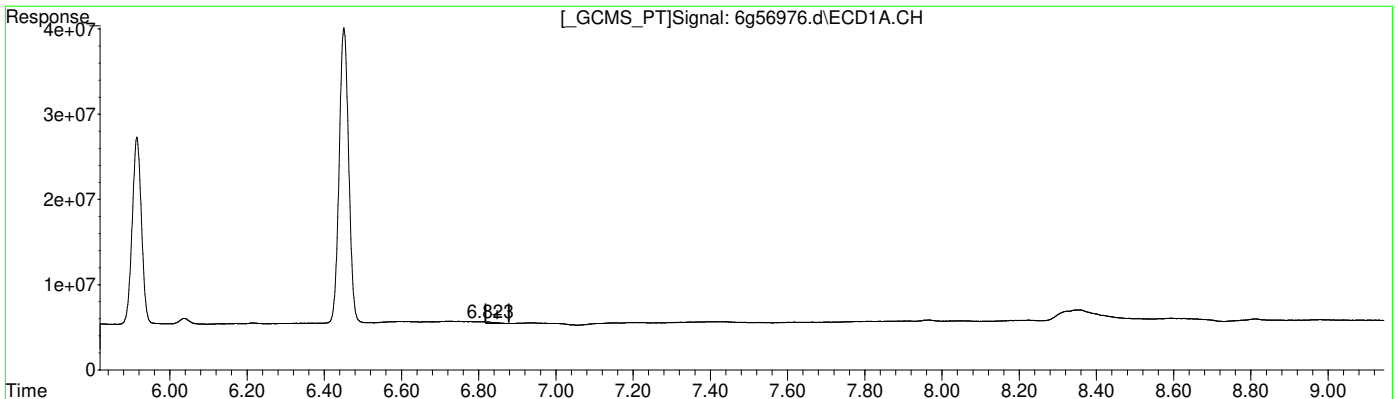
(+) = Expected Retention Time
 6PST1671.M Wed Jun 06 16:31:53 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56976.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 09:36:36
 Operator : rebeccak
 Sample : ddt
 Misc : OP12431,g6g1701,15.2,,,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: Jun 06 16:30:48 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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)

6.823min 0.474 PPB m

response 2591023

(21) Endrin Aldehyde #2 (B)

8.111min 0.397 PPB m

response 1454611

(+) = Expected Retention Time
 6PST1671.M Wed Jun 06 16:32:23 2018

Page: 1

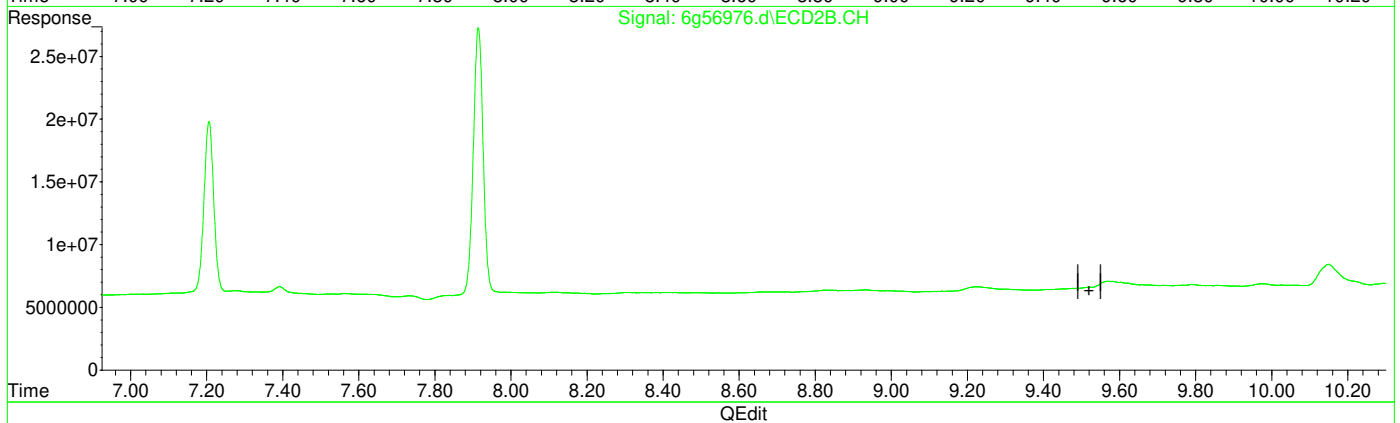
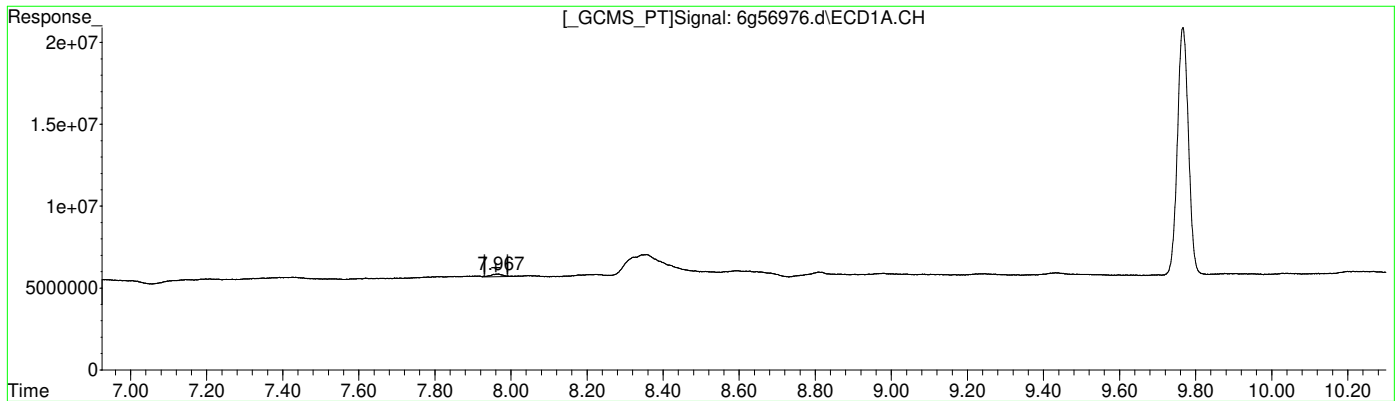
SGS 665 of 1259

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56976.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 09:36:36
 Operator : rebeccak
 Sample : ddt
 Misc : OP12431,g6g1701,15.2,,,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: Jun 06 16:30:48 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



(25) Endrin Ketone (B)

7.966min 0.525 PPB

response 3375620

(25) Endrin Ketone #2 (B)

0.000min 0.000 PPB

response 0

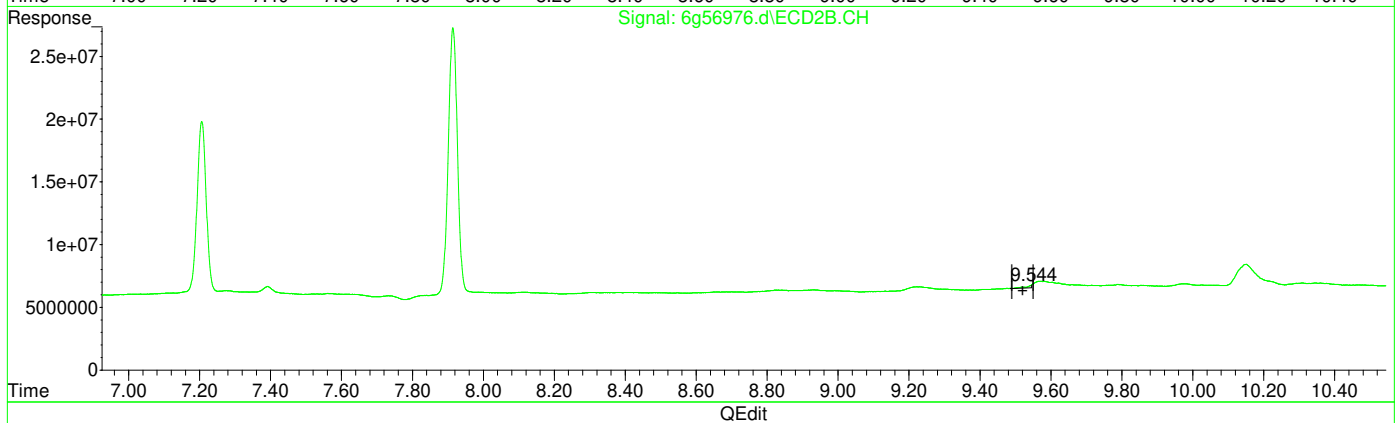
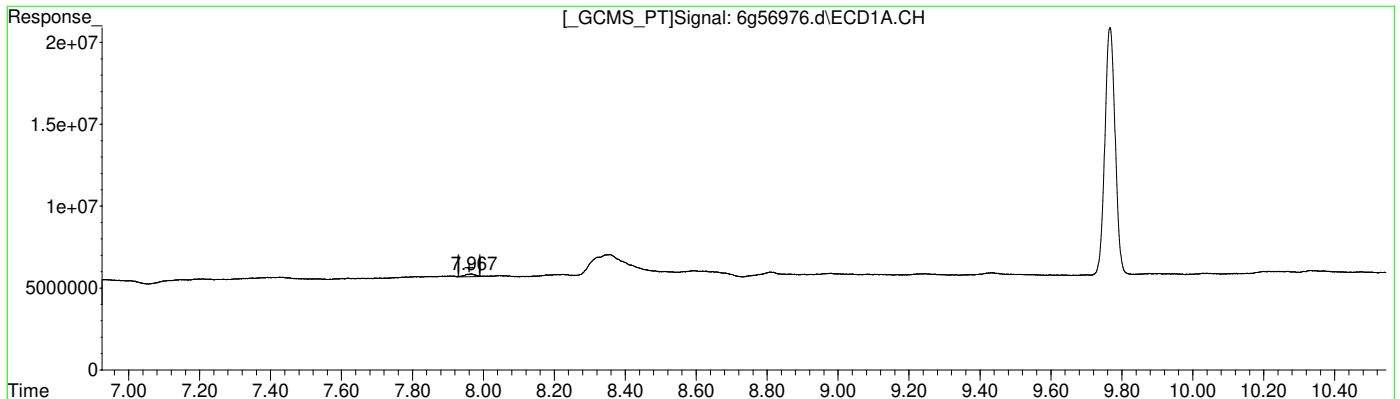
(+) = Expected Retention Time
 6PST1671.M Wed Jun 06 16:32:36 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56976.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 09:36:36
 Operator : rebeccak
 Sample : ddt
 Misc : OP12431,g6g1701,15.2,,,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: Jun 06 16:30:48 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



(25) Endrin Ketone (B)

7.966min 0.525 PPB

response 3375620

(25) Endrin Ketone #2 (B)

9.544min 0.486 PPB m

response 2361375

(+) = Expected Retention Time
 6PST1671.M Wed Jun 06 16:32:56 2018

Page: 1

667 of 1259

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15805.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:20 am
 Operator : dharas
 Sample : ddt
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:52:47 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:44:10 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.870	2.257	171.8E6	388.3E6	50.000	50.000
27)	I 1-bromo-2...	1.870	2.257	171.8E6	388.3E6	50.000	50.000
33)	I 1-bromo-2...	1.870	2.257	171.8E6	388.3E6	50.000	50.000
System Monitoring Compounds							
2)	SAB Tetrachlo...	2.632	3.284	192.9E6	426.9E6	59.356	67.129
	Spiked Amount	40.000	Range 30 - 150	Recovery =	148.39%	167.82%#	
26)	SA Decachlor...	10.923	13.312	238.2E6	271.7E6	65.397	39.613 #
	Spiked Amount	40.000		Recovery =	163.49%	99.03%	
Target Compounds							
15)	B 4,4'-DDE	5.848	7.610	7820307	16485256	2.254	2.070
17)	MA Endrin	6.664	8.510	213.8E6	405.1E6	69.420	53.458
18)	A 4,4'-DDD	6.787	8.674	5064050	10304193	1.933	1.547m
20)	MA 4,4'-DDT	7.257	9.273	411.0E6	684.1E6	164.996	117.178 #
21)	B Endrin Al...	7.731	9.536	586825	1941265	0.218m	0.318m#
25)	B Endrin Ke...	8.993	11.100	1936459	2752330	0.641m	0.427m#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

11.5.3

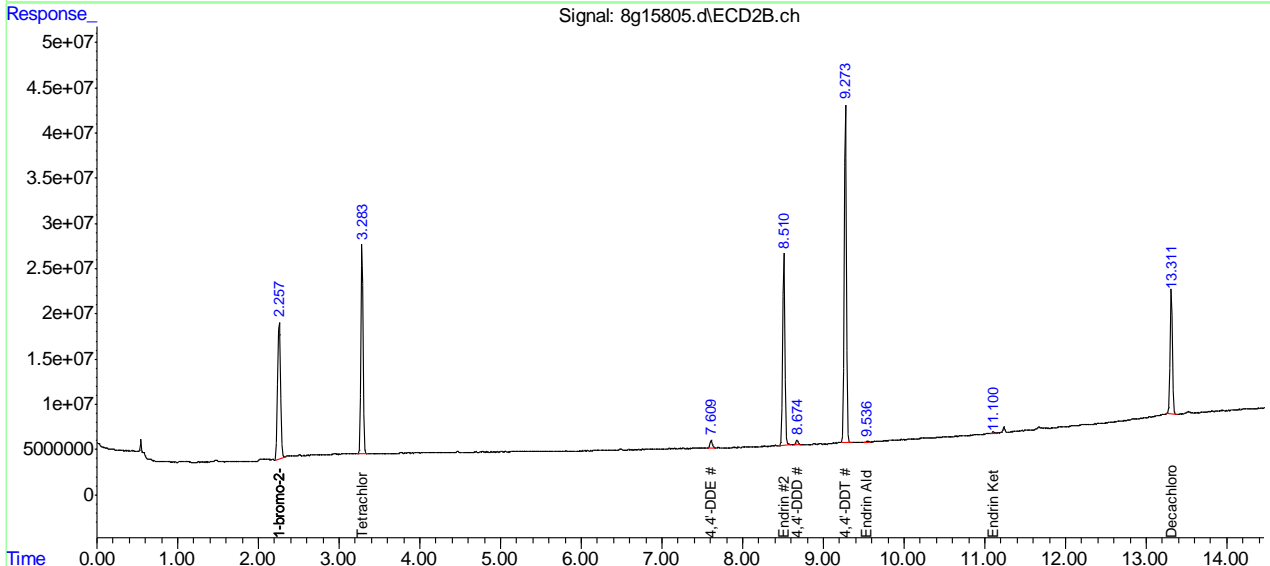
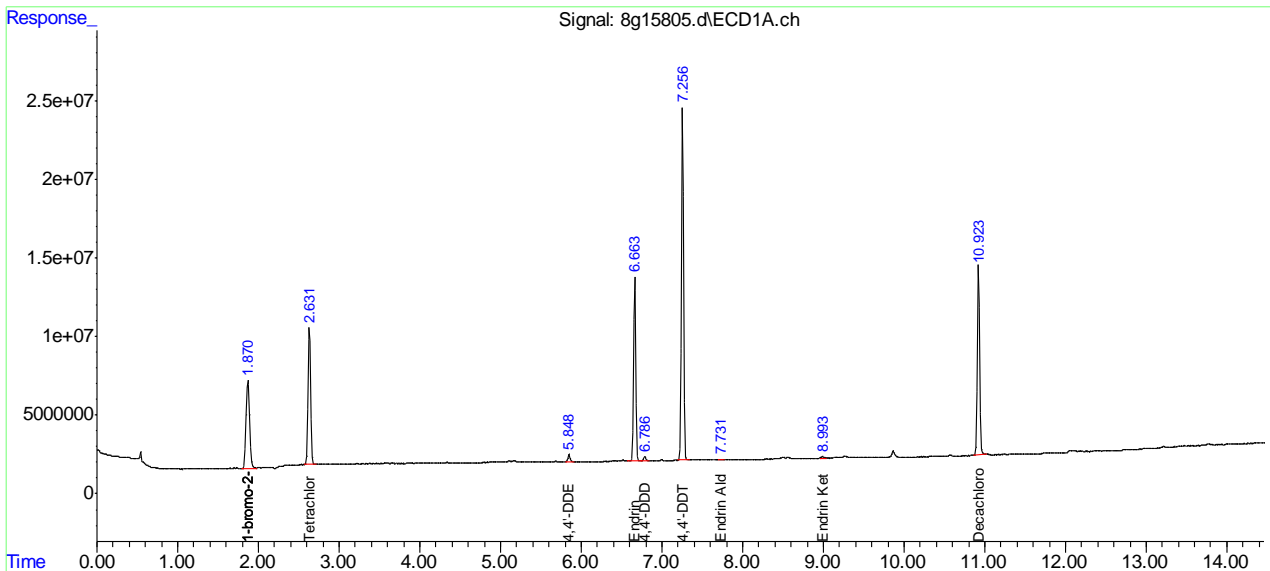
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15805.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:20 am
 Operator : dharas
 Sample : ddt
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:52:47 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:44:10 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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: G8G511-DDT Method: SW846 8081B
Lab FileID: 8G15805.D Analyst approved: 06/11/18 15:51 Dhara Saparia
Injection Time: 06/11/18 11:20 Supervisor approved: 06/13/18 10:11 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Endrin aldehyde	7421-93-4	1	7.73	Poorly defined baseline
4,4'-DDD	72-54-8	2	8.67	Poorly defined baseline
Endrin ketone	53494-70-5	1	8.99	Poorly defined baseline
Endrin aldehyde	7421-93-4	2	9.54	Poorly defined baseline
Endrin ketone	53494-70-5	2	11.10	Poorly defined baseline

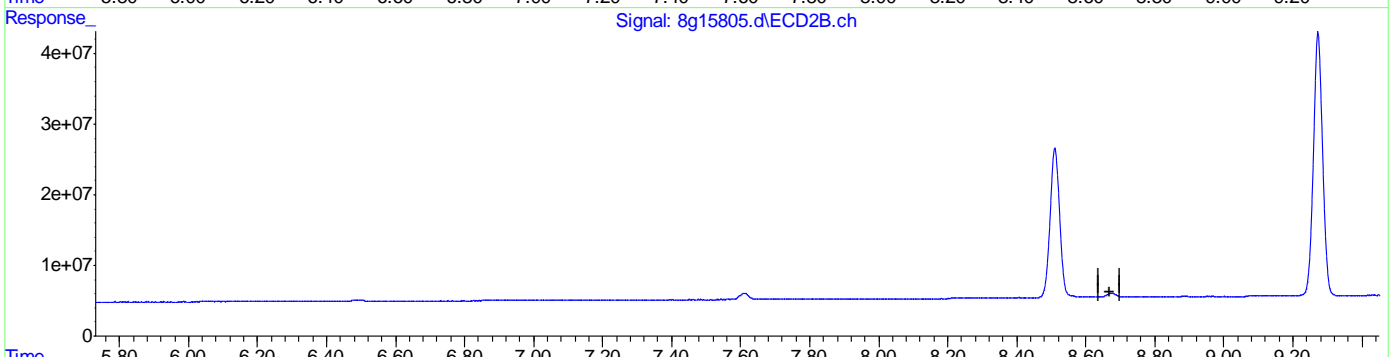
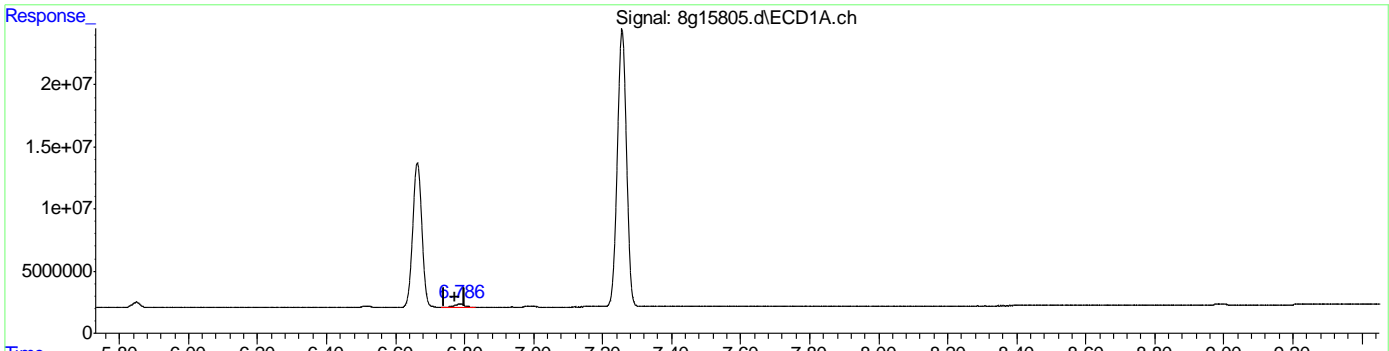
11.5.3.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15805.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:20 am
 Operator : dharas
 Sample : ddt
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:51:24 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:44:10 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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)
6.787min 1.933 PPB
response 5064050
(18) 4,4'-DDD #2 (A)
0.000min 0.000 PPB
response 0

(+) = Expected Retention Time
 8PST511.M Mon Jun 11 14:51:58 2018

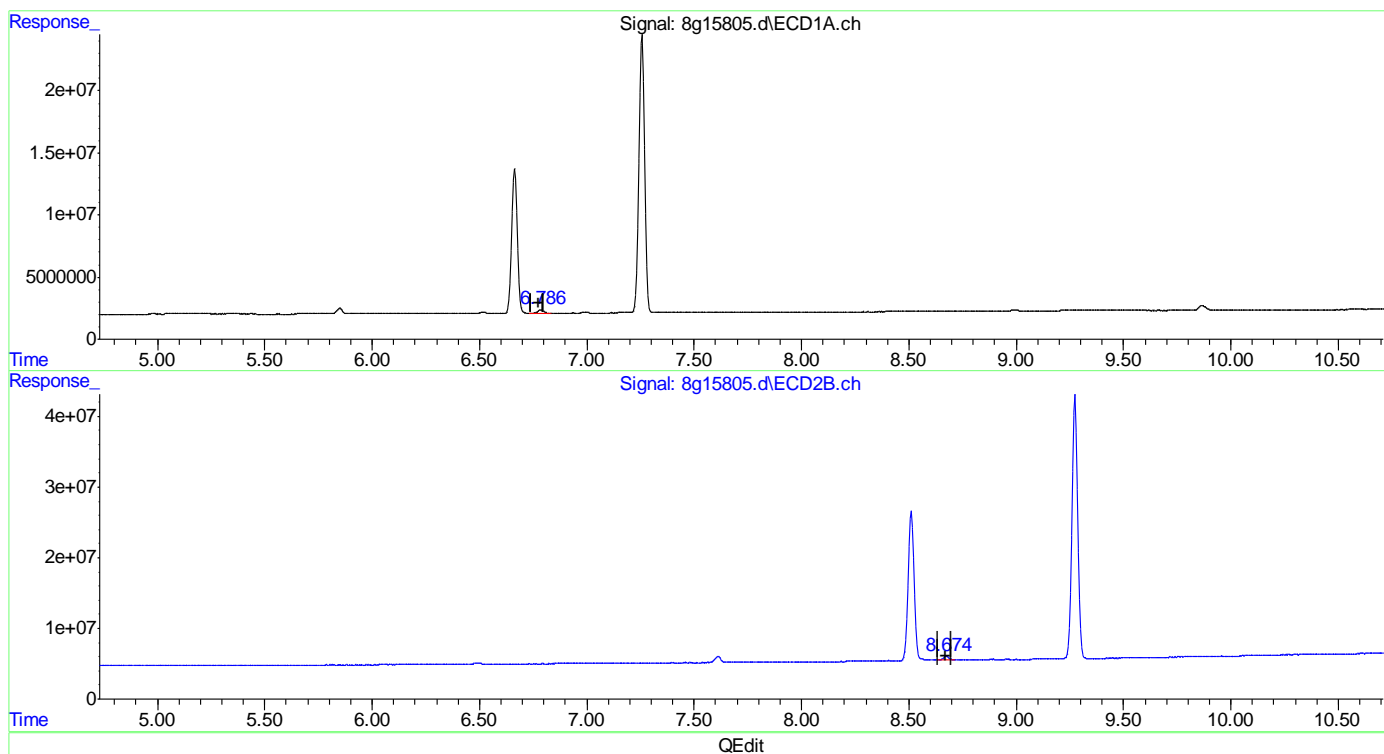
11.5.32
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15805.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:20 am
 Operator : dharas
 Sample : ddt
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:51:24 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:44:10 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



(18) 4,4'-DDD (A)
 6.787min 1.933 PPB
 response 5064050

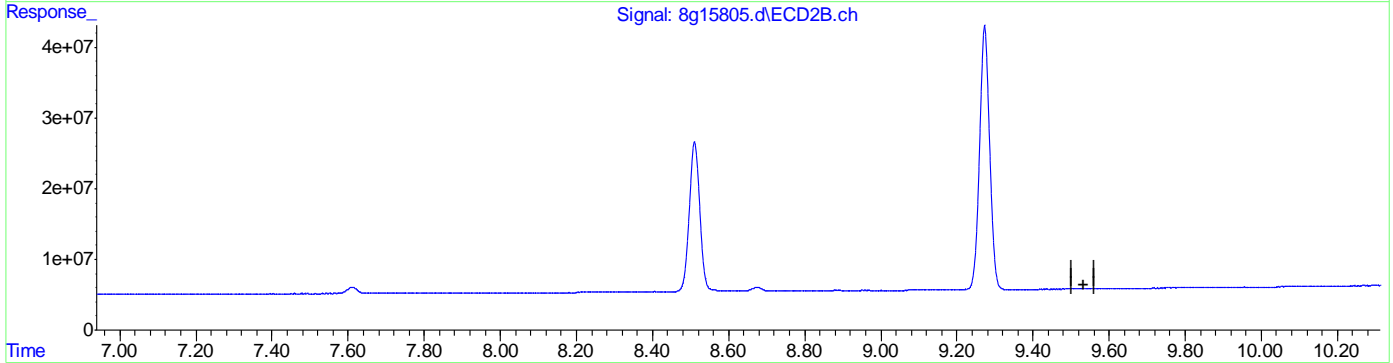
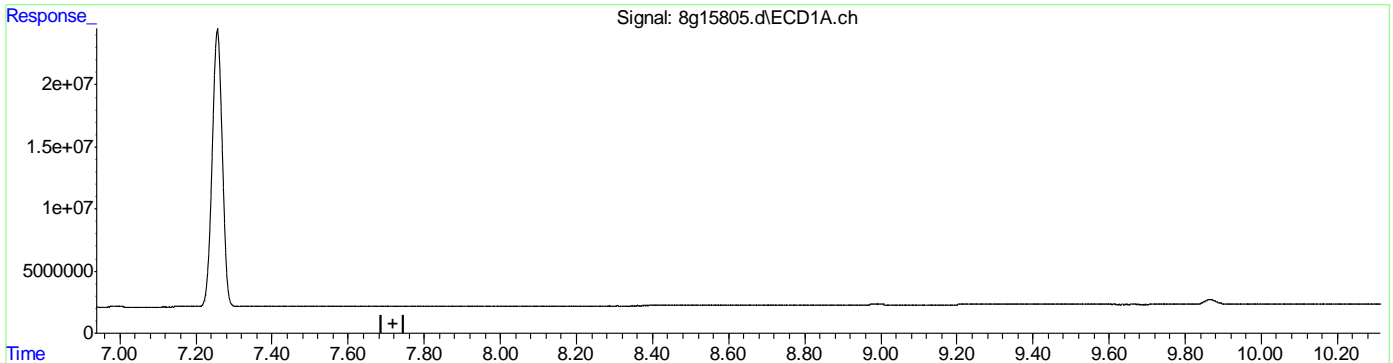
(18) 4,4'-DDD #2 (A)
 8.674min 1.547 PPB m
 response 10304193

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15805.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:20 am
 Operator : dharas
 Sample : ddt
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:51:24 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:44:10 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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)
 0.000min 0.000 PPB
 response 0

(21) Endrin Aldehyde #2 (B)
 0.000min 0.000 PPB
 response 0

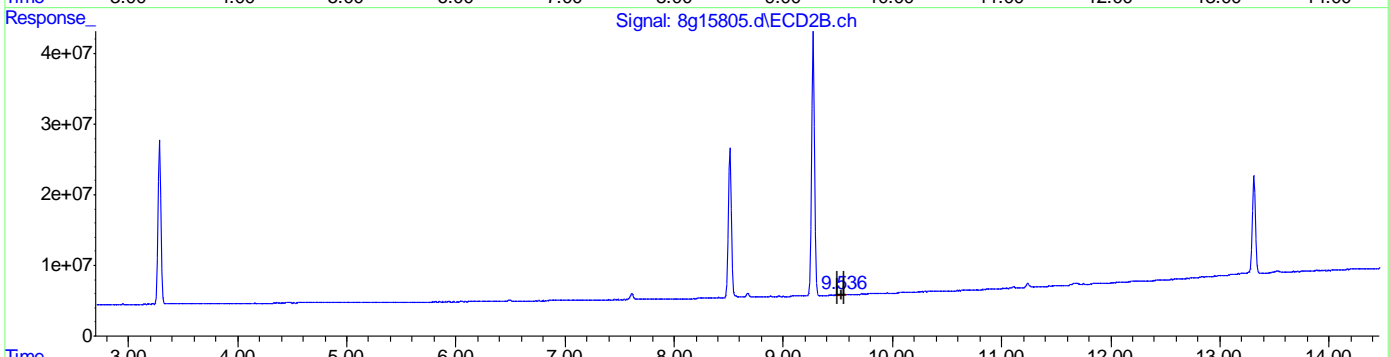
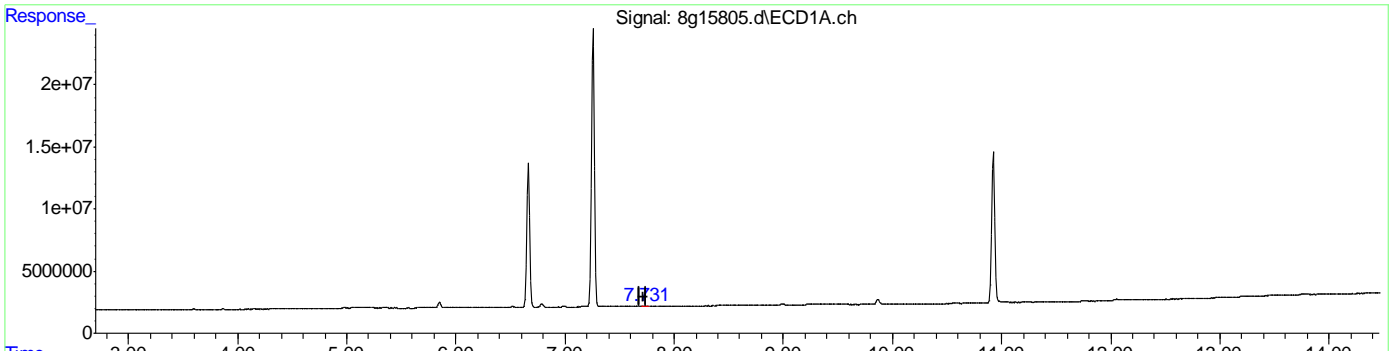
(+) = Expected Retention Time
 8PST511.M Mon Jun 11 14:52:12 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15805.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:20 am
 Operator : dharas
 Sample : ddt
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:51:24 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:44:10 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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)
 7.731min 0.218 PPB m
 response 586825

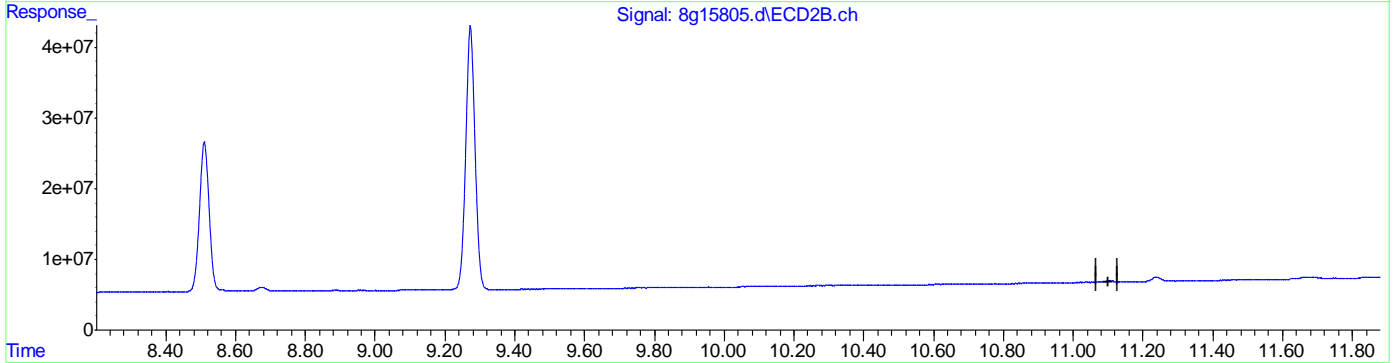
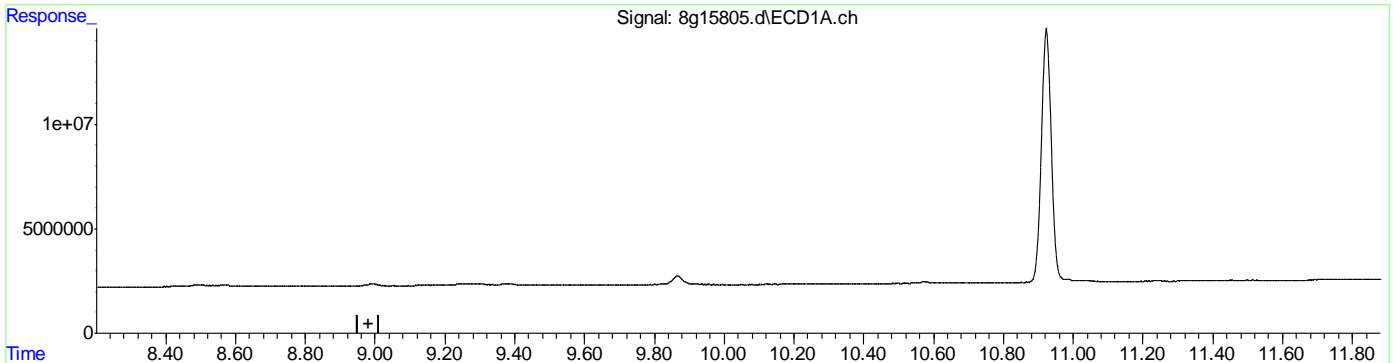
(21) Endrin Aldehyde #2 (B)
 9.536min 0.318 PPB m
 response 1941265

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15805.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:20 am
 Operator : dharas
 Sample : ddt
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:51:24 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:44:10 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



(25) Endrin Ketone (B)
 0.000min 0.000 PPB
 response 0

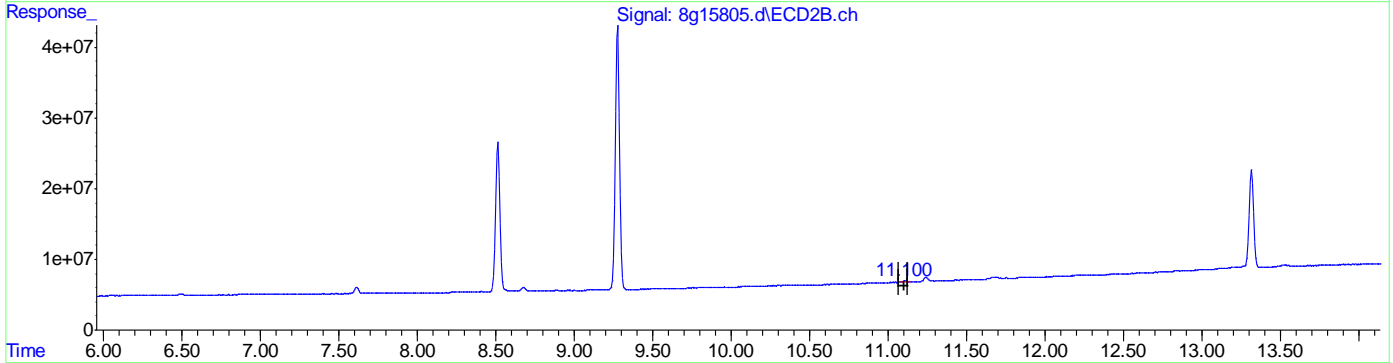
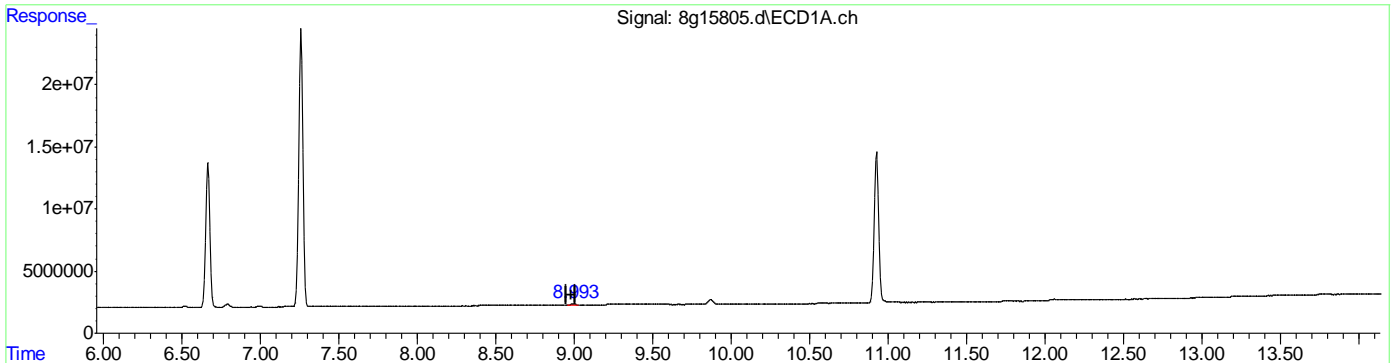
(25) Endrin Ketone #2 (B)
 0.000min 0.000 PPB
 response 0

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15805.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:20 am
 Operator : dharas
 Sample : ddt
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:51:24 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:44:10 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



(25) Endrin Ketone (B)
 8.993min 0.641 PPB m
 response 1936459

(25) Endrin Ketone #2 (B)
 11.100min 0.427 PPB m
 response 2752330

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G513\
 Data File : 8g15832.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Jun 2018 8:31 am
 Operator : dharas
 Sample : ddt
 Misc : op12466,g8g513,15.0,,,10,1
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 13 08:26:59 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.877	2.267	161.8E6	361.1E6	50.000	50.000
27)	I 1-bromo-2...	1.877	2.267	161.8E6	361.1E6	50.000	50.000
33)	I 1-bromo-2...	1.877	2.267	161.8E6	361.1E6	50.000	50.000
System Monitoring Compounds							
2)	SAB Tetrachlo...	2.635	3.292	183.5E6	407.5E6	55.767m	56.239
	Spiked Amount	40.000	Range 30 - 150	Recovery =	139.42%	140.60%	
26)	SA Decachlor...	10.914	13.303	214.5E6	277.1E6	52.908	54.302
	Spiked Amount	40.000		Recovery =	132.27%	135.76%	
Target Compounds							
15)	B 4,4'-DDE	5.837	7.601	4175972	8823603	1.145	1.184
17)	MA Endrin	6.652	8.502	196.6E6	413.1E6	58.159	61.022
18)	A 4,4'-DDD	6.772	8.664	4868068	11069441	1.687	1.847
20)	MA 4,4'-DDT	7.244	9.265	373.5E6	708.2E6	122.957	120.068
21)	B Endrin Al...	7.715	9.524	632249	1361496	0.207m	0.242m
25)	B Endrin Ke...	8.979	11.095	5022410	3258753	1.444	0.552m#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

11.54

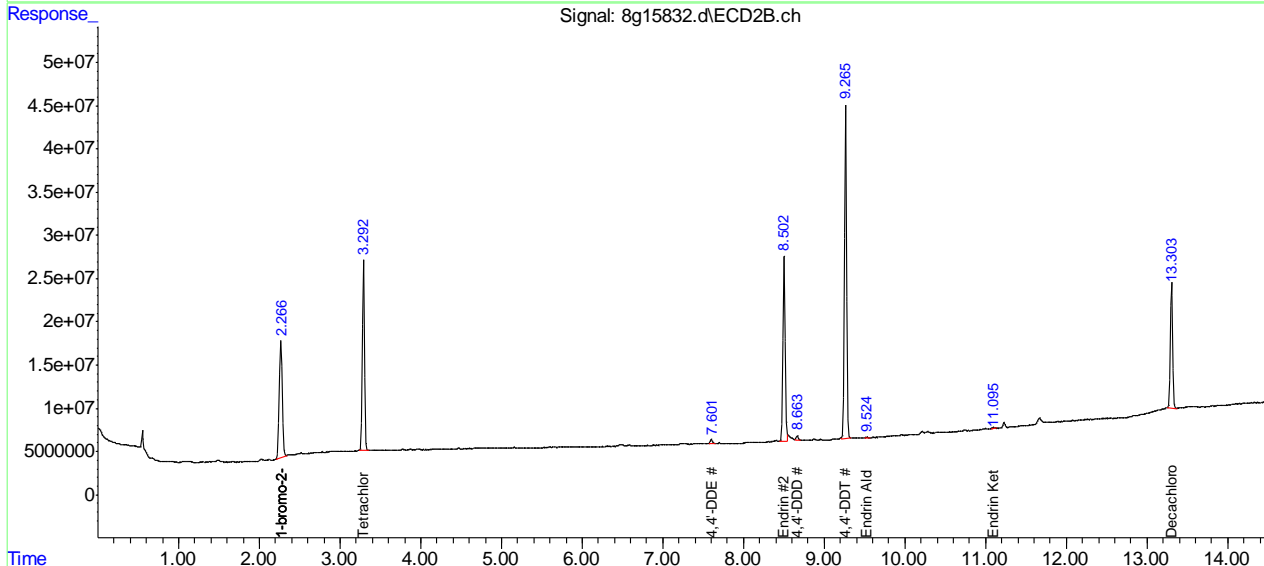
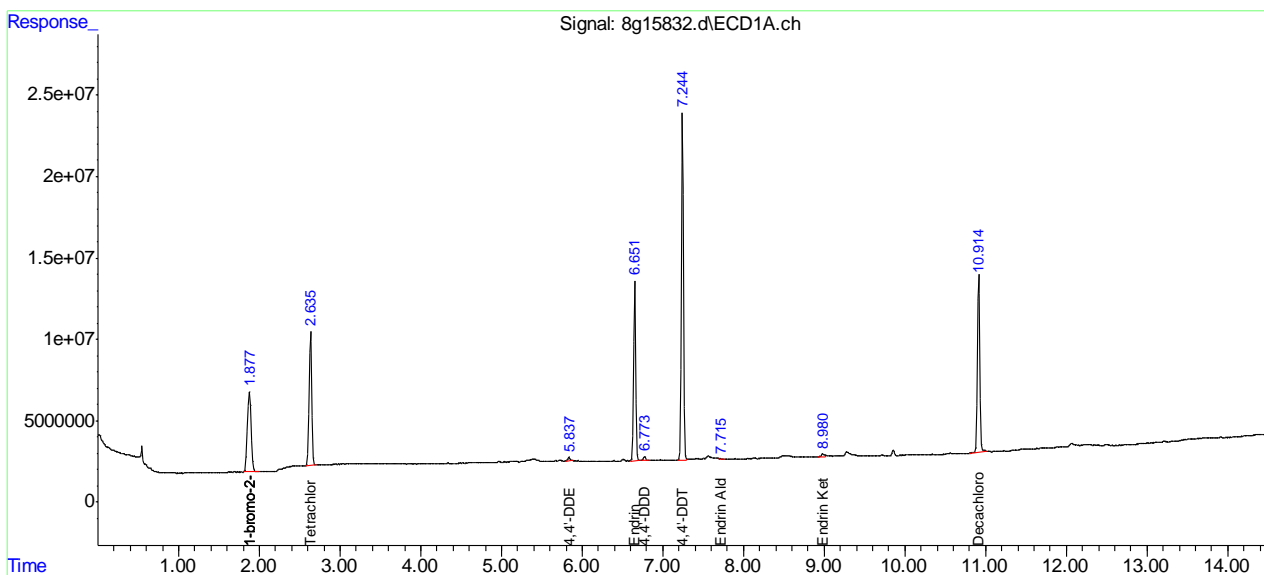
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G513\
 Data File : 8g15832.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Jun 2018 8:31 am
 Operator : dharas
 Sample : ddt
 Misc : op12466,g8g513,15.0,,,10,1
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 13 08:26:59 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.5.4
11

Manual Integration Approval Summary

Sample Number: G8G513-DDT Method: SW846 8081B
Lab FileID: 8G15832.D Analyst approved: 06/13/18 08:30 Dharmistha Mehta
Injection Time: 06/12/18 08:31 Supervisor approved: 06/13/18 10:12 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrachloro-m-xylene	877-09-8	1	2.63	Poorly defined baseline
Endrin aldehyde	7421-93-4	1	7.71	Poorly defined baseline
Endrin aldehyde	7421-93-4	2	9.52	Poorly defined baseline
Endrin ketone	53494-70-5	2	11.10	Poorly defined baseline

11.5.4.1

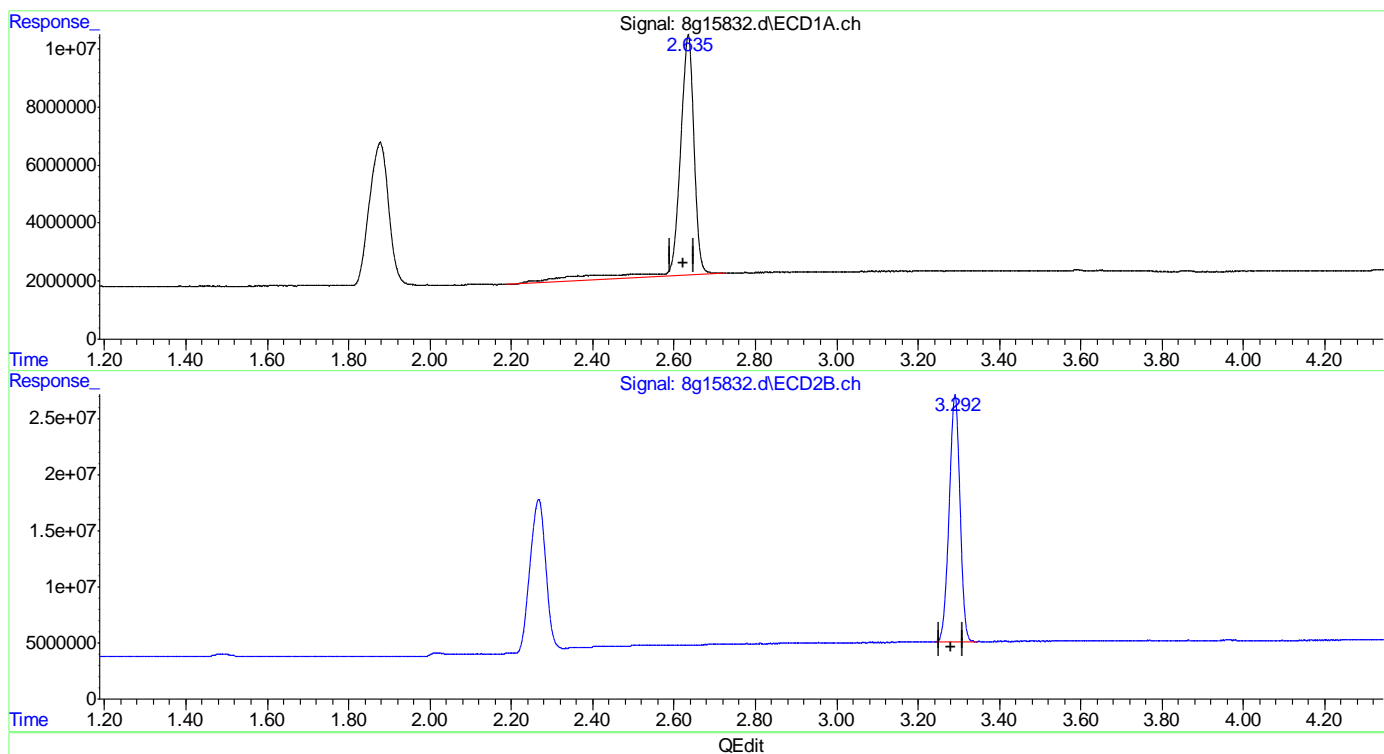
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G513\
 Data File : 8g15832.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Jun 2018 8:31 am
 Operator : dharas
 Sample : ddt
 Misc : op12466,g8g513,15.0,,,10,1
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 13 08:24:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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)

2.635min 64.629 PPB

response 212615431

(2) Tetrachloro-m-xylene #2 (SAB)

3.292min 56.239 PPB

response 407461150

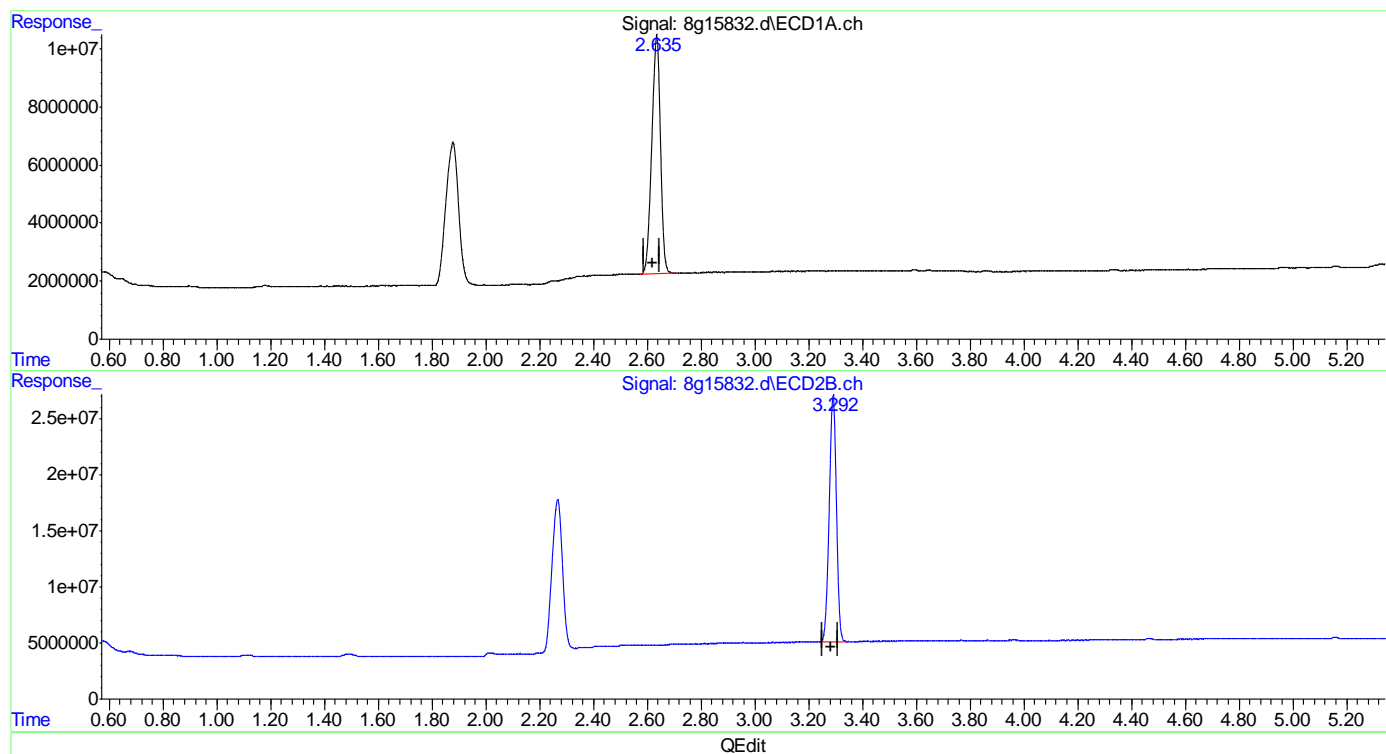
(+) = Expected Retention Time
 8PST511.M Wed Jun 13 08:25:02 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G513\
 Data File : 8g15832.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Jun 2018 8:31 am
 Operator : dharas
 Sample : ddt
 Misc : op12466,g8g513,15.0,,,10,1
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 13 08:24:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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)

2.635min 55.767 PPB m

response 183462607

(2) Tetrachloro-m-xylene #2 (SAB)

3.292min 56.239 PPB

response 407461150

(+) = Expected Retention Time

8PST511.M Wed Jun 13 08:25:13 2018

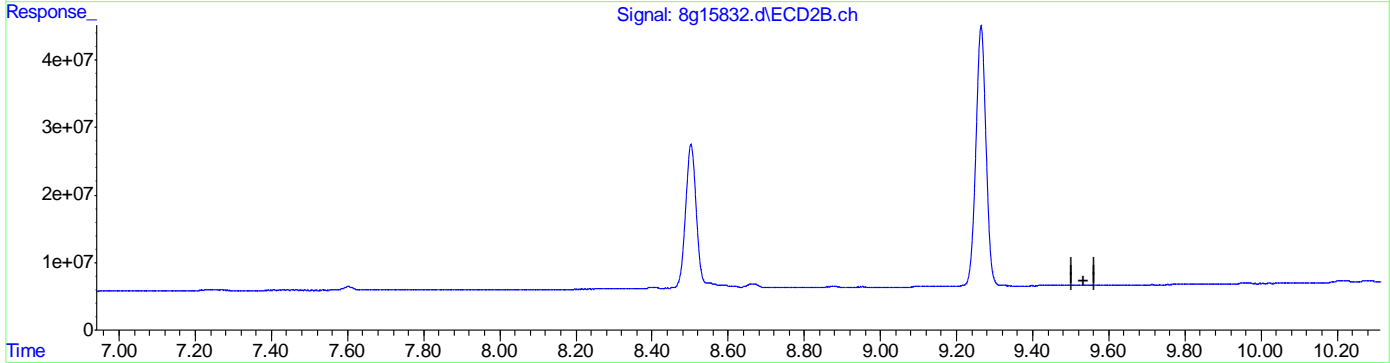
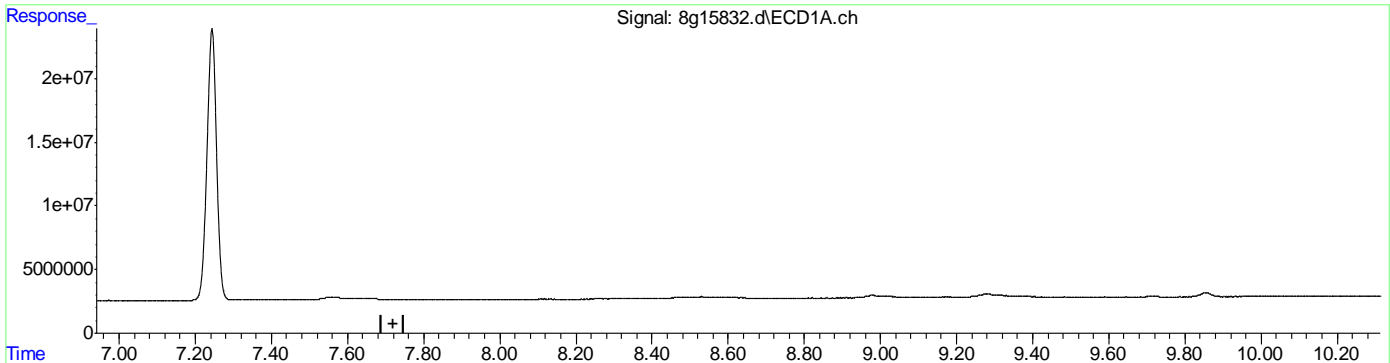
Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G513\
 Data File : 8g15832.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Jun 2018 8:31 am
 Operator : dharas
 Sample : ddt
 Misc : op12466,g8g513,15.0,,,10,1
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 13 08:24:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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)
 0.000min 0.000 PPB
 response 0

(21) Endrin Aldehyde #2 (B)
 0.000min 0.000 PPB
 response 0

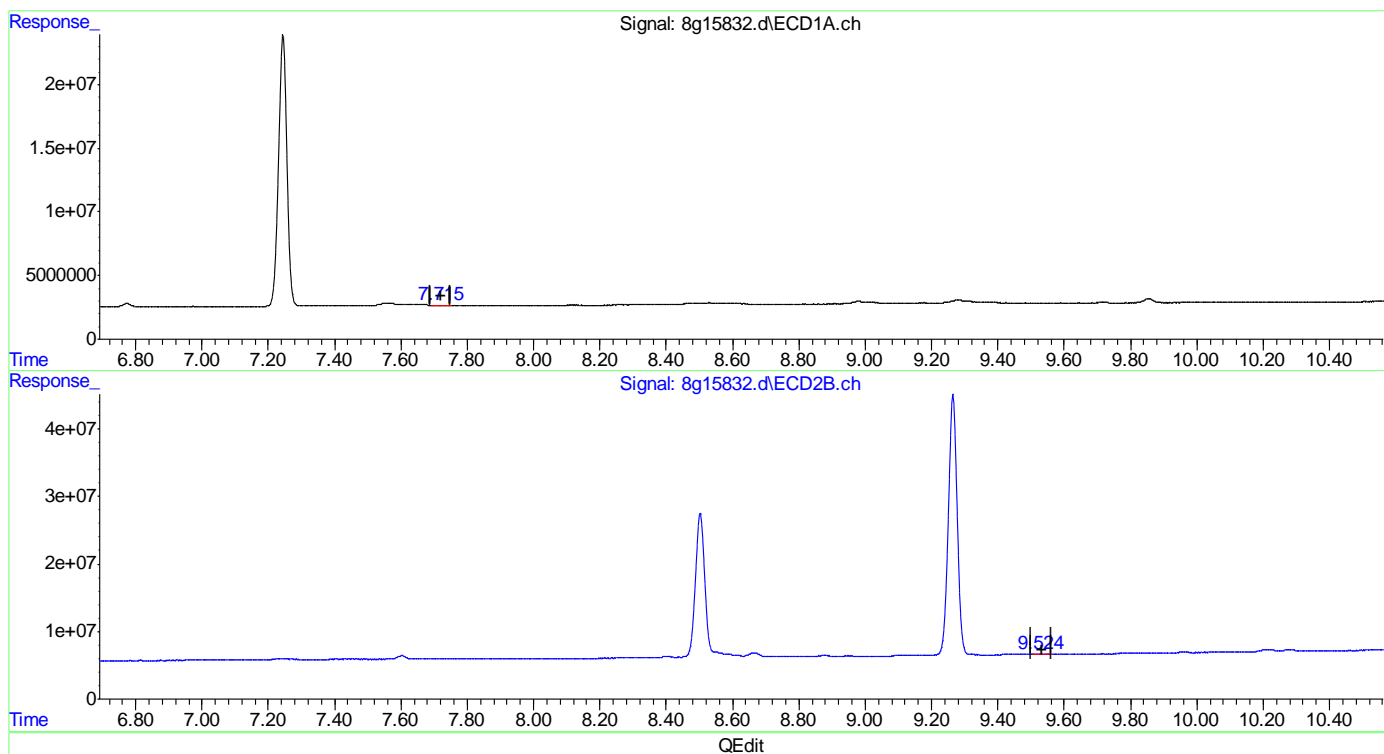
(+) = Expected Retention Time
 8PST511.M Wed Jun 13 08:25:46 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G513\
 Data File : 8g15832.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Jun 2018 8:31 am
 Operator : dharas
 Sample : ddt
 Misc : op12466,g8g513,15.0,,,10,1
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 13 08:24:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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)

7.715min 0.207 PPB m
 response 632249

(21) Endrin Aldehyde #2 (B)

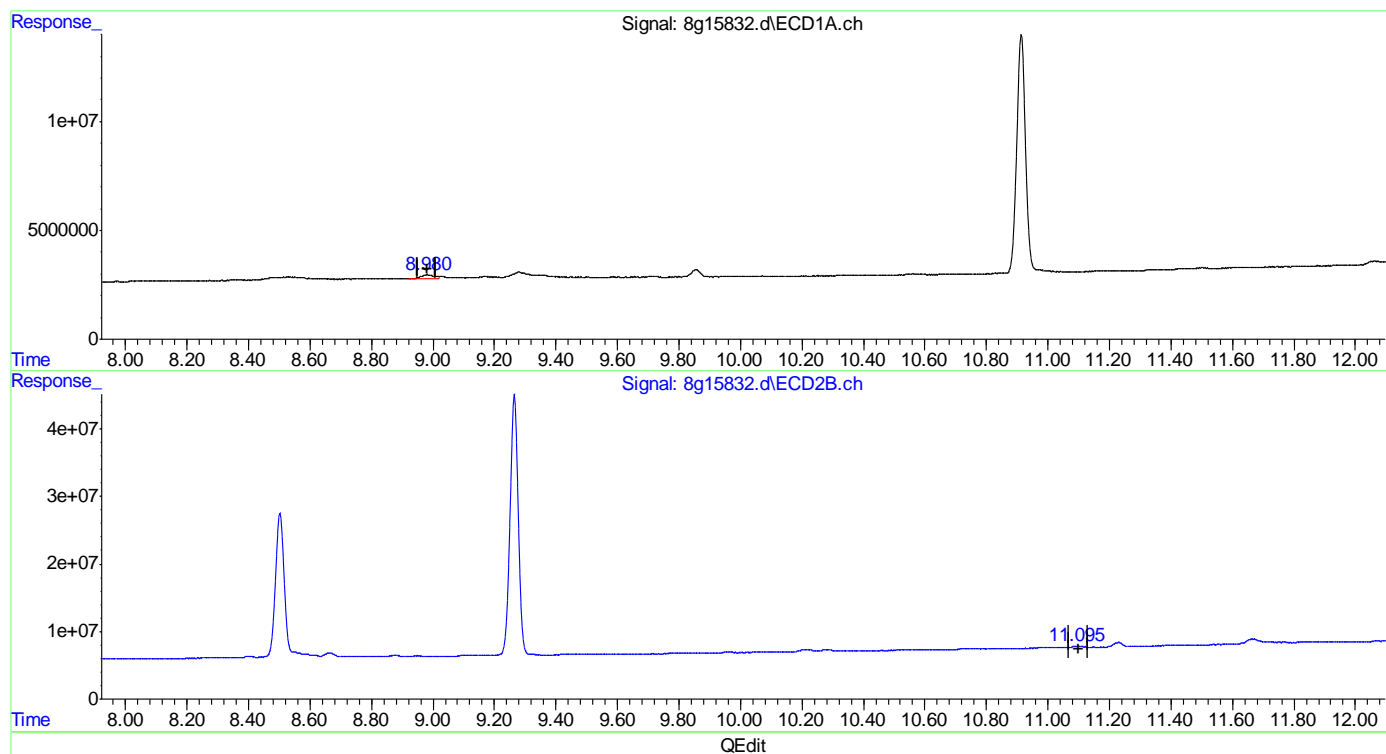
9.524min 0.242 PPB m
 response 1361496

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G513\
 Data File : 8g15832.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Jun 2018 8:31 am
 Operator : dharas
 Sample : ddt
 Misc : op12466,g8g513,15.0,,,10,1
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 13 08:24:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



(25) Endrin Ketone (B)
 8.979min 1.444 PPB
 response 5022410

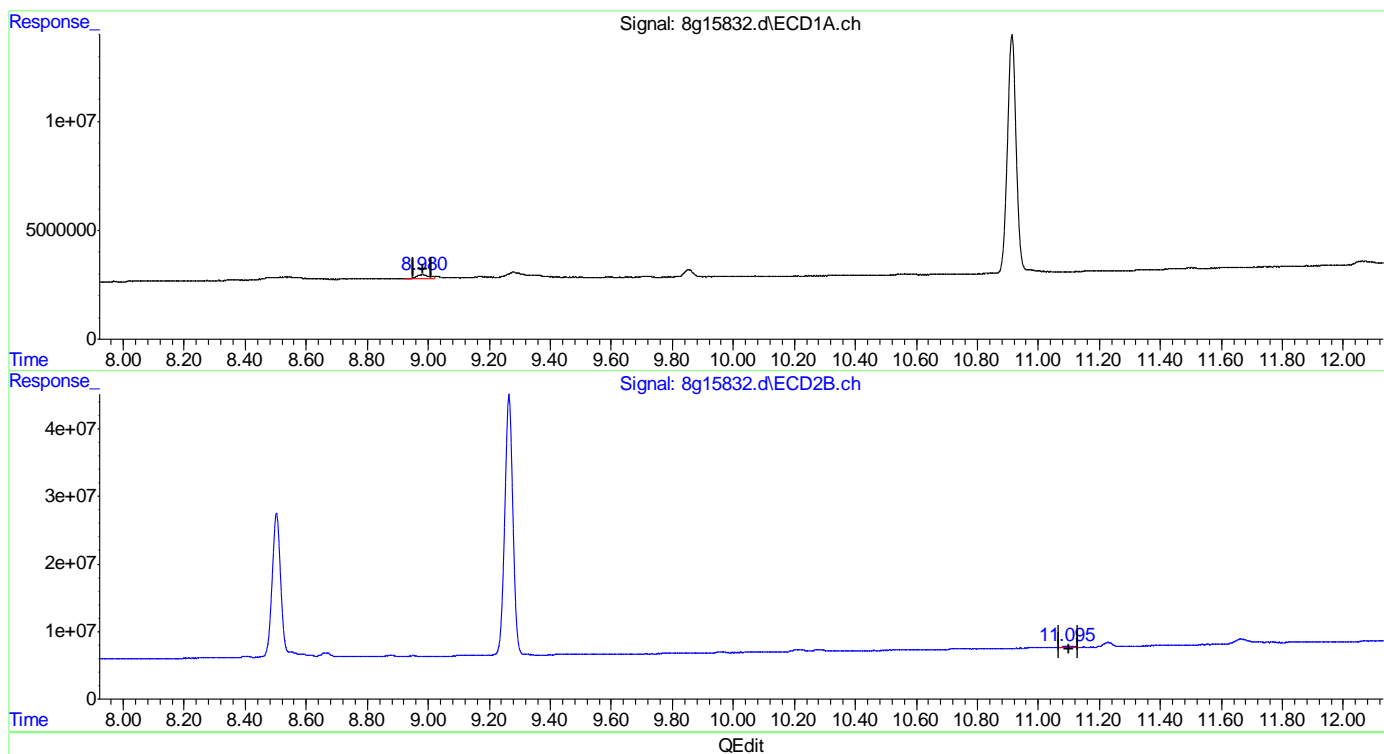
(25) Endrin Ketone #2 (B)
 11.095min 0.007 PPB
 response 41660

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G513\
 Data File : 8g15832.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Jun 2018 8:31 am
 Operator : dharas
 Sample : ddt
 Misc : op12466,g8g513,15.0,,,10,1
 ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 13 08:24:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



(25) Endrin Ketone (B)
 8.979min 1.444 PPB
 response 5022410

(25) Endrin Ketone #2 (B)
 11.095min 0.552 PPB m
 response 3258753

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55780.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:25:24
 Operator : dharas
 Sample : ic1671-1
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:24:48 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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...	1.943	2.147	334.6E6	212.6E6	50.000	50.000
27) I 1-bromo-2...	1.943	2.147	334.6E6	212.6E6	50.000	50.000
33) I 1-bromo-2...	1.943	2.147	334.6E6	212.6E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.530f	2.932	7250563	4173542	1.095	1.012
Spiked Amount	40.000	Range	30 - 150	Recovery =	2.74%#	2.53%#
26) SA Decachlor...	9.841	11.722f	8701532	4796545	1.380m	1.337
Spiked Amount	40.000		Recovery =	3.45%	3.34%	
Target Compounds						
3) hexachlor...	2.857	3.415	8505661	5523975	1.070	1.055
4) A alpha-BHC	2.997	3.562	8791650	4874874	1.831	2.173
5) MA gamma-BHC	3.288	3.971	9465075	4831145	1.797	1.926
6) MA Heptachlor	3.777	4.527	8734295	5198954	1.115	1.035
7) B beta-BHC	3.360	4.052	4318811	2569784	1.160	1.128
8) B delta-BHC	3.542	4.430	7245572	4722215	2.224	2.445
9) MB Aldrin	4.107	4.961	8177217	4465092	1.058	1.945 #
11) B Heptachlo...	4.814	5.760	7500595	4380492	1.086	1.043
12) B gamma-Chl...	4.976	6.038	7087856	3867677	1.045	0.940m
13) B alpha-Chl...	5.146	6.256	8190133	3993779	1.179	0.992m
14) A Endosulfan I	5.323	6.351	7479806	4222041	1.132	1.101
15) B 4,4'-DDE	5.256	6.521	7329274	3841496	1.072	2.056 #
16) MA Dieldrin	5.643	6.775	7656157	4158230	1.694	1.995
17) MA Endrin	5.965	7.270	7051232	4837328	1.108	1.247
18) A 4,4'-DDD	6.086	7.453	6016212	3788716	1.049	1.131
19) B Endosulfa...	6.282	7.615	9411333	5624250	1.465	1.478
20) MA 4,4'-DDT	6.504	7.980	5644746	3301023	2.372	2.472m
21) B Endrin Al...	6.909	8.178	6326313	3602921	1.189	1.191
22) B Endosulfa...	7.590	8.643	6192811	3554588	1.204	1.195
23) A Methoxychlor	7.286	9.216	3696772	1831536	1.238m	1.075m
24) Mirex	7.438	9.522	7027302	3765077	1.351	1.224
25) B Endrin Ke...	8.030	9.589	7266165	6169547	1.165	1.539 #
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.

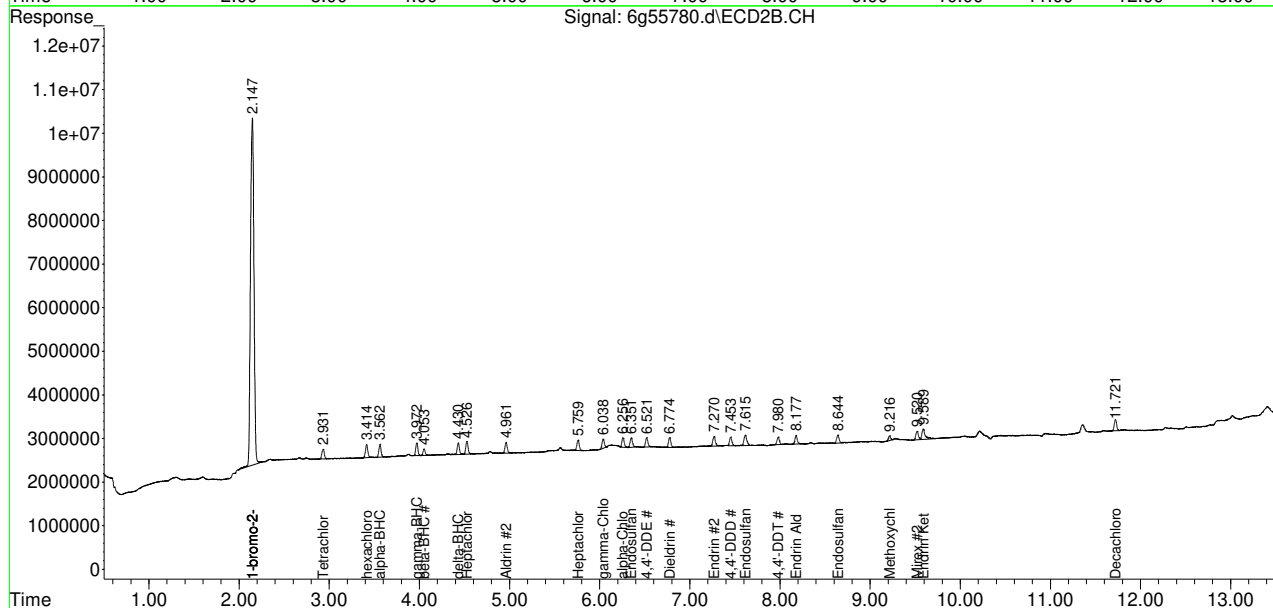
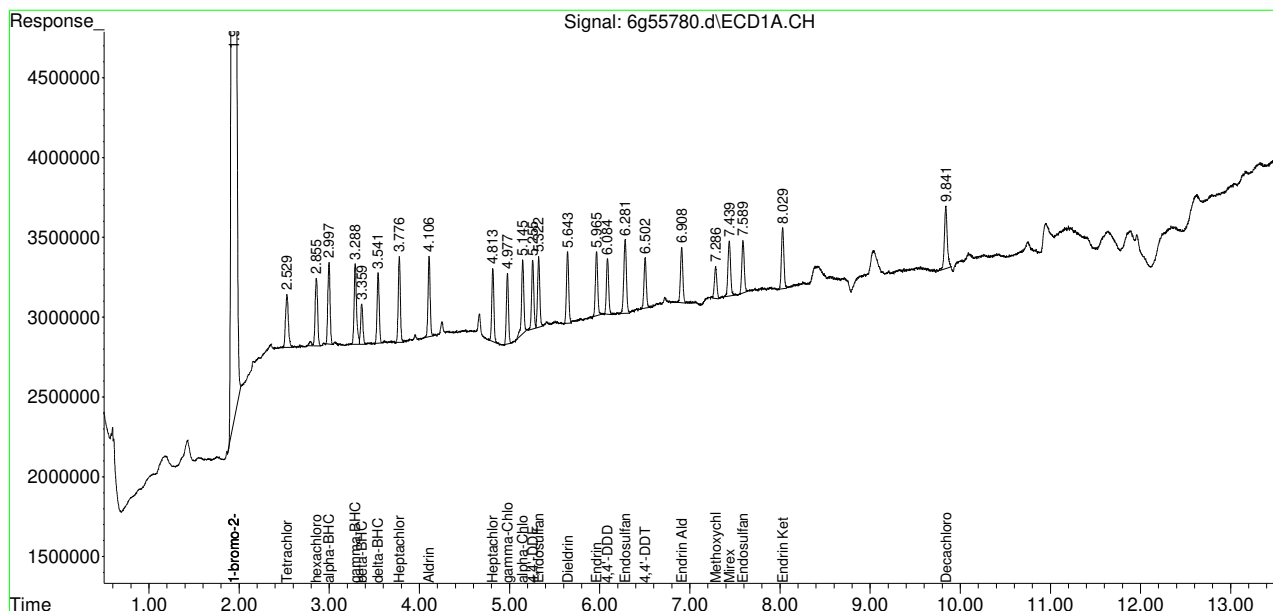
11.6.1
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55780.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:25:24
 Operator : dharas
 Sample : ic1671-1
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:24:48 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



11.6.1
11

Manual Integration Approval Summary

Sample Number: G6G1671-IC1671 Method: EPA 608
Lab FileID: 6G55780.D Analyst approved: 04/30/18 17:28 Rebecca Krug
Injection Time: 04/30/18 11:25 Supervisor approved: 05/01/18 08:39 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
gamma-Chlordane	5103-74-2	2	6.04	Poorly defined baseline
alpha-Chlordane	5103-71-9	2	6.26	Poorly defined baseline
Methoxychlor	72-43-5	1	7.29	Poorly defined baseline
4,4'-DDT	50-29-3	2	7.98	Poorly defined baseline
Methoxychlor	72-43-5	2	9.22	Poorly defined baseline
Decachlorobiphenyl	2051-24-3	1	9.84	Poorly defined baseline

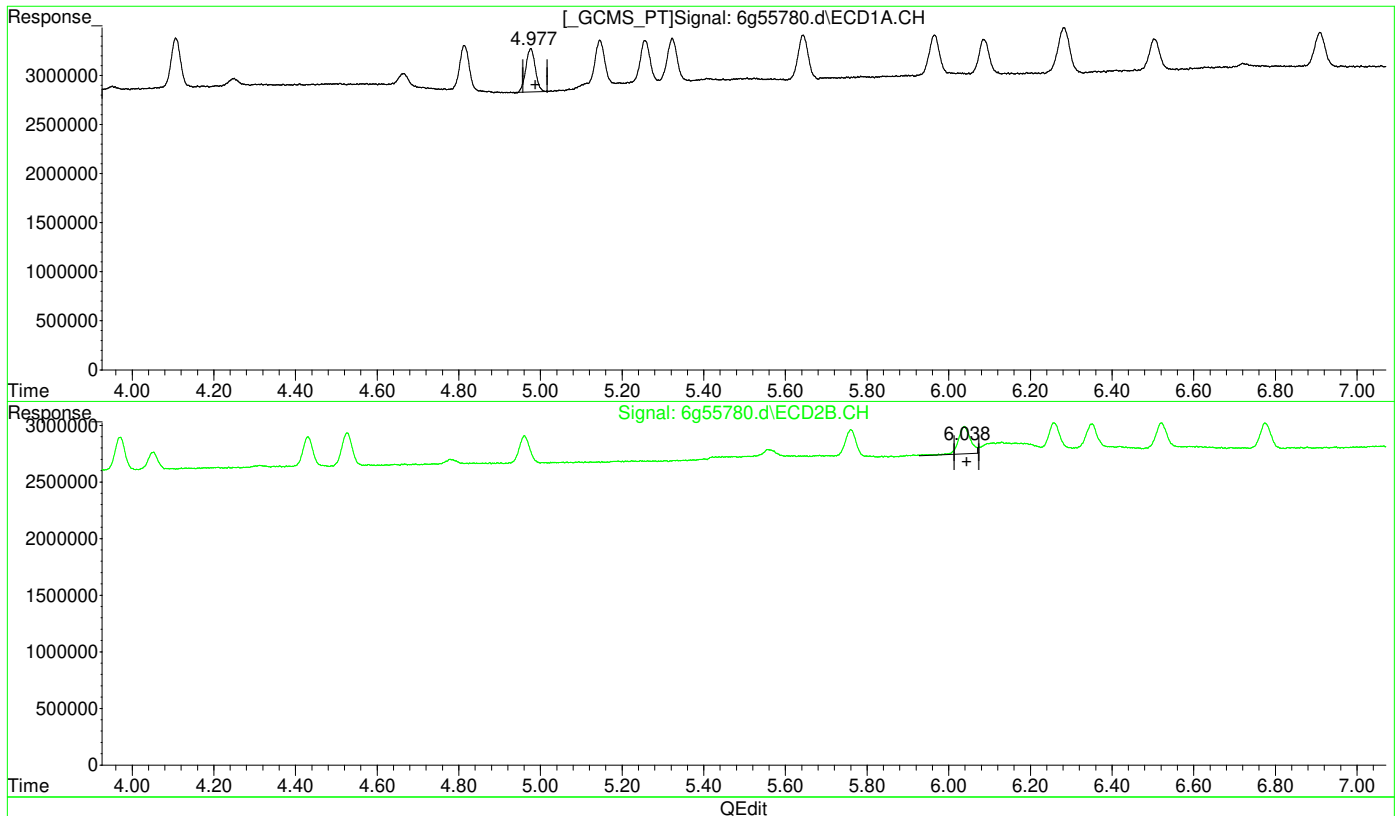
11.6.1.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55780.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:25:24
 Operator : dharas
 Sample : ic1671-1
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:23:25 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



11.6.1.2
11

(12) gamma-Chlordane (B)
 4.976min 1.045 PPB
 response 7087856

(12) gamma-Chlordane #2 (B)
 6.038min 1.225 PPB
 response 5036393

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:23:47 2018

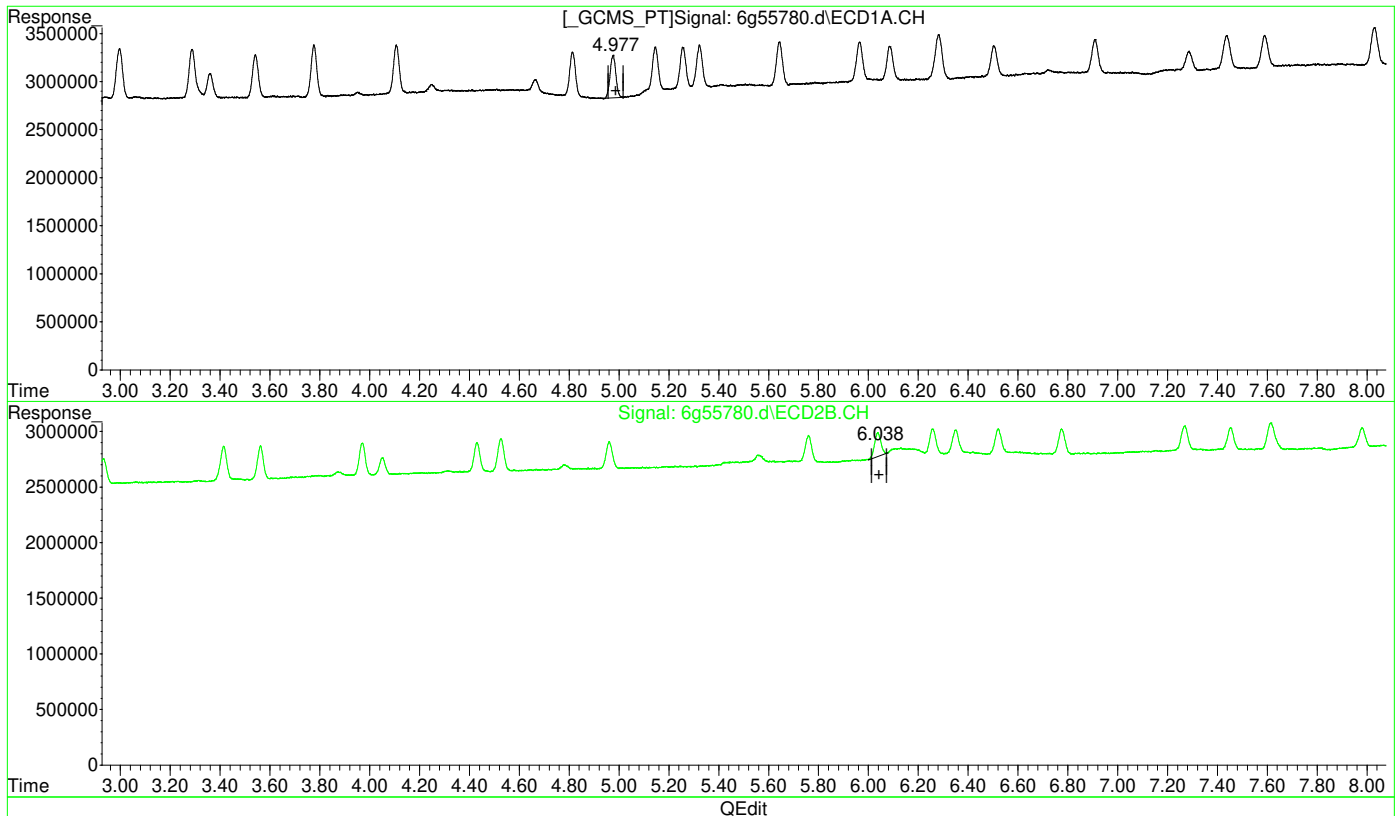


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55780.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:25:24
 Operator : dharas
 Sample : ic1671-1
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:23:25 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



(12) gamma-Chlordane (B)
 4.976min 1.045 PPB
 response 7087856

(12) gamma-Chlordane #2 (B)
 6.038min 0.940 PPB m
 response 3867677

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:23:53 2018

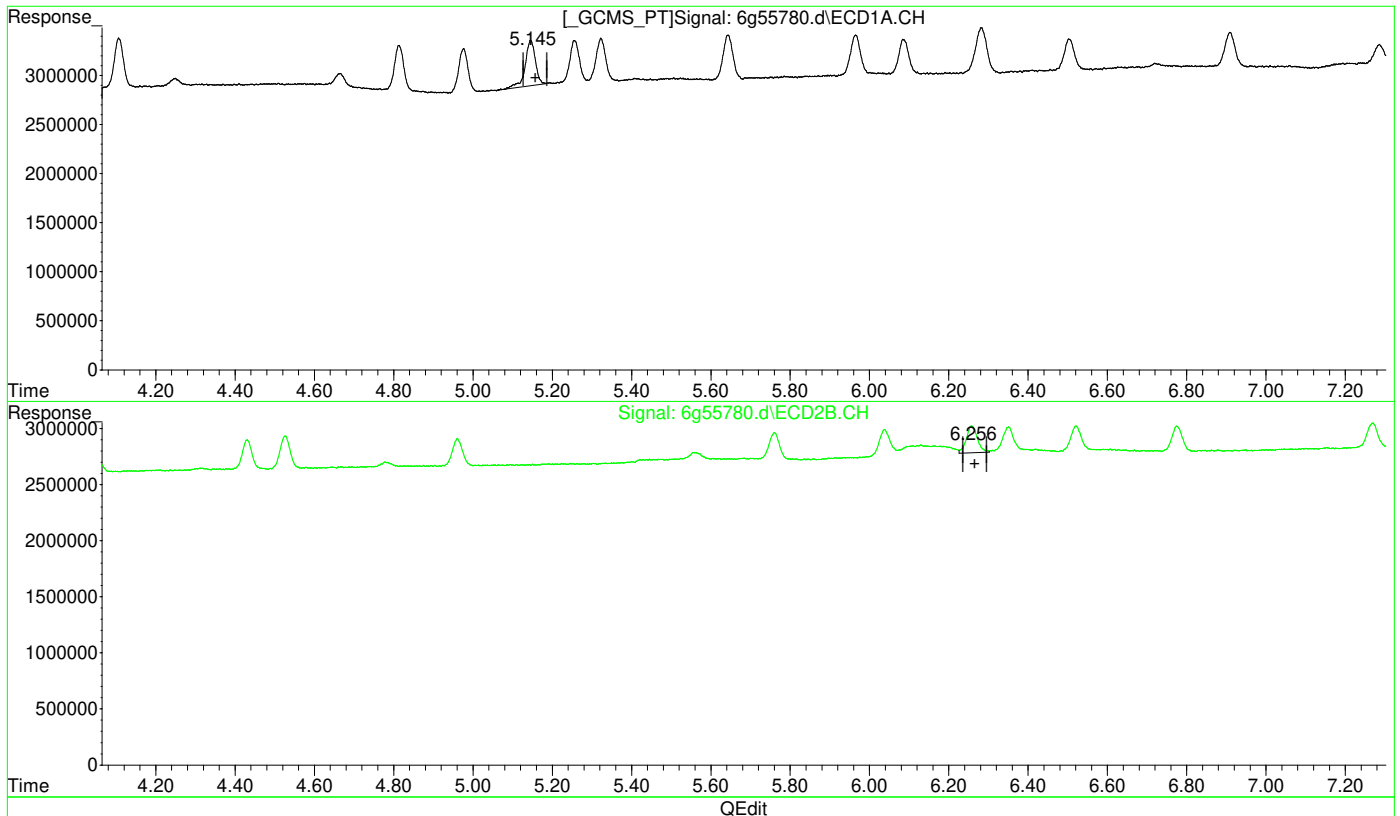
11.6.13
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55780.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:25:24
 Operator : dharas
 Sample : ic1671-1
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:23:25 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



(13) alpha-Chlordane (B)

5.146min 1.179 PPB

response 8190133

(13) alpha-Chlordane #2 (B)

6.258min 1.156 PPB

response 4654642

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:23:57 2018

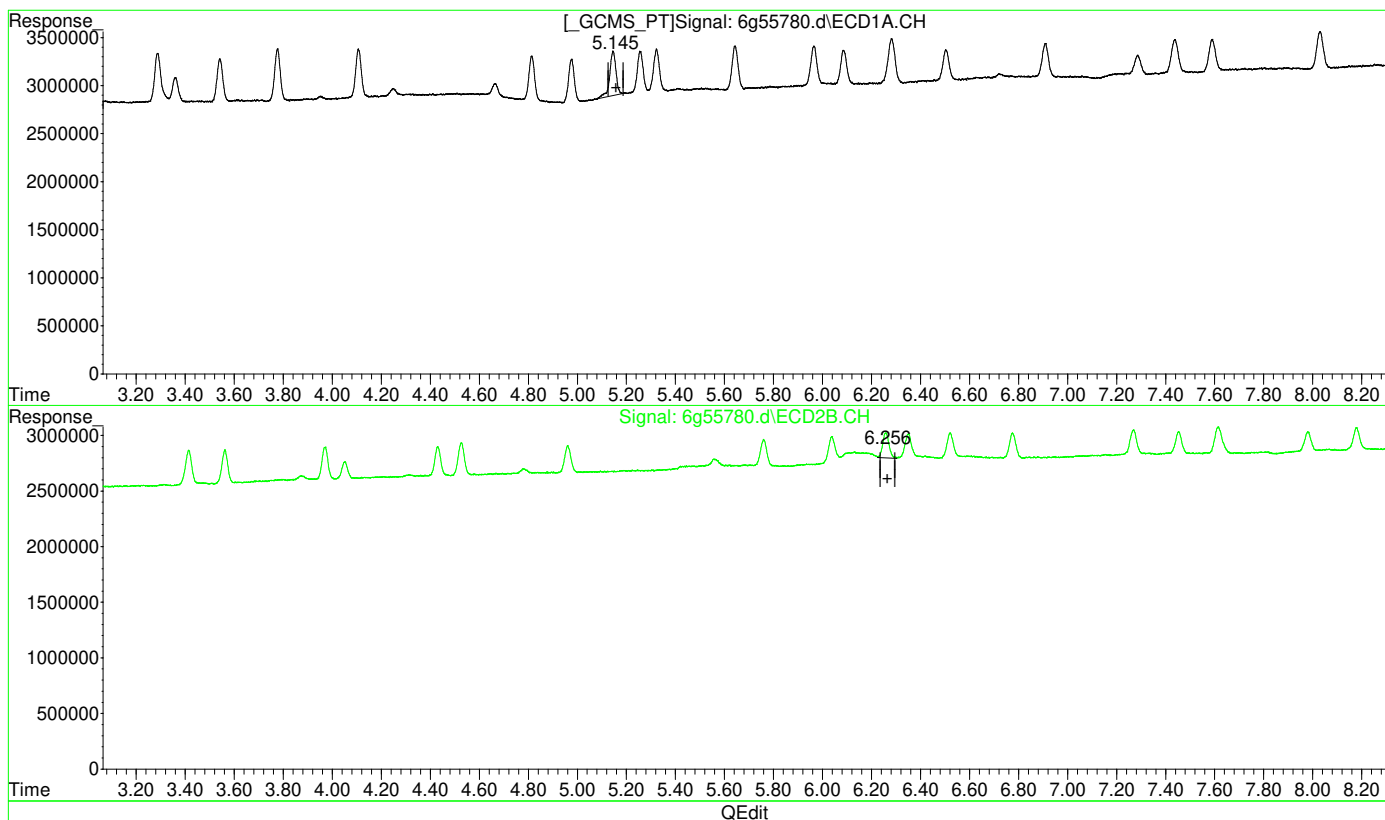
11.6.14
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55780.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:25:24
 Operator : dharas
 Sample : ic1671-1
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:23:25 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



11.6.15
11

(13) alpha-Chlordane (B)

5.146min 1.179 PPB

response 8190133

(13) alpha-Chlordane #2 (B)

6.256min 0.992 PPB m

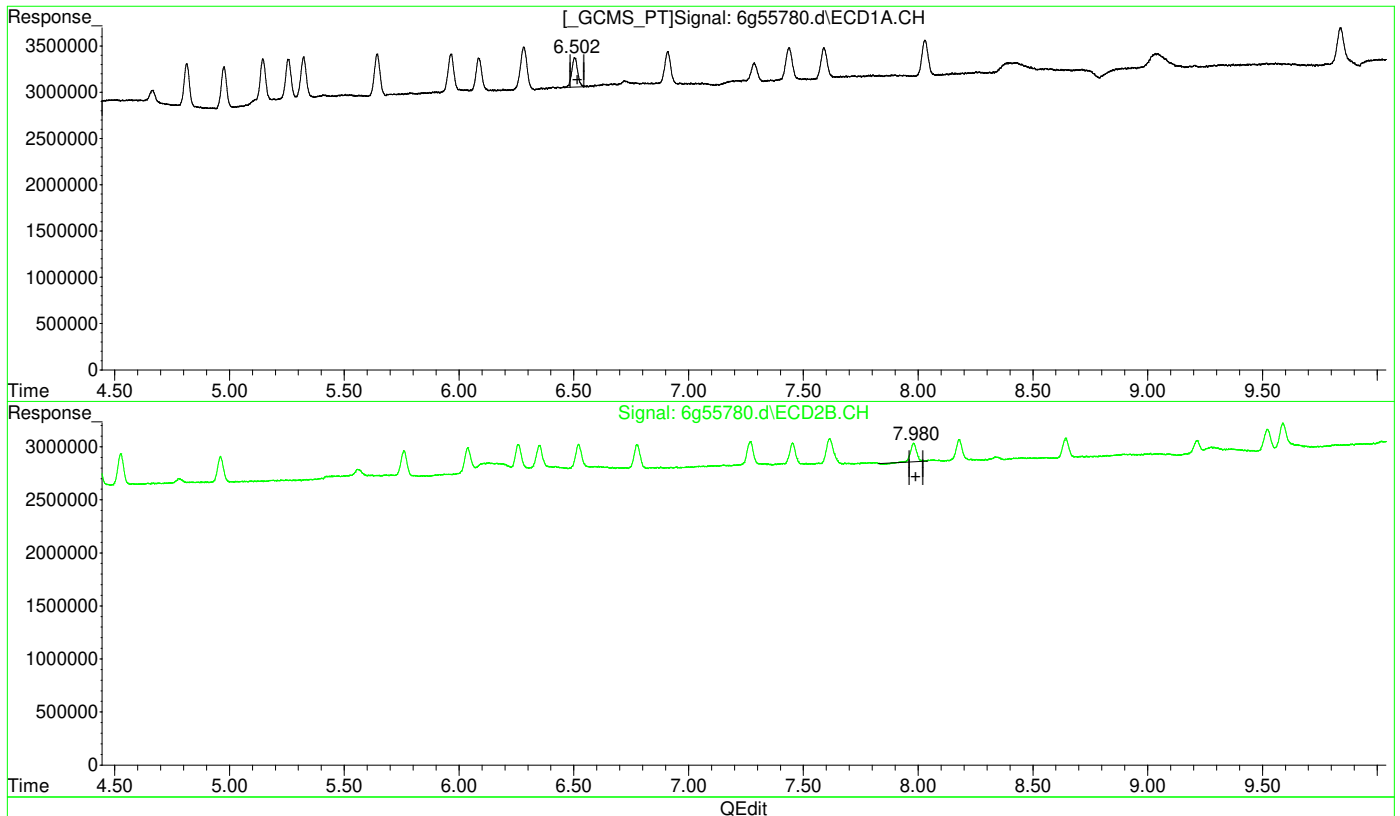
response 3993779

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55780.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:25:24
 Operator : dharas
 Sample : ic1671-1
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:23:25 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



11.6.16
11

(20) 4,4'-DDT (MA)
 6.504min 2.372 PPB
 response 5644746

(20) 4,4'-DDT #2 (MA)
 7.981min 2.434 PPB
 response 3163250

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:24:18 2018

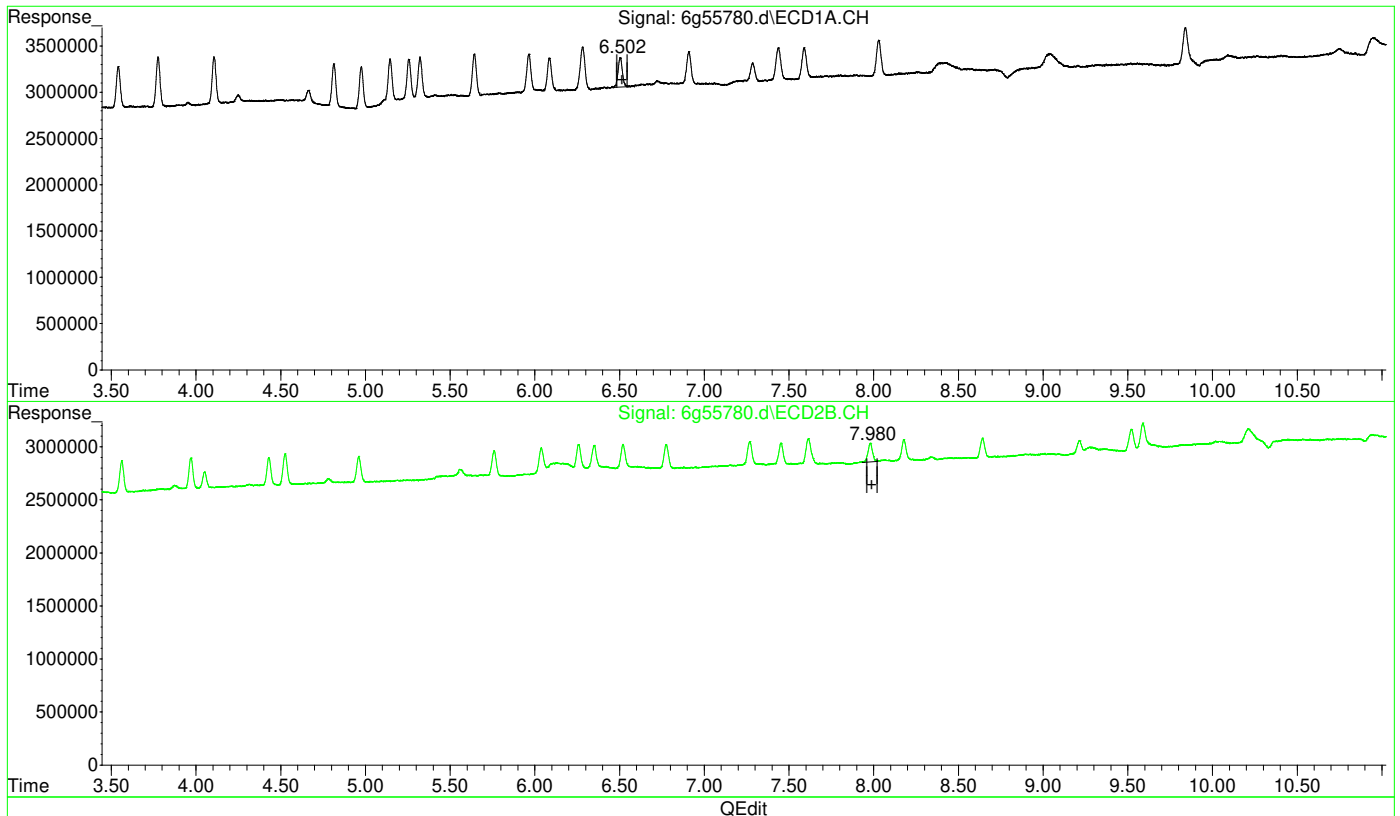


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55780.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:25:24
 Operator : dharas
 Sample : ic1671-1
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:23:25 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



11.6.1.7
11

(20) 4,4'-DDT (MA)
 6.504min 2.372 PPB
 response 5644746

(20) 4,4'-DDT #2 (MA)
 7.980min 2.472 PPB m
 response 3301023

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:24:24 2018

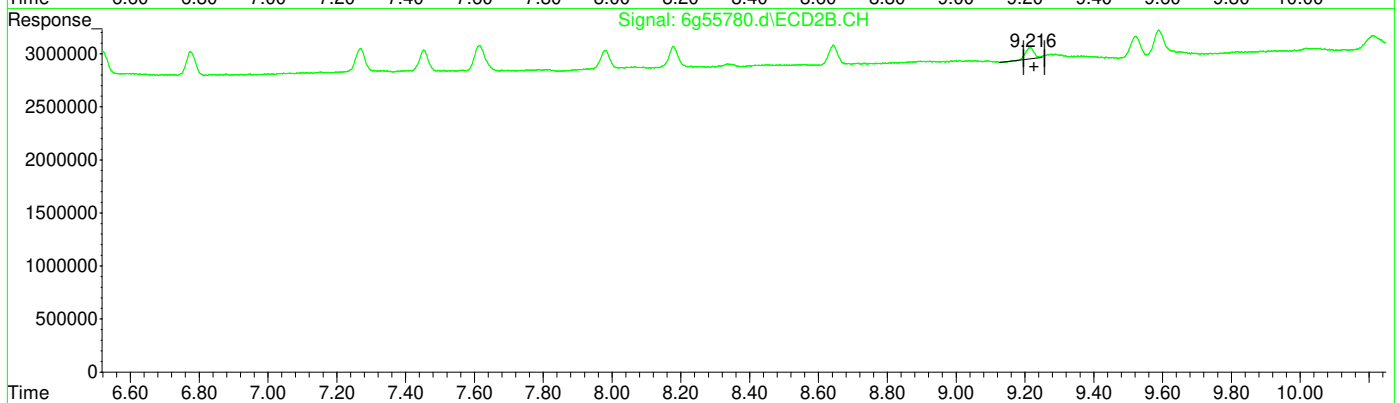
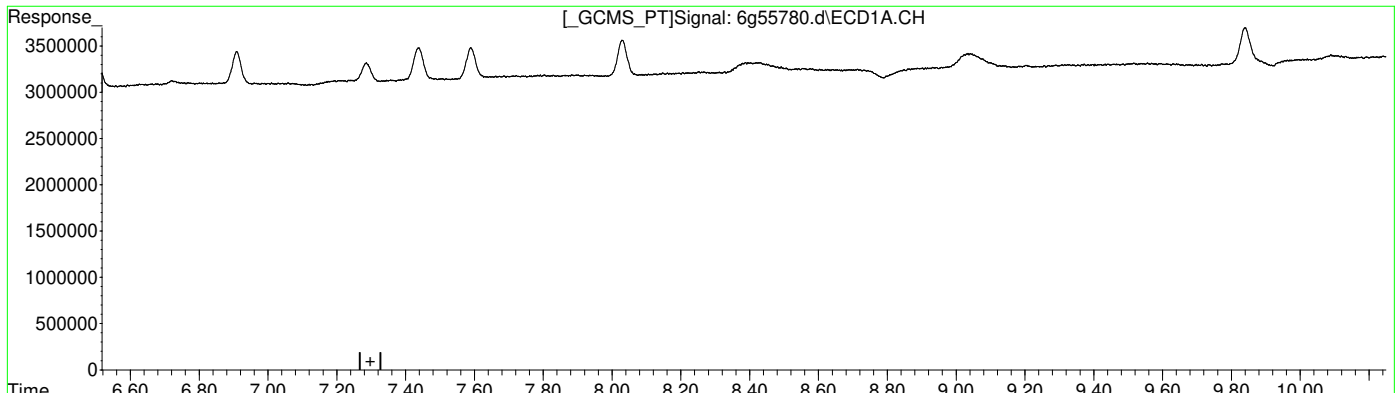


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55780.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:25:24
 Operator : dharas
 Sample : ic1671-1
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:23:25 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



Retention Time (min)	Response
(23) Methoxychlor (A)	0.000min 0.000 PPB
	response 0
(23) Methoxychlor #2 (A)	9.216min 1.067 PPB
	response 1816913

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:24:29 2018

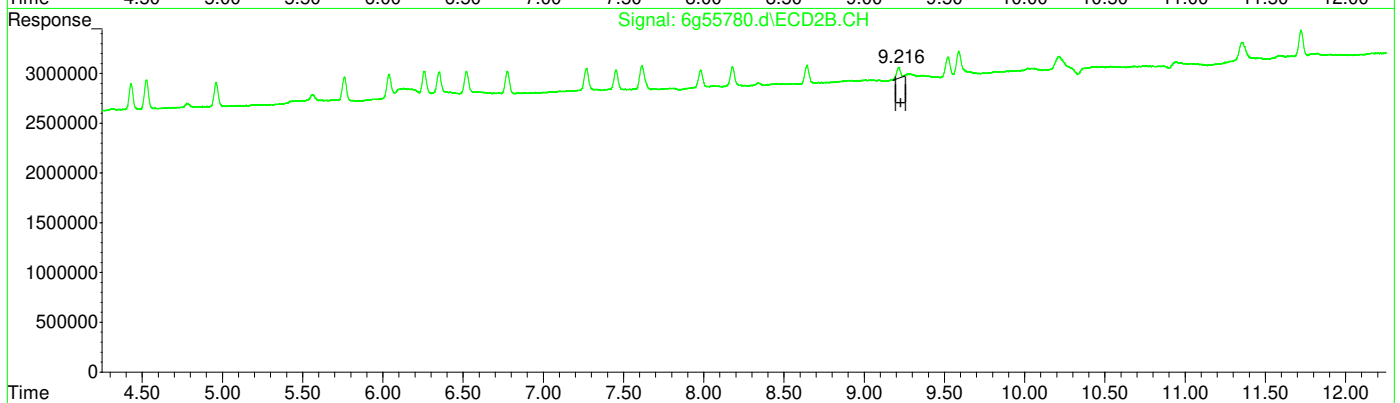
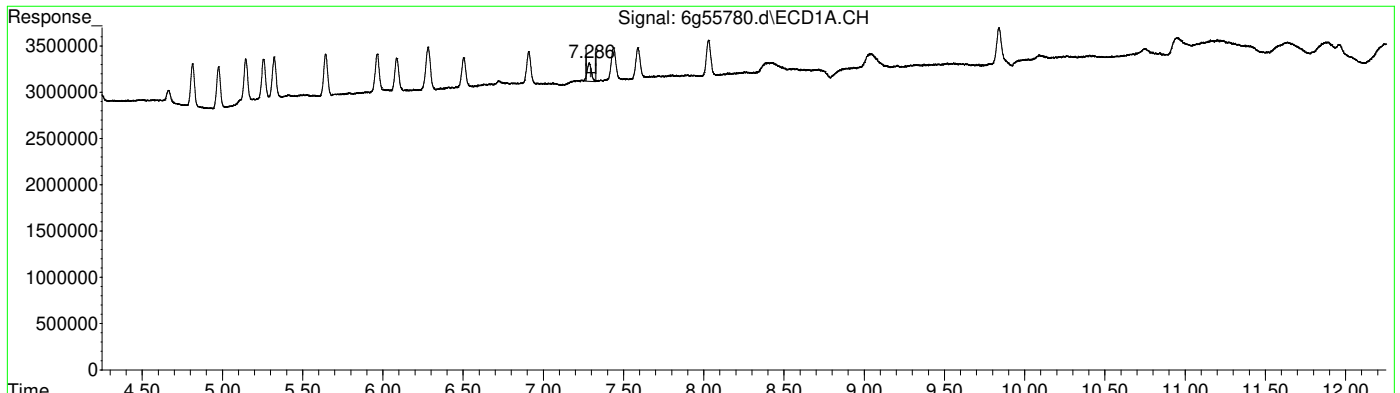
11.6.18
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55780.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:25:24
 Operator : dharas
 Sample : ic1671-1
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:23:25 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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

(23) Methoxychlor (A)	7.286min	1.238 PPB m	response 3696772
(23) Methoxychlor #2 (A)	9.216min	1.075 PPB m	response 1831536

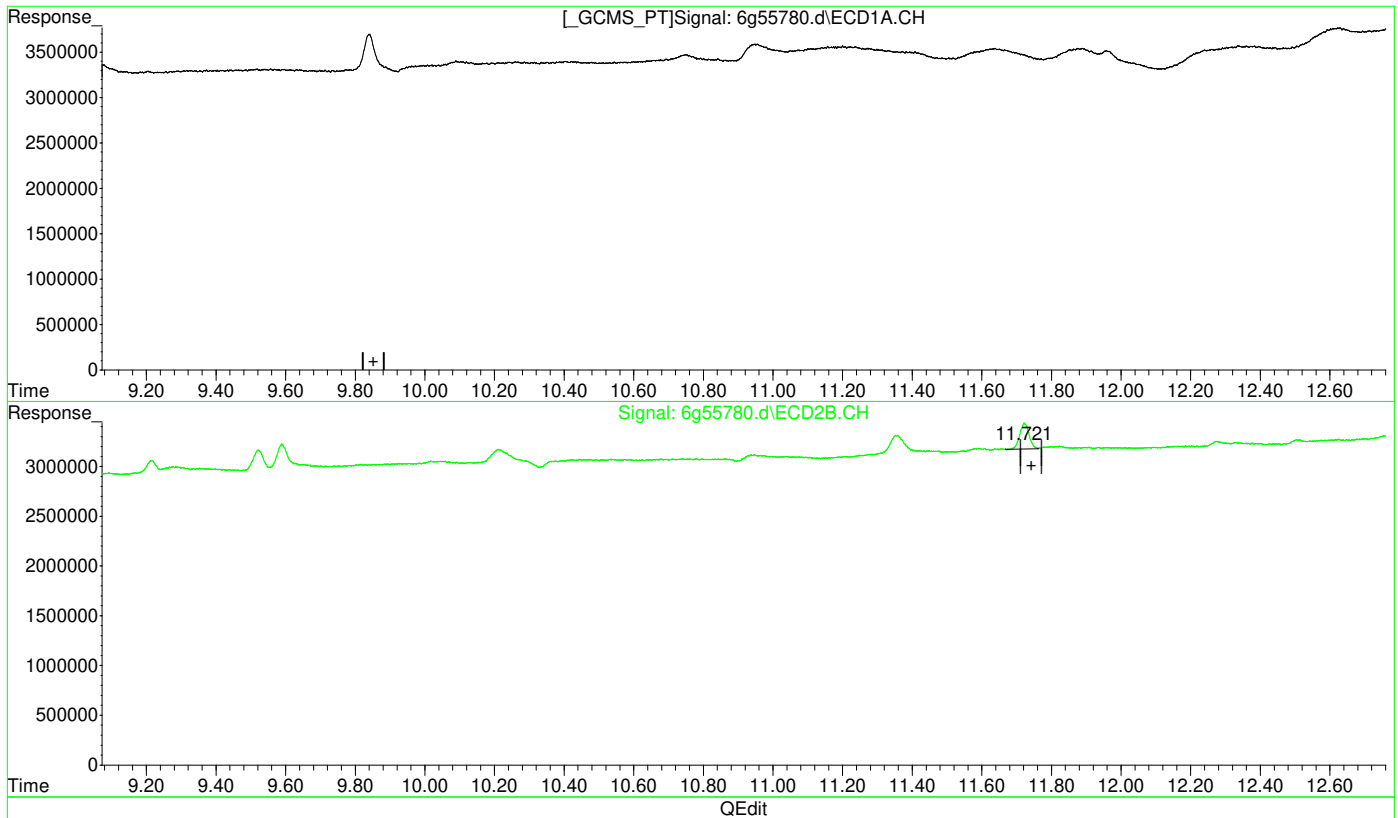
(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:24:40 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55780.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:25:24
 Operator : dharas
 Sample : ic1671-1
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:23:25 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



11.6.1.10
11

(26) Decachlorobiphenyl (SA)

0.000min 0.000 PPB

response 0

(26) Decachlorobiphenyl #2 (SA)

11.722min 1.337 PPB

response 4796545

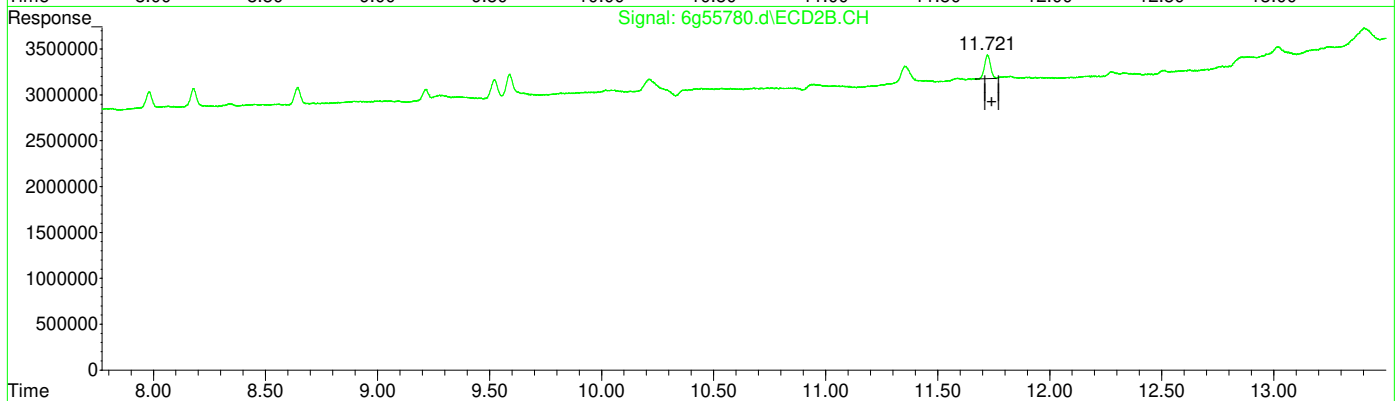
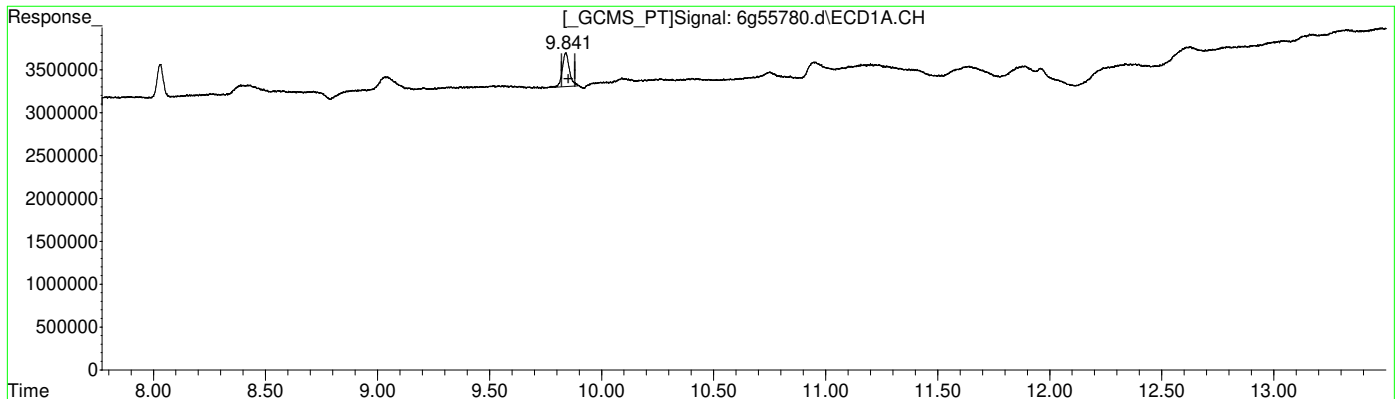
(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:24:45 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55780.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:25:24
 Operator : dharas
 Sample : ic1671-1
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:23:25 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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)	9.841min	1.380 PPB m	response 8701532
(26) Decachlorobiphenyl #2 (SA)	11.722min	1.337 PPB	response 4796545

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:24:50 2018

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55781.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:43:10
 Operator : dharas
 Sample : ic1671-2
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:20:37 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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...	1.943	2.147	387.0E6	241.1E6	50.000	50.000
27) I 1-bromo-2...	1.943	2.147	387.0E6	241.1E6	50.000	50.000
33) I 1-bromo-2...	1.943	2.147	387.0E6	241.1E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.530f	2.932	14602253	8507501	1.906	1.820
Spiked Amount	40.000	Range	30 - 150	Recovery =	4.76%#	4.55%#
26) SA Decachlor...	9.839	11.723f	16338027	9180560	2.240	2.257
Spiked Amount	40.000		Recovery =	5.60%	5.64%	
Target Compounds						
3) hexachlor...	2.856	3.415	16294686	11301352	1.772	1.903
4) A alpha-BHC	2.996	3.563	17999726	10077842	2.494	2.814
5) MA gamma-BHC	3.287	3.971	17825012	9866951	2.447	2.607
6) MA Heptachlor	3.775	4.526	17160198	10577603	1.894	1.858
7) B beta-BHC	3.359	4.052	8774543	4960670	2.037	1.921
8) B delta-BHC	3.542	4.430	14887658	8880069	2.893	3.038
9) MB Aldrin	4.106	4.961	16201073	8859319	1.812	2.611 #
10) alachlor	4.245	4.781	2244634	1308957	1.959m	1.890
11) B Heptachlo...	4.813	5.760	15342403	9140408	1.920	1.921
12) B gamma-Chl...	4.975	6.038	14743634	8692586	1.879	1.864
13) B alpha-Chl...	5.145	6.258	16078851	7974896	2.000	1.747
14) A Endosulfan I	5.322	6.350	14907968	8139344	1.950	1.873
15) B 4,4'-DDE	5.255	6.521	14410408	7734247	1.822	2.705 #
16) MA Dieldrin	5.642	6.775	15434484	8796328	2.402	2.759
17) MA Endrin	5.964	7.269	14135074	8494069	1.921	1.931
18) A 4,4'-DDD	6.085	7.453	12192826	7046507	1.838	1.855
19) B Endosulfa...	6.282	7.614	16624747	9482240	2.238	2.198
20) MA 4,4'-DDT	6.503	7.980	11618446	6780069	3.125	3.215
21) B Endrin Al...	6.907	8.178	12752377	6955696	2.072	2.028
22) B Endosulfa...	7.589	8.643	12398444	6754107	2.085	2.003
23) A Methoxychlor	7.286	9.211f	7461816	4108135	2.161	2.127m
24) Mirex	7.436	9.520f	13279056	7099768	2.208	2.036
25) B Endrin Ke...	8.027	9.588	14410690	9463333	1.998	2.082
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

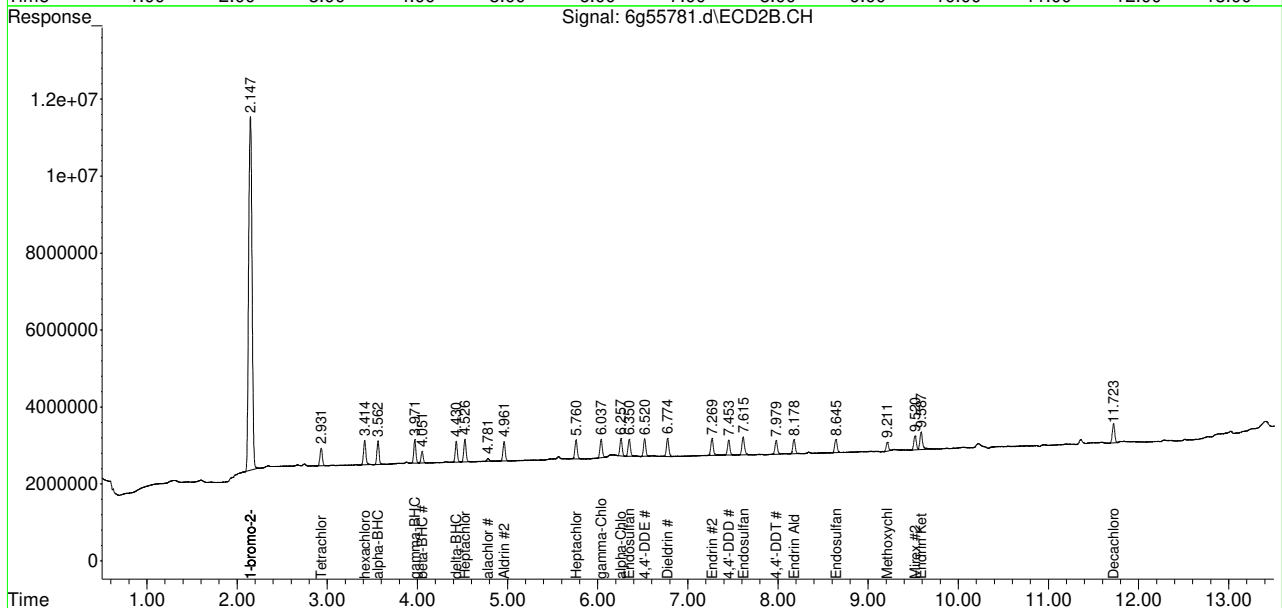
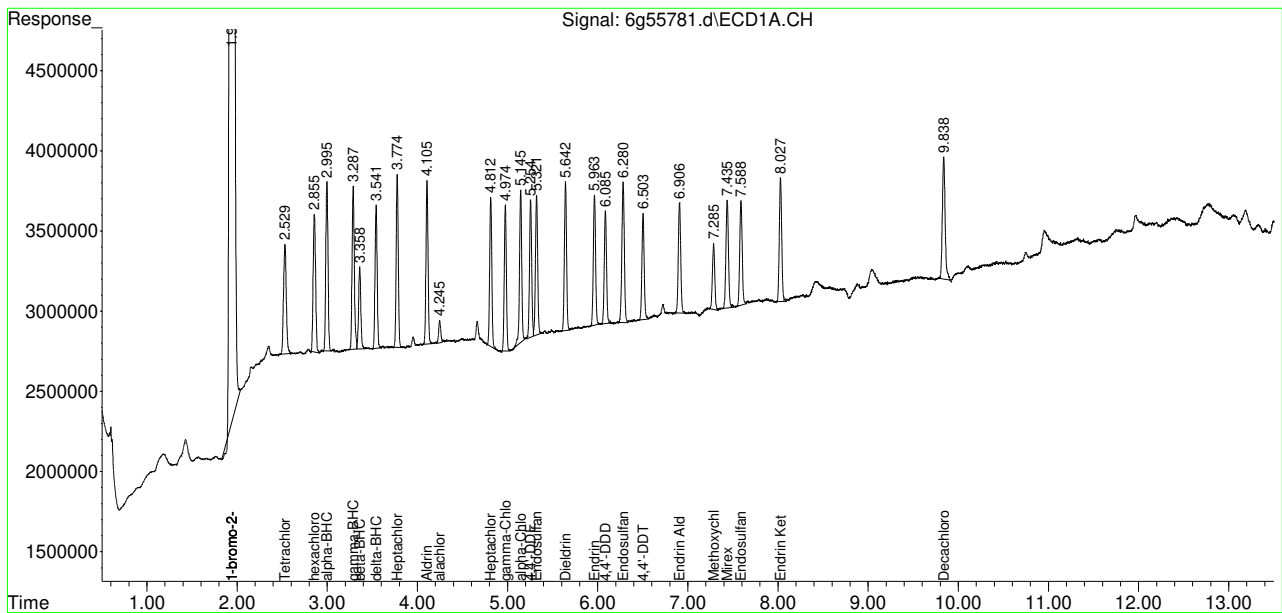
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55781.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:43:10
 Operator : dharas
 Sample : ic1671-2
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:20:37 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



11.6.2
 11

Manual Integration Approval Summary

Sample Number: G6G1671-IC1671 Method: EPA 608
Lab FileID: 6G55781.D Analyst approved: 04/30/18 17:28 Rebecca Krug
Injection Time: 04/30/18 11:43 Supervisor approved: 05/01/18 08:39 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Methoxychlor	72-43-5	2	9.21	Poorly defined baseline

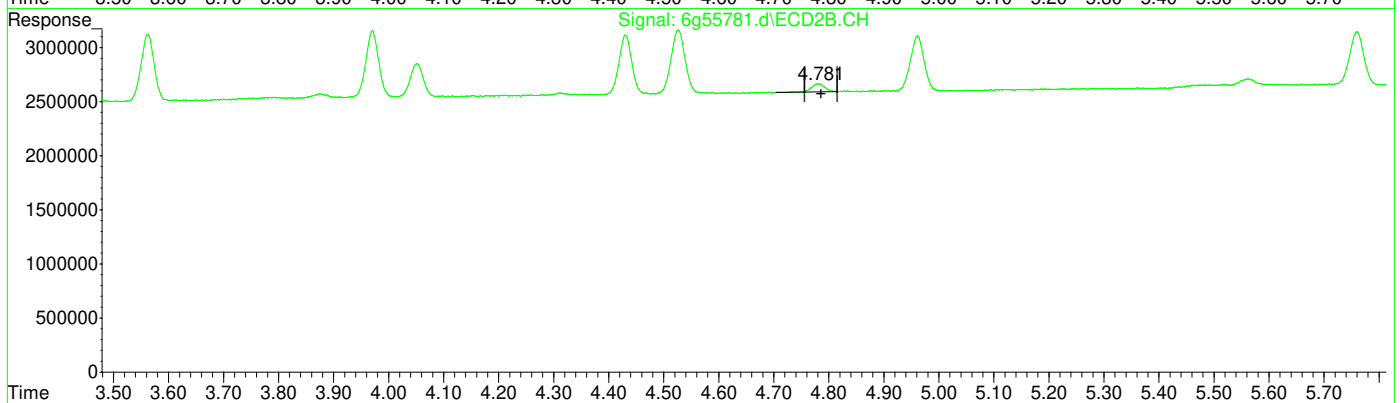
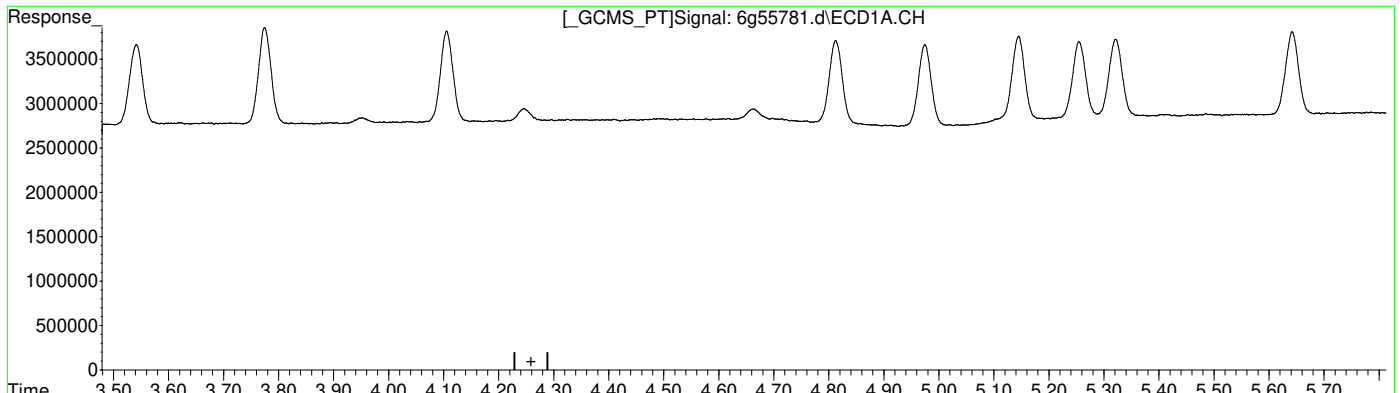
11.6.21
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55781.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:43:10
 Operator : dharas
 Sample : ic1671-2
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:20:00 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



Retention Time (min)	Response
(10) alachlor	0.000min 0.000 PPB
	response 0
(10) alachlor #2	4.781min 1.890 PPB
	response 1308957

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:20:14 2018

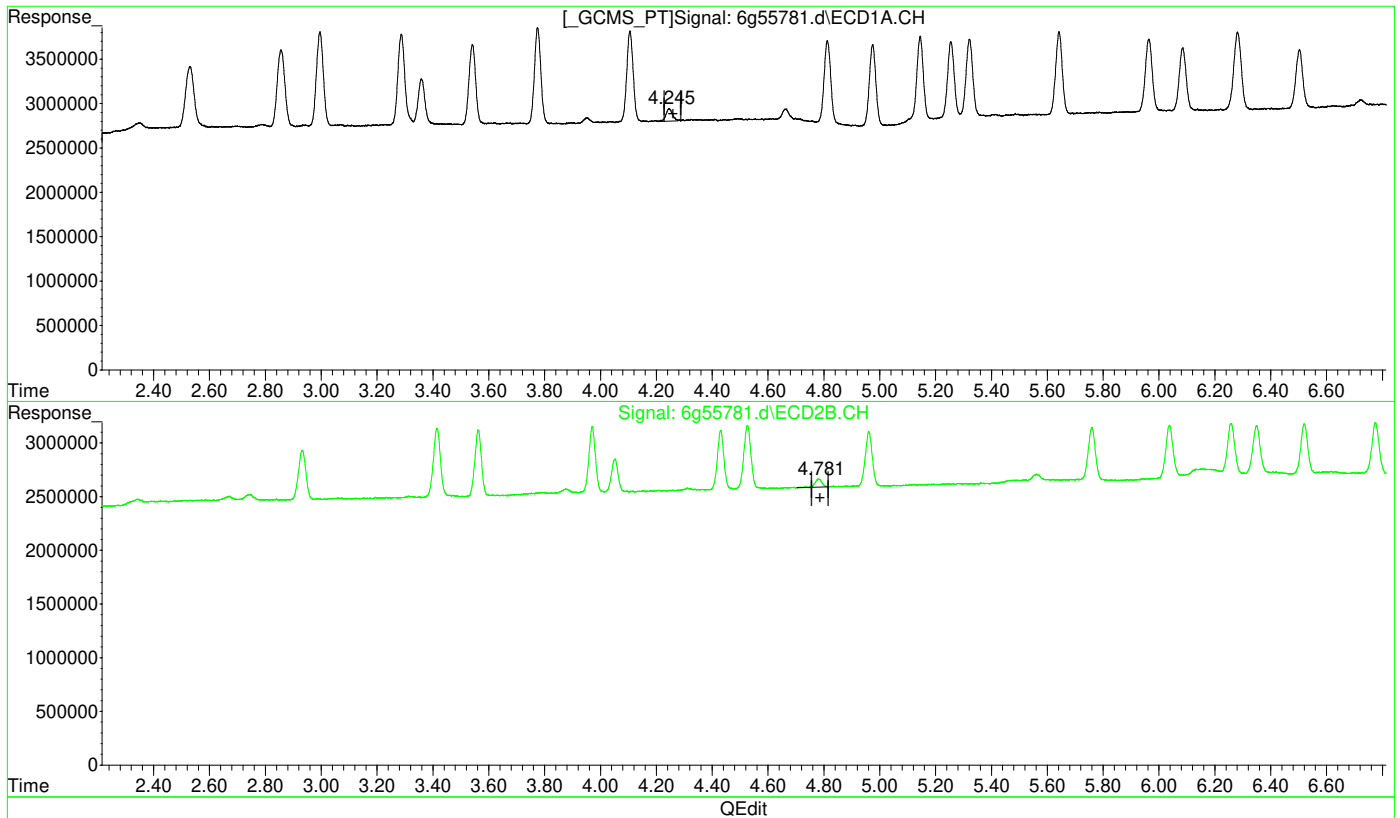
11.6.22
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55781.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:43:10
 Operator : dharas
 Sample : ic1671-2
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:20:00 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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
 4.245min 1.959 PPB m
 response 2244634

(10)alachlor #2
 4.781min 1.890 PPB
 response 1308957

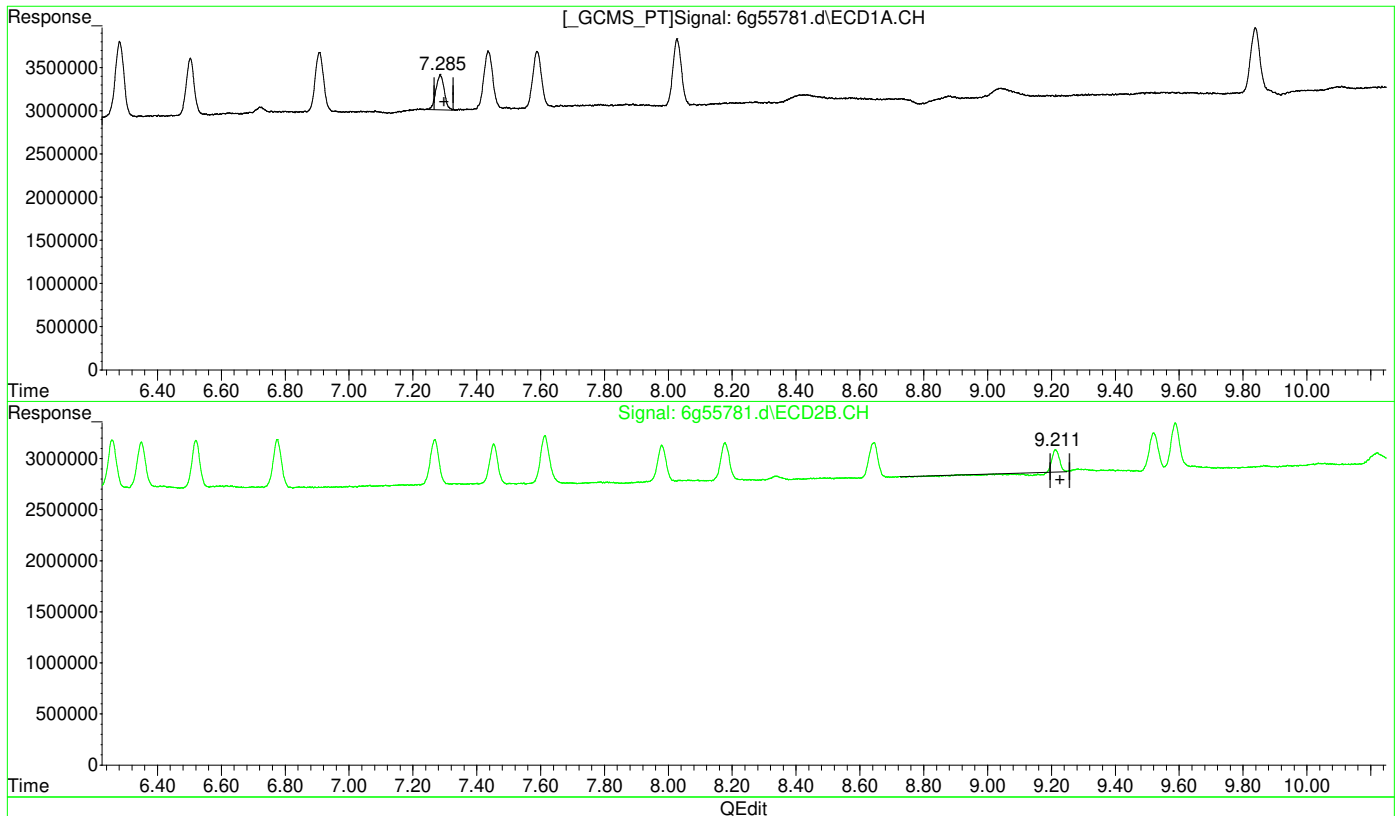
(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:20:22 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55781.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:43:10
 Operator : dharas
 Sample : ic1671-2
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:20:00 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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)

7.286min 2.161 PPB

response 7461816

(23) Methoxychlor #2 (A)

9.213min 0.820 PPB

response 1582778

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:20:34 2018

Page: 1

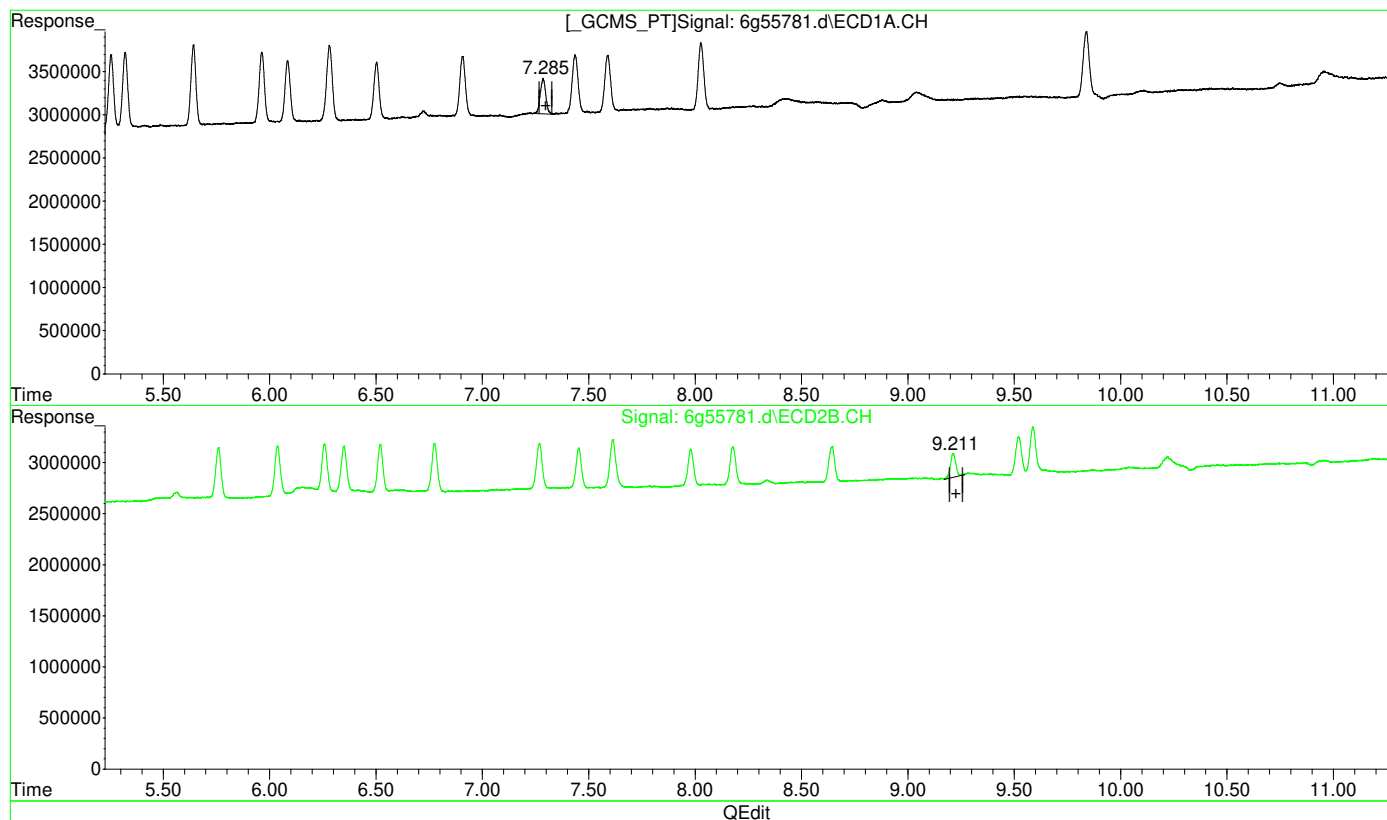
SGS 704 of 1259

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55781.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 11:43:10
 Operator : dharas
 Sample : ic1671-2
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:20:00 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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)

7.286min 2.161 PPB

response 7461816

(23) Methoxychlor #2 (A)

9.211min 2.127 PPB m

response 4108135

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:20:40 2018

Page: 1

SGS 705 of 1259

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55782.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 12:01:04
 Operator : dharas
 Sample : ic1671-5
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:18:53 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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...	1.941	2.146	391.8E6	245.7E6	50.000	50.000
27)	I 1-bromo-2...	1.941	2.146	391.8E6	245.7E6	50.000	50.000
33)	I 1-bromo-2...	1.941	2.146	391.8E6	245.7E6	50.000	50.000
System Monitoring Compounds							
2)	SAB Tetrachlo...	2.529f	2.932	36692553	21567937	4.732	4.526
	Spiked Amount	40.000	Range	30 - 150	Recovery =	11.83%#	11.32%#
26)	SA Decachlor...	9.837	11.722f	38515506	22696529	5.217	5.474
	Spiked Amount	40.000		Recovery =		13.04%	13.69%
Target Compounds							
3)	hexachlor...	2.856f	3.414	40039008	27524590	4.301	4.546
4)	A alpha-BHC	2.995f	3.562	46372720	26372740	4.848	5.035
5)	MA gamma-BHC	3.287	3.971	44366106	25338460	4.903	4.930
6)	MA Heptachlor	3.775	4.526	43060808	26855824	4.694	4.627
7)	B beta-BHC	3.358	4.051	21939549	12603643	5.030	4.787
8)	B delta-BHC	3.541	4.430	37980998	22676292	5.218	5.287
9)	MB Aldrin	4.106	4.960	41208200	23078938	4.553	5.030
10)	alachlor	4.247	4.779	5675895	3729328	4.892	5.283
11)	B Heptachlo...	4.813	5.759	39915152	23422377	4.934	4.828
12)	B gamma-Chl...	4.974	6.037	37751508	23381751	4.751	4.919
13)	B alpha-Chl...	5.145	6.259	39936526	23006245	4.908	4.942
14)	A Endosulfan I	5.321	6.350	36980626	21912385	4.777	4.945
15)	B 4,4'-DDE	5.256	6.520	36612488	20625296	4.572	5.106
16)	MA Dieldrin	5.642	6.775	38902287	21711765	4.877	5.101
17)	MA Endrin	5.963	7.268	37334160	21438153	5.012	4.782
18)	A 4,4'-DDD	6.085	7.453	31218421	18083448	4.648	4.670
19)	B Endosulfa...	6.283	7.613	38002443	22119932	5.052	5.029
20)	MA 4,4'-DDT	6.502	7.979	28888141	16458168	5.628	5.503
21)	B Endrin Al...	6.907	8.178	31478562	17270913	5.051	4.938
22)	B Endosulfa...	7.589	8.642	30972100	16884248	5.143	4.912
23)	A Methoxychlor	7.284	9.211f	20208435	10399649	5.781	5.283m
24)	Mirex	7.436	9.520f	32654704	18026150	5.362	5.070
25)	B Endrin Ke...	8.029	9.587	36218258	21602414	4.959	4.661
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

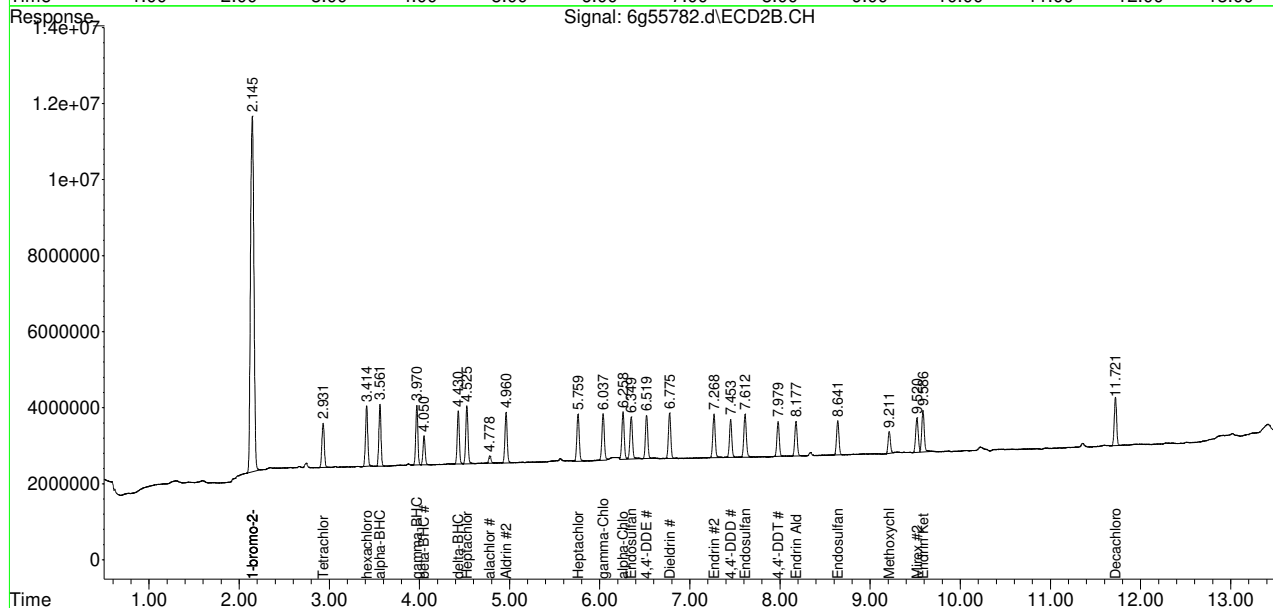
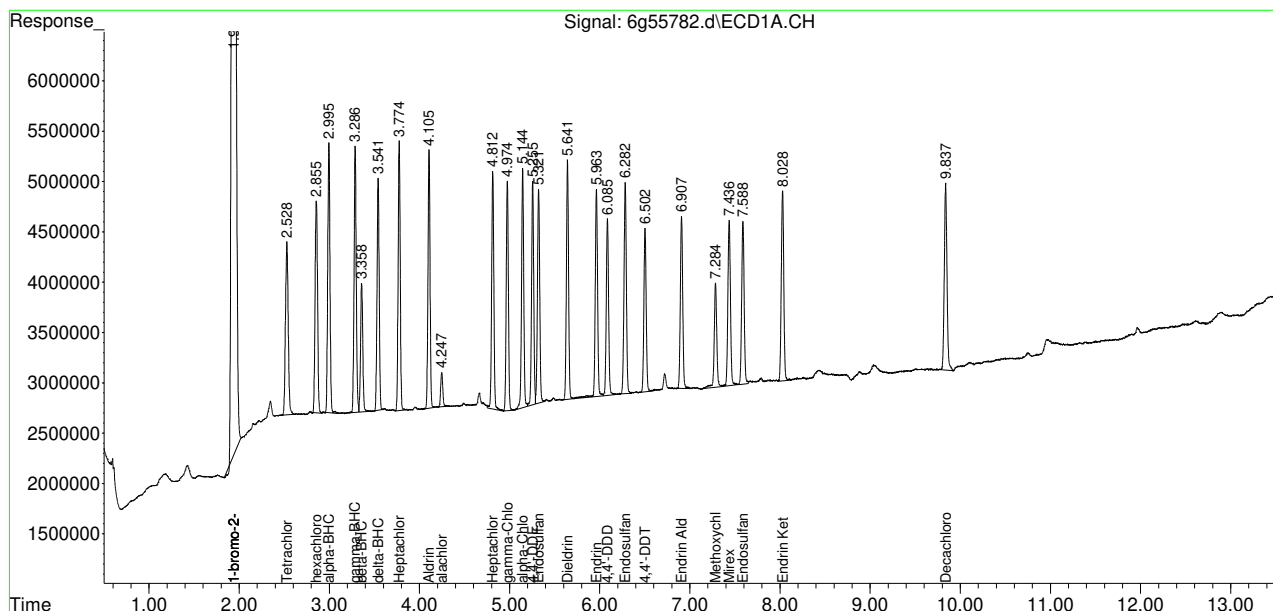
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55782.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 12:01:04
 Operator : dharas
 Sample : ic1671-5
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:18:53 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



11.6.3
 11

Manual Integration Approval Summary

Sample Number: G6G1671-IC1671 Method: EPA 608
Lab FileID: 6G55782.D Analyst approved: 04/30/18 17:28 Rebecca Krug
Injection Time: 04/30/18 12:01 Supervisor approved: 05/01/18 08:39 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Methoxychlor	72-43-5	2	9.21	Poorly defined baseline

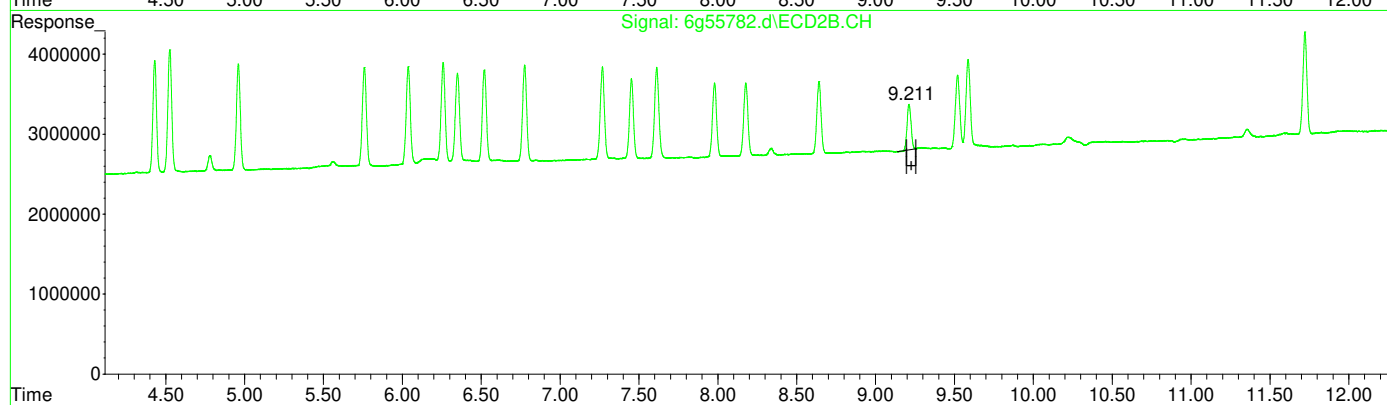
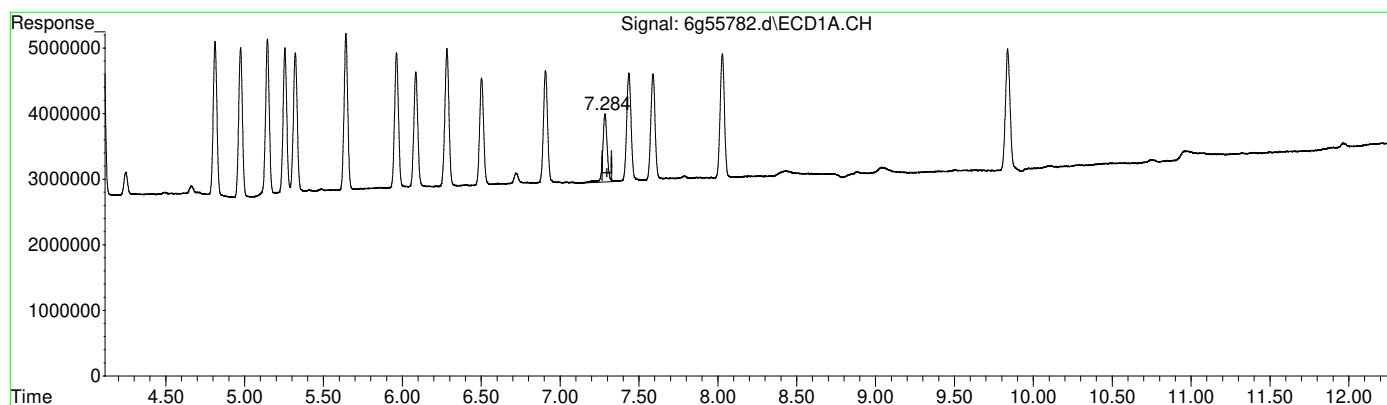
11.6.3.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55782.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 12:01:04
 Operator : dharas
 Sample : ic1671-5
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:18:18 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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

(23) Methoxychlor (A)

7.284min 5.781 PPB

response 20208435

(23) Methoxychlor #2 (A)

9.212min 5.091 PPB

response 10022539

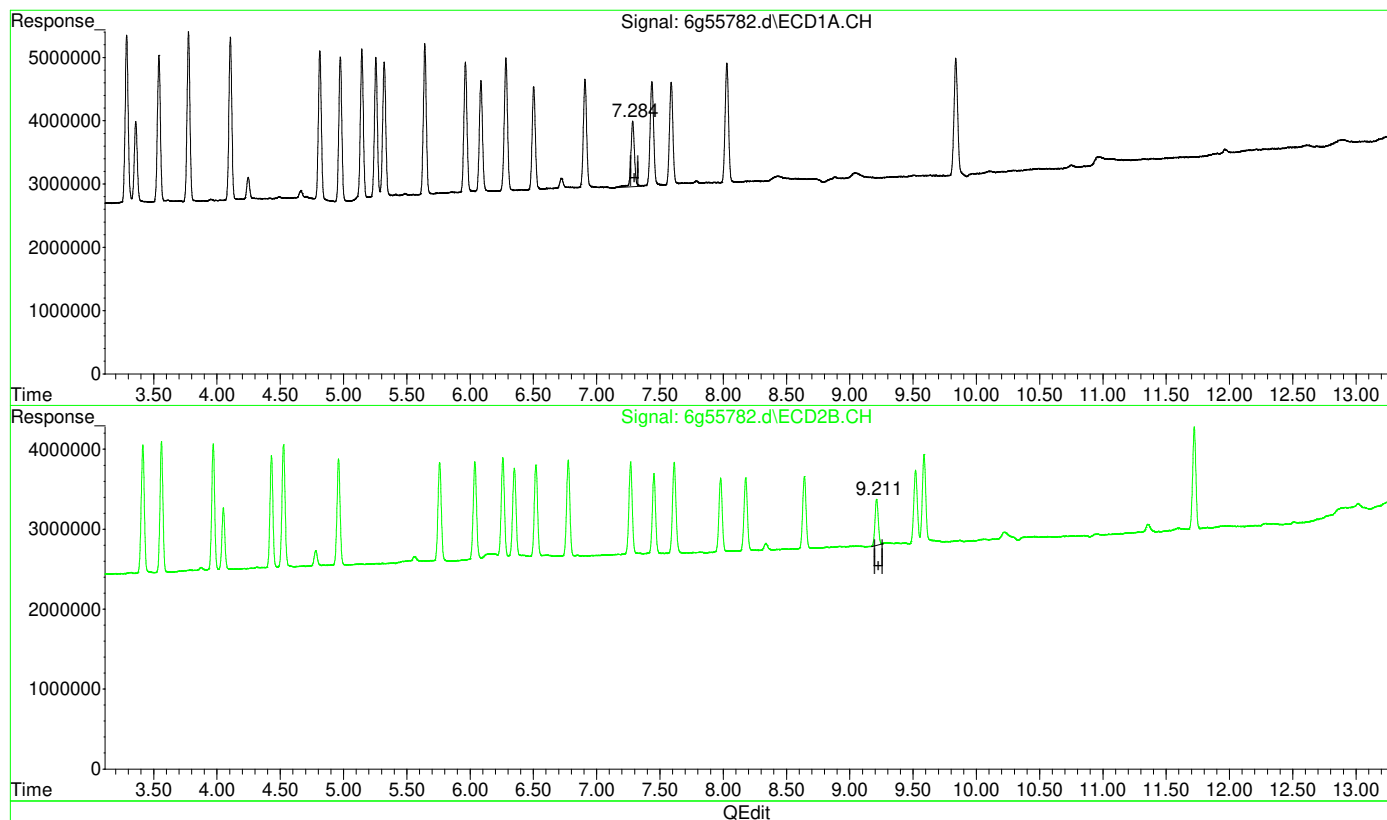
(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:18:49 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55782.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 12:01:04
 Operator : dharas
 Sample : ic1671-5
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:18:18 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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)

7.284min 5.781 PPB

response 20208435

(23) Methoxychlor #2 (A)

9.211min 5.283 PPB m

response 10399649

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:18:56 2018

Page: 1

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55783.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 12:18:49
 Operator : dharas
 Sample : ic1671-10
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 12:35:55 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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...	1.940	2.146	404.5E6	249.9E6	50.000	50.000
27)	I 1-bromo-2...	1.940	2.146	404.5E6	249.9E6	50.000	50.000
33)	I 1-bromo-2...	1.940	2.146	404.5E6	249.9E6	50.000	50.000
System Monitoring Compounds							
2)	SAB Tetrachlo...	2.529	2.932	73901804	44215088	9.232	9.125
	Spiked Amount	40.000	Range 30 - 150	Recovery =		23.08%#	22.81%#
26)	SA Decachlor...	9.838	11.722	75160701	45369722	9.862	10.762
	Spiked Amount	40.000		Recovery =		24.65%	26.91%
Target Compounds							
3)	hexachlor...	2.856	3.414	83583448	56450905	8.697	9.170
4)	A alpha-BHC	2.995	3.562	97743211	56386816	8.888	9.048
5)	MA gamma-BHC	3.286	3.971	91967233	53241053	9.077	9.038
6)	MA Heptachlor	3.775	4.526	88871146	54807268	9.385	9.287
7)	B beta-BHC	3.358	4.051	42930797	25495592	9.534	9.523
8)	B delta-BHC	3.541	4.431	81098685	48187824	9.336	9.368
9)	MB Aldrin	4.106	4.961	85738730	47824862	9.178	9.155
10)	alachlor	4.246	4.781	11358176	6912789	9.483	9.631
11)	B Heptachlo...	4.812	5.759	80177320	47082321	9.601	9.544
12)	B gamma-Chl...	4.974	6.037	78967366	46348408	9.627	9.590
13)	B alpha-Chl...	5.145	6.259	79424311	44755949	9.455	9.456
14)	A Endosulfan I	5.322	6.350	74776476	42208976	9.358	9.368
15)	B 4,4'-DDE	5.256	6.521	74569596	43119328	9.021	9.210
16)	MA Dieldrin	5.643	6.776	80375482	45183086	9.019	9.277
17)	MA Endrin	5.963	7.268	72713977	44101387	9.455	9.674
18)	A 4,4'-DDD	6.085	7.453	62571806	36612176	9.025	9.300
19)	B Endosulfa...	6.283	7.613	75504798	43757412	9.724	9.784
20)	MA 4,4'-DDT	6.502	7.980	60076136	35387734	9.912	9.902
21)	B Endrin Al...	6.907	8.178	62320964	34812334	9.687	9.789
22)	B Endosulfa...	7.589	8.642	61328622	34742417	9.866	9.940
23)	A Methoxychlor	7.284	9.214	37029064	21442540	10.261	10.712
24)	Mirex	7.436	9.520	64055523	36503944	10.190	10.097
25)	B Endrin Ke...	8.027	9.587	73780467	42480086	9.786	9.015
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

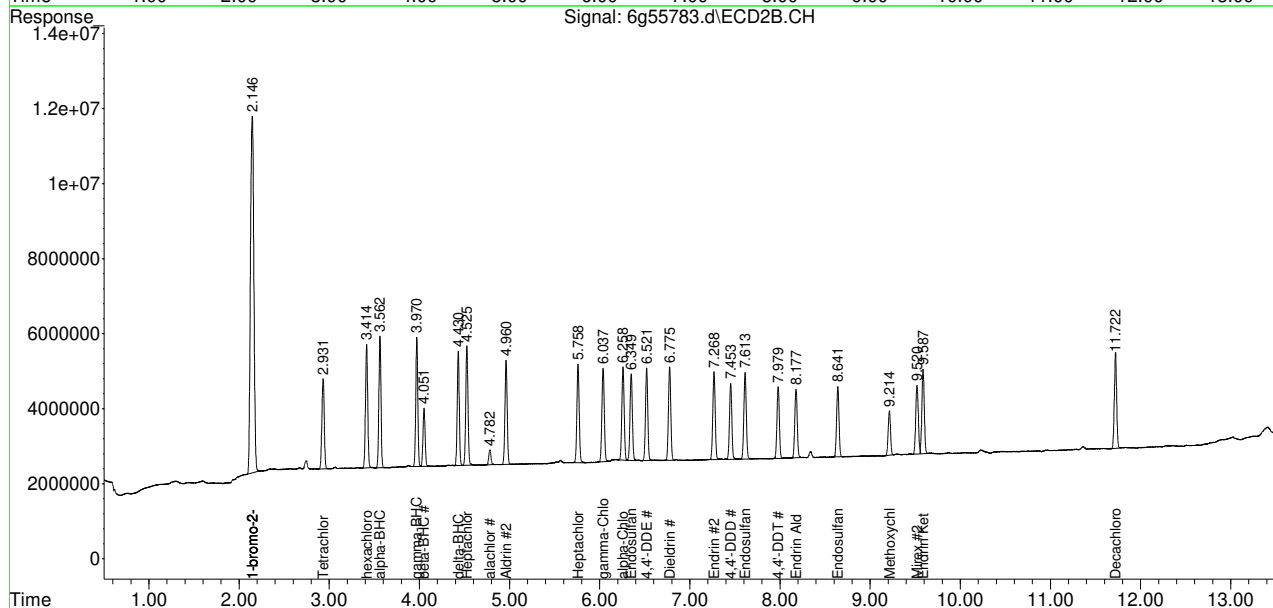
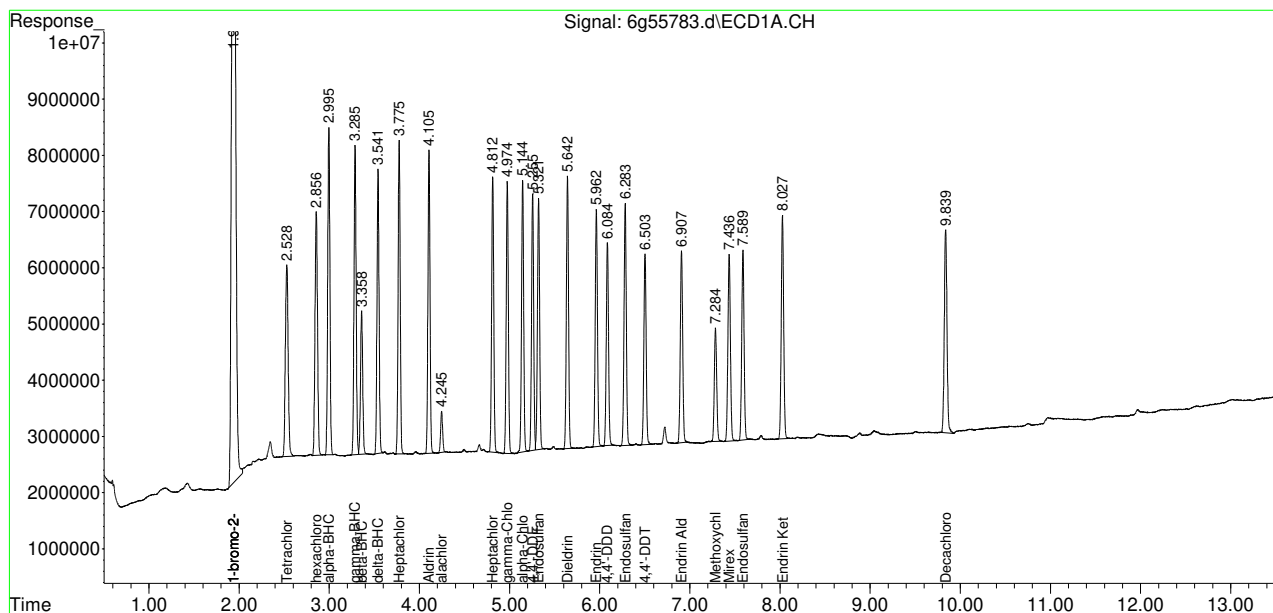
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55783.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 12:18:49
 Operator : dharas
 Sample : ic1671-10
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 12:35:55 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



11.6.4
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55784.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 12:36:33
 Operator : dharas
 Sample : icc1671-25
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 12:52:37 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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...	1.943	2.148	403.9E6	253.2E6	50.000	50.000
27)	I 1-bromo-2...	1.943	2.148	403.9E6	253.2E6	50.000	50.000
33)	I 1-bromo-2...	1.943	2.148	403.9E6	253.2E6	50.000	50.000
System Monitoring Compounds							
2)	SAB Tetrachlo...	2.530	2.932	189.1E6	114.8E6	23.658	23.388
	Spiked Amount	40.000	Range 30 - 150	Recovery =		59.15%	58.47%
26)	SA Decachlor...	9.838	11.722	184.6E6	109.7E6	24.257	25.672
	Spiked Amount	40.000		Recovery =		60.64%	64.18%
Target Compounds							
3)	hexachlor...	2.857	3.415	210.3E6	141.6E6	21.917	22.707
4)	A alpha-BHC	2.996	3.563	270.6E6	157.3E6	22.926	22.462
5)	MA gamma-BHC	3.287	3.971	249.6E6	145.6E6	23.359	22.563
6)	MA Heptachlor	3.776	4.526	236.7E6	146.0E6	25.037	24.415
7)	B beta-BHC	3.359	4.051	109.6E6	65204342	24.369	24.037
8)	B delta-BHC	3.542	4.431	226.7E6	133.1E6	23.687	22.873
9)	MB Aldrin	4.107	4.962	232.3E6	129.4E6	24.904	22.686
10)	alachlor	4.246	4.780	28340673	17039946	23.696	23.431
11)	B Heptachlo...	4.813	5.760	214.1E6	124.0E6	25.673	24.804
12)	B gamma-Chl...	4.975	6.037	212.2E6	123.6E6	25.903	25.235
13)	B alpha-Chl...	5.145	6.257	210.1E6	122.8E6	25.048	25.615
14)	A Endosulfan I	5.322	6.349	197.6E6	111.7E6	24.765	24.460
15)	B 4,4'-DDE	5.256	6.521	203.7E6	116.9E6	24.678	22.598
16)	MA Dieldrin	5.642	6.775	217.8E6	121.4E6	23.209	22.770
17)	MA Endrin	5.964	7.268	194.6E6	115.1E6	25.344	24.911
18)	A 4,4'-DDD	6.085	7.452	168.7E6	96890160	24.374	24.290
19)	B Endosulfa...	6.283	7.612	194.5E6	112.1E6	25.092	24.729
20)	MA 4,4'-DDT	6.503	7.980	162.0E6	96232017	24.375	23.954
21)	B Endrin Al...	6.907	8.177	160.7E6	89850605	25.017	24.937
22)	B Endosulfa...	7.588	8.641	159.9E6	90465081	25.757	25.546
23)	A Methoxychlor	7.285	9.213	94604672	55394201	26.255	27.313
24)	Mirex	7.436	9.520	156.3E6	89970523	24.892	24.562
25)	B Endrin Ke...	8.028	9.587	193.0E6	111.2E6	25.635	23.298
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

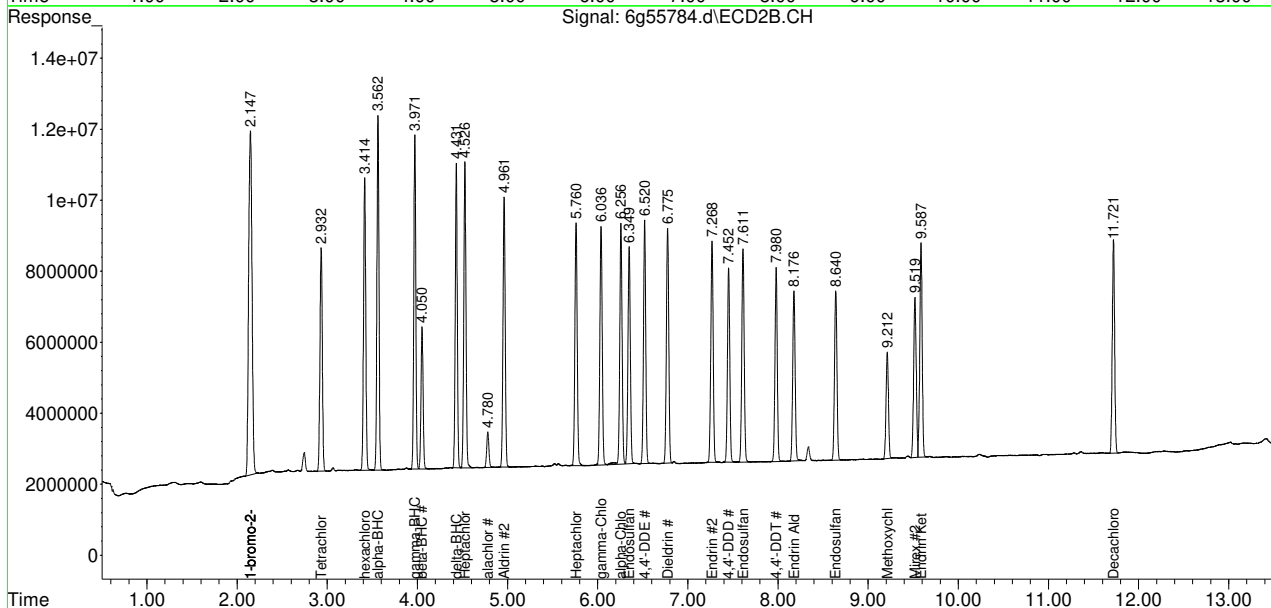
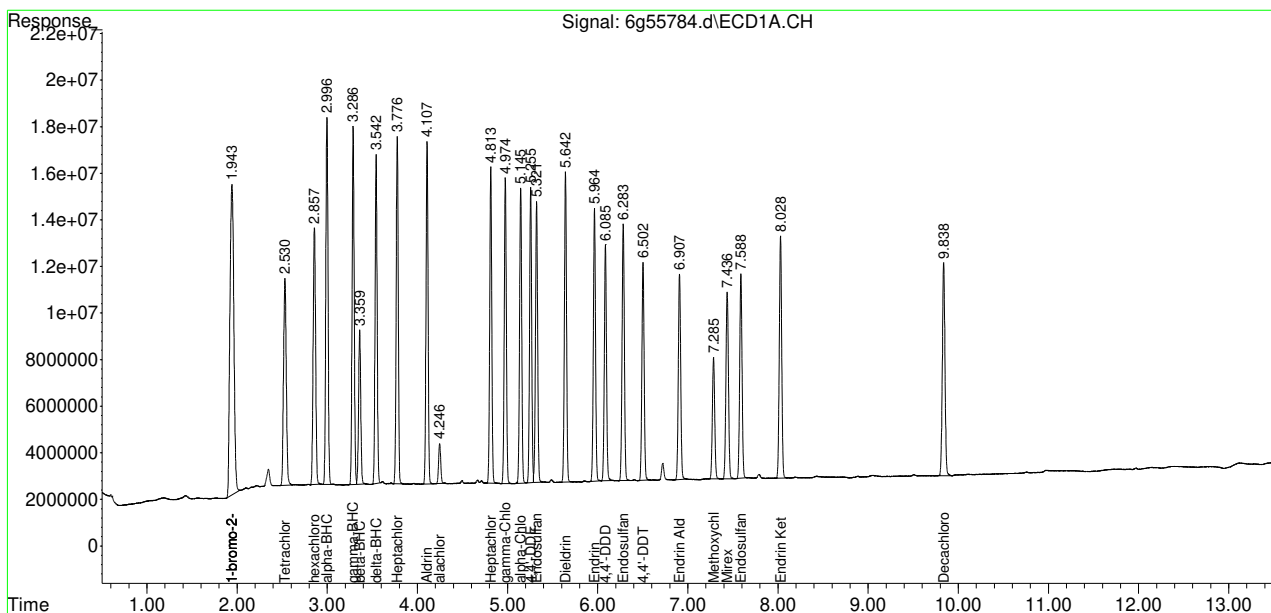
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55784.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 12:36:33
 Operator : dharas
 Sample : icc1671-25
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 12:52:37 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



11.65
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55785.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 12:54:20
 Operator : dharas
 Sample : ic1671-50
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 13:12:04 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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...	1.941	2.146	402.8E6	253.8E6	50.000	50.000
27)	I 1-bromo-2...	1.941	2.146	402.8E6	253.8E6	50.000	50.000
33)	I 1-bromo-2...	1.941	2.146	402.8E6	253.8E6	50.000	50.000
System Monitoring Compounds							
2)	SAB Tetrachlo...	2.530	2.931	391.8E6	239.9E6	49.148	48.749
	Spiked Amount	40.000	Range 30 - 150	Recovery =	122.87%	121.87%	
26)	SA Decachlor...	9.840	11.721	371.4E6	222.1E6	48.928	51.861
	Spiked Amount	40.000		Recovery =	122.32%	129.65%	
Target Compounds							
3)	hexachlor...	2.856	3.414	434.6E6	290.9E6	45.401	46.527
4)	A alpha-BHC	2.996	3.562	587.6E6	345.1E6	48.765	47.500
5)	MA gamma-BHC	3.287	3.970	533.9E6	315.2E6	49.227	47.485
6)	MA Heptachlor	3.776	4.527	503.3E6	310.9E6	53.366	51.869
7)	B beta-BHC	3.359	4.051	225.1E6	133.9E6	50.183	49.230
8)	B delta-BHC	3.541	4.431	494.7E6	294.3E6	50.196	48.598
9)	MB Aldrin	4.107	4.961	498.8E6	279.4E6	53.611	47.644
10)	alachlor	4.247	4.781	57187264	34245986	47.938	46.978
11)	B Heptachlo...	4.813	5.760	452.8E6	262.5E6	54.440	52.385
12)	B gamma-Chl...	4.975	6.038	455.0E6	262.9E6	55.687	53.553
13)	B alpha-Chl...	5.145	6.259	444.4E6	256.8E6	53.120	53.422
14)	A Endosulfan I	5.322	6.349	418.7E6	236.5E6	52.609	51.678
15)	B 4,4'-DDE	5.256	6.521	441.6E6	253.1E6	53.639	47.405
16)	MA Dieldrin	5.643	6.776	469.2E6	262.4E6	49.262	47.805
17)	MA Endrin	5.964	7.269	416.3E6	247.8E6	54.354	53.518
18)	A 4,4'-DDD	6.087	7.453	362.6E6	208.2E6	52.511	52.062
19)	B Endosulfa...	6.283	7.612	407.7E6	234.9E6	52.717	51.725
20)	MA 4,4'-DDT	6.504	7.980	350.7E6	208.2E6	51.254	49.897
21)	B Endrin Al...	6.908	8.178	336.7E6	186.3E6	52.552	51.588
22)	B Endosulfa...	7.590	8.642	335.6E6	189.5E6	54.205	53.382
23)	A Methoxychlor	7.286	9.214	193.5E6	114.0E6	53.826	56.087
24)	Mirex	7.438	9.520	316.3E6	180.6E6	50.526	49.181
25)	B Endrin Ke...	8.029	9.588	405.4E6	232.3E6	53.994	48.542
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

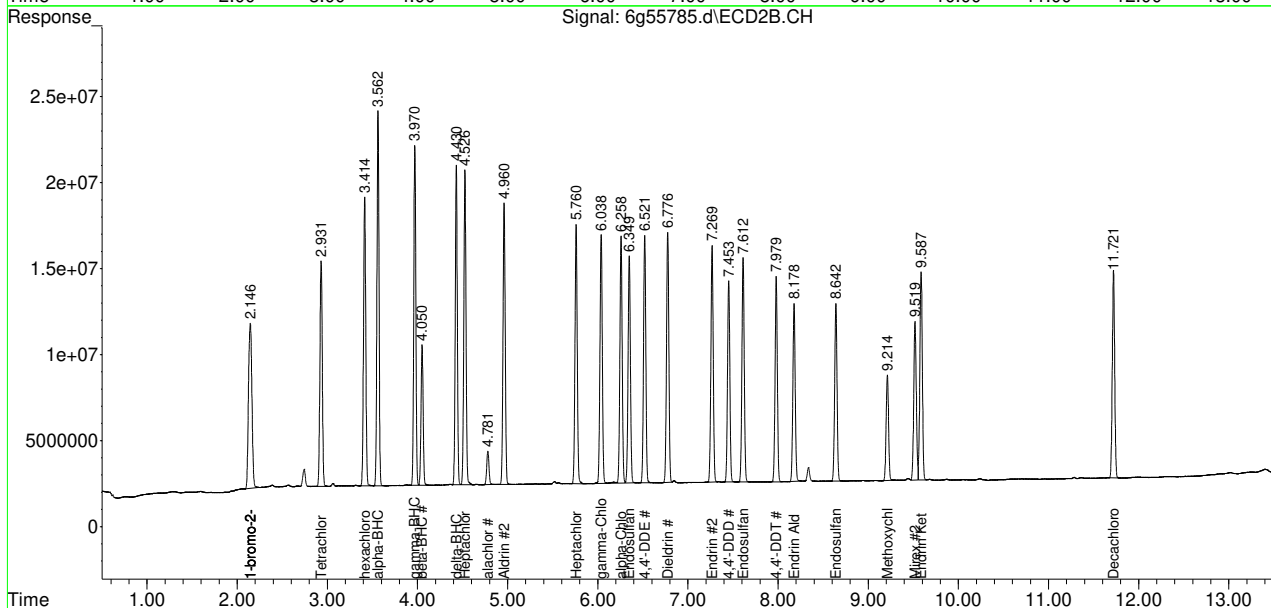
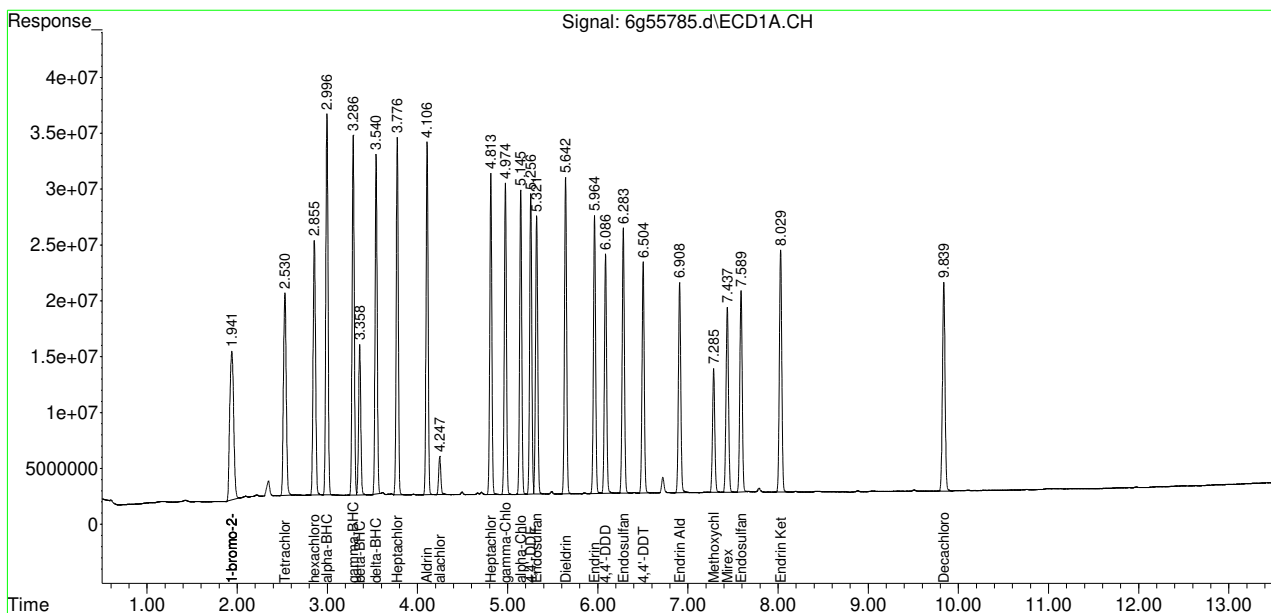
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55785.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 12:54:20
 Operator : dharas
 Sample : ic1671-50
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 13:12:04 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



11.6.6 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55786.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 13:12:12
 Operator : dharas
 Sample : ic1671-75
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 15:16:15 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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...	1.940	2.147	402.4E6	252.3E6	50.000	50.000
27) I 1-bromo-2...	1.940	2.147	402.4E6	252.3E6	50.000	50.000
33) I 1-bromo-2...	1.940	2.147	402.4E6	252.3E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.530	2.932	592.5E6	366.2E6	74.391	74.839
Spiked Amount	40.000	Range 30 - 150	Recovery = 185.98%#		187.10%#	
26) SA Decachlor...	9.838	11.721	560.5E6	335.1E6	73.925	78.714
Spiked Amount	40.000		Recovery = 184.81%		196.79%	
Target Compounds						
3) hexachlor...	2.856	3.414	660.9E6	440.8E6	69.121	70.903
4) A alpha-BHC	2.996	3.562	915.2E6	541.2E6	75.486	74.117
5) MA gamma-BHC	3.287	3.971	829.6E6	491.4E6	76.153	73.841
6) MA Heptachlor	3.776	4.526	770.2E6	479.7E6	81.759	80.487
7) B beta-BHC	3.359	4.051	342.7E6	203.1E6	76.501	75.126
8) B delta-BHC	3.542	4.431	771.7E6	463.5E6	77.628	76.076
9) MB Aldrin	4.107	4.961	769.0E6	434.3E6	82.738	73.878
10) alachlor	4.247	4.781	84755002	50870076	71.125	70.179
11) B Heptachlo...	4.814	5.760	696.9E6	403.1E6	83.881	80.918
12) B gamma-Chl...	4.975	6.037	708.7E6	406.4E6	86.840	83.258
13) B alpha-Chl...	5.145	6.258	687.6E6	390.7E6	82.275	81.734
14) A Endosulfan I	5.322	6.349	644.6E6	361.6E6	81.083	79.461
15) B 4,4'-DDE	5.256	6.520	688.1E6	395.0E6	83.668	73.707
16) MA Dieldrin	5.643	6.777	728.1E6	408.2E6	76.107	74.152
17) MA Endrin	5.964	7.268	644.5E6	386.0E6	84.236	83.833
18) A 4,4'-DDD	6.086	7.453	563.8E6	324.8E6	81.731	81.705
19) B Endosulfa...	6.284	7.612	627.2E6	360.1E6	81.195	79.731
20) MA 4,4'-DDT	6.502	7.980	551.7E6	326.6E6	79.922	77.811
21) B Endrin Al...	6.908	8.178	516.4E6	285.9E6	80.669	79.599
22) B Endosulfa...	7.589	8.642	517.8E6	292.8E6	83.719	82.961
23) A Methoxychlor	7.285	9.212	294.2E6	174.1E6	81.939	86.110
24) Mirex	7.437	9.521	481.6E6	274.2E6	77.010	75.113
25) B Endrin Ke...	8.029	9.587	621.3E6	360.6E6	82.828	75.787
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.

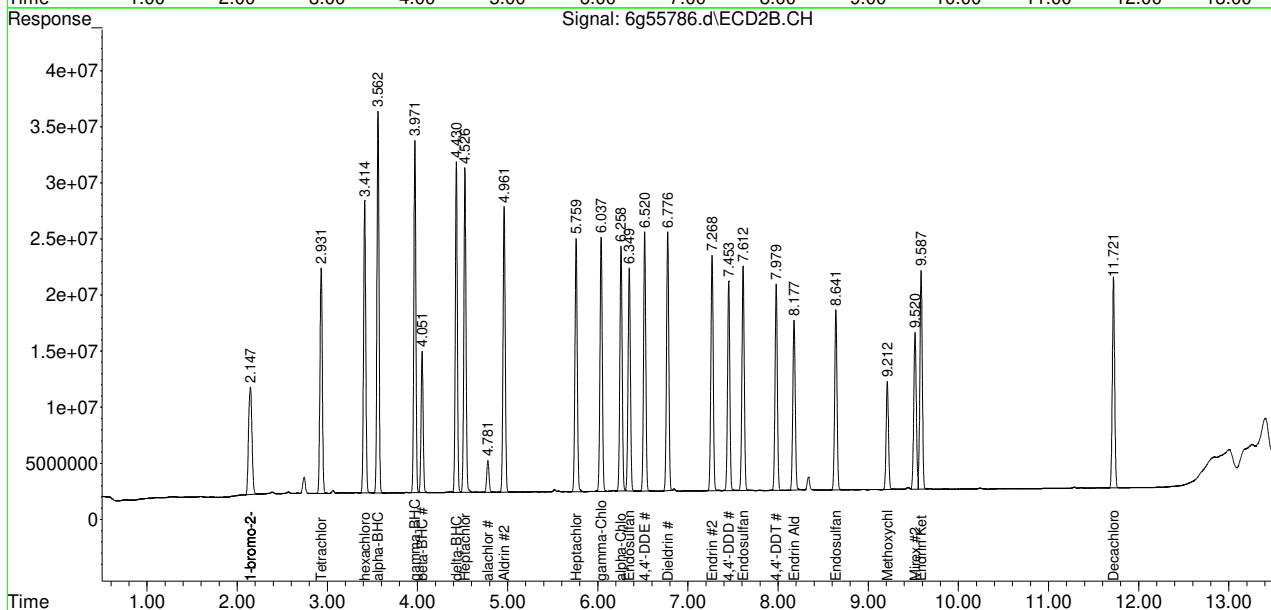
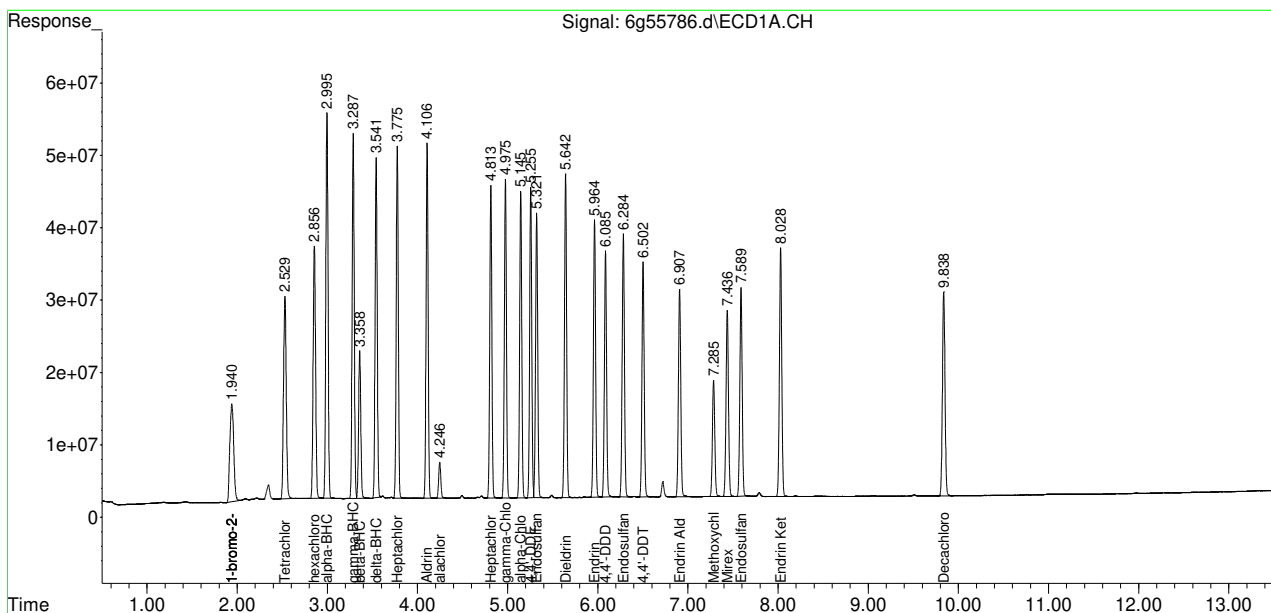
11.67
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55786.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 13:12:12
 Operator : dharas
 Sample : ic1671-75
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 15:16:15 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



11.67
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55787.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 13:29:59
 Operator : dharas
 Sample : ic1671-100
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 15:17:03 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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...	1.944	2.148	417.0E6	251.5E6	50.000	50.000
27)	I 1-bromo-2...	1.944	2.148	417.0E6	251.5E6	50.000	50.000
33)	I 1-bromo-2...	1.944	2.148	417.0E6	251.5E6	50.000	50.000
System Monitoring Compounds							
2)	SAB Tetrachlo...	2.531	2.932	840.0E6	505.2E6	101.779	103.596
	Spiked Amount	40.000	Range 30 - 150	Recovery =	254.45%#	258.99%#	
26)	SA Decachlor...	9.838	11.721	743.8E6	449.1E6	94.654	105.868
	Spiked Amount	40.000		Recovery =	236.63%	264.67%	
Target Compounds							
3)	hexachlor...	2.857	3.415	904.5E6	599.5E6	91.284	96.768
4)	A alpha-BHC	2.997	3.563	1270.8E6	749.4E6	100.818	102.449
5)	MA gamma-BHC	3.287	3.970	1141.2E6	680.0E6	100.835	102.121
6)	MA Heptachlor	3.776	4.526	1059.3E6	655.4E6	108.497	110.370
7)	B beta-BHC	3.359	4.051	467.5E6	276.4E6	100.694	102.576
8)	B delta-BHC	3.542	4.431	1078.7E6	643.2E6	104.231	105.336
9)	MB Aldrin	4.107	4.961	1055.1E6	598.7E6	109.536	101.807
10)	alachlor	4.247	4.781	111.8E6	66988013	90.544	92.743
11)	B Heptachlo...	4.813	5.760	954.9E6	552.4E6	110.900	111.262
12)	B gamma-Chl...	4.975	6.037	979.2E6	559.4E6	115.774	115.025
13)	B alpha-Chl...	5.145	6.258	947.3E6	536.2E6	109.370	112.575
14)	A Endosulfan I	5.322	6.349	882.2E6	499.7E6	107.072	110.216
15)	B 4,4'-DDE	5.256	6.520	950.7E6	545.5E6	111.548	101.681
16)	MA Dieldrin	5.642	6.776	990.4E6	565.3E6	99.668	102.626
17)	MA Endrin	5.963	7.268	874.7E6	528.2E6	110.318	115.143
18)	A 4,4'-DDD	6.086	7.453	767.0E6	447.3E6	107.297	112.896
19)	B Endosulfa...	6.284	7.612	848.5E6	492.0E6	105.985	109.316
20)	MA 4,4'-DDT	6.502	7.980	753.3E6	452.9E6	104.858	107.686
21)	B Endrin Al...	6.907	8.177	694.6E6	389.2E6	104.710	108.743
22)	B Endosulfa...	7.588	8.641	701.2E6	400.2E6	109.403	113.776
23)	A Methoxychlor	7.285	9.212	394.1E6	234.8E6	105.937	116.540
24)	Mirex	7.436	9.520	644.4E6	369.5E6	99.428	101.555
25)	B Endrin Ke...	8.028	9.586	838.0E6	490.4E6	107.799	103.418
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

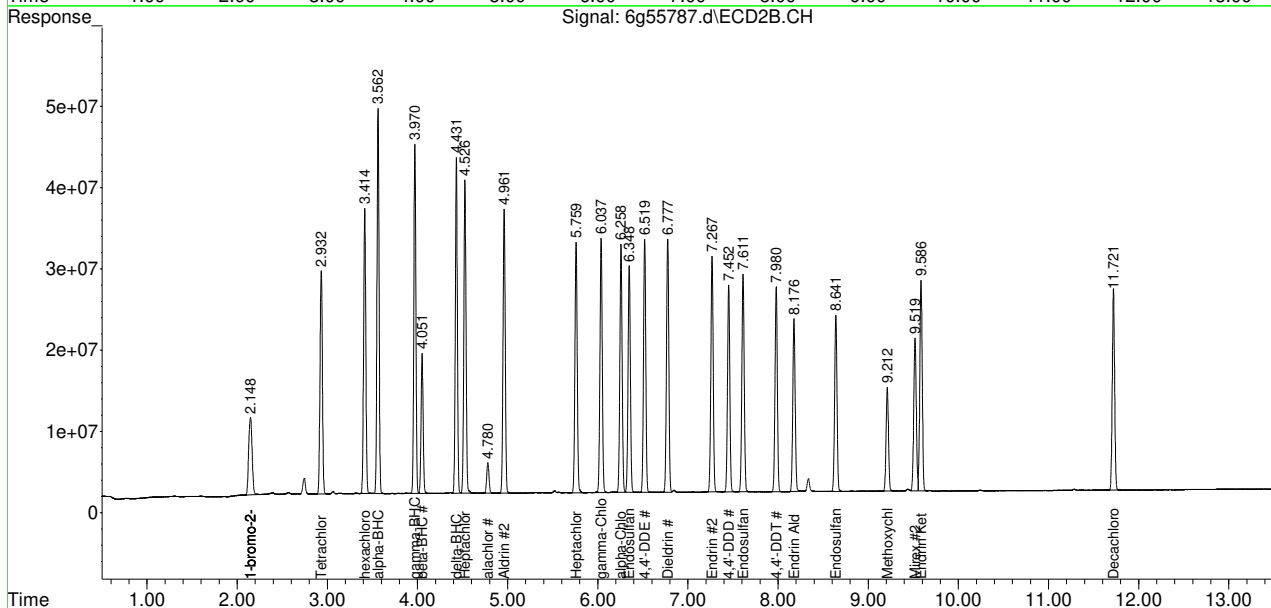
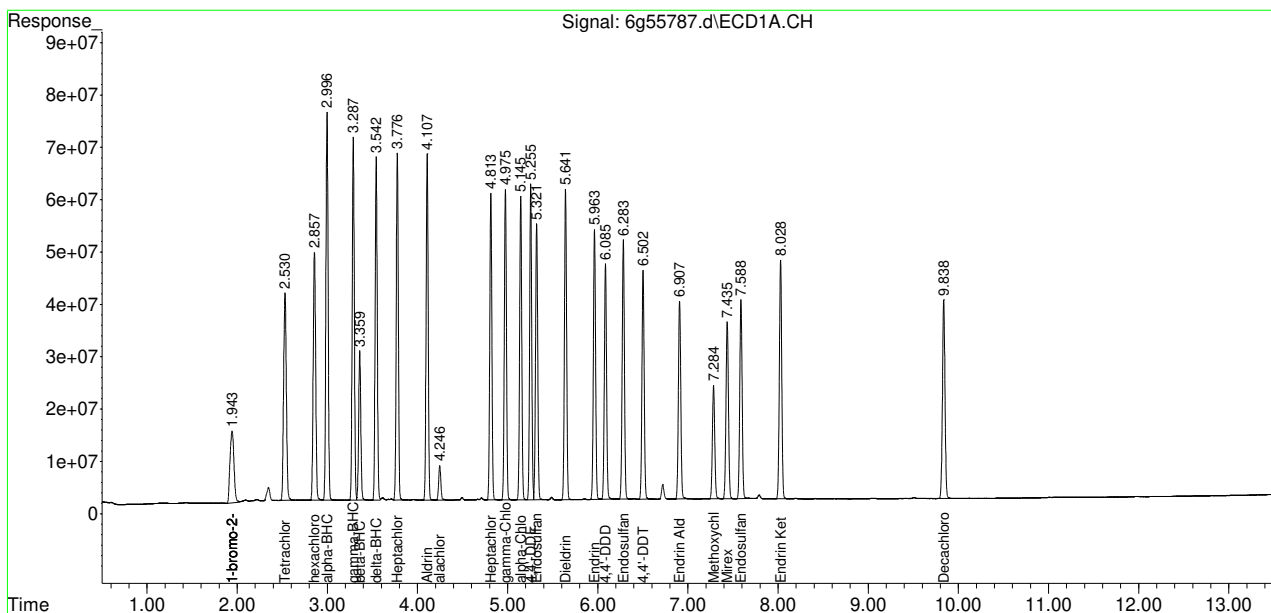
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55787.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 13:29:59
 Operator : dharas
 Sample : ic1671-100
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 15:17:03 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



11.6.8
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55788.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 13:47:47 (#1); 30-Apr-18, 13:47:46 (#2)
 Operator : dharas
 Sample : ic1671-500
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:25:49 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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...	1.944	2.148	409.6E6	252.6E6	50.000	50.000
27)	I 1-bromo-2...	1.944	2.148	409.6E6	252.6E6	50.000	50.000
33)	I 1-bromo-2...	1.944	2.148	409.6E6	252.6E6	50.000	50.000
System Monitoring Compounds							
2)	SAB Tetrachlo...	2.531f	2.933	389.1E6	228.0E6	47.992	46.540
	Spiked Amount	40.000	Range 30 - 150	Recovery =	119.98%	116.35%	
26)	SA Decachlor...	9.838	11.722f	351.2E6	206.2E6	45.509	48.373
	Spiked Amount	40.000		Recovery =	113.77%	120.93%	
Target Compounds							
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
34)	Chlordane...	3.776	4.526	220.7E6	136.8E6	497.720	487.961
35)	Chlordane...	4.250	5.150	183.3E6	100.4E6	481.316	486.126
36)	Chlordane...	4.975	6.037	592.7E6	319.3E6	506.778	487.790
37)	Chlordane...	5.139	6.258	932.0E6	520.1E6	496.185	488.099m
38)	Chlordane...	6.024	7.396	105.2E6	54285316	450.659	528.699

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

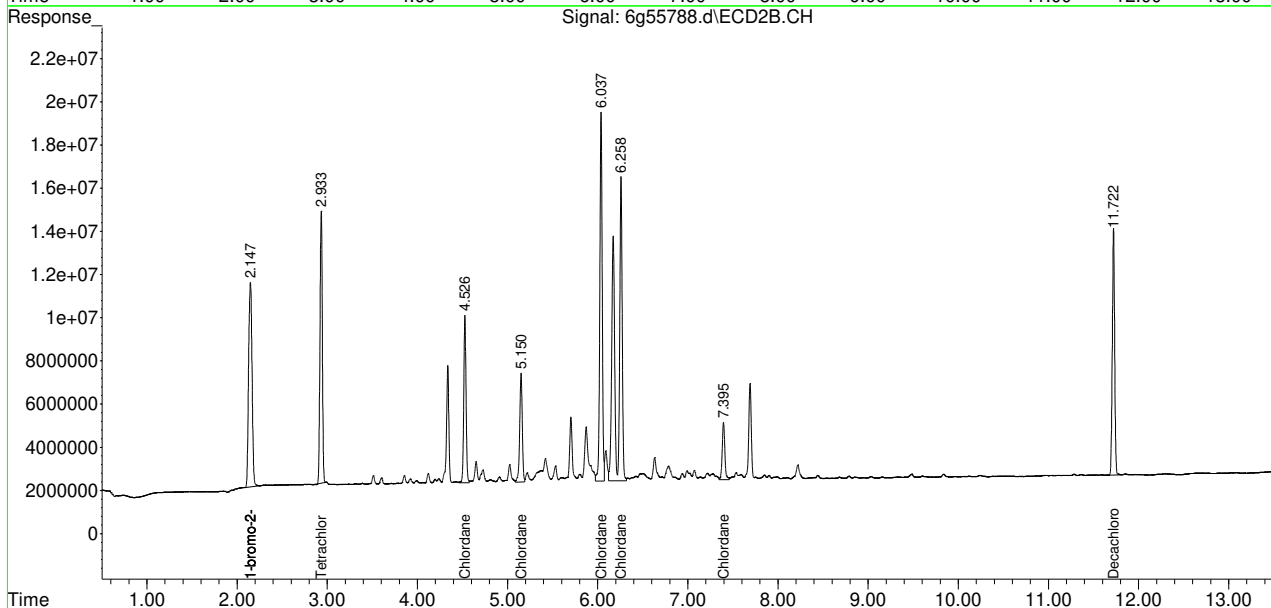
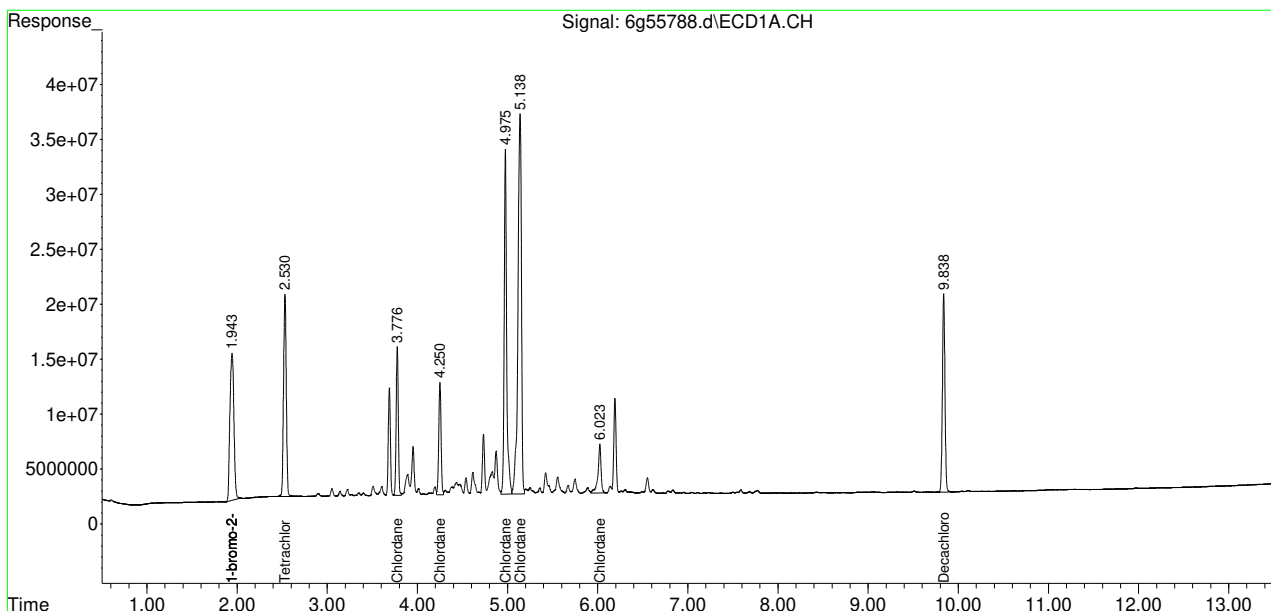
11.69
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55788.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 13:47:47 (#1); 30-Apr-18, 13:47:46 (#2)
 Operator : dharas
 Sample : ic1671-500
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:25:49 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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



11.6.9
11

Manual Integration Approval Summary

Sample Number: G6G1671-IC1671 Method: EPA 608
Lab FileID: 6G55788.D Analyst approved: 04/30/18 17:28 Rebecca Krug
Injection Time: 04/30/18 13:47 Supervisor approved: 05/01/18 08:39 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlordane-D		2	6.26	Split peak

11.6.9.1

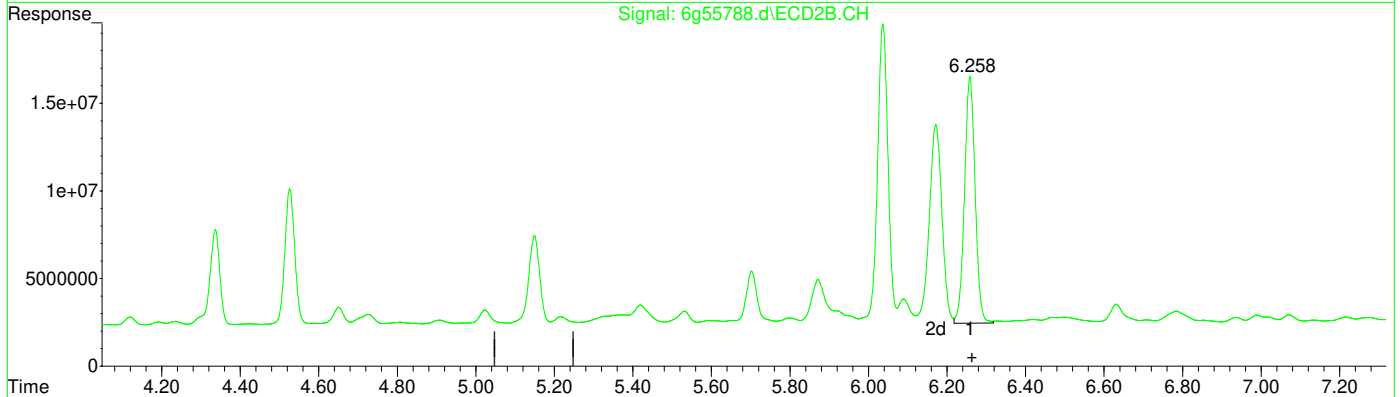
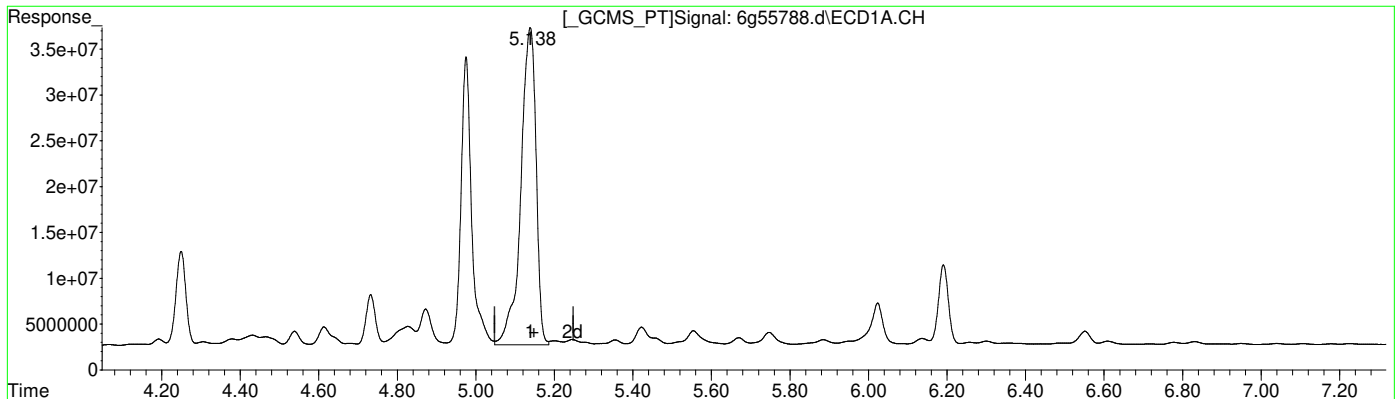
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55788.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 13:47:47 (#1); 30-Apr-18, 13:47:46 (#2)
 Operator : dharas
 Sample : ic1671-500
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:25:19 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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}
 5.139min 496.185 PPB
 response 931959641

(37) Chlordane {D} #2
 6.258min 247.455 PPB
 response 263691638

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:25:39 2018

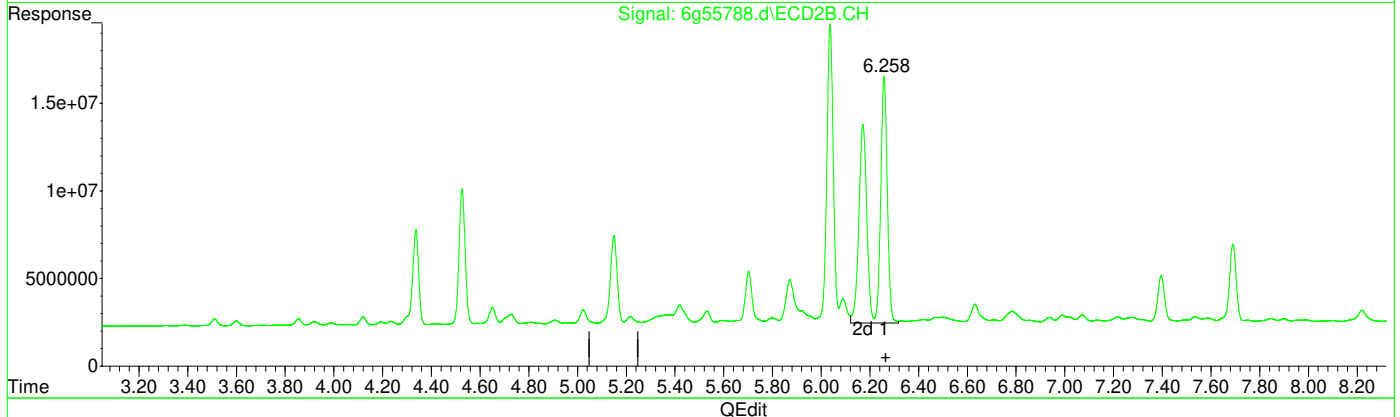
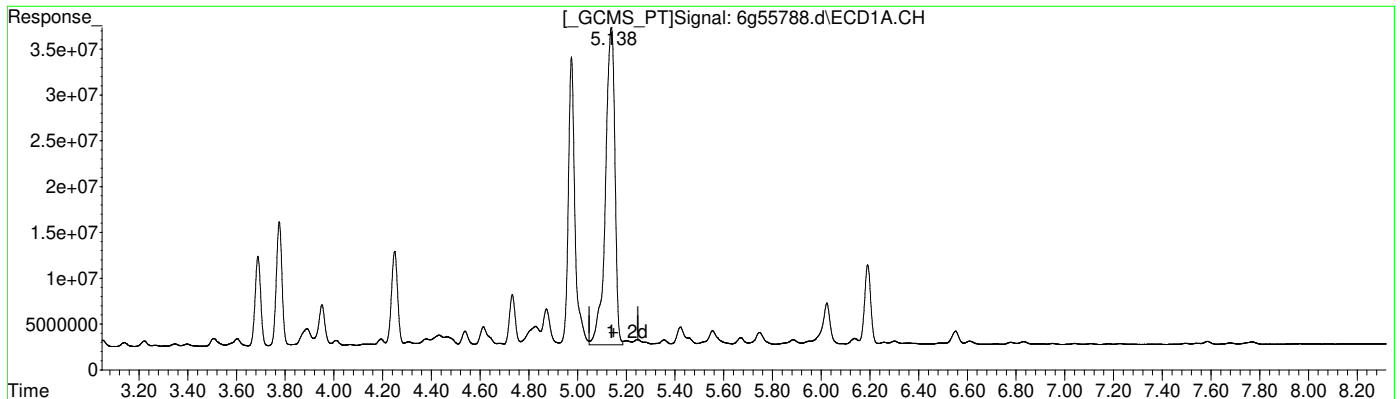
11.6.9.2
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55788.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 13:47:47 (#1); 30-Apr-18, 13:47:46 (#2)
 Operator : dharas
 Sample : ic1671-500
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:25:19 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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}
 5.139min 496.185 PPB
 response 931959641

(37) Chlordane {D} #2
 6.258min 488.099 PPB m
 response 520124161

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:25:51 2018

11.6.9.3
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55789.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 14:05:32
 Operator : dharas
 Sample : ic1671-500
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:26:17 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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...	1.940	2.144	402.5E6	250.1E6	50.000	50.000
27) I 1-bromo-2...	1.940	2.144	402.5E6	250.1E6	50.000	50.000
33) I 1-bromo-2...	1.940	2.144	402.5E6	250.1E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.528f	2.931	385.1E6	233.3E6	48.334	48.108
Spiked Amount	40.000	Range	30 - 150	Recovery	= 120.84%	120.27%
26) SA Decachlor...	9.837	11.722f	358.9E6	213.2E6	47.319	50.528
Spiked Amount	40.000		Recovery	= 118.30%	126.32%	
Target Compounds						
28) L8 Toxaphene{A}	5.652	6.741	63726000	48141894	470.271	486.445
29) L8 Toxaphene{B}	6.272	7.583	164.9E6	62990732	478.558	515.469
30) L8 Toxaphene{C}	6.447	7.744	133.5E6	117.7E6	480.051	512.531
31) L8 Toxaphene{D}	6.787	8.178	104.7E6	65399372	492.281	529.767
32) L8 Toxaphene{E}	7.434	9.066	107.3E6	58569705	475.346	551.126
Sum Toxaphene			574.1E6	352.8E6	2396.507	2595.337
Average Toxaphene					479.301	519.067

SemiQuant Compounds - Not Calibrated on this Instrument

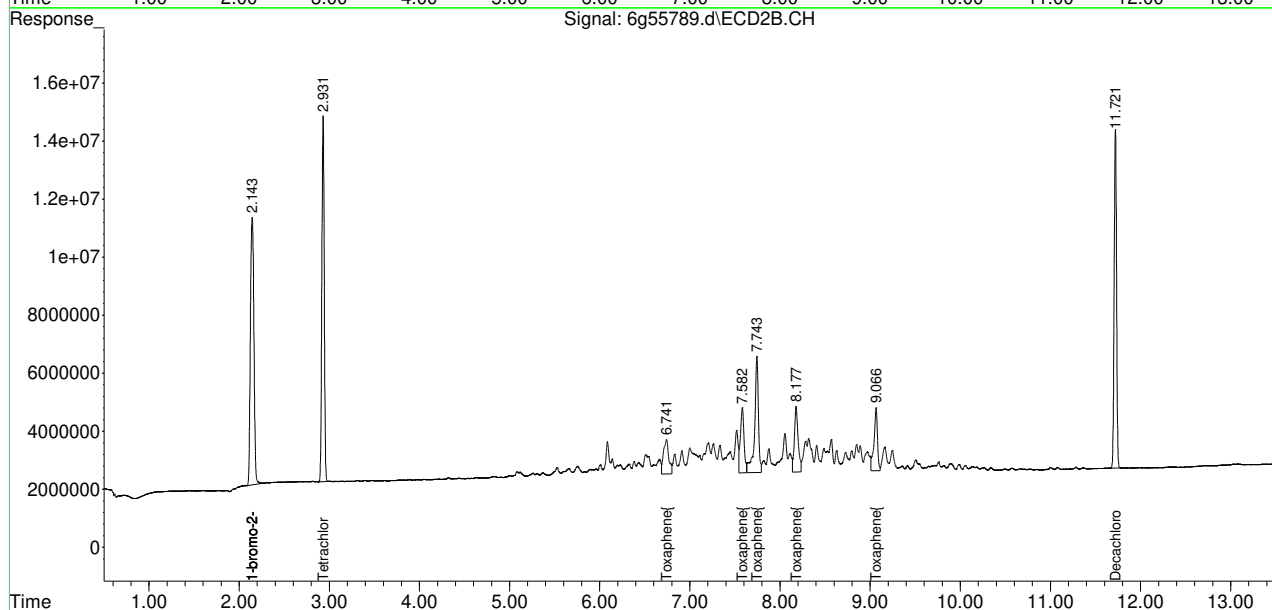
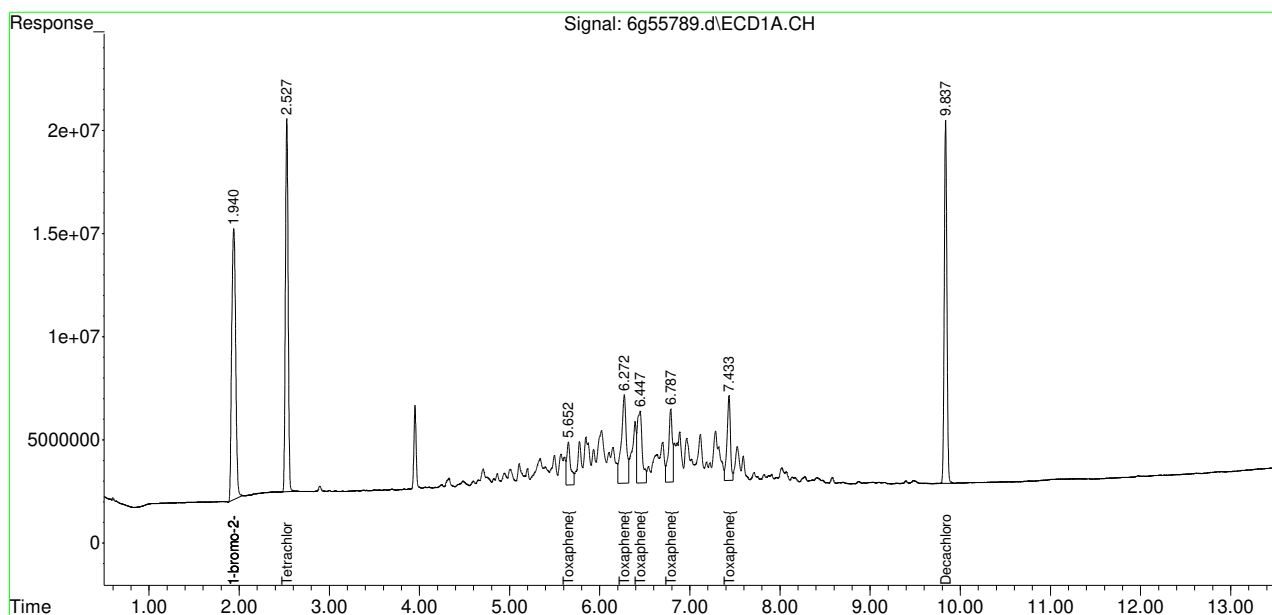
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55789.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 14:05:32
 Operator : dharas
 Sample : ic1671-500
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:26:17 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 12:31:07 2018
 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\G6G1671\
 Data File : 6g55790.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 14:23:25
 Operator : dharas
 Sample : icv1671-25
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:35:31 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 17:34:19 2018
 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...	1.944	2.148	411.1E6	251.8E6	50.000	50.000
27) I 1-bromo-2...	1.944	2.148	411.1E6	251.8E6	50.000	50.000
33) I 1-bromo-2...	1.944	2.148	411.1E6	251.8E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.531f	2.932	207.5E6	122.5E6	25.973	26.117
Spiked Amount	40.000	Range	30 - 150	Recovery	= 64.93%	65.29%
26) SA Decachlor...	9.838	11.721f	210.6E6	125.7E6	25.863	26.862
Spiked Amount	40.000		Recovery	= 64.66%	67.16%	
Target Compounds						
4) A alpha-BHC	2.997	3.562	322.9E6	183.7E6	29.343	29.437
5) MA gamma-BHC	3.288	3.970	293.2E6	168.3E6	28.137	28.750
6) MA Heptachlor	3.776	4.526	279.9E6	168.9E6	28.431	28.370
7) B beta-BHC	3.359	4.051	129.1E6	74696741	27.709	27.787
8) B delta-BHC	3.542	4.431	274.2E6	157.4E6	29.848	28.968
9) MB Aldrin	4.107	4.962	272.6E6	148.5E6	28.503	28.338
11) B Heptachlo...	4.813	5.760	253.5E6	143.9E6	28.660	28.405
12) B gamma-Chl...	4.975	6.038	259.3E6	146.5E6	29.751	29.502
13) B alpha-Chl...	5.145	6.258	252.7E6	141.2E6	28.321	29.223
14) A Endosulfan I	5.321	6.348	242.4E6	134.3E6	29.149	29.076
15) B 4,4'-DDE	5.256	6.520	246.2E6	138.1E6	28.978	29.423
16) MA Dieldrin	5.643	6.775	260.9E6	143.1E6	28.964	28.865
17) MA Endrin	5.963	7.267	236.9E6	138.6E6	29.058	28.480
18) A 4,4'-DDD	6.086	7.452	205.3E6	116.2E6	29.174	28.741
19) B Endosulfa...	6.283	7.613	227.5E6	128.6E6	26.309	26.115
20) MA 4,4'-DDT	6.503	7.979	191.2E6	111.7E6	28.341	28.613
21) B Endrin Al...	6.908	8.178	192.6E6	106.1E6	28.129	28.381
22) B Endosulfa...	7.589	8.641	197.7E6	110.2E6	29.161	29.415
23) A Methoxychlor	7.285	9.212f	109.9E6	64907034	27.300	29.272
24) Mirex	7.437	9.519f	182.1E6	103.7E6	26.588	27.613
25) B Endrin Ke...	8.028	9.587f	227.6E6	129.5E6	28.221	26.092
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

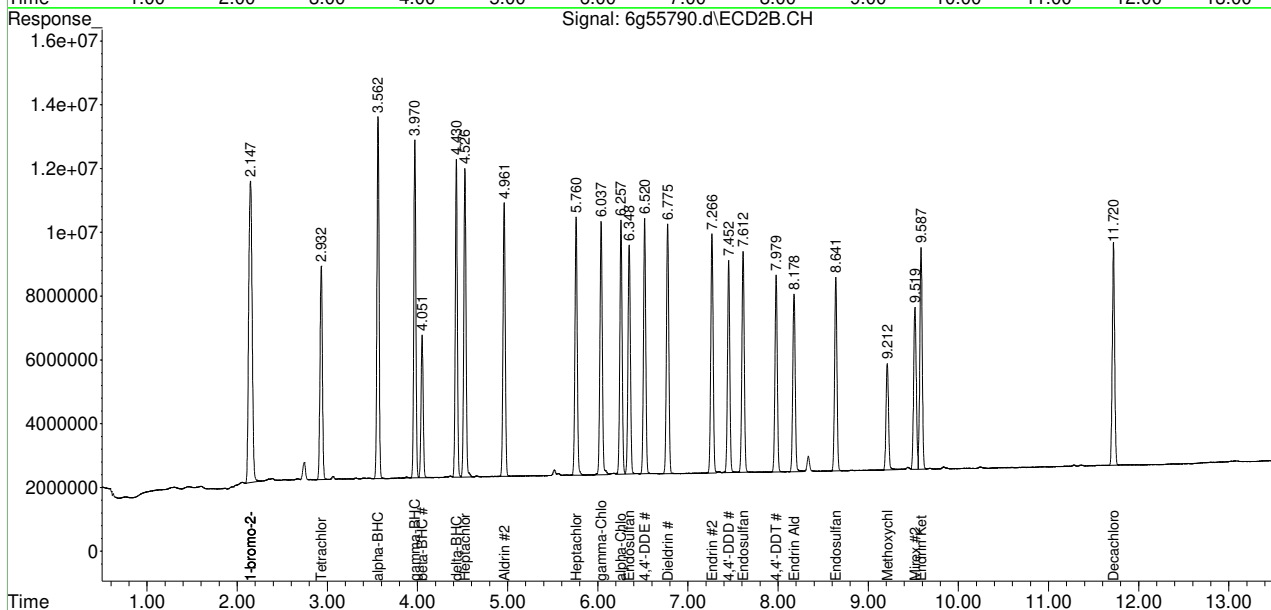
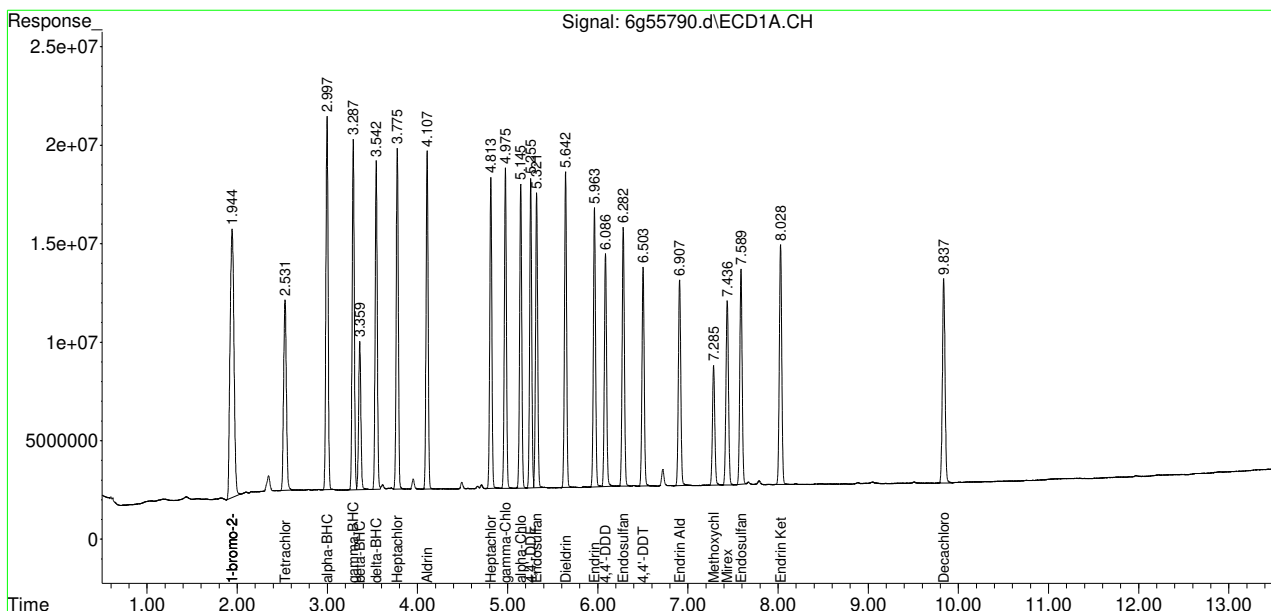
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55790.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 14:23:25
 Operator : dharas
 Sample : icv1671-25
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:35:31 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 17:34:19 2018
 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



11.6.11 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55791.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 14:41:11
 Operator : dharas
 Sample : icv1671-500
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:36:45 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 17:34:19 2018
 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...	1.942	2.146	407.7E6	250.4E6	50.000	50.000
27) I 1-bromo-2...	1.942	2.146	407.7E6	250.4E6	50.000	50.000
33) I 1-bromo-2...	1.942	2.146	407.7E6	250.4E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.530f	2.931	411.0E6	218.2E6	51.869	46.771
Spiked Amount	40.000	Range 30 - 150	Recovery =	129.67%	116.93%	
26) SA Decachlor...	9.837	11.720f	363.7E6	218.5E6	45.037	46.960
Spiked Amount	40.000		Recovery =	112.59%	117.40%	
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000
34) Chlordane...	3.775	4.526	257.4E6	159.1E6	585.844	586.613
35) Chlordane...	4.249	5.149	160.5E6	89465464	439.833	449.292
36) Chlordane...	4.974	6.036	589.8E6	319.4E6	499.827	504.498
37) Chlordane...	5.137	6.257	938.1E6	520.9E6	505.638	505.179m
38) Chlordane...	6.022	7.396	115.3E6	58460674	550.893	543.198

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

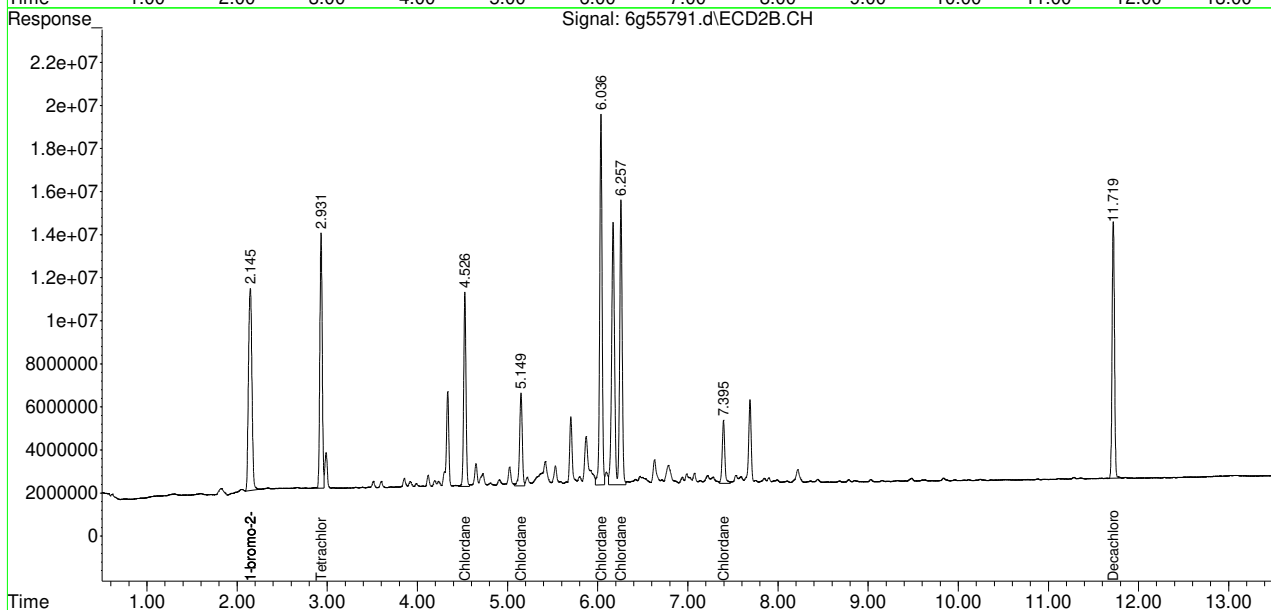
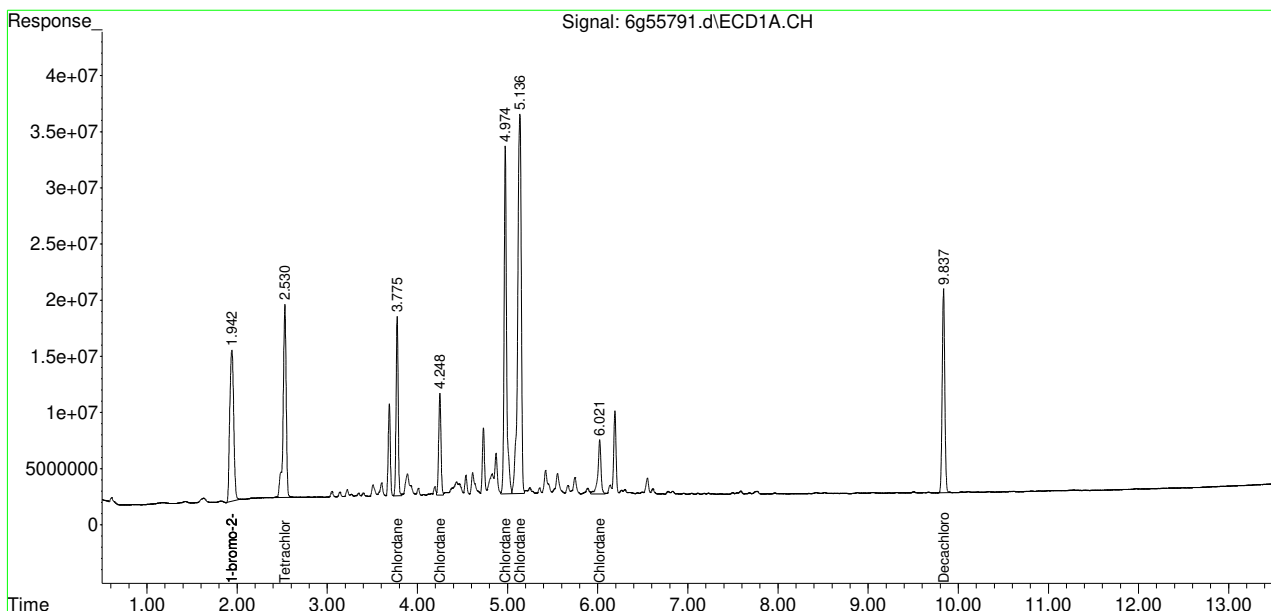
11.6.12
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55791.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 14:41:11
 Operator : dharas
 Sample : icv1671-500
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:36:45 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 17:34:19 2018
 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



11.6.12
11

Manual Integration Approval Summary

Sample Number: G6G1671-ICV1671 Method: EPA 608
Lab FileID: 6G55791.D Analyst approved: 04/30/18 17:41 Rebecca Krug
Injection Time: 04/30/18 14:41 Supervisor approved: 05/01/18 08:39 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlordane-D		2	6.26	Split peak

11.6.12.1

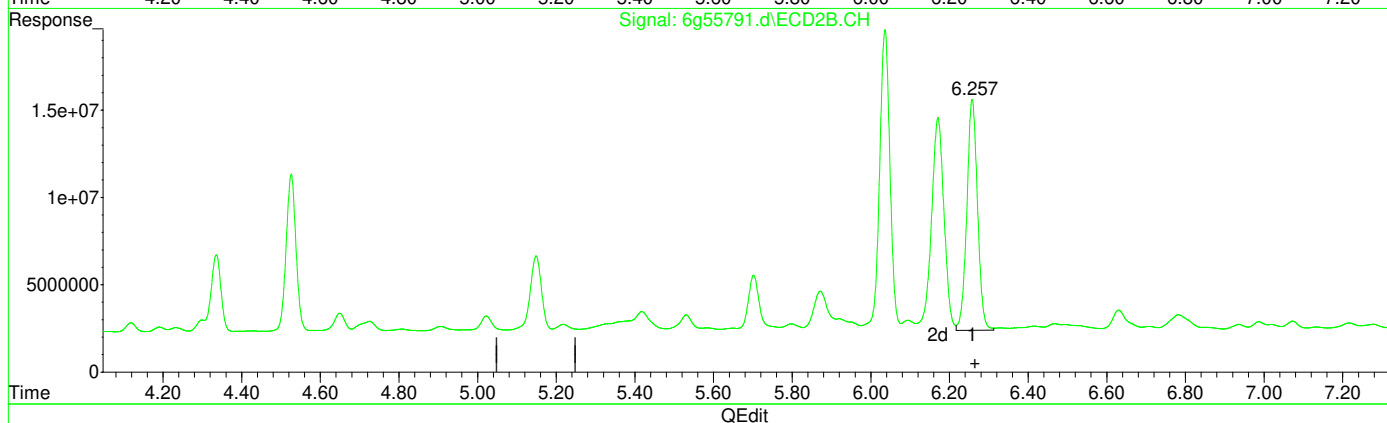
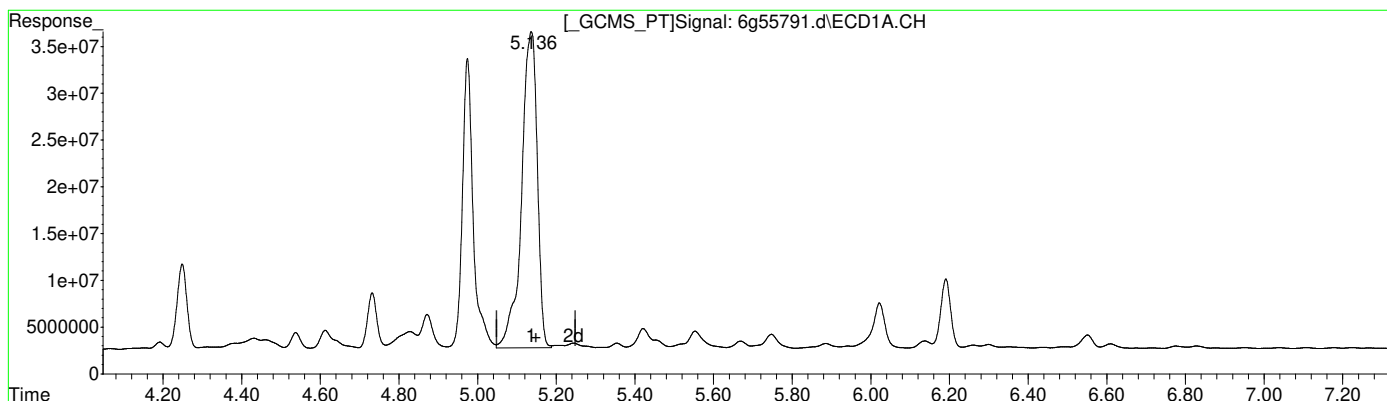
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55791.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 14:41:11
 Operator : dharas
 Sample : icv1671-500
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:36:17 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 17:34:19 2018
 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}
 5.137min 505.638 PPB
 response 938058658

(37) Chlordane {D} #2
 6.258min 242.281 PPB
 response 249833522

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:36:36 2018

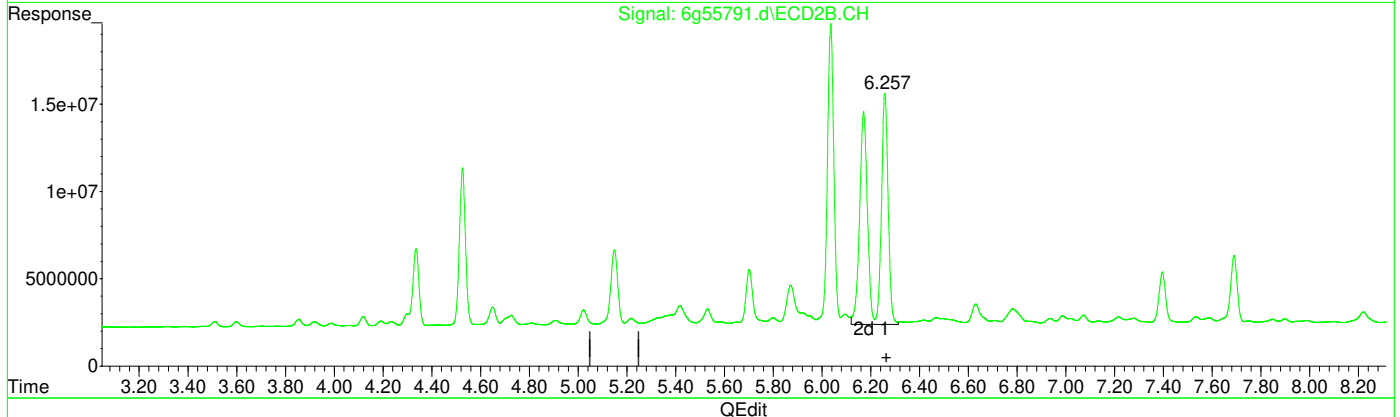
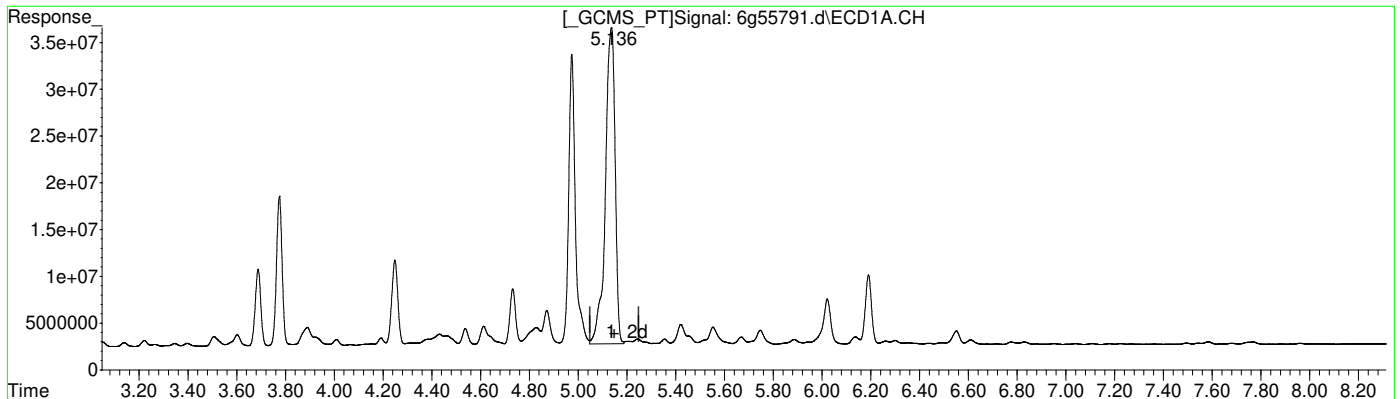
11.6.122
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55791.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 14:41:11
 Operator : dharas
 Sample : icv1671-500
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:36:17 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 17:34:19 2018
 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}
 5.137min 505.638 PPB
 response 938058658

(37) Chlordane {D} #2
 6.257min 505.179 PPB m
 response 520925906

(+) = Expected Retention Time
 6PST1671.M Mon Apr 30 17:36:48 2018

11.6.123
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55792.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 14:58:58 (#1); 30-Apr-18, 14:58:59 (#2)
 Operator : dharas
 Sample : icv1671-500
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:37:19 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 17:34:19 2018
 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...	1.941	2.147	408.9E6	251.5E6	50.000	50.000
27) I 1-bromo-2...	1.941	2.147	408.9E6	251.5E6	50.000	50.000
33) I 1-bromo-2...	1.941	2.147	408.9E6	251.5E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.530f	2.932	369.1E6	222.1E6	46.431	47.419
Spiked Amount	40.000	Range 30 - 150	Recovery =	116.08%	118.55%	
26) SA Decachlor...	9.838	11.721f	372.5E6	218.4E6	45.973	46.754
Spiked Amount	40.000		Recovery =	114.93%	116.88%	
Target Compounds						
28) L8 Toxaphene{A}	5.651	6.742	68187525	51807953	526.609	535.174
29) L8 Toxaphene{B}	6.273	7.584	178.6E6	64306737	532.864	507.694
30) L8 Toxaphene{C}	6.451	7.745	142.5E6	114.9E6	525.467	485.546
31) L8 Toxaphene{D}	6.788	8.180	107.9E6	67815668	507.287	515.678
32) L8 Toxaphene{E}	7.434	9.067	118.3E6	59104825	542.622	501.848
Sum Toxaphene			615.4E6	357.9E6	2634.849	2545.939
Average Toxaphene					526.970	509.188

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

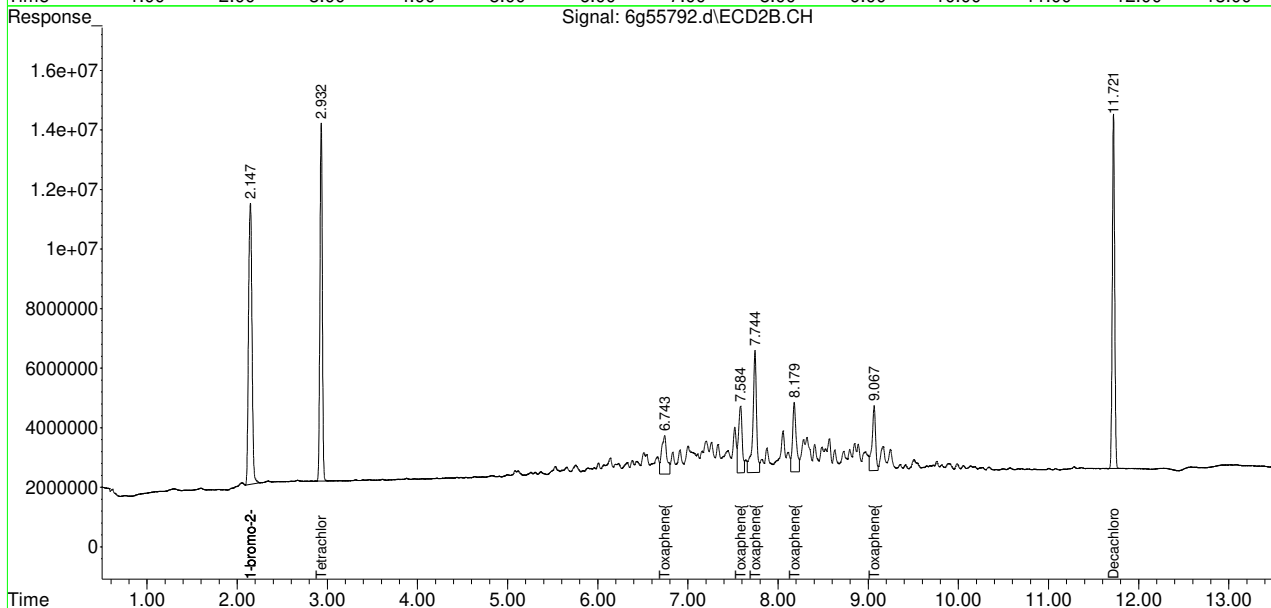
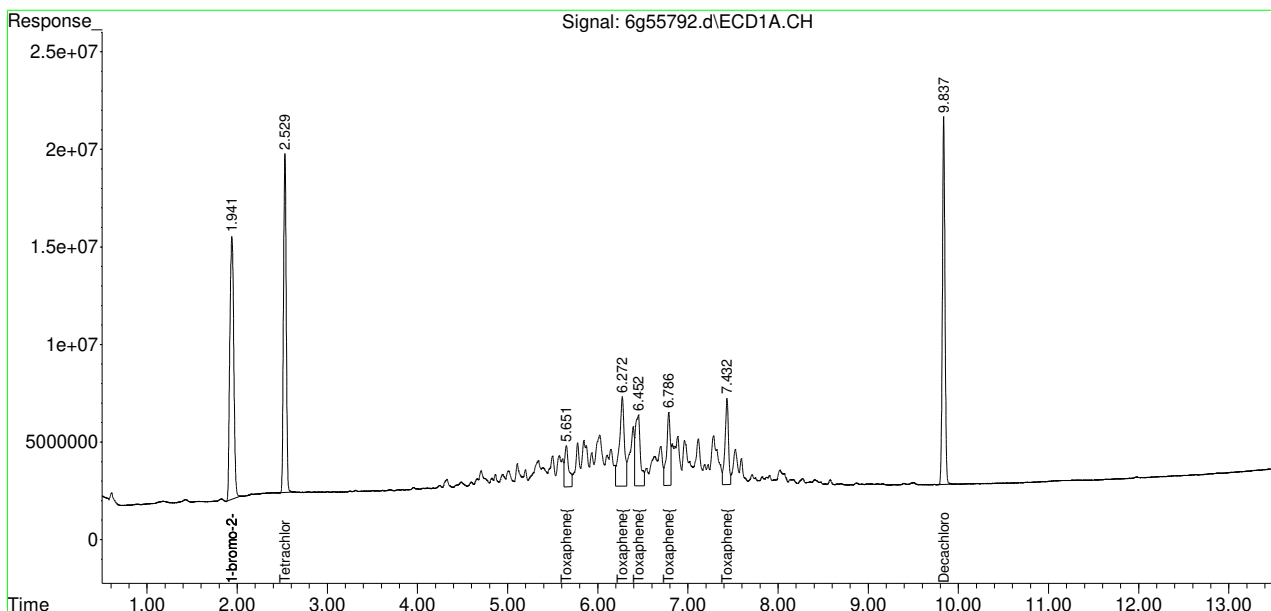
11.6.13
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55792.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 14:58:58 (#1); 30-Apr-18, 14:58:59 (#2)
 Operator : dharas
 Sample : icv1671-500
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:37:19 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 17:34:19 2018
 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



11.6.13 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55793.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 15:16:44
 Operator : dharas
 Sample : icv1671-50
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:37:44 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 17:34:19 2018
 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...	1.944	2.147	404.4E6	249.7E6	50.000	50.000
27) I 1-bromo-2...	1.944	2.147	404.4E6	249.7E6	50.000	50.000
33) I 1-bromo-2...	1.944	2.147	404.4E6	249.7E6	50.000	50.000

System Monitoring Compounds

Target Compounds	RT#1	RT#2	62483950	37384080	55.052	54.288
10)alachlor	4.247	4.781	62483950	37384080	55.052	54.288
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.

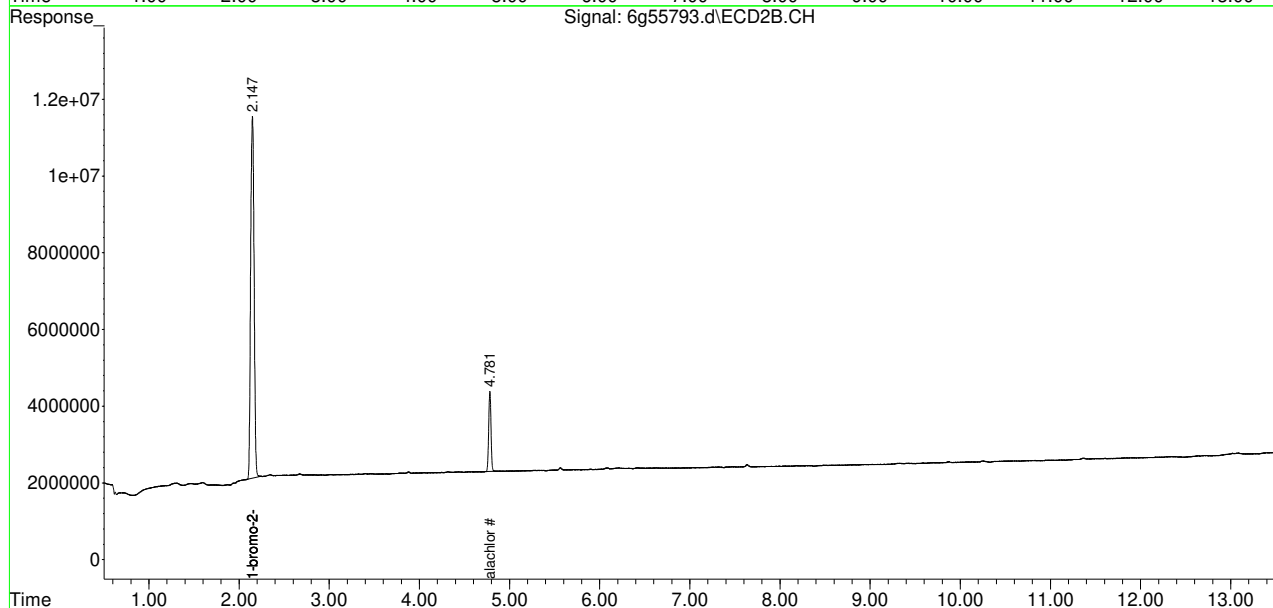
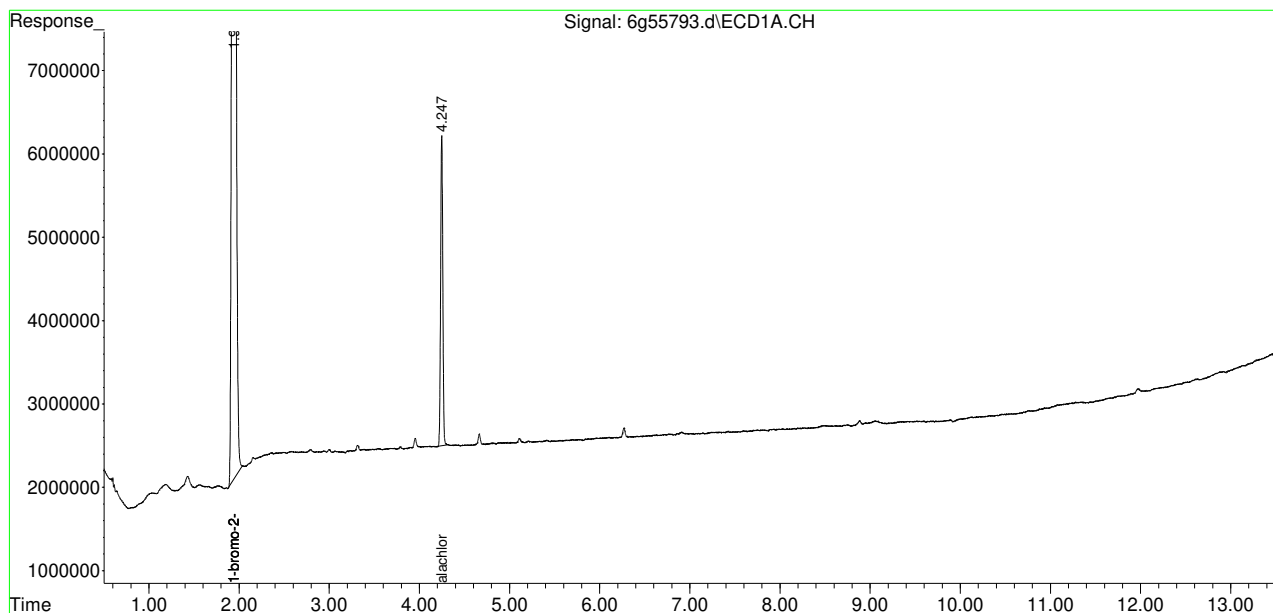
11.6.14
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55793.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 15:16:44
 Operator : dharas
 Sample : icv1671-50
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:37:44 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 17:34:19 2018
 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



11.6.14 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55794.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 15:34:38
 Operator : dharas
 Sample : icv1671-50
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:38:08 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 17:34:19 2018
 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...	1.942	2.147	413.6E6	254.0E6	50.000	50.000
27) I 1-bromo-2...	1.942	2.147	413.6E6	254.0E6	50.000	50.000
33) I 1-bromo-2...	1.942	2.147	413.6E6	254.0E6	50.000	50.000

System Monitoring Compounds

Target Compounds	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
3) hexachlor...	2.856	3.414	444.9E6	289.2E6	49.576	48.749
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.

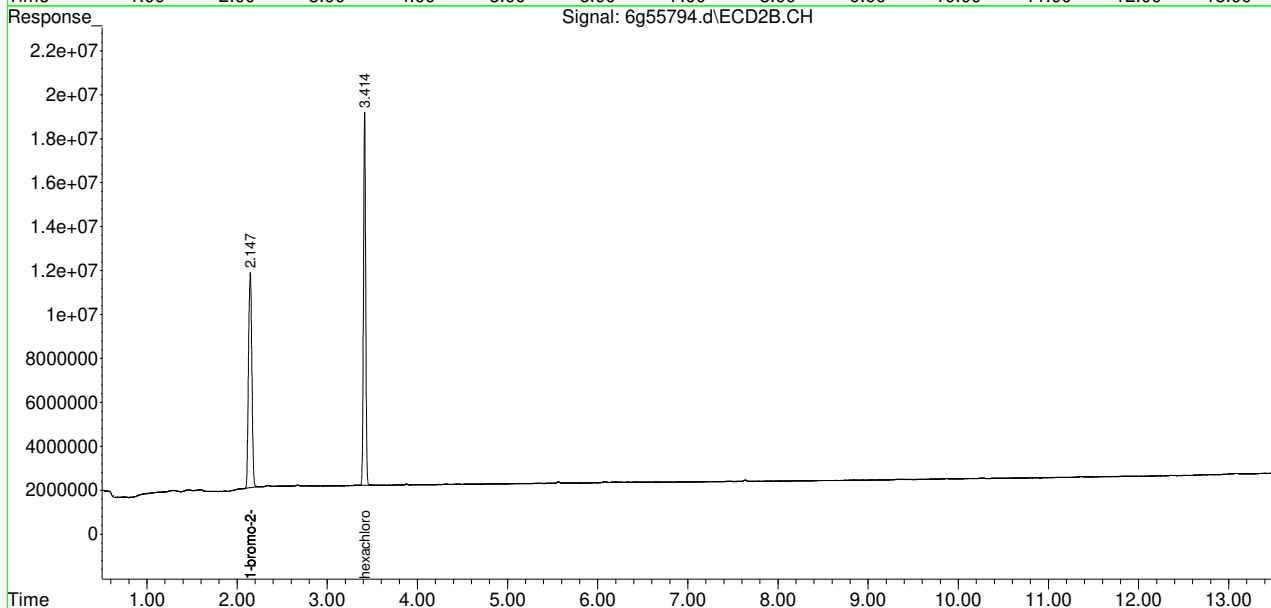
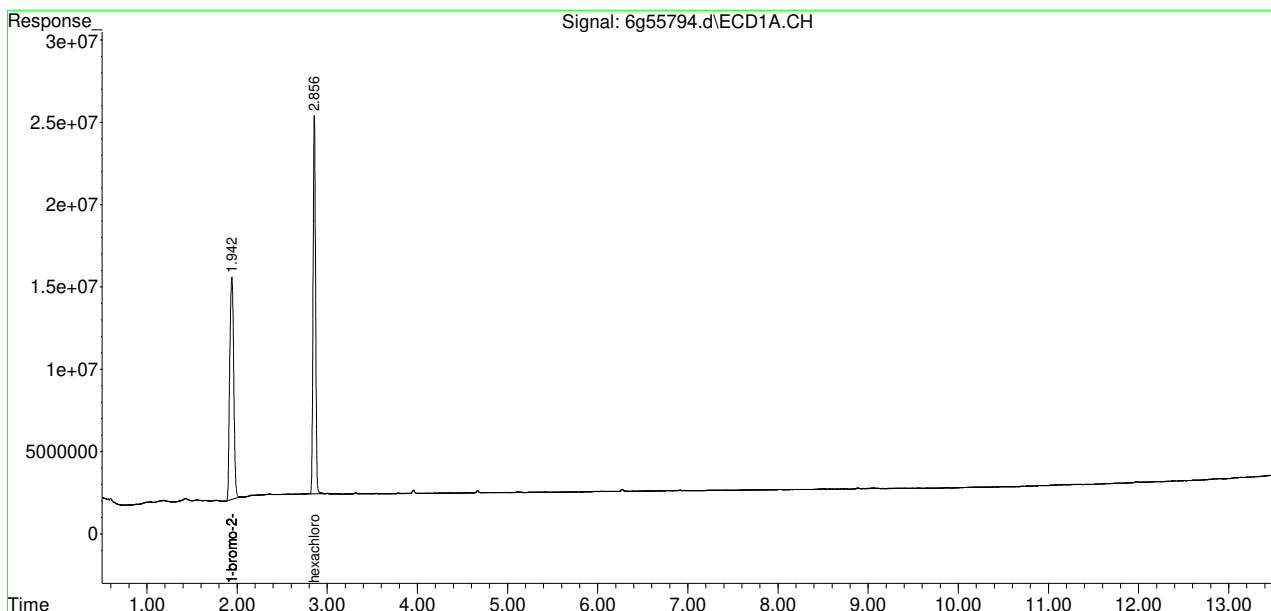
11.6.15
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1671\
 Data File : 6g55794.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 30-Apr-18, 15:34:38
 Operator : dharas
 Sample : icv1671-50
 Misc : OP11619,g6g1671,1000,,,5,1
 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: Apr 30 17:38:08 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Mon Apr 30 17:34:19 2018
 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



11.6.15
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56977.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 09:54:26
 Operator : rebeccak
 Sample : cc1671-50
 Misc : OP12431,g6g1701,15.2,,,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: Jun 06 16:33:56 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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...	1.936	2.135	340.8E6	254.2E6	50.000	50.000
27) I 1-bromo-2...	1.936	2.135	340.8E6	254.2E6	50.000	50.000
33) I 1-bromo-2...	1.936	2.135	340.8E6	254.2E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.520	2.912	330.5E6	239.2E6	49.889	50.524
Spiked Amount	40.000	Range 30 - 150	Recovery =	124.72%	126.31%	
26) SA Decachlor...	9.769	11.655	286.0E6	209.8E6	42.353	44.436
Spiked Amount	40.000		Recovery =	105.88%	111.09%	
Target Compounds						
3) hexachlor...	2.843	3.390	354.0E6	295.9E6	47.861	49.845
4) A alpha-BHC	2.979	3.534	480.1E6	332.6E6	52.618	52.789
5) MA gamma-BHC	3.266	3.939	414.8E6	295.9E6	48.014	50.076
6) MA Heptachlor	3.749	4.486	431.1E6	292.6E6	52.810	48.690
7) B beta-BHC	3.340	4.021	171.5E6	124.4E6	44.413	45.846
8) B delta-BHC	3.521	4.396	373.3E6	264.8E6	49.007	48.261
9) MB Aldrin	4.077	4.917	412.4E6	258.2E6	51.991	48.808
10) alachlor	4.212	4.738	48411078	31364138	50.600	44.750
11) B Heptachlo...	4.775	5.707	354.9E6	241.6E6	48.389	47.238
12) B gamma-Chl...	4.935	5.984	355.0E6	241.4E6	49.124	48.172
13) B alpha-Chl...	5.104	6.203	359.0E6	256.4E6	48.523	52.557
14) A Endosulfan I	5.278	6.293	344.1E6	223.1E6	49.903	47.868
15) B 4,4'-DDE	5.215	6.463	363.3E6	238.5E6	51.570	50.344
16) MA Dieldrin	5.597	6.716	379.0E6	246.4E6	50.749	49.247
17) MA Endrin	5.915	7.206	367.9E6	241.1E6	54.425	49.094
18) A 4,4'-DDD	6.038	7.391	303.3E6	199.1E6	51.985	48.766
19) B Endosulfa...	6.233	7.549	331.9E6	221.6E6	46.288	44.576
20) MA 4,4'-DDT	6.452	7.915	289.5E6	184.5E6	51.748	46.820
21) B Endrin Al...	6.851	8.111	269.1E6	175.6E6	47.395	46.514
22) B Endosulfa...	7.527	8.573	285.9E6	185.7E6	50.847	49.129
23) A Methoxychlor	7.229	9.143	174.9E6	101.5E6	52.415	45.360
24) Mirex	7.380	9.448	261.6E6	166.2E6	46.080	43.821
25) B Endrin Ke...	7.964	9.516	327.1E6	215.4E6	48.908	42.998
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

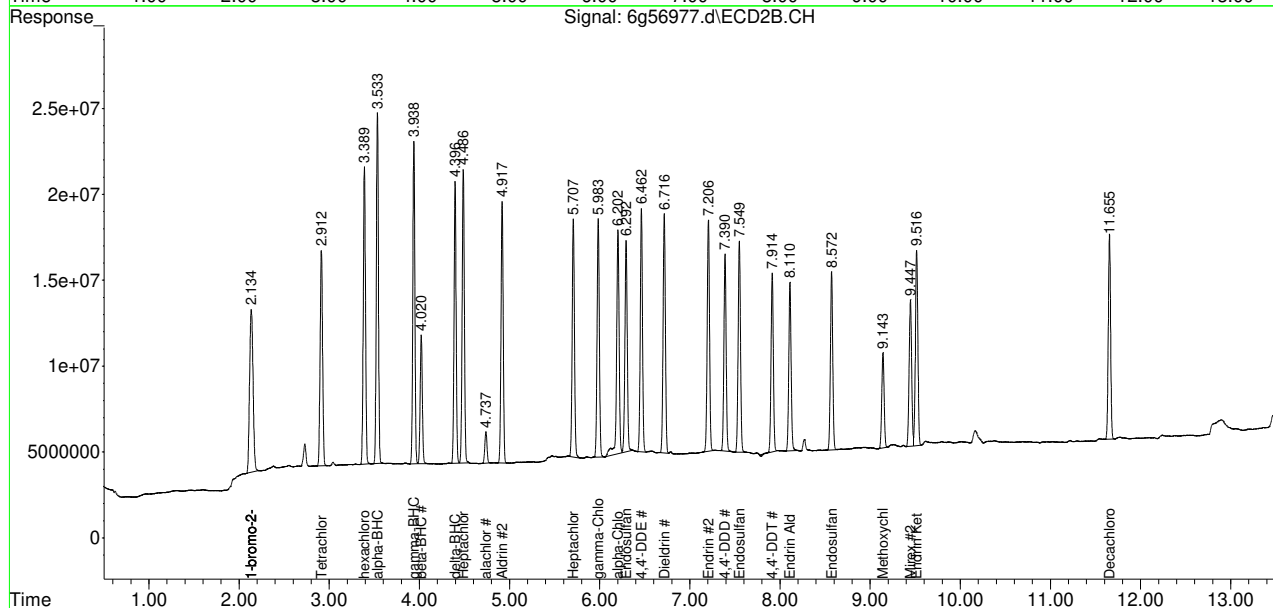
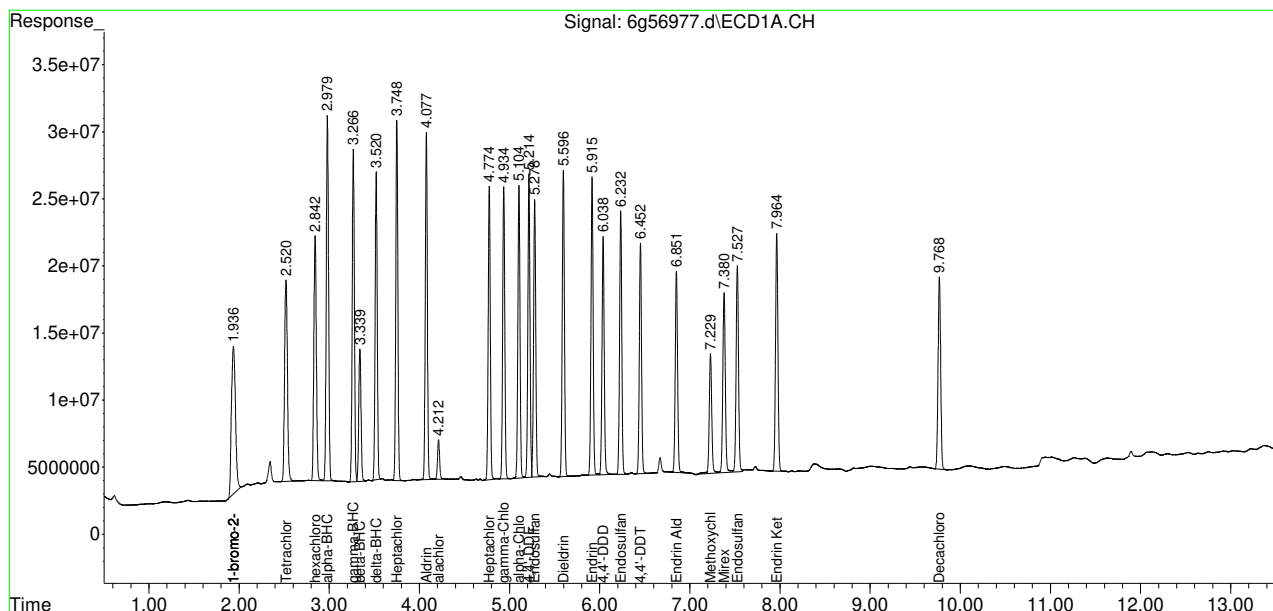
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g56977.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 09:54:26
 Operator : rebeccak
 Sample : cc1671-50
 Misc : OP12431,g6g1701,15.2,,,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: Jun 06 16:33:56 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



11.6.16 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g57000.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 23:43:24
 Operator : christp
 Sample : cc1671-25
 Misc : OP12508,g6g1701,15.4,,,10,5
 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: Jun 07 00:04:58 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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	2.151	340.7E6	254.2E6	50.000	50.000
27)	I 1-bromo-2...	1.953	2.151	340.7E6	254.2E6	50.000	50.000
33)	I 1-bromo-2...	1.953	2.151	340.7E6	254.2E6	50.000	50.000
System Monitoring Compounds							
2)	SAB Tetrachlo...	2.532	2.921	171.2E6	123.3E6	25.859	26.042
	Spiked Amount	40.000	Range 30 - 150	Recovery =		64.65%	65.11%
26)	SA Decachlor...	9.771	11.654	154.7E6	112.0E6	22.923	23.727
	Spiked Amount	40.000		Recovery =		57.31%	59.32%
Target Compounds							
3)	hexachlor...	2.852	3.396	183.5E6	158.1E6	24.827	26.630
4)	A alpha-BHC	2.988	3.540	236.0E6	165.8E6	25.879	26.318
5)	MA gamma-BHC	3.274	3.943	216.5E6	152.3E6	25.078	25.779
6)	MA Heptachlor	3.755	4.490	220.8E6	155.9E6	27.069	25.946
7)	B beta-BHC	3.348	4.025	92921700	67199247	24.072	24.765
8)	B delta-BHC	3.529	4.400	175.7E6	126.5E6	23.074	23.064
9)	MB Aldrin	4.082	4.921	210.3E6	140.7E6	26.532	26.597
10)	alachlor	4.216	4.741	25588859	17632408	26.761m	25.160
11)	B Heptachlo...	4.778	5.710	181.7E6	131.6E6	24.797	25.735
12)	B gamma-Chl...	4.939	5.986	182.2E6	131.4E6	25.223	26.210
13)	B alpha-Chl...	5.107	6.205	185.4E6	130.1E6	25.076	26.671
14)	A Endosulfan I	5.282	6.295	177.9E6	120.3E6	25.809	25.806
15)	B 4,4'-DDE	5.218	6.464	182.4E6	128.2E6	25.911	27.050
16)	MA Dieldrin	5.600	6.718	193.6E6	131.8E6	25.934	26.339
17)	MA Endrin	5.918	7.207	184.2E6	126.2E6	27.264	25.692
18)	A 4,4'-DDD	6.043	7.393	152.8E6	104.1E6	26.205	25.496
19)	B Endosulfa...	6.235	7.550	170.8E6	119.4E6	23.831	24.015
20)	MA 4,4'-DDT	6.456	7.916	135.0E6	88445733	24.142	22.447
21)	B Endrin Al...	6.854	8.112	145.7E6	93917008	25.684	24.880
22)	B Endosulfa...	7.530	8.574	135.9E6	91562942	24.192	24.223
23)	A Methoxychlor	7.234	9.144	81178935	50702766	24.337	22.654
24)	Mirex	7.382	9.448	136.4E6	92999079	24.032	24.529
25)	B Endrin Ke...	7.967	9.517	168.2E6	112.3E6	25.161	22.428
	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.

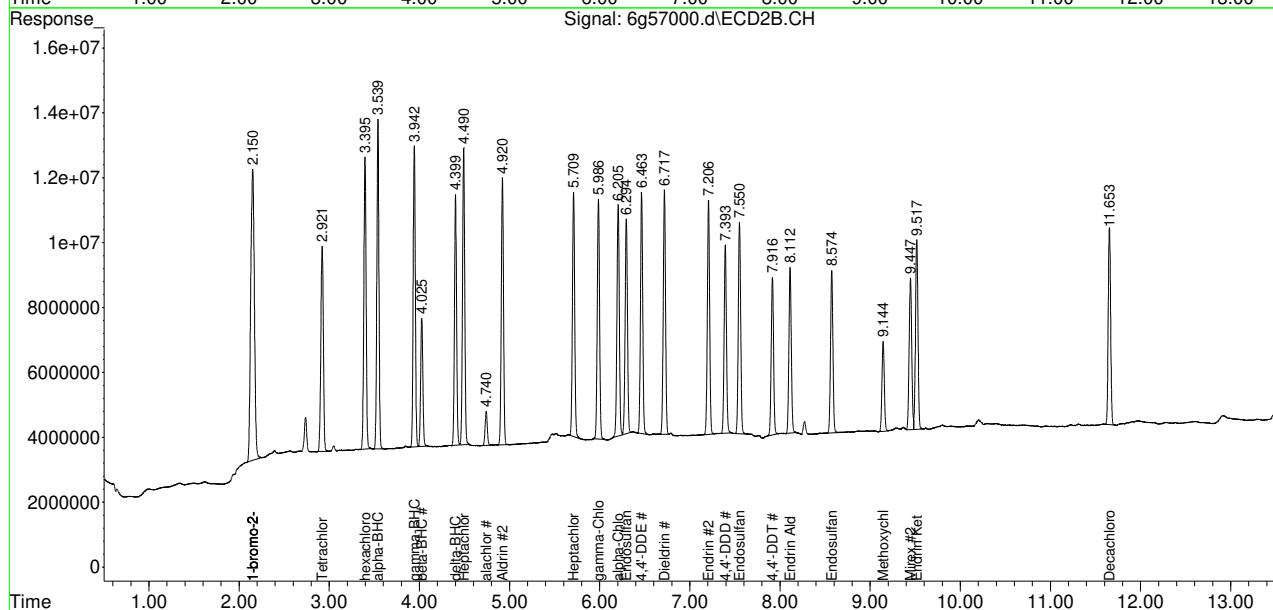
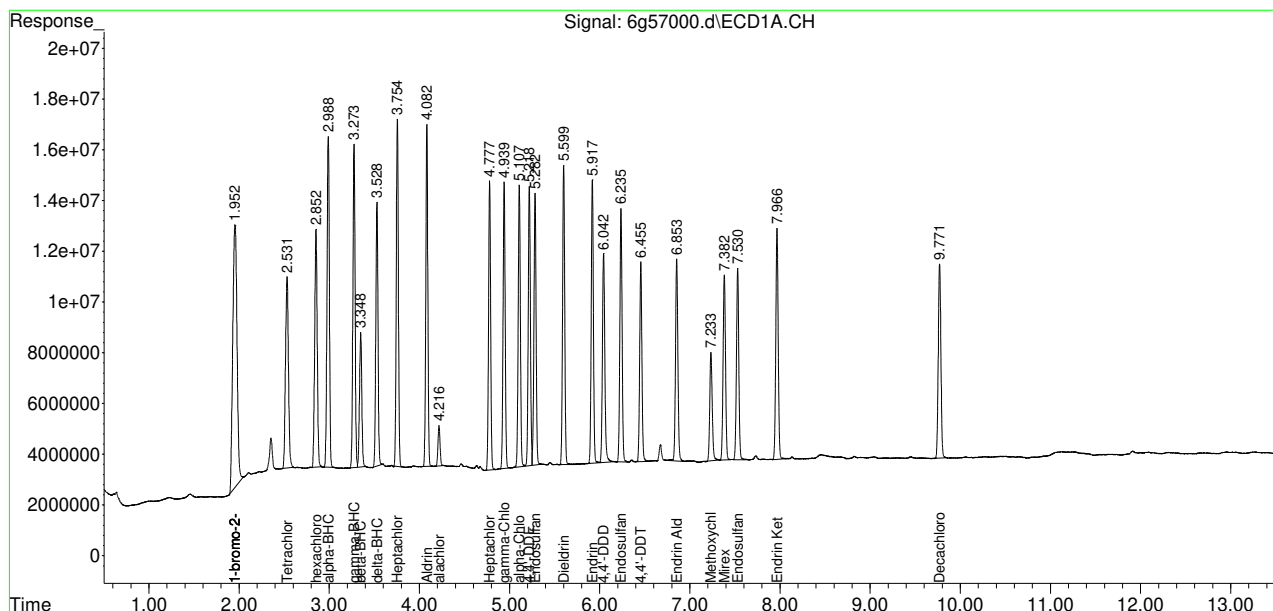
11.6.17
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g57000.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 23:43:24
 Operator : christp
 Sample : cc1671-25
 Misc : OP12508,g6g1701,15.4,,,10,5
 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: Jun 07 00:04:58 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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



11.6.17 11

Manual Integration Approval Summary

Sample Number: G6G1701-CC1671 Method: SW846 8081B
Lab FileID: 6G57000.D Analyst approved: 06/07/18 15:26 Dharmistha Mehta
Injection Time: 06/06/18 23:43 Supervisor approved: 06/08/18 12:08 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Alachlor	15972-60-8	1	4.22	Poorly defined baseline

11.6.17.1

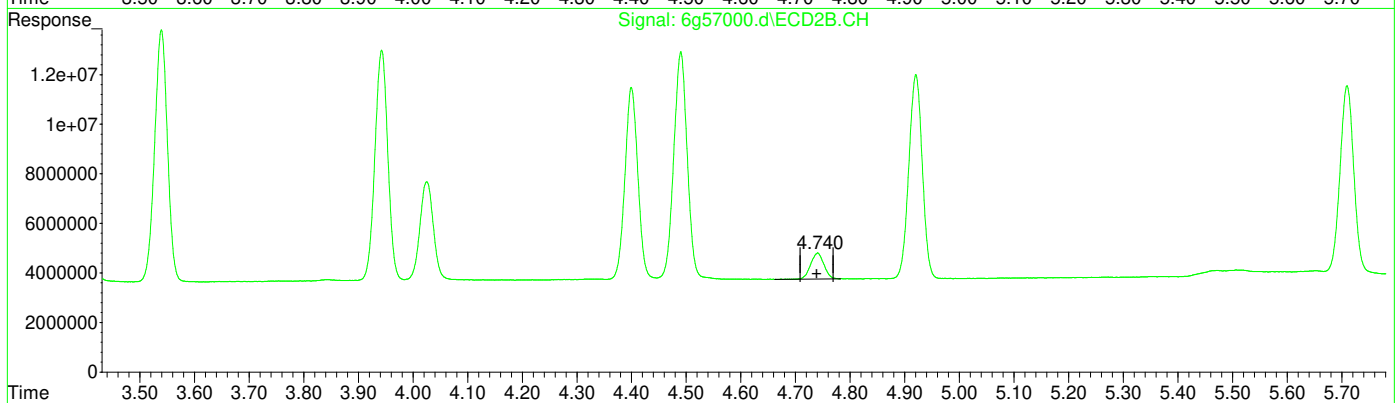
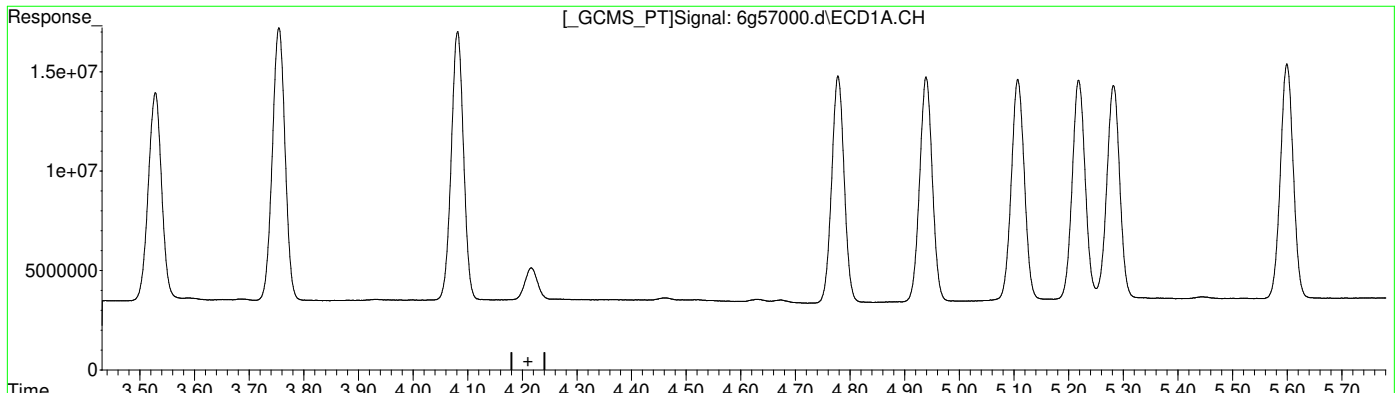
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g57000.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 23:43:24
 Operator : christp
 Sample : cc1671-25
 Misc : OP12508,g6g1701,15.4,,,10,5
 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: Jun 07 00:03:52 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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
 4.741min 25.160 PPB
 response 17632408

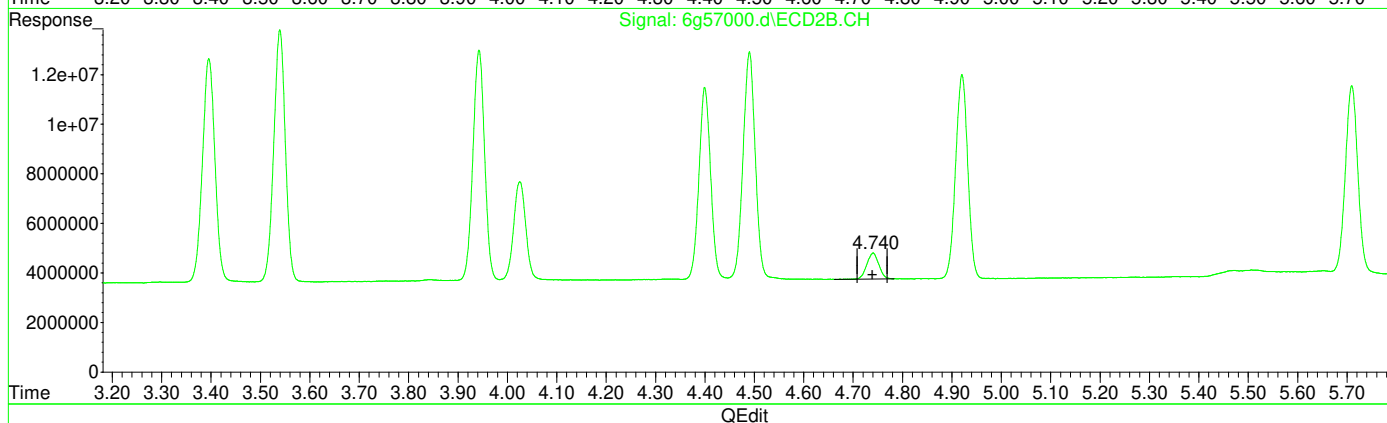
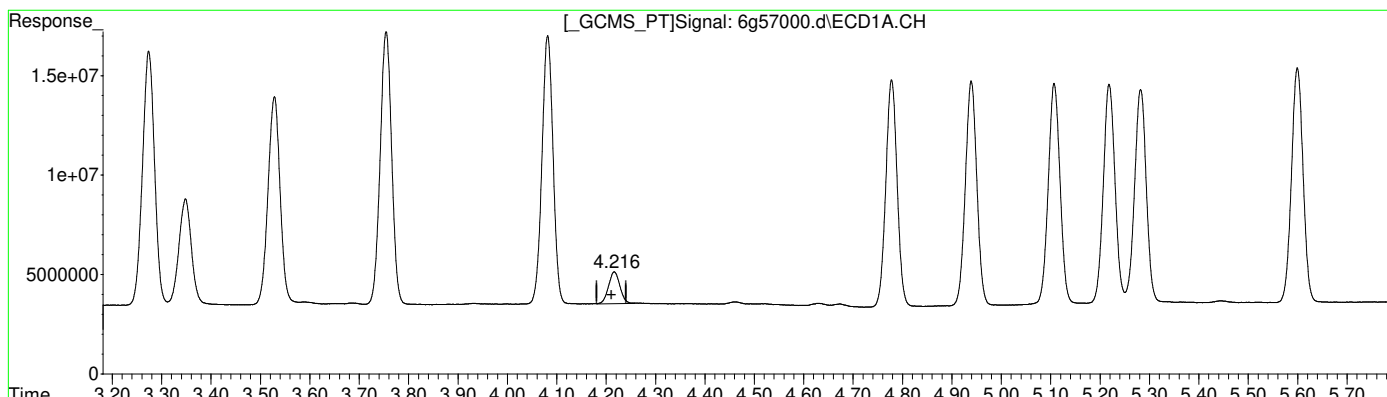
(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 00:04:24 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\G6G1701\
 Data File : 6g57000.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 06-Jun-18, 23:43:24
 Operator : christp
 Sample : cc1671-25
 Misc : OP12508,g6g1701,15.4,,,10,5
 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: Jun 07 00:03:52 2018
 Quant Method : C:\msdchem\1\methods\6PST1671.M
 Quant Title : PEST/PCB
 QLast Update : Wed Jun 06 14:34:42 2018
 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
 4.216min 26.761 PPB m
 response 25588859

(10)alachlor #2
 4.741min 25.160 PPB
 response 17632408

(+) = Expected Retention Time
 6PST1671.M Thu Jun 07 00:04:36 2018



11.6.17.3
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:54:42 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.877	2.268	175.3E6	396.3E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.630	3.290	3942357	8068515	1.189m	1.243
Spiked Amount	40.000	Range 30 - 150	Recovery =		2.97%#	3.11%#
26) SA Decachlor...	10.921	13.311	4907154	6500440	1.320	0.929m#
Spiked Amount	40.000		Recovery =		3.30%	2.32%
Target Compounds						
3) hexachlor...	3.034	3.904	5258382	10468678	1.075	1.234
4) A alpha-BHC	3.209	4.091	4200024	10139740	0.978	1.181
5) MA gamma-BHC	3.557	4.596	4393054	9629341	1.094	1.193
6) MA Heptachlor	4.135	5.274	5053055	10480039	1.259	1.269
7) B beta-BHC	3.643	4.693	2350635	5522573	1.231	1.438
8) B delta-BHC	3.860	5.159	3405565	9265025	1.045	1.306
9) MB Aldrin	4.521	5.803	3925812	9563730	1.082	1.228
10)alachlor	4.691	5.565	753324	1750647	1.493m	1.655m
11) B Heptachlo...	5.340	6.748	4432903	9463460	1.241	1.280
12) B gamma-Chl...	5.524	7.071	4055905	10325560	1.226	1.307
13) B alpha-Chl...	5.719	7.328	3870478	8893673	1.138	1.037
14) A Endosulfan I	5.922	7.443	4255987	8582740	1.364	1.192
15) B 4,4'-DDE	5.839	7.606	4079833	8447991	1.153	1.040
16) MA Dieldrin	6.289	7.936	3747164	8332519	1.084	1.009
17) MA Endrin	6.655	8.509	3565994	7352779	1.135	0.951m
18) A 4,4'-DDD	6.774	8.674	2923436	7045090	1.093	1.036m
19) B Endosulfa...	7.015	8.900	4905055	8576407	1.470	1.074 #
20) MA 4,4'-DDT	7.247	9.269	2878713	7586791	1.133	1.273m
21) B Endrin Al...	7.720	9.538	3918259	6756757	1.429	1.083
22) B Endosulfa...	8.491	10.054	3223150	5889813	1.348	0.981m#
23) A Methoxychlor	8.108	10.616	2268870	3929502	1.378	1.147
24) Mirex	8.319	11.053	4110558	5567435	1.464	1.013m#
25) B Endrin Ke...	8.981	11.103	3888771	5967879	1.261	0.908 #

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

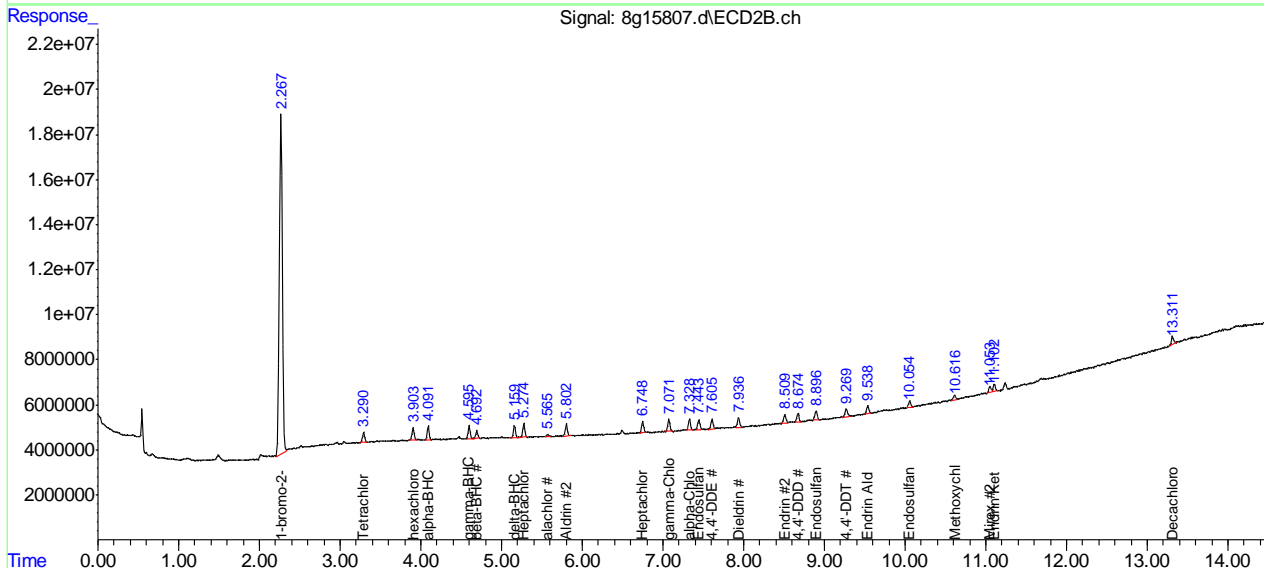
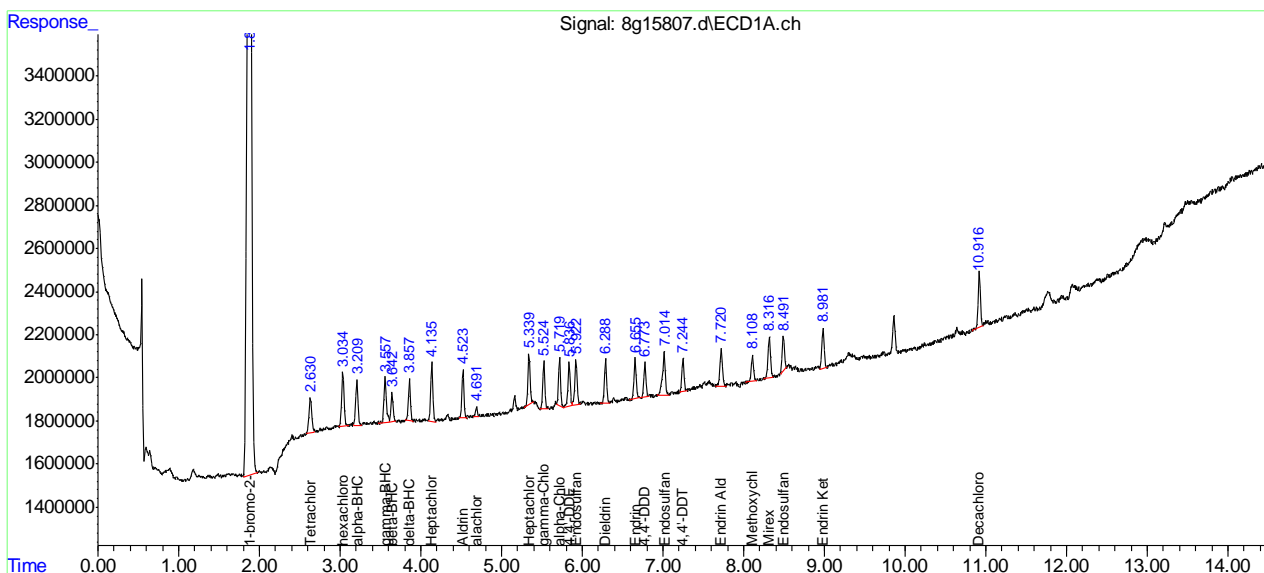
11.6.18
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:54:42 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.18 11

Manual Integration Approval Summary

Sample Number: G8G511-IC511 **Method:** SW846 8081B
Lab FileID: 8G15807.D **Analyst approved:** 06/11/18 15:51 Dhara Saparia
Injection Time: 06/11/18 11:58 **Supervisor approved:** 06/13/18 10:11 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrachloro-m-xylene	877-09-8	1	2.63	Poorly defined baseline
Alachlor	15972-60-8	1	4.69	Poorly defined baseline
Alachlor	15972-60-8	2	5.56	Poorly defined baseline
Endrin	72-20-8	2	8.51	Poorly defined baseline
4,4'-DDD	72-54-8	2	8.67	Poorly defined baseline
4,4'-DDT	50-29-3	2	9.27	Poorly defined baseline
Endosulfan sulfate	1031-07-8	2	10.05	Poorly defined baseline
Mirex	2385-85-5	2	11.05	Poorly defined baseline
Decachlorobiphenyl	2051-24-3	2	13.31	Poorly defined baseline

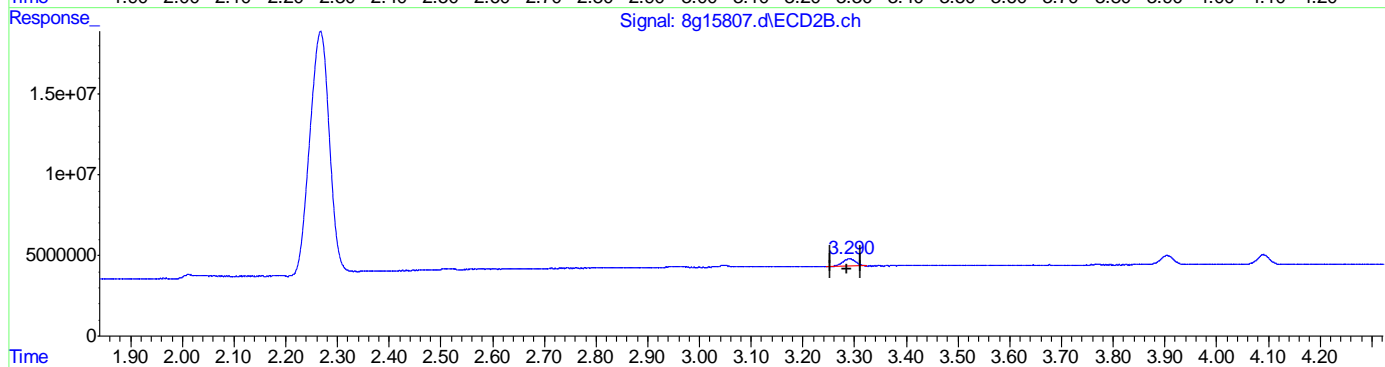
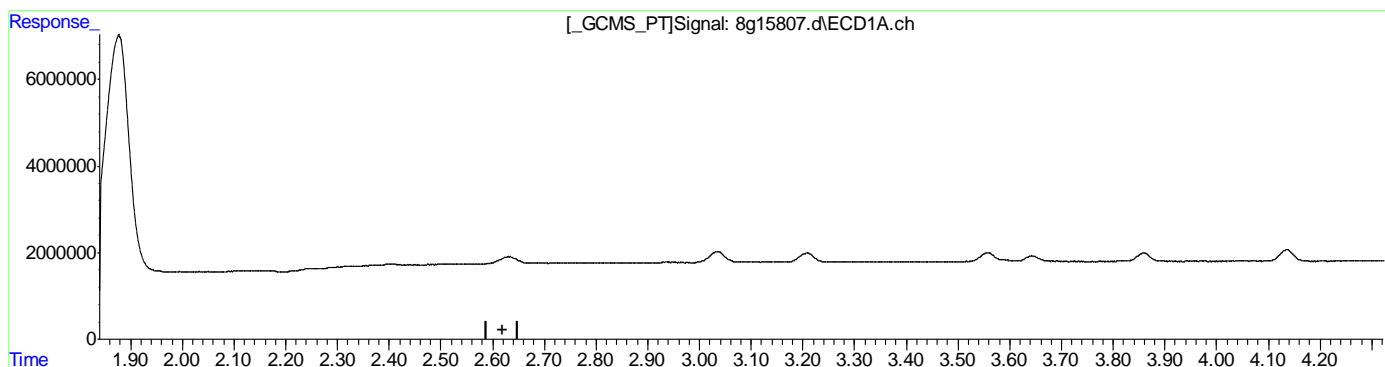
11.6.18.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:32:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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)
 0.000min 0.000 PPB
 response 0

(2) Tetrachloro-m-xylene #2 (SAB)
 3.290min 1.243 PPB
 response 8068515

(+) = Expected Retention Time
 8PST511.M Mon Jun 11 14:32:47 2018

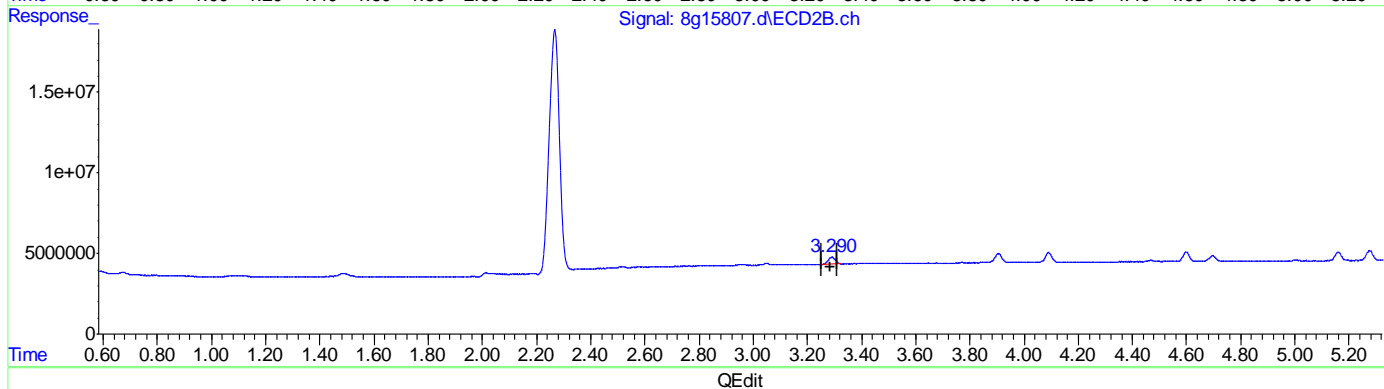
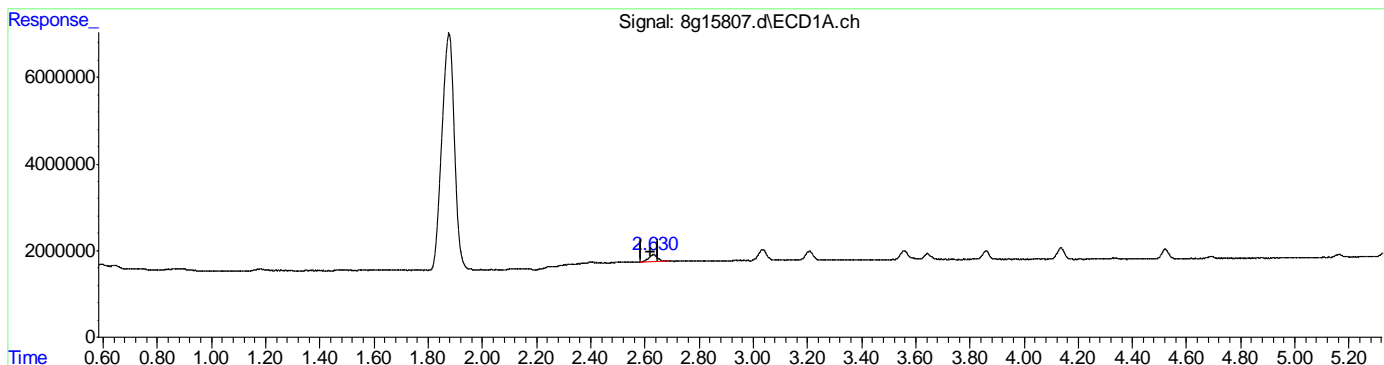
11.6.18.2
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:32:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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)
 2.630min 1.189 PPB m
 response 3942357

(2) Tetrachloro-m-xylene #2 (SAB)
 3.290min 1.243 PPB
 response 8068515

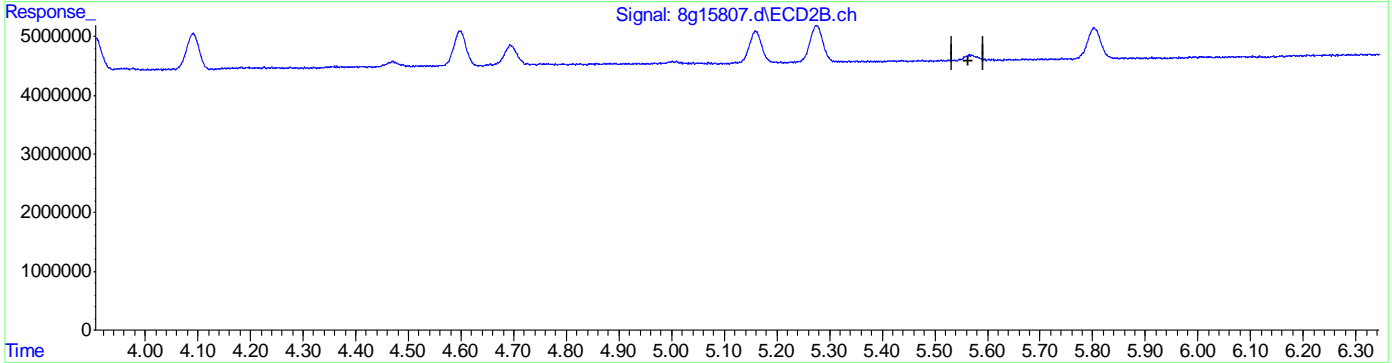
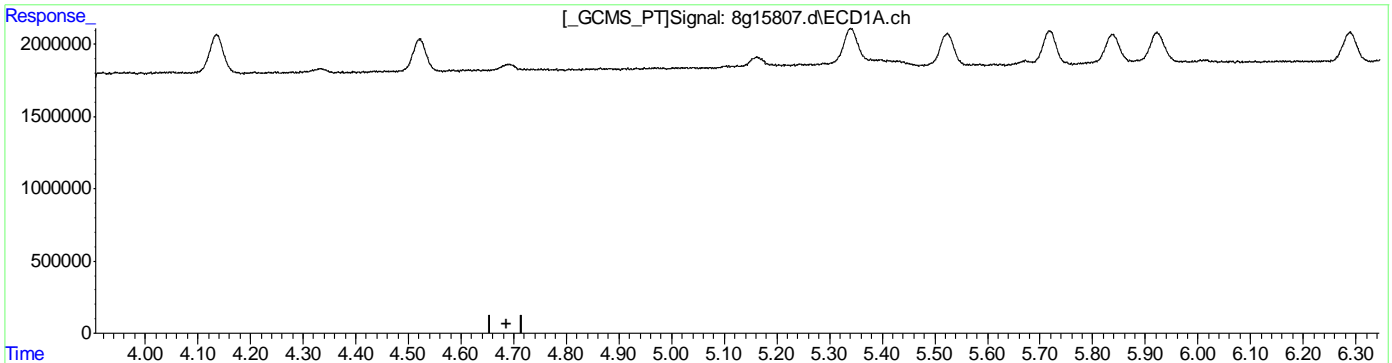
11.6.18.3
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:32:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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
 8PST511.M Mon Jun 11 14:33:07 2018

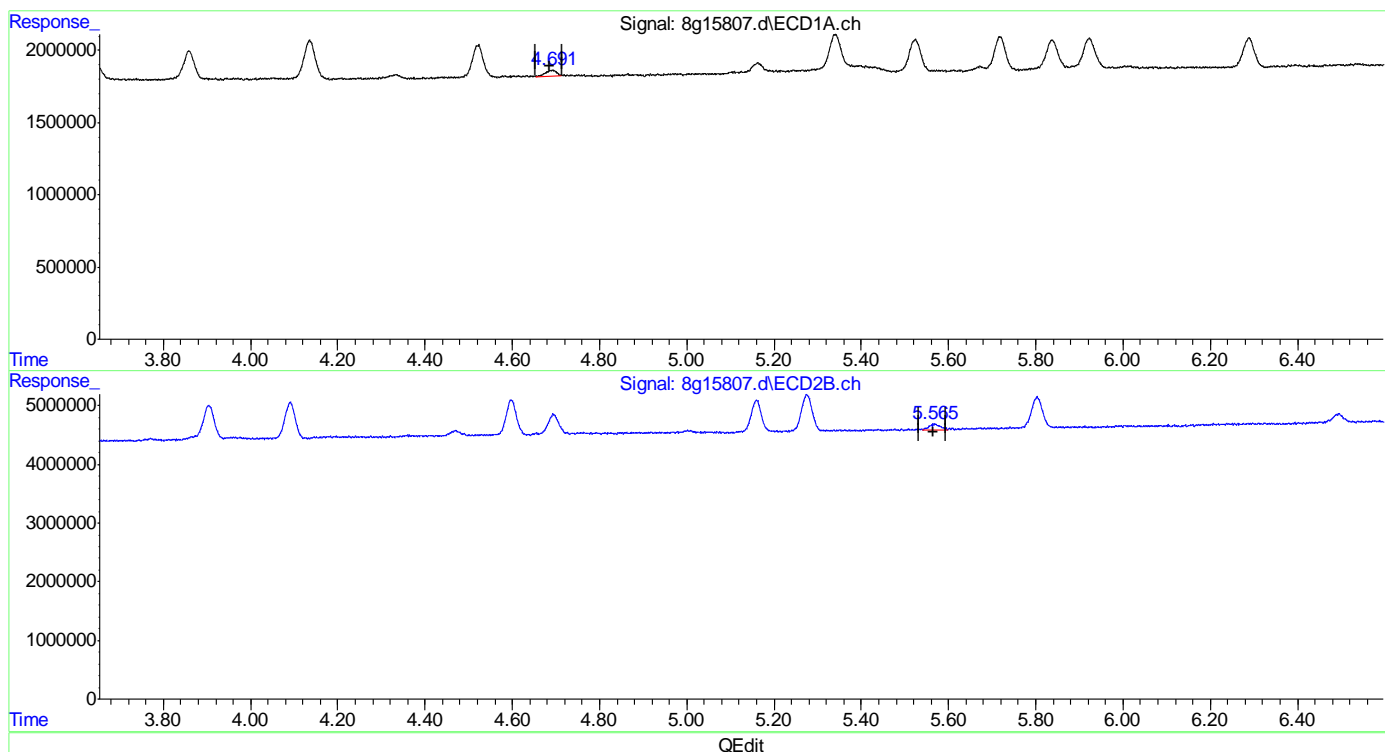
11.6.18.4
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:32:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.18.5
11

(10)alachlor
 4.691min 1.493 PPB m
 response 753324

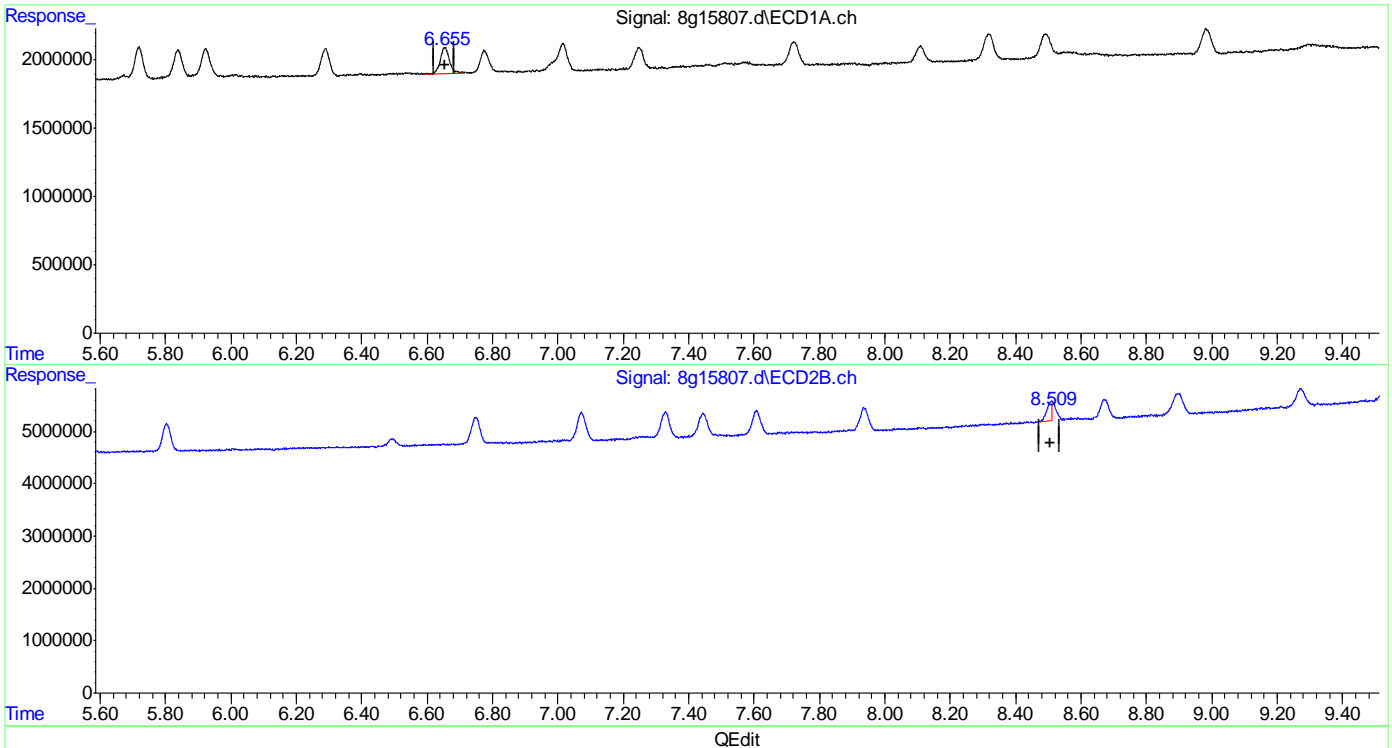
(10)alachlor #2
 5.565min 1.655 PPB m
 response 1750647

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:32:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.18.6
11

(17) Endrin (MA)
 6.655min 1.135 PPB
 response 3565994

(17) Endrin #2 (MA)
 8.509min 0.536 PPB
 response 4143404

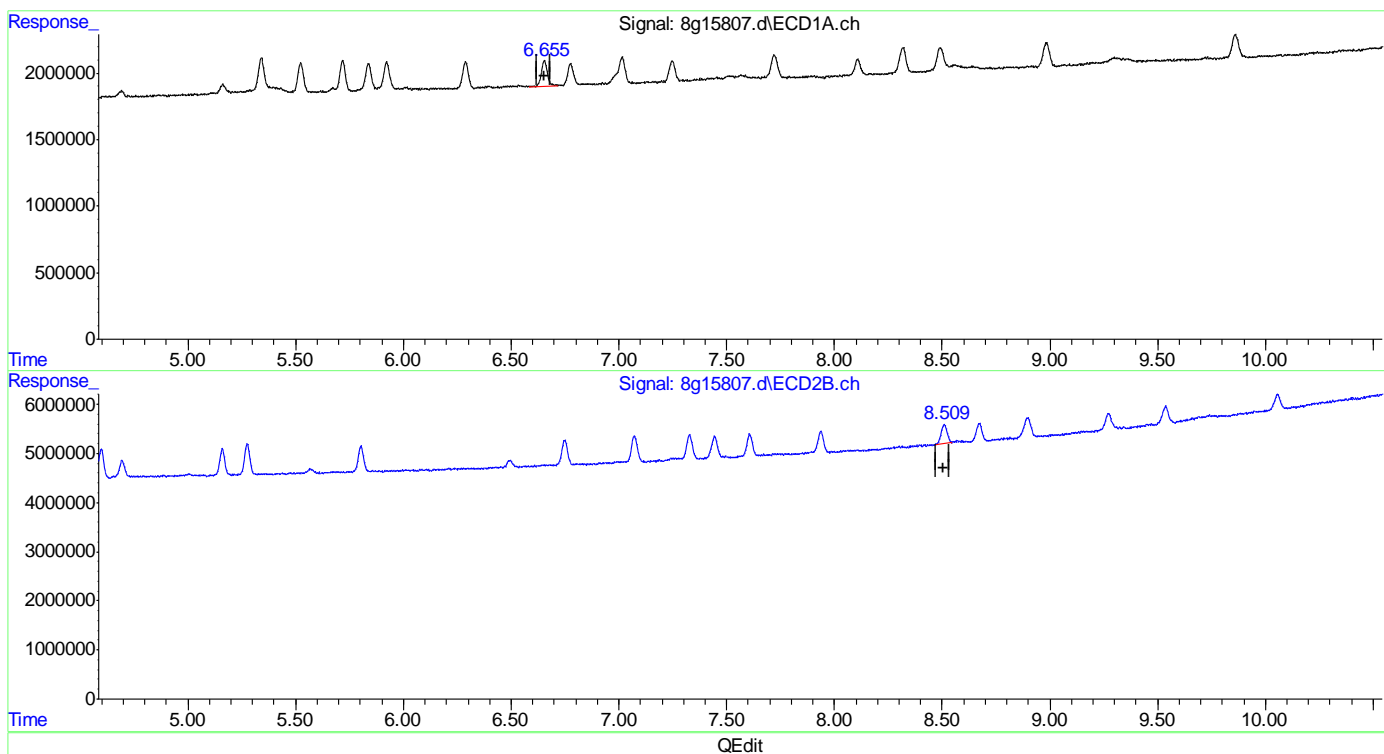
(+) = Expected Retention Time
 8PST511.M Mon Jun 11 14:34:15 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:32:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.18.7
11

(17) Endrin (MA)
 6.655min 1.135 PPB
 response 3565994

(17) Endrin #2 (MA)
 8.509min 0.951 PPB m
 response 7352779

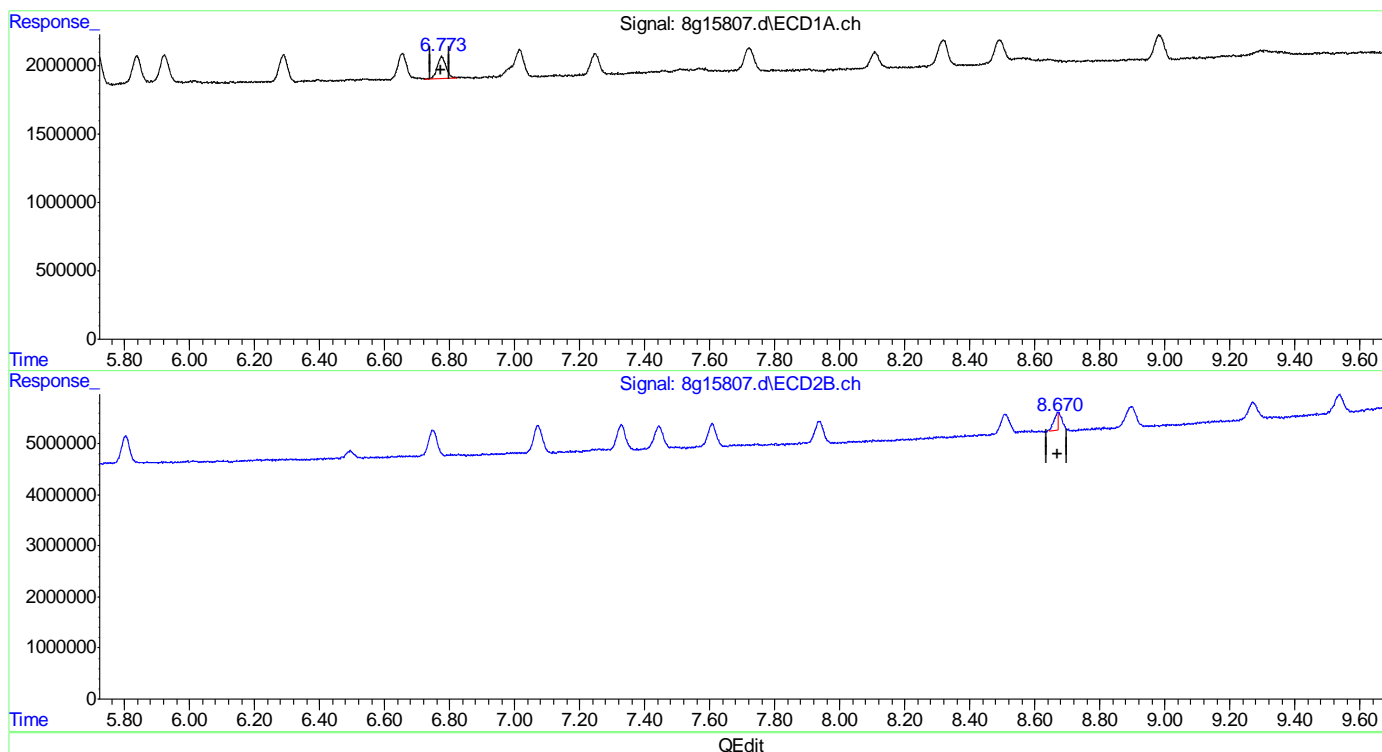
(+) = Expected Retention Time
 8PST511.M Mon Jun 11 14:34:27 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:32:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



(18) 4,4'-DDD (A)
 6.774min 1.093 PPB
 response 2923436

(18) 4,4'-DDD #2 (A)
 8.670min 0.454 PPB
 response 3082821

(+) = Expected Retention Time
 8PST511.M Mon Jun 11 14:34:30 2018

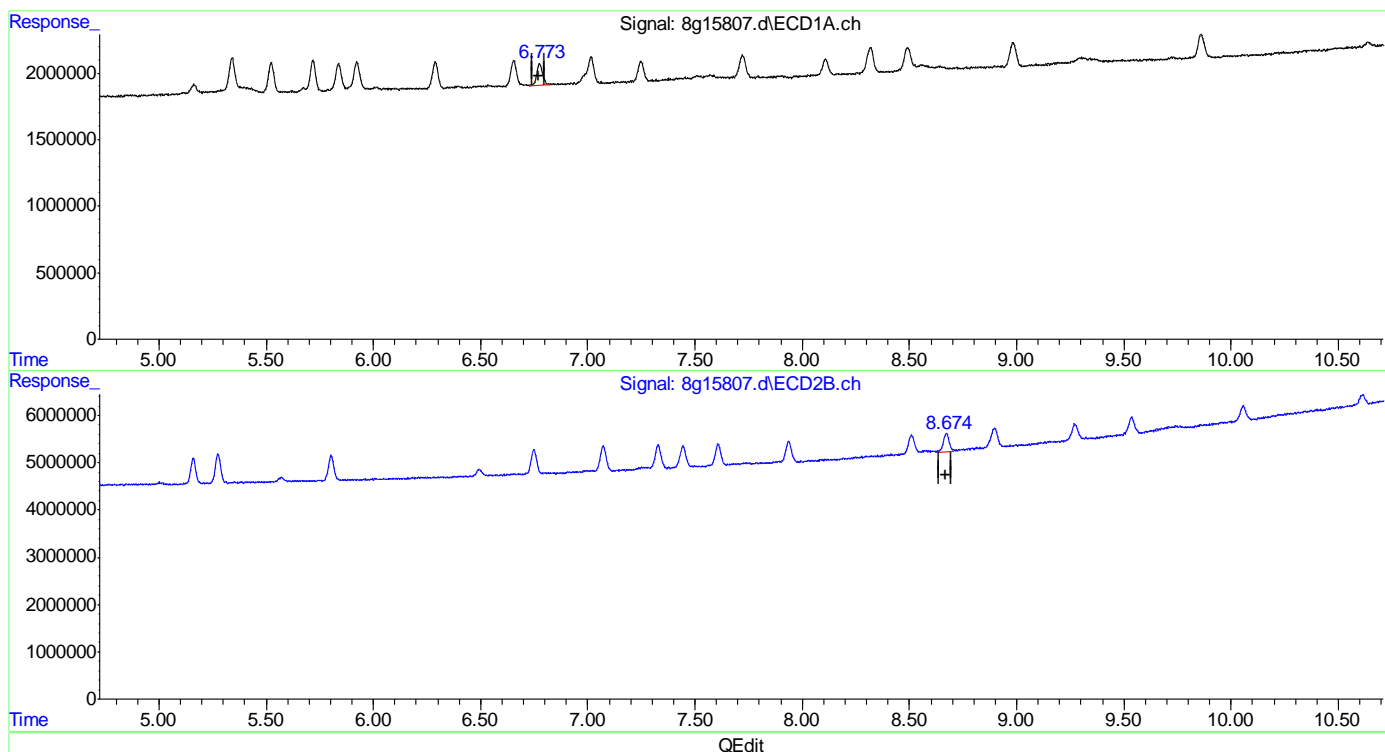
11.6.18.8
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:32:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



(18) 4,4'-DDD (A)
 6.774min 1.093 PPB
 response 2923436

(18) 4,4'-DDD #2 (A)
 8.674min 1.036 PPB m
 response 7045090

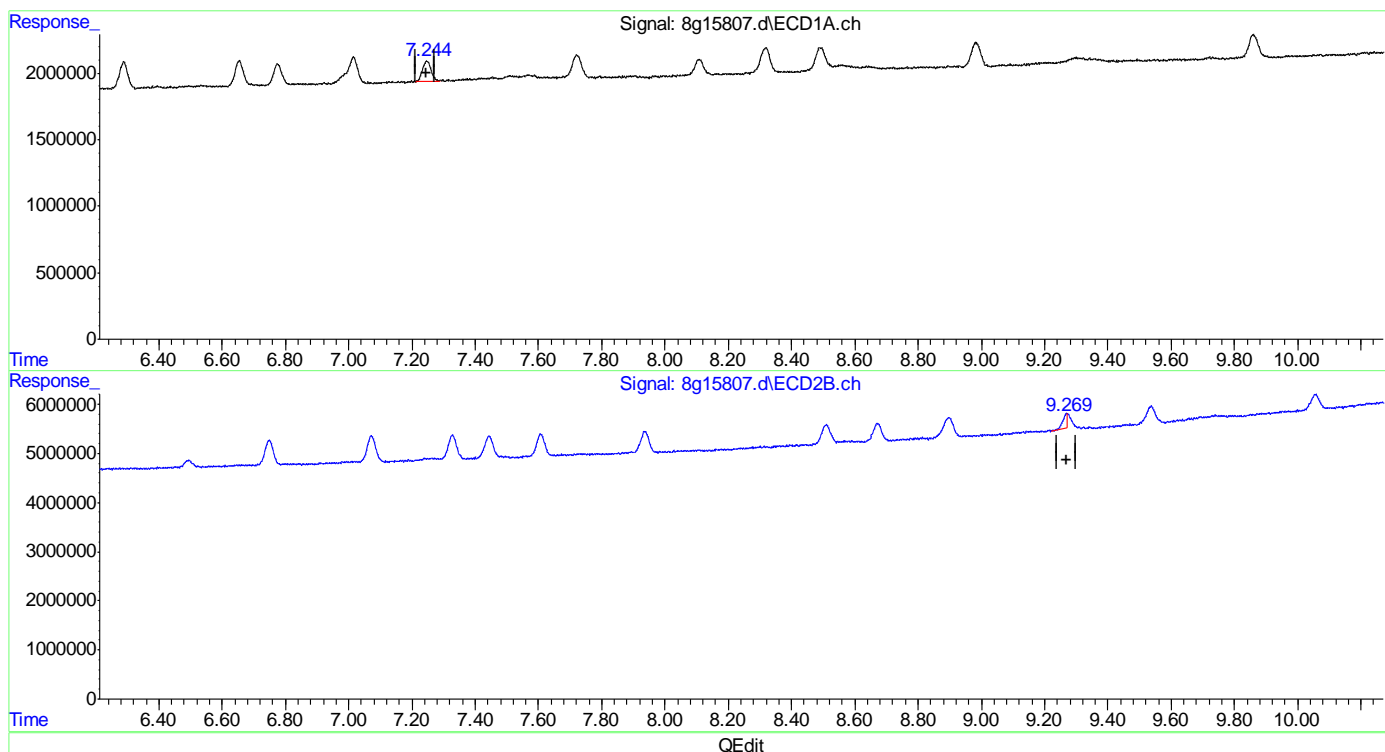
11.6.18.9
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:32:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.18.10
11

(20) 4,4'-DDT (MA)
 7.247min 1.133 PPB
 response 2878713

(20) 4,4'-DDT #2 (MA)
 9.269min 0.494 PPB
 response 2944408

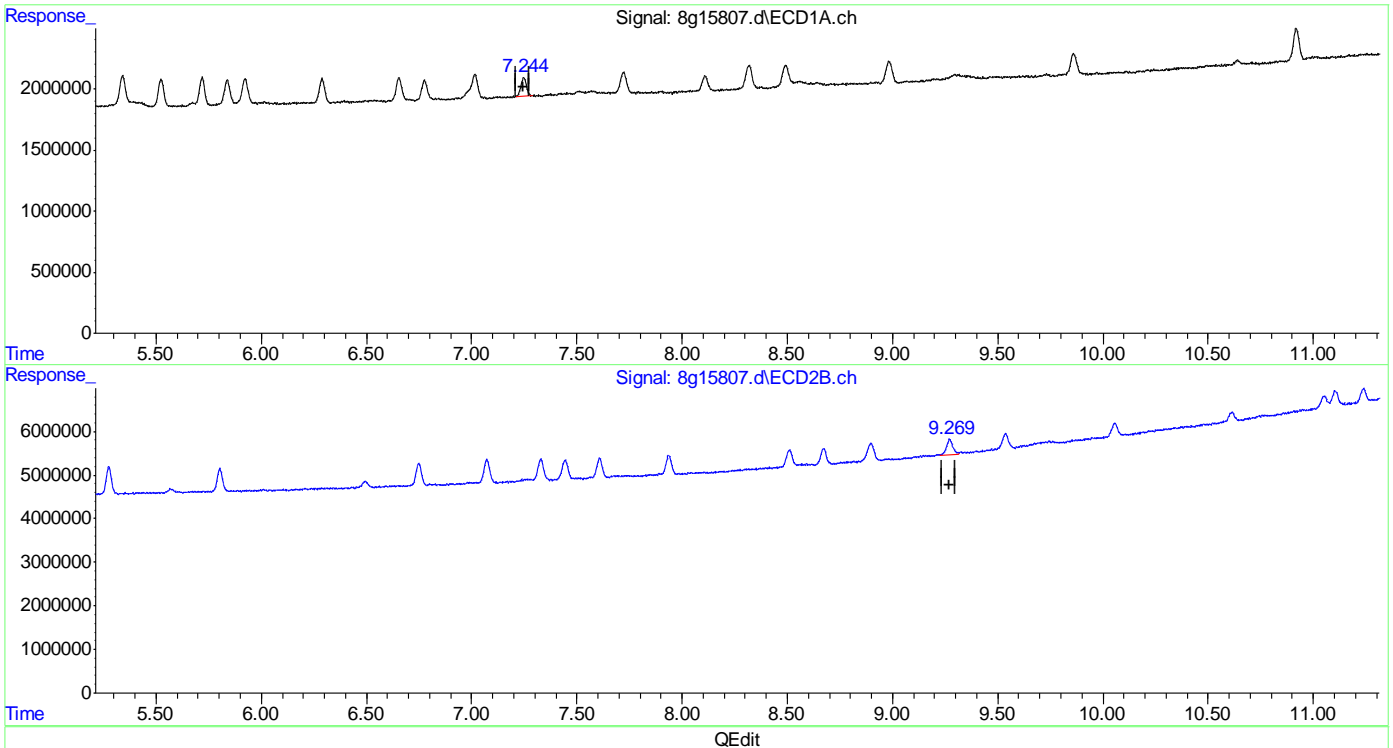
(+) = Expected Retention Time
 8PST511.M Mon Jun 11 14:34:46 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:32:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.18.11
11

(20) 4,4'-DDT (MA)
 7.247min 1.133 PPB
 response 2878713

(20) 4,4'-DDT #2 (MA)
 9.269min 1.273 PPB m
 response 7586791

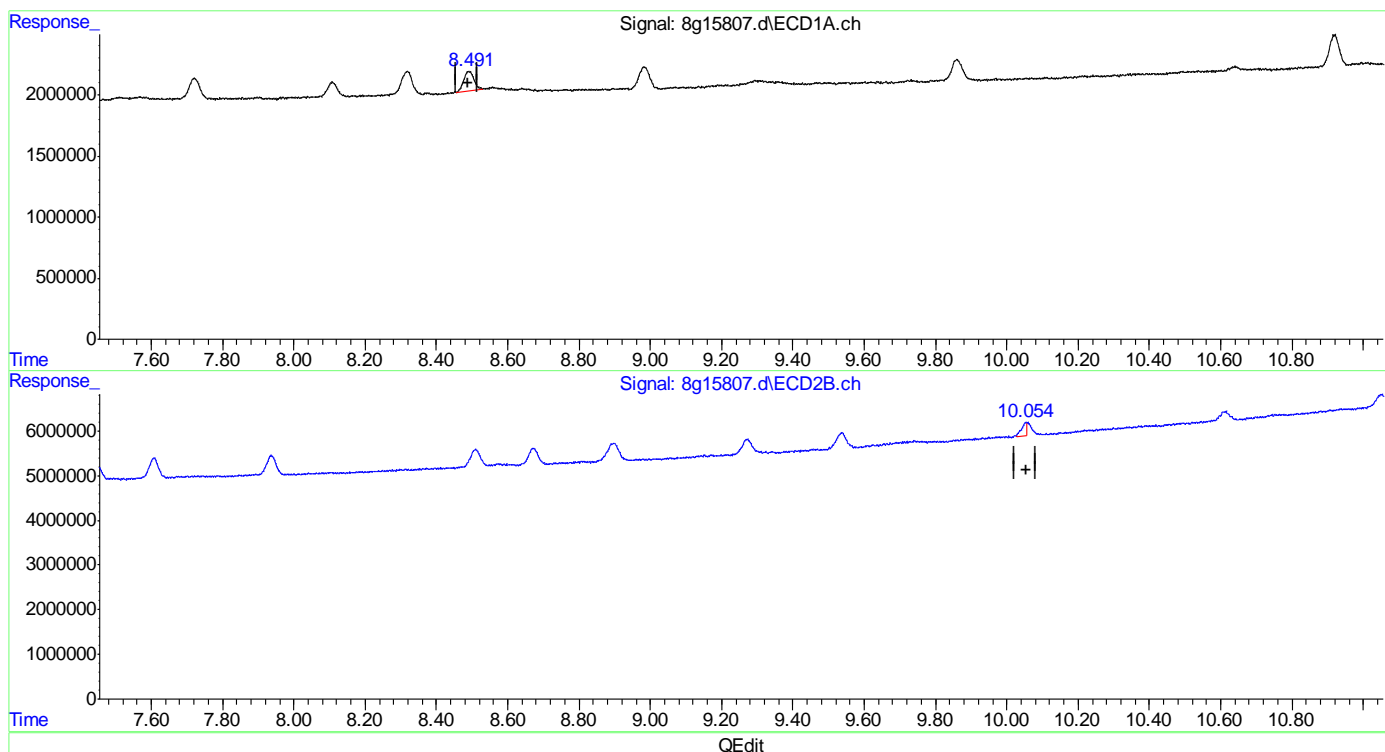
(+) = Expected Retention Time
 8PST511.M Mon Jun 11 14:34:54 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:32:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.18.12
11

(22) Endosulfan Sulfate (B)
 8.491min 1.348 PPB
 response 3223150

(22) Endosulfan Sulfate #2 (B)
 10.054min 0.499 PPB
 response 2996566

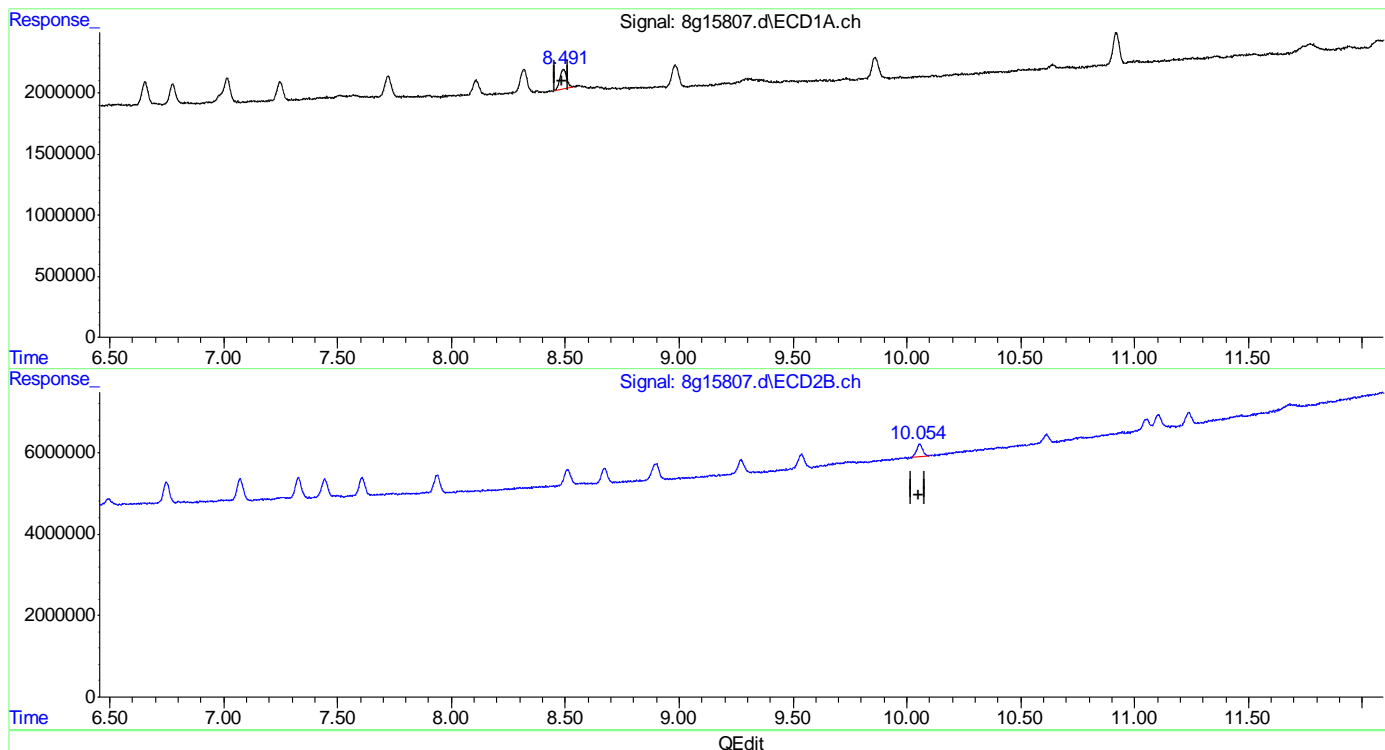
(+) = Expected Retention Time
 8PST511.M Mon Jun 11 14:35:11 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:32:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.18.13
11

(22) Endosulfan Sulfate (B)

8.491min 1.348 PPB
 response 3223150

(22) Endosulfan Sulfate #2 (B)

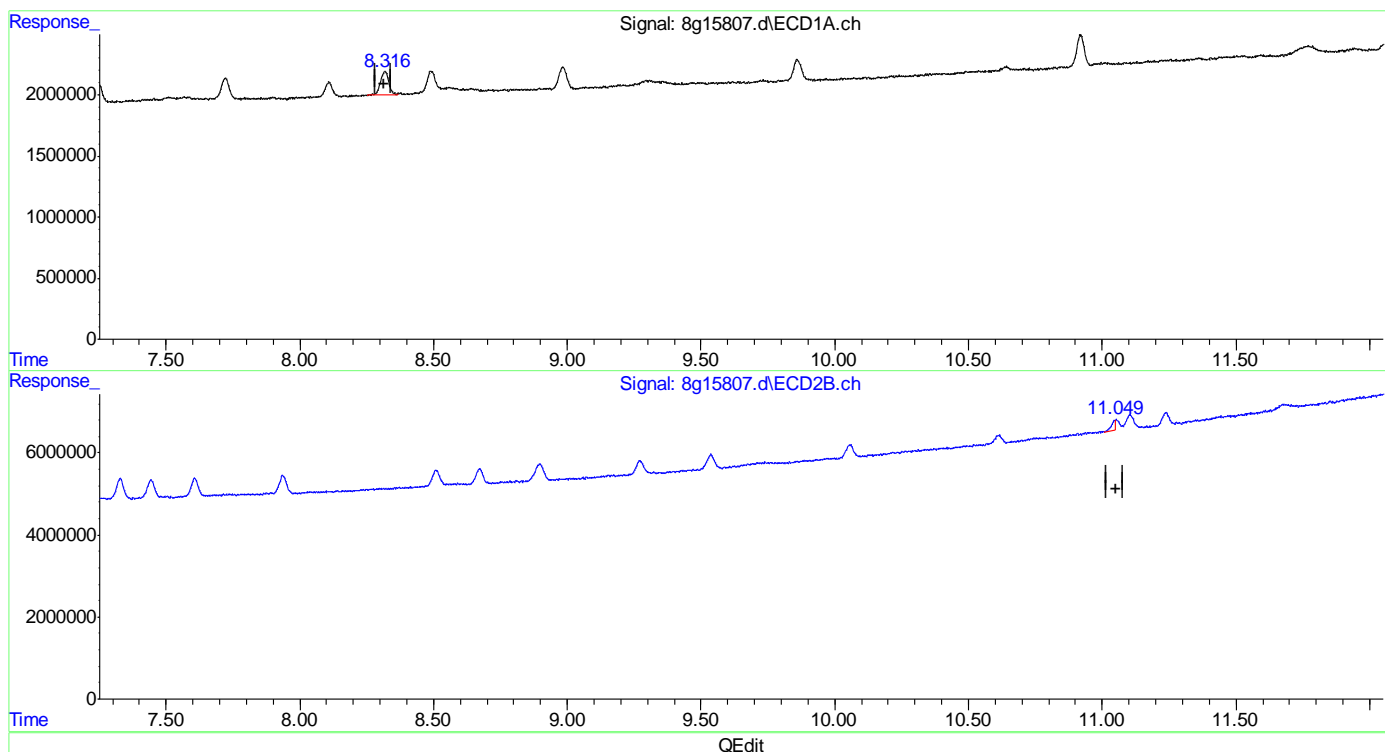
10.054min 0.981 PPB m
 response 5889813

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:32:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



(24) Mirex
 8.319min 1.464 PPB
 response 4110558

(24) Mirex #2
 11.049min 0.526 PPB
 response 2890590

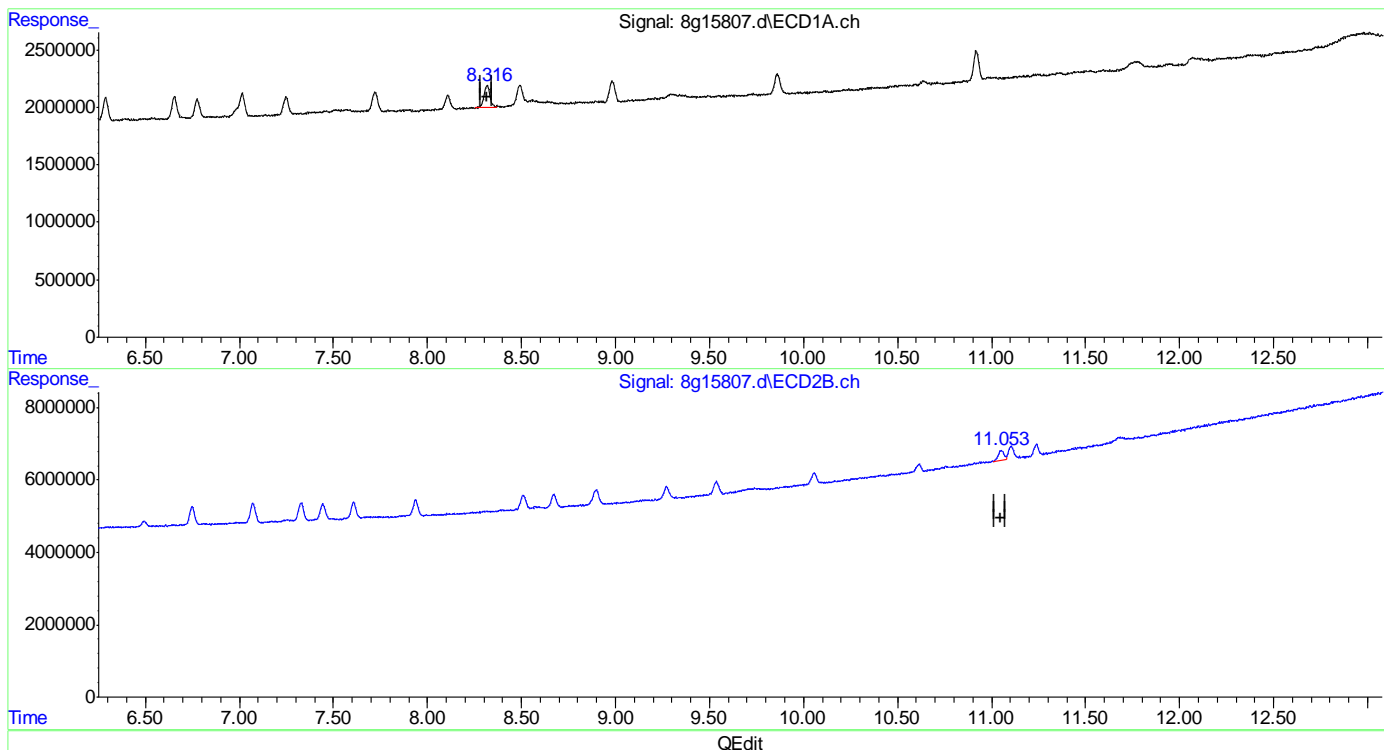
11.6.18.14
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:32:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.18.15
11

(24) Mirex
 8.319min 1.464 PPB
 response 4110558

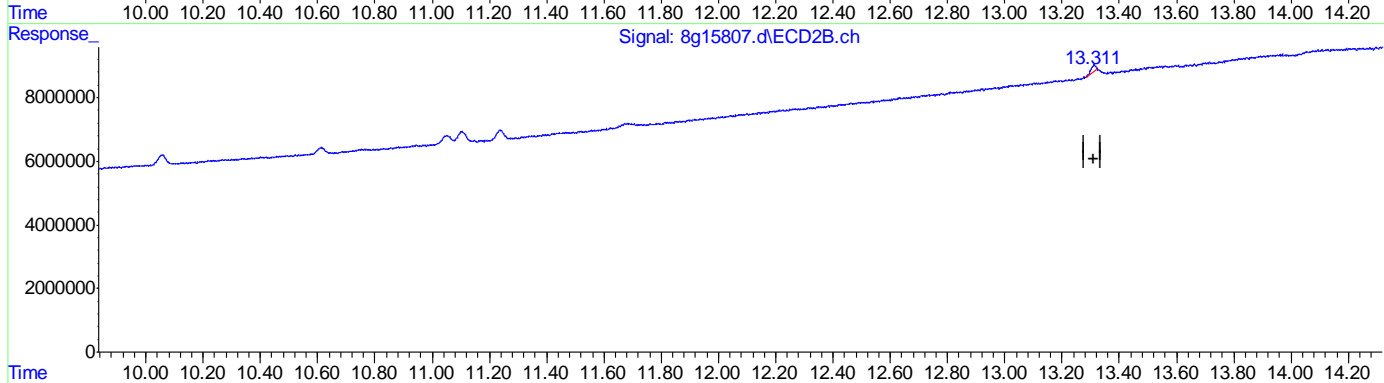
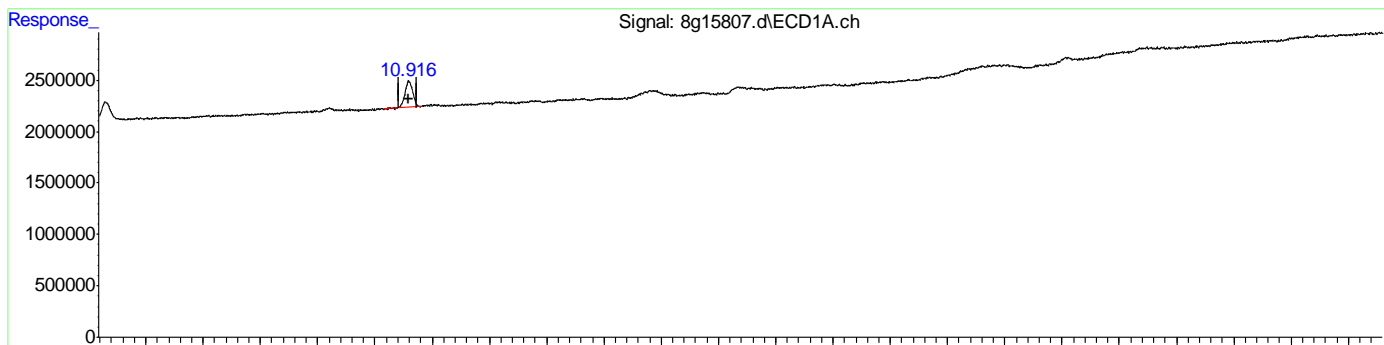
(24) Mirex #2
 11.053min 1.013 PPB m
 response 5567435

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:32:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



Retention Time (min)	Concentration (PPB)	Response
10.921	1.320	4907154
13.312	0.318	2228902

(+) = Expected Retention Time
 8PST511.M Mon Jun 11 14:35:43 2018

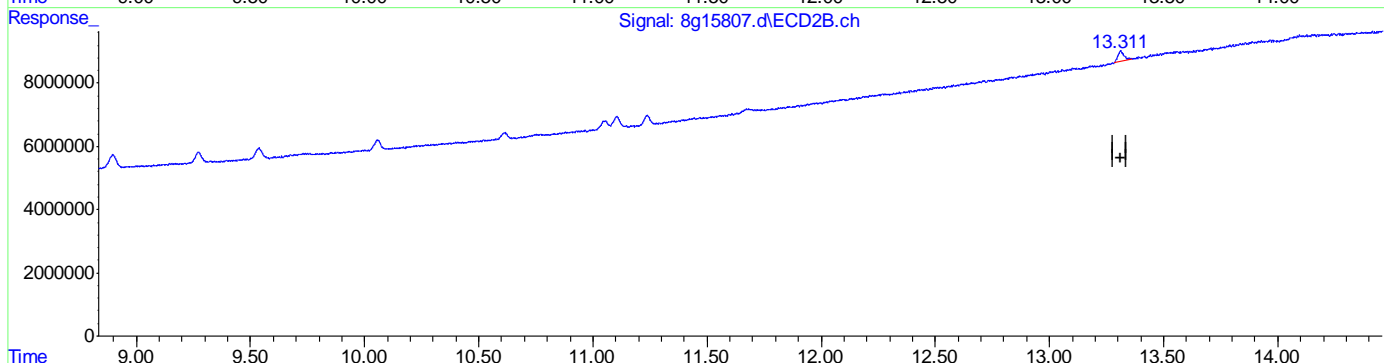
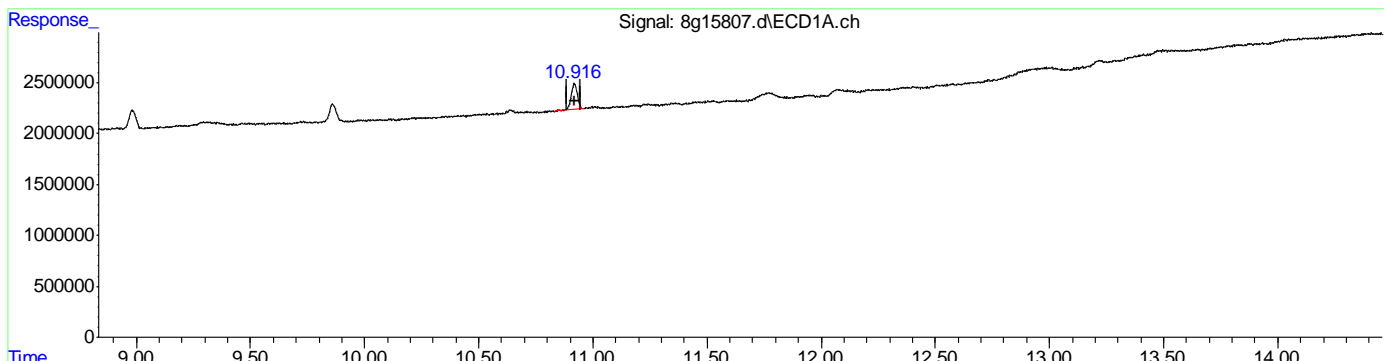
11.6.18.16
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15807.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 11:58 am
 Operator : dharas
 Sample : ic511-1
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:32:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



Retention Time (min)	Concentration (PPB)	Response
10.921 (+)	1.320	4907154
13.311 (+)	0.929	6500440

(+) = Expected Retention Time
 8PST511.M Mon Jun 11 14:35:54 2018

11.6.18.17
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15808.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:14 pm
 Operator : dharas
 Sample : ic511-2
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:54:55 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.863	2.255	186.7E6	416.0E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.622	3.283	7280822	15754658	2.062	2.313
Spiked Amount	40.000	Range	30 - 150	Recovery =	5.16%#	5.78%#
26) SA Decachlor...	10.918	13.314	9576981	13389707	2.420	1.822m
Spiked Amount	40.000		Recovery =	6.05%	4.55%	
Target Compounds						
3) hexachlor...	3.027	3.900	10565542	21296550	2.029	2.392
4) A alpha-BHC	3.201	4.086	7909129	20314675	1.730	2.254 #
5) MA gamma-BHC	3.550	4.594	8452980	19468554	1.976	2.298
6) MA Heptachlor	4.131	5.274	9752175	20669444	2.282	2.384
7) B beta-BHC	3.637	4.689	4605020	10363213	2.264	2.571
8) B delta-BHC	3.854	5.155	6633914	16473300	1.912	2.212
9) MB Aldrin	4.518	5.801	7598341	17936084	1.966	2.195
10)alachlor	4.690	5.565	1535043	2822961	2.858m	2.543
11) B Heptachlo...	5.337	6.747	8225241	17707375	2.163	2.282
12) B gamma-Chl...	5.521	7.071	7911715	18102720	2.245	2.184
13) B alpha-Chl...	5.716	7.328	7892052	17720414	2.179	1.969
14) A Endosulfan I	5.921	7.441	7165113	16198353	2.157	2.143
15) B 4,4'-DDE	5.834	7.605	7248646	15557794	1.923	1.824
16) MA Dieldrin	6.285	7.935	7601803	16162595	2.066	1.864
17) MA Endrin	6.651	8.509	7251663	14087328	2.167	1.736
18) A 4,4'-DDD	6.774	8.672	6046755	12887034	2.124	1.806
19) B Endosulfa...	7.013	8.896	8839772	16017303	2.487	1.910
20) MA 4,4'-DDT	7.245	9.269	6360666	12246446	2.350	1.958
21) B Endrin Al...	7.718	9.535	7096446	12221212	2.431	1.867
22) B Endosulfa...	8.489	10.054	6597965	11458555	2.591	1.818 #
23) A Methoxychlor	8.106	10.613	4443489	6867126	2.534	1.910
24) Mirex	8.316	11.051	7692872	10314607	2.573	1.787m#
25) B Endrin Ke...	8.983	11.102	7545514	13462928	2.299	1.951

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

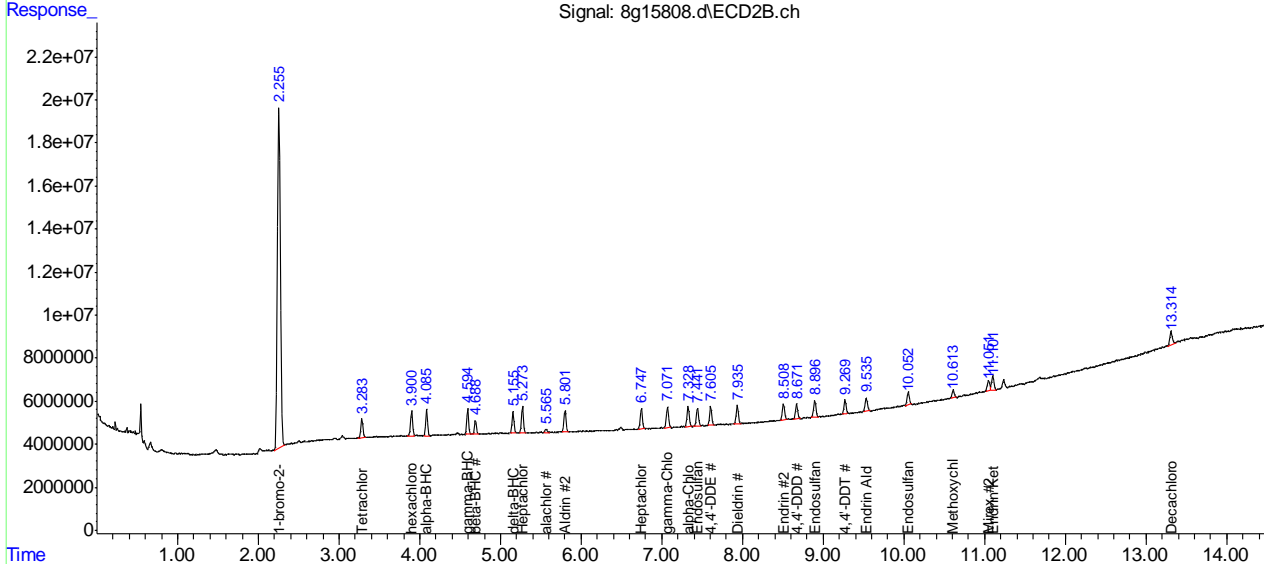
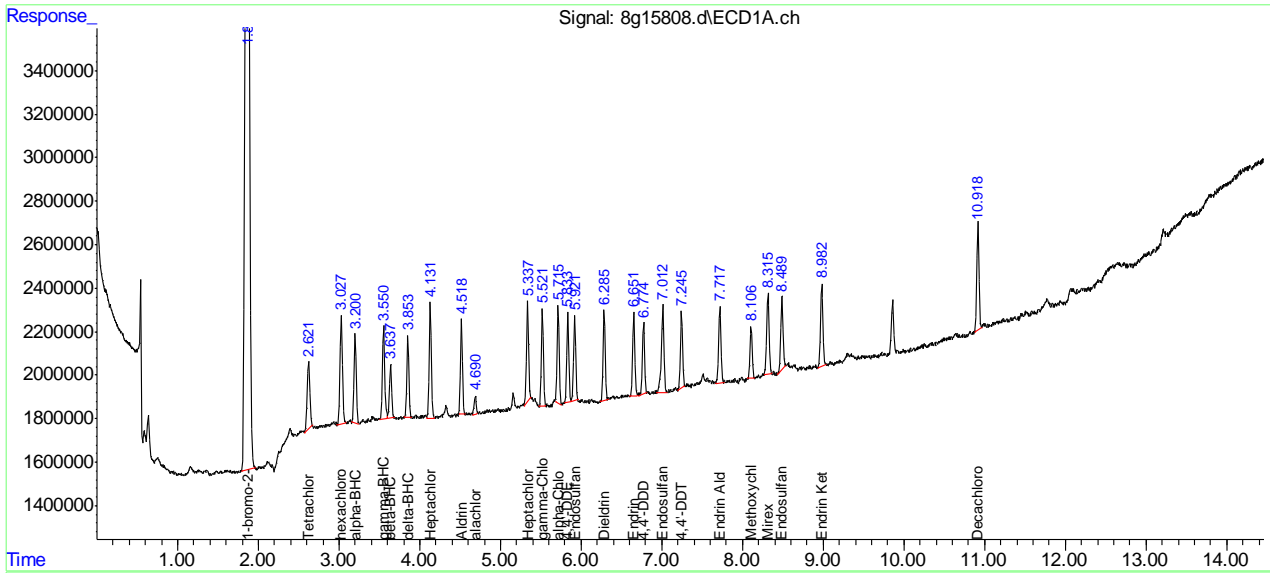
11.6.19
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15808.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:14 pm
 Operator : dharas
 Sample : ic511-2
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:54:55 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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: G8G511-IC511 Method: SW846 8081B
Lab FileID: 8G15808.D Analyst approved: 06/11/18 15:51 Dhara Saparia
Injection Time: 06/11/18 12:14 Supervisor approved: 06/13/18 10:11 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Alachlor	15972-60-8	1	4.69	Poorly defined baseline
Mirex	2385-85-5	2	11.05	Poorly defined baseline
Decachlorobiphenyl	2051-24-3	2	13.31	Poorly defined baseline

11.6.19.1

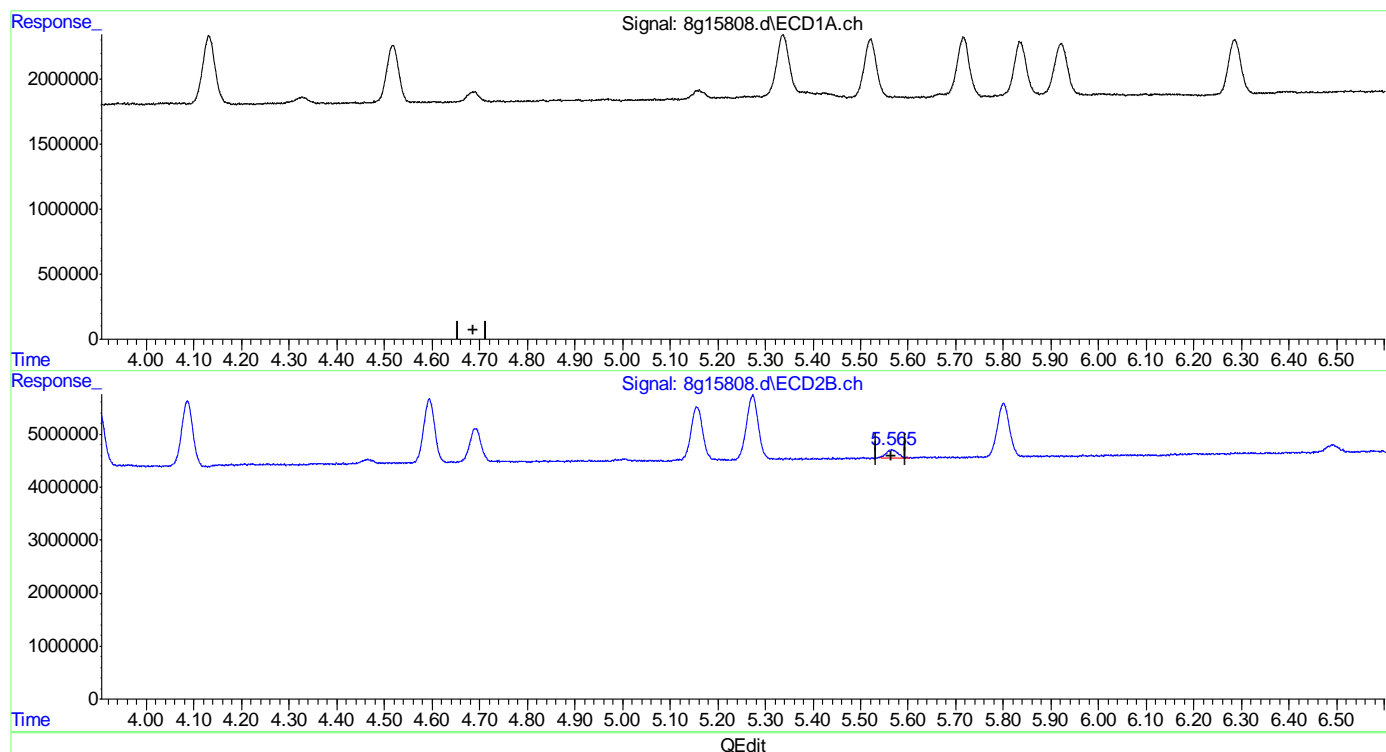
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15808.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:14 pm
 Operator : dharas
 Sample : ic511-2
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:21:33 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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

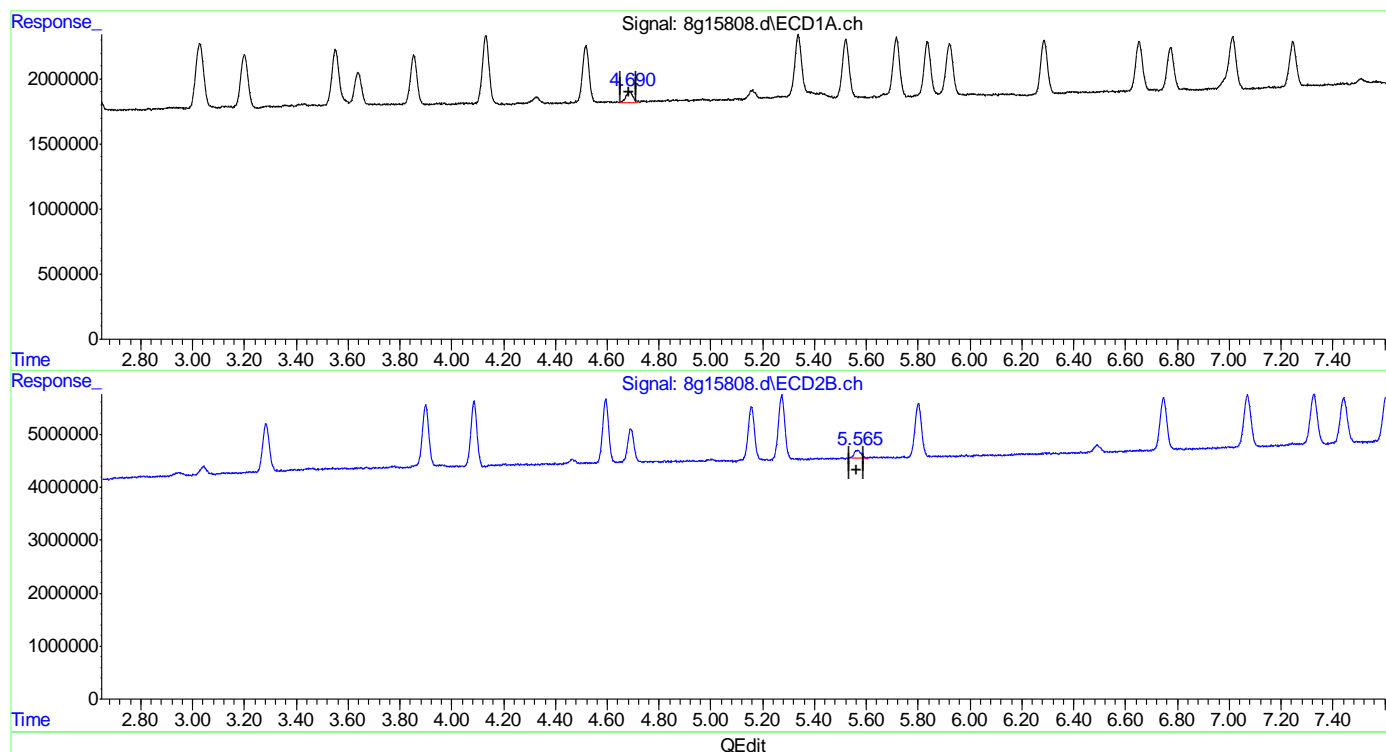
(10)alachlor #2
 5.565min 2.543 PPB
 response 2822961

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15808.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:14 pm
 Operator : dharas
 Sample : ic511-2
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:21:33 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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
 4.690min 2.858 PPB m
 response 1535043

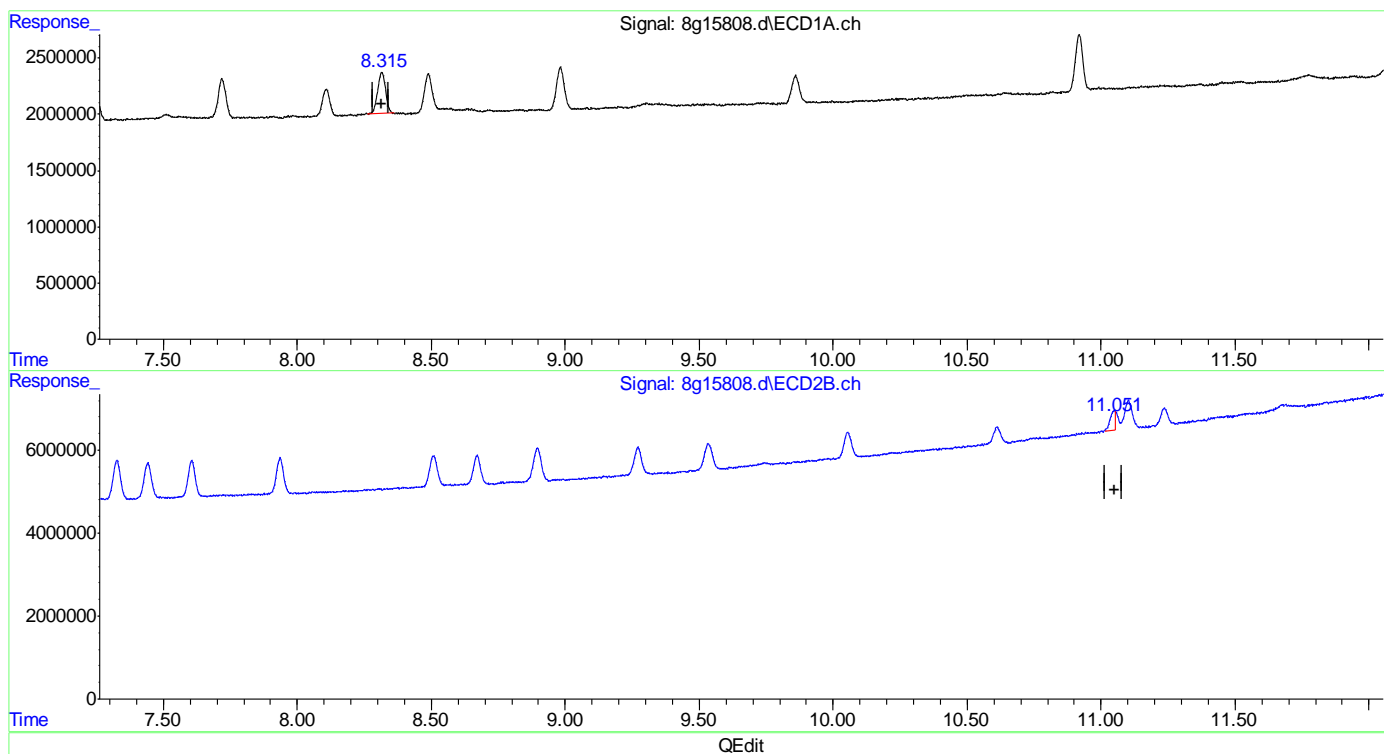
(10) alachlor #2
 5.565min 2.543 PPB
 response 2822961

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15808.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:14 pm
 Operator : dharas
 Sample : ic511-2
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:21:33 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



(24) Mirex
 8.316min 2.573 PPB
 response 7692872

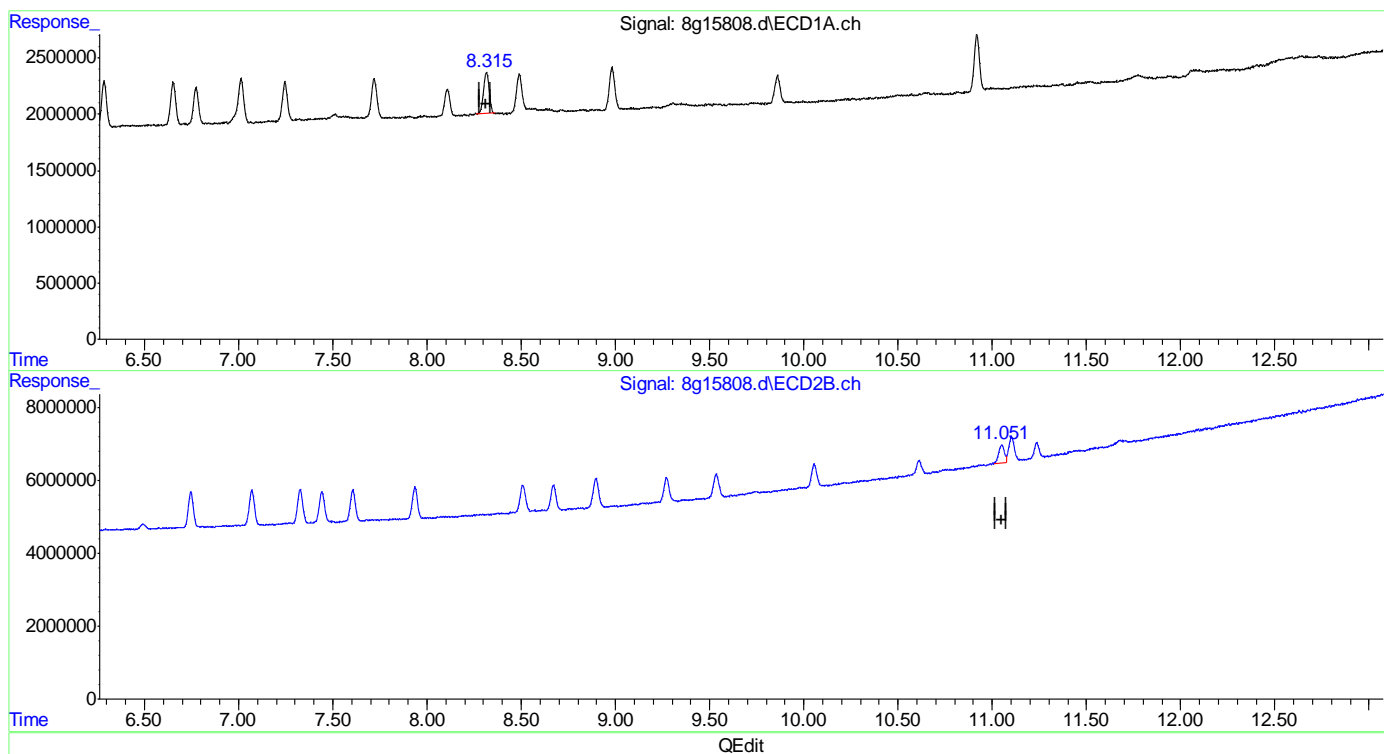
(24) Mirex #2
 11.051min 1.103 PPB
 response 6366239

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15808.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:14 pm
 Operator : dharas
 Sample : ic511-2
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:21:33 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



(24) Mirex
 8.316min 2.573 PPB
 response 7692872

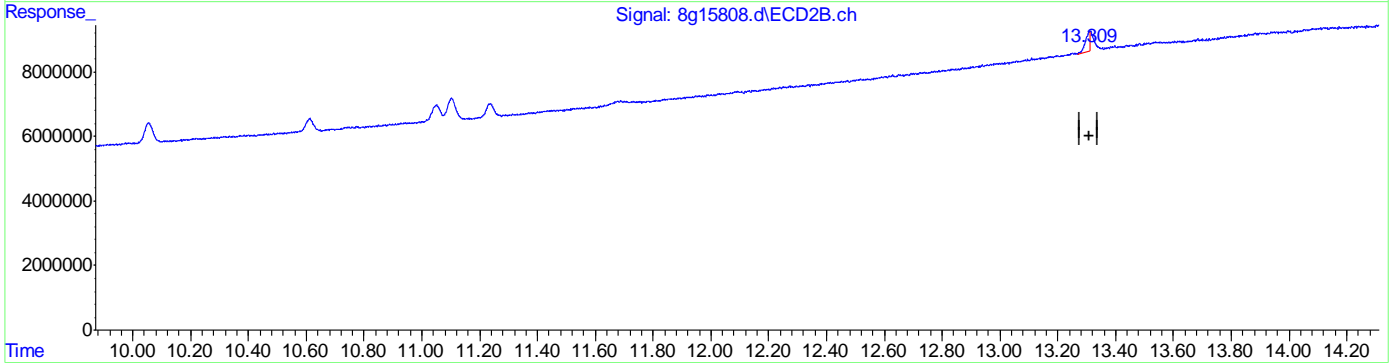
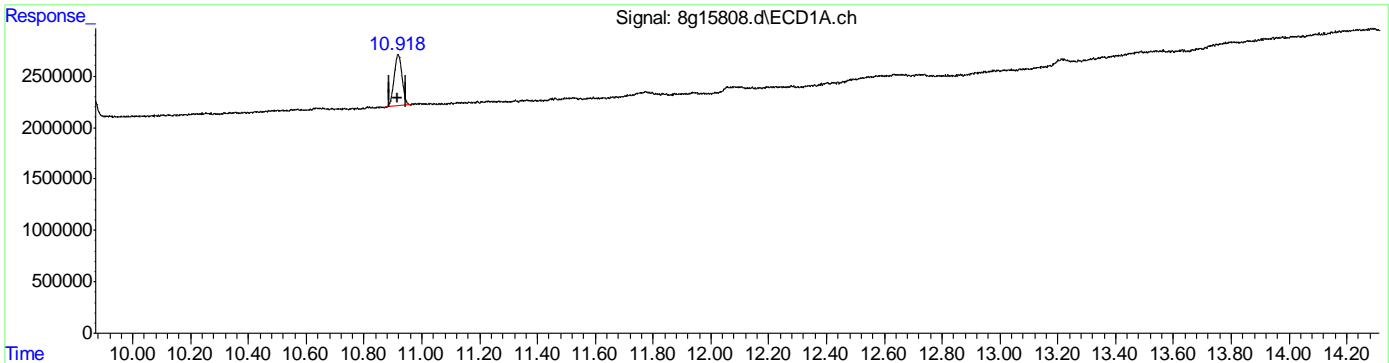
(24) Mirex #2
 11.051min 1.787 PPB m
 response 10314607

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15808.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:14 pm
 Operator : dharas
 Sample : ic511-2
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:21:33 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



Retention Time (min)	Concentration (PPB)	Response
10.918 (+)	2.420	9576981
13.309 (+)	0.918	6744447

(+) = Expected Retention Time
 8PST511.M Mon Jun 11 14:29:19 2018

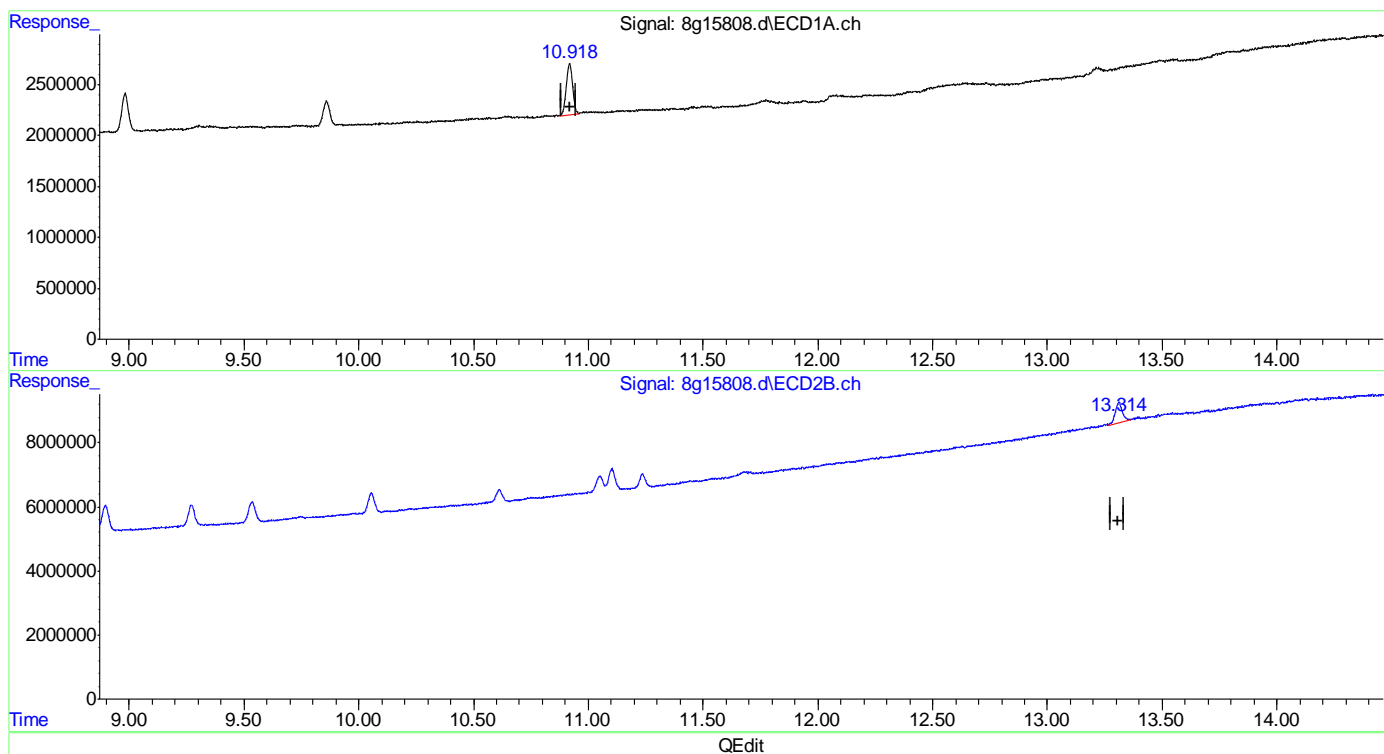
11.6.19.6
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15808.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:14 pm
 Operator : dharas
 Sample : ic511-2
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:21:33 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



(26) Decachlorobiphenyl (SA)

10.918min 2.420 PPB

response 9576981

(26) Decachlorobiphenyl #2 (SA)

13.314min 1.822 PPB m

response 13389707

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15809.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:30 pm
 Operator : dharas
 Sample : ic511-5
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:55:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.875	2.268	194.0E6	422.3E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.630	3.291	17994662	41023983	4.904	5.932
Spiked Amount	40.000 Range	30 - 150	Recovery =		12.26%#	14.83%#
26) SA Decachlor...	10.918	13.313	23999362	29772910	5.834	3.991m#
Spiked Amount	40.000		Recovery =		14.58%	9.98%
Target Compounds						
3) hexachlor...	3.036	3.905	25819236	48292324	4.770	5.344
4) A alpha-BHC	3.207	4.091	20252044	51148673	4.261	5.590 #
5) MA gamma-BHC	3.557	4.599	20368969	48122206	4.582	5.595
6) MA Heptachlor	4.135	5.276	23751793	51639139	5.347	5.867
7) B beta-BHC	3.644	4.695	11334997	26141080	5.362	6.388
8) B delta-BHC	3.859	5.159	16869815	41198224	4.679	5.448
9) MB Aldrin	4.520	5.803	19956470	45093953	4.969	5.435
10)alachlor	4.690	5.570	3508503	7415078	6.284	6.578m
11) B Heptachlo...	5.339	6.748	21135584	43600659	5.348	5.534
12) B gamma-Chl...	5.523	7.073	20889949	44768340	5.704	5.319
13) B alpha-Chl...	5.717	7.327	21621892	43649231	5.744	4.778
14) A Endosulfan I	5.922	7.443	19020115	39845497	5.509	5.193
15) B 4,4'-DDE	5.837	7.608	18907424	39658048	4.826	4.579
16) MA Dieldrin	6.289	7.937	19616435	39667901	5.130	4.506
17) MA Endrin	6.654	8.510	18442222	37032455	5.303	4.494
18) A 4,4'-DDD	6.776	8.670	15596430	31967878	5.271	4.413
19) B Endosulfa...	7.014	8.899	20211305	38801061	5.472	4.559
20) MA 4,4'-DDT	7.246	9.271	16132821	30271418	5.735	4.768
21) B Endrin Al...	7.721	9.537	16941852	31212048	5.583	4.696
22) B Endosulfa...	8.491	10.057	16192927	29498480	6.119	4.610
23) A Methoxychlor	8.105	10.610	11507128	18317883	6.315	5.017
24) Mirex	8.315	11.051	19459237	25560204	6.262	4.362 #
25) B Endrin Ke...	8.984	11.102	19133864	33169431	5.608	4.733

SemiQuant Compounds - Not Calibrated on this Instrument

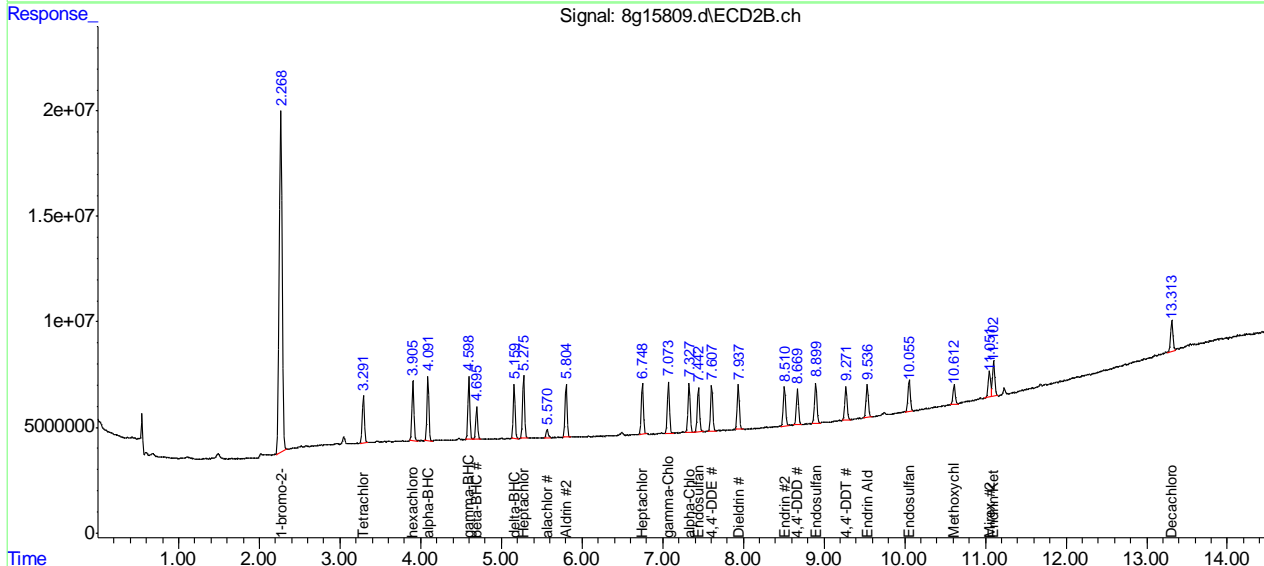
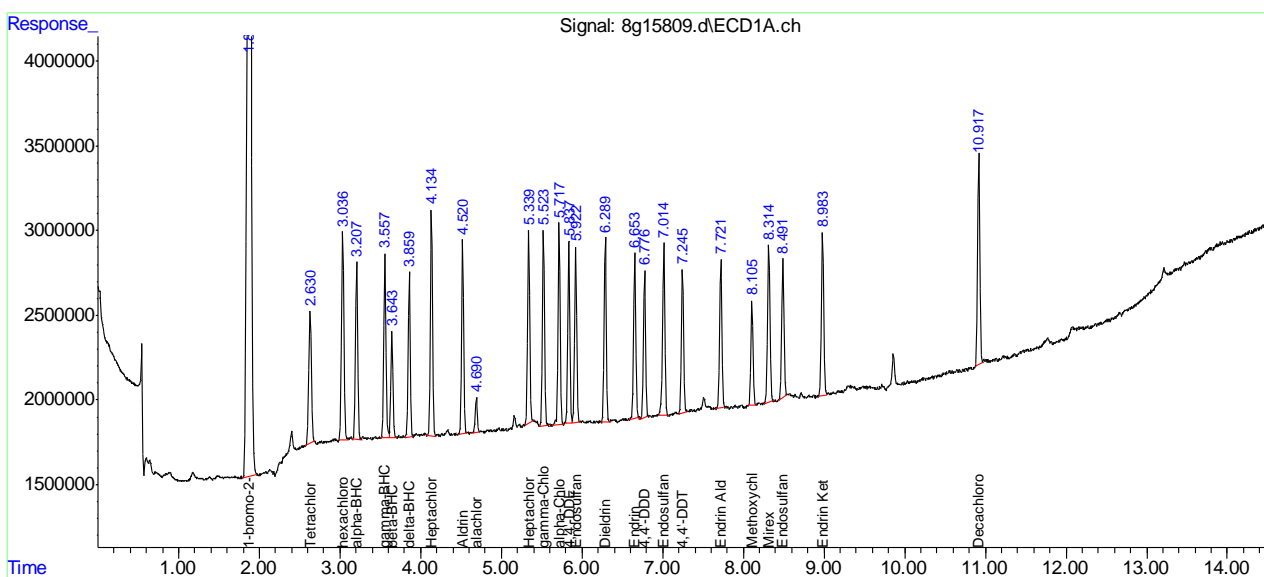
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15809.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:30 pm
 Operator : dharas
 Sample : ic511-5
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:55:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.20
11

Manual Integration Approval Summary

Sample Number: G8G511-IC511 Method: SW846 8081B
Lab FileID: 8G15809.D Analyst approved: 06/11/18 15:51 Dhara Saparia
Injection Time: 06/11/18 12:30 Supervisor approved: 06/13/18 10:11 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Alachlor	15972-60-8	2	5.57	Poorly defined baseline
Decachlorobiphenyl	2051-24-3	2	13.31	Poorly defined baseline

11.6.20.1

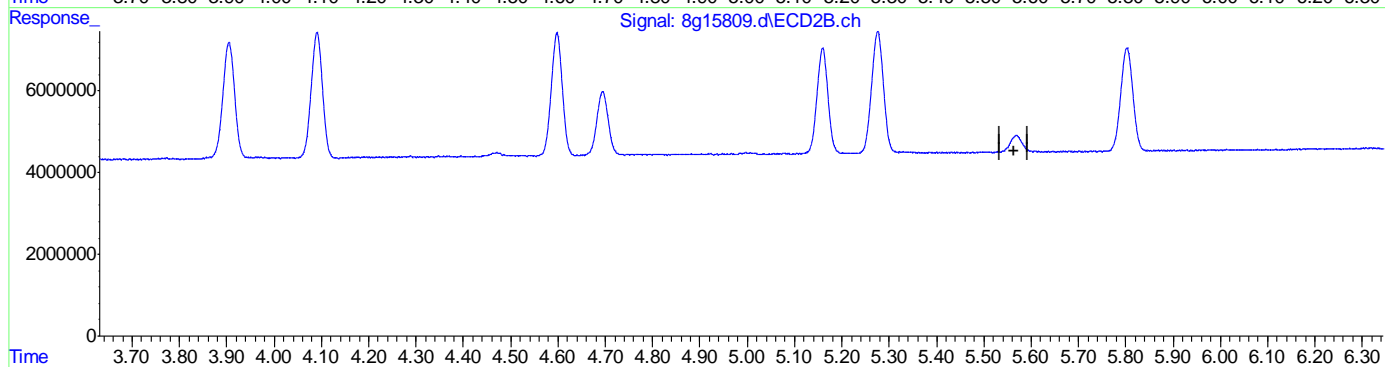
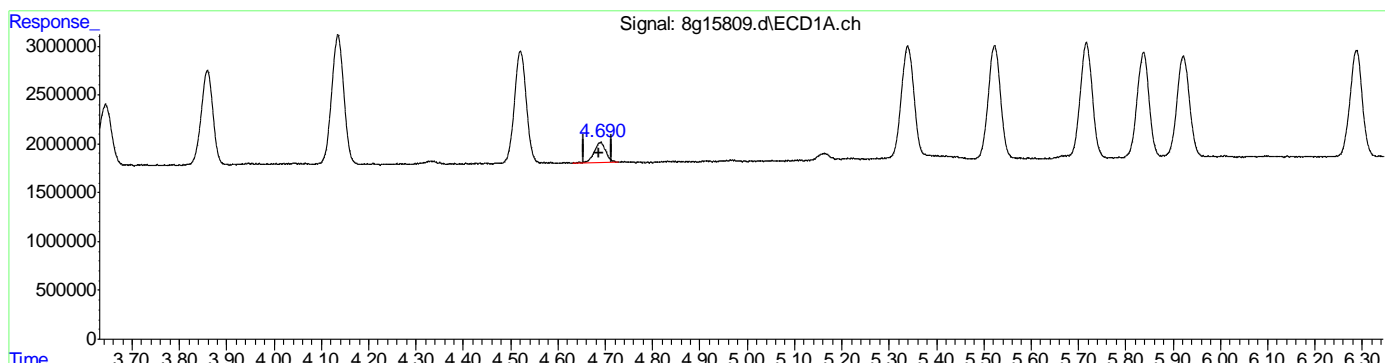
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15809.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:30 pm
 Operator : dharas
 Sample : ic511-5
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:15:56 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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
 4.690min 6.284 PPB
 response 3508503

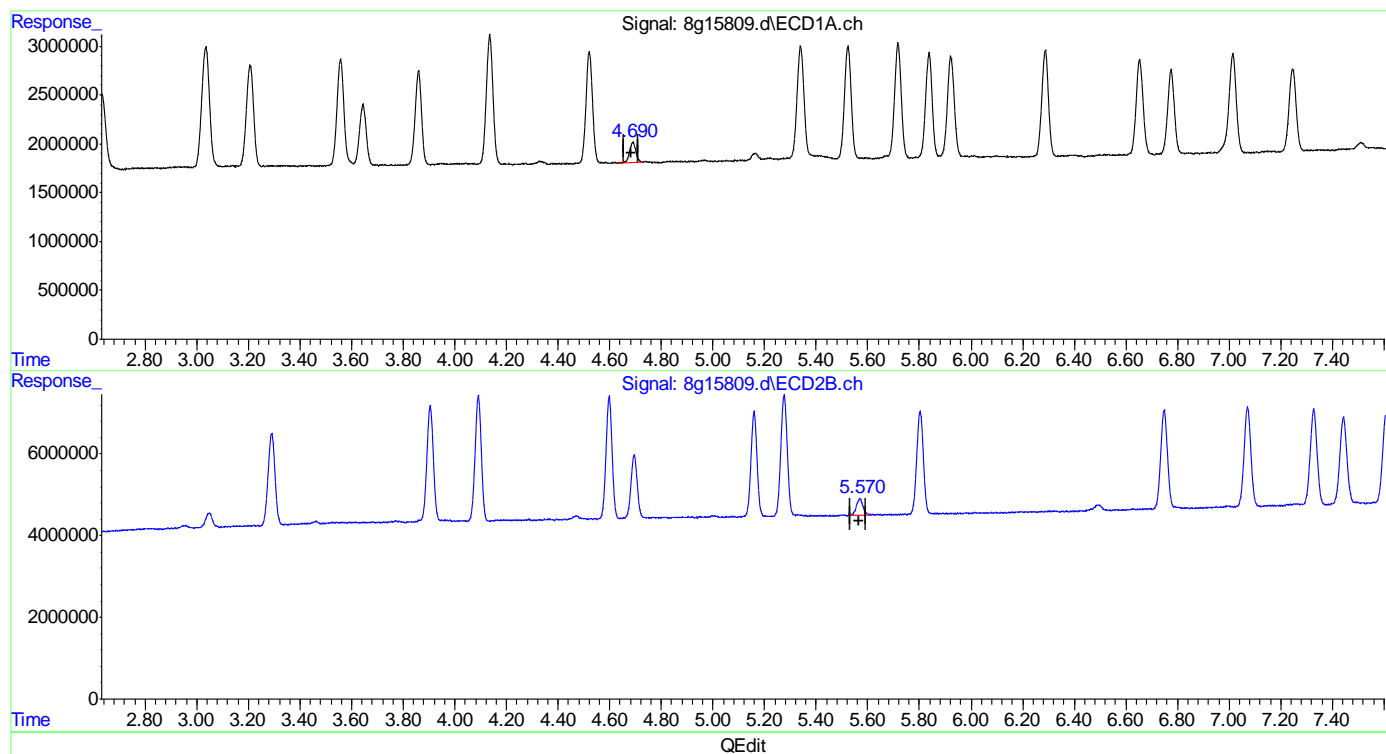
(10) alachlor #2
 0.000min 0.000 PPB
 response 0

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15809.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:30 pm
 Operator : dharas
 Sample : ic511-5
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:15:56 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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
 4.690min 6.284 PPB
 response 3508503

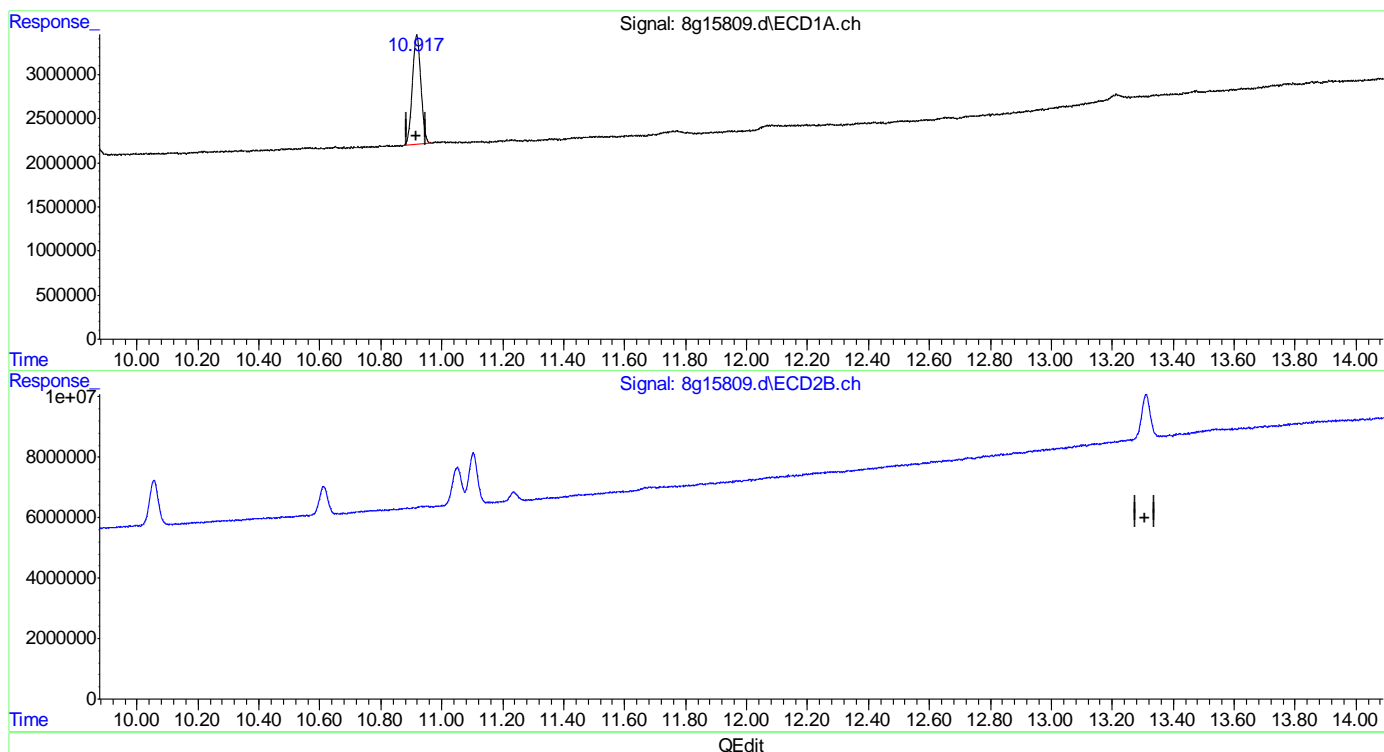
(10) alachlor #2
 5.570min 6.578 PPB m
 response 7415078

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15809.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:30 pm
 Operator : dharas
 Sample : ic511-5
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:15:56 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



(26) Decachlorobiphenyl (SA)

10.918min 5.834 PPB

response 23999362

(26) Decachlorobiphenyl #2 (SA)

0.000min 0.000 PPB

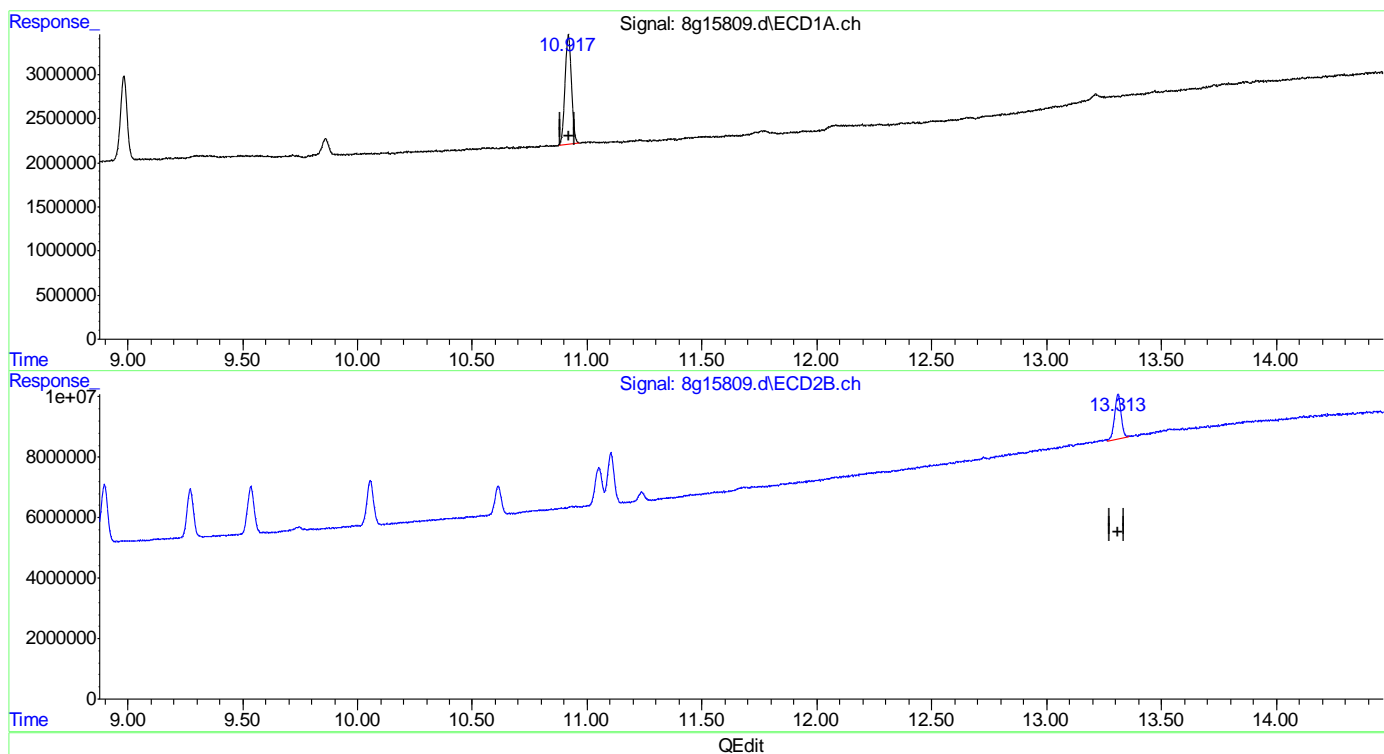
response 0

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15809.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:30 pm
 Operator : dharas
 Sample : ic511-5
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:15:56 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



(26) Decachlorobiphenyl (SA)

10.918min 5.834 PPB

response 23999362

(26) Decachlorobiphenyl #2 (SA)

13.313min 3.991 PPB m

response 29772910

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15810.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:47 pm
 Operator : dharas
 Sample : ic511-10
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:55:22 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.859	2.256	187.4E6	407.7E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.621	3.284	34644788	78766878	9.776	11.799
Spiked Amount	40.000	Range	30 - 150	Recovery =	24.44%#	29.50%#
26) SA Decachlor...	10.916	13.310	47773786	54727264	12.024	7.600 #
Spiked Amount	40.000		Recovery =	30.06%	19.00%	
Target Compounds						
3) hexachlor...	3.028	3.900	48942716	92947197	9.361	10.654
4) A alpha-BHC	3.200	4.087	39600822	101.0E6	8.627	11.431 #
5) MA gamma-BHC	3.552	4.594	39639158	94272481	9.233	11.354
6) MA Heptachlor	4.131	5.273	45003829	99327419	10.489	11.691
7) B beta-BHC	3.638	4.691	20985387	48824989	10.278	12.360
8) B delta-BHC	3.854	5.156	32731872	81361656	9.399	11.146
9) MB Aldrin	4.518	5.800	39156194	87608600	10.093	10.938
10)alachlor	4.685	5.564	6741265	13772555	12.502	12.658m
11) B Heptachlo...	5.337	6.746	40093525	84480890	10.503	11.109
12) B gamma-Chl...	5.520	7.070	39846136	85615364	11.264	10.537
13) B alpha-Chl...	5.716	7.326	40660419	84064724	11.183	9.533
14) A Endosulfan I	5.920	7.440	35340603	76594897	10.598	10.342
15) B 4,4'-DDE	5.834	7.608	36188933	77747068	9.564	9.300
16) MA Dieldrin	6.285	7.935	37554588	78765367	10.167	9.269
17) MA Endrin	6.651	8.508	34607340	71628314	10.303	9.004
18) A 4,4'-DDD	6.773	8.670	29534555	62787857	10.334	8.980
19) B Endosulfa...	7.012	8.897	36970701	73129051	10.363	8.900
20) MA 4,4'-DDT	7.243	9.271	30936816	61474679	11.386	10.030
21) B Endrin Al...	7.717	9.534	32806654	62058321	11.194	9.673
22) B Endosulfa...	8.488	10.054	30799748	56488779	12.050	9.145
23) A Methoxychlor	8.104	10.610	22269108	35746698	12.654	10.142
24) Mirex	8.315	11.048	38040160	49952089	12.674	8.831 #
25) B Endrin Ke...	8.981	11.101	37419368	65042154	11.356	9.615

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

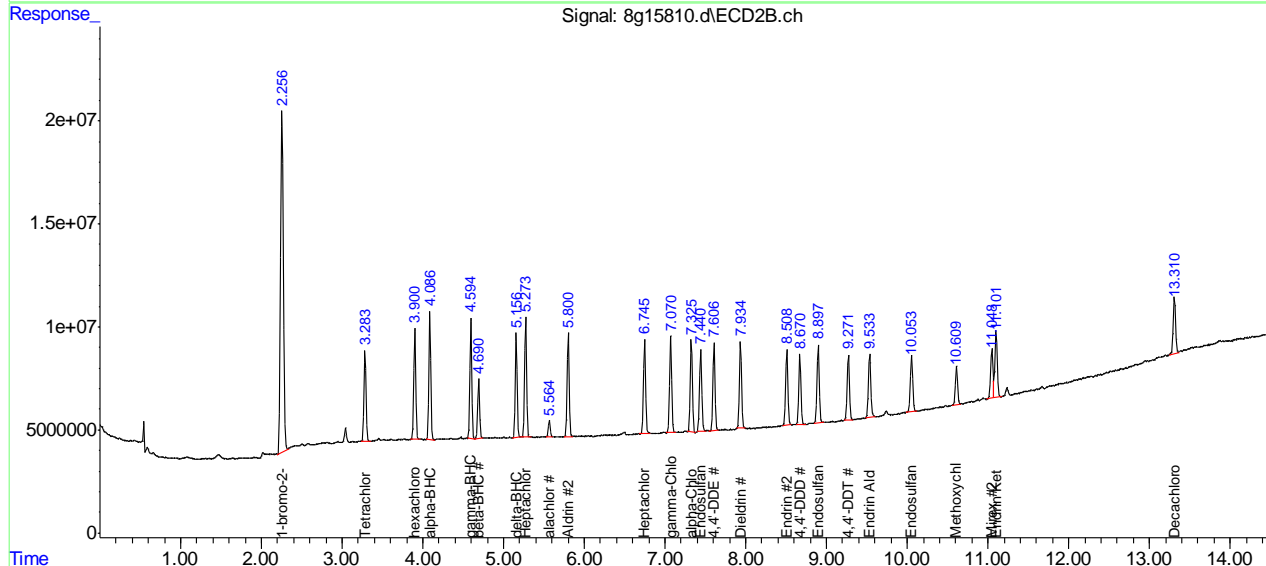
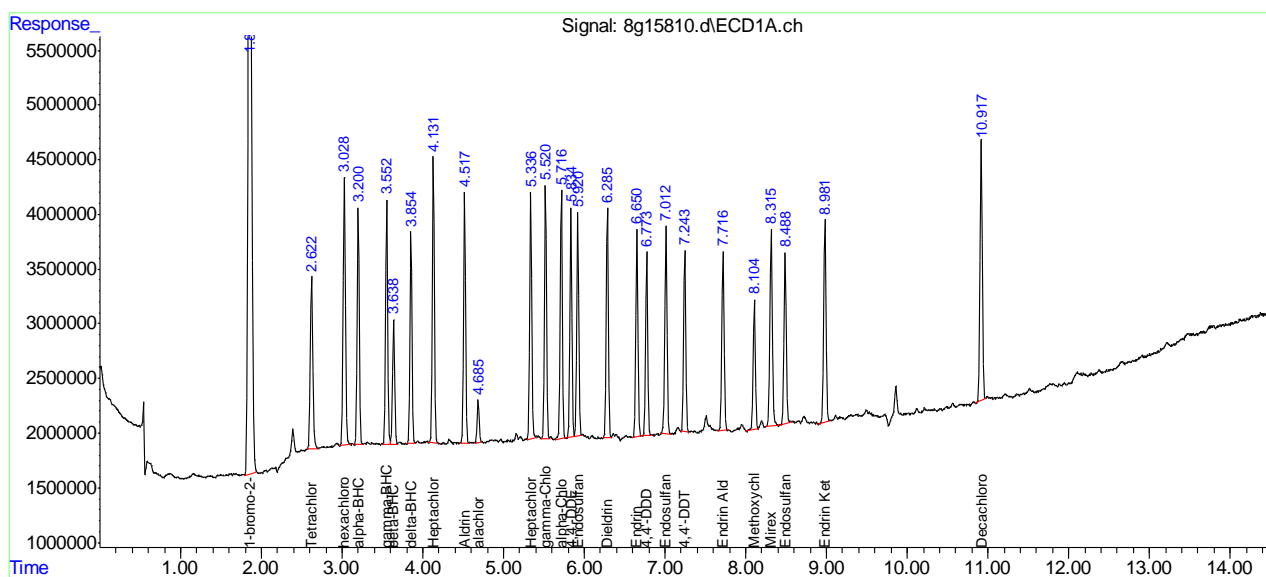
11.621
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15810.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:47 pm
 Operator : dharas
 Sample : ic511-10
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:55:22 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.21
11

Manual Integration Approval Summary

Sample Number: G8G511-IC511 Method: SW846 8081B
Lab FileID: 8G15810.D Analyst approved: 06/11/18 15:51 Dhara Saparia
Injection Time: 06/11/18 12:47 Supervisor approved: 06/13/18 10:11 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Alachlor	15972-60-8	2	5.56	Poorly defined baseline

11.6.21.1

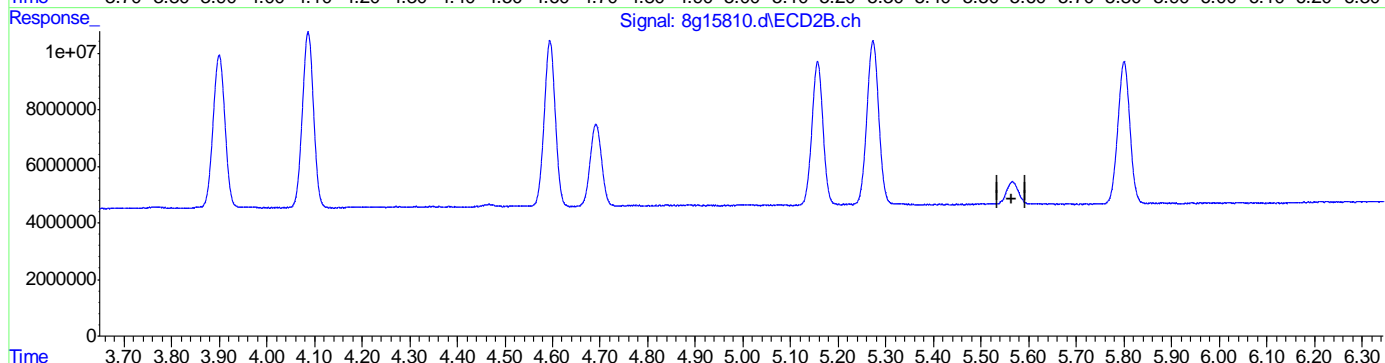
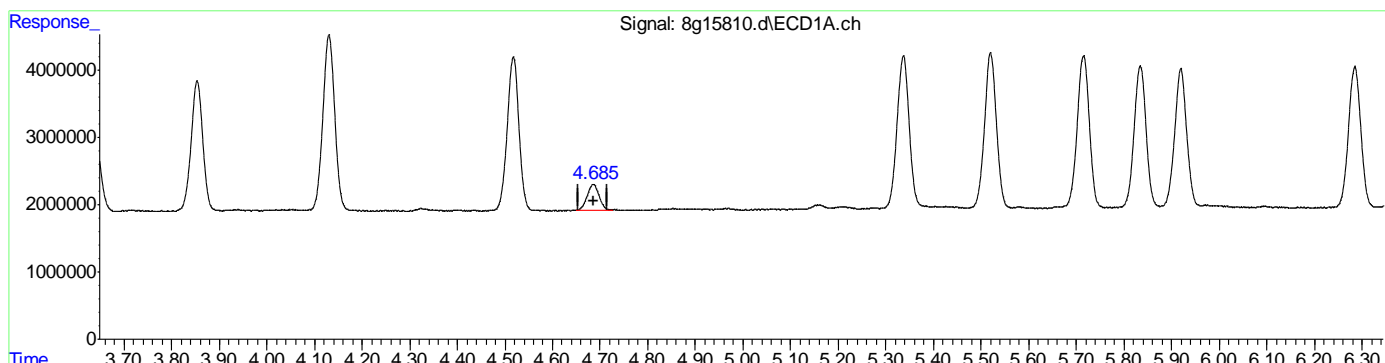
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15810.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:47 pm
 Operator : dharas
 Sample : ic511-10
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:14:37 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.21.2
11

QEdit

(10)alachlor
 4.685min 12.502 PPB
 response 6741265

(10)alachlor #2
 0.000min 0.000 PPB
 response 0

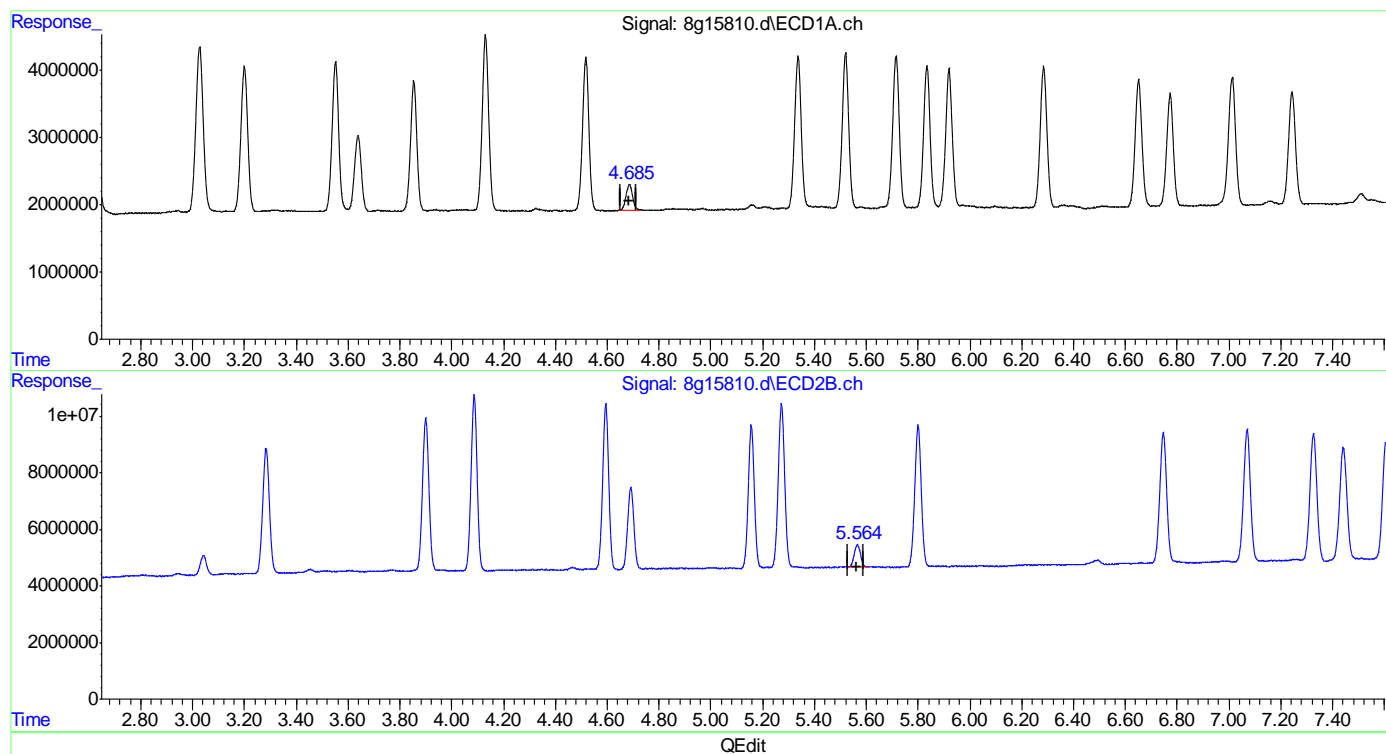
(+) = Expected Retention Time
 8PST511.M Mon Jun 11 14:14:52 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15810.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 12:47 pm
 Operator : dharas
 Sample : ic511-10
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:14:37 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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
 4.685min 12.502 PPB
 response 6741265

(10) alachlor #2
 5.564min 12.658 PPB m
 response 13772555

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15811.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 1:03 pm
 Operator : dharas
 Sample : icc511-25
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:55:36 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.861	2.256	192.9E6	408.7E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.622	3.284	93841619	201.2E6	25.723	30.068
Spiked Amount	40.000	Range	30 - 150	Recovery =	64.31%	75.17%
26) SA Decachlor...	10.918	13.310	116.5E6	134.6E6	28.476	18.655 #
Spiked Amount	40.000		Recovery =	71.19%	46.64%	
Target Compounds						
3) hexachlor...	3.027	3.900	128.6E6	230.8E6	23.903	26.394
4) A alpha-BHC	3.201	4.087	121.3E6	277.3E6	25.677	31.322
5) MA gamma-BHC	3.552	4.595	116.7E6	257.1E6	26.397	30.883
6) MA Heptachlor	4.132	5.273	128.0E6	259.7E6	28.983	30.495
7) B beta-BHC	3.640	4.691	56371367	120.4E6	26.820	30.410
8) B delta-BHC	3.855	5.157	101.5E6	226.3E6	28.317	30.921
9) MB Aldrin	4.519	5.801	112.7E6	232.9E6	28.232	29.010
10)alachlor	4.687	5.566	16290901	33553419	29.349	30.763
11) B Heptachlo...	5.338	6.747	107.3E6	218.1E6	27.314	28.608
12) B gamma-Chl...	5.521	7.069	108.2E6	218.7E6	29.707	26.856
13) B alpha-Chl...	5.716	7.326	107.9E6	213.4E6	28.839	24.146
14) A Endosulfan I	5.921	7.442	97684317	198.5E6	28.457	26.737
15) B 4,4'-DDE	5.835	7.606	102.1E6	204.2E6	26.209	24.370
16) MA Dieldrin	6.286	7.935	104.0E6	211.4E6	27.342	24.821
17) MA Endrin	6.653	8.508	94518058	189.5E6	27.336	23.764
18) A 4,4'-DDD	6.774	8.670	80755470	164.4E6	27.450	23.453
19) B Endosulfa...	7.013	8.896	97243775	187.4E6	26.480	22.749
20) MA 4,4'-DDT	7.245	9.270	86854492	162.0E6	31.054	26.366
21) B Endrin Al...	7.719	9.534	82487584	155.0E6	27.341	24.094
22) B Endosulfa...	8.488	10.054	81019797	148.1E6	30.794	23.922
23) A Methoxychlor	8.107	10.610	55436111	90079172	30.600	25.497
24) Mirex	8.315	11.048	90247943	119.3E6	29.210	21.044 #
25) B Endrin Ke...	8.982	11.101	97922444	164.4E6	28.868	24.243

SemiQuant Compounds - Not Calibrated on this Instrument

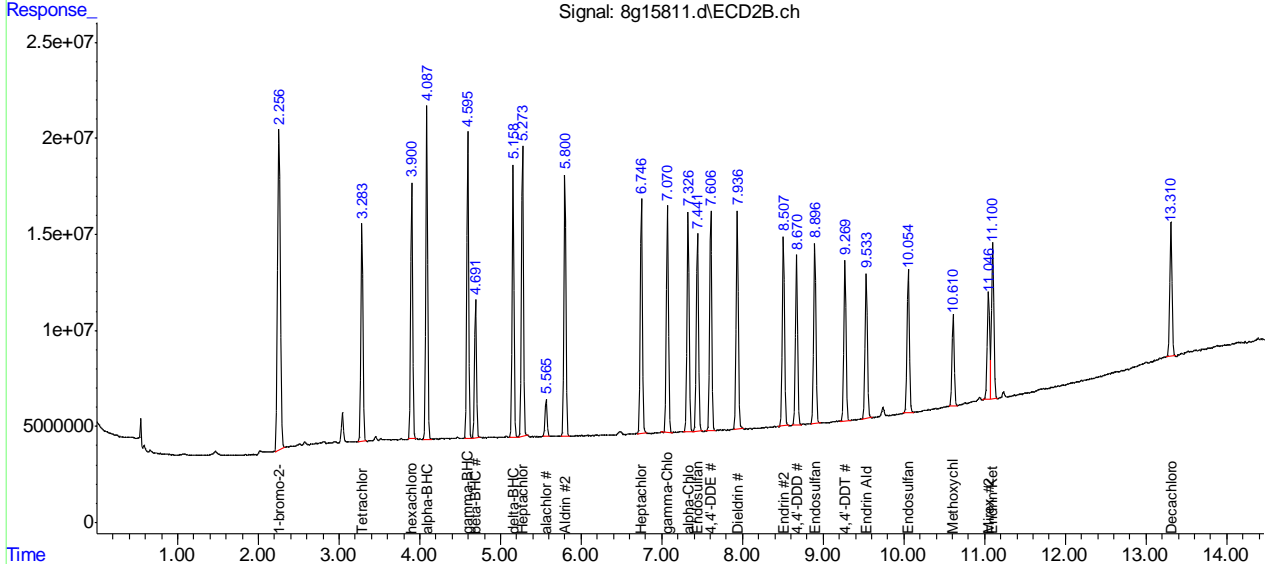
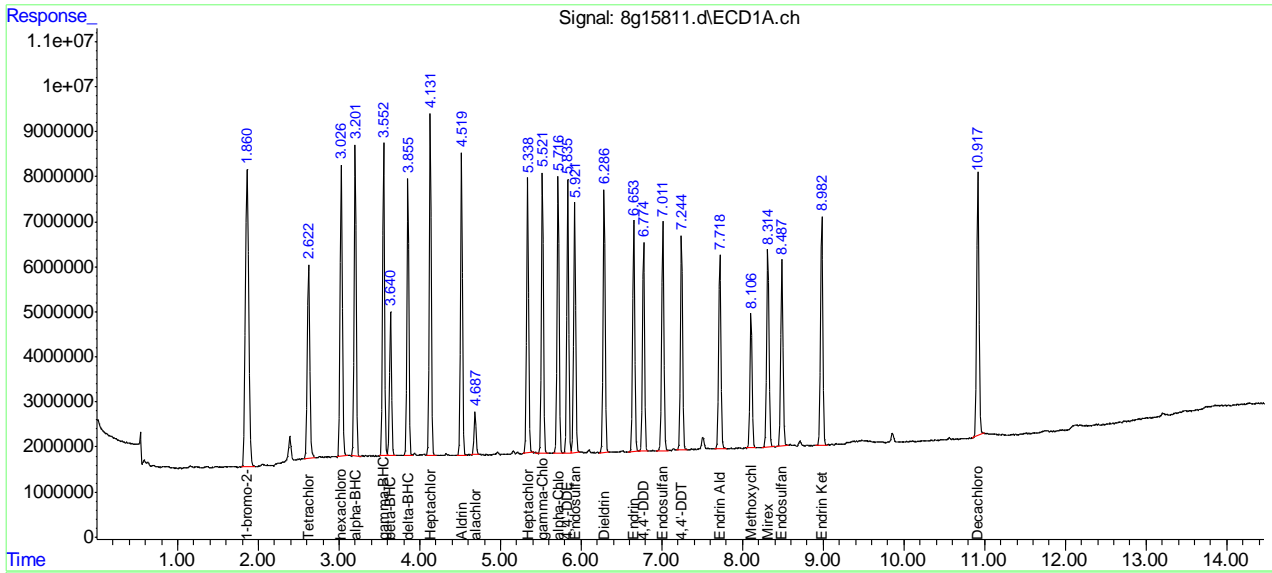
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15811.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 1:03 pm
 Operator : dharas
 Sample : icc511-25
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:55:36 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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\8G511\
 Data File : 8g15812.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 1:19 pm
 Operator : dharas
 Sample : ic511-50
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:11:50 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.860	2.253	176.7E6	375.5E6	50.000	50.000
27)	I 1-bromo-2...	1.860	2.253	176.7E6	375.5E6	50.000	50.000
33)	I 1-bromo-2...	1.860	2.253	176.7E6	375.5E6	50.000	50.000
System Monitoring Compounds							
2)	SAB Tetrachlo...	2.621	3.283	192.5E6	408.5E6	57.611	66.432
	Spiked Amount	40.000	Range 30 - 150	Recovery =	144.03%	166.08%#	
26)	SA Decachlor...	10.916	13.309	222.6E6	259.6E6	59.429	39.138 #
	Spiked Amount	40.000		Recovery =	148.57%	97.84%	
Target Compounds							
3)	hexachlor...	3.027	3.899	257.2E6	462.9E6	52.184	57.598
4)	A alpha-BHC	3.201	4.087	266.4E6	586.8E6	61.572	72.114
5)	MA gamma-BHC	3.552	4.594	251.0E6	537.3E6	62.013	70.254
6)	MA Heptachlor	4.132	5.273	267.6E6	533.8E6	66.164	68.204
7)	B beta-BHC	3.639	4.691	113.0E6	239.0E6	58.685	65.686
8)	B delta-BHC	3.855	5.157	221.7E6	478.9E6	67.534	71.223
9)	MB Aldrin	4.519	5.800	242.3E6	488.2E6	66.250	66.169
10)	alachlor	4.686	5.566	31220765	65349643	61.416	65.200
11)	B Heptachlo...	5.338	6.746	231.7E6	446.3E6	64.393	63.712
12)	B gamma-Chl...	5.522	7.070	237.4E6	449.3E6	71.172	60.034
13)	B alpha-Chl...	5.717	7.326	232.9E6	434.0E6	67.952	53.430
14)	A Endosulfan I	5.921	7.441	211.1E6	403.9E6	67.137	59.210
15)	B 4,4'-DDE	5.836	7.607	227.6E6	427.0E6	63.798	55.451
16)	MA Dieldrin	6.287	7.935	231.3E6	444.3E6	66.428	56.758
17)	MA Endrin	6.654	8.508	206.8E6	389.4E6	65.292	53.137
18)	A 4,4'-DDD	6.774	8.670	180.3E6	339.1E6	66.933	52.647
19)	B Endosulfa...	7.014	8.897	207.3E6	375.6E6	61.631	49.621
20)	MA 4,4'-DDT	7.246	9.271	192.7E6	329.1E6	75.239	58.284
21)	B Endrin Al...	7.721	9.533	174.7E6	309.8E6	63.223	52.414
22)	B Endosulfa...	8.490	10.053	171.9E6	300.7E6	71.321	52.854 #
23)	A Methoxychlor	8.107	10.611	114.8E6	177.4E6	69.194	54.628
24)	Mirex	8.316	11.048	183.2E6	232.9E6	64.759	44.692 #
25)	B Endrin Ke...	8.982	11.102	211.1E6	332.2E6	67.959	53.312

SemiQuant Compounds - Not Calibrated on this Instrument

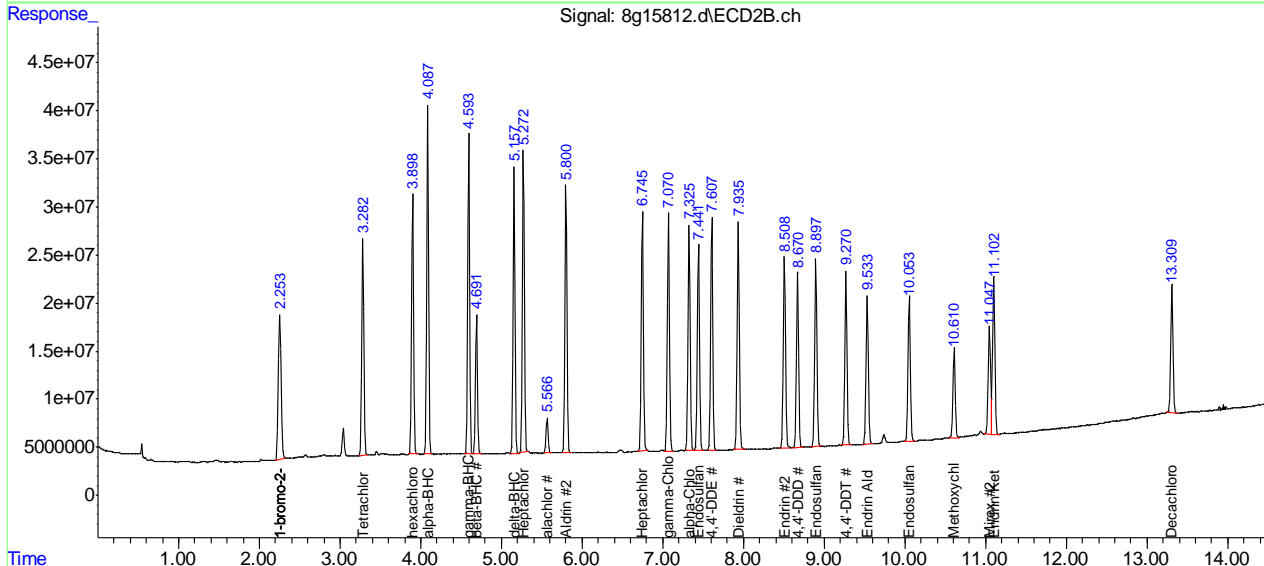
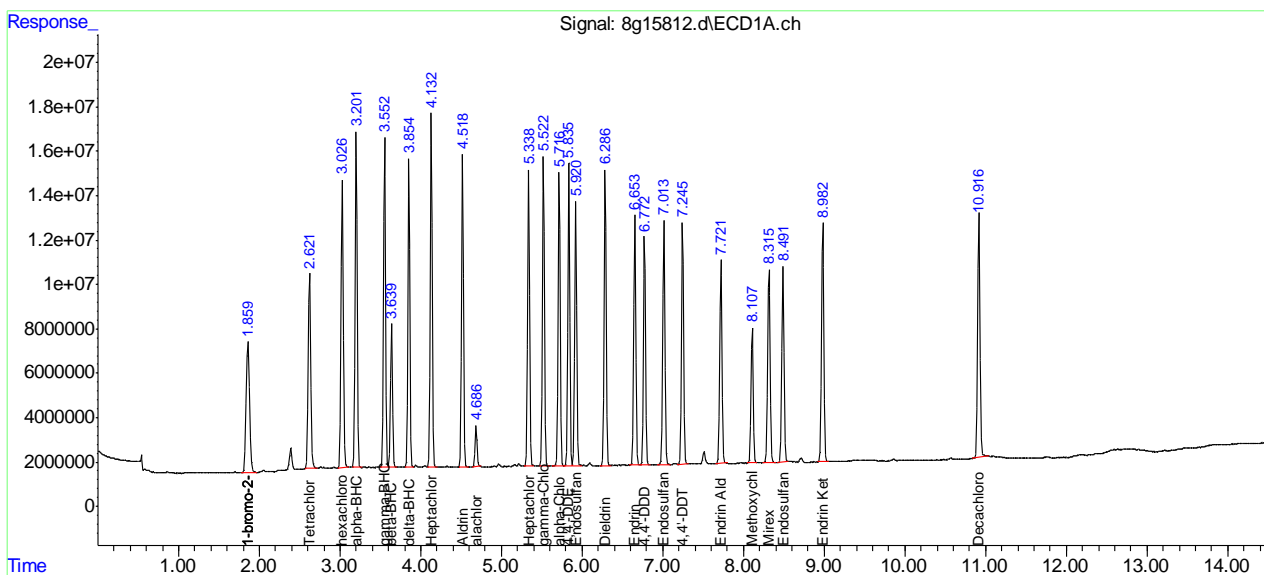
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15812.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 1:19 pm
 Operator : dharas
 Sample : ic511-50
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:11:50 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.23
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15813.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 1:36 pm
 Operator : dharas
 Sample : ic511-75
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:56:04 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.861	2.255	198.0E6	414.0E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.621	3.284	305.5E6	629.1E6	81.592	92.805
Spiked Amount	40.000	Range 30 - 150	Recovery = 203.98%#		232.01%#	
26) SA Decachlor...	10.918	13.309	341.3E6	402.6E6	81.290	55.072 #
Spiked Amount	40.000		Recovery = 203.23%		137.68%	
Target Compounds						
3) hexachlor...	3.027	3.900	400.3E6	708.7E6	72.457	80.008
4) A alpha-BHC	3.201	4.087	437.1E6	929.0E6	90.117	103.584
5) MA gamma-BHC	3.552	4.595	405.9E6	844.1E6	89.476	100.121
6) MA Heptachlor	4.131	5.273	429.6E6	835.2E6	94.759	96.815
7) B beta-BHC	3.639	4.692	175.7E6	366.0E6	81.447	91.241
8) B delta-BHC	3.854	5.157	360.4E6	755.7E6	97.949	101.963
9) MB Aldrin	4.519	5.800	395.1E6	771.0E6	96.390	94.795
10)alachlor	4.686	5.566	47254163	98856097	82.941	89.479
11) B Heptachlo...	5.337	6.746	370.5E6	705.6E6	91.851	91.383
12) B gamma-Chl...	5.521	7.069	382.4E6	704.4E6	102.319	85.385
13) B alpha-Chl...	5.715	7.326	372.7E6	676.1E6	97.003	75.505
14) A Endosulfan I	5.921	7.441	337.9E6	632.9E6	95.903	84.166
15) B 4,4'-DDE	5.836	7.607	370.5E6	678.1E6	92.665	79.892
16) MA Dieldrin	6.286	7.935	375.2E6	698.2E6	96.137	80.920
17) MA Endrin	6.654	8.507	335.2E6	605.1E6	94.440	74.919
18) A 4,4'-DDD	6.773	8.671	291.6E6	526.5E6	96.577	74.153
19) B Endosulfa...	7.013	8.896	329.3E6	572.3E6	87.374	68.598
20) MA 4,4'-DDT	7.246	9.271	312.7E6	515.3E6	108.938	82.806
21) B Endrin Al...	7.719	9.533	272.0E6	478.8E6	87.823	73.501
22) B Endosulfa...	8.489	10.054	266.3E6	466.3E6	98.625	74.355
23) A Methoxychlor	8.107	10.610	177.5E6	275.5E6	95.458	76.984
24) Mirex	8.315	11.049	279.7E6	356.4E6	88.196	62.060 #
25) B Endrin Ke...	8.981	11.102	328.4E6	523.2E6	94.317	76.173

SemiQuant Compounds - Not Calibrated on this Instrument

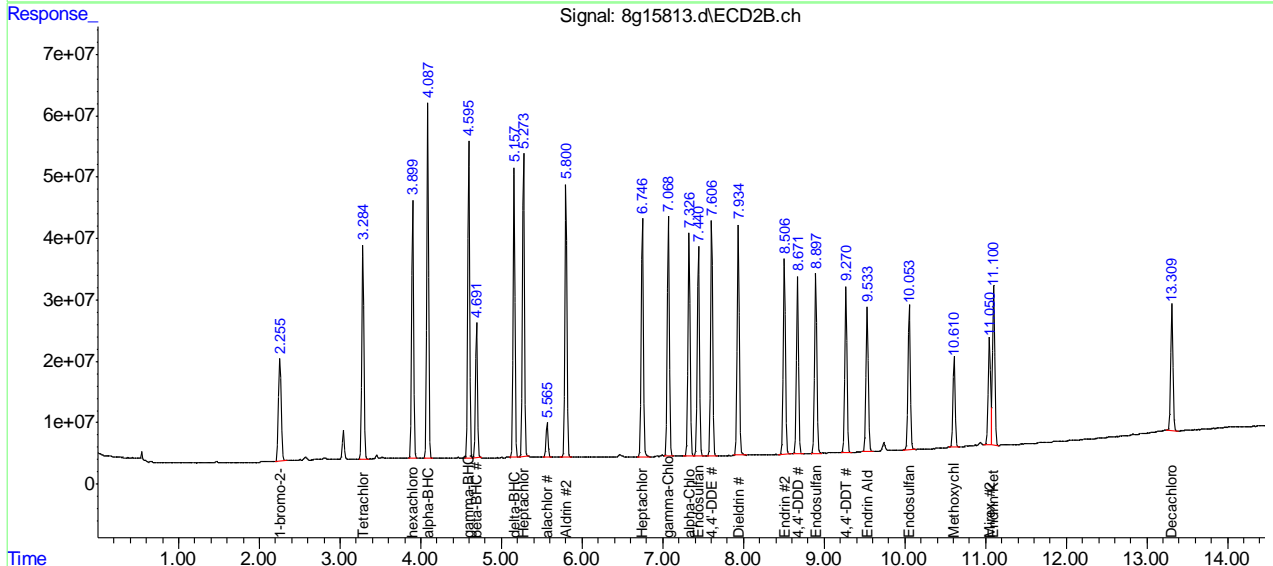
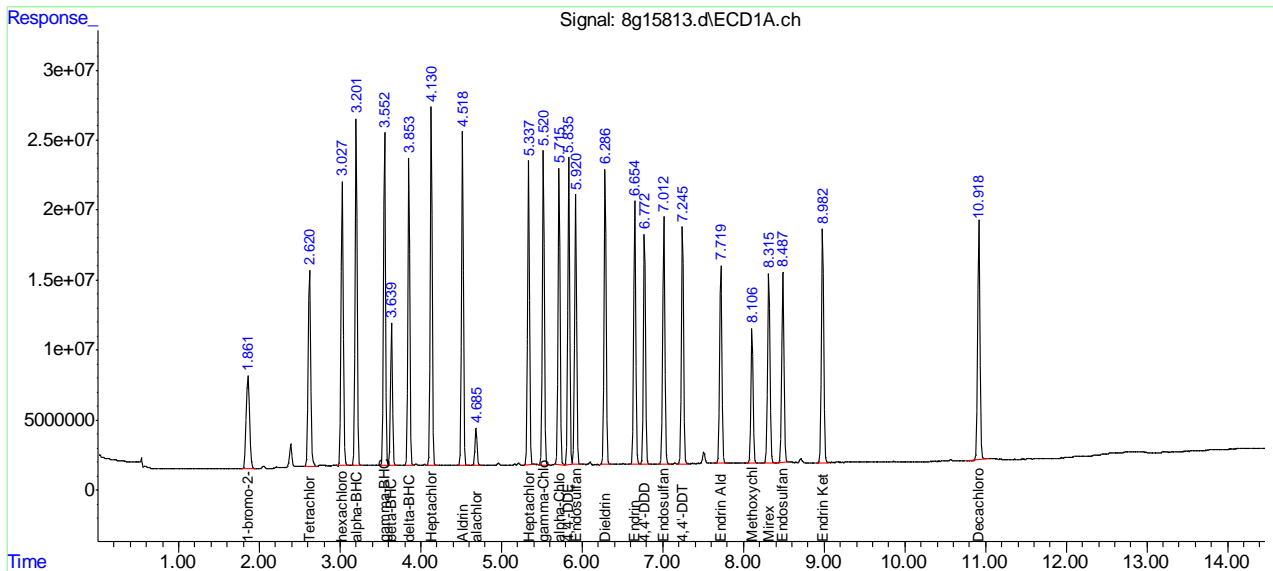
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15813.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 1:36 pm
 Operator : dharas
 Sample : ic511-75
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:56:04 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.24 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15814.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 1:52 pm
 Operator : dharas
 Sample : ic511-100
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:56:16 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.858	2.256	194.3E6	410.9E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.623	3.283	424.4E6	852.5E6	115.477	126.713
Spiked Amount	40.000	Range 30 - 150	Recovery = 288.69%#		316.78%#	
26) SA Decachlor...	10.917	13.309	472.7E6	536.1E6	114.719	73.885 #
Spiked Amount	40.000		Recovery = 286.80%		184.71%	
Target Compounds						
3) hexachlor...	3.027	3.900	548.5E6	952.1E6	101.154	108.294
4) A alpha-BHC	3.201	4.087	622.9E6	1272.6E6	130.845	142.970
5) MA gamma-BHC	3.552	4.595	573.8E6	1154.0E6	128.877	137.911
6) MA Heptachlor	4.132	5.273	601.6E6	1145.5E6	135.207	133.796
7) B beta-BHC	3.638	4.691	242.2E6	492.3E6	114.383	123.671
8) B delta-BHC	3.854	5.157	516.3E6	1039.9E6	142.961	141.361
9) MB Aldrin	4.518	5.800	556.8E6	1055.1E6	138.380	130.712
10)alachlor	4.686	5.565	63022155	130.1E6	112.696	118.611
11) B Heptachlo...	5.337	6.746	516.9E6	961.0E6	130.564	125.396
12) B gamma-Chl...	5.521	7.069	537.3E6	962.3E6	146.446	117.524
13) B alpha-Chl...	5.715	7.326	523.0E6	922.3E6	138.692	103.782 #
14) A Endosulfan I	5.921	7.441	472.6E6	861.4E6	136.664	115.416
15) B 4,4'-DDE	5.836	7.606	524.1E6	930.6E6	133.552	110.459
16) MA Dieldrin	6.286	7.935	529.8E6	960.0E6	138.296	112.100
17) MA Endrin	6.652	8.507	472.5E6	846.1E6	135.630	105.544
18) A 4,4'-DDD	6.773	8.670	412.3E6	732.4E6	139.102	103.940 #
19) B Endosulfa...	7.013	8.896	459.4E6	794.8E6	124.167	95.989
20) MA 4,4'-DDT	7.246	9.270	441.7E6	715.0E6	156.758	115.764 #
21) B Endrin Al...	7.720	9.532	375.4E6	647.5E6	123.496	100.150
22) B Endosulfa...	8.489	10.054	371.3E6	633.3E6	140.068	101.743 #
23) A Methoxychlor	8.107	10.611	242.0E6	370.8E6	132.596	104.395
24) Mirex	8.315	11.048	382.3E6	482.9E6	122.808	84.722 #
25) B Endrin Ke...	8.982	11.101	459.8E6	708.9E6	134.529	103.996

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

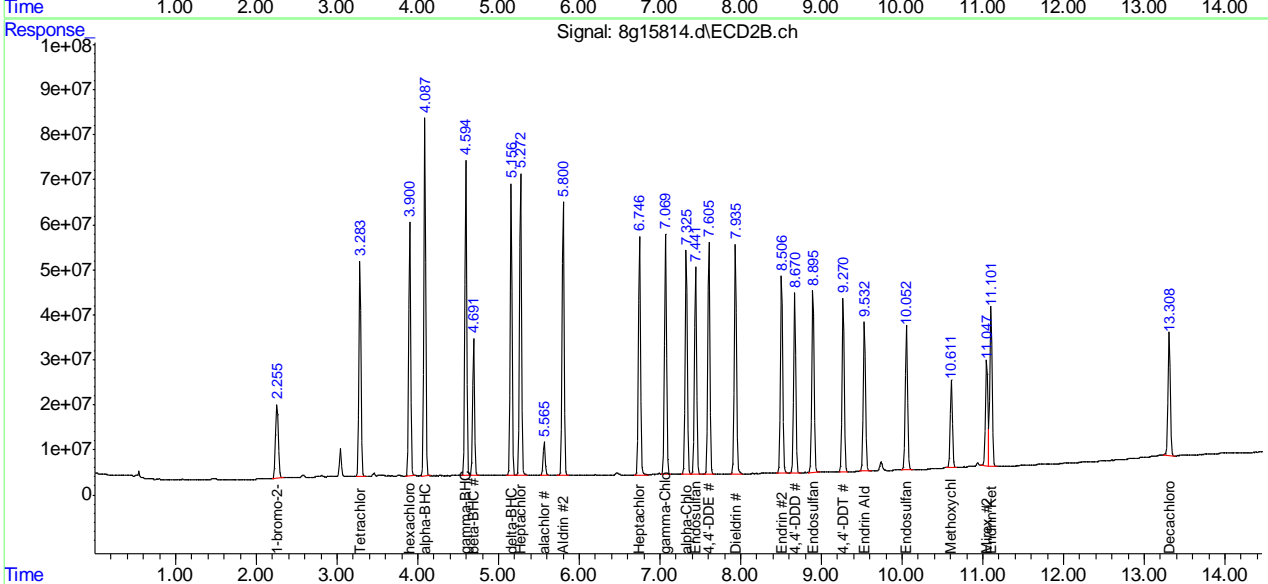
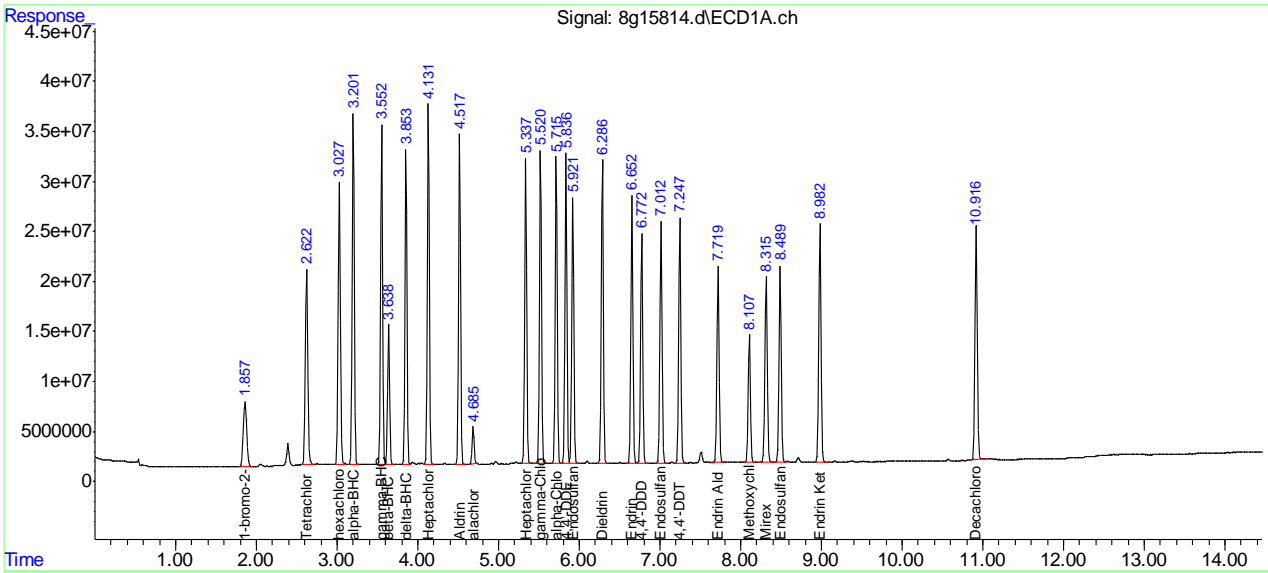
11.6.25
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15814.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 1:52 pm
 Operator : dharas
 Sample : ic511-100
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:56:16 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:08:49 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.25
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15815.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 2:08 pm
 Operator : dharas
 Sample : ic511-500
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:56:30 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:37:37 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.856	2.254	187.8E6	406.7E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
34) Chlordane...	4.131	5.273	138.2E6	293.7E6	723.356	810.838
35) Chlordane...	4.684	6.019	84576187	162.5E6	528.168	544.913
36) Chlordane...	5.521	7.069	313.3E6	553.7E6	649.243	607.725
37) Chlordane...	5.709	7.324	495.2E6	894.7E6	635.039	553.174m
38) Chlordane...	6.907	8.987	67542929	122.6E6	529.964	424.013

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

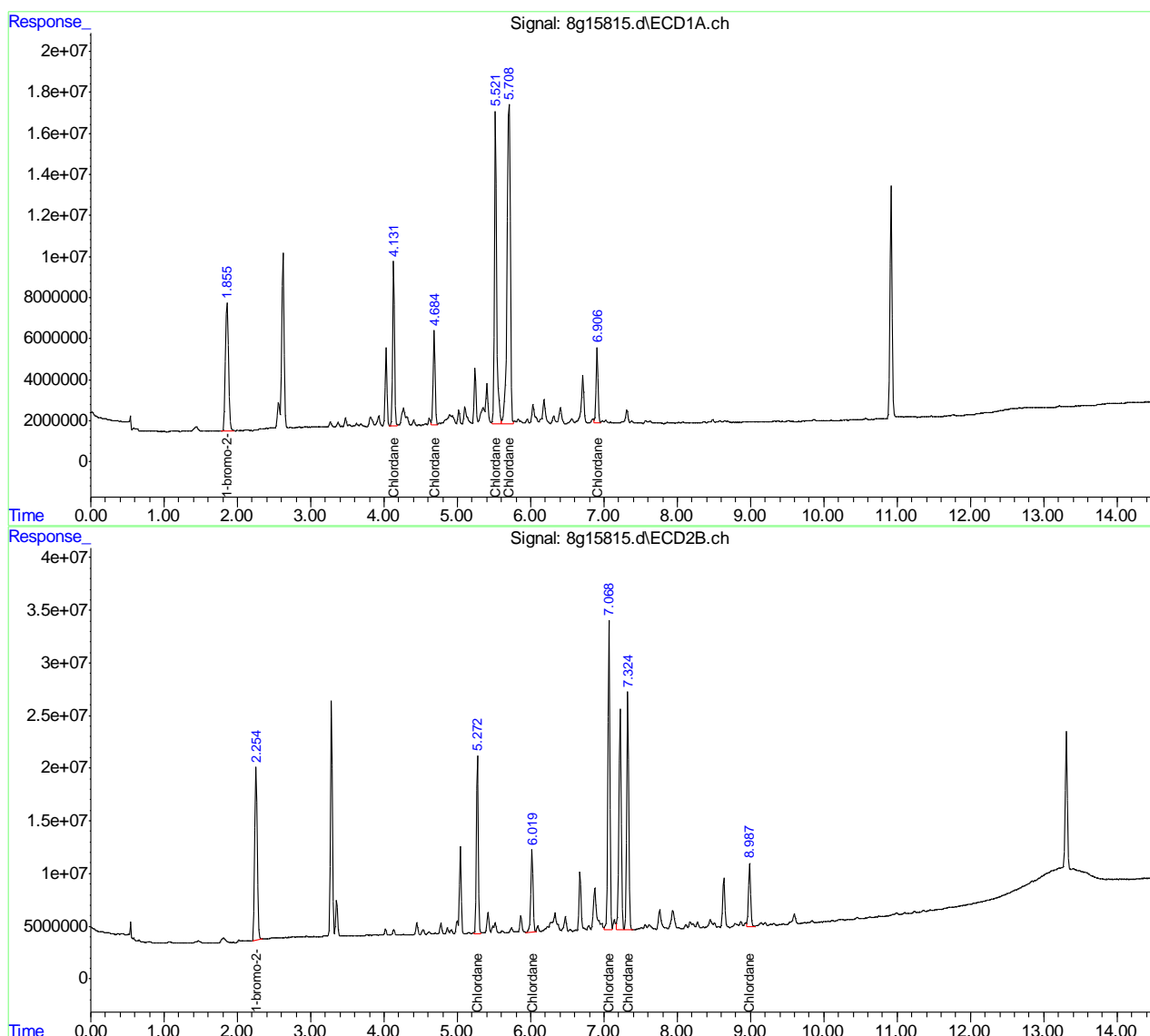
11.6.26
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15815.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 2:08 pm
 Operator : dharas
 Sample : ic511-500
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:56:30 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:37:37 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.26 11

Manual Integration Approval Summary

Sample Number: G8G511-IC511 Method: SW846 8081B
Lab FileID: 8G15815.D Analyst approved: 06/11/18 15:51 Dhara Saparia
Injection Time: 06/11/18 14:08 Supervisor approved: 06/13/18 10:11 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlordane-D		2	7.32	Split peak
Decachlorobiphenyl	2051-24-3	2	13.31	Poorly defined baseline

11.6.26.1

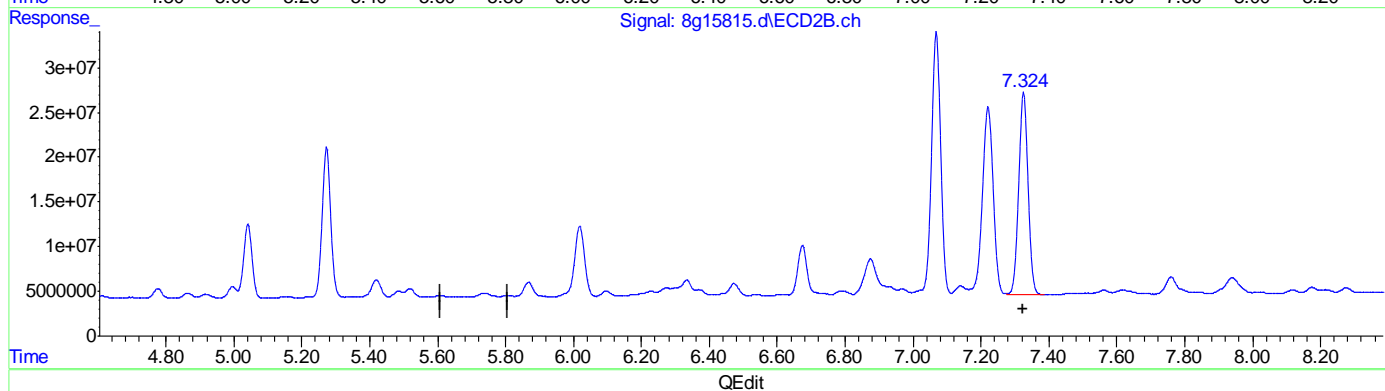
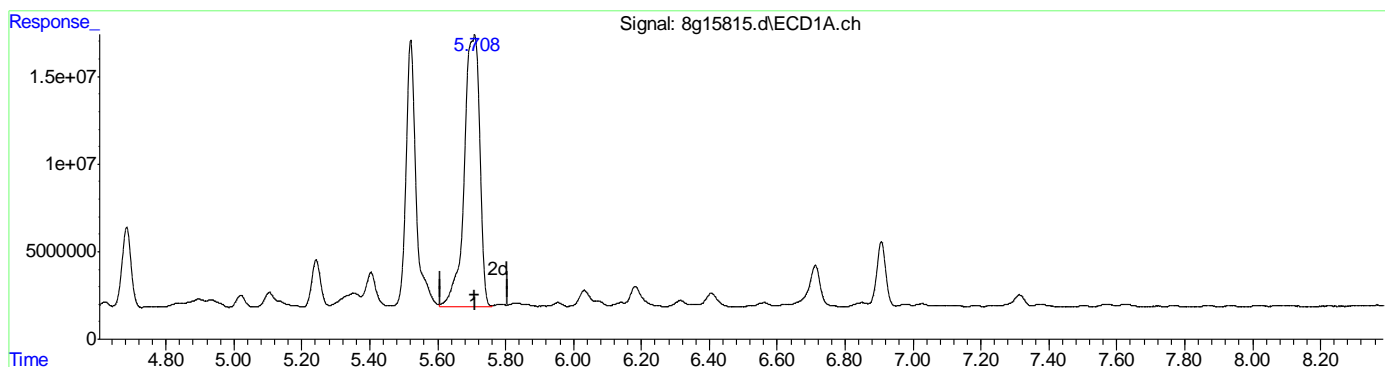
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15815.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 2:08 pm
 Operator : dharas
 Sample : ic511-500
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:38:37 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:37:37 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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}
 5.709min 635.039 PPB
 response 495248588

(37) Chlordane {D} #2
 7.325min 265.645 PPB
 response 429669537

(+) = Expected Retention Time
 8PST511.M Mon Jun 11 14:39:22 2018

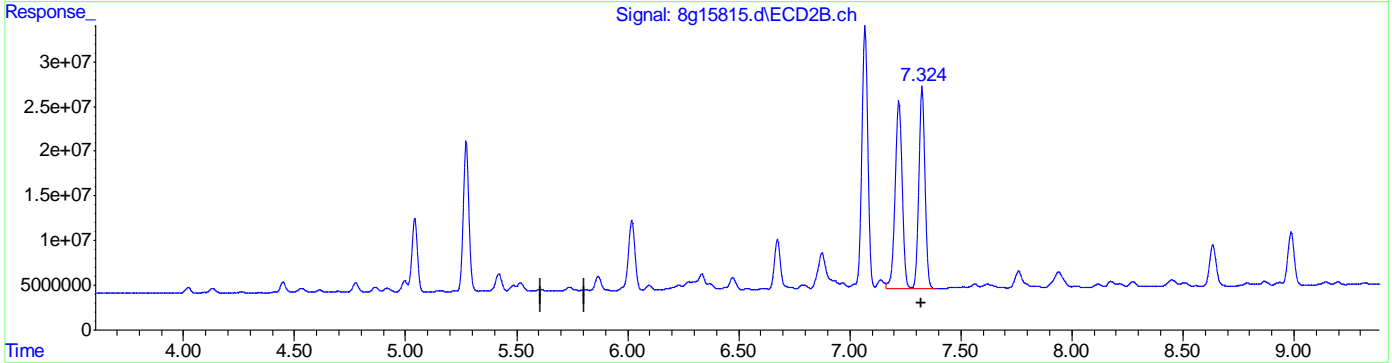
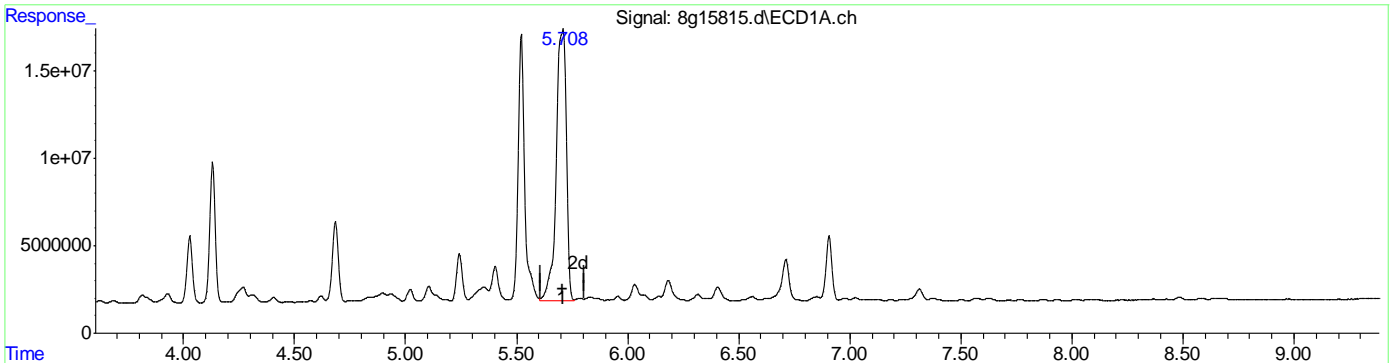
11.6.26.2
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15815.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 2:08 pm
 Operator : dharas
 Sample : ic511-500
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:38:37 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:37:37 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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}
 5.709min 635.039 PPB
 response 495248588

(37) Chlordane {D} #2
 7.324min 553.174 PPB m
 response 894735361

(+) = Expected Retention Time
 8PST511.M Mon Jun 11 14:39:31 2018

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15816.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 2:24 pm
 Operator : dharas
 Sample : ic511-500
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:56:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:44:10 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.870	2.260	198.8E6	421.5E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
28) L8 Toxaphene{A}	6.294	7.891	33474953	66486528	548.566	305.731 #
29) L8 Toxaphene{B}	7.002	8.861	90798415	84591046	596.114	374.956 #
30) L8 Toxaphene{C}	7.202	9.041	68199754	162.8E6	577.843	374.427 #
31) L8 Toxaphene{D}	7.577	9.526	50516500	95434056	447.595	371.978
32) L8 Toxaphene{E}	8.312	10.532	58534244	84219309	600.372	452.502

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

11.6.27

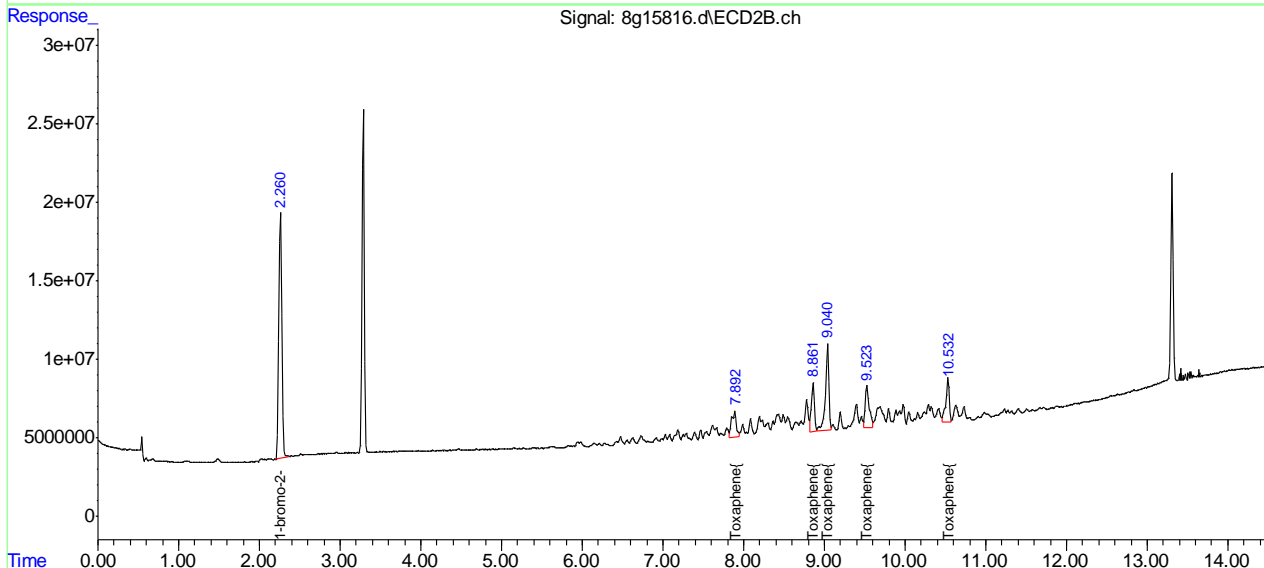
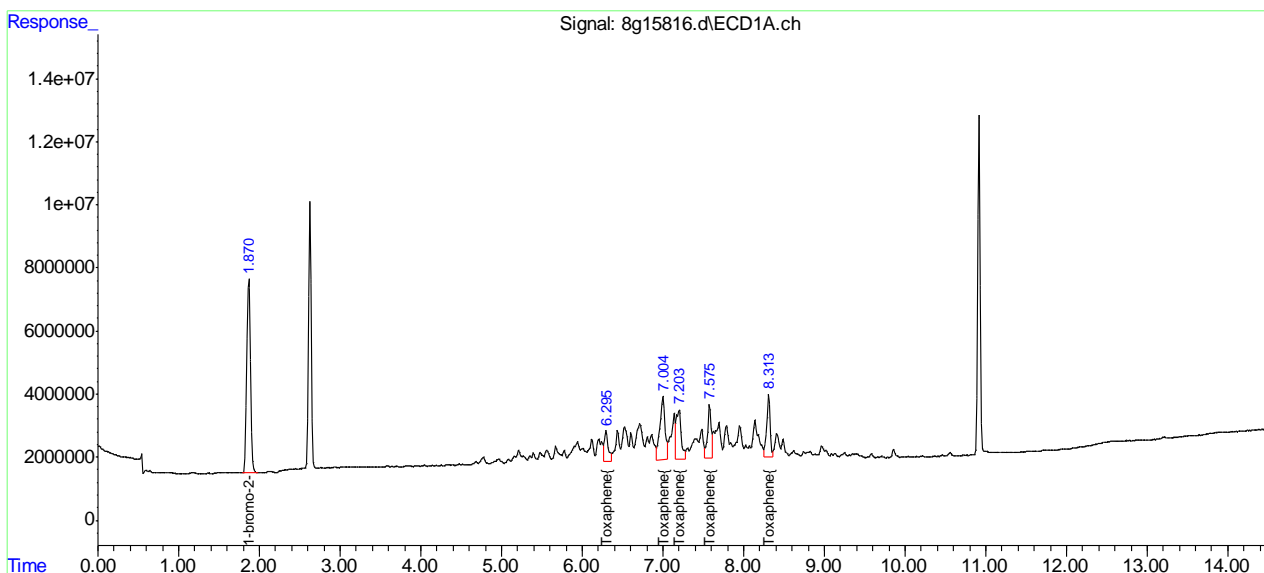
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15816.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 2:24 pm
 Operator : dharas
 Sample : ic511-500
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 14:56:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:44:10 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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: G8G511-IC511 Method: SW846 8081B
Lab FileID: 8G15816.D Analyst approved: 06/11/18 15:51 Dhara Saparia
Injection Time: 06/11/18 14:24 Supervisor approved: 06/13/18 10:11 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Decachlorobiphenyl	2051-24-3	2	13.31	Poorly defined baseline

11.6.27.1

11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15817.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 2:41 pm
 Operator : dharas
 Sample : icv511-25
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 15:03:30 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.869	2.262	190.8E6	415.0E6	50.000	50.000
27) I 1-bromo-2...	1.869	2.262	190.8E6	415.0E6	50.000	50.000
33) I 1-bromo-2...	1.869	2.262	190.8E6	415.0E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.627	3.287	86509143	191.8E6	22.300	23.040
Spiked Amount	40.000	Range	30 - 150	Recovery =	55.75%	57.60%
26) SA Decachlor...	10.916	13.308	115.9E6	133.0E6	24.236	22.673
Spiked Amount	40.000		Recovery =	60.59%	56.68%	
Target Compounds						
4) A alpha-BHC	3.205	4.089	116.4E6	281.0E6	23.937	24.815
5) MA gamma-BHC	3.555	4.596	110.5E6	257.8E6	23.254	24.516
6) MA Heptachlor	4.134	5.274	123.1E6	261.1E6	23.443	24.116
7) B beta-BHC	3.642	4.692	54632482	122.7E6	23.524	23.879
8) B delta-BHC	3.857	5.158	95275111	226.0E6	23.638	24.206
9) MB Aldrin	4.520	5.802	107.8E6	235.3E6	23.751	24.140
11) B Heptachlo...	5.339	6.746	106.2E6	223.0E6	23.365	24.175
12) B gamma-Chl...	5.522	7.069	109.5E6	226.1E6	24.202	24.012
13) B alpha-Chl...	5.717	7.325	108.6E6	217.5E6	24.241	24.194
14) A Endosulfan I	5.922	7.441	99579301	206.6E6	24.118	24.718
15) B 4,4'-DDE	5.836	7.605	102.7E6	210.4E6	23.879	24.563
16) MA Dieldrin	6.287	7.935	102.6E6	214.2E6	23.613	24.465
17) MA Endrin	6.653	8.507	95236858	196.7E6	23.898	25.281
18) A 4,4'-DDD	6.774	8.669	81592540	169.4E6	23.975	24.602
19) B Endosulfa...	7.013	8.896	94539734	185.9E6	21.825	23.375
20) MA 4,4'-DDT	7.245	9.269	83954626	160.6E6	23.440	23.696
21) B Endrin Al...	7.720	9.533	82387771	157.0E6	22.907	24.288
22) B Endosulfa...	8.488	10.052	82644956	154.7E6	24.326	25.392
23) A Methoxychlor	8.106	10.610	54415812	90145001	23.409	24.210
24) Mirex	8.315	11.047	90124882	124.0E6	23.278	24.363
25) B Endrin Ke...	8.981	11.101	96752588	166.4E6	23.583	24.526

SemiQuant Compounds - Not Calibrated on this Instrument

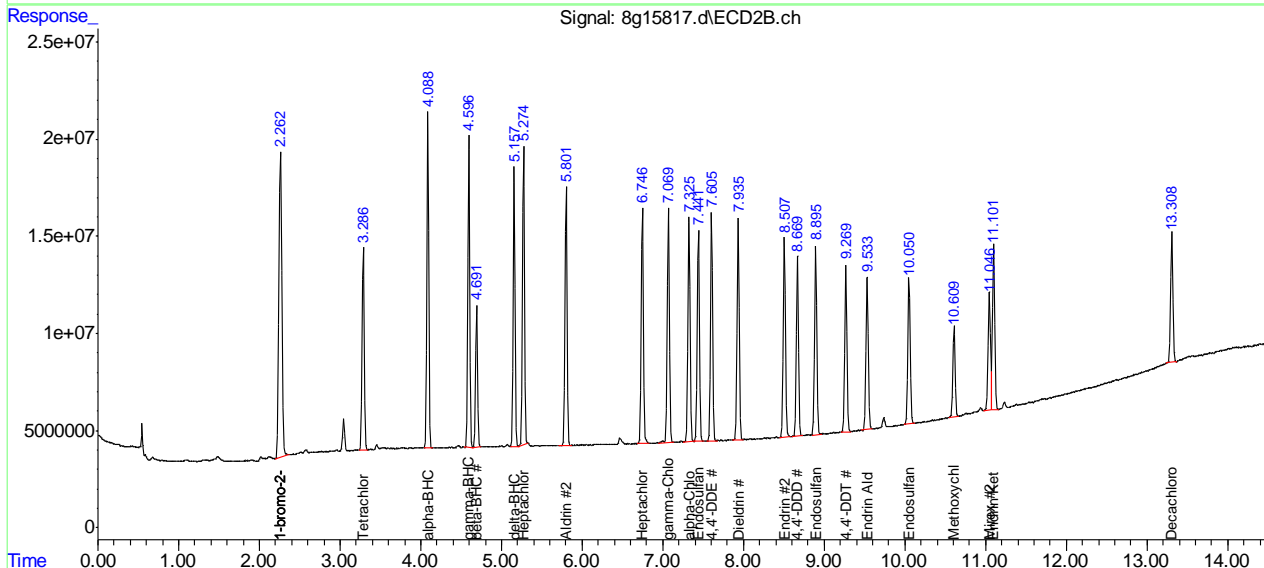
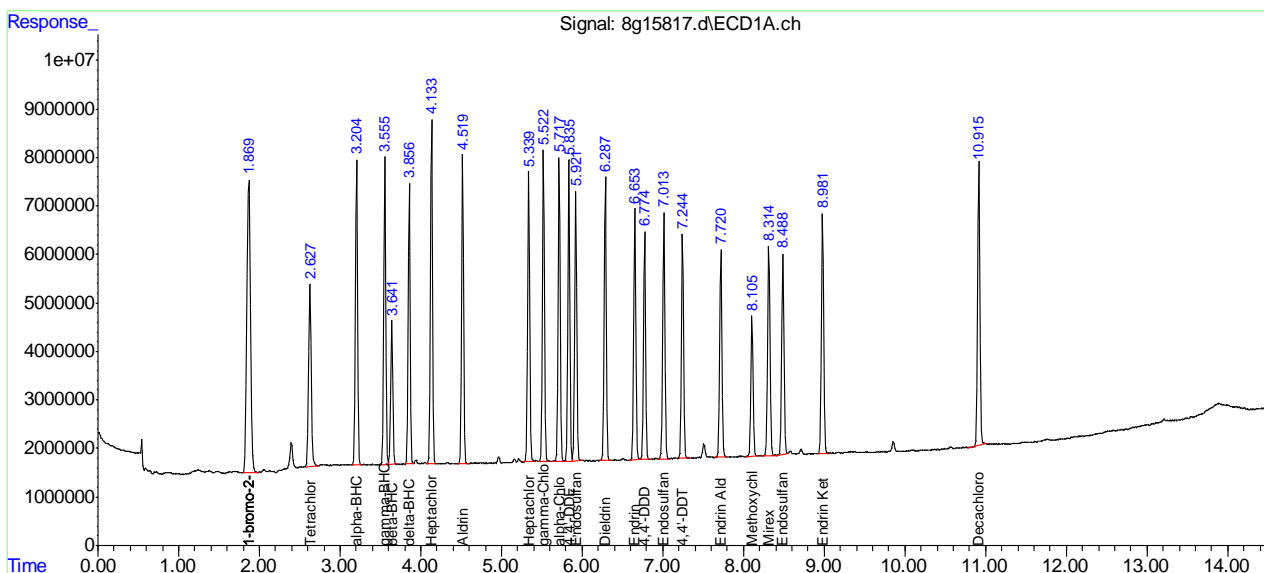
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15817.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 2:41 pm
 Operator : dharas
 Sample : icv511-25
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 15:03:30 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.28
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15818.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 2:57 pm
 Operator : dharas
 Sample : icv511-500
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 15:13:30 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.870	2.262	195.7E6	408.7E6	50.000	50.000
27) I 1-bromo-2...	1.870	2.262	195.7E6	408.7E6	50.000	50.000
33) I 1-bromo-2...	1.870	2.262	195.7E6	408.7E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.626	3.286	175.5E6	367.2E6	44.110	44.782
Spiked Amount	40.000	Range 30 - 150	Recovery =	110.27%	111.95%	
26) SA Decachlor...	10.916	13.308	223.3E6	253.6E6	45.525	43.919
Spiked Amount	40.000		Recovery =	113.81%	109.80%	
Target Compounds						
34) Chlordane...	4.133	5.273	135.1E6	280.4E6	469.548	474.926
35) Chlordane...	4.685	6.019	81520670	154.1E6	462.650	471.690
36) Chlordane...	5.521	7.068	293.8E6	532.6E6	450.091	478.651
37) Chlordane...	5.709	7.325	470.2E6	870.8E6	455.746	484.236m
38) Chlordane...	6.906	8.987	62290759	119.1E6	442.666	483.385

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

11.6.29

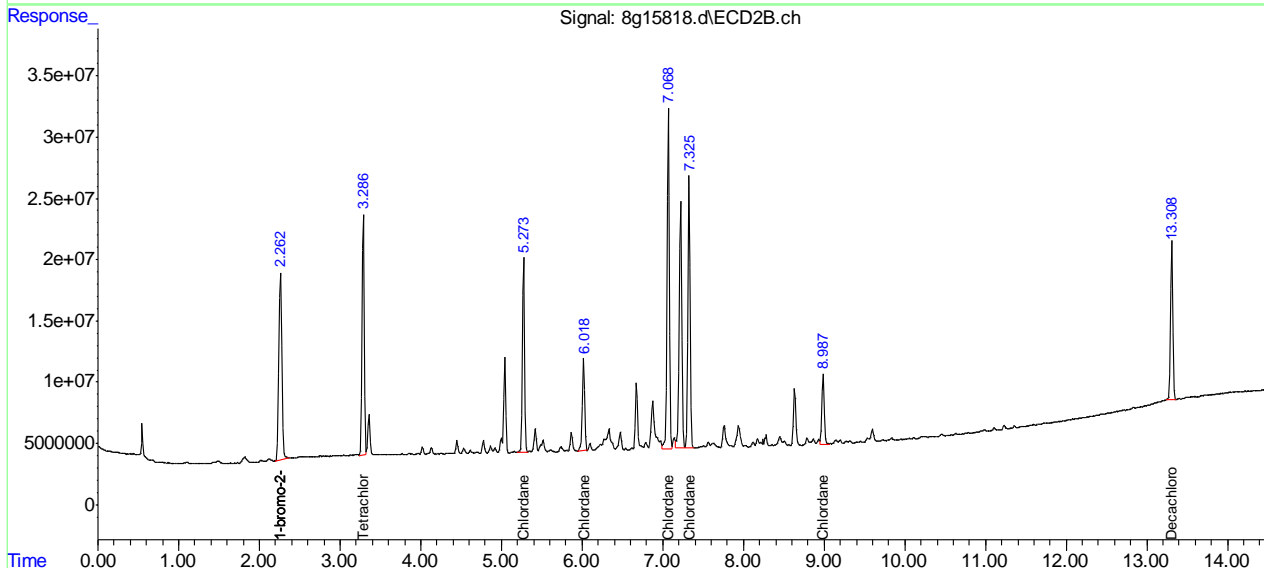
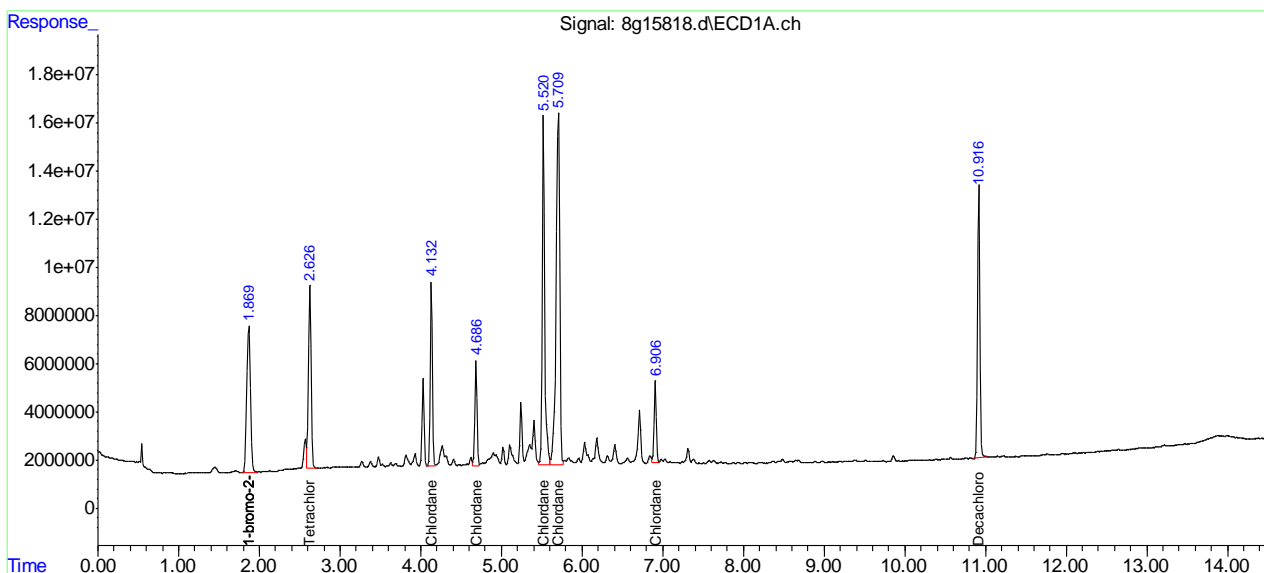
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15818.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 2:57 pm
 Operator : dharas
 Sample : icv511-500
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 15:13:30 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.29
11

Manual Integration Approval Summary

Sample Number: G8G511-ICV511 Method: SW846 8081B
Lab FileID: 8G15818.D Analyst approved: 06/12/18 07:29 Dhara Saparia
Injection Time: 06/11/18 14:57 Supervisor approved: 06/13/18 10:11 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlordane-D		2	7.32	Split peak

11.6.29.1

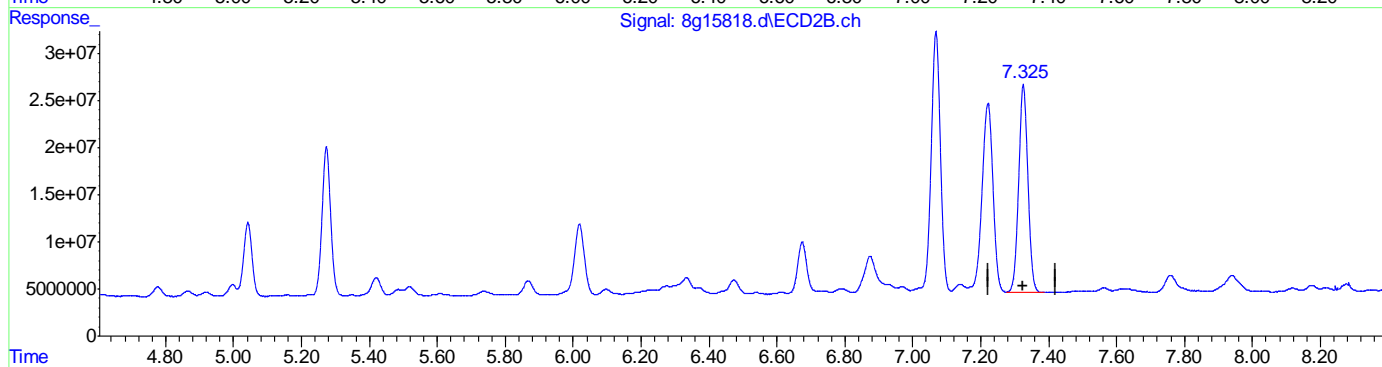
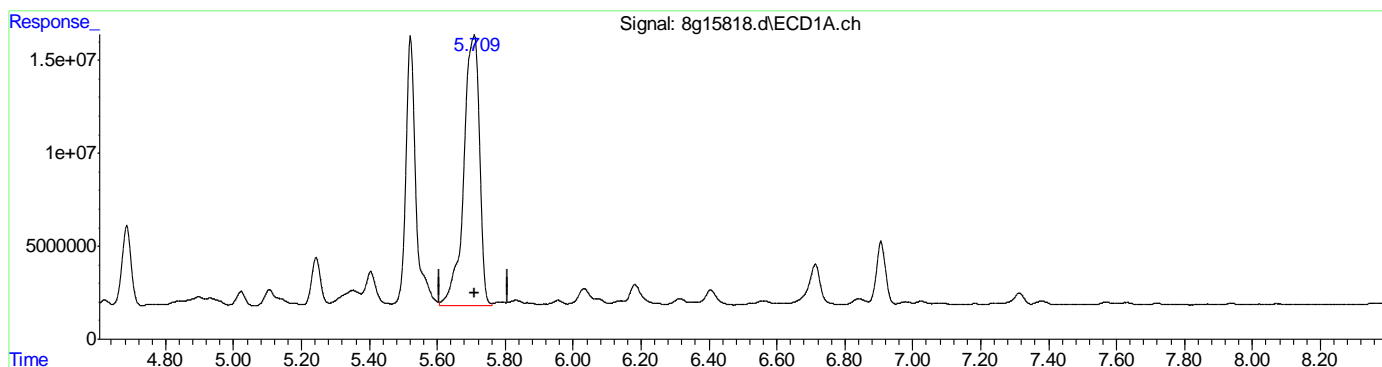
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15818.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 2:57 pm
 Operator : dharas
 Sample : icv511-500
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 15:12:44 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/columnn
 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}
 5.709min 455.746 PPB
 response 470233318

(37) Chlordane {D} #2
 7.325min 231.542 PPB
 response 416362219

(+) = Expected Retention Time
 8PST511.M Mon Jun 11 15:13:02 2018

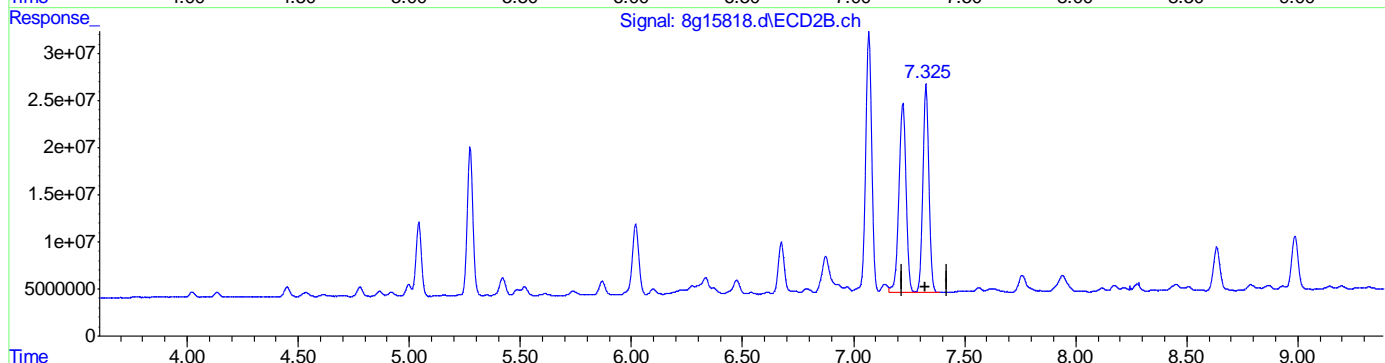
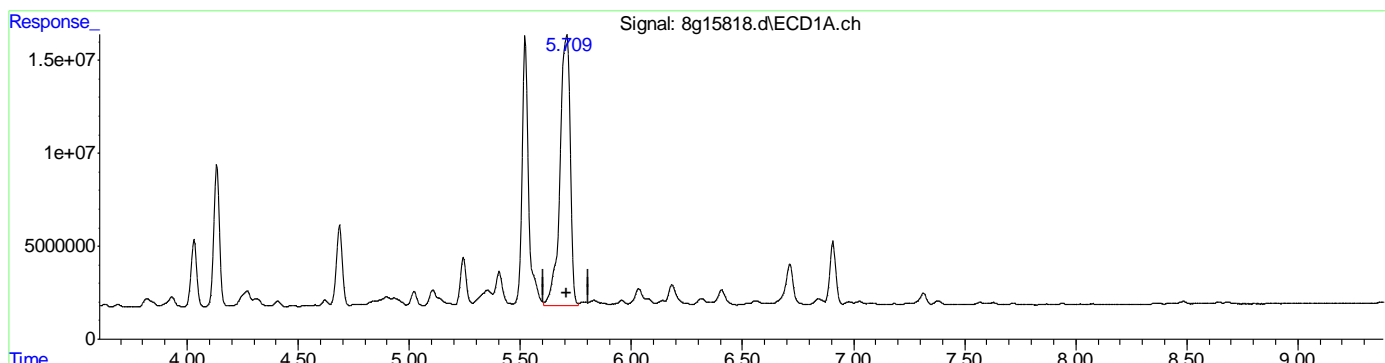
11.6.29.2
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15818.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 2:57 pm
 Operator : dharas
 Sample : icv511-500
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 15:12:44 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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}
 5.709min 455.746 PPB
 response 470233318

(37) Chlordane {D} #2
 7.325min 484.236 PPB m
 response 870759543

11.6.29.3
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15819.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 3:13 pm
 Operator : dharas
 Sample : icv511-500
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 15:32:45 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.876	2.265	187.9E6	417.3E6	50.000	50.000
27) I 1-bromo-2...	1.876	2.265	187.9E6	417.3E6	50.000	50.000
33) I 1-bromo-2...	1.876	2.265	187.9E6	417.3E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.632	3.289	169.0E6	379.6E6	44.237	45.338
Spiked Amount	40.000	Range 30 - 150	Recovery =	110.59%	113.35%	
26) SA Decachlor...	10.918	13.307	225.1E6	256.0E6	47.802	43.420
Spiked Amount	40.000		Recovery =	119.51%	108.55%	
Target Compounds						
28) L8 Toxaphene{A}	6.296	7.889	26700877	66245554	421.955	503.268
29) L8 Toxaphene{B}	7.001	8.861	86687587	82454518	505.056	492.342
30) L8 Toxaphene{C}	7.202	9.041	64942628	157.9E6	503.742	489.725
31) L8 Toxaphene{D}	7.580	9.525	48961585	91695044	512.723	485.310
32) L8 Toxaphene{E}	8.313	10.531	56829014	75512722	513.595	452.882

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

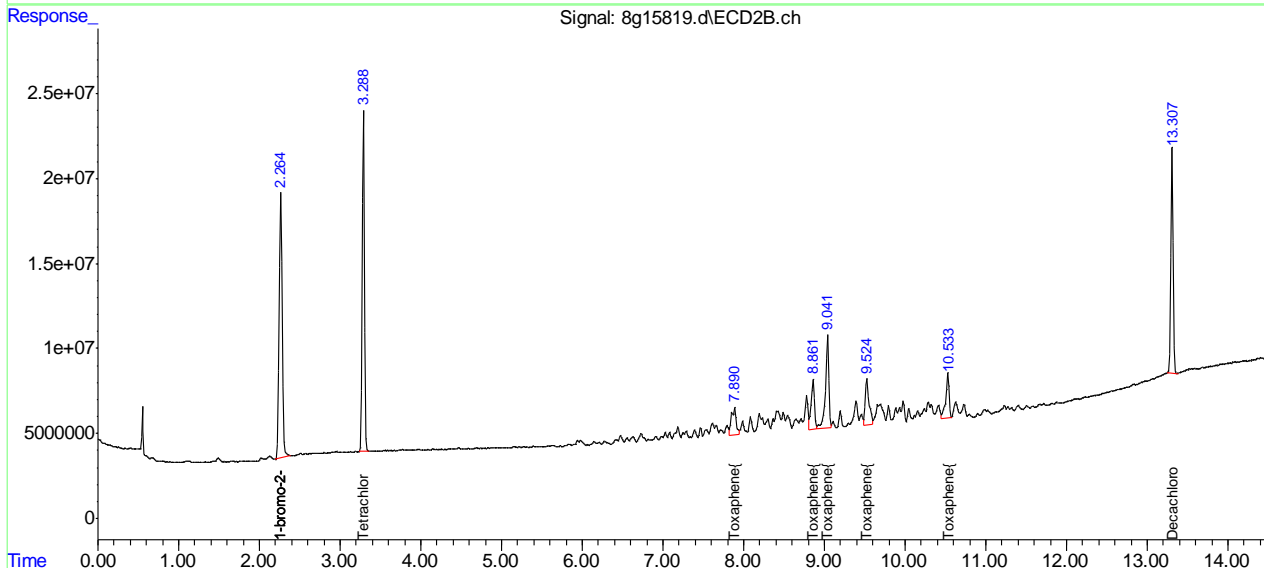
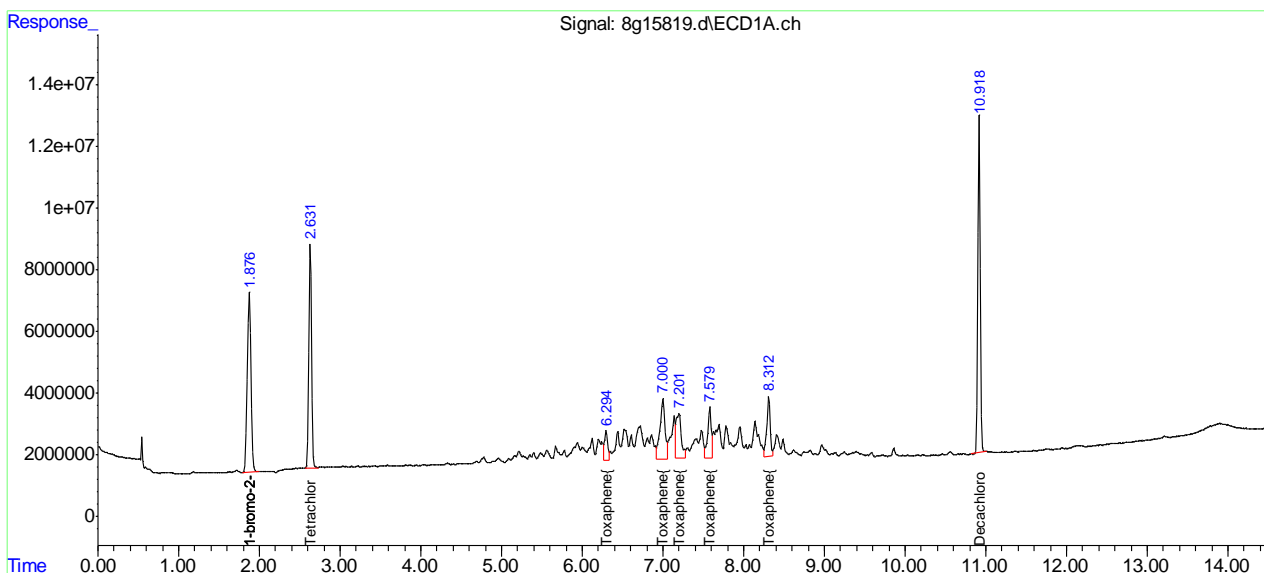
11.6.30
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15819.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 3:13 pm
 Operator : dharas
 Sample : icv511-500
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 15:32:45 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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\8G511\
 Data File : 8g15820.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 3:30 pm
 Operator : dharas
 Sample : icv511-50
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 15:46:12 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.870	2.262	196.9E6	419.5E6	50.000	50.000
27)	I 1-bromo-2...	1.870	2.262	196.9E6	419.5E6	50.000	50.000
33)	I 1-bromo-2...	1.870	2.262	196.9E6	419.5E6	50.000	50.000
System Monitoring Compounds							
Target Compounds							
10)	alachlor	4.687	5.566	33514184	68908452	49.699	49.269
SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

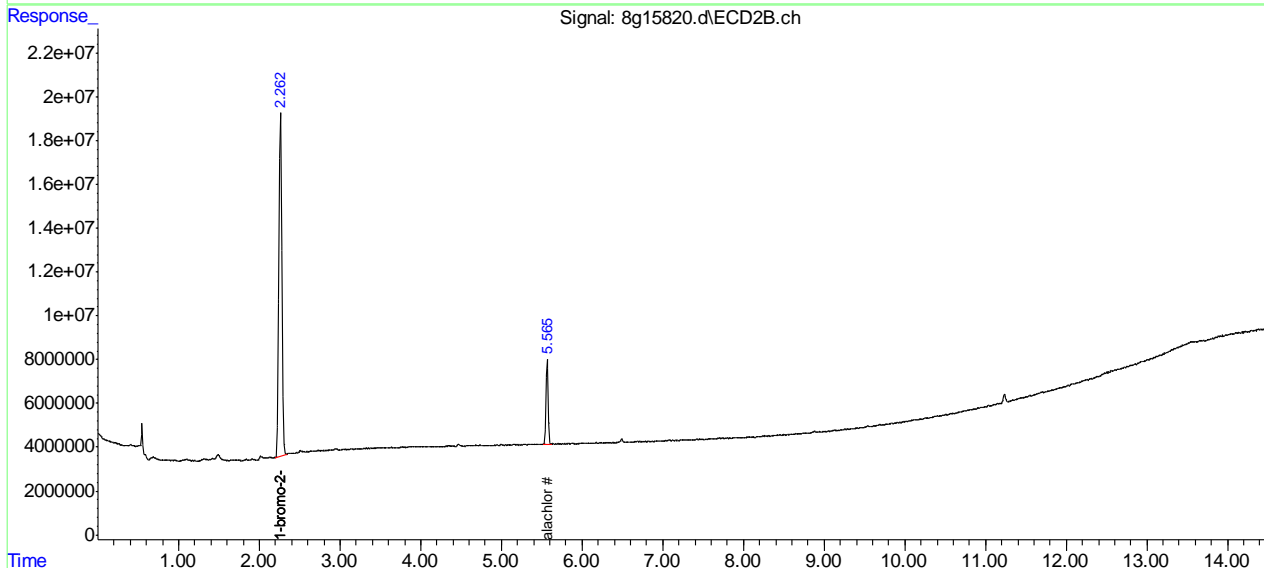
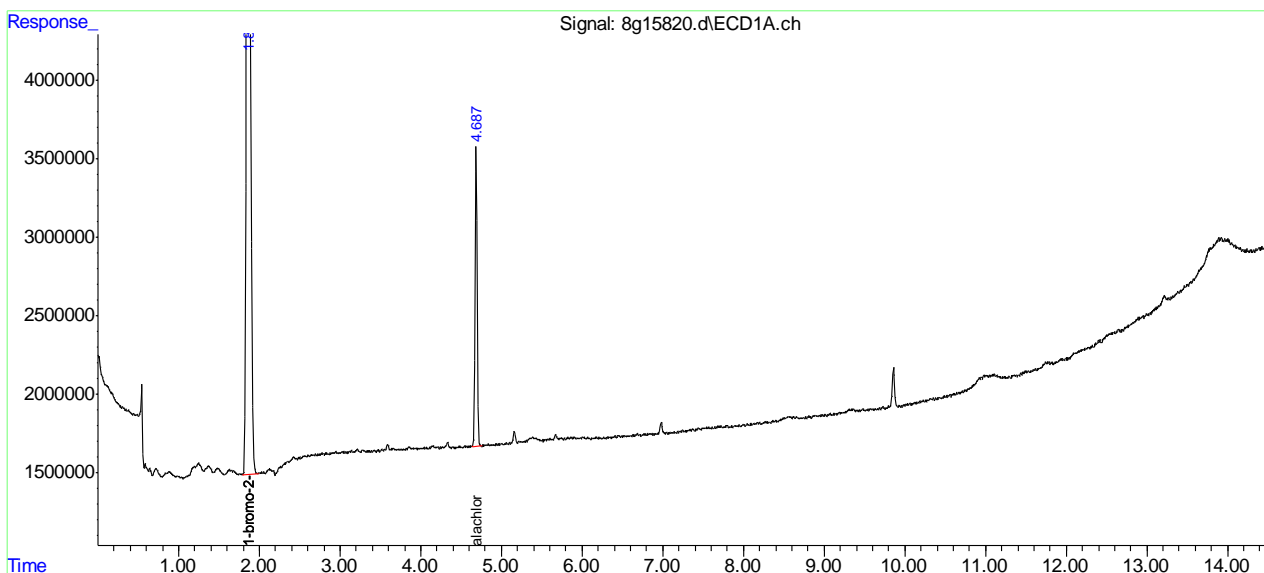
11.6.31
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15820.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 3:30 pm
 Operator : dharas
 Sample : icv511-50
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 11 15:46:12 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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



11.6.31
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15821.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 3:46 pm
 Operator : dharas
 Sample : icv511-50
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 12 07:24:16 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.873	2.266	203.3E6	413.4E6	50.000	50.000
27)	I 1-bromo-2...	1.873	2.266	203.3E6	413.4E6	50.000	50.000
33)	I 1-bromo-2...	1.873	2.266	203.3E6	413.4E6	50.000	50.000

System Monitoring Compounds

Target Compounds

3)	hexachlor...	3.034	3.903	270.6E6	479.6E6	47.962	48.609
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SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

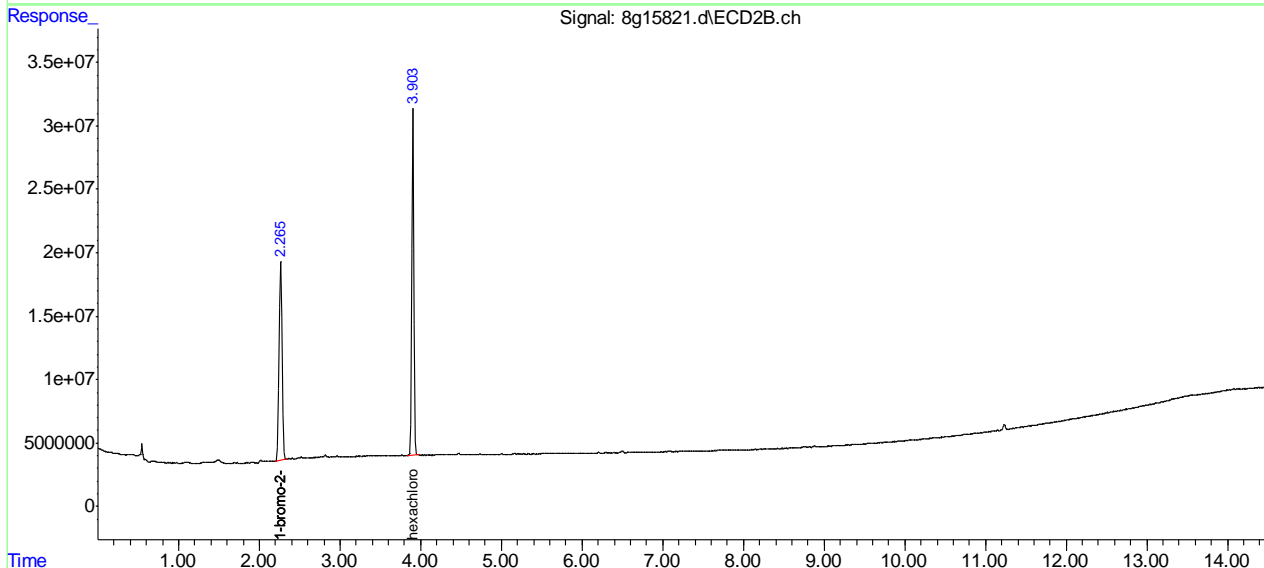
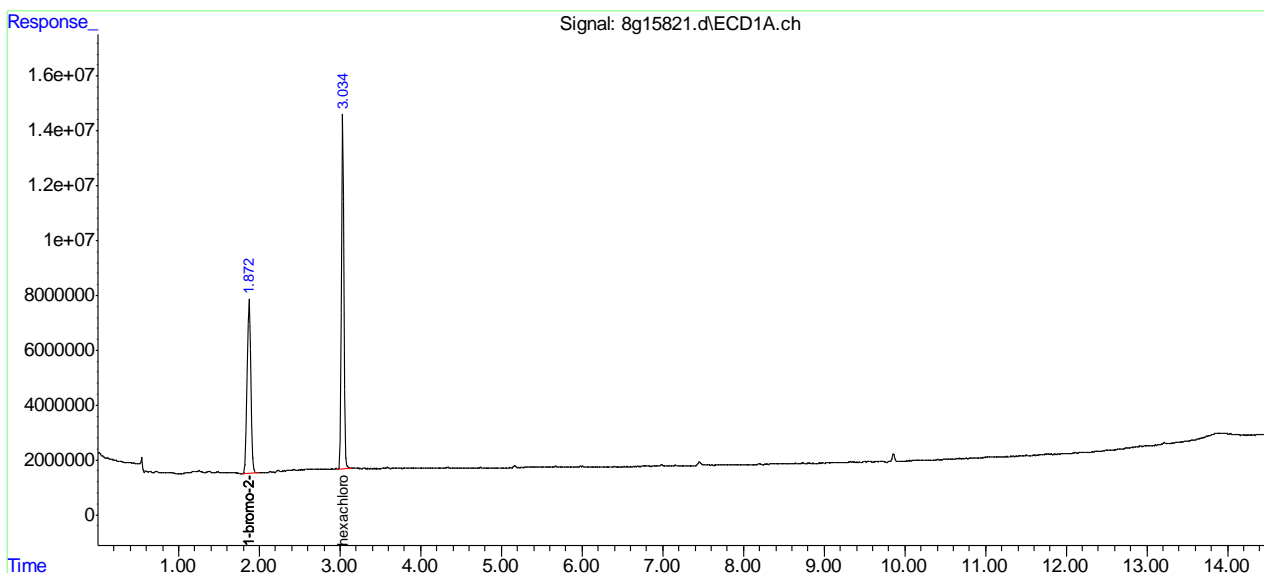
11.6.32
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
 Data File : 8g15821.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 11 Jun 2018 3:46 pm
 Operator : dharas
 Sample : icv511-50
 Misc : op12386,g8g511,15.1,,,10,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 12 07:24:16 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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\8G513\
 Data File : 8g15833.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Jun 2018 8:47 am
 Operator : dharas
 Sample : cc511-50
 Misc : op12466,g8g513,15.0,,,10,1
 ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 12 09:15:54 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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...	1.878	2.269	175.2E6	371.5E6	50.000	50.000
27) I 1-bromo-2...	1.878	2.269	175.2E6	371.5E6	50.000	50.000
33) I 1-bromo-2...	1.878	2.269	175.2E6	371.5E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.638f	3.293	194.1E6	411.6E6	54.481	55.221
Spiked Amount	40.000	Range 30 - 150	Recovery =	136.20%	138.05%	
26) SA Decachlor...	10.919	13.305	215.6E6	274.4E6	49.099	52.272
Spiked Amount	40.000		Recovery =	122.75%	130.68%	
Target Compounds						
3) hexachlor...	3.040	3.906	258.3E6	467.1E6	53.132	52.678
4) A alpha-BHC	3.212	4.092	271.7E6	595.7E6	60.836	58.761
5) MA gamma-BHC	3.562	4.598	255.4E6	546.6E6	58.531	58.072
6) MA Heptachlor	4.139	5.275	270.9E6	558.8E6	56.184	57.642
7) B beta-BHC	3.648	4.694	110.4E6	237.2E6	51.745	51.579
8) B delta-BHC	3.863	5.159	222.1E6	495.3E6	60.014	59.269
9) MB Aldrin	4.526	5.802	250.6E6	505.3E6	60.137	57.918
10)alachlor	4.691	5.566	30456556	65669801	50.760	53.015
11) B Heptachlo...	5.342	6.746	221.9E6	466.2E6	53.189	56.471
12) B gamma-Chl...	5.525	7.069	220.5E6	463.9E6	53.055	55.051
13) B alpha-Chl...	5.720	7.325	225.9E6	442.7E6	54.896	55.011
14) A Endosulfan I	5.925	7.440	209.7E6	417.2E6	55.311	55.769
15) B 4,4'-DDE	5.839	7.605	222.5E6	435.1E6	56.356	56.753
16) MA Dieldrin	6.290	7.934	227.3E6	451.7E6	56.963	57.631
17) MA Endrin	6.657	8.505	211.6E6	417.3E6	57.821	59.917
18) A 4,4'-DDD	6.778	8.668	178.1E6	346.5E6	56.991	56.207
19) B Endosulfa...	7.017	8.894	200.2E6	385.8E6	50.336	54.177
20) MA 4,4'-DDT	7.248	9.267	190.8E6	353.2E6	58.021	58.201
21) B Endrin Al...	7.722	9.530	163.3E6	311.7E6	49.453	53.873
22) B Endosulfa...	8.491	10.050	174.7E6	319.7E6	55.980	58.629
23) A Methoxychlor	8.109	10.607	110.6E6	186.1E6	51.829	55.823
24) Mirex	8.316	11.045	170.6E6	251.7E6	47.983	55.226
25) B Endrin Ke...	8.984	11.098	207.5E6	358.9E6	55.071	59.089

SemiQuant Compounds - Not Calibrated on this Instrument

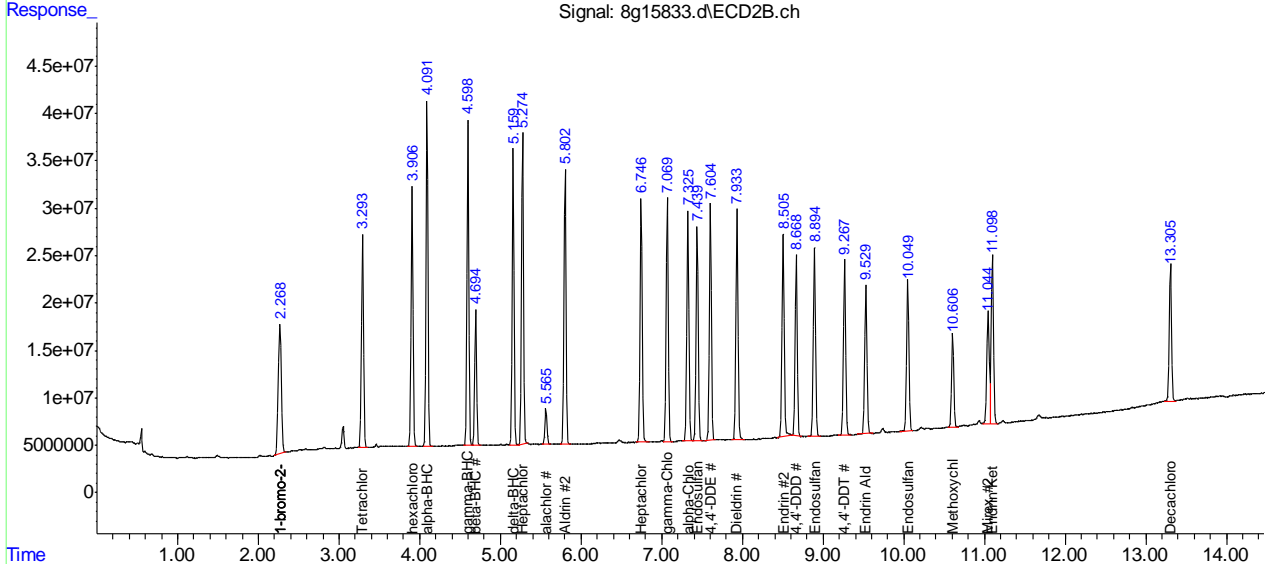
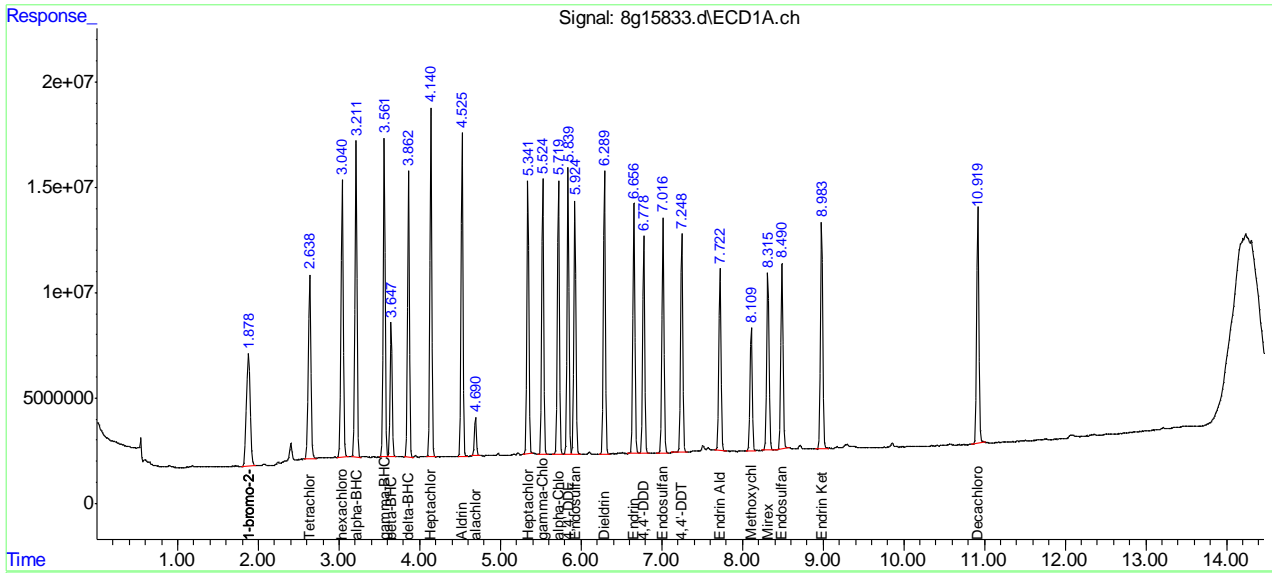
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G513\
 Data File : 8g15833.d
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 12 Jun 2018 8:47 am
 Operator : dharas
 Sample : cc511-50
 Misc : op12466,g8g513,15.0,,,10,1
 ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 12 09:15:54 2018
 Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
 Quant Title : PEST/PCB
 QLast Update : Mon Jun 11 14:59:42 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1ul/column
 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\gxx6349\
 Data File : xx228513.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:10 pm
 Operator : rebeccak
 Sample : ic6349-50
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:25:13 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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...	2.796	3.538	21102251	19228538	2.554	2.364
Spiked Amount	40.000		Recovery	=	6.38%	5.91%
51) S Decachlor...	9.936	11.943	25953752	25959334	2.604	2.842m
Spiked Amount	40.000		Recovery	=	6.51%	7.11%
Target Compounds						
41) AR1016-A	3.168	4.193	9490520	9107309	54.721m	69.258m#
42) AR1016-B	3.553	4.740	19467735	18085066	73.218	72.502m
43) AR1016-C	4.106	5.379	44237435	39759606	72.353m	67.759m
44) AR1016-D	4.266	5.565	16055392	17318683	68.838	70.072m
45) AR1016-E	4.754	6.223	16137670	11806620	66.151	68.067
46) AR1260-A	7.101	8.831	48928163	58504571	68.622	75.561m
47) AR1260-B	7.253	8.948	21628775	31114642	68.813	72.648
48) AR1260-C	7.587	9.381	20716452	25973981	60.868	62.017
49) AR1260-D	8.022	9.730	54751196	65028955	58.297	61.704
50) AR1260-E	8.415	10.275	59952752	59309446	65.636m	60.514m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

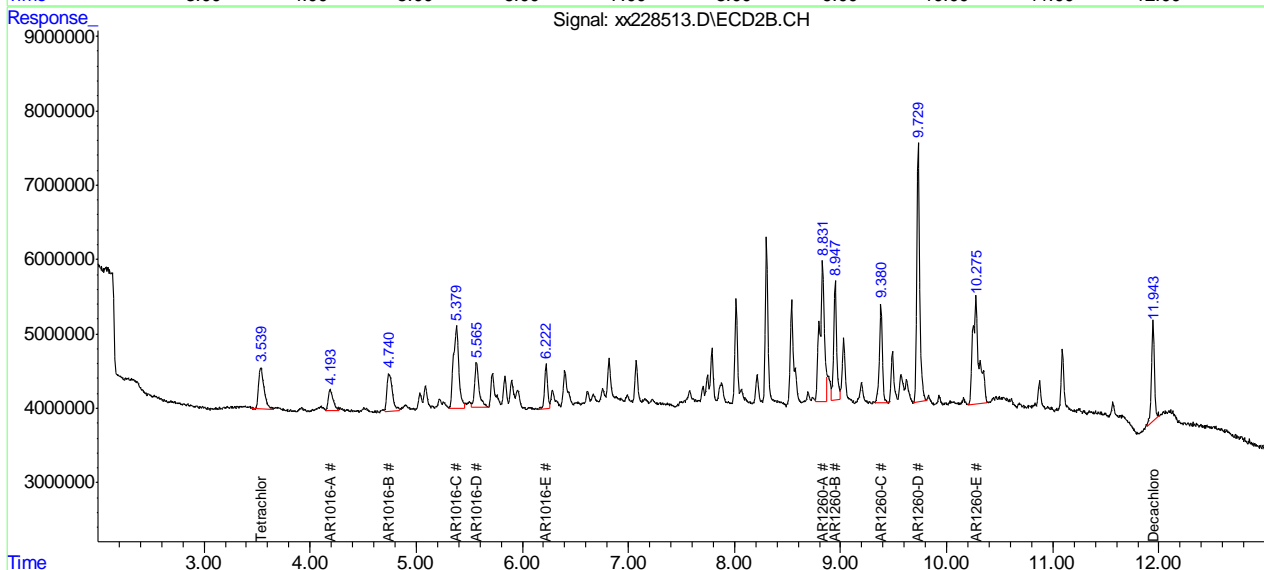
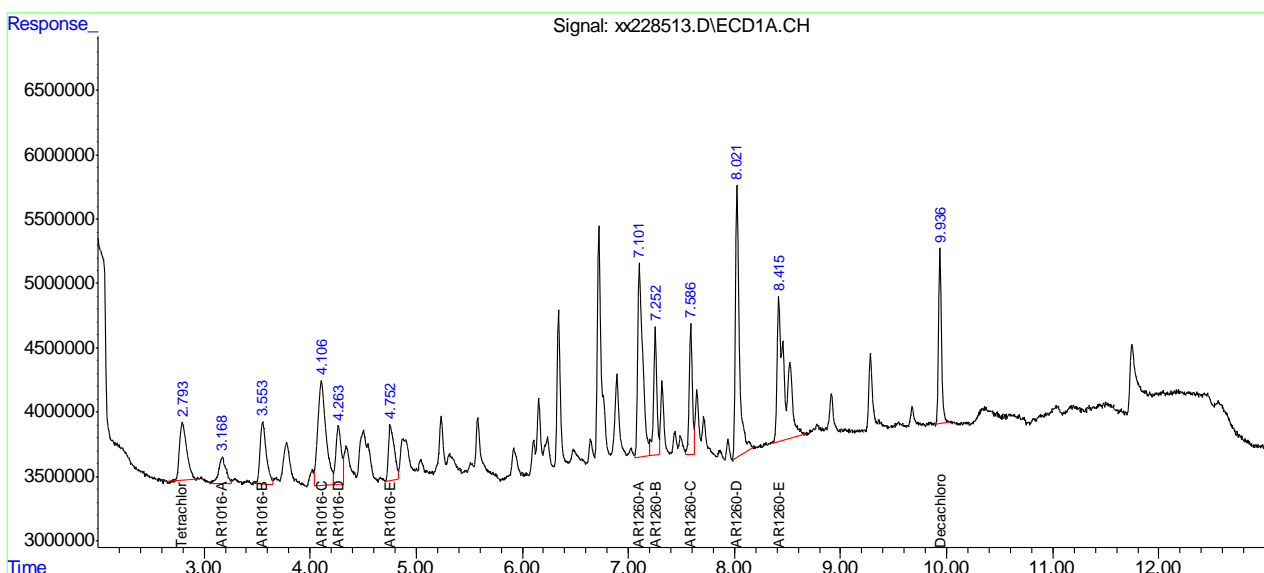
11.6.34
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228513.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:10 pm
 Operator : rebeccak
 Sample : ic6349-50
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:25:13 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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)



11.6.34
11

Manual Integration Approval Summary

Sample Number: GXX6349-IC6349 Method: SW846 8082A
Lab FileID: XX228513.D Analyst approved: 05/15/18 08:26 Rebecca Krug
Injection Time: 05/14/18 17:10 Supervisor approved: 05/15/18 13:34 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-A		1	3.17	Split peak
AR1016-C		1	4.11	Split peak
AR1016-A		2	4.19	Split peak
AR1016-B		2	4.74	Split peak
AR1016-C		2	5.38	Split peak
AR1016-D		2	5.57	Split peak
AR1260-E		1	8.42	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.27	Split peak
Decachlorobiphenyl	2051-24-3	2	11.94	Poorly defined baseline

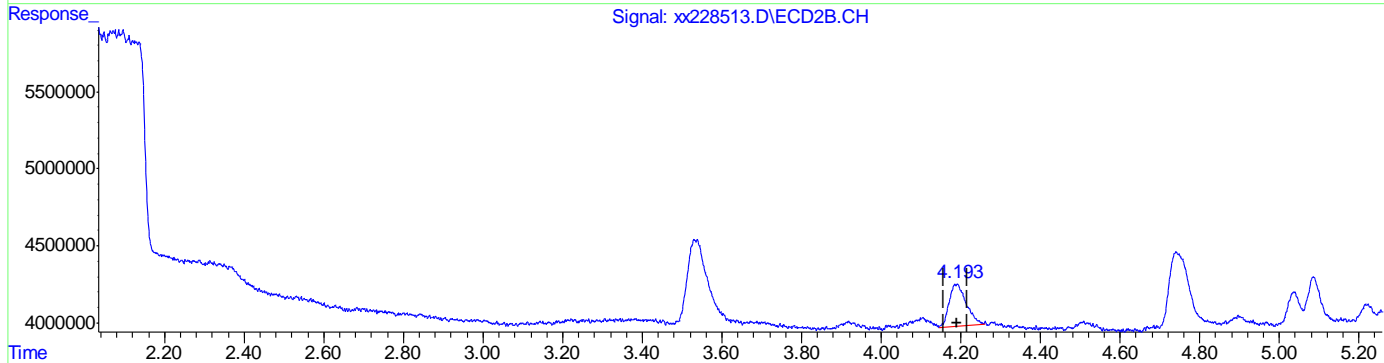
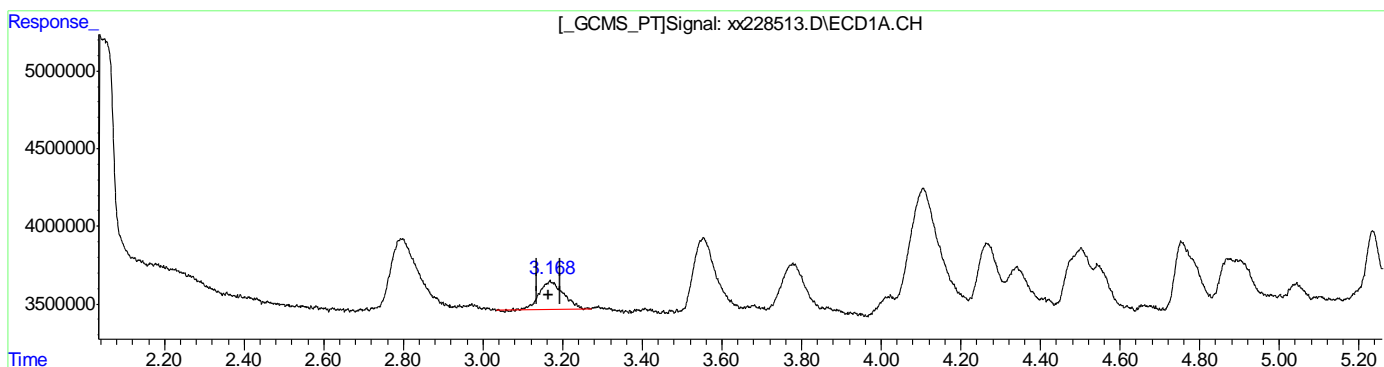
11.6.34.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228513.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:10 pm
 Operator : rebeccak
 Sample : ic6349-50
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:20:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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)



Retention Time (min)	Concentration (PPB)	Response
(41) AR1016-A 3.168min	44.520PPB	7721350
(41) AR1016-A #2 4.192min	61.697PPB	8113124

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:20:25 2018

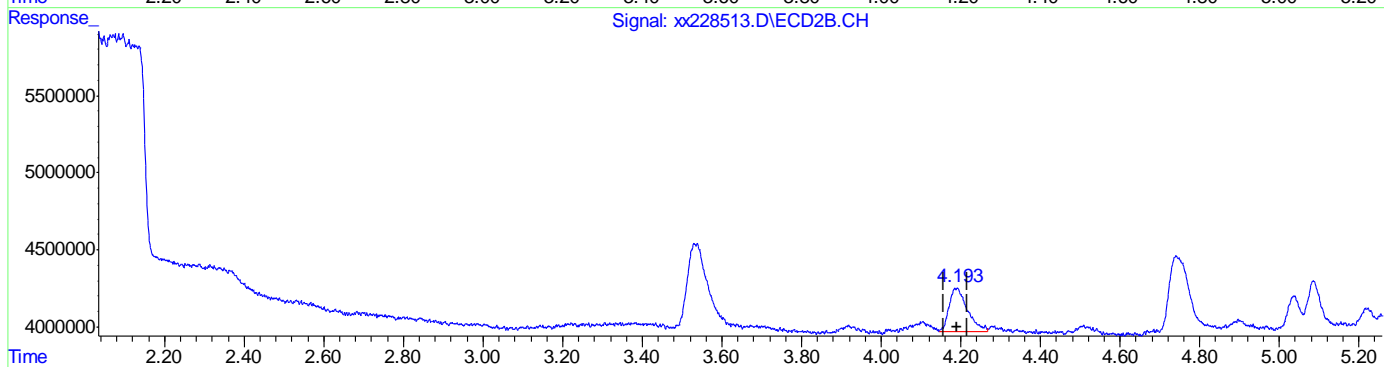
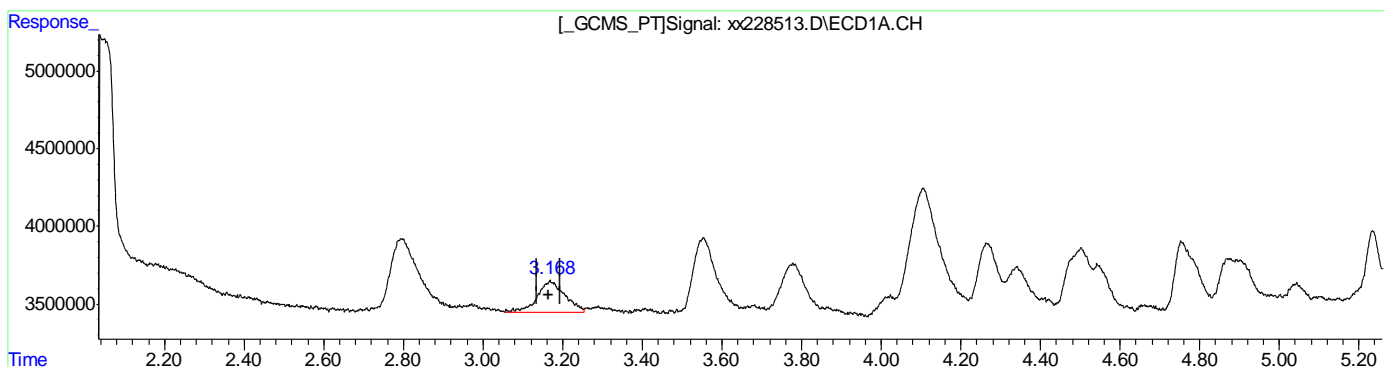
11.6.34.2
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228513.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:10 pm
 Operator : rebeccak
 Sample : ic6349-50
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:20:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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)



(41) AR1016-A
 3.168min 54.721PPB m
 response 9490520

(41) AR1016-A #2
 4.193min 69.258PPB m
 response 9107309

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:20:34 2018

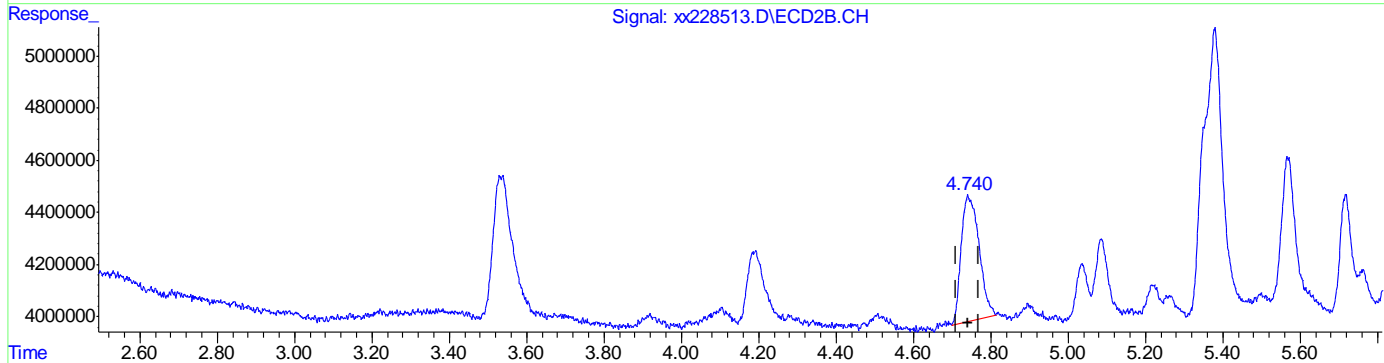
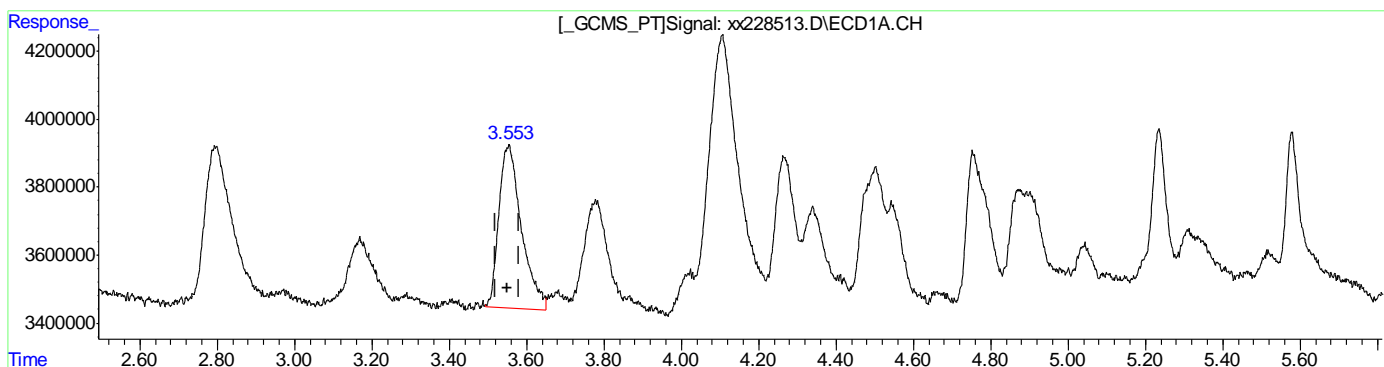
11.6.34.3
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228513.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:10 pm
 Operator : rebeccak
 Sample : ic6349-50
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:20:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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)



(42) AR1016-B
 3.553min 73.218PPB
 response 19467735

(42) AR1016-B #2
 4.741min 62.087PPB
 response 15487233

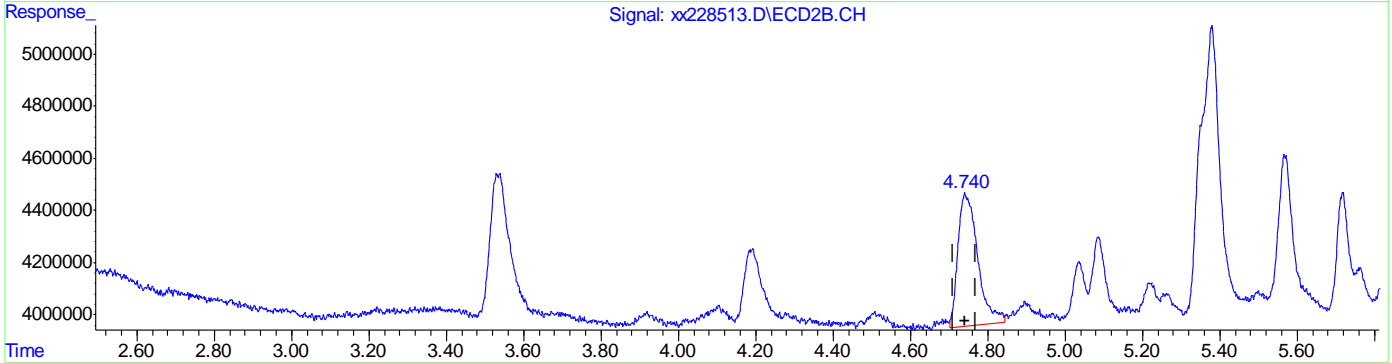
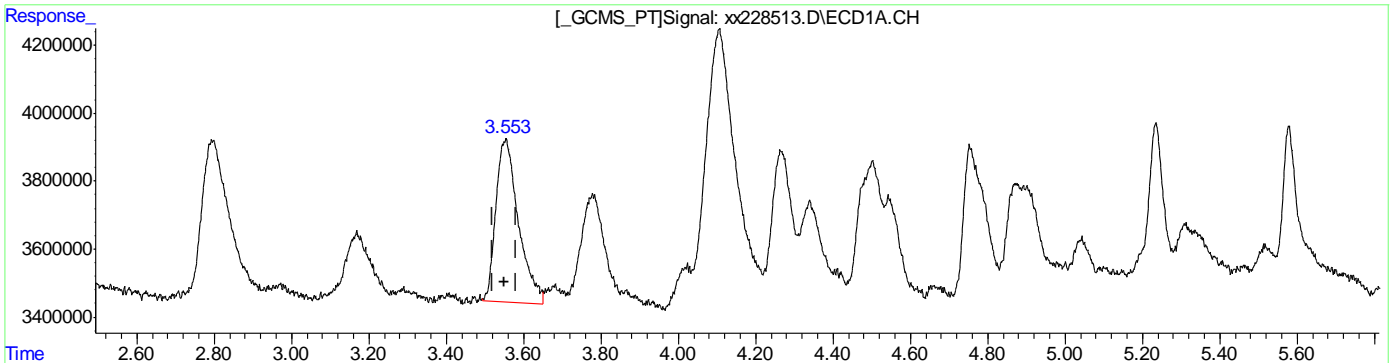
11.6.34.4
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228513.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:10 pm
 Operator : rebeccak
 Sample : ic6349-50
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:20:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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)



(42) AR1016-B
 3.553min 73.218PPB
 response 19467735

(42) AR1016-B #2
 4.740min 72.502PPB m
 response 18085066

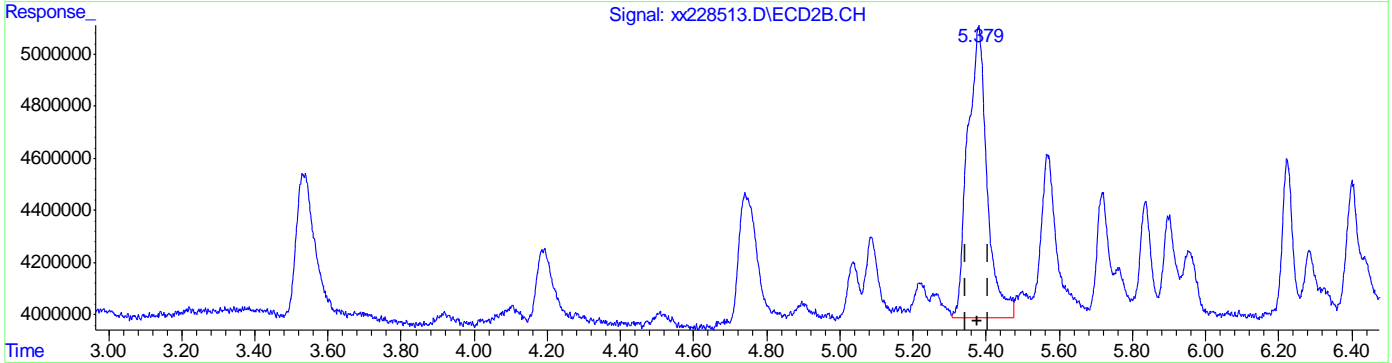
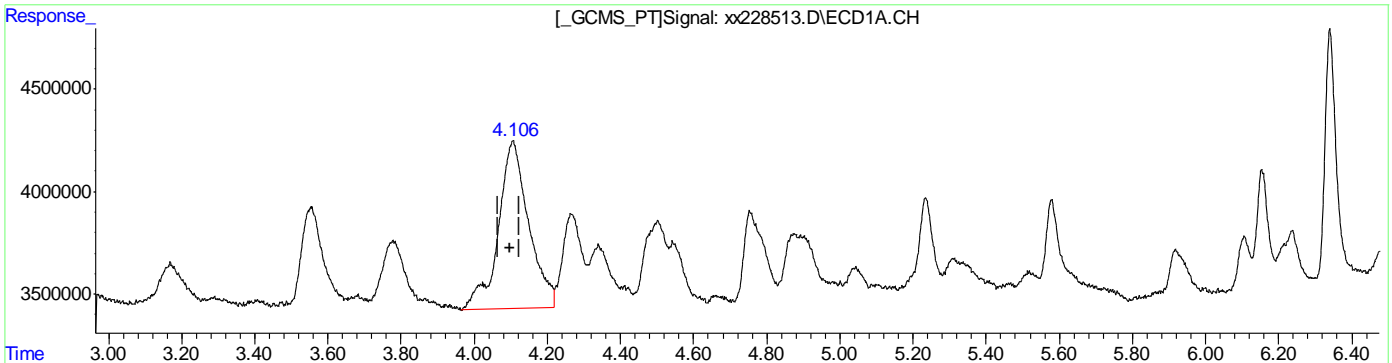
11.6.34.5
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228513.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:10 pm
 Operator : rebeccak
 Sample : ic6349-50
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:20:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 4.106min 77.160PPB
 response 47176288

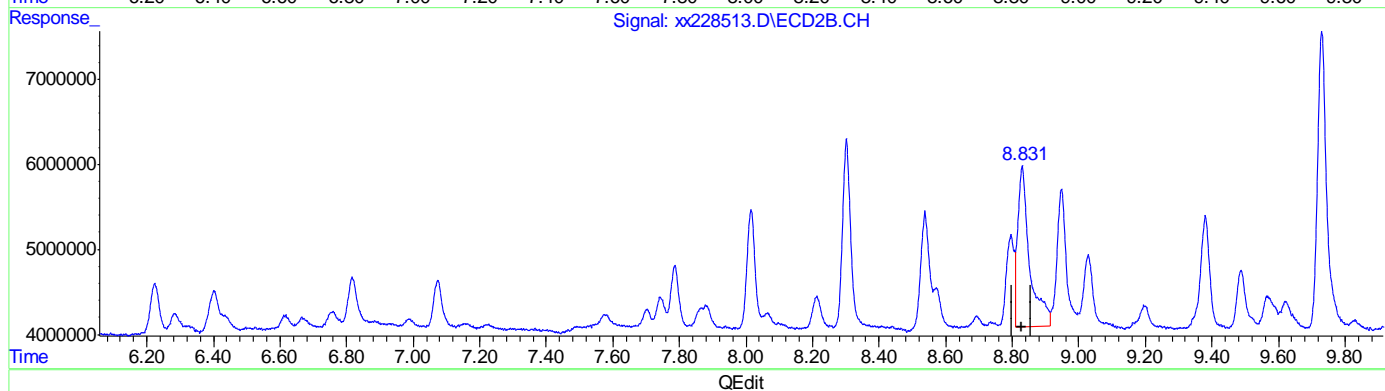
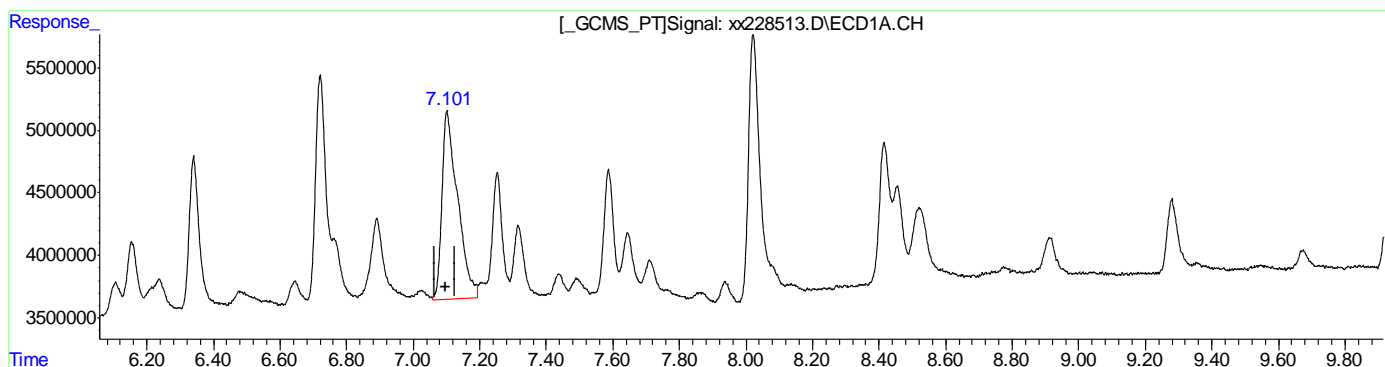
(43) AR1016-C #2
 5.380min 69.959PPB
 response 41050608

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228513.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:10 pm
 Operator : rebeccak
 Sample : ic6349-50
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:20:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 7.101min 68.622PPB
 response 48928163

(46) AR1260-A #2
 8.830min 60.820PPB
 response 47090842

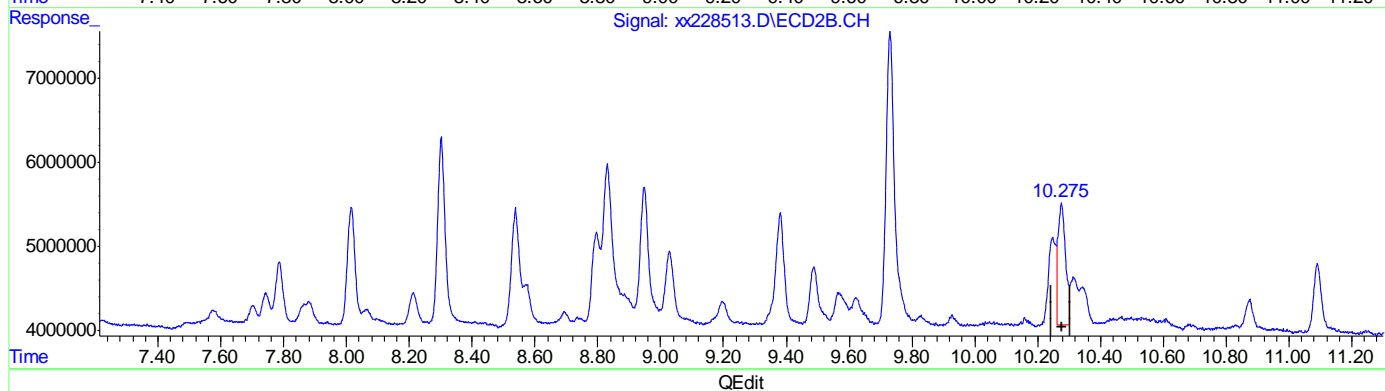
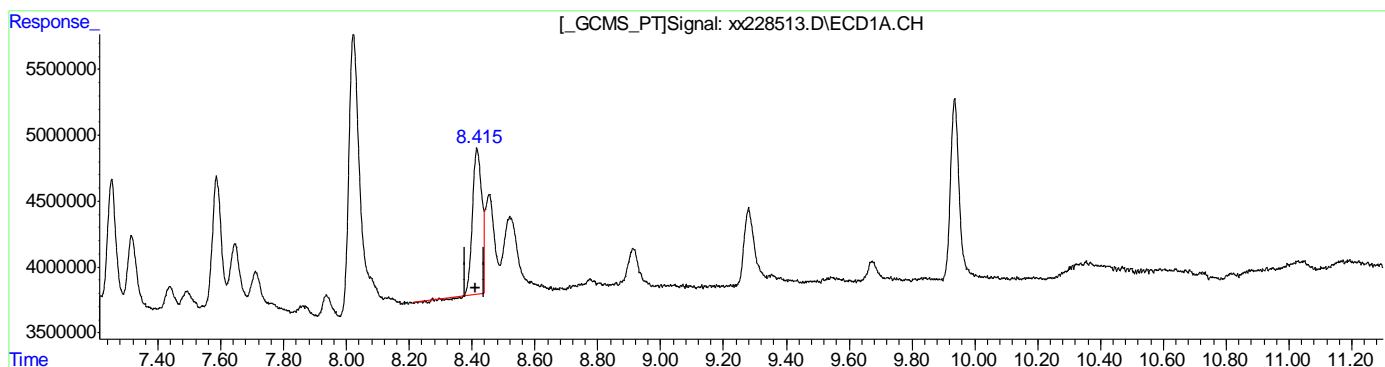
11.6.34.7
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228513.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:10 pm
 Operator : rebeccak
 Sample : ic6349-50
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:20:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 8.416min 25.421PPB
 response 23219898

(50) AR1260-E #2
 10.276min 25.039PPB
 response 24541041

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:21:12 2018

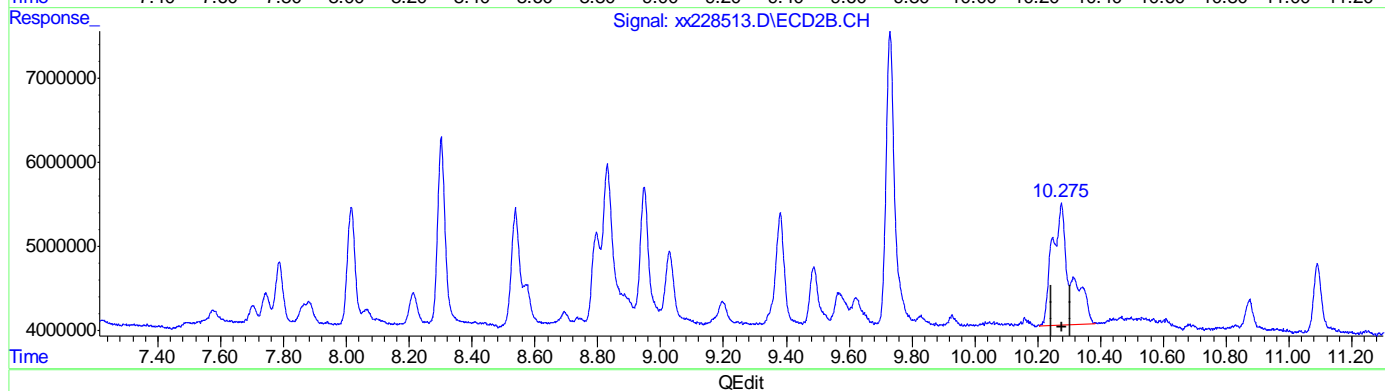
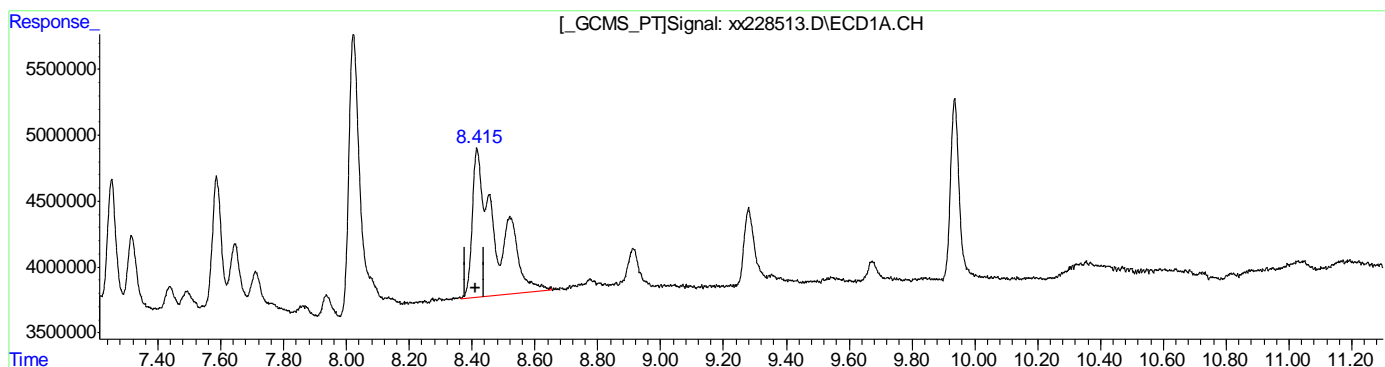
11.6.34.8
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228513.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:10 pm
 Operator : rebeccak
 Sample : ic6349-50
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:20:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 8.415min 65.636PPB m
 response 59952752

(50) AR1260-E #2
 10.275min 60.514PPB m
 response 59309446

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:21:20 2018

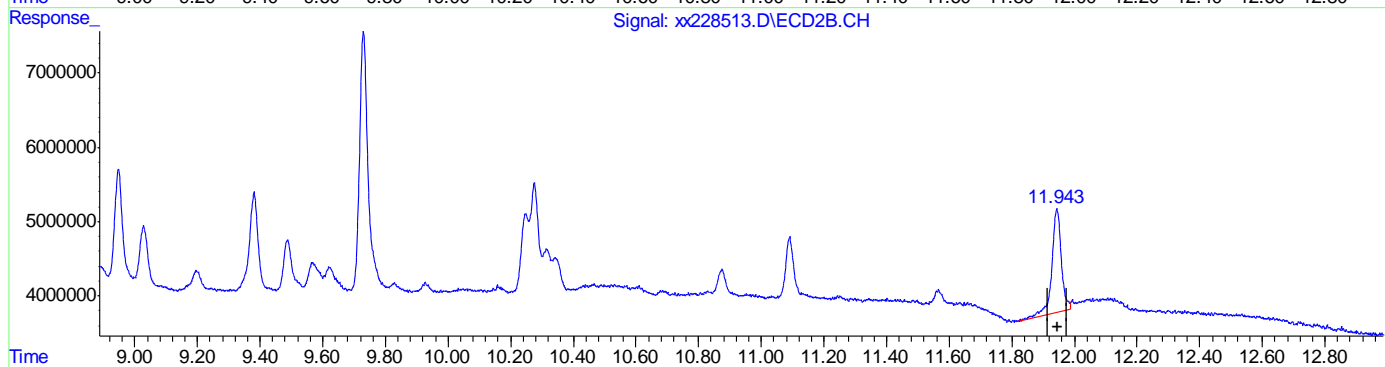
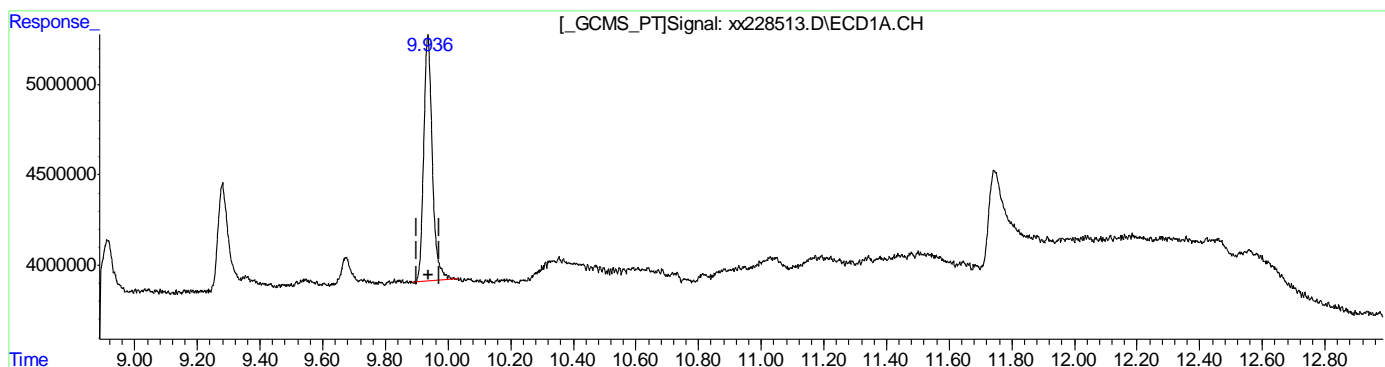
11.6.34.9
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228513.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:10 pm
 Operator : rebeccak
 Sample : ic6349-50
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:20:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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)



(51) Decachlorobiphenyl (S)

9.936min 2.604ppb
 response 25953752

(51) Decachlorobiphenyl #2 (S)

11.944min 3.226ppb
 response 29460892

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:21:23 2018

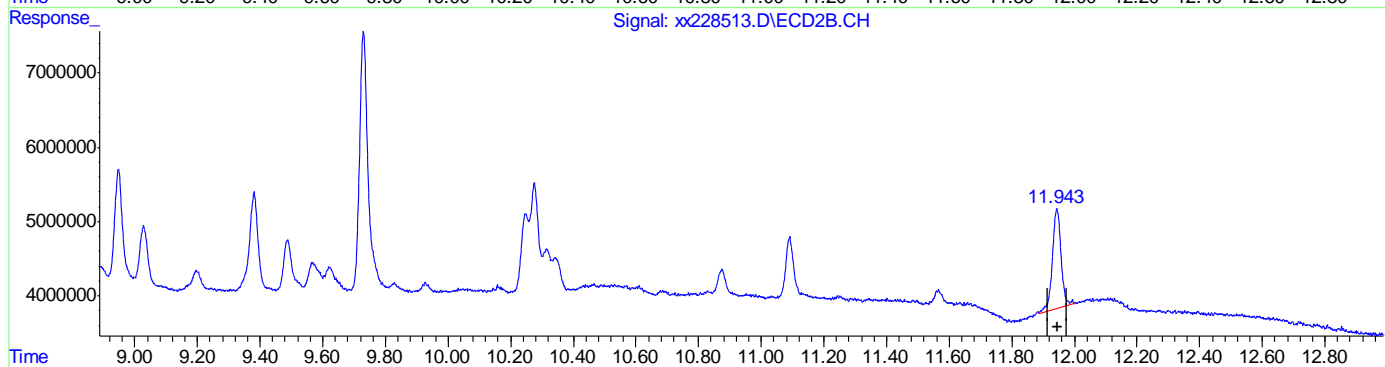
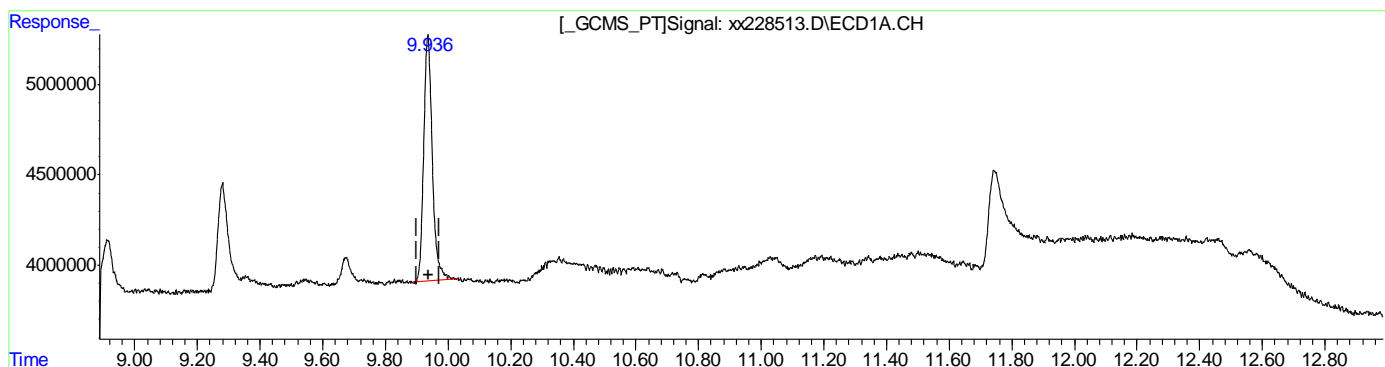
11.6.34.10
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228513.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:10 pm
 Operator : rebeccak
 Sample : ic6349-50
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:20:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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)



(51) Decachlorobiphenyl (S)
 9.936min 2.604ppb
 response 25953752

(51) Decachlorobiphenyl #2 (S)
 11.943min 2.842ppb m
 response 25959334

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:21:27 2018

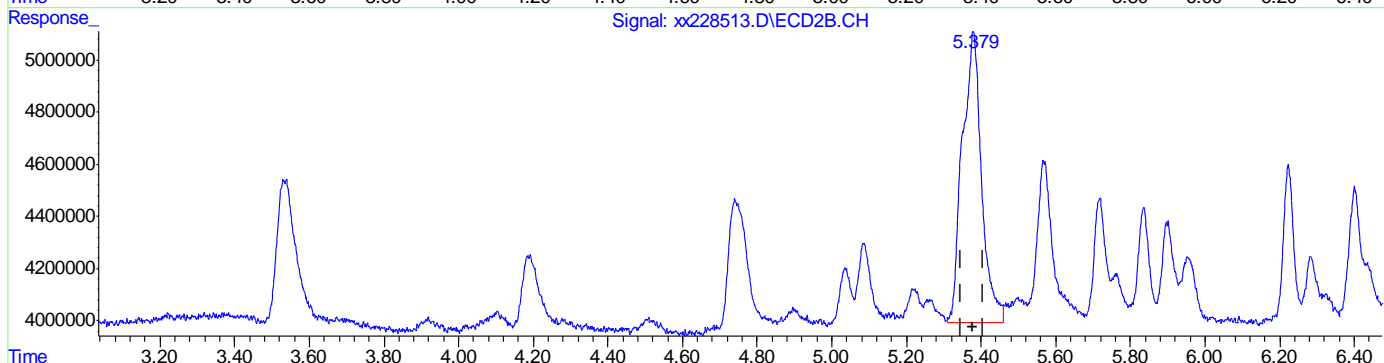
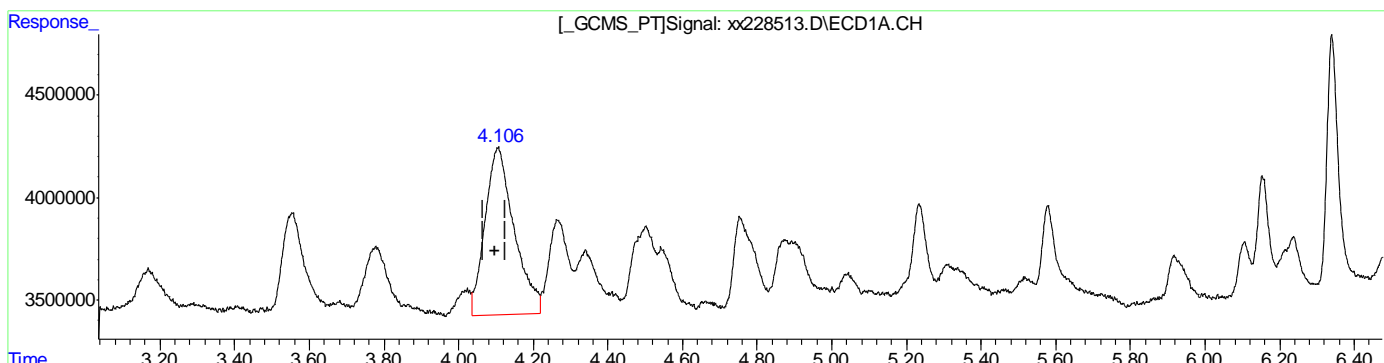
11.6.34.11
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228513.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:10 pm
 Operator : rebeccak
 Sample : ic6349-50
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:21:25 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
4.106min 72.353PPB m
response 44237435
(43) AR1016-C #2
5.379min 67.759PPB m
response 39759606

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:23:54 2018

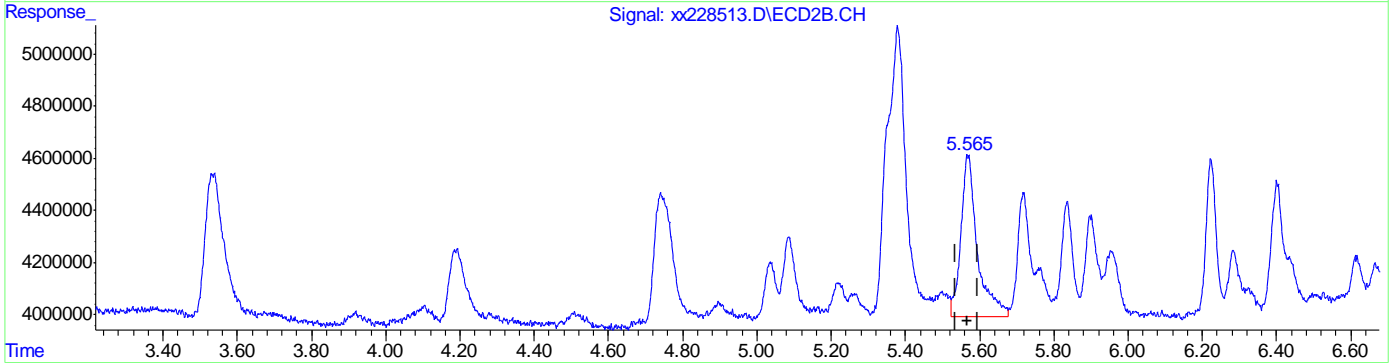
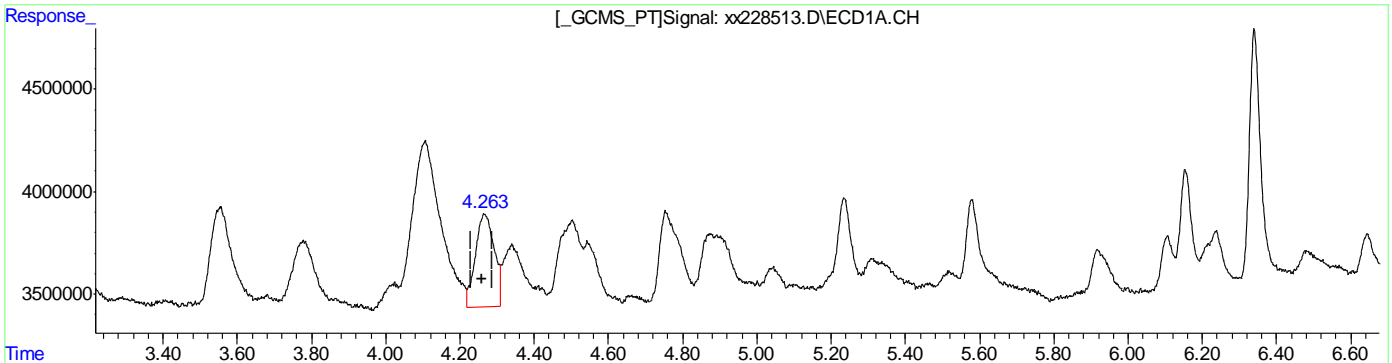
11.6.34.12
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228513.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:10 pm
 Operator : rebeccak
 Sample : ic6349-50
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:21:25 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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)



(44) AR1016-D
 4.266min 68.838PPB
 response 16055392

(44) AR1016-D #2
 5.567min 77.756PPB
 response 19217892

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:23:57 2018

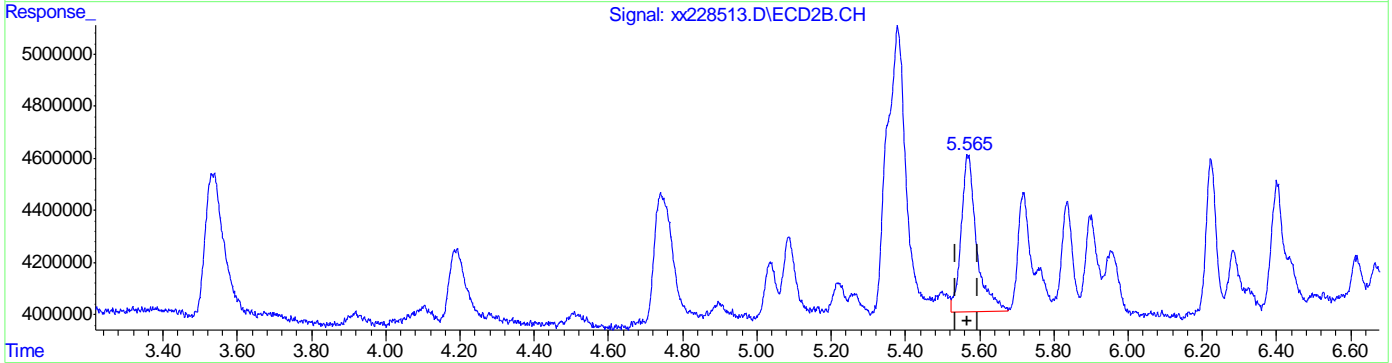
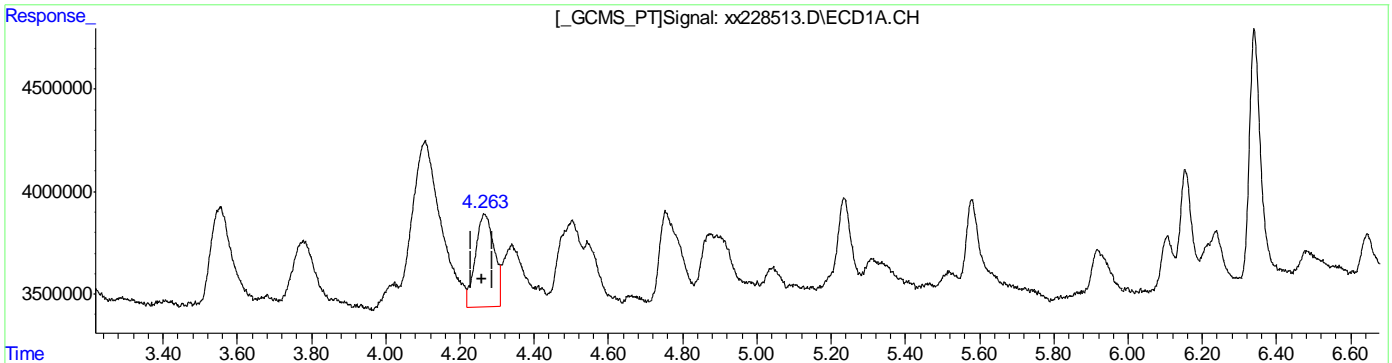
11.6.34.13
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228513.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:10 pm
 Operator : rebeccak
 Sample : ic6349-50
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:21:25 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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)



(44) AR1016-D
 4.266min 68.838PPB
 response 16055392

(44) AR1016-D #2
 5.565min 70.072PPB m
 response 17318683

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:24:27 2018

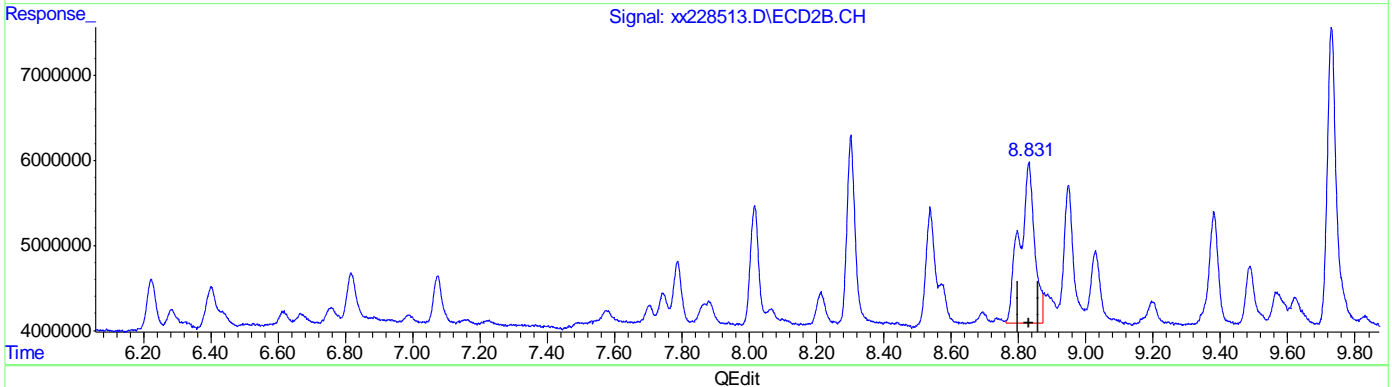
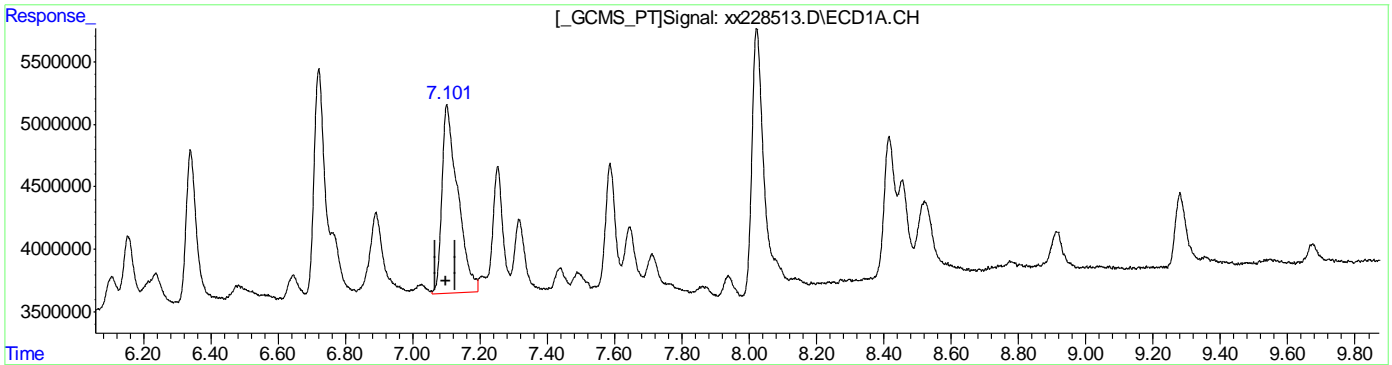
11.6.34.14
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228513.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:10 pm
 Operator : rebeccak
 Sample : ic6349-50
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:24:36 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 7.101min 68.622PPB
 response 48928163

(46) AR1260-A #2
 8.831min 75.561PPB m
 response 58504571

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:25:21 2018

11.6.34.15
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228514.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:26 pm
 Operator : rebeccak
 Sample : ic6349-250
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:19:53 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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...	2.797	3.532	105.7E6	92255629	12.796	11.343
Spiked Amount	40.000		Recovery	=	31.99%	28.36%
51) S Decachlor...	9.938	11.946	121.0E6	112.9E6	12.136	12.365m
Spiked Amount	40.000		Recovery	=	30.34%	30.91%
Target Compounds						
41) AR1016-A	3.169	4.189	47269887	39342747	272.549	299.186
42) AR1016-B	3.551	4.743	89775442	83233786	337.646	333.679
43) AR1016-C	4.103	5.378	204.4E6	185.1E6	334.286	315.473
44) AR1016-D	4.265	5.567	76353050	78689143	327.365	318.377
45) AR1016-E	4.756	6.223	78777945	52859672	322.926	304.742
46) AR1260-A	7.102	8.832	232.4E6	243.4E6	325.903	314.403m
47) AR1260-B	7.254	8.947	99129096	129.9E6	315.383	303.328
48) AR1260-C	7.588	9.381	100.1E6	122.8E6	294.129	293.103
49) AR1260-D	8.023	9.731	273.3E6	308.3E6	290.956	292.581
50) AR1260-E	8.415	10.274	273.2E6	283.9E6	299.057m	289.679m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

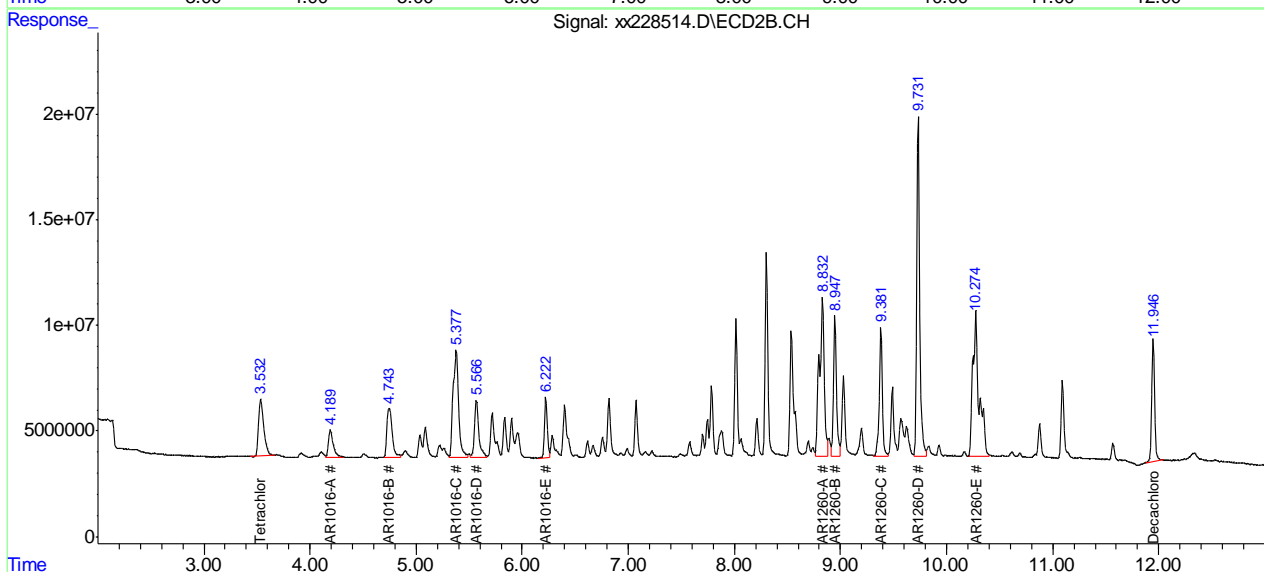
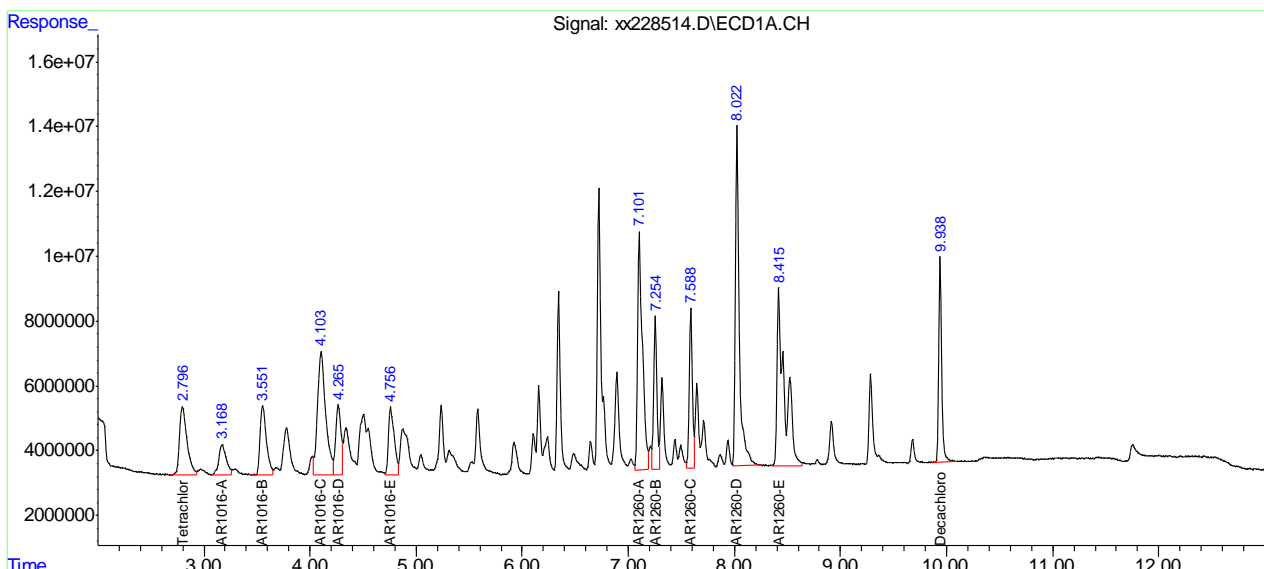
11.6.35
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228514.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:26 pm
 Operator : rebeccak
 Sample : ic6349-250
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:19:53 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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)



11.6.35
11

Manual Integration Approval Summary

Sample Number: GXX6349-IC6349 Method: SW846 8082A
Lab FileID: XX228514.D Analyst approved: 05/15/18 08:26 Rebecca Krug
Injection Time: 05/14/18 17:26 Supervisor approved: 05/15/18 13:34 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1260-E		1	8.42	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.27	Split peak
Decachlorobiphenyl	2051-24-3	2	11.95	Poorly defined baseline

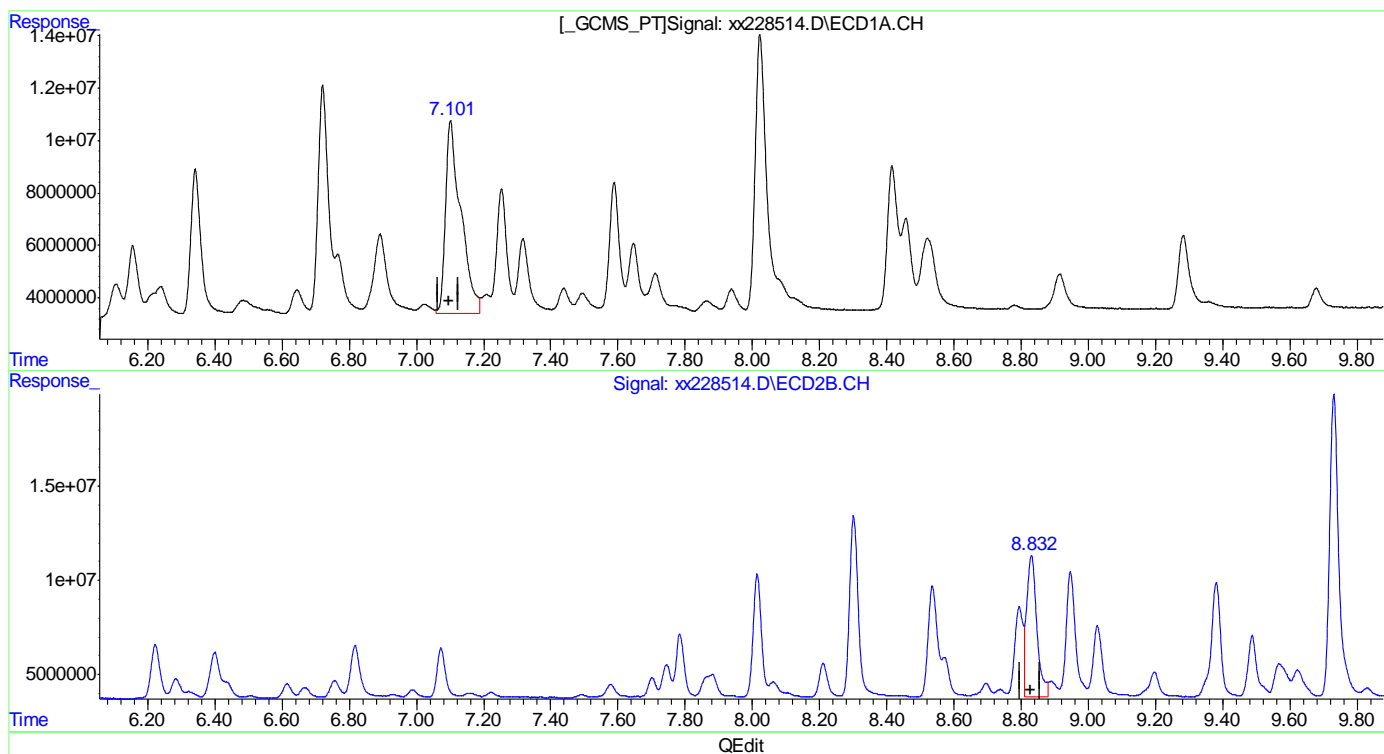
11.6.35.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228514.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:26 pm
 Operator : rebeccak
 Sample : ic6349-250
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:19:12 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 7.102min 325.903PPB
 response 232370976

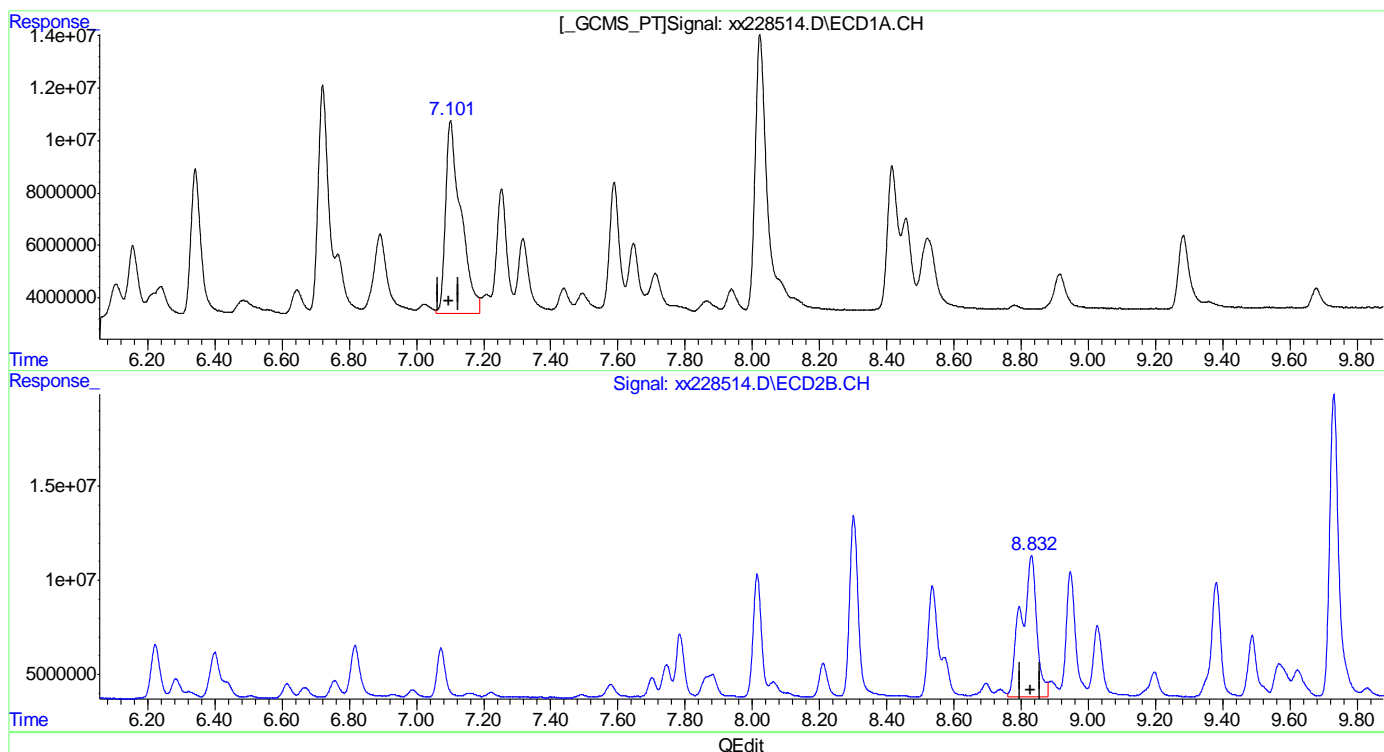
(46) AR1260-A #2
 8.831min 209.553PPB
 response 162249303

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228514.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:26 pm
 Operator : rebeccak
 Sample : ic6349-250
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:19:12 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 7.102min 325.903PPB
 response 232370976

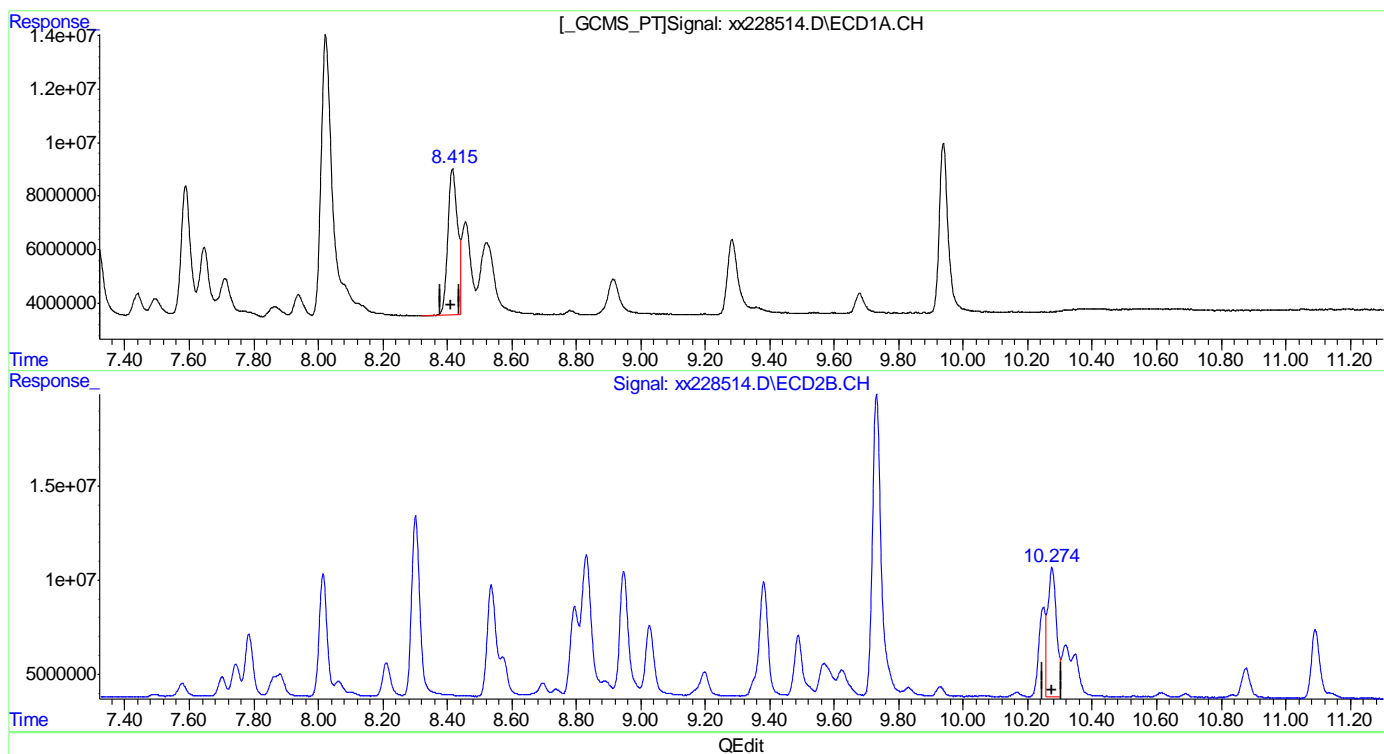
(46) AR1260-A #2
 8.832min 314.403PPB m
 response 243431373

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228514.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:26 pm
 Operator : rebeccak
 Sample : ic6349-250
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:19:12 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 8.416min 125.055PPB
 response 114226062

(50) AR1260-E #2
 10.275min 133.087PPB
 response 130438141

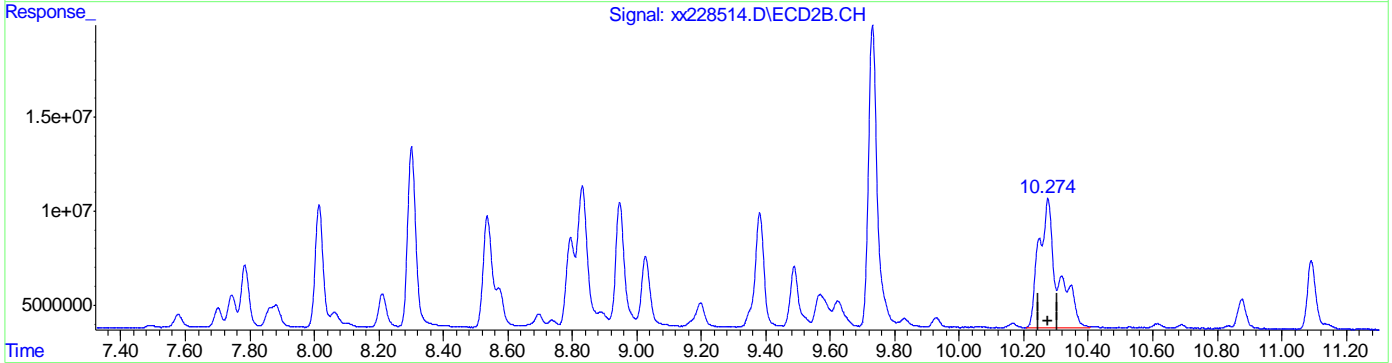
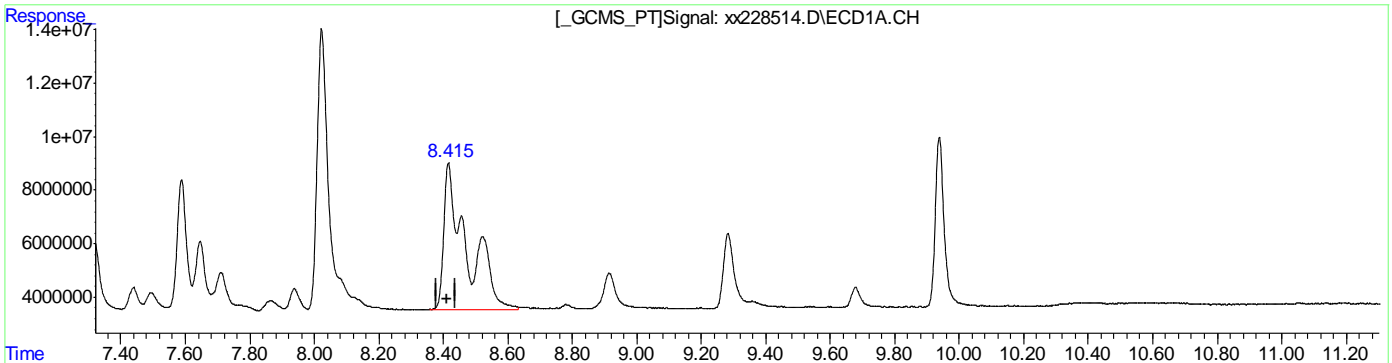
(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:19:36 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228514.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:26 pm
 Operator : rebeccak
 Sample : ic6349-250
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:19:12 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 8.415min 299.057PPB m
 response 273160313

(50) AR1260-E #2
 10.274min 289.679PPB m
 response 283913888

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:19:47 2018

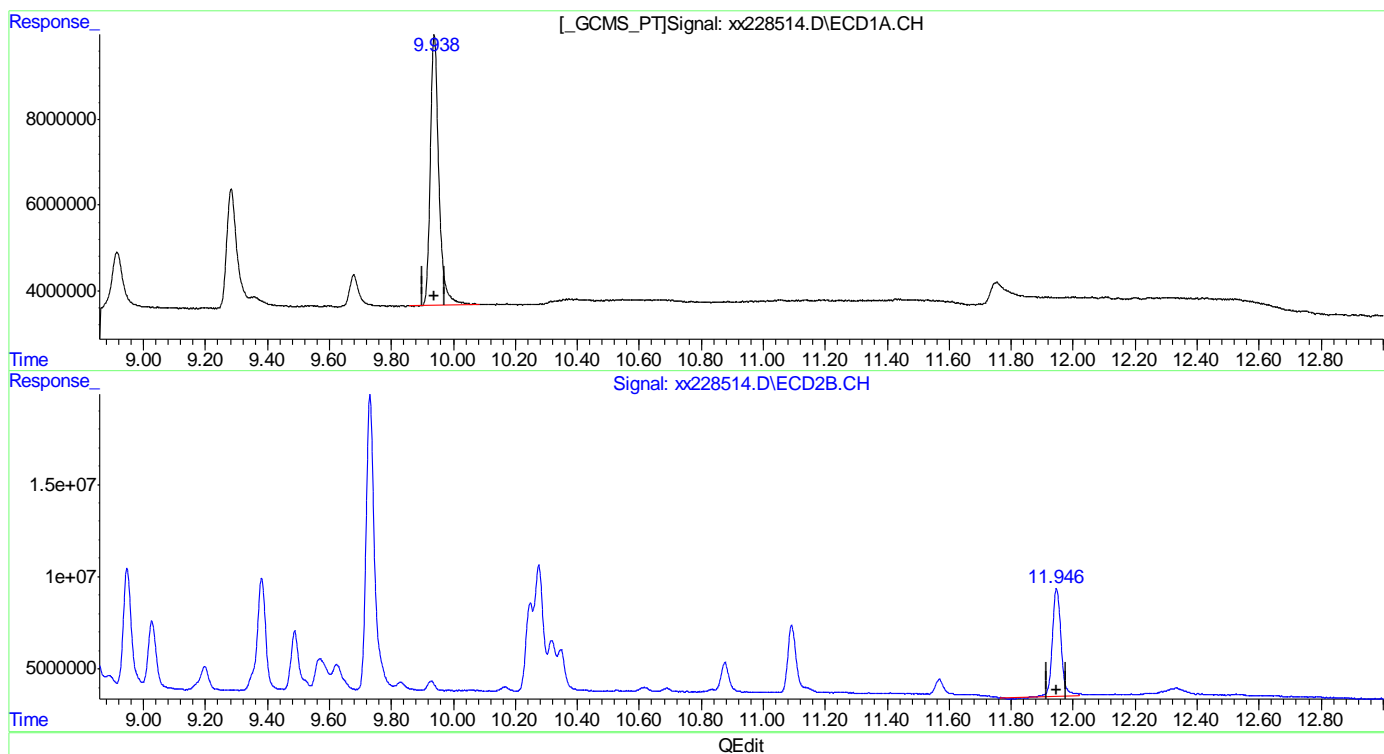
11.6.35.5
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228514.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:26 pm
 Operator : rebeccak
 Sample : ic6349-250
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:19:12 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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)



(51) Decachlorobiphenyl (S)

9.938min 12.136ppb

response 120952704

(51) Decachlorobiphenyl #2 (S)

11.947min 12.504ppb

response 114194831

(+) = Expected Retention Time

PCB6349.M Tue May 15 08:19:50 2018

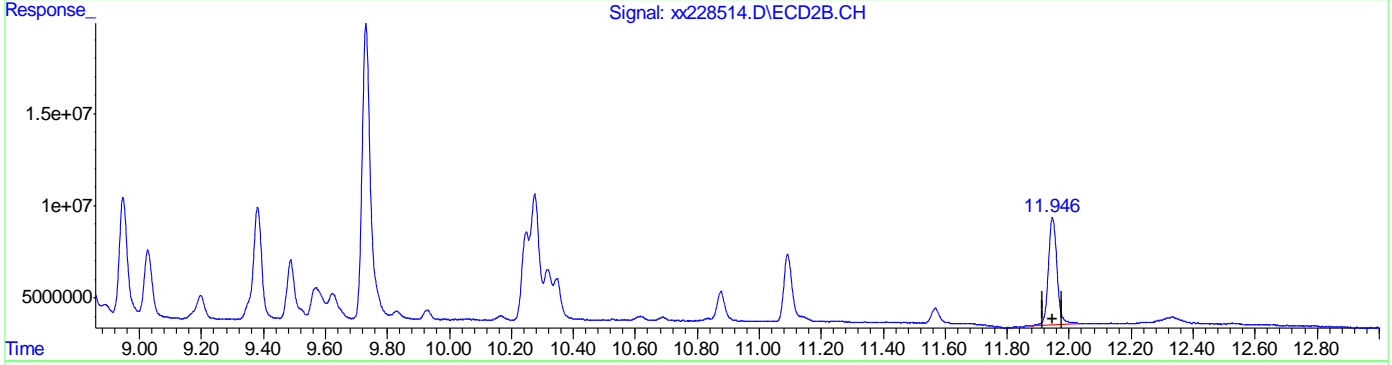
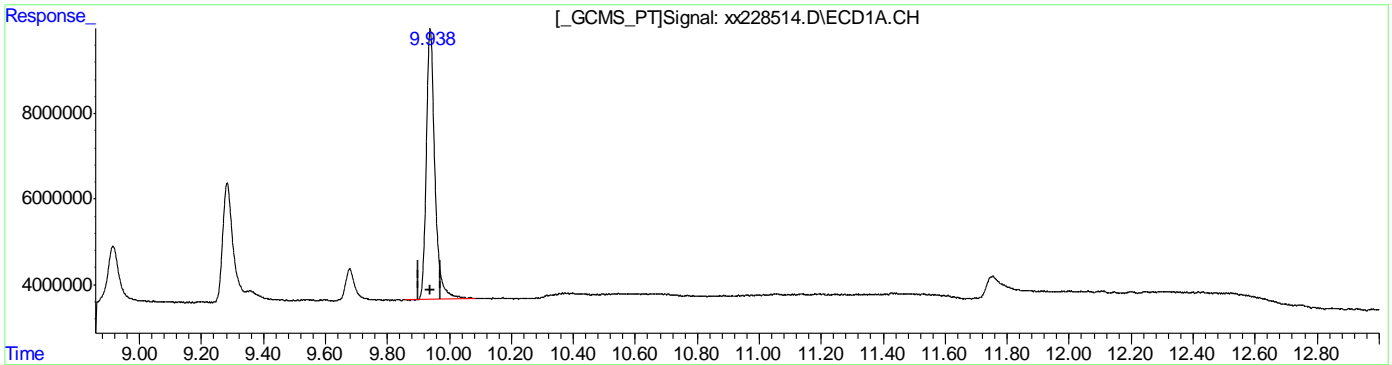
Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228514.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:26 pm
 Operator : rebeccak
 Sample : ic6349-250
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:19:12 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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)



(51) Decachlorobiphenyl (S)
 9.938min 12.136ppb
 response 120952704

(51) Decachlorobiphenyl #2 (S)
 11.946min 12.365ppb m
 response 112933645

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:19:55 2018

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228515.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:43 pm
 Operator : rebeccak
 Sample : ic6349-500
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:16:42 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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...	2.799	3.533	217.6E6	208.5E6	26.340	25.640
Spiked Amount	40.000		Recovery	=	65.85%	64.10%
51) S Decachlor...	9.939	11.947	251.9E6	227.2E6	25.272	24.875
Spiked Amount	40.000		Recovery	=	63.18%	62.19%
Target Compounds						
41) AR1016-A	3.170	4.191	98735010	86305027	569.287	656.316
42) AR1016-B	3.553	4.744	180.1E6	167.3E6	677.308	670.608
43) AR1016-C	4.102	5.379	420.2E6	382.3E6	687.308	651.460
44) AR1016-D	4.266	5.568	156.6E6	159.3E6	671.574	644.329
45) AR1016-E	4.757	6.223	163.2E6	111.3E6	668.895	641.453
46) AR1260-A	7.101	8.828	443.6E6	457.1E6	622.085	590.361m
47) AR1260-B	7.253	8.949	226.9E6	291.1E6	722.024	679.680
48) AR1260-C	7.588	9.382	230.2E6	263.4E6	676.382	628.943
49) AR1260-D	8.020	9.733	649.3E6	707.6E6	691.356	671.391
50) AR1260-E	8.415	10.276	617.6E6	637.5E6	676.133m	650.427m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

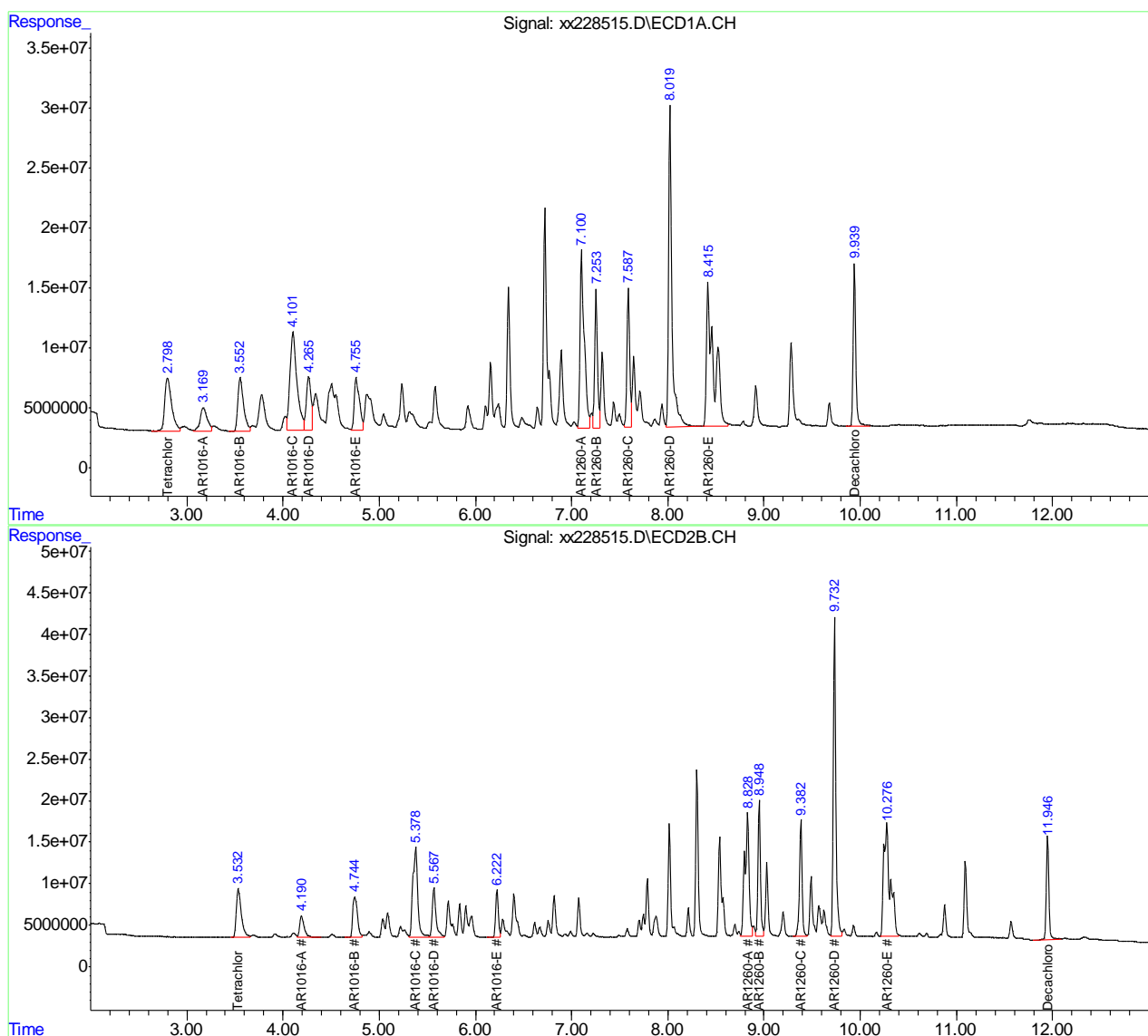
11.6.36
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228515.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:43 pm
 Operator : rebeccak
 Sample : ic6349-500
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:16:42 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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)



11.6.36

11

Manual Integration Approval Summary

Sample Number: GXX6349-IC6349 Method: SW846 8082A
Lab FileID: XX228515.D Analyst approved: 05/15/18 08:26 Rebecca Krug
Injection Time: 05/14/18 17:43 Supervisor approved: 05/15/18 13:34 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1260-E		1	8.41	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.28	Split peak

11.6.36.1

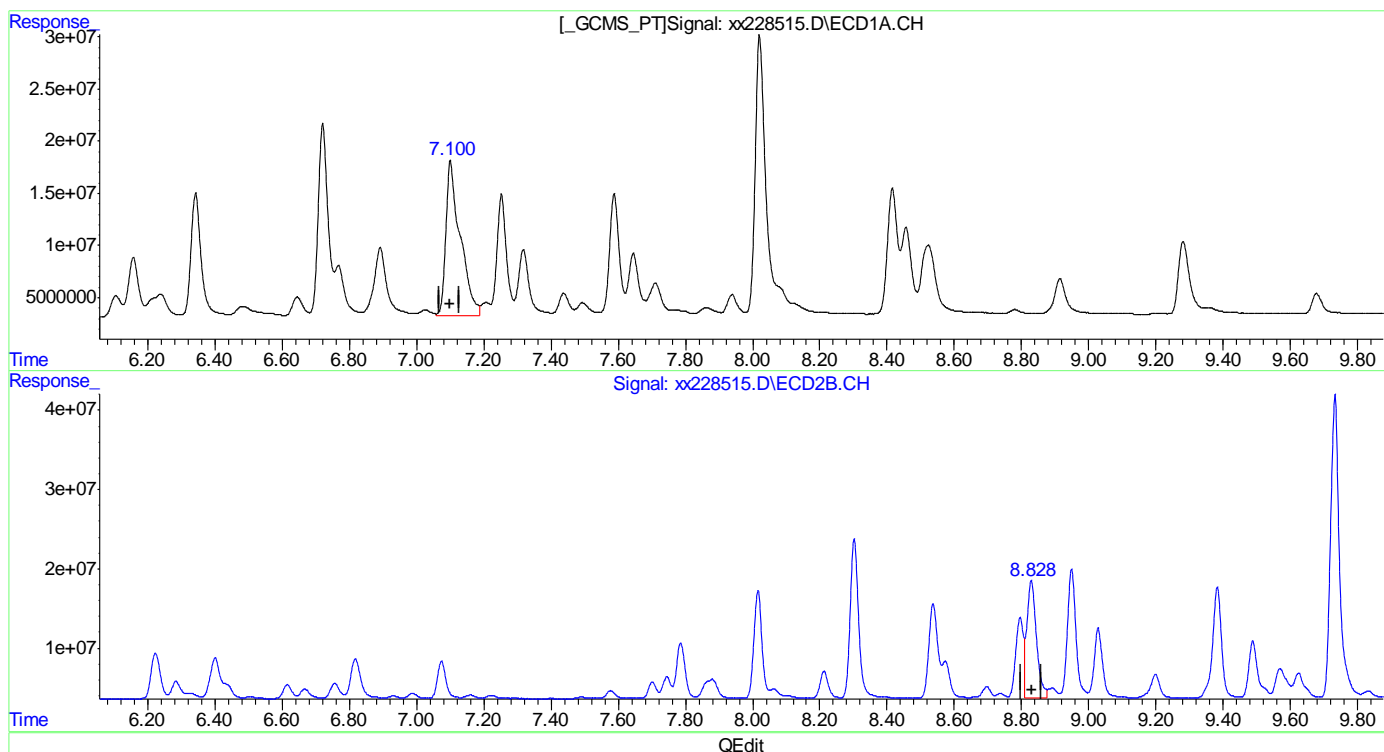
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228515.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:43 pm
 Operator : rebeccak
 Sample : ic6349-500
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:16:05 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 7.101min 622.085PPB
 response 443551494

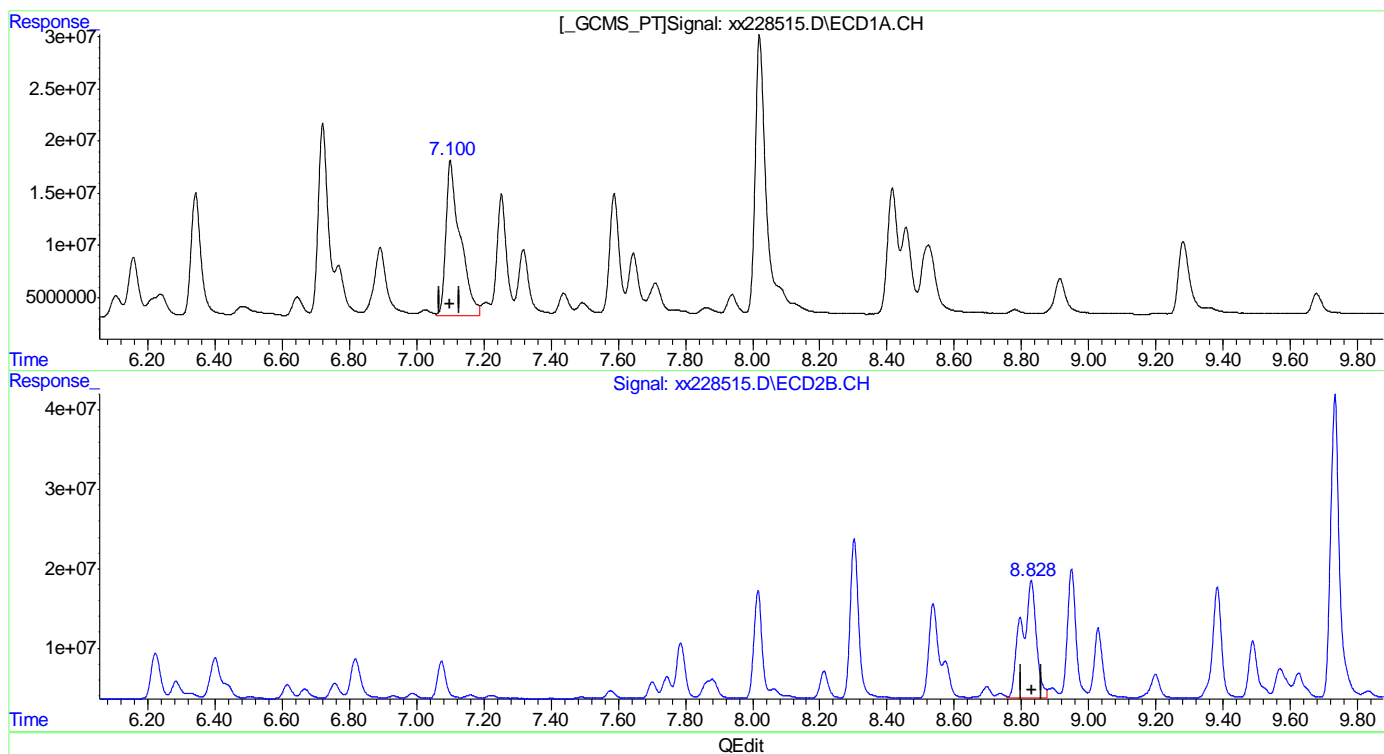
(46) AR1260-A #2
 8.829min 379.442PPB
 response 293789061

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228515.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:43 pm
 Operator : rebeccak
 Sample : ic6349-500
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:16:05 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 7.101min 622.085PPB
 response 443551494

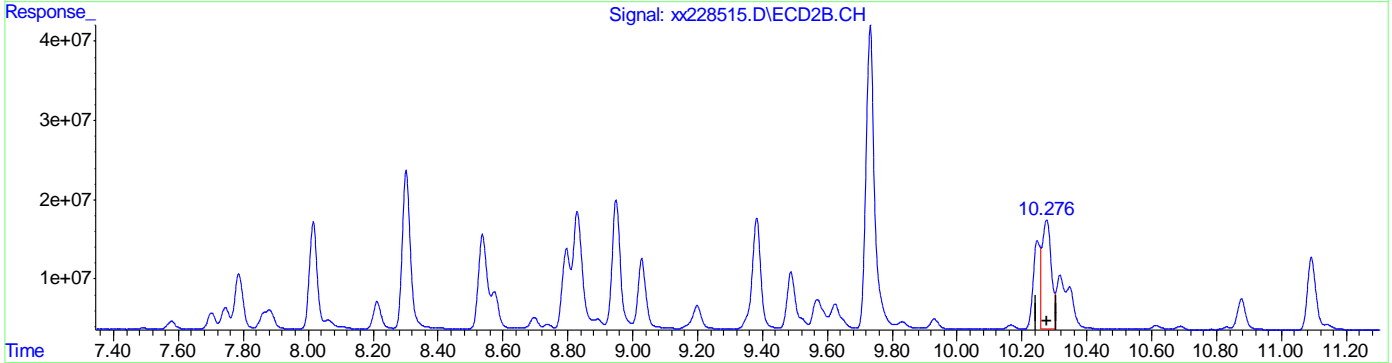
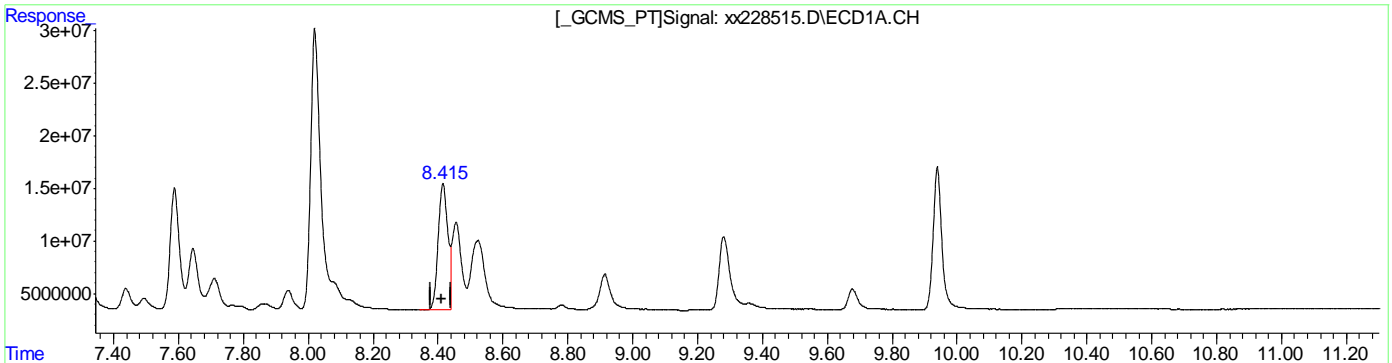
(46) AR1260-A #2
 8.828min 590.361PPB m
 response 457096418

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228515.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:43 pm
 Operator : rebeccak
 Sample : ic6349-500
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:16:05 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 8.415min 268.729PPB
 response 245458582

(50) AR1260-E #2
 10.276min 274.711PPB
 response 269243794

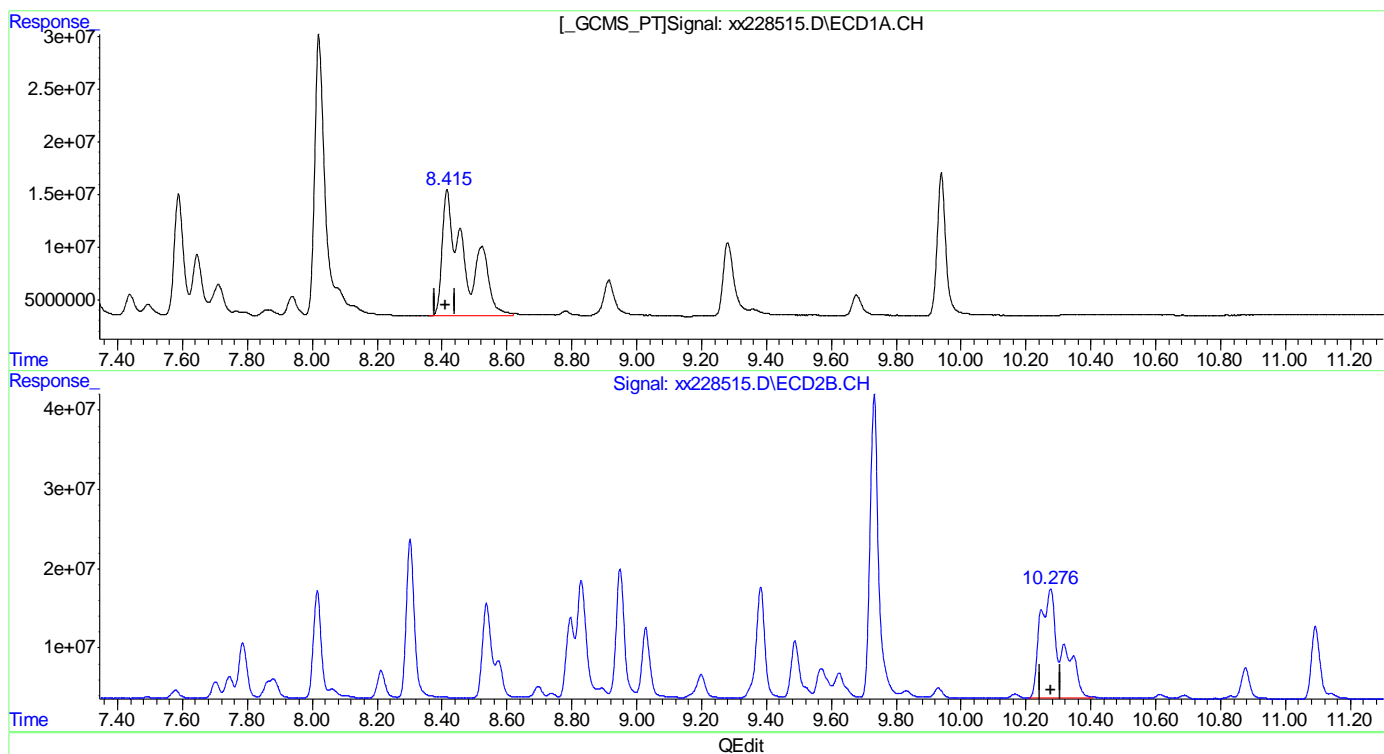
(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:16:31 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228515.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:43 pm
 Operator : rebeccak
 Sample : ic6349-500
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:16:05 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 8.415min 676.133PPB m
 response 617584042

(50) AR1260-E #2
 10.276min 650.427PPB m
 response 637482816

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228516.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:59 pm
 Operator : rebeccak
 Sample : icc6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:17:37 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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...	2.799	3.533	442.9E6	418.6E6	53.615	51.473
Spiked Amount	40.000		Recovery	=	134.04%	128.68%
51) S Decachlor...	9.939	11.947	498.2E6	443.1E6	49.989	48.511
Spiked Amount	40.000		Recovery	=	124.97%	121.28%
Target Compounds						
41) AR1016-A	3.167	4.190	198.0E6	168.6E6	1141.653	1282.289
42) AR1016-B	3.553	4.742	356.8E6	327.0E6	1341.931	1311.008
43) AR1016-C	4.100	5.377	842.2E6	753.6E6	1377.470	1284.269
44) AR1016-D	4.263	5.566	309.8E6	311.3E6	1328.165	1259.472
45) AR1016-E	4.756	6.223	321.2E6	220.5E6	1316.660	1271.195
46) AR1260-A	7.100	8.829	901.2E6	911.6E6	1263.927	1177.432m
47) AR1260-B	7.254	8.948	462.1E6	575.8E6	1470.055	1344.361
48) AR1260-C	7.589	9.382	471.4E6	526.7E6	1384.907	1257.488
49) AR1260-D	8.022	9.730	1378.1E6	1448.9E6	1467.365	1374.842
50) AR1260-E	8.414	10.275	1260.7E6	1279.0E6	1380.205m	1304.937m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

11.6.37

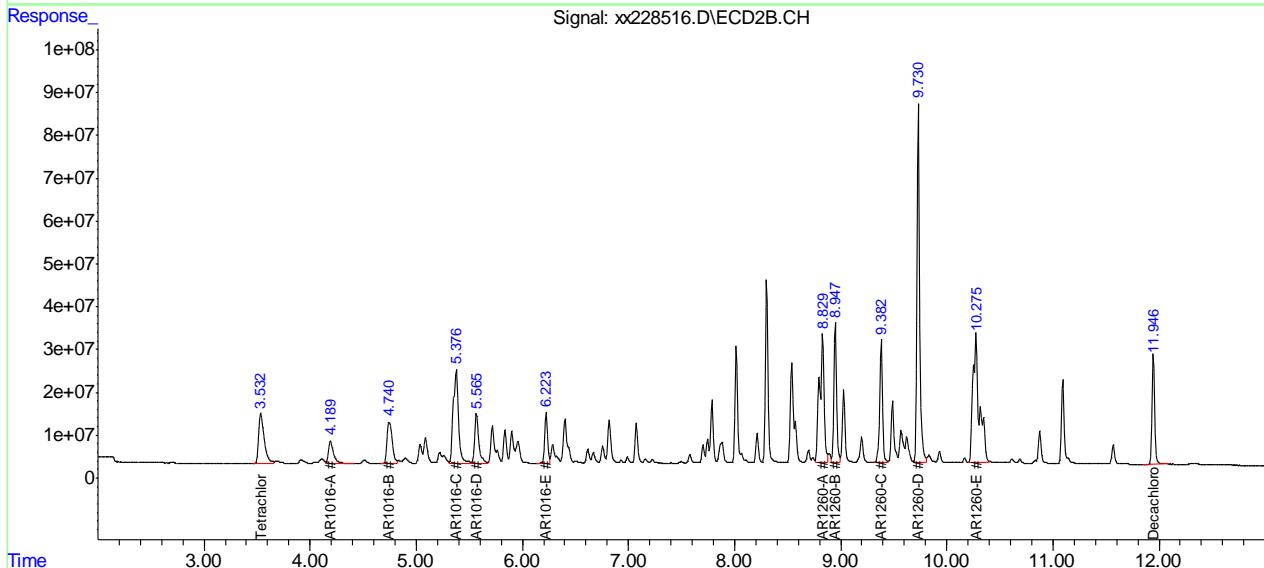
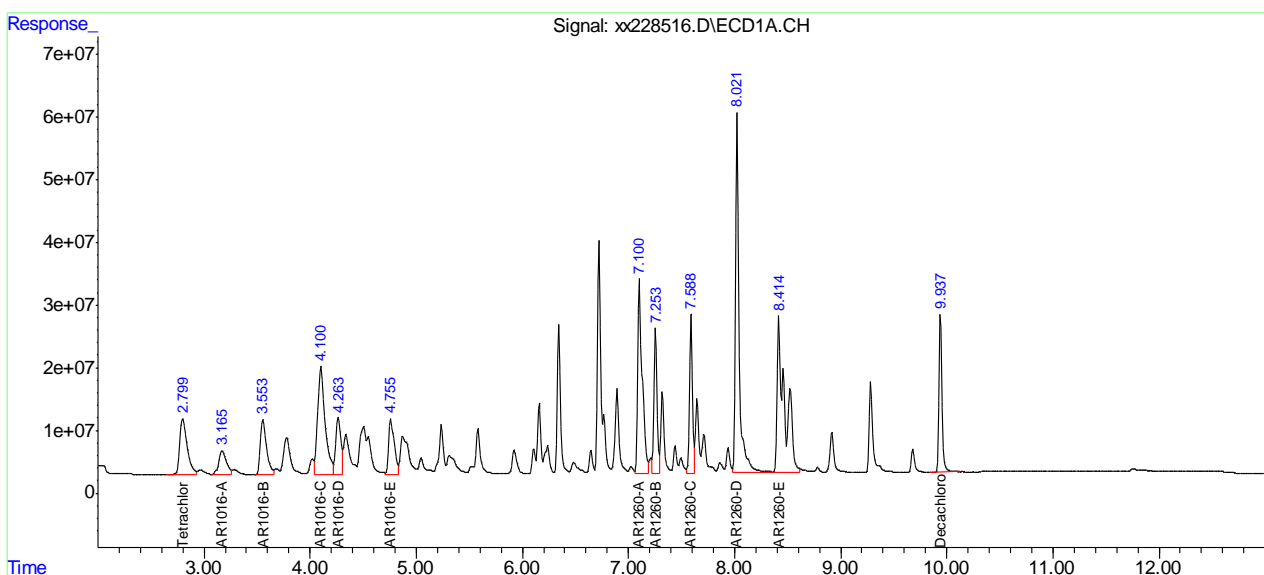
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228516.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:59 pm
 Operator : rebeccak
 Sample : icc6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:17:37 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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)



11.6.37
11

Manual Integration Approval Summary

Sample Number: GXX6349-ICC6349 Method: SW846 8082A
Lab FileID: XX228516.D Analyst approved: 05/15/18 08:26 Rebecca Krug
Injection Time: 05/14/18 17:59 Supervisor approved: 05/15/18 13:34 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1260-E		1	8.41	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.28	Split peak

11.6.37.1

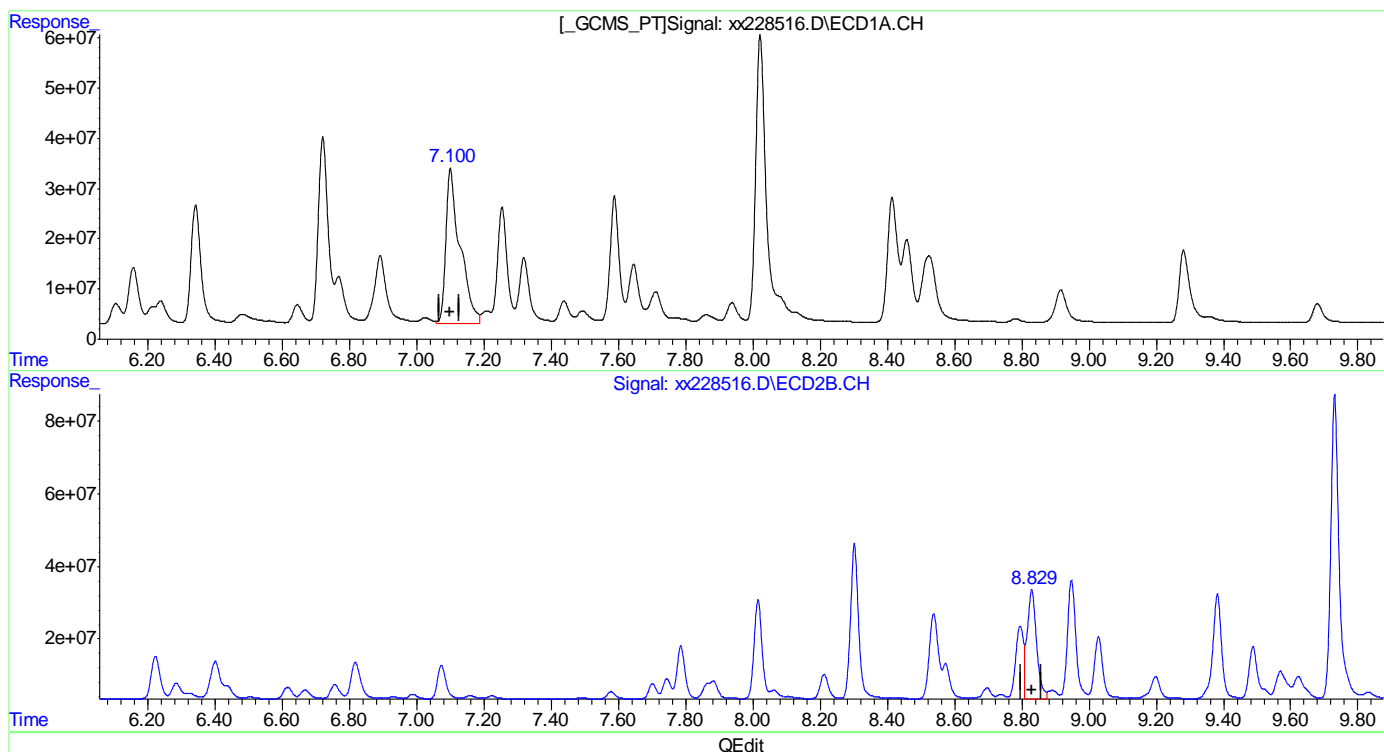
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228516.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:59 pm
 Operator : rebeccak
 Sample : icc6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:16:59 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 7.100min 1263.927PPB
 response 901189057

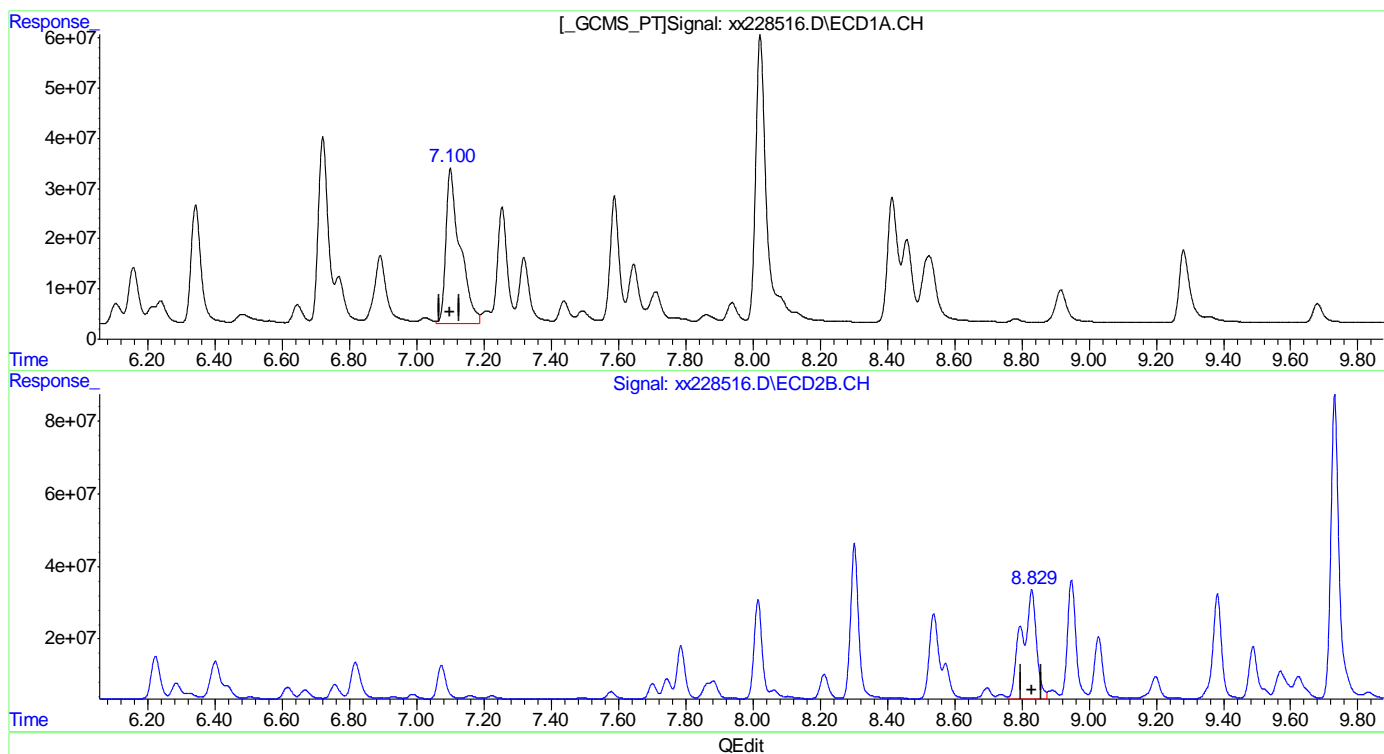
(46) AR1260-A #2
 8.830min 748.323PPB
 response 579400473

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228516.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:59 pm
 Operator : rebeccak
 Sample : icc6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:16:59 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 7.100min 1263.927PPB
 response 901189057

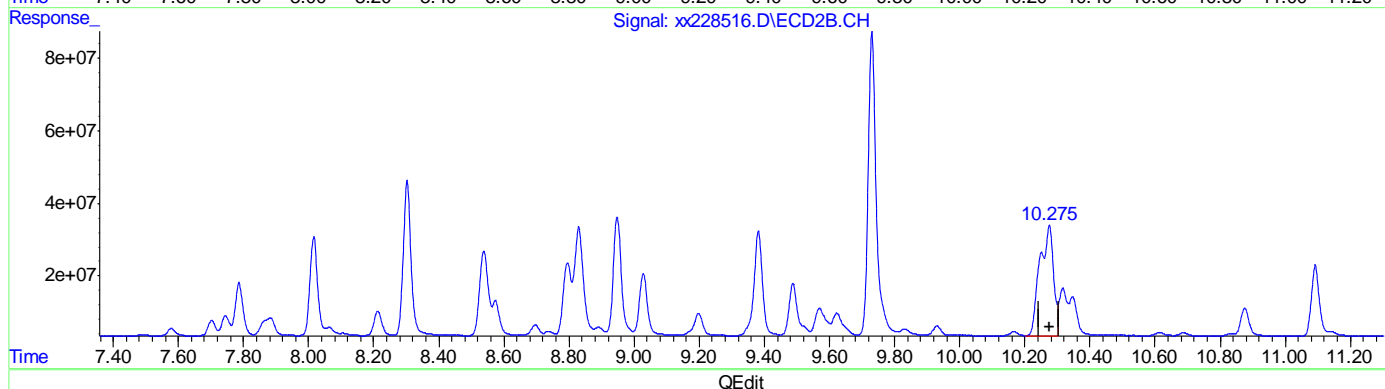
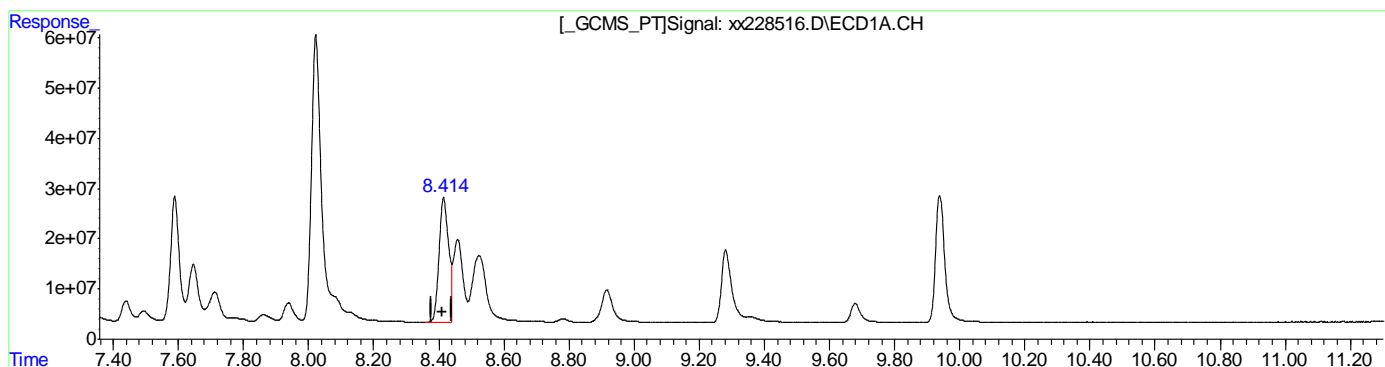
(46) AR1260-A #2
 8.829min 1177.432PPB m
 response 911644811

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228516.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:59 pm
 Operator : rebeccak
 Sample : icc6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:16:59 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 8.415min 562.571PPB
 response 513855810

(50) AR1260-E #2
 10.276min 896.924PPB
 response 879073693

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:17:27 2018

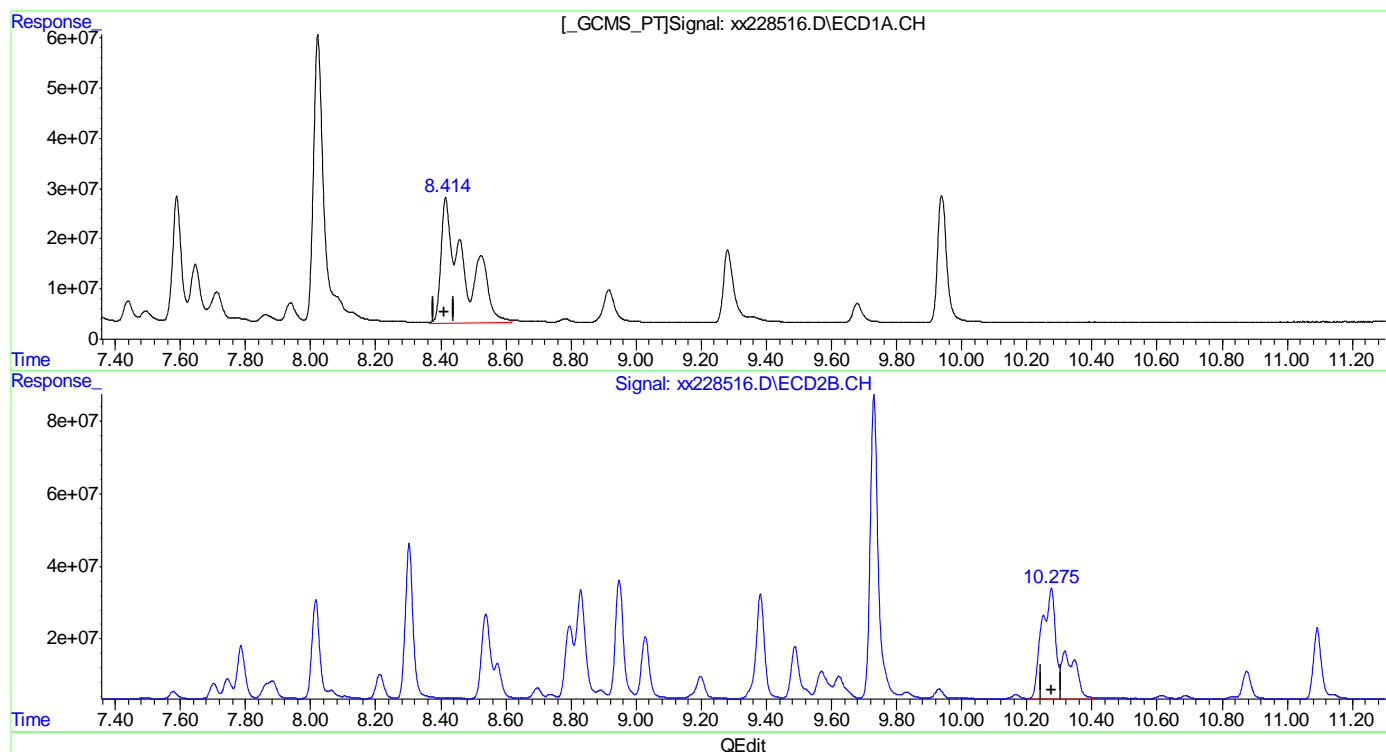
11.6.37.4
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228516.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 5:59 pm
 Operator : rebeccak
 Sample : icc6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:16:59 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 8.414min 1380.205PPB m
 response 1260687628

(50) AR1260-E #2
 10.275min 1304.937PPB m
 response 1278966800

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228517.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:16 pm
 Operator : rebeccak
 Sample : ic6349-2000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:18:28 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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...	2.797	3.532	859.5E6	816.3E6	104.033	100.366
Spiked Amount	40.000		Recovery	=	260.08%	250.91%
51) S Decachlor...	9.939	11.946	991.8E6	869.6E6	99.518	95.215
Spiked Amount	40.000		Recovery	=	248.80%	238.04%
Target Compounds						
41) AR1016-A	3.167	4.188	378.9E6	325.0E6	2184.588	2471.773
42) AR1016-B	3.552	4.740	682.5E6	620.1E6	2566.988	2485.880
43) AR1016-C	4.098	5.377	1651.6E6	1474.9E6	2701.257	2513.537
44) AR1016-D	4.261	5.565	597.8E6	596.2E6	2563.189	2412.096
45) AR1016-E	4.755	6.223	628.7E6	430.5E6	2577.079	2481.893
46) AR1260-A	7.099	8.828	1985.3E6	1974.6E6	2784.398	2550.304m
47) AR1260-B	7.252	8.948	806.9E6	1013.1E6	2567.029	2365.444
48) AR1260-C	7.587	9.380	859.0E6	977.1E6	2523.754	2333.072
49) AR1260-D	8.019	9.730	2496.2E6	2620.9E6	2657.823	2486.892
50) AR1260-E	8.411	10.275	2239.8E6	2293.3E6	2452.158m	2339.844m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

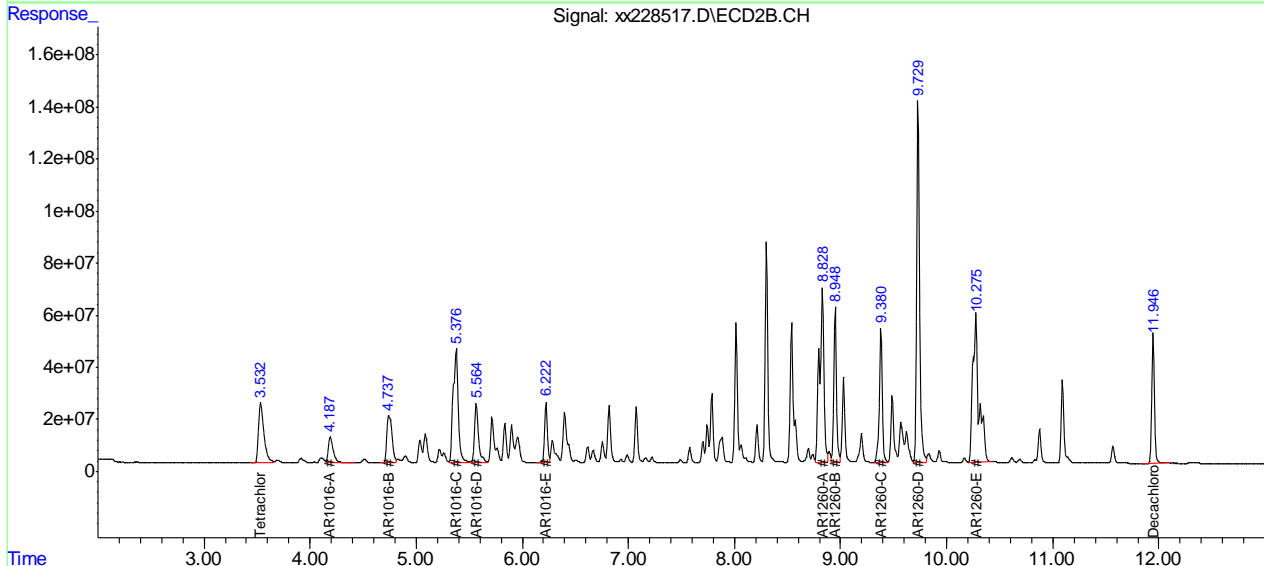
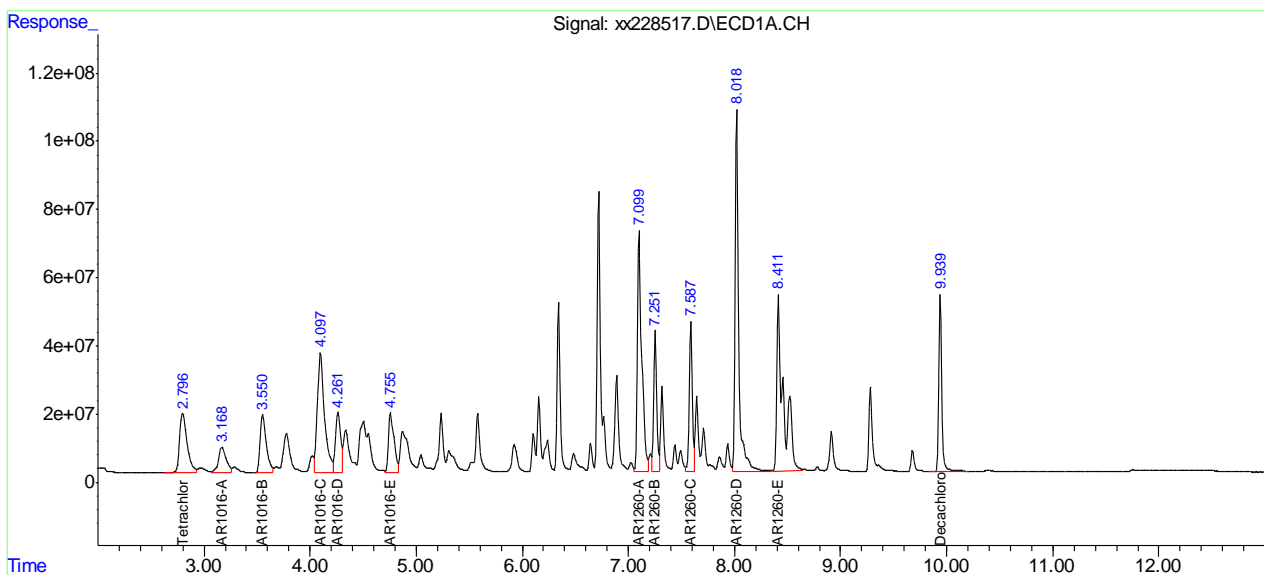
11.6.38
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228517.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:16 pm
 Operator : rebeccak
 Sample : ic6349-2000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:18:28 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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)



11.6.38
11

Manual Integration Approval Summary

Sample Number: GXX6349-IC6349 Method: SW846 8082A
Lab FileID: XX228517.D Analyst approved: 05/15/18 08:26 Rebecca Krug
Injection Time: 05/14/18 18:16 Supervisor approved: 05/15/18 13:34 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1260-E		1	8.41	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.28	Split peak

11.6.38.1

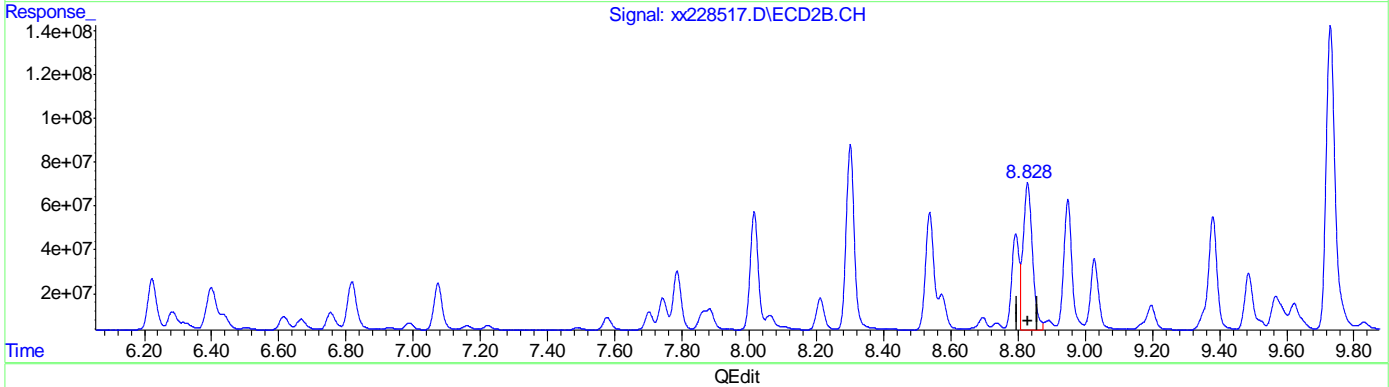
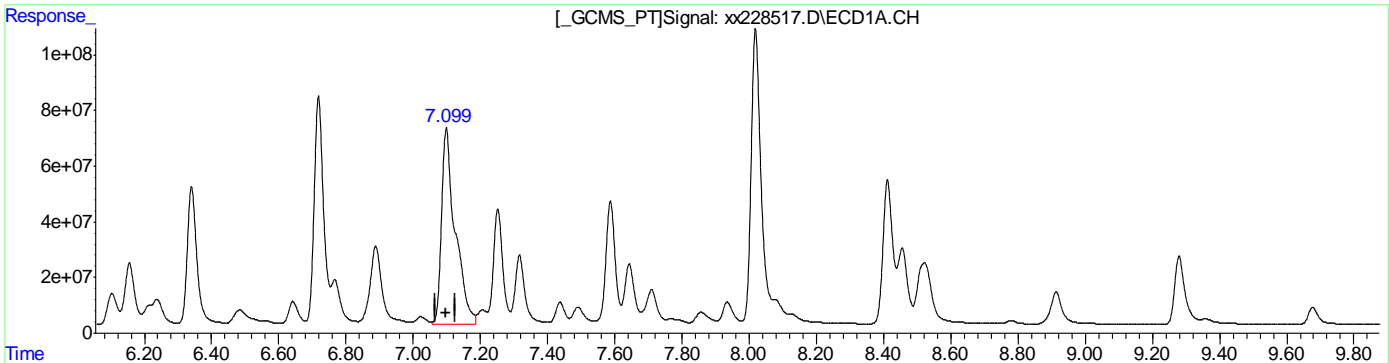
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228517.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:16 pm
 Operator : rebeccak
 Sample : ic6349-2000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:17:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 7.099min 2784.398PPB
 response 1985296092

(46) AR1260-A #2
 8.829min 1684.003PPB
 response 1303865421

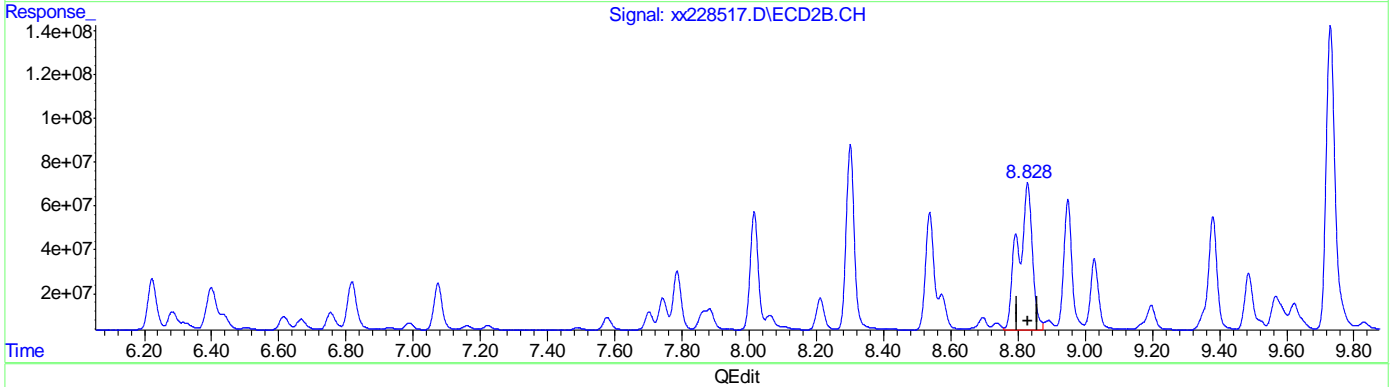
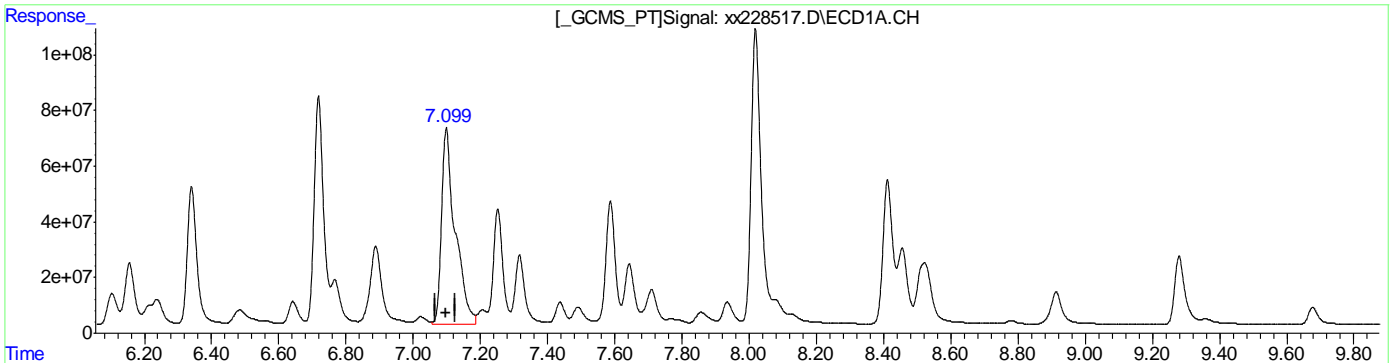
11.6.38.2
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228517.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:16 pm
 Operator : rebeccak
 Sample : ic6349-2000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:17:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 7.099min 2784.398PPB
 response 1985296092

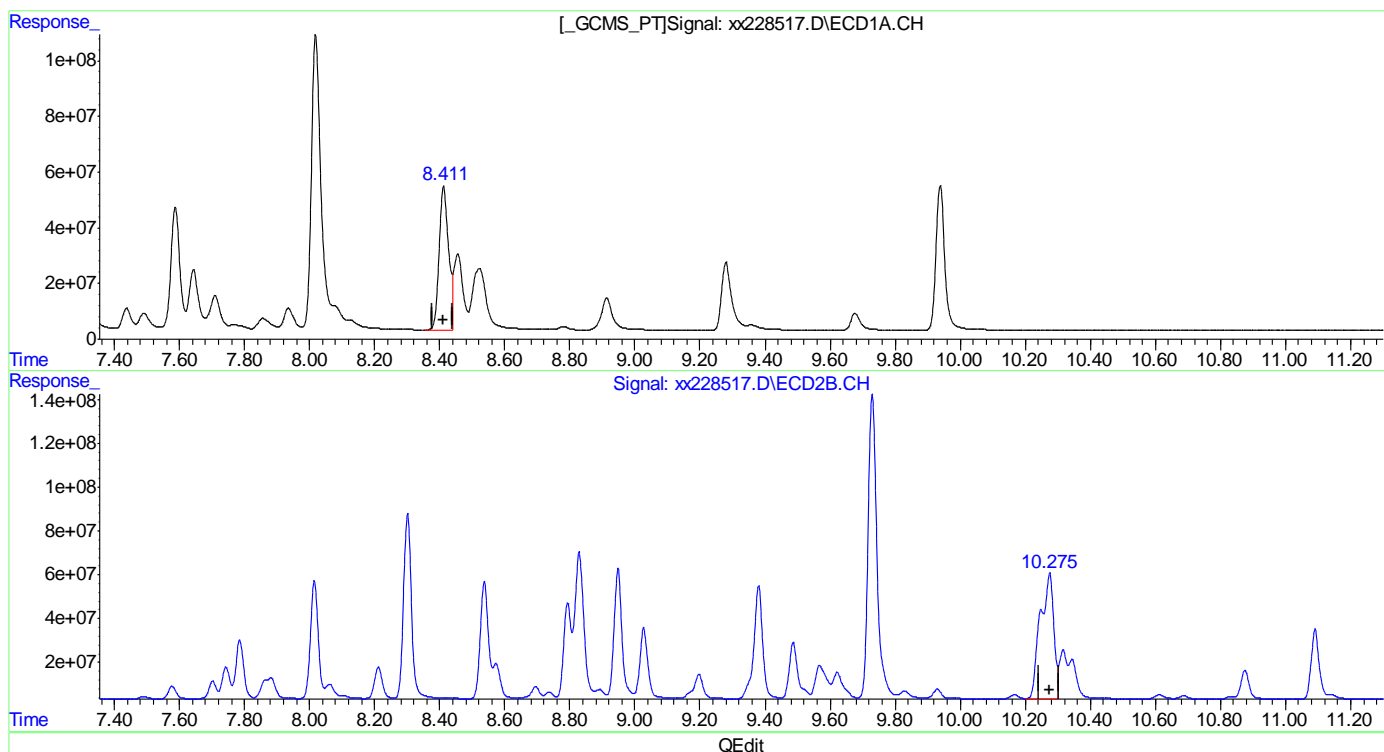
(46) AR1260-A #2
 8.828min 2550.304PPB m
 response 1974612329

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228517.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:16 pm
 Operator : rebeccak
 Sample : ic6349-2000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:17:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 8.412min 1131.458PPB
 response 1033480810

(50) AR1260-E #2
 10.275min 1675.264PPB
 response 1641923390

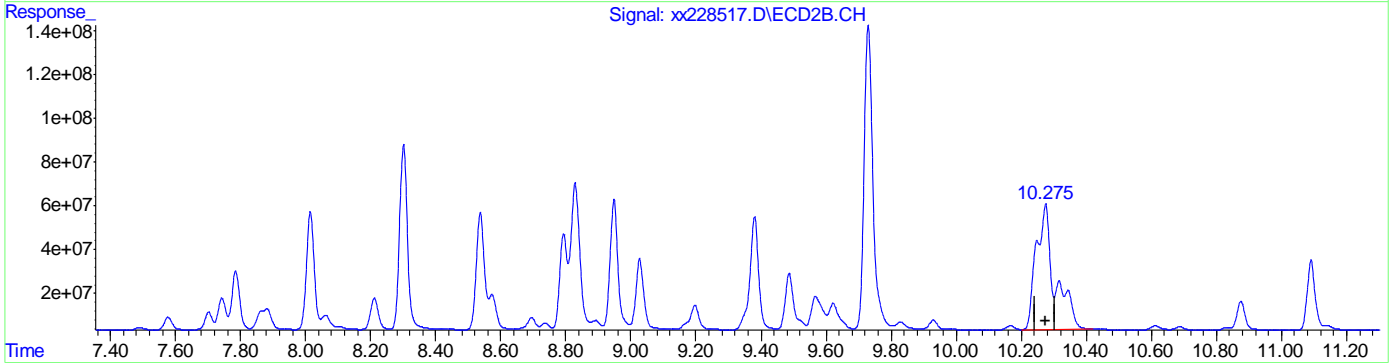
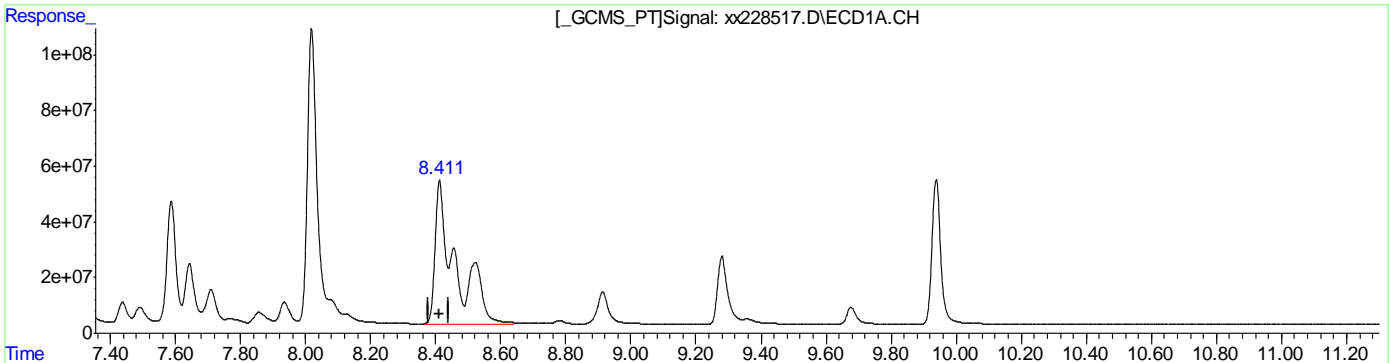
(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:18:16 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228517.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:16 pm
 Operator : rebeccak
 Sample : ic6349-2000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:17:51 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 8.411min 2452.158PPB m
 response 2239816221

(50) AR1260-E #2
 10.275min 2339.844PPB m
 response 2293277188

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:18:30 2018

11.6.38.5
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228518.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:32 pm
 Operator : rebeccak
 Sample : ic6349-3000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:14:44 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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...	2.797	3.535	1296.1E6	1236.4E6	156.888	152.023
Spiked Amount	40.000		Recovery	=	392.22%	380.06%
51) S Decachlor...	9.939	11.948	1510.4E6	1324.7E6	151.544	145.041
Spiked Amount	40.000		Recovery	=	378.86%	362.60%
Target Compounds						
41) AR1016-A	3.167	4.190	557.5E6	471.0E6	3214.686	3581.874
42) AR1016-B	3.552	4.742	1010.6E6	913.9E6	3800.711	3663.910
43) AR1016-C	4.097	5.377	2486.3E6	2221.3E6	4066.432	3785.646
44) AR1016-D	4.261	5.566	892.2E6	889.3E6	3825.527	3598.262
45) AR1016-E	4.754	6.223	944.4E6	646.6E6	3871.265	3727.830
46) AR1260-A	7.099	8.830	2999.5E6	2985.6E6	4206.815	3856.066m
47) AR1260-B	7.253	8.950	1203.0E6	1523.5E6	3827.466	3557.080
48) AR1260-C	7.588	9.382	1297.2E6	1475.1E6	3811.239	3522.098
49) AR1260-D	8.019	9.731	3808.9E6	3926.4E6	4055.587	3725.687
50) AR1260-E	8.410	10.276	3431.8E6	3482.7E6	3757.195m	3553.449m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

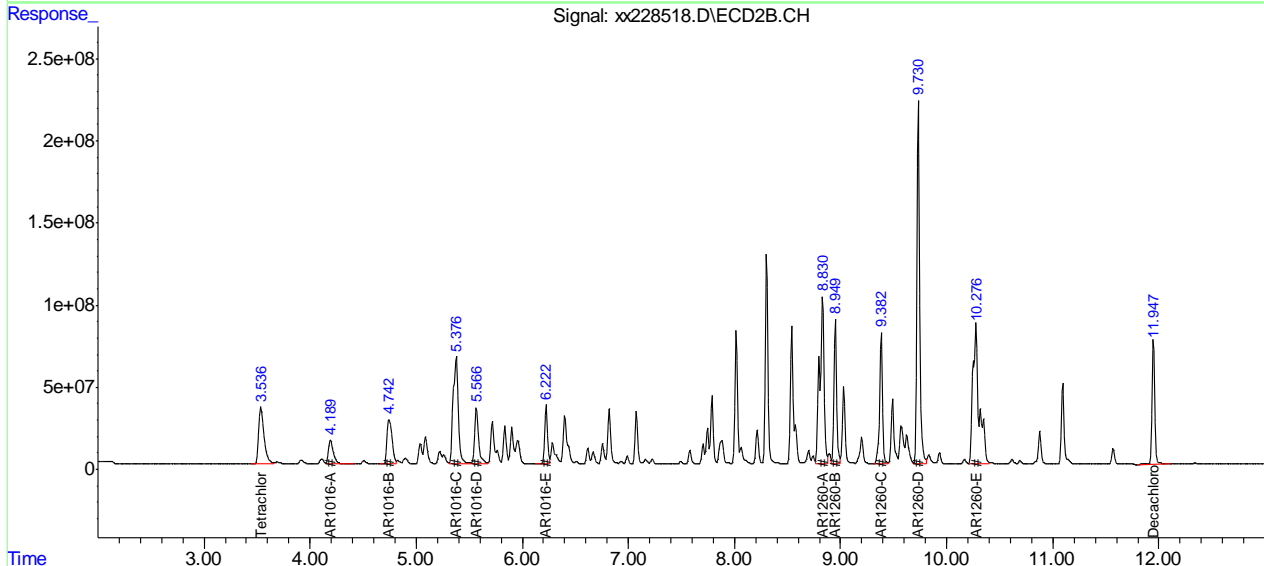
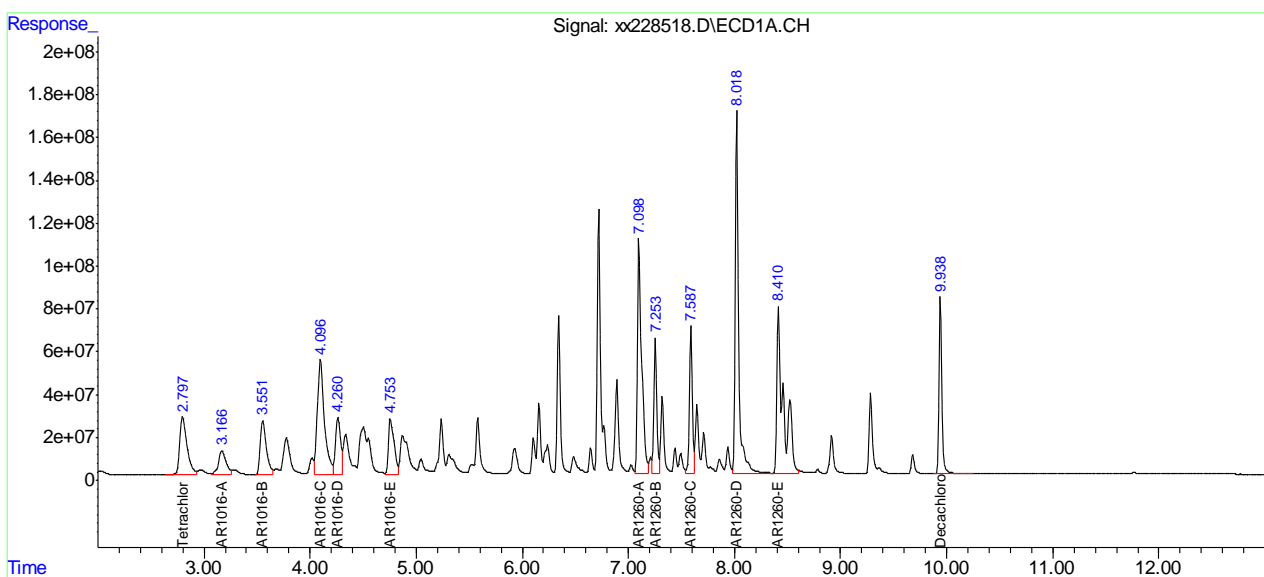
11.6.39
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228518.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:32 pm
 Operator : rebeccak
 Sample : ic6349-3000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:14:44 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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)



11.6.39
11

Manual Integration Approval Summary

Sample Number: GXX6349-IC6349 Method: SW846 8082A
Lab FileID: XX228518.D Analyst approved: 05/15/18 08:26 Rebecca Krug
Injection Time: 05/14/18 18:32 Supervisor approved: 05/15/18 13:34 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1260-E		1	8.41	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.28	Split peak

11.6.39.1

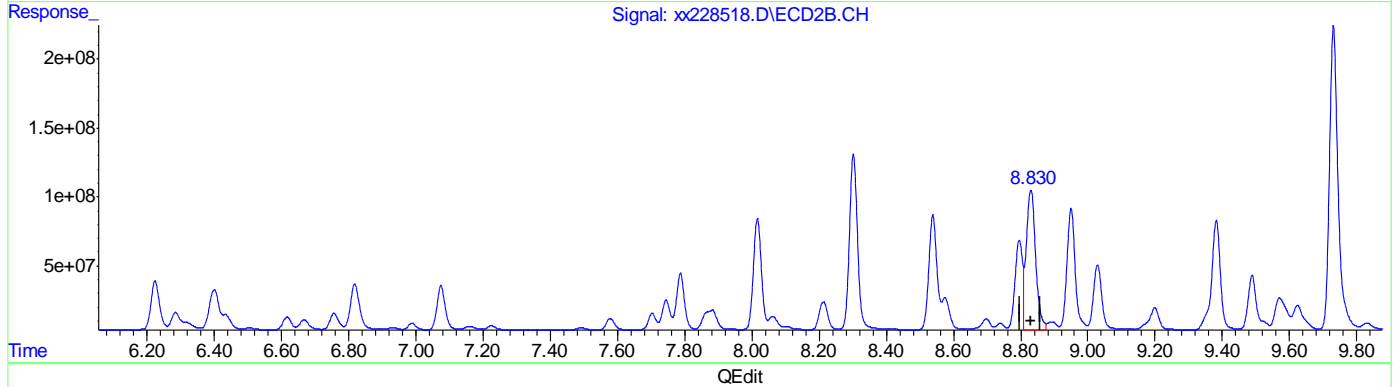
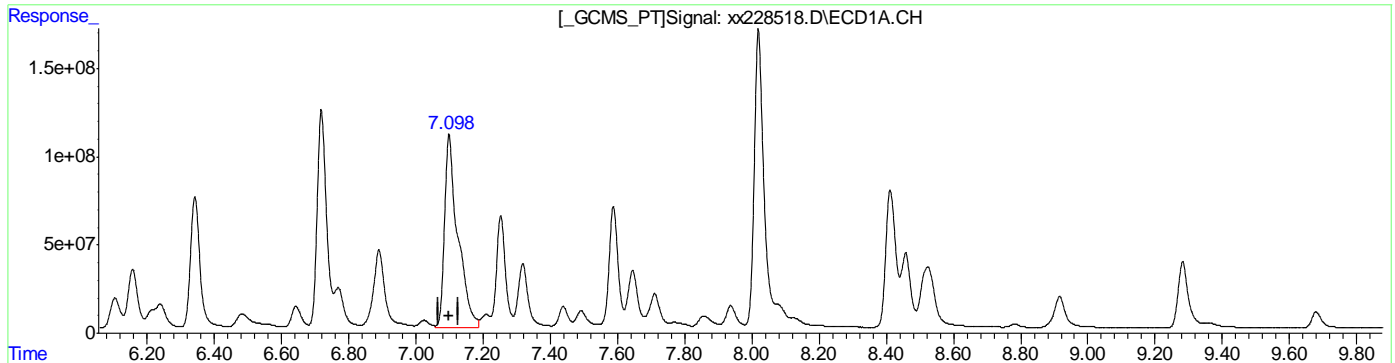
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228518.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:32 pm
 Operator : rebeccak
 Sample : ic6349-3000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:13:57 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 7.099min 4206.815PPB
 response 2999490252

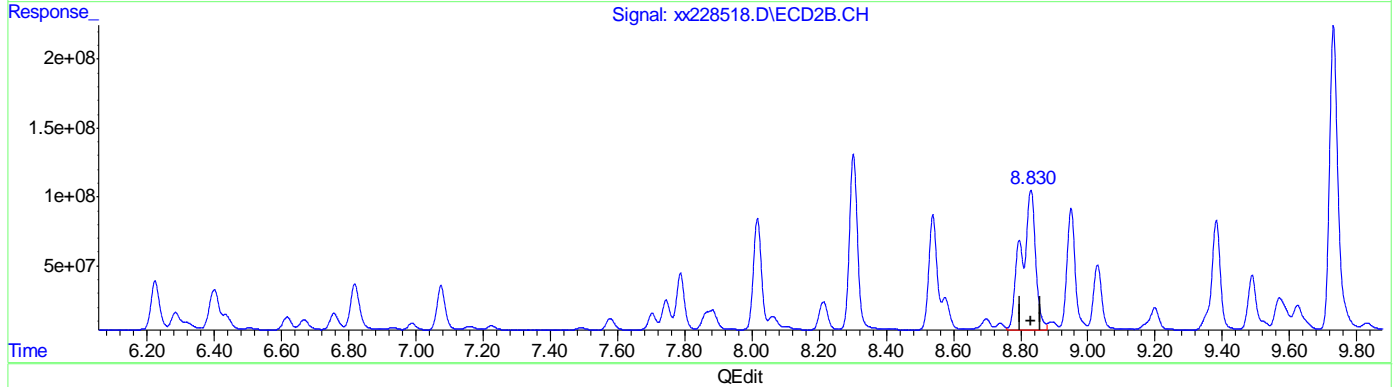
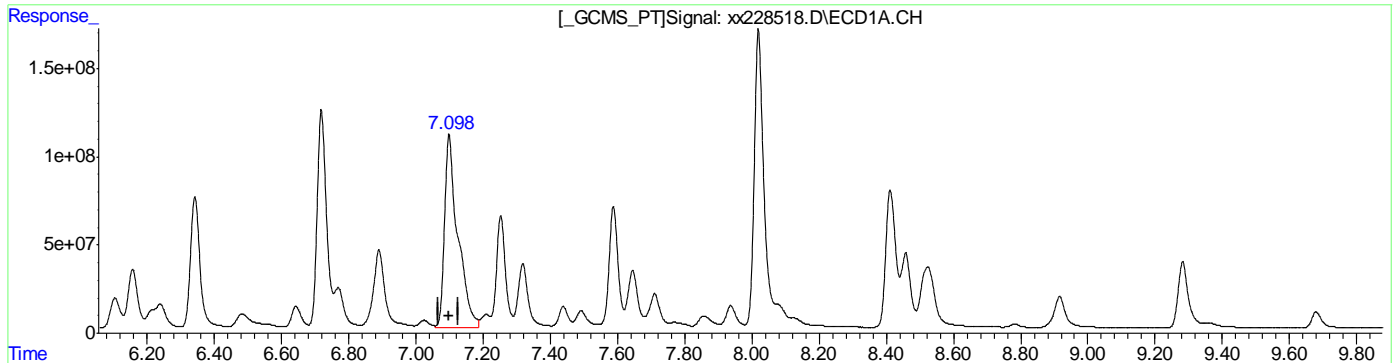
(46) AR1260-A #2
 8.830min 2542.755PPB
 response 1968767238

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228518.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:32 pm
 Operator : rebeccak
 Sample : ic6349-3000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:13:57 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 7.099min 4206.815PPB
 response 2999490252

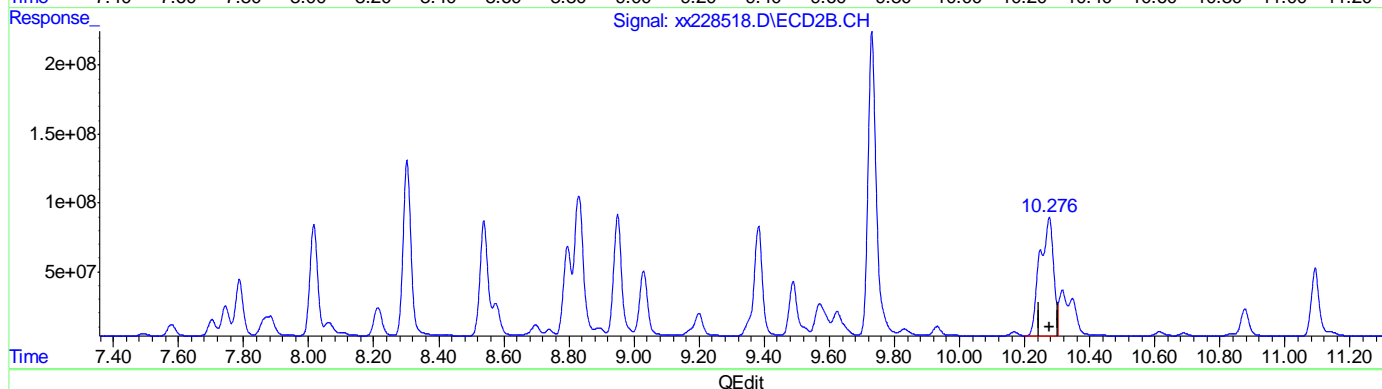
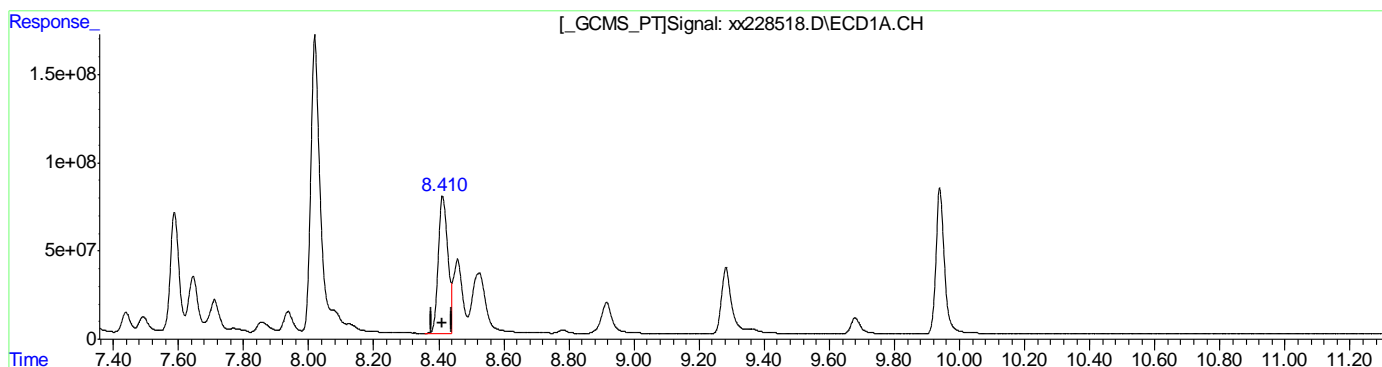
(46) AR1260-A #2
 8.830min 3856.066PPB m
 response 2985618611

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228518.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:32 pm
 Operator : rebeccak
 Sample : ic6349-3000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:13:57 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 8.412min 1751.630PPB
 response 1599949238

(50) AR1260-E #2
 10.276min 2549.468PPB
 response 2498729048

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:14:34 2018

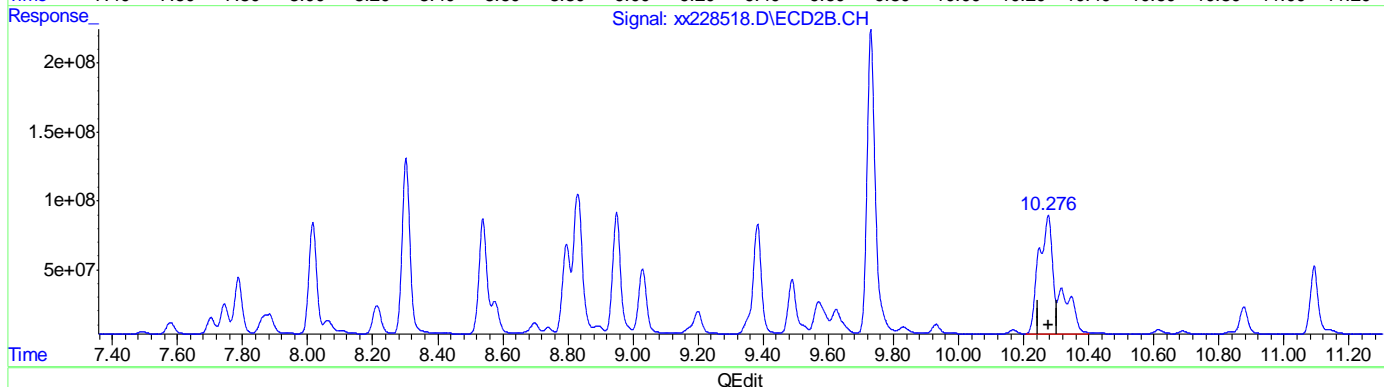
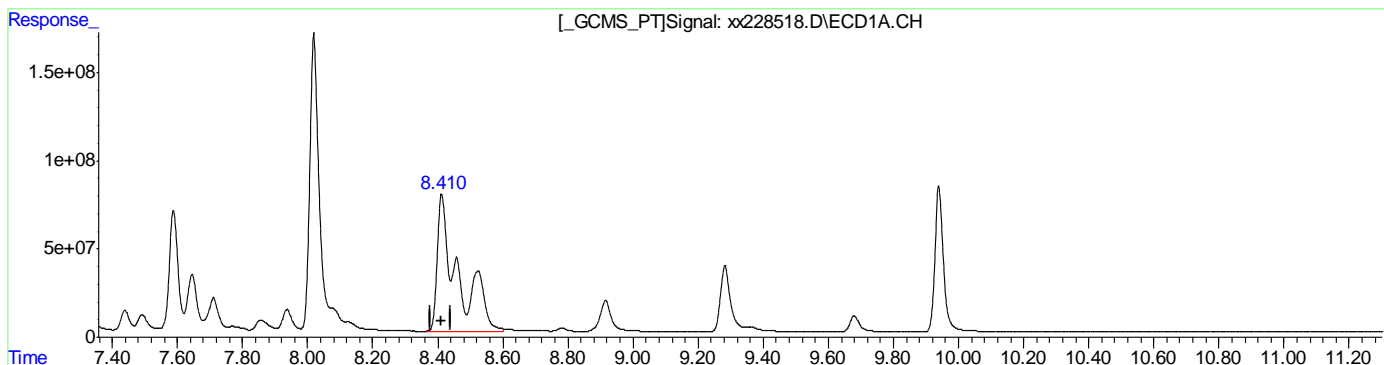
11.6.39.4
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228518.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:32 pm
 Operator : rebeccak
 Sample : ic6349-3000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:13:57 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:13:54 2018
 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
 8.410min 3757.195PPB m
 response 3431844851

(50) AR1260-E #2
 10.276min 3553.449PPB m
 response 3482729500

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:14:46 2018

11.6.39.5
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228519.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:49 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:29:13 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:28:21 2018
 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...	2.797	3.535	477.6E6	431.6E6	44.340	42.987
Spiked Amount	40.000		Recovery	=	110.85%	107.47%
51) S Decachlor...	9.940	11.946	514.6E6	460.3E6	41.114	40.253m
Spiked Amount	40.000		Recovery	=	102.79%	100.63%
Target Compounds						
2) AR1221-A	2.312	2.965	64189186	60721641	1240.669	1297.526
3) AR1221-B	2.970	3.917	120.4E6	107.9E6	1361.385	1277.065
4) AR1221-C	3.164	4.191	366.8E6	281.0E6	1354.182	1325.703
5) AR1221-D	3.555	4.738	37097293	50229444	1157.452	1247.818
6) AR1221-E	3.775	4.831	56510766	36128074	1425.967	1381.397
24) AR1254-A	5.237	6.816	357.3E6	375.7E6	1302.138	1293.972
25) AR1254-B	5.578	7.075	460.9E6	414.5E6	942.711	1284.126 #
26) AR1254-C	5.940	7.577	369.8E6	343.4E6	1329.158	1291.511
27) AR1254-D	6.103	7.743	731.4E6	704.9E6	1337.824	1306.373
28) AR1254-E	6.487	8.061	536.9E6	544.9E6	1295.427	1291.370
29) AR1254-F	6.721	8.537	483.6E6	555.9E6	1339.245	1276.749m
30) AR1254-G	7.102	8.829	699.5E6	716.4E6	1318.191	1297.886m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

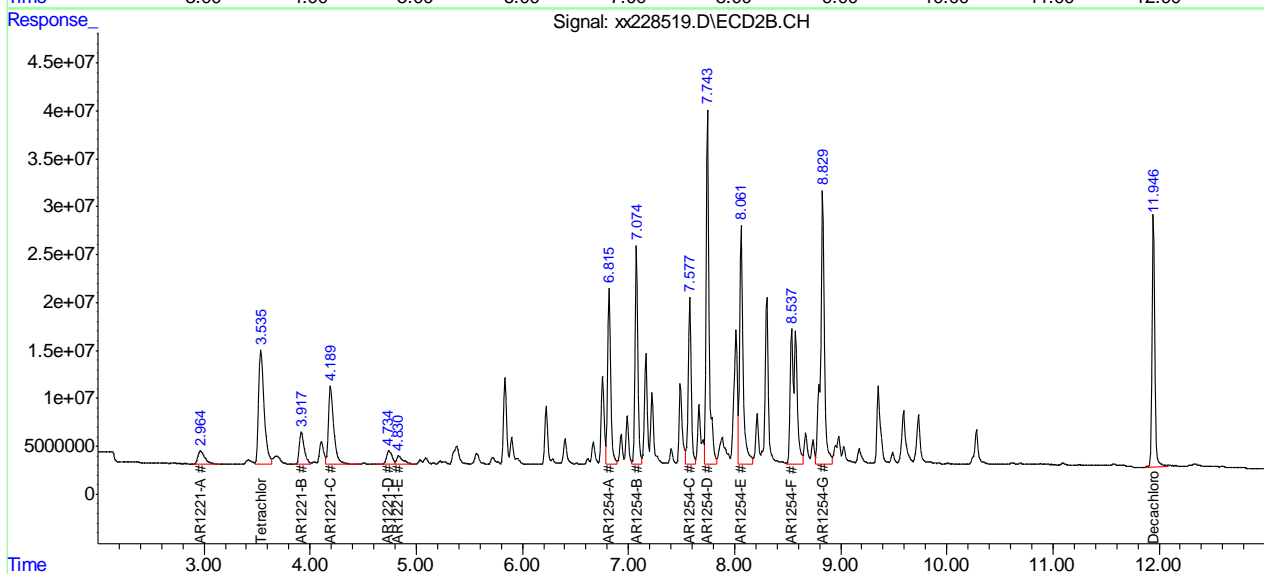
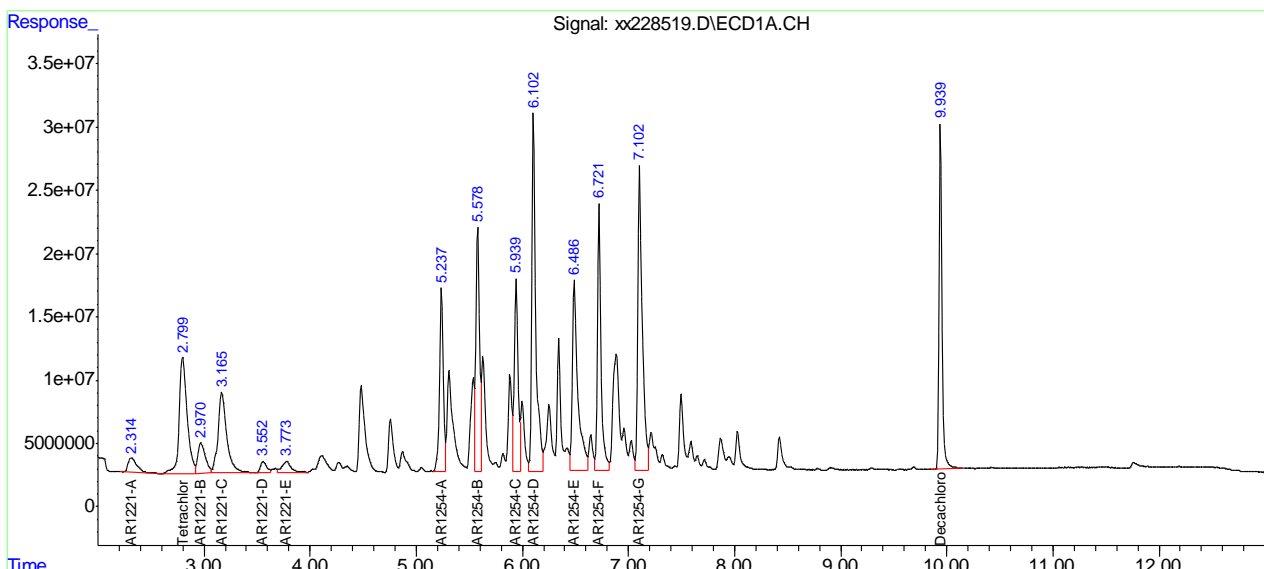
11.640
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228519.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:49 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:29:13 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:28:21 2018
 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)



11.640
11

Manual Integration Approval Summary

Sample Number: GXX6349-IC6349 Method: SW846 8082A
Lab FileID: XX228519.D Analyst approved: 05/15/18 08:34 Rebecca Krug
Injection Time: 05/14/18 18:49 Supervisor approved: 05/15/18 13:34 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1254-F		2	8.54	Split peak
Ar1254-G		2	8.83	Split peak
Decachlorobiphenyl	2051-24-3	2	11.95	Poorly defined baseline

11.6.40.1

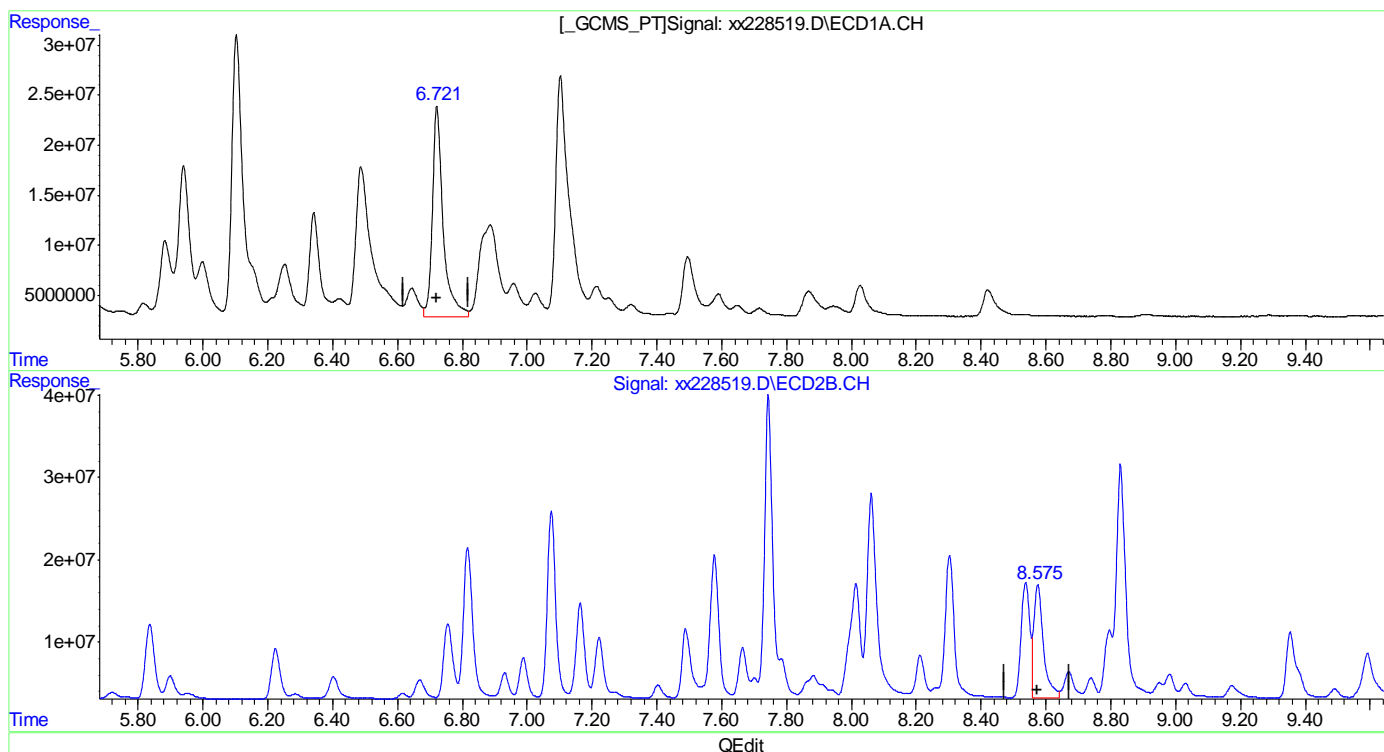
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228519.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:49 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:28:24 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:28:21 2018
 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
 6.721min 1339.245PPB
 response 483593531

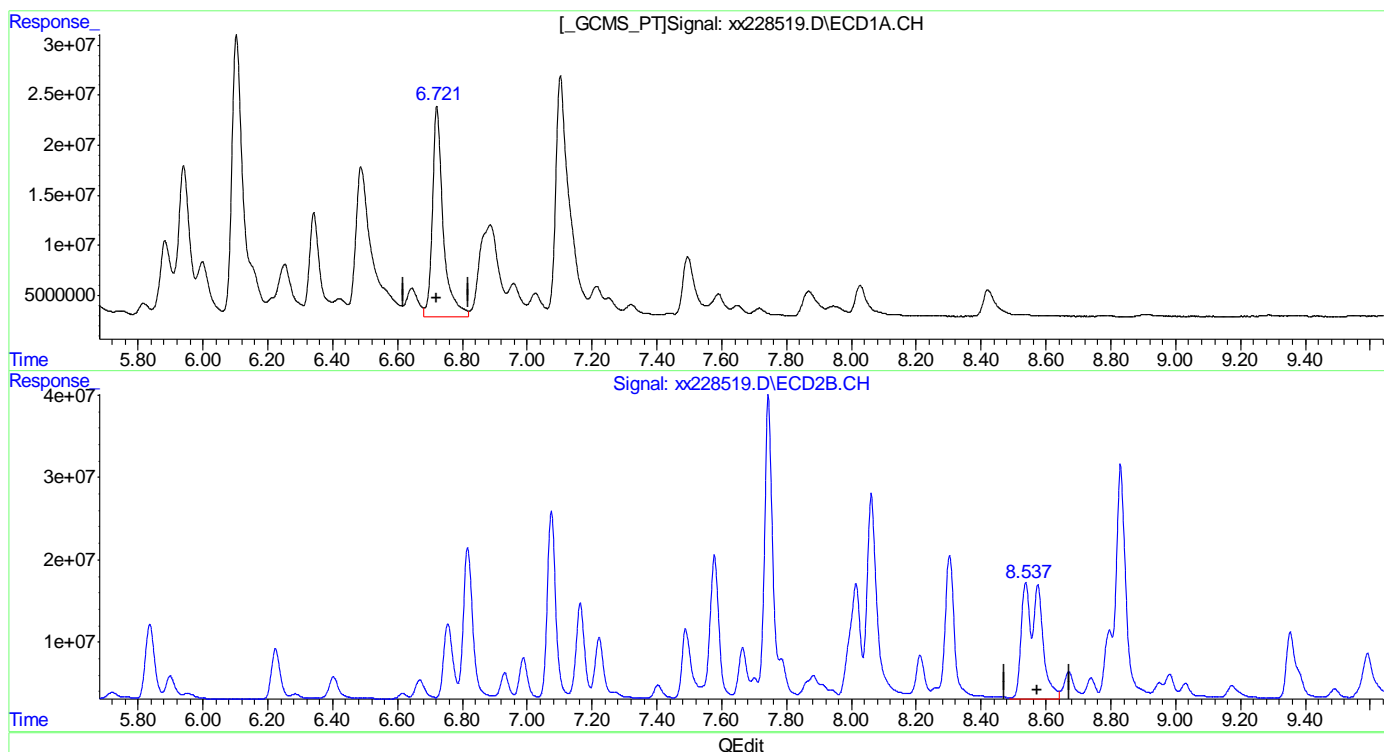
(29) AR1254-F #2
 8.575min 675.001PPB
 response 293917974

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228519.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:49 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:28:24 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:28:21 2018
 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
 6.721min 1339.245PPB
 response 483593531

(29) AR1254-F #2
 8.537min 1276.749PPB m
 response 555939102

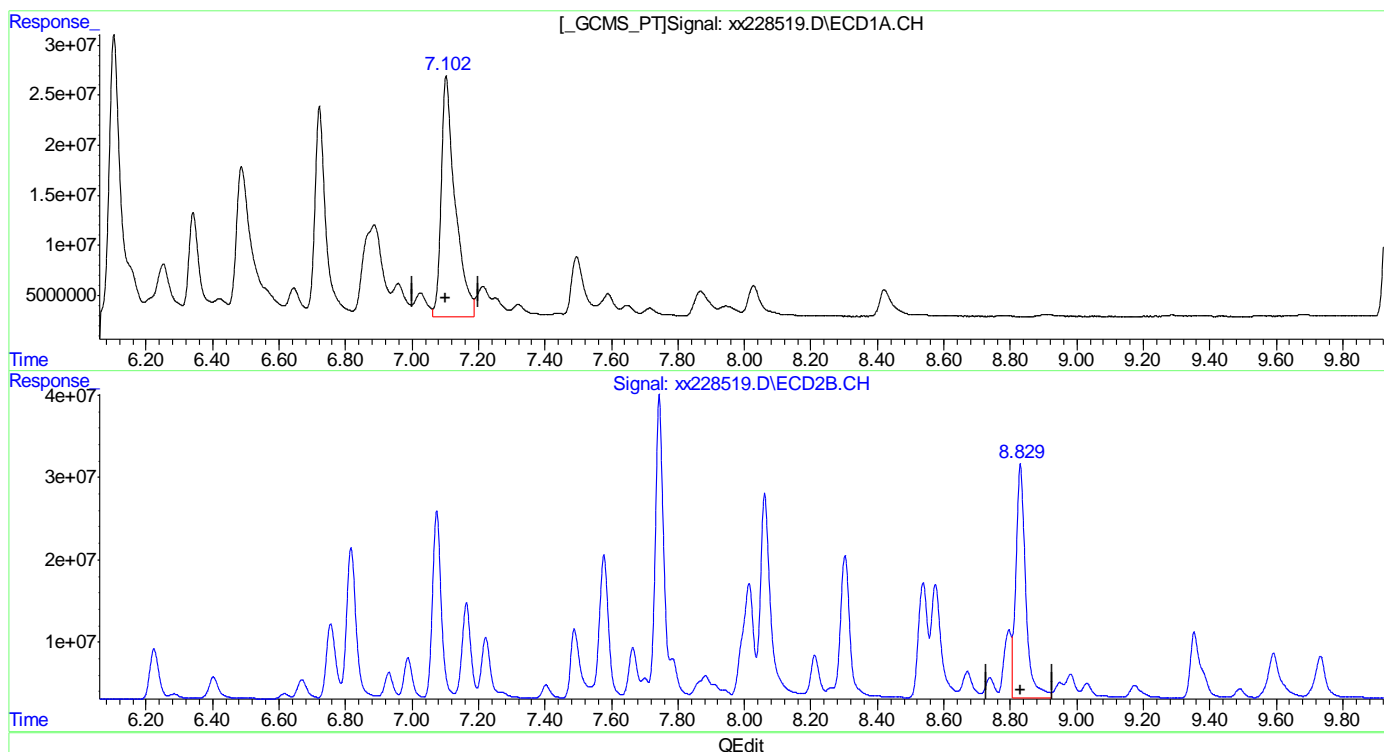
(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:28:55 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228519.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:49 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:28:24 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:28:21 2018
 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)



(30) AR1254-G
 7.102min 1318.191PPB
 response 699513242

(30) AR1254-G #2
 8.830min 1063.172PPB
 response 586817950

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:28:57 2018

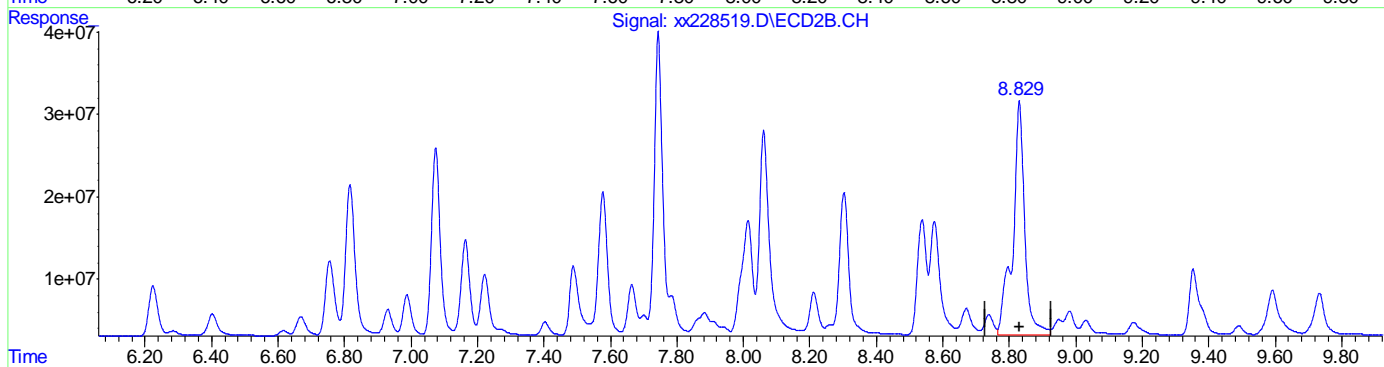
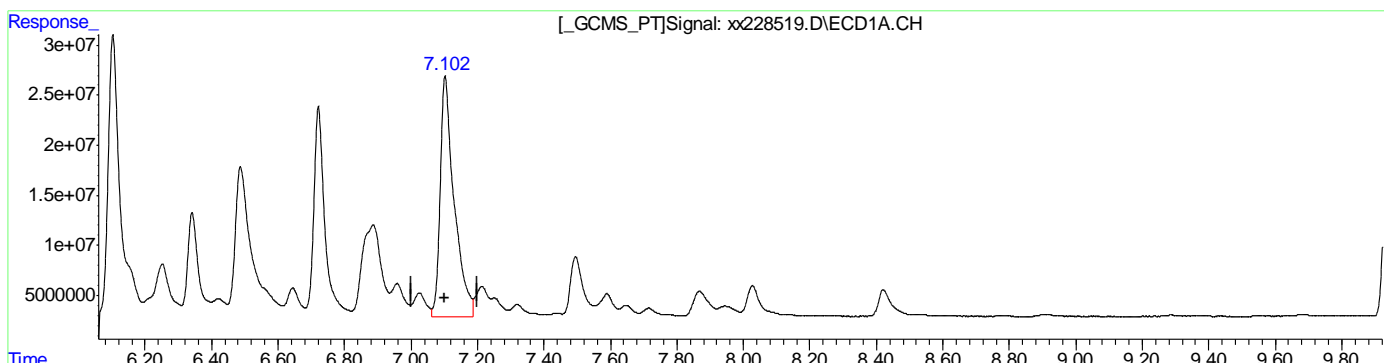
Page: 1

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228519.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:49 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:28:24 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:28:21 2018
 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)



(30) AR1254-G
 7.102min 1318.191PPB
 response 699513242

(30) AR1254-G #2
 8.829min 1297.886PPB m
 response 716368660

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:29:04 2018

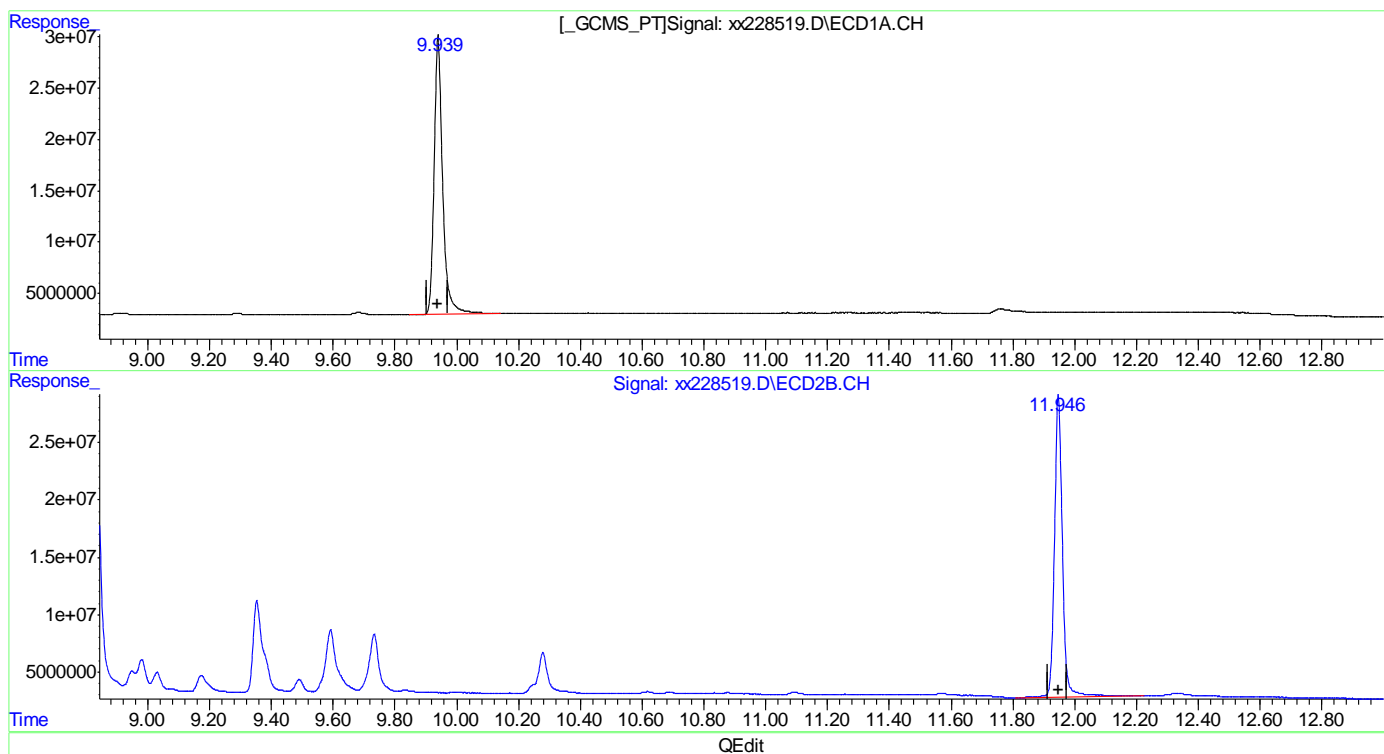
11.6.40.5
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228519.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:49 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:28:24 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:28:21 2018
 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)



(51) Decachlorobiphenyl (S)

9.940min 41.114ppb
 response 514641203

(51) Decachlorobiphenyl #2 (S)

11.947min 41.411ppb
 response 473583488

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:29:10 2018

Page: 1

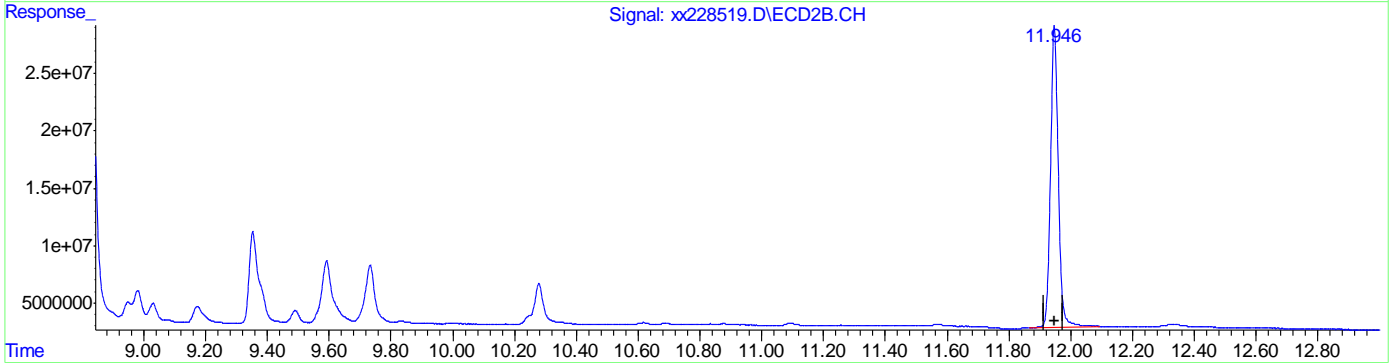
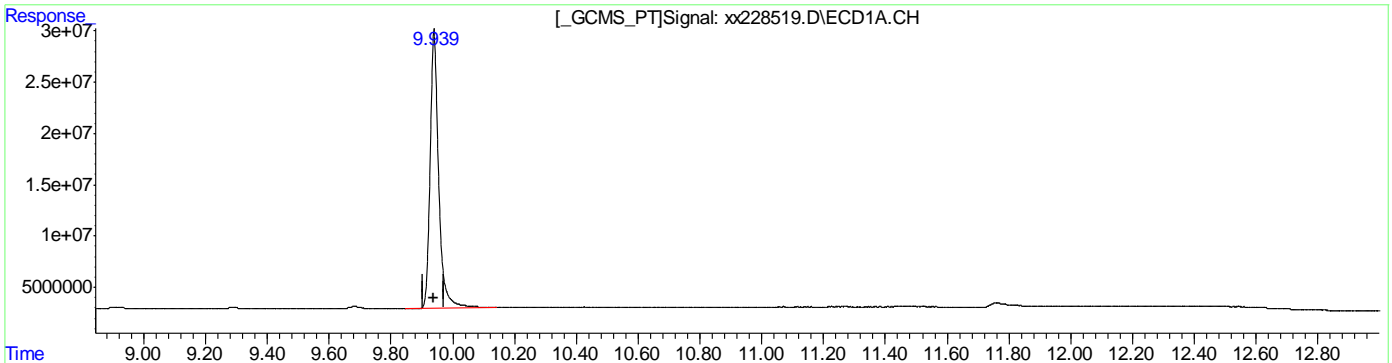
SGS 880 of 1259

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228519.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 6:49 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:28:24 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:28:21 2018
 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)
9.940min 41.114ppb
response 514641203
(51) Decachlorobiphenyl #2 (S)
11.946min 40.253ppb m
response 460343405

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:29:15 2018

11.6.40.7
11

Manual Integrations
APPROVED
 (compounds with "m" flag)

Gwendolyn Burns
 05/15/18 13:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228520.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 7:06 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:31:02 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:30:24 2018
 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...	2.799	3.534	504.5E6	473.1E6	46.841	47.119
Spiked Amount	40.000		Recovery	=	117.10%	117.80%
51) S Decachlor...	9.941	11.947	563.1E6	513.7E6	44.983	44.916
Spiked Amount	40.000		Recovery	=	112.46%	112.29%
Target Compounds						
7) AR1232-A	3.168	4.191	284.5E6	218.1E6	1319.291	1339.007
8) AR1232-B	3.554	4.743	168.3E6	163.3E6	1271.970	1284.187
9) AR1232-C	4.105	5.380	377.9E6	361.4E6	1319.123	1302.905
10) AR1232-D	4.267	5.568	139.3E6	151.8E6	1257.635	1313.632
11) AR1232-E	4.759	6.224	132.3E6	96595031	1227.159	1278.658
31) AR1262-A	6.722	8.303	485.8E6	554.1E6	1293.679	1297.040
32) AR1262-B	7.255	8.949	704.6E6	911.3E6	1331.263	1305.157
33) AR1262-C	7.589	9.383	621.2E6	683.8E6	1299.680	1281.666
34) AR1262-D	8.023	9.732	1638.2E6	1738.0E6	1341.281	1281.674
35) AR1262-E	8.459	10.249	1783.9E6	1864.8E6	1288.714m	1266.826m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

11.641

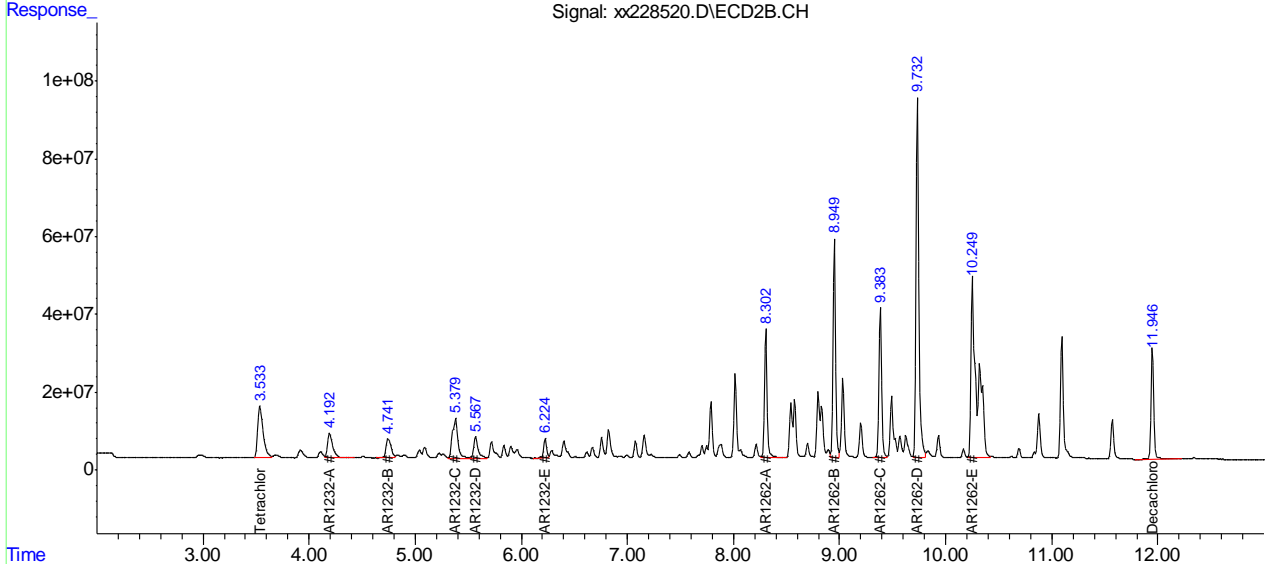
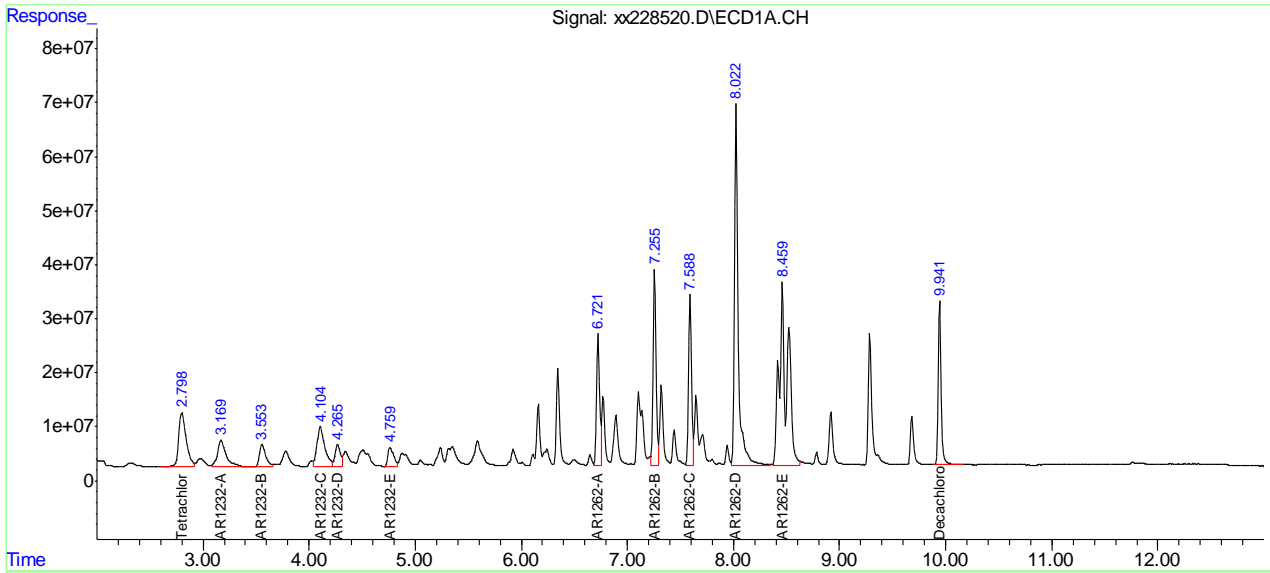
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228520.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 7:06 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:31:02 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:30:24 2018
 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)



11.641
11

Manual Integration Approval Summary

Sample Number: GXX6349-IC6349 Method: SW846 8082A
Lab FileID: XX228520.D Analyst approved: 05/15/18 08:34 Rebecca Krug
Injection Time: 05/14/18 19:06 Supervisor approved: 05/15/18 13:34 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1262-E		1	8.46	Split peak
AR1262-E		2	10.25	Split peak

11.6.41.1

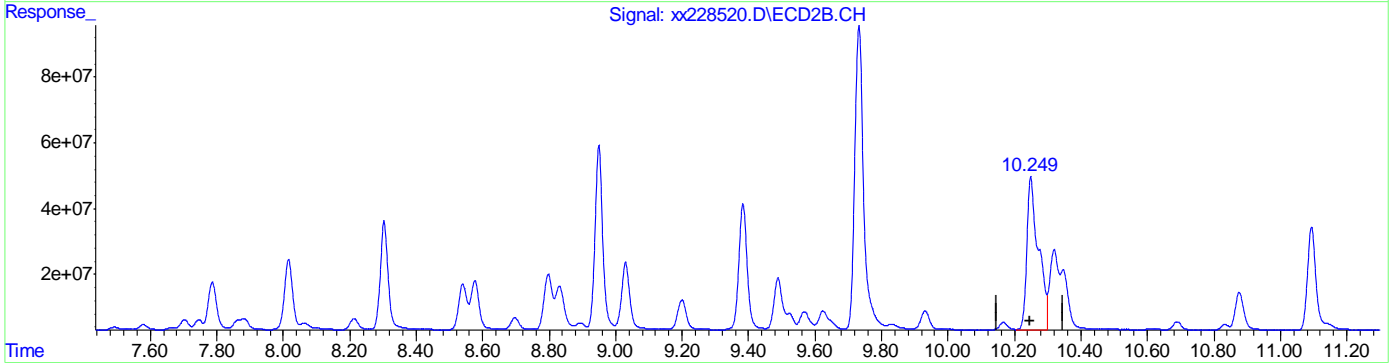
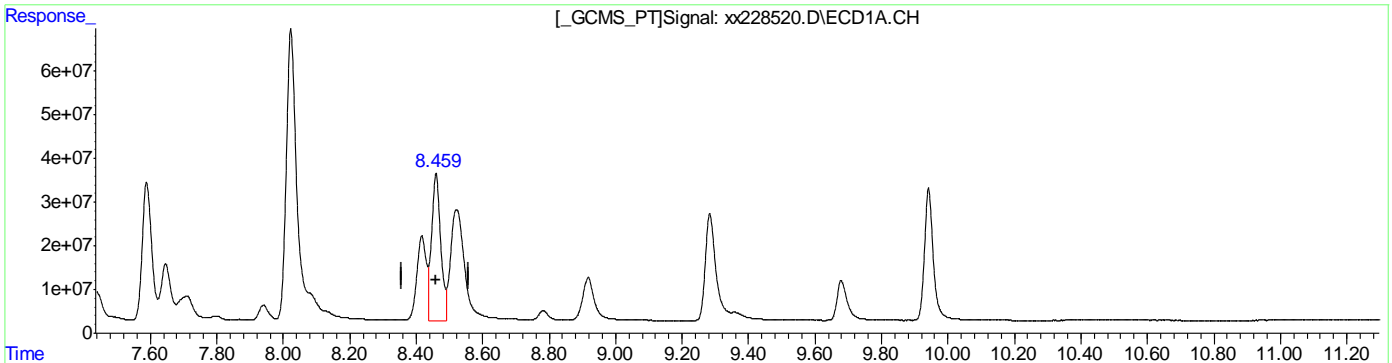
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228520.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 7:06 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:30:26 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:30:24 2018
 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	8.460min	478.930PPB	response 662958420
(35) AR1262-E #2	10.249min	757.879PPB	response 1115611575

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:30:46 2018

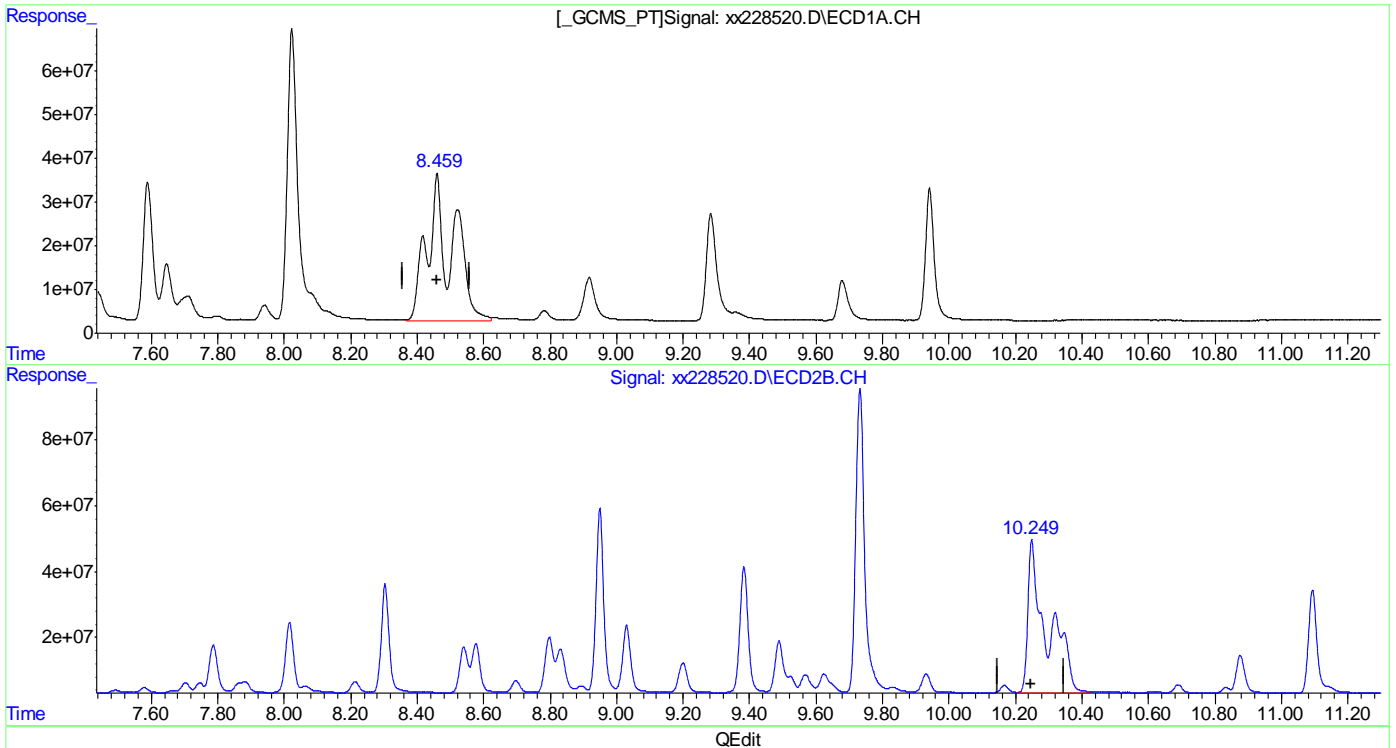
11.6.41.2
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228520.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 7:06 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:30:26 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:30:24 2018
 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
 8.459min 1288.714PPB m
 response 1783900989

(35) AR1262-E #2
 10.249min 1266.826PPB m
 response 1864790539

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:30:58 2018

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228521.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 7:22 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:32:24 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:31:48 2018
 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...	2.798	3.535	477.1E6	461.8E6	44.297	46.000
Spiked Amount	40.000		Recovery	=	110.74%	115.00%
51) S Decachlor...	9.938	11.946	1605.1E6	1379.7E6	128.231	120.642
Spiked Amount	40.000		Recovery	=	320.58%	301.61%
Target Compounds						
12) AR1242-A	3.554	4.743	312.4E6	291.6E6	1323.625	1294.566
13) AR1242-B	4.102	5.378	725.8E6	663.4E6	1347.132	1284.765
14) AR1242-C	4.266	5.568	268.5E6	277.7E6	1298.840	1285.713
15) AR1242-D	4.758	6.224	291.2E6	199.4E6	1294.478	1280.152
16) AR1242-E	5.346	6.826	336.6E6	262.4E6	1400.026	1284.068
36) AR1268-A	8.458	10.250	1767.4E6	2072.4E6	1267.071	1236.905
37) AR1268-B	8.514	10.319	2042.0E6	1918.2E6	1343.980	1275.060
38) AR1268-C	8.780	10.690	1623.7E6	1645.2E6	1278.148	1267.207
39) AR1268-D	9.280	11.093	638.9E6	660.8E6	1230.317	1282.649
40) AR1268-E	9.676	11.568	5471.6E6	4780.7E6	1280.178	1243.490

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

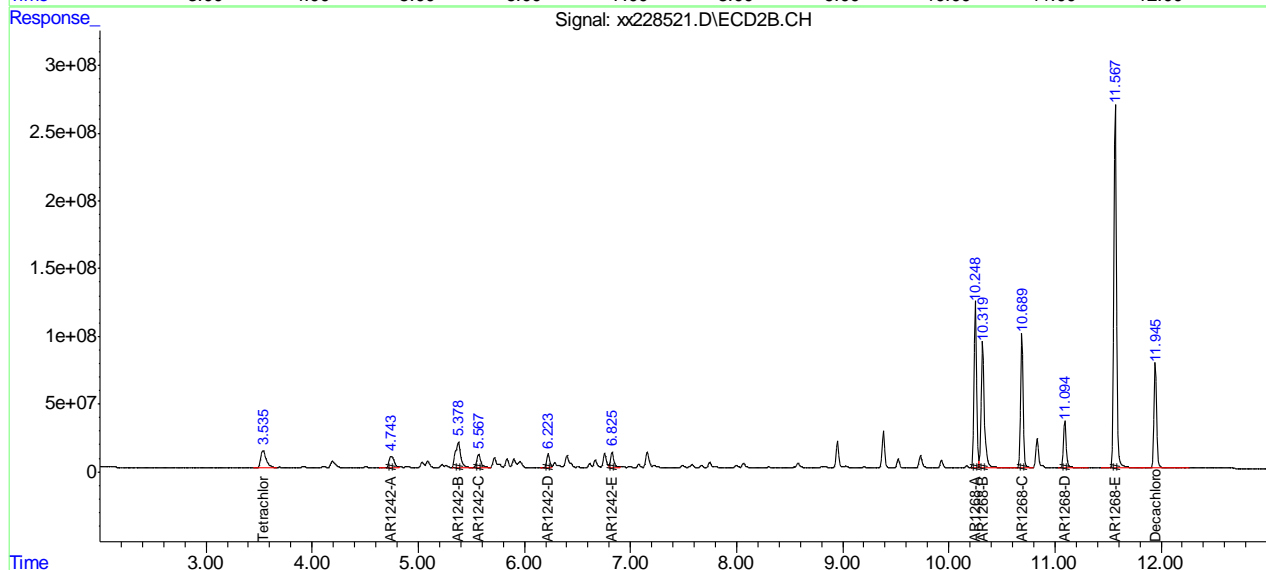
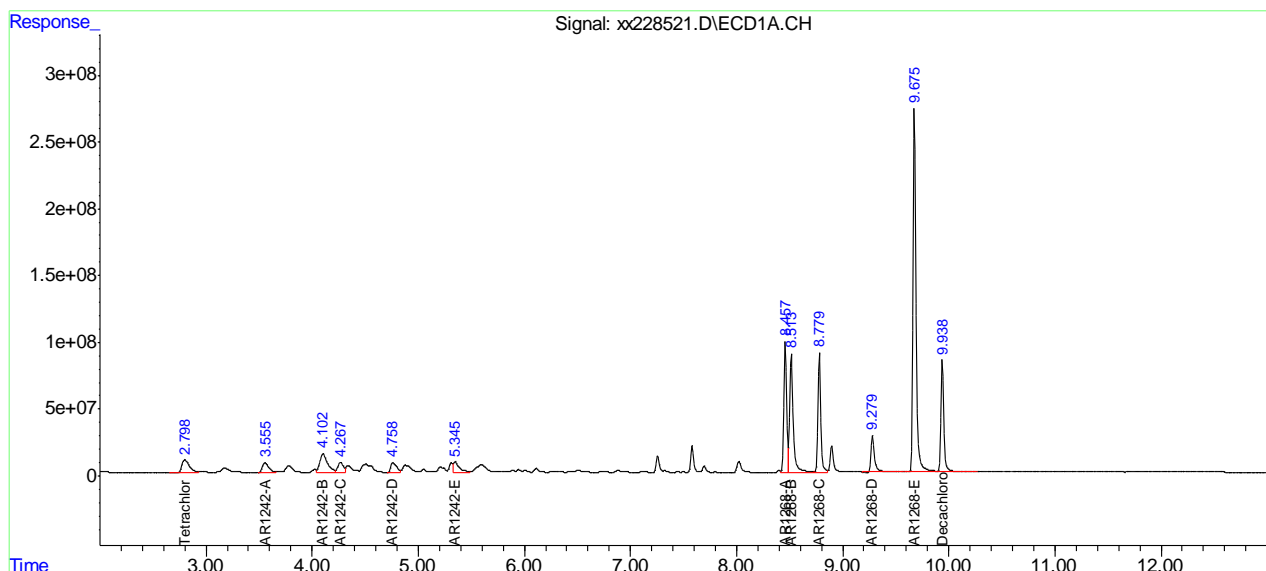
11.642
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228521.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 7:22 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:32:24 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:31:48 2018
 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)



11.642
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228522.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 7:39 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:34:12 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:33:40 2018
 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...	2.797	3.533	485.6E6	475.8E6	45.088	47.391
Spiked Amount	40.000		Recovery	=	112.72%	118.48%
51) S Decachlor...	9.941	11.948	552.1E6	511.7E6	44.104	44.743
Spiked Amount	40.000		Recovery	=	110.26%	111.86%
Target Compounds						
17) AR1248-A	3.551	4.740	154.1E6	150.3E6	1291.186	1307.435
18) AR1248-B	4.103	5.379	459.9E6	421.1E6	1322.696	1308.000
19) AR1248-C	4.502	5.833	414.0E6	228.9E6	1300.537	1297.283
20) AR1248-D	4.755	6.223	426.9E6	308.0E6	1312.900	1307.623
21) AR1248-E	4.868	6.400	405.1E6	357.5E6	1341.429m	1305.097
22) AR1248-F	5.342	6.822	479.4E6	438.9E6	1394.672	1317.390
23) AR1248-G	5.588	7.157	688.6E6	398.9E6	1308.671	1292.399

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

11.643

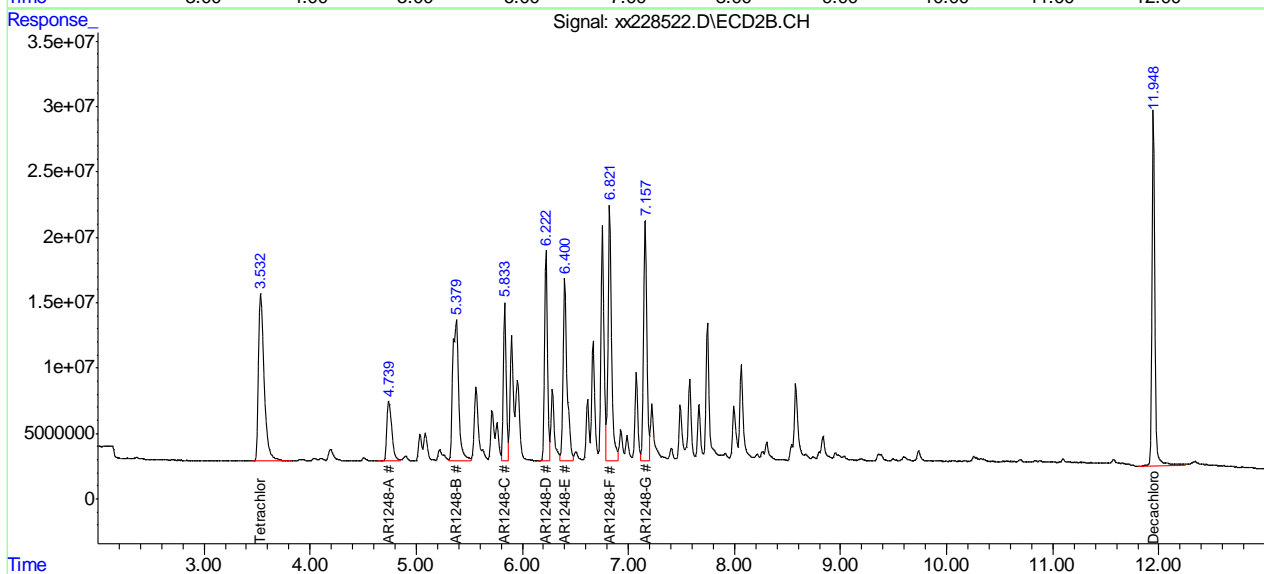
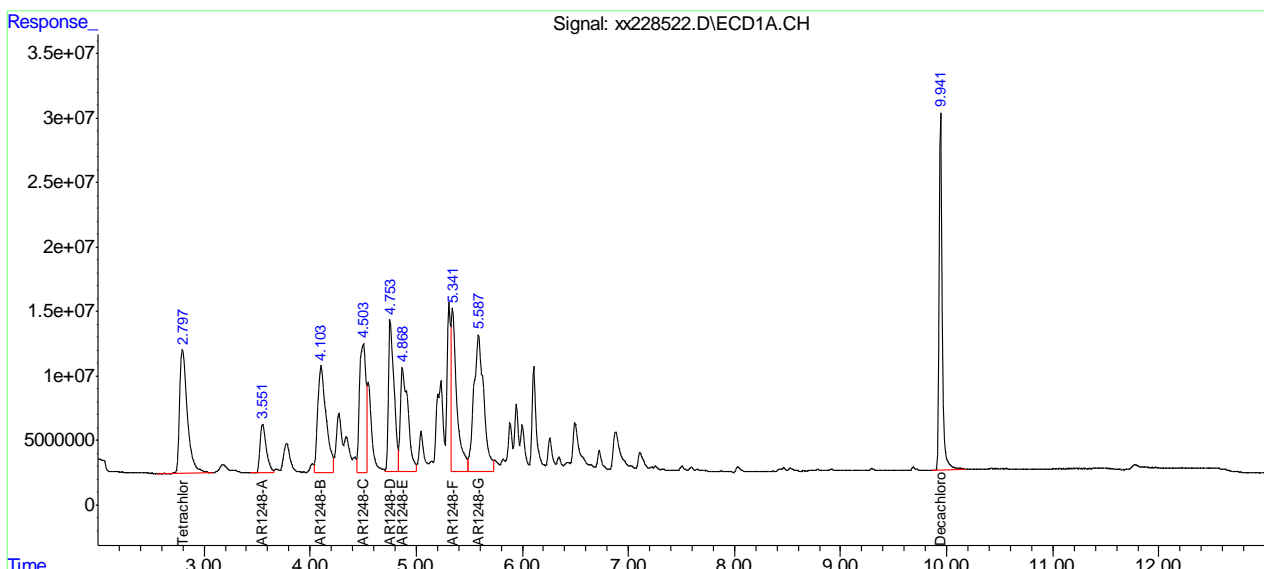
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228522.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 7:39 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:34:12 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:33:40 2018
 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)



11.643
11

Manual Integration Approval Summary

Sample Number: GXX6349-IC6349 Method: SW846 8082A
Lab FileID: XX228522.D Analyst approved: 05/15/18 08:34 Rebecca Krug
Injection Time: 05/14/18 19:39 Supervisor approved: 05/15/18 13:34 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1248-E		1	4.87	Split peak

11.6.43.1

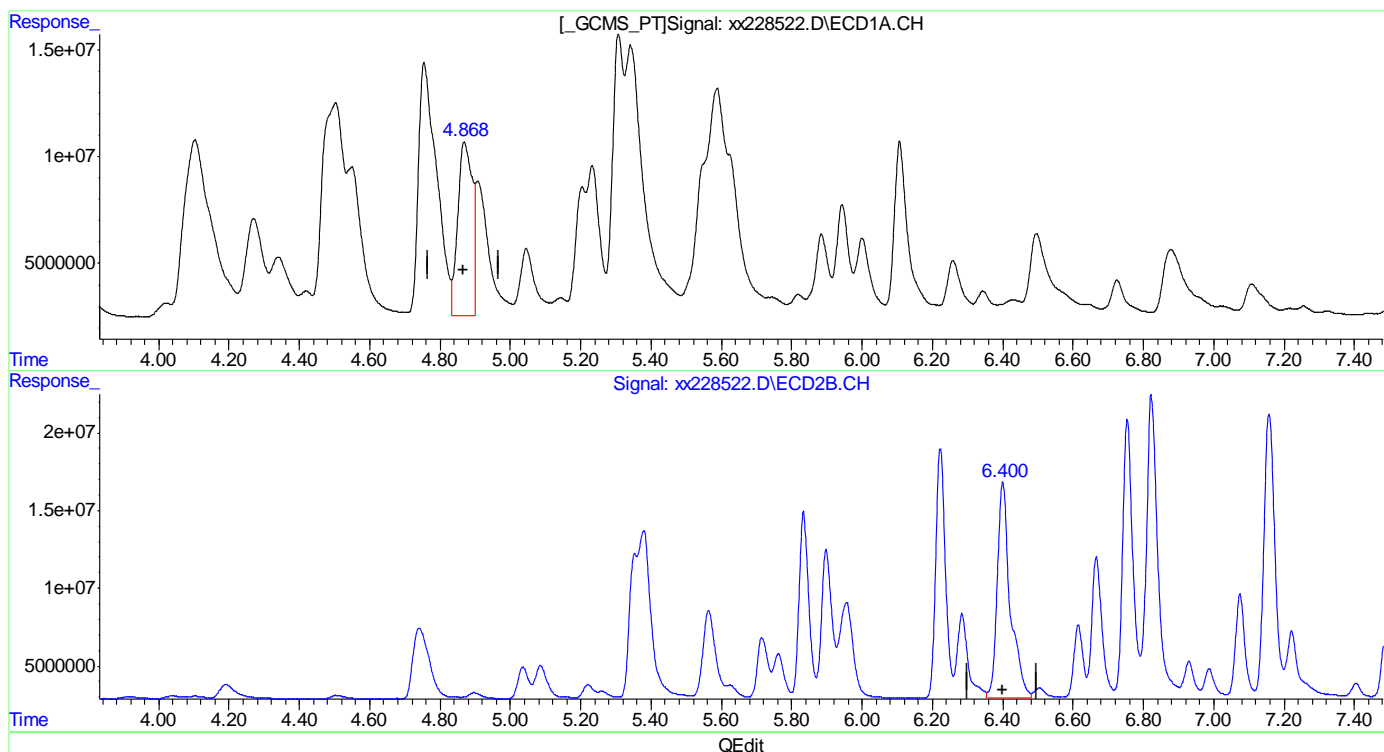
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228522.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 7:39 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:33:43 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:33:40 2018
 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)



(21) AR1248-E
 4.869min 781.625PPB
 response 236034705

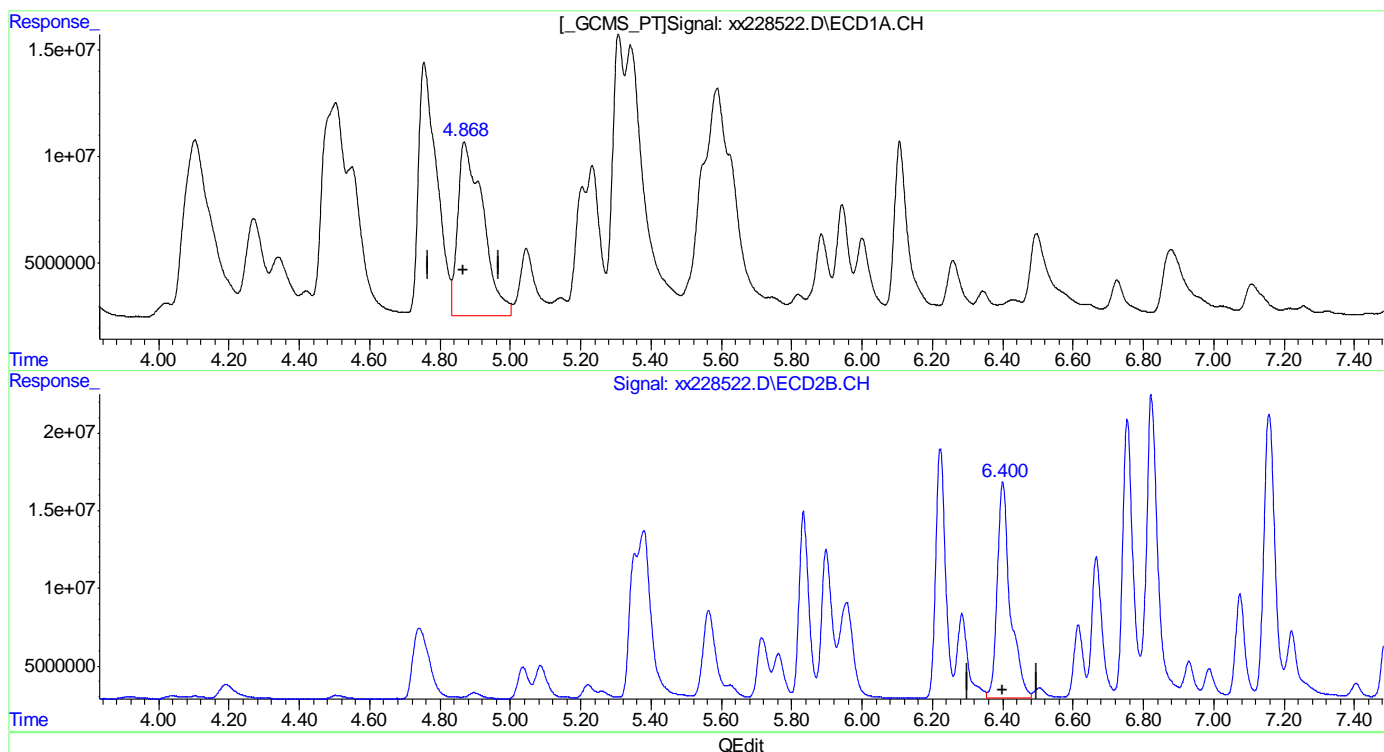
(21) AR1248-E #2
 6.400min 1305.097PPB
 response 357499624

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228522.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 7:39 pm
 Operator : rebeccak
 Sample : ic6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:33:43 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:33:40 2018
 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)



(21) AR1248-E
 4.868min 1341.429PPB m
 response 405083908

(21) AR1248-E #2
 6.400min 1305.097PPB
 response 357499624

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228523.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 7:55 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:37:39 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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...	2.800	3.534	466.7E6	457.2E6	43.331	45.535
Spiked Amount	40.000		Recovery	=	108.33%	113.84%
51) S Decachlor...	9.942	11.948	491.8E6	448.0E6	39.285	39.174
Spiked Amount	40.000		Recovery	=	98.21%	97.93%
Target Compounds						
41) AR1016-A	3.169	4.191	192.9E6	178.3E6	1006.818	1069.398
42) AR1016-B	3.553	4.742	378.2E6	354.2E6	1058.566	1078.426
43) AR1016-C	4.102	5.379	886.1E6	820.6E6	1055.009	1086.463
44) AR1016-D	4.266	5.567	327.5E6	340.9E6	1064.622	1084.811
45) AR1016-E	4.757	6.223	336.2E6	236.1E6	1053.667	1072.033
46) AR1260-A	7.102	8.830	950.5E6	986.2E6	1002.478	994.097m
47) AR1260-B	7.255	8.948	435.4E6	556.8E6	1024.720	1008.042
48) AR1260-C	7.590	9.382	452.2E6	527.2E6	1040.172	1039.020
49) AR1260-D	8.024	9.732	1312.4E6	1414.9E6	1066.623	1058.857
50) AR1260-E	8.418	10.276	1192.5E6	1221.3E6	1014.680m	1020.132m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

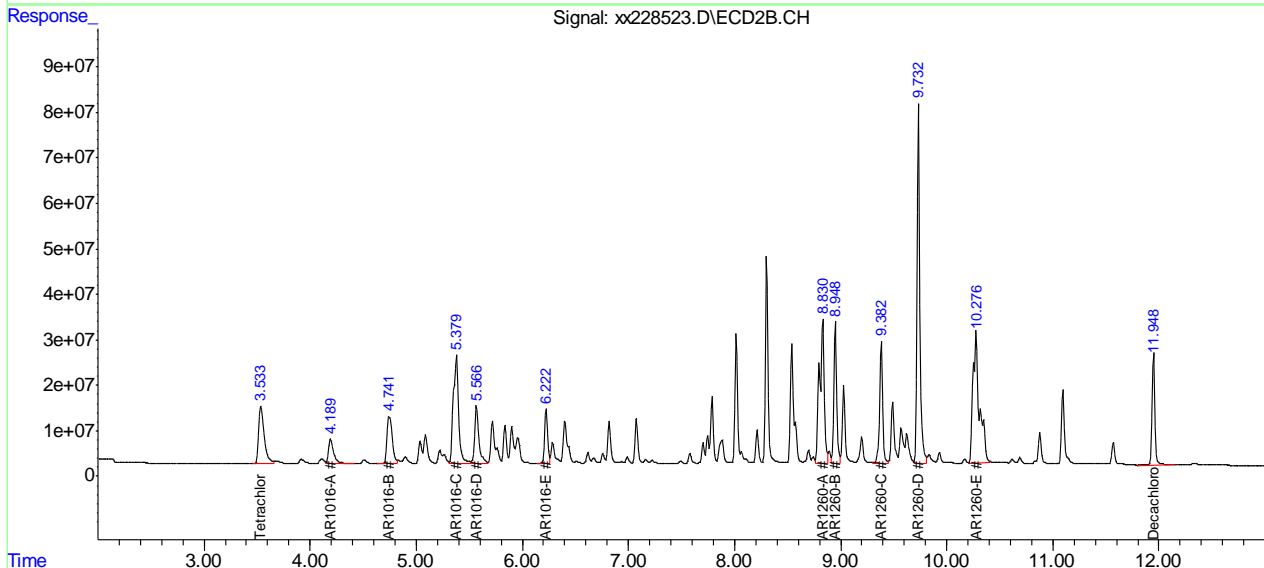
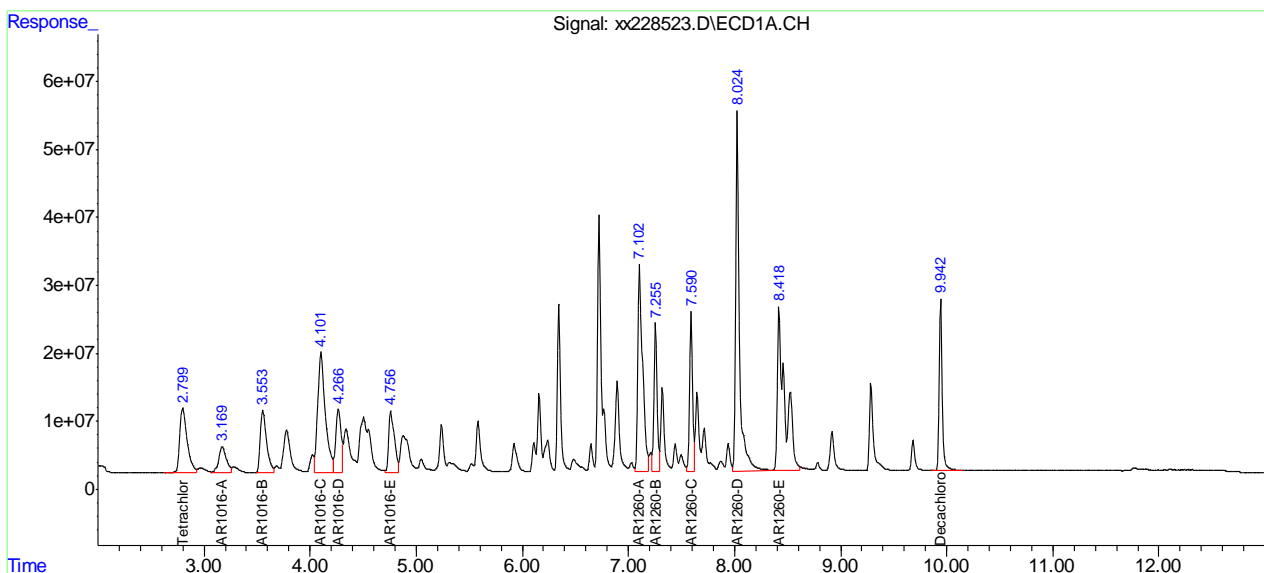
11.6.44
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228523.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 7:55 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:37:39 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



11.6.44
11

Manual Integration Approval Summary

Sample Number: GXX6349-ICV6349 Method: SW846 8082A
Lab FileID: XX228523.D Analyst approved: 05/15/18 08:45 Rebecca Krug
Injection Time: 05/14/18 19:55 Supervisor approved: 05/15/18 13:34 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1260-E		1	8.42	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.28	Split peak

11.6.44.1

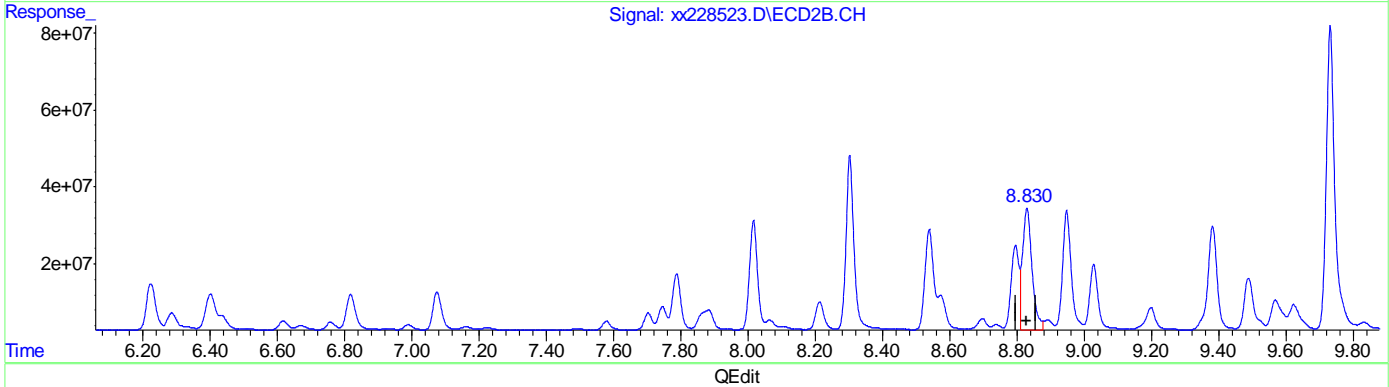
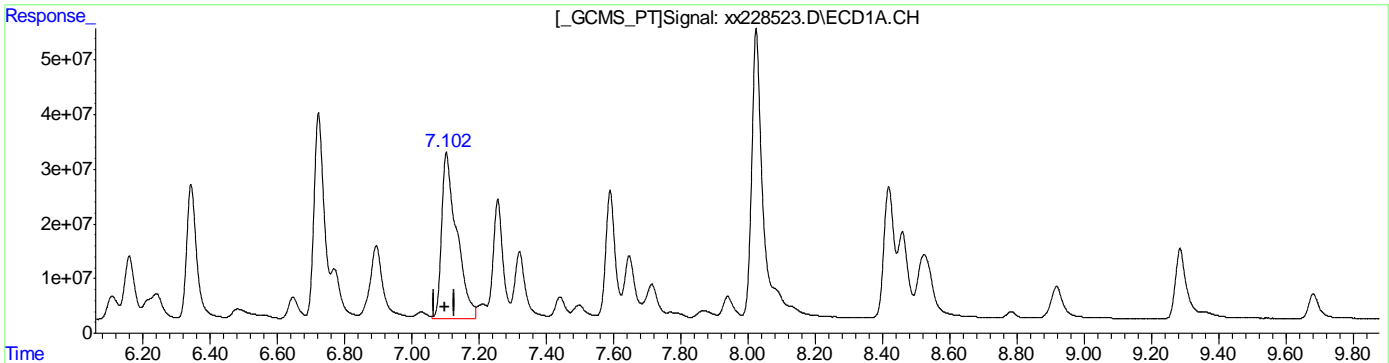
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228523.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 7:55 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:37:04 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 7.102min 1002.478PPB
 response 950485981

(46) AR1260-A #2
 8.830min 636.238PPB
 response 631166153

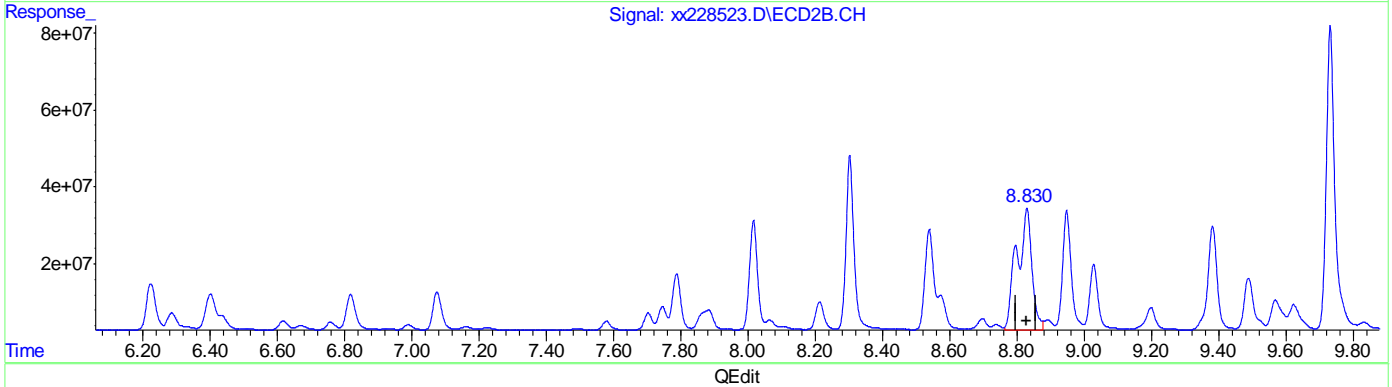
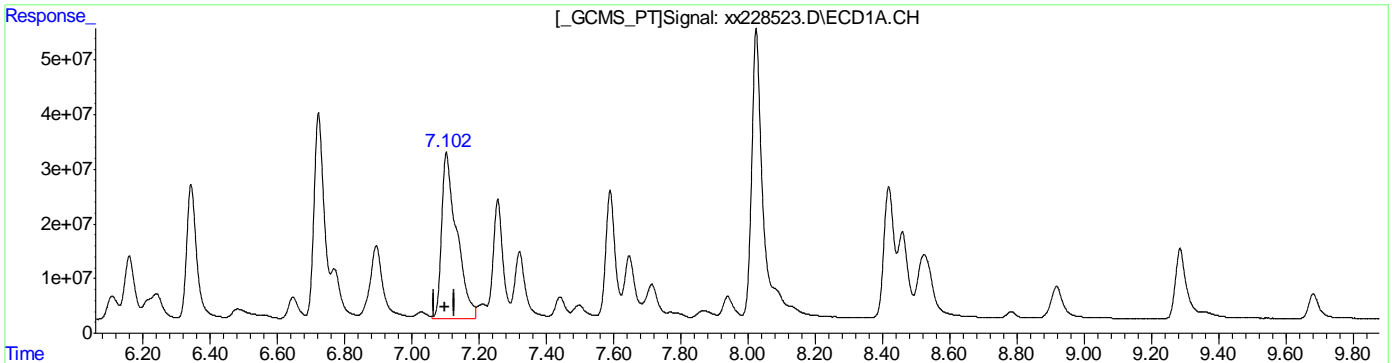
11.6.44.2
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228523.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 7:55 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:37:04 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 7.102min 1002.478PPB
 response 950485981

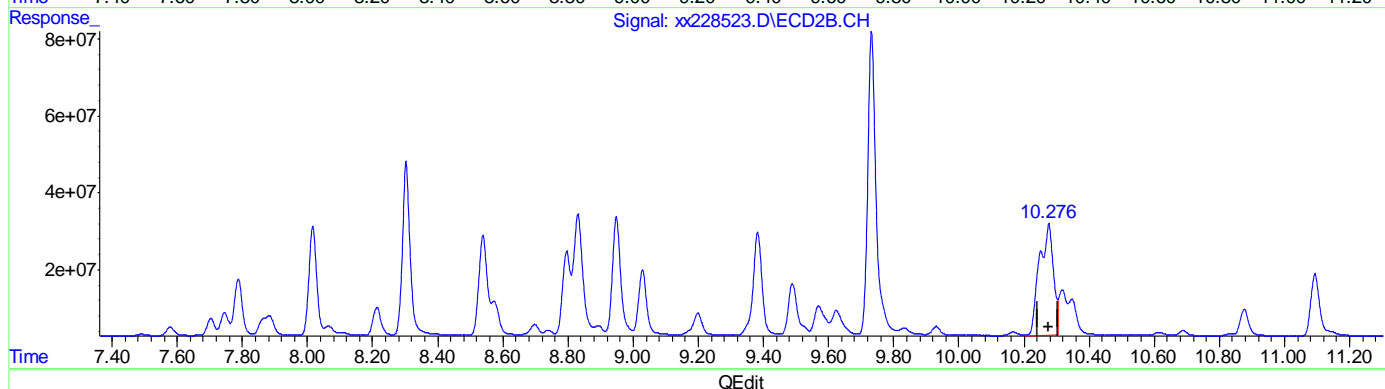
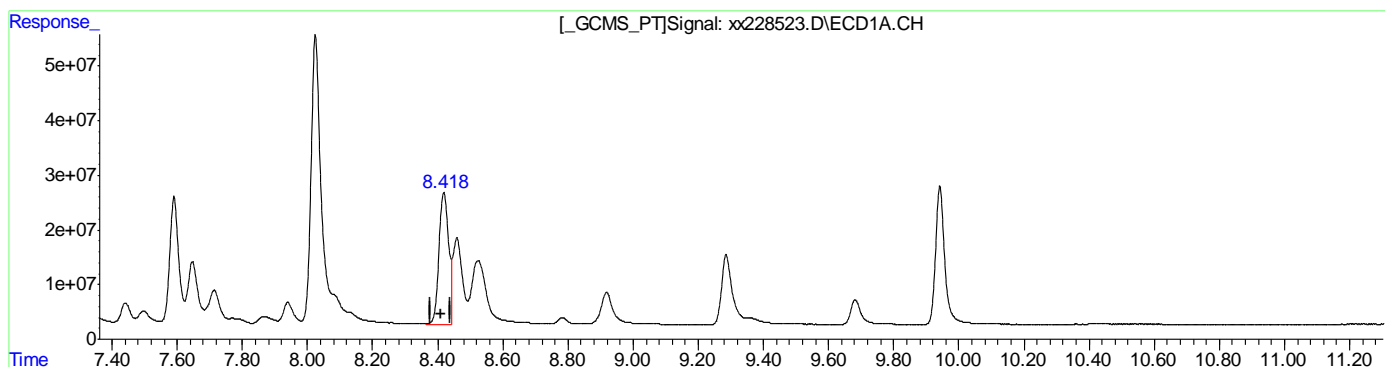
(46) AR1260-A #2
 8.830min 994.097PPB m
 response 986171848

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228523.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 7:55 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:37:04 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 8.419min 424.372PPB
 response 498736440

(50) AR1260-E #2
 10.276min 719.507PPB
 response 861408890

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:37:28 2018

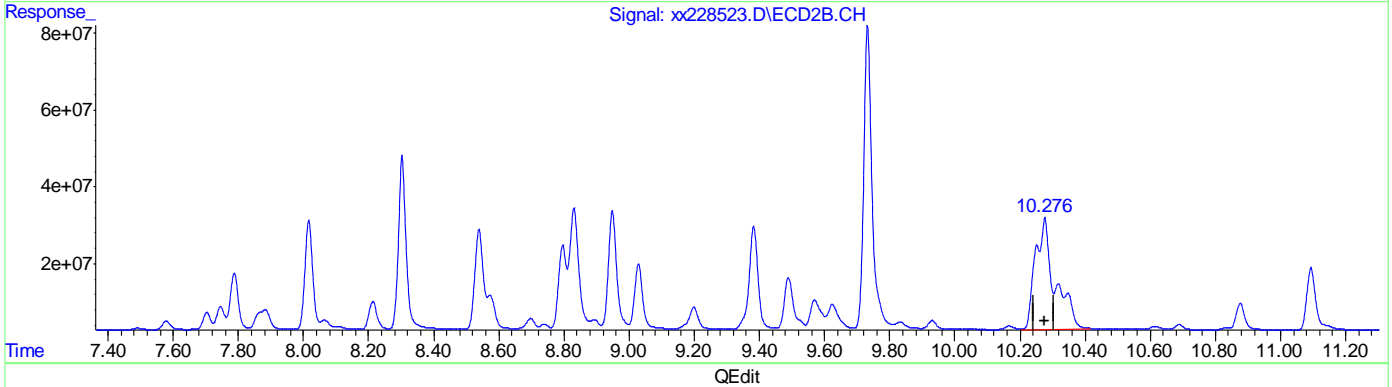
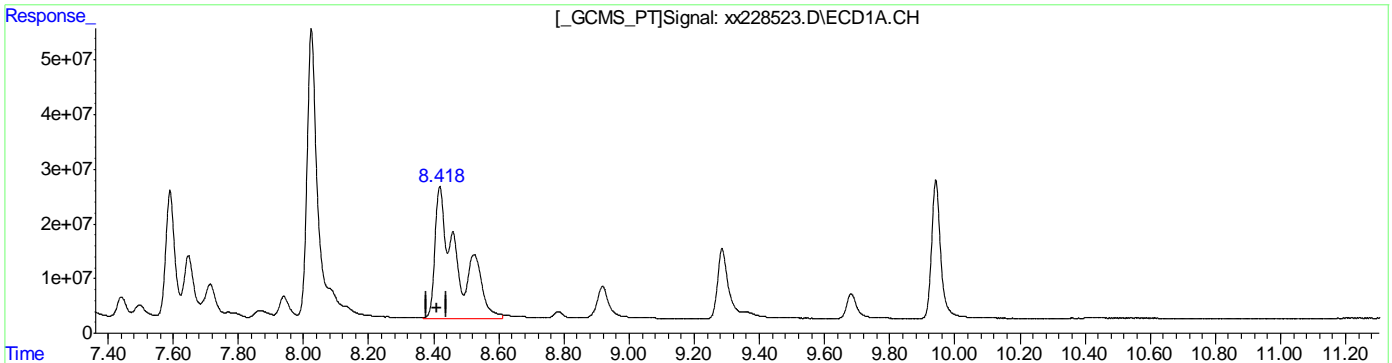
11.6.44.4
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228523.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 7:55 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:37:04 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 8.418min 1014.680PPB m
 response 1192486825

(50) AR1260-E #2
 10.276min 1020.132PPB m
 response 1221323008

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:37:41 2018

11.6.44.5
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228524.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 8:12 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:38:59 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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...	2.798	3.534	429.6E6	391.5E6	39.885	38.999
Spiked Amount	40.000		Recovery	=	99.71%	97.50%
51) S Decachlor...	9.942	11.949	404.6E6	368.3E6	32.324	32.202
Spiked Amount	40.000		Recovery	=	80.81%	80.50%
Target Compounds						
2) AR1221-A	2.312	2.970	65752086	61552728	1024.348	1013.687
3) AR1221-B	2.969	3.915	109.7E6	101.7E6	911.520	942.377
4) AR1221-C	3.165	4.190	330.2E6	259.7E6	900.018	924.209
5) AR1221-D	3.555	4.741	30052373	44879329	810.096m	893.486
6) AR1221-E	3.775	4.835	46826470	37496495	828.629	1037.877 #
24) AR1254-A	5.237	6.817	364.7E6	380.9E6	1020.489	1013.864
25) AR1254-B	5.579	7.075	468.3E6	418.9E6	1016.016	1010.471
26) AR1254-C	5.942	7.577	376.0E6	350.6E6	1016.831	1020.989
27) AR1254-D	6.105	7.745	744.5E6	717.8E6	1017.871	1018.307
28) AR1254-E	6.489	8.063	542.2E6	551.1E6	1009.843	1011.243
29) AR1254-F	6.723	8.536	491.9E6	555.1E6	1017.112	998.557m
30) AR1254-G	7.104	8.831	700.1E6	724.4E6	1000.791	1011.163m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

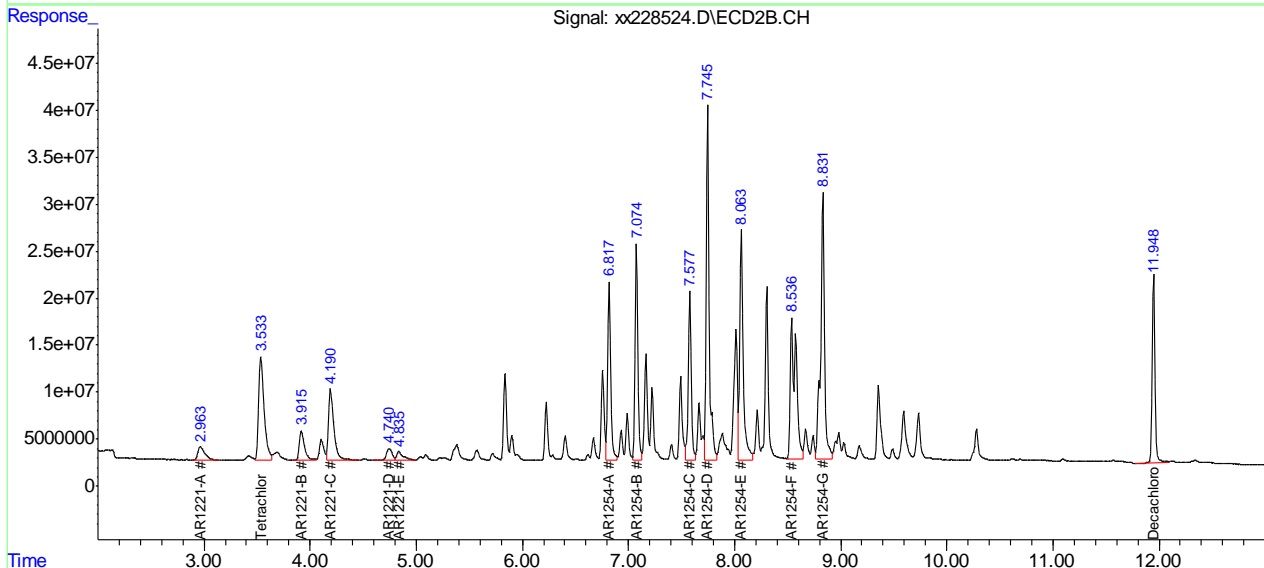
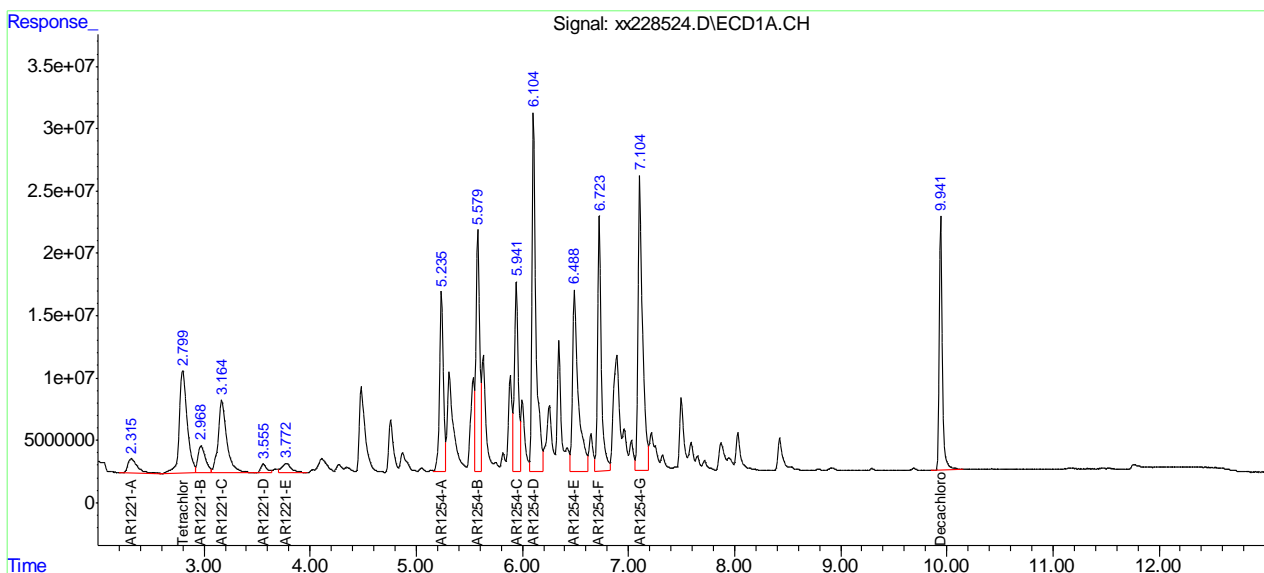
11.645
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228524.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 8:12 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:38:59 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



11.6.45
11

Manual Integration Approval Summary

Sample Number: GXX6349-ICV6349 Method: SW846 8082A
Lab FileID: XX228524.D Analyst approved: 05/15/18 08:45 Rebecca Krug
Injection Time: 05/14/18 20:12 Supervisor approved: 05/15/18 13:34 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1221-D		1	3.56	Split peak
AR1254-F		2	8.54	Split peak
Ar1254-G		2	8.83	Split peak

11.6.45.1

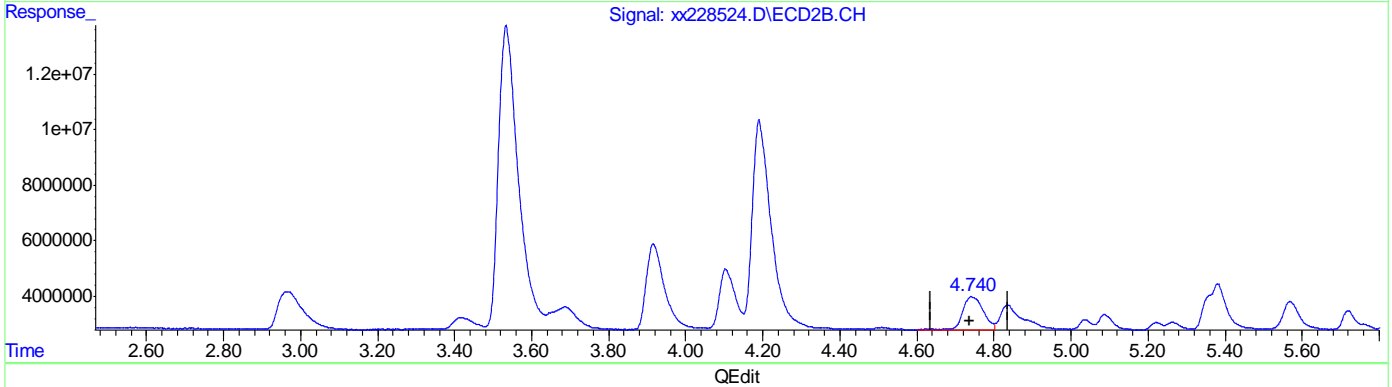
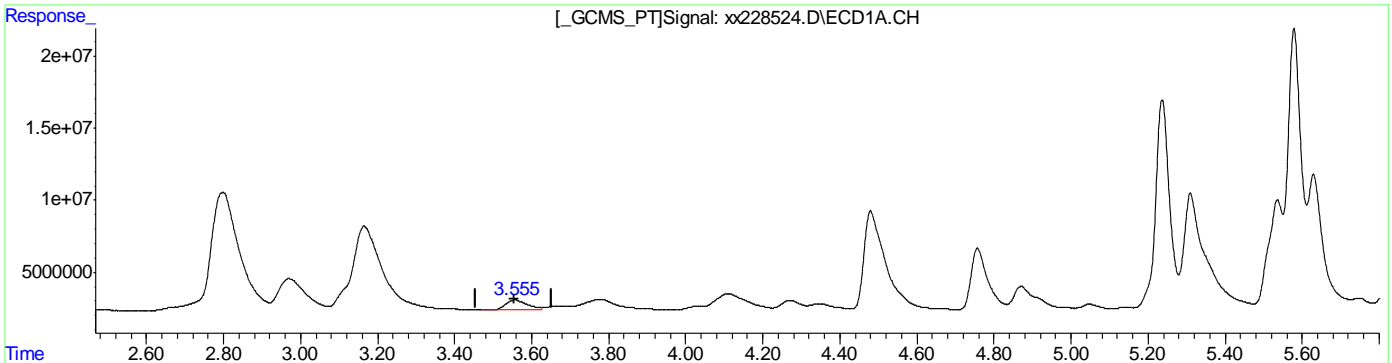
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228524.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 8:12 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:37:54 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



(5) AR1221-D
 3.556min 747.779PPB
 response 27740572

(5) AR1221-D #2
 4.741min 893.486PPB
 response 44879329

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:38:03 2018

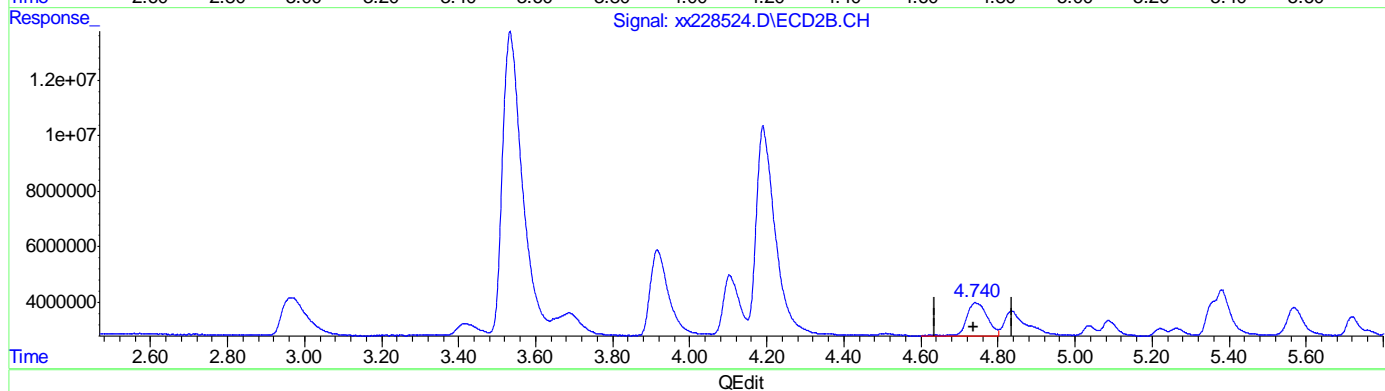
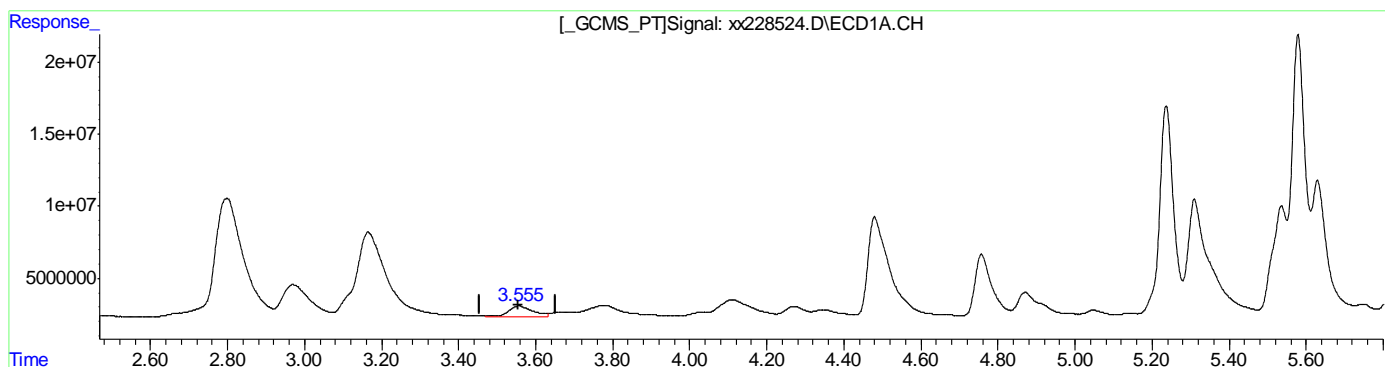
11.6.45.2
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228524.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 8:12 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:37:54 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



(5) AR1221-D
 3.555min 810.096PPB m
 response 30052373

(5) AR1221-D #2
 4.741min 893.486PPB
 response 44879329

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:38:22 2018

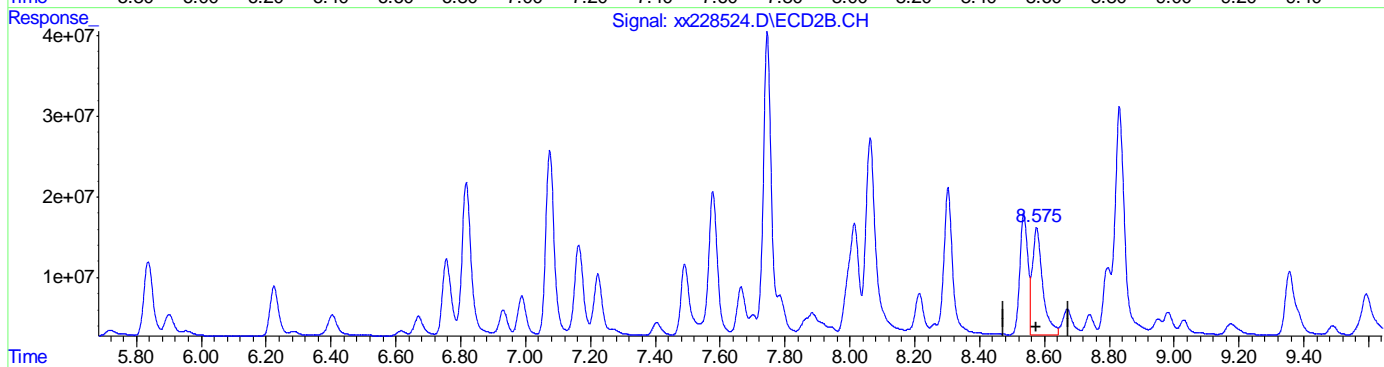
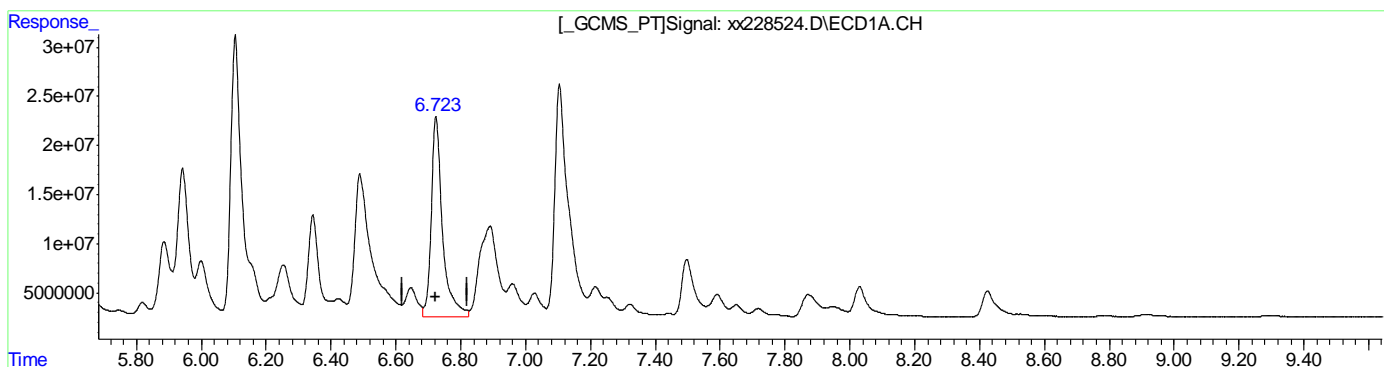
11.6.45.3
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228524.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 8:12 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:37:54 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
6.723min 1017.112PPB
response 491868702
(29) AR1254-F #2
8.576min 531.598PPB
response 295536233

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:38:40 2018

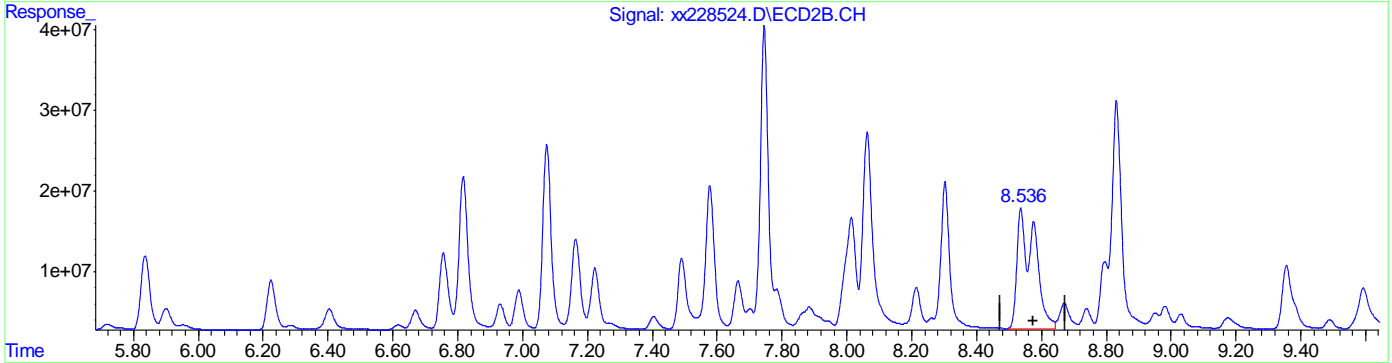
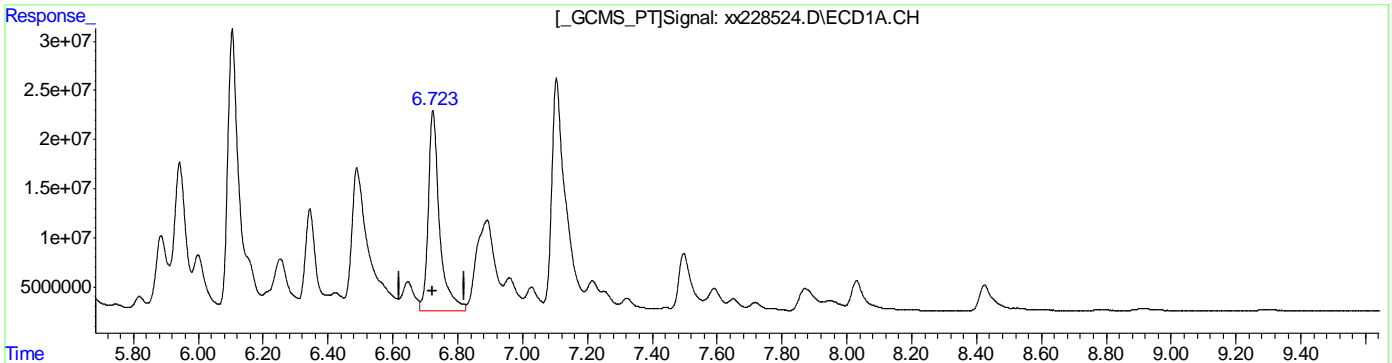
11.6.45.4
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228524.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 8:12 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:37:54 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 6.723min 1017.112PPB
 response 491868702

(29) AR1254-F #2
 8.536min 998.557PPB m
 response 555136842

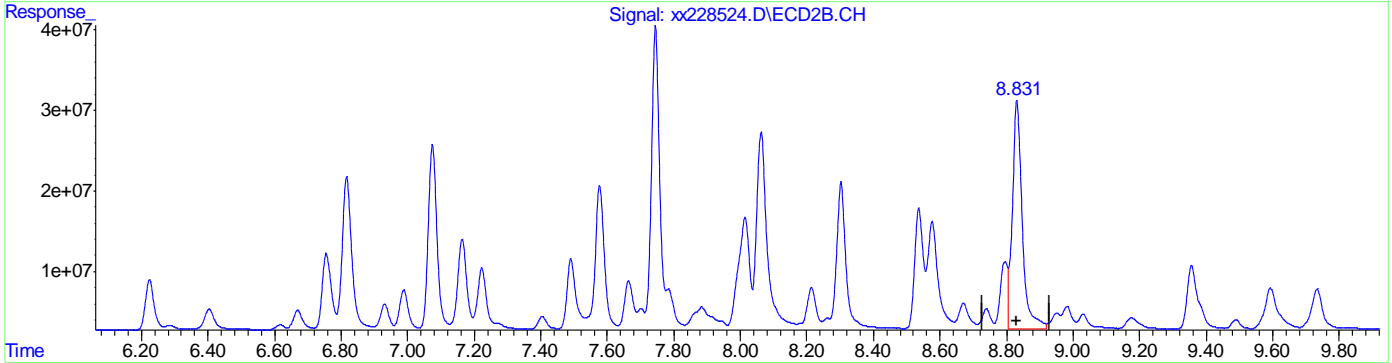
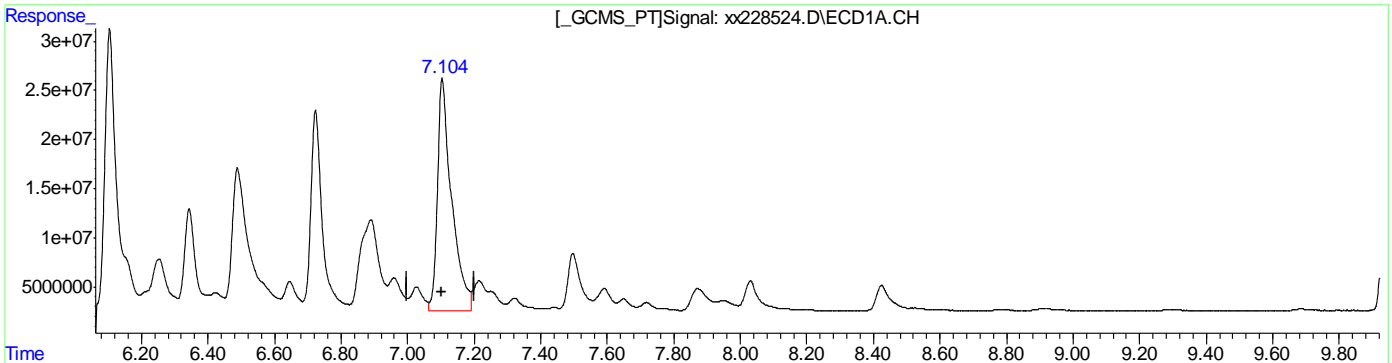
(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:38:46 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228524.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 8:12 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:37:54 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



(30) AR1254-G
 7.104min 1000.791PPB
 response 700066743

(30) AR1254-G #2
 8.831min 826.812PPB
 response 592302433

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:38:49 2018

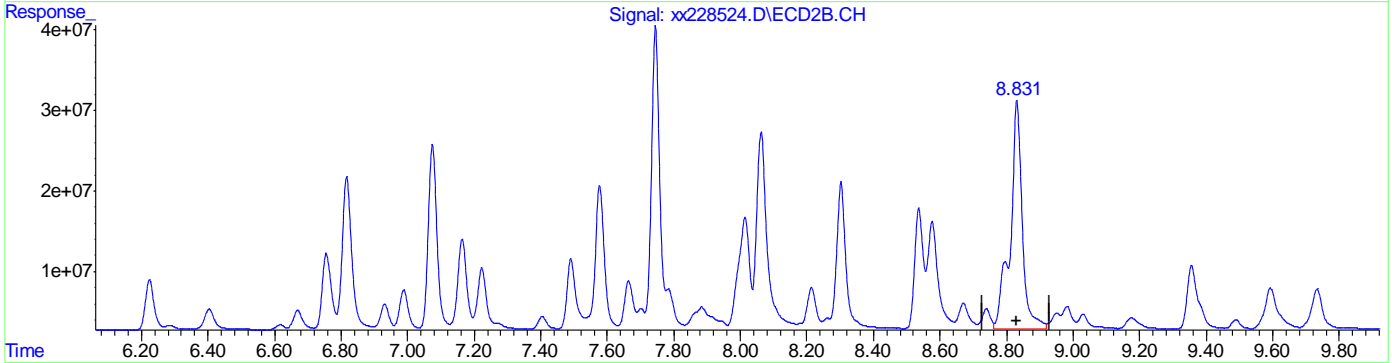
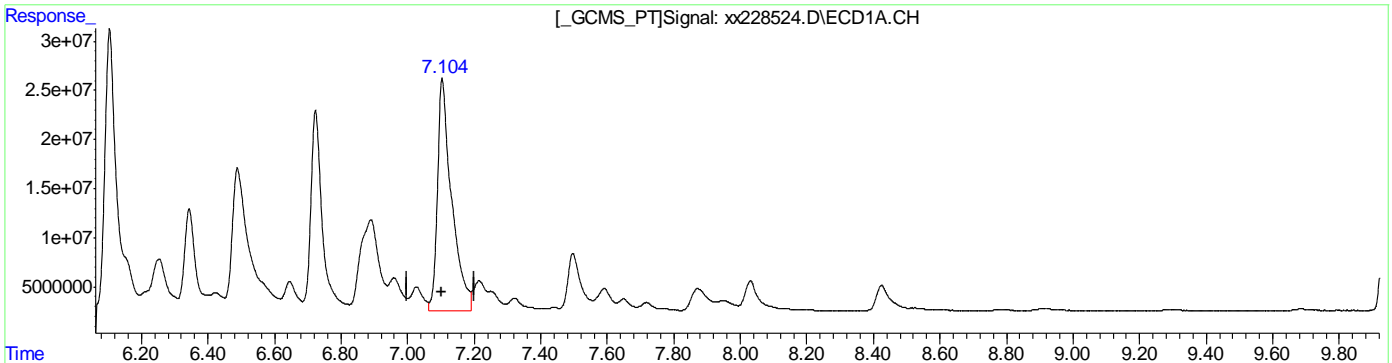
11.6.45.6
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228524.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 8:12 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:37:54 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



(30) AR1254-G
 7.104min 1000.791PPB
 response 700066743

(30) AR1254-G #2
 8.831min 1011.163PPB m
 response 724365712

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:38:55 2018

11.6.45.7
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228525.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 8:28 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:40:35 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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...	2.800	3.534	498.3E6	472.0E6	46.265	47.012
Spiked Amount	40.000		Recovery	=	115.66%	117.53%
51) S Decachlor...	9.940	11.946	513.9E6	482.6E6	41.057	42.197
Spiked Amount	40.000		Recovery	=	102.64%	105.49%
Target Compounds						
7) AR1232-A	3.167	4.190	284.4E6	218.0E6	999.702	999.172
8) AR1232-B	3.554	4.741	172.1E6	165.8E6	1022.612	1015.285
9) AR1232-C	4.105	5.378	387.2E6	365.5E6	1024.440	1011.308
10) AR1232-D	4.266	5.568	144.9E6	155.0E6	1040.372	1021.462
11) AR1232-E	4.758	6.223	139.1E6	98508615	1051.481	1019.810
31) AR1262-A	6.721	8.302	495.8E6	580.0E6	1020.514	1046.635
32) AR1262-B	7.254	8.948	727.2E6	933.0E6	1032.050	1023.739
33) AR1262-C	7.588	9.379	640.2E6	715.8E6	1030.583	1046.741
34) AR1262-D	8.022	9.731	1714.9E6	1790.7E6	1046.858	1030.321
35) AR1262-E	8.458	10.247	1843.1E6	1938.9E6	1033.185m	1039.742m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

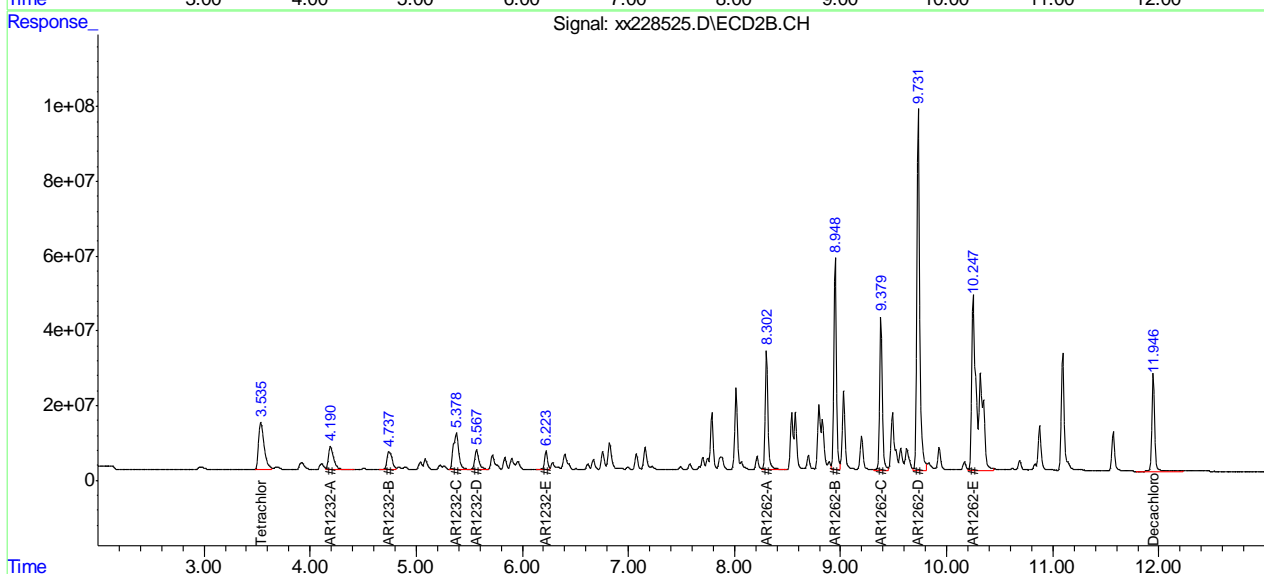
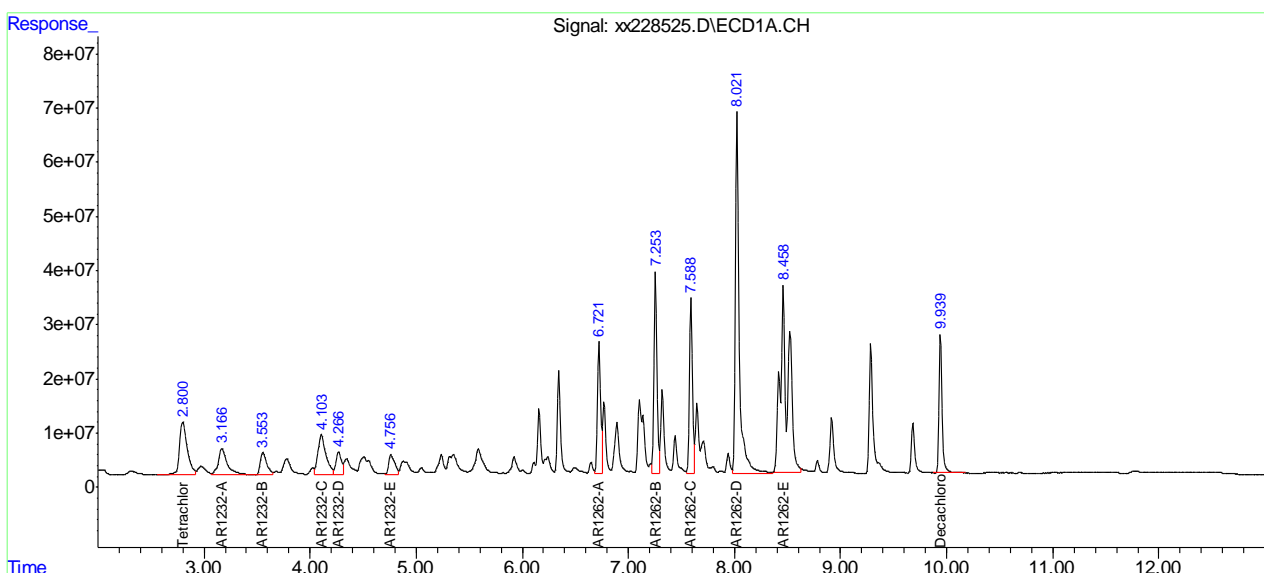
11.646
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228525.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 8:28 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:40:35 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



11.6.46
11

Manual Integration Approval Summary

Sample Number: GXX6349-ICV6349 Method: SW846 8082A
Lab FileID: XX228525.D Analyst approved: 05/15/18 08:45 Rebecca Krug
Injection Time: 05/14/18 20:28 Supervisor approved: 05/15/18 13:34 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1262-E		1	8.46	Split peak
AR1262-E		2	10.25	Split peak

11.6.46.1

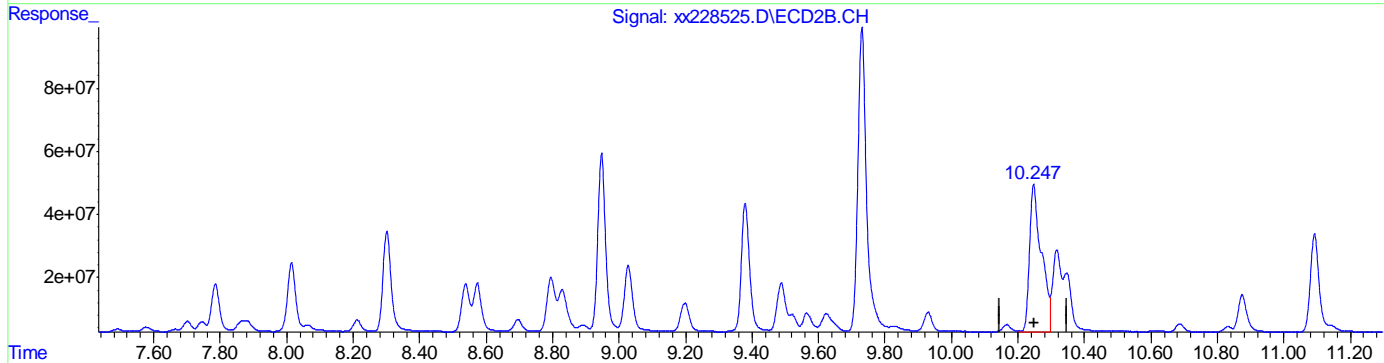
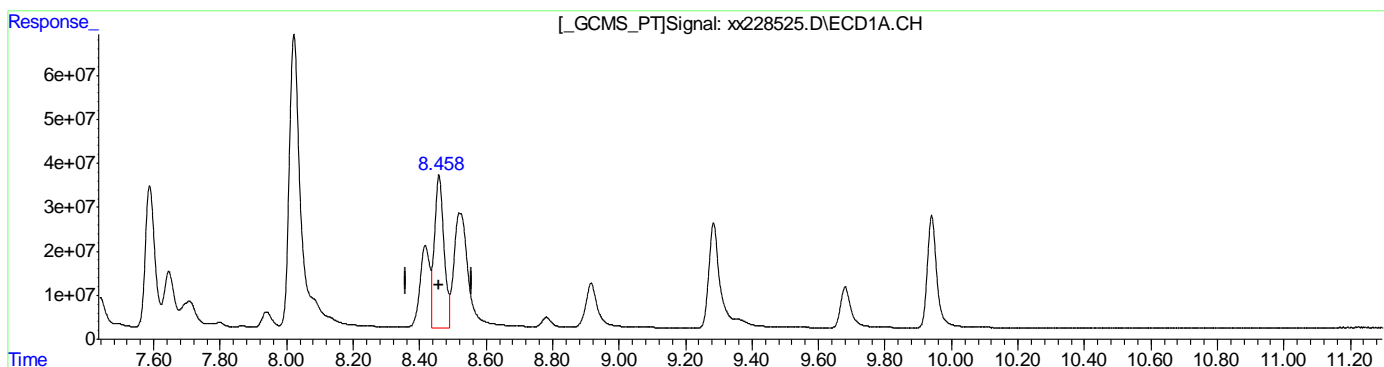
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228525.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 8:28 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:40:01 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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	8.458min	391.924PPB	response 699153119
(35) AR1262-E #2	10.247min	614.636PPB	response 1146167306

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:40:21 2018

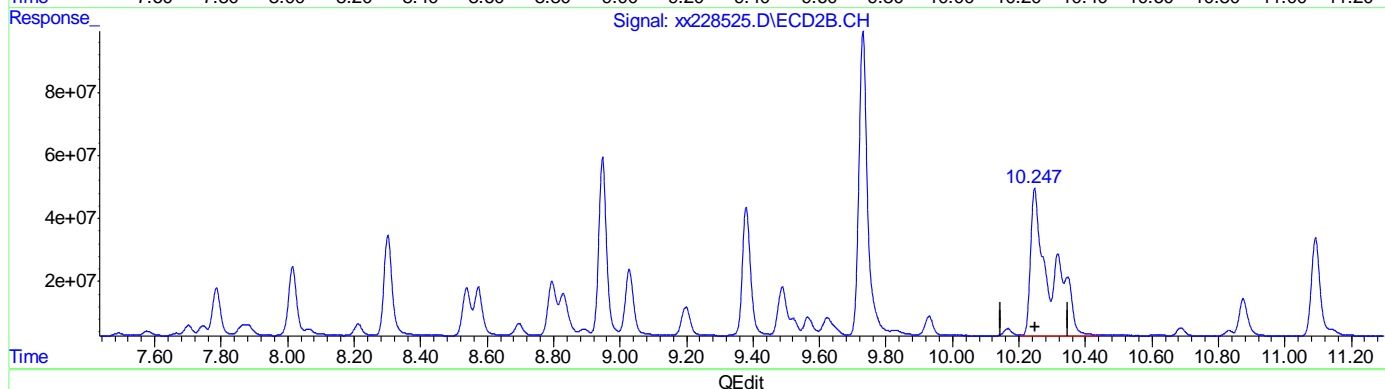
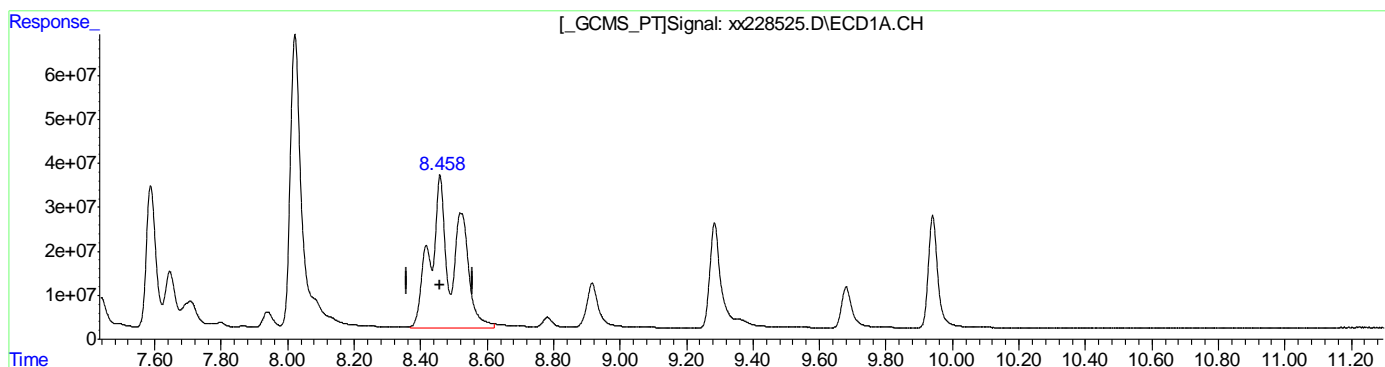
11.6.46.2
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228525.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 8:28 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:40:01 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 8.458min 1033.185PPB m
 response 1843099143

(35) AR1262-E #2
 10.247min 1039.742PPB m
 response 1938901575

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:40:31 2018

11.6.46.3
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228526.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 8:45 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:41:12 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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...	2.797	3.533	506.4E6	493.1E6	47.014	49.111
Spiked Amount	40.000		Recovery	=	117.54%	122.78%
51) S Decachlor...	9.940	11.947	1582.7E6	1339.8E6	126.436	117.158
Spiked Amount	40.000		Recovery	=	316.09%	292.89%
Target Compounds						
12) AR1242-A	3.555	4.743	311.2E6	289.0E6	996.091	990.854
13) AR1242-B	4.104	5.382	717.0E6	661.0E6	987.868	996.445
14) AR1242-C	4.265	5.567	269.0E6	279.1E6	1001.805	1004.771
15) AR1242-D	4.759	6.224	283.4E6	194.0E6	973.367	973.007
16) AR1242-E	5.348	6.826	320.8E6	246.6E6	952.868	940.067
36) AR1268-A	8.461	10.250	1734.1E6	2076.0E6	981.156	1001.764
37) AR1268-B	8.516	10.318	2036.2E6	1929.1E6	997.169	1005.657
38) AR1268-C	8.781	10.690	1611.4E6	1634.4E6	992.442	993.455
39) AR1268-D	9.283	11.094	642.4E6	652.5E6	1005.507	987.386
40) AR1268-E	9.677	11.569	5403.1E6	4700.5E6	987.469	983.218

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

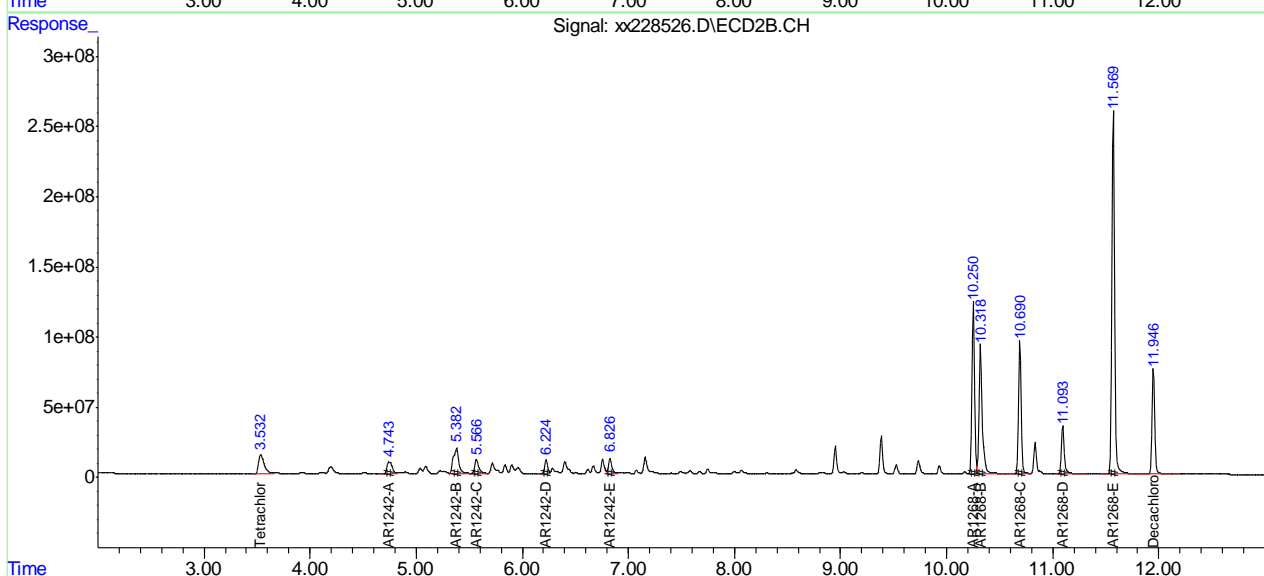
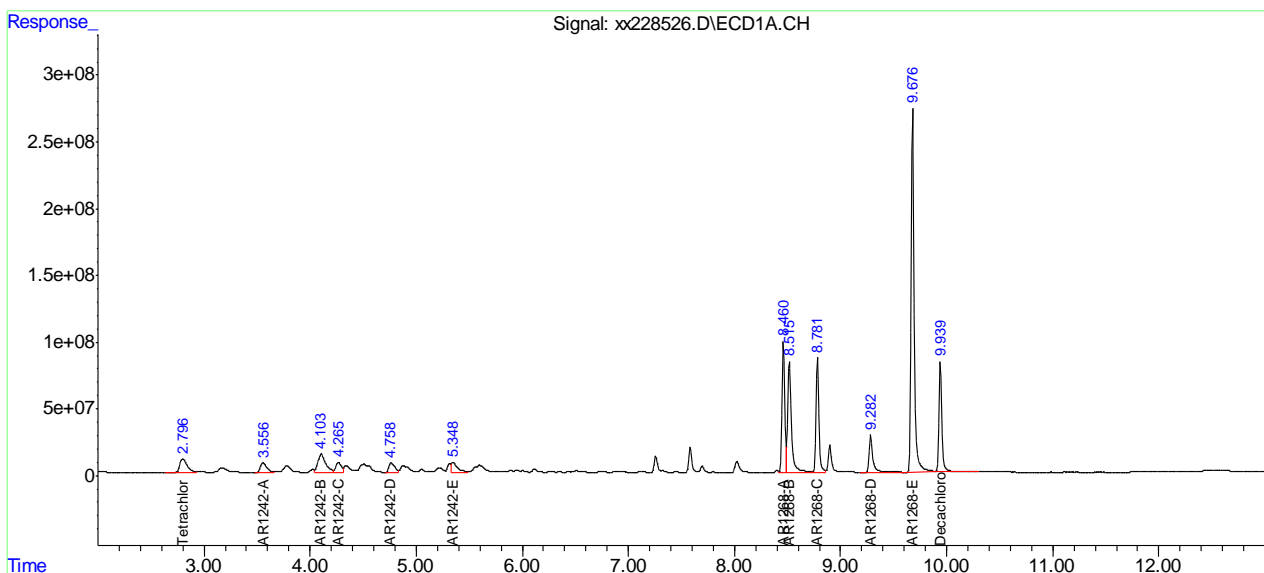
11.647
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228526.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 8:45 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:41:12 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



11.6.47
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228527.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 9:01 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:41:49 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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...	2.799	3.536	507.2E6	500.5E6	47.092	49.854
Spiked Amount	40.000		Recovery	=	117.73%	124.64%
51) S Decachlor...	9.942	11.946	539.7E6	477.8E6	43.116	41.778m
Spiked Amount	40.000		Recovery	=	107.79%	104.44%
Target Compounds						
17) AR1248-A	3.554	4.740	144.7E6	140.7E6	939.139	936.346
18) AR1248-B	4.106	5.378	451.5E6	418.1E6	981.786	992.989
19) AR1248-C	4.504	5.837	417.7E6	232.3E6	1008.905	1014.736
20) AR1248-D	4.757	6.225	435.3E6	314.0E6	1019.732	1019.467
21) AR1248-E	4.870	6.400	420.8E6	373.4E6	1038.832	1044.614
22) AR1248-F	5.343	6.824	508.1E6	465.2E6	1059.729	1059.939
23) AR1248-G	5.588	7.159	725.5E6	423.8E6	1053.576	1062.407

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

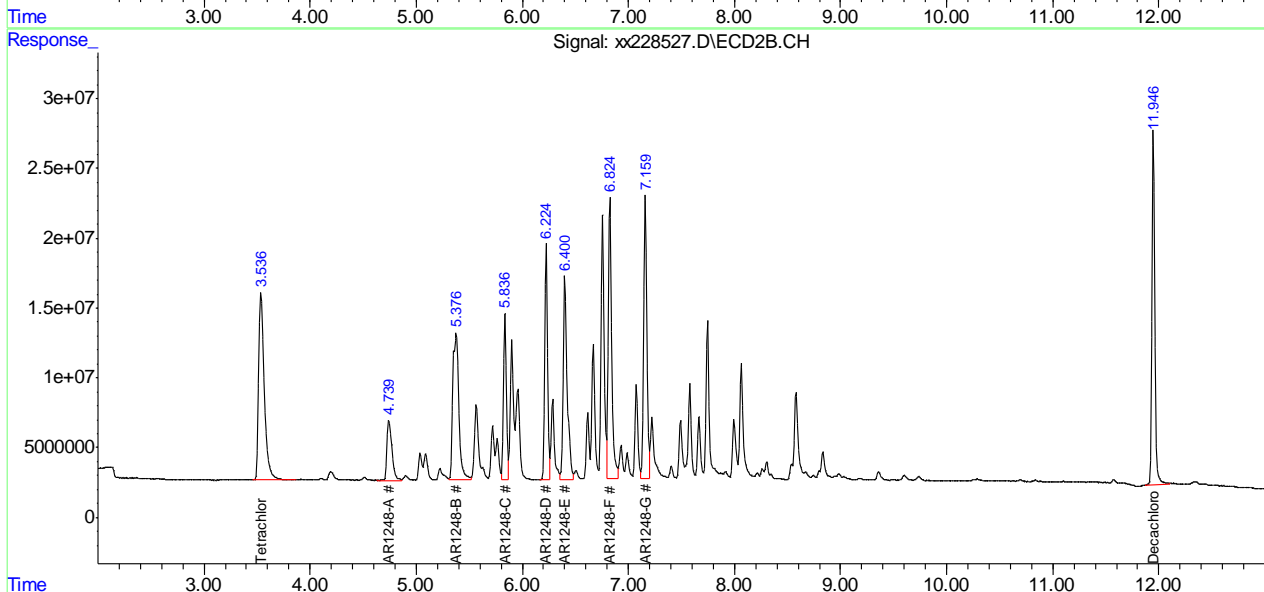
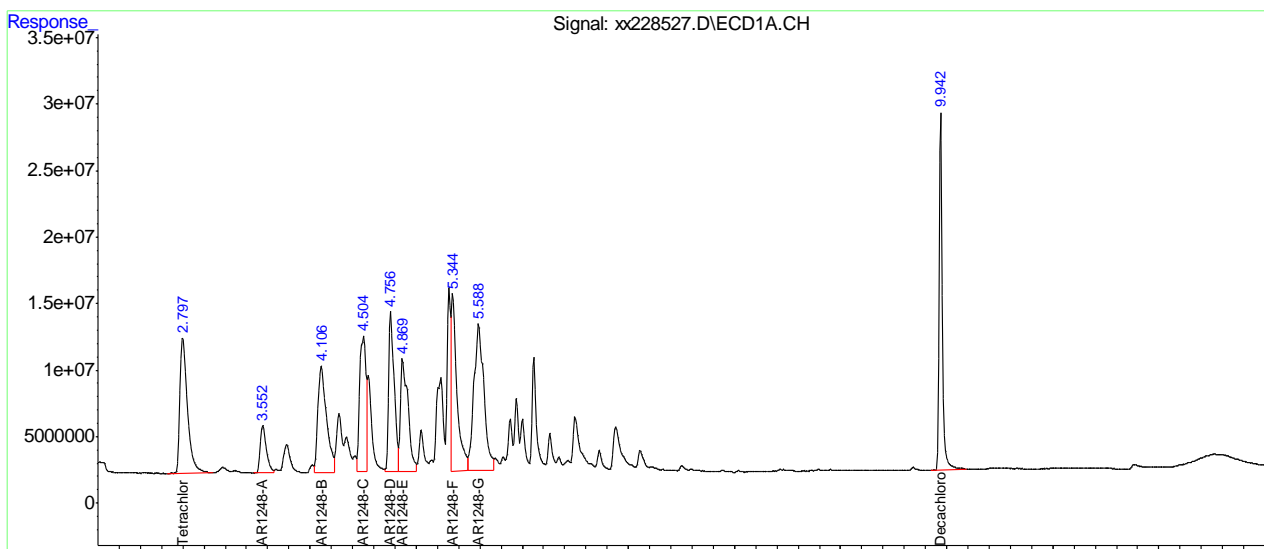
11.648
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228527.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 9:01 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:41:49 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



11.6.48
11

Manual Integration Approval Summary

Sample Number: GXX6349-ICV6349 Method: SW846 8082A
Lab FileID: XX228527.D Analyst approved: 05/15/18 08:45 Rebecca Krug
Injection Time: 05/14/18 21:01 Supervisor approved: 05/15/18 13:34 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
Decachlorobiphenyl	2051-24-3	2	11.95	Poorly defined baseline

11.6.48.1

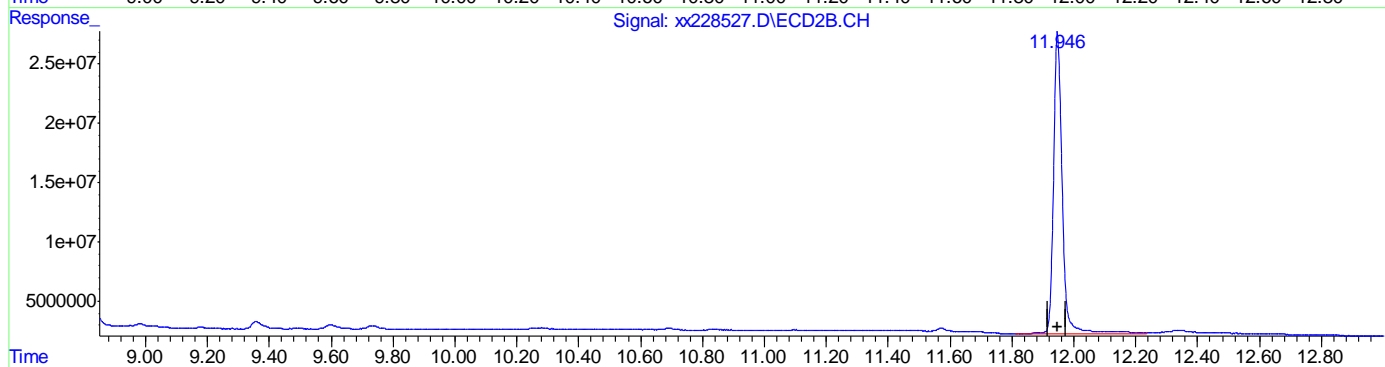
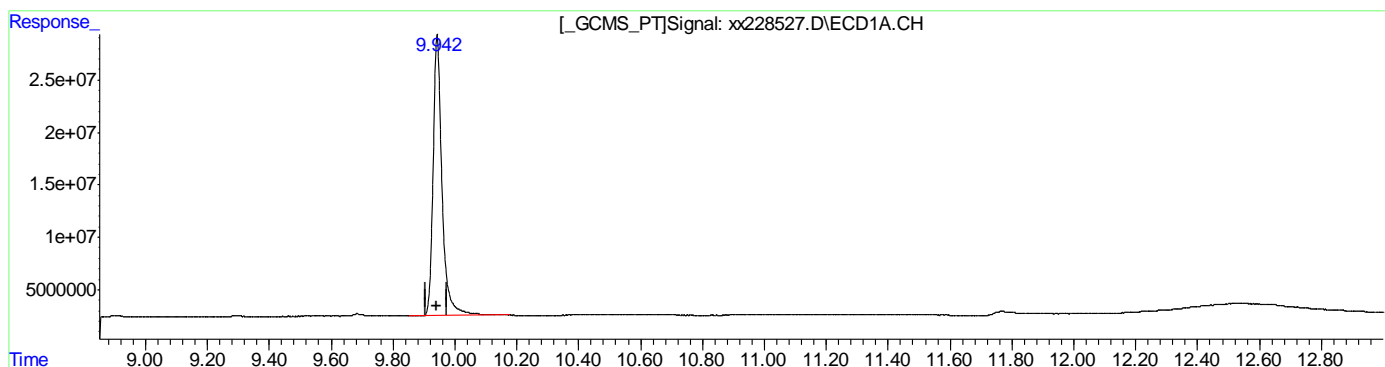
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228527.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 9:01 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:41:25 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



(51) Decachlorobiphenyl (S)
 9.942min 43.116ppb
 response 539705092

(51) Decachlorobiphenyl #2 (S)
 11.947min 44.254ppb
 response 506102594

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:41:47 2018

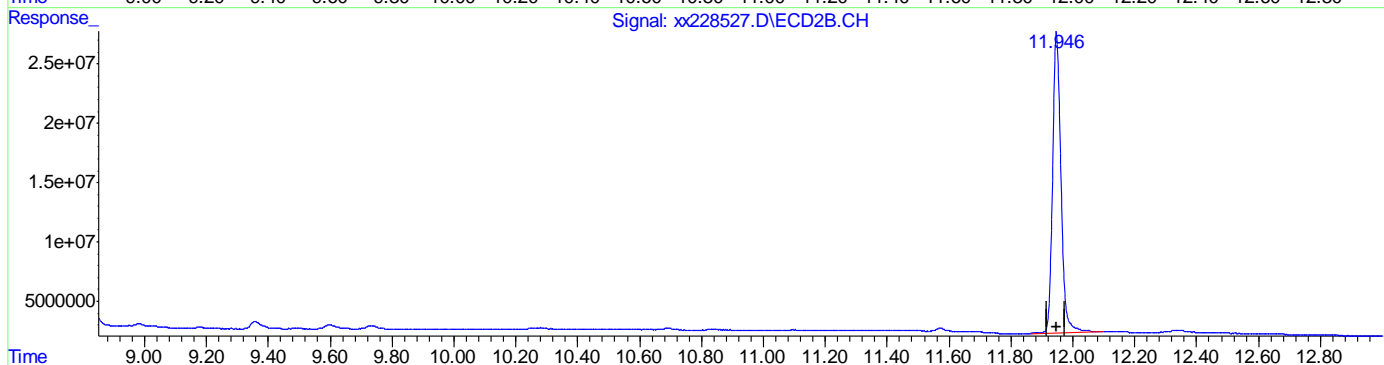
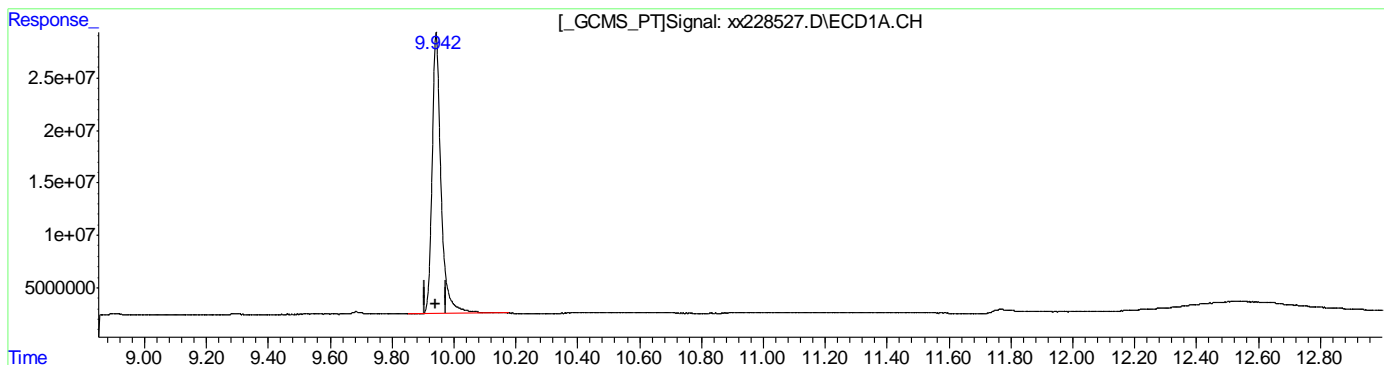
11.6.48.2
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6349\
 Data File : xx228527.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 14 May 2018 9:01 pm
 Operator : rebeccak
 Sample : icv6349-1000
 Misc : op11947,GXX6349,1.0,,,1,1
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 15 08:41:25 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)
9.942min 43.116ppb
response 539705092
(51) Decachlorobiphenyl #2 (S)
11.946min 41.778ppb m
response 477780122

(+) = Expected Retention Time
 PCB6349.M Tue May 15 08:41:51 2018

11.6.48.3
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229836.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 12:34 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12450,GXX6375,1000,,,5,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:56:21 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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...	2.820f	3.547	225.1E6	218.7E6	20.899	21.783
Spiked Amount	40.000		Recovery	=	52.25%	54.46%
51) S Decachlor...	9.941	11.940	269.9E6	245.0E6	21.564	21.427
Spiked Amount	40.000		Recovery	=	53.91%	53.57%
Target Compounds						
41) AR1016-A	3.193f	4.204f	99569324	88149657	519.648	528.755
42) AR1016-B	3.571f	4.753	186.0E6	175.5E6	520.531	534.207
43) AR1016-C	4.125f	5.388	402.9E6	387.9E6	479.663m	513.615
44) AR1016-D	4.282f	5.575	159.8E6	165.7E6	519.411	527.205
45) AR1016-E	4.769f	6.226	163.4E6	109.3E6	512.090	496.411
46) AR1260-A	7.121f	8.832	444.6E6	456.0E6	468.923	459.689m
47) AR1260-B	7.258	8.946	242.5E6	298.6E6	570.605	540.497m
48) AR1260-C	7.594	9.381	220.0E6	272.9E6	505.953	537.930
49) AR1260-D	8.038f	9.733	698.3E6	743.7E6	567.512	556.540
50) AR1260-E	8.460f	10.280	593.1E6	672.8E6	504.665m	561.935m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

11.6.49

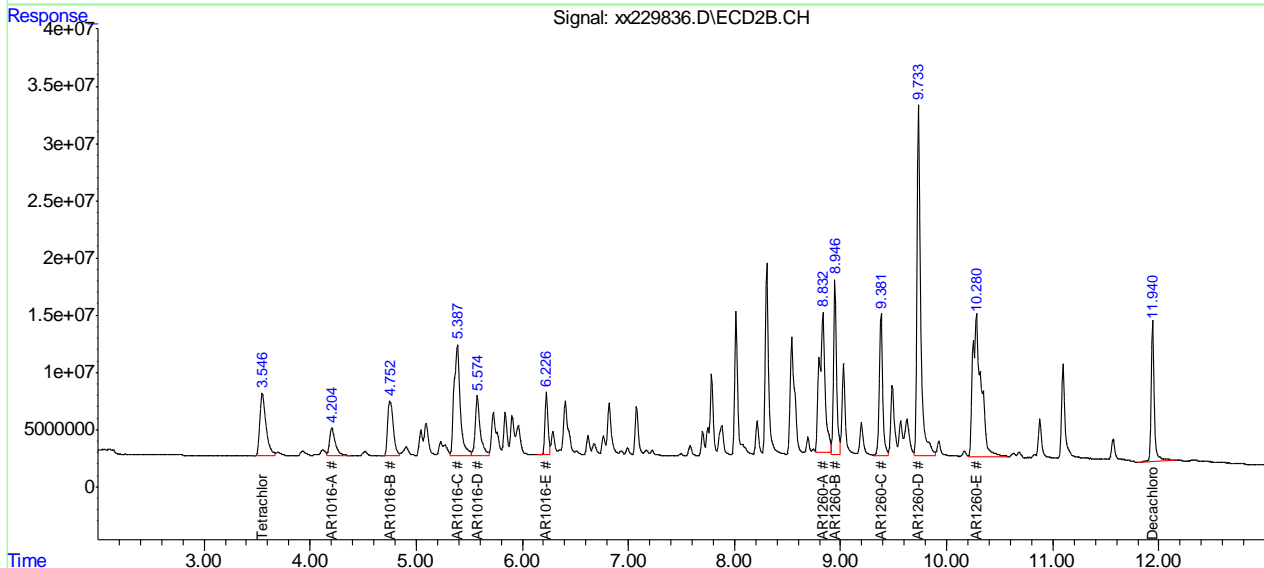
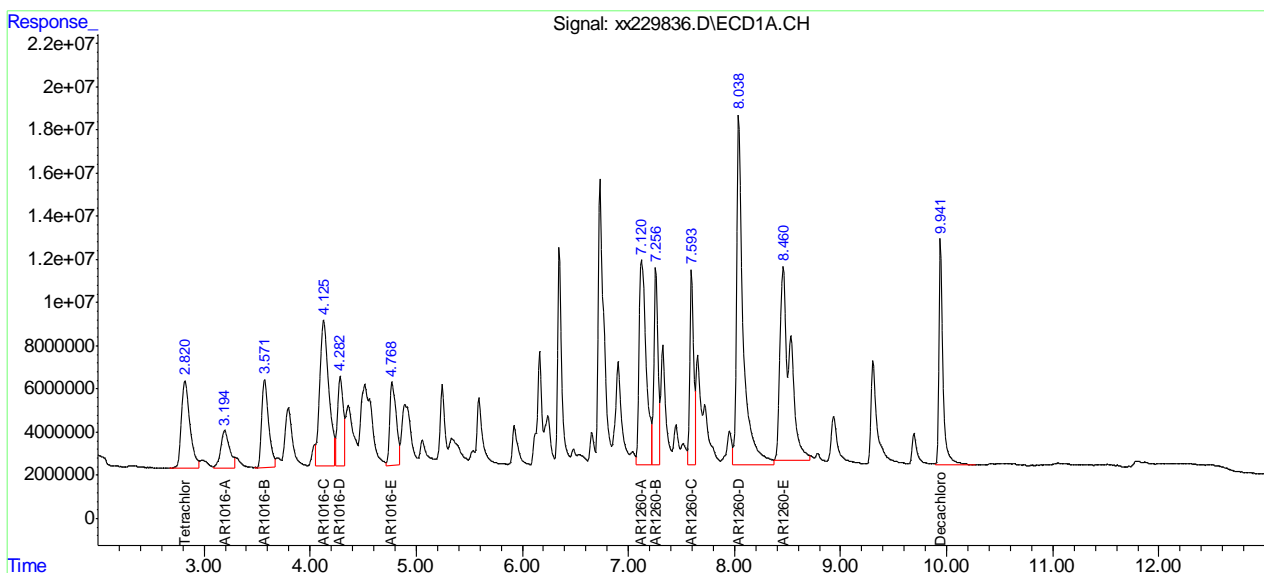
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229836.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 12:34 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12450,GXX6375,1000,,,5,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:56:21 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



11.6.49
11

Manual Integration Approval Summary

Sample Number: GXX6375-CC6349 Method: EPA 608
Lab FileID: XX229836.D Analyst approved: 06/04/18 09:16 Summer Kotb
Injection Time: 06/03/18 00:34 Supervisor approved: 06/05/18 13:48 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		1	4.13	Split peak
AR1260-E		1	8.46	Split peak
AR1260-A		2	8.83	Split peak
AR1260-B		2	8.95	Split peak
AR1260-E		2	10.28	Split peak

11.6.49.1

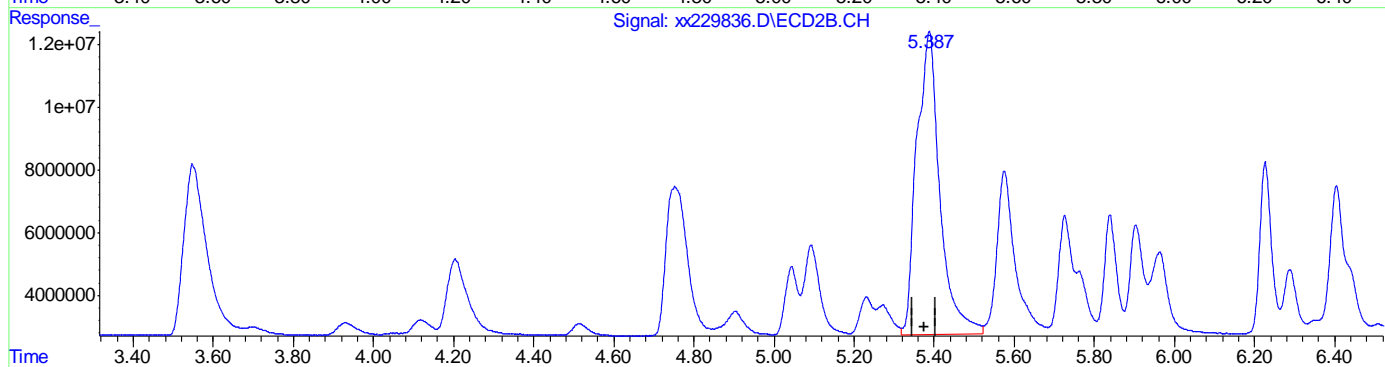
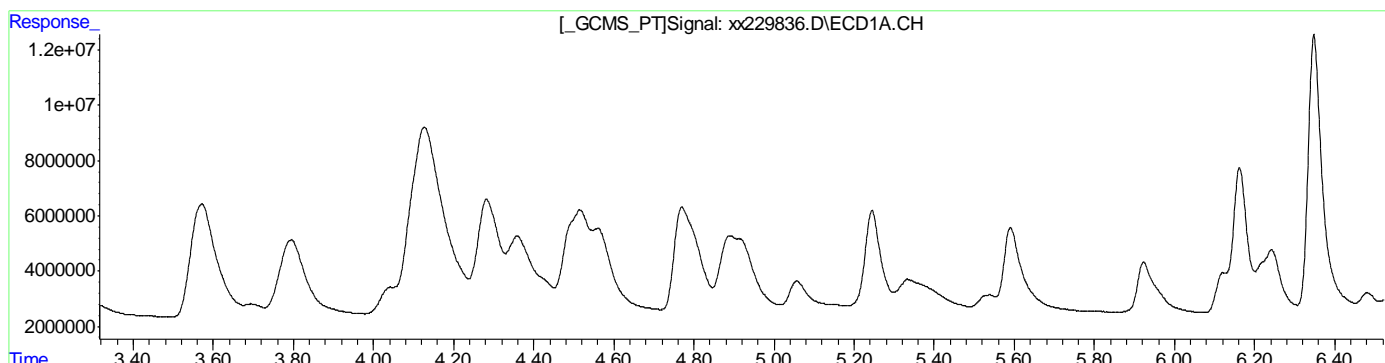
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229836.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 12:34 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12450,GXX6375,1000,,,5,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:54:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 0.000min 0.000PPB
 response 0

(43) AR1016-C #2
 5.388min 513.615PPB
 response 387921152

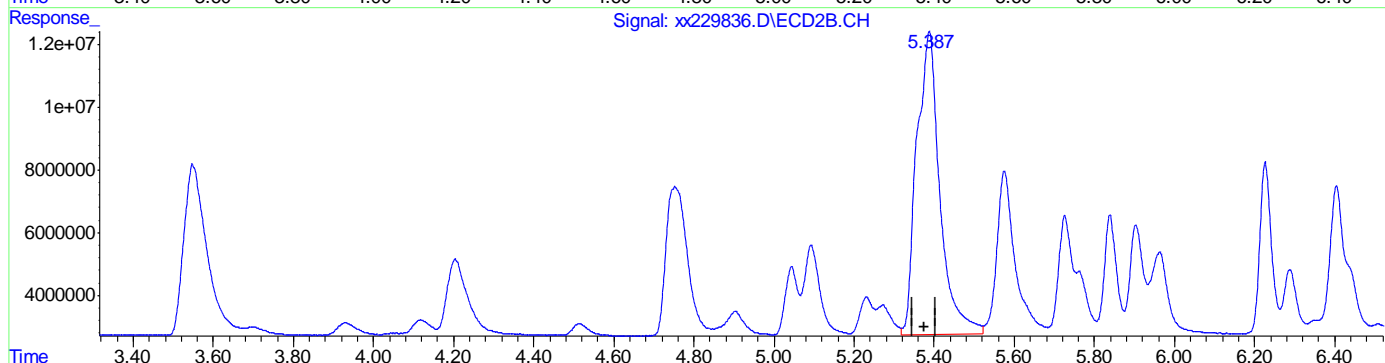
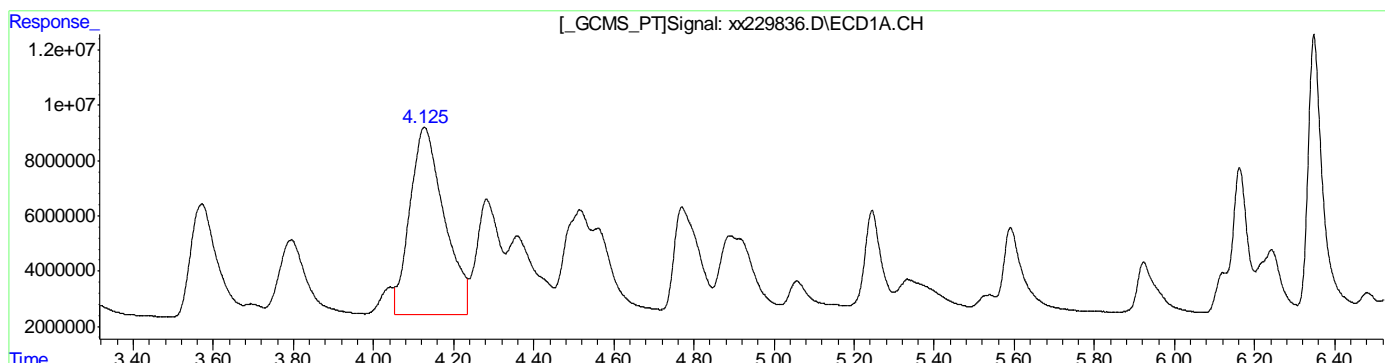
11.6.49.2
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229836.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 12:34 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12450,GXX6375,1000,,,5,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:54:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



11.6.49.3
11

(43) AR1016-C
 4.125min 479.663PPB m
 response 402875953

(43) AR1016-C #2
 5.388min 513.615PPB
 response 387921152

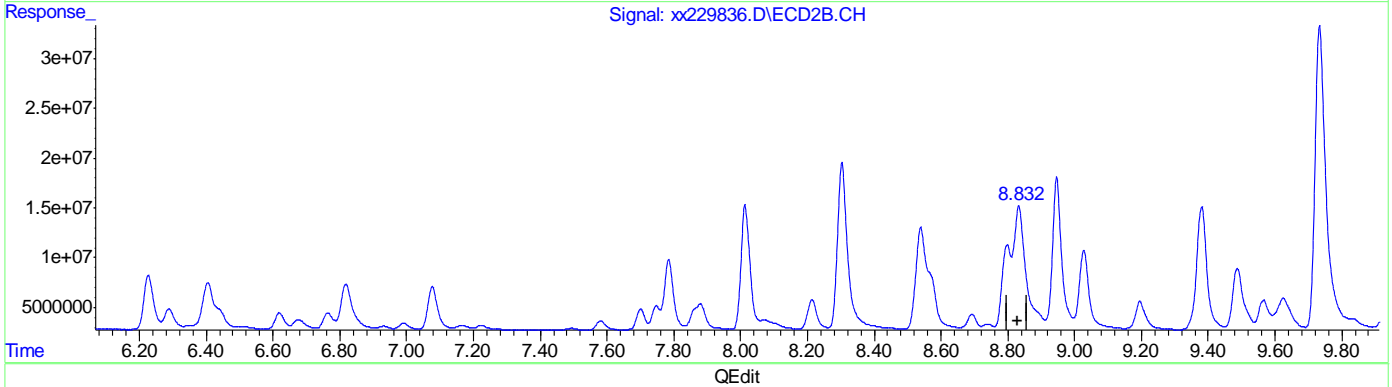
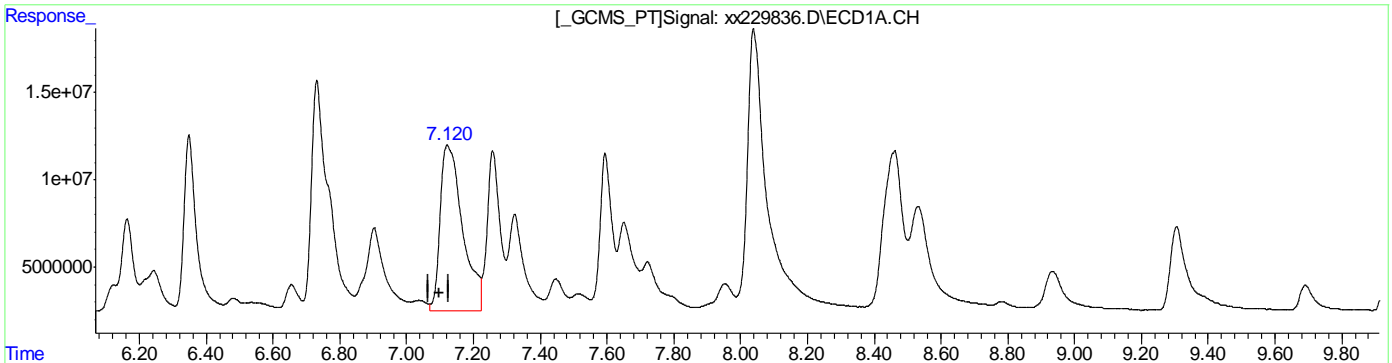
(+) = Expected Retention Time
 PCB6349.M Mon Jun 04 08:55:14 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229836.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 12:34 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12450,GXX6375,1000,,,5,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:54:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 7.121min 468.923PPB
 response 444603126

(46) AR1260-A #2
 8.833min 339.885PPB
 response 337175794

(+) = Expected Retention Time
 PCB6349.M Mon Jun 04 08:55:19 2018

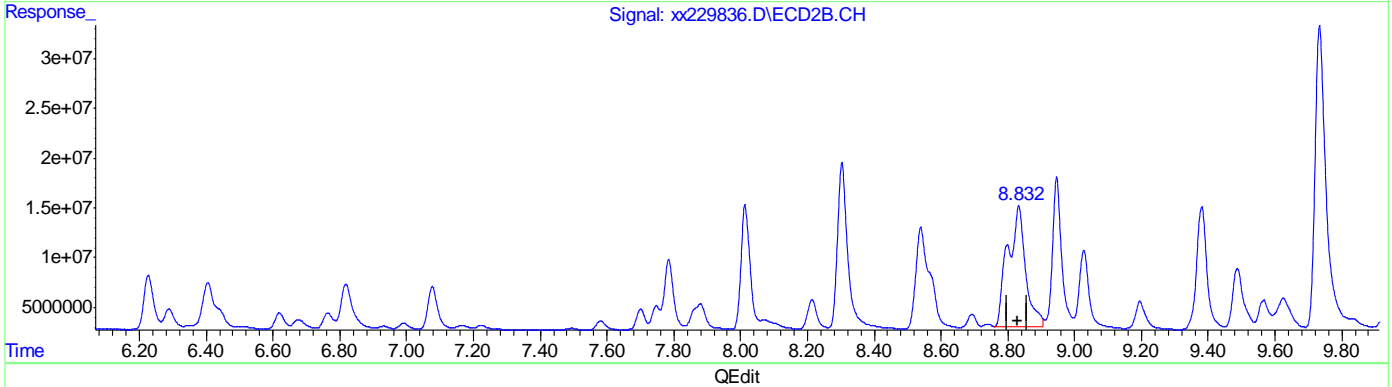
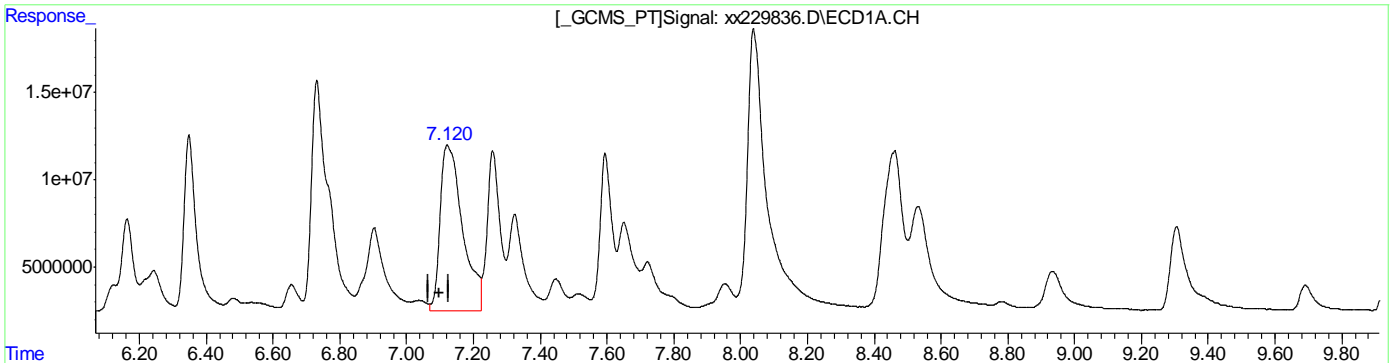
11.6.49.4
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229836.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 12:34 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12450,GXX6375,1000,,,5,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:54:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 7.121min 468.923PPB
 response 444603126

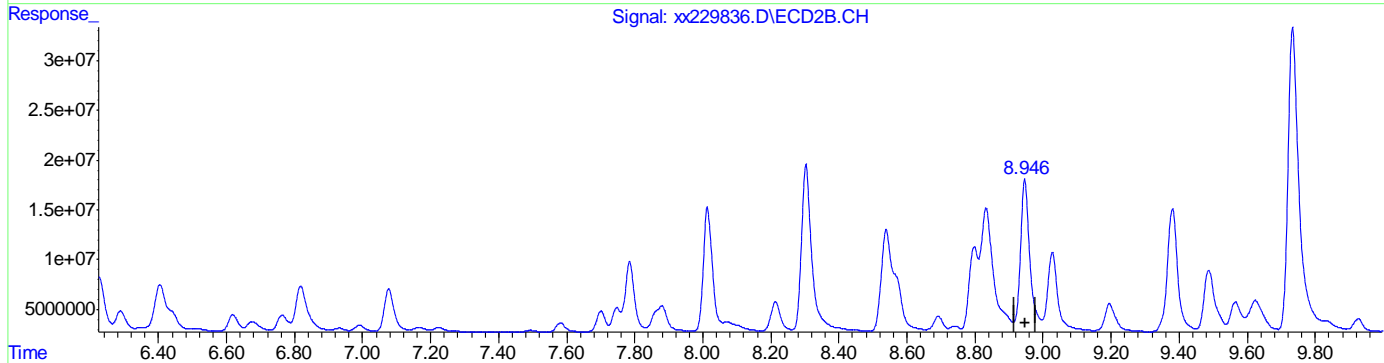
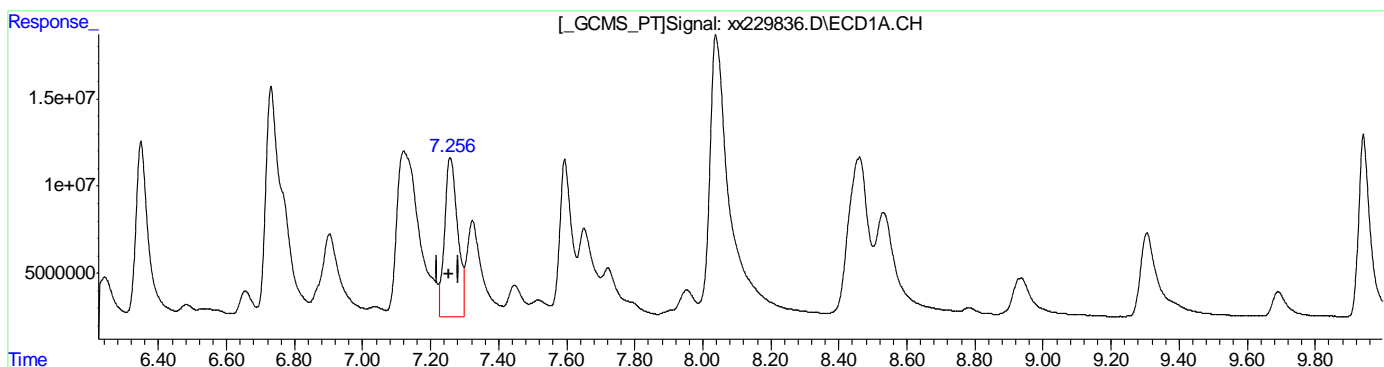
(46) AR1260-A #2
 8.832min 459.689PPB m
 response 456023932

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229836.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 12:34 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12450,GXX6375,1000,,,5,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:54:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



Retention Time (min)	Concentration (PPB)	Response
(47) AR1260-B 7.258min	570.605PPB	242456303
(47) AR1260-B #2 8.946min	550.555PPB	304119090

(+) = Expected Retention Time
 PCB6349.M Mon Jun 04 08:55:42 2018

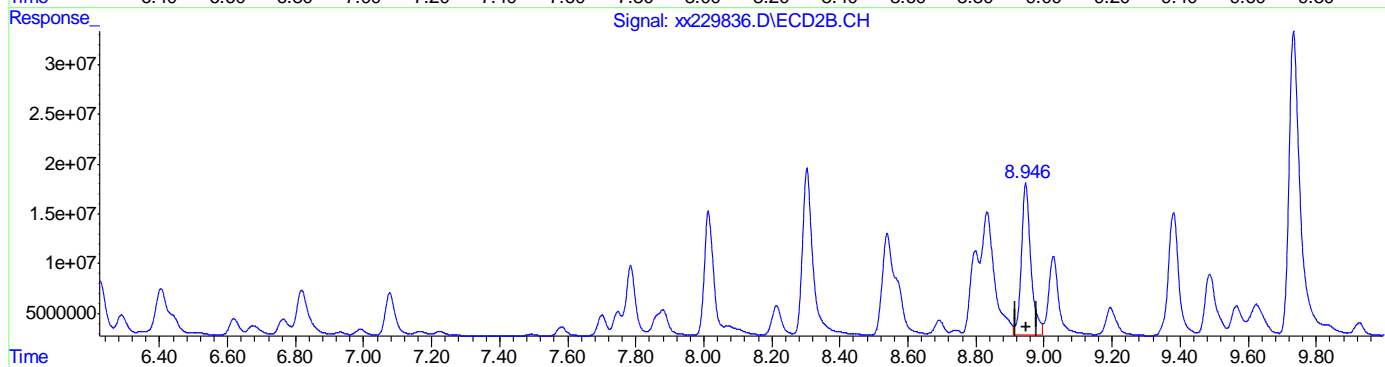
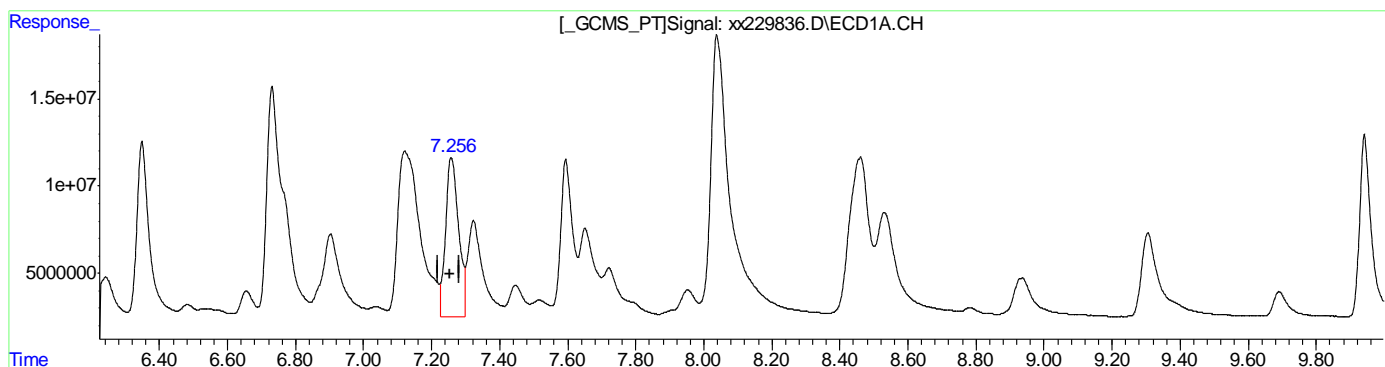
11.6.49.6
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229836.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 12:34 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12450,GXX6375,1000,,,5,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:54:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



(47) AR1260-B
 7.258min 570.605PPB
 response 242456303

(47) AR1260-B #2
 8.946min 540.497PPB m
 response 298563275

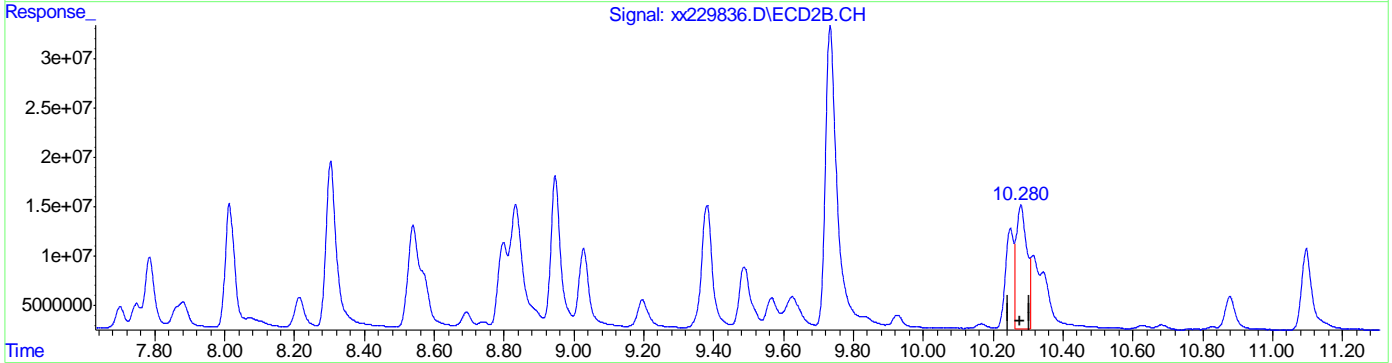
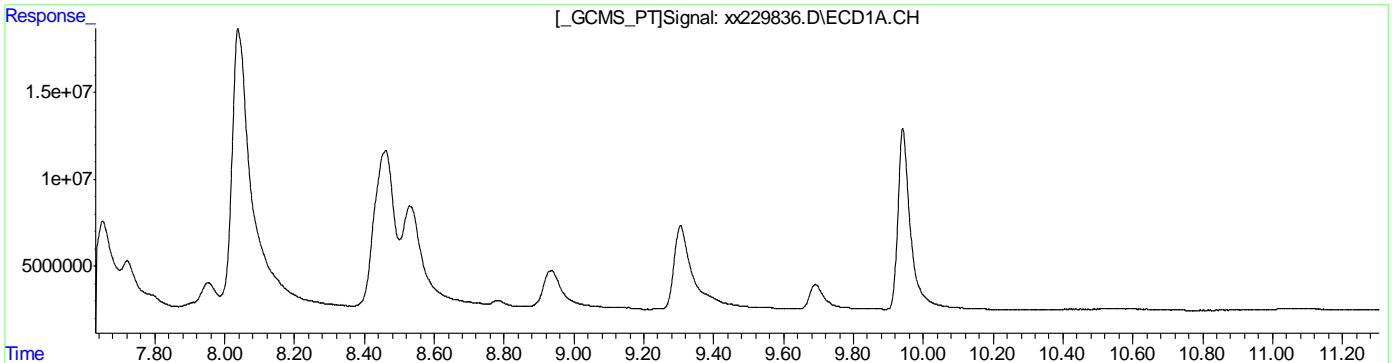
11.6.49.7
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229836.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 12:34 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12450,GXX6375,1000,,,5,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:54:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



Retention Time (min)	Concentration (PPB)	Response
(50) AR1260-E 0.000min	0.000PPB	response 0
(50) AR1260-E #2 10.280min	222.076PPB	response 265873484

(+) = Expected Retention Time
 PCB6349.M Mon Jun 04 08:56:11 2018

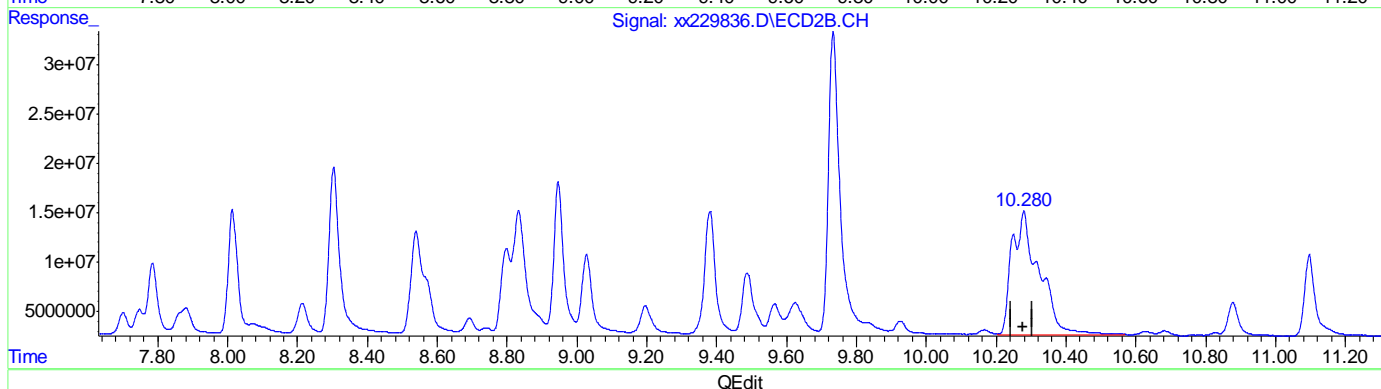
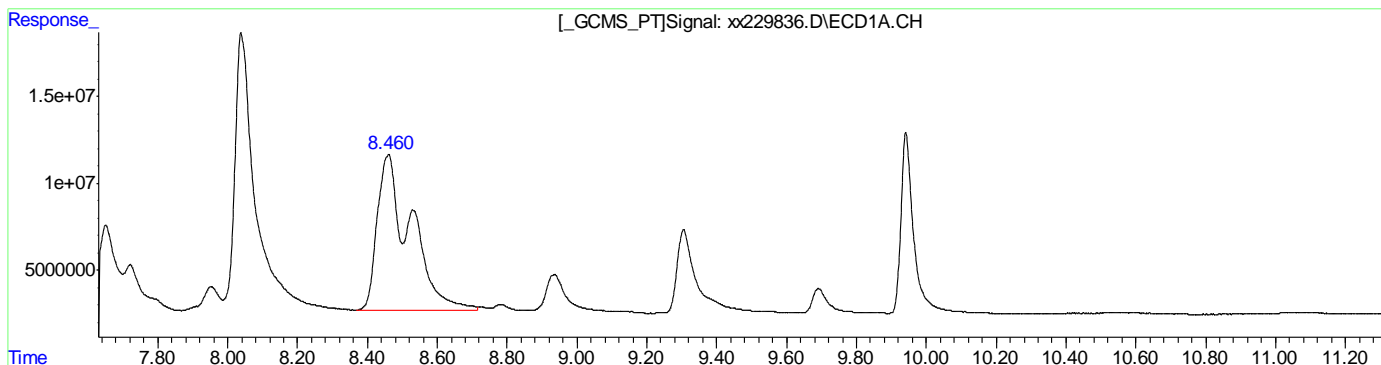
11.6.49.8
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229836.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 12:34 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12450,GXX6375,1000,,,5,1
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:54:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 8.460min 504.665PPB m
 response 593100096

(50) AR1260-E #2
 10.280min 561.935PPB m
 response 672760094

(+) = Expected Retention Time
 PCB6349.M Mon Jun 04 08:56:25 2018

11.6.49.9
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229847.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 3:38 am
 Operator : edouarda
 Sample : cc6349-1000
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 06 08:43:54 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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...	2.820f	3.554f	466.5E6	452.3E6	43.314	45.045
Spiked Amount	40.000		Recovery	=	108.29%	112.61%
51) S Decachlor...	9.945	11.944	528.1E6	486.0E6	42.188	42.494
Spiked Amount	40.000		Recovery	=	105.47%	106.23%
Target Compounds						
41) AR1016-A	3.192f	4.203	193.9E6	181.5E6	1012.165m	1088.959
42) AR1016-B	3.569f	4.753	382.7E6	350.8E6	1071.110	1067.864
43) AR1016-C	4.124f	5.388	857.2E6	774.2E6	1020.636	1024.997
44) AR1016-D	4.282f	5.575	334.1E6	328.1E6	1085.829	1044.078
45) AR1016-E	4.769f	6.227	348.1E6	218.6E6	1090.876	992.765
46) AR1260-A	7.118f	8.833	925.3E6	963.3E6	975.920	971.000m
47) AR1260-B	7.258	8.949	502.2E6	620.1E6	1181.950	1122.546
48) AR1260-C	7.595	9.381	458.4E6	557.3E6	1054.357	1098.310
49) AR1260-D	8.039f	9.735	1472.9E6	1481.6E6	1197.064	1108.832m
50) AR1260-E	8.461f	10.281	1126.1E6	1367.5E6	958.178m	1142.195m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

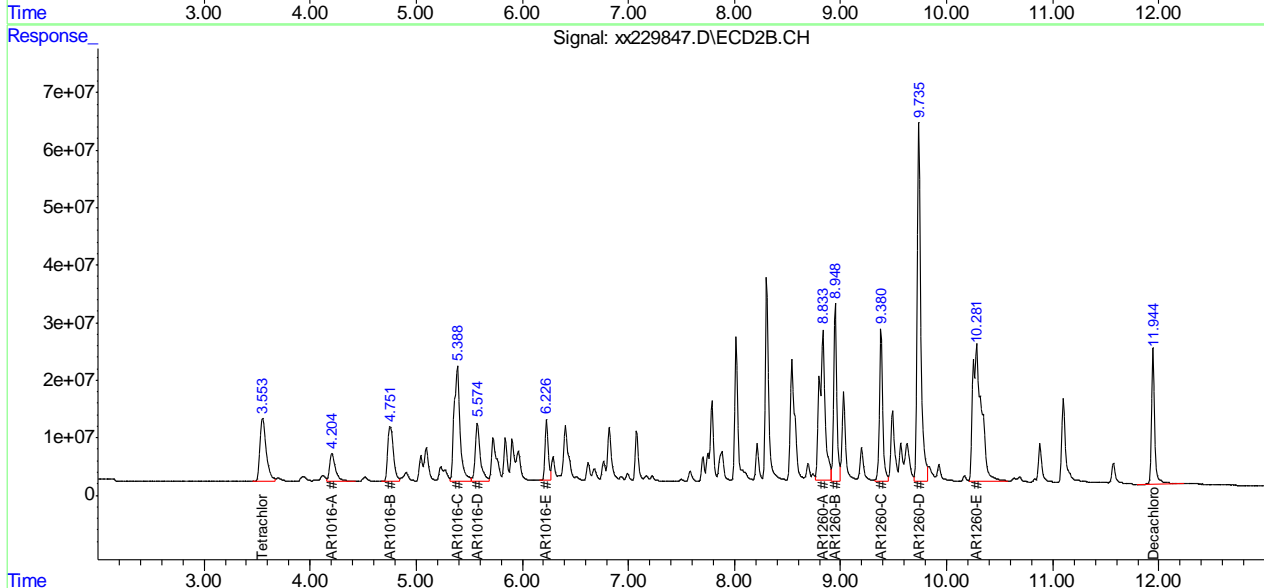
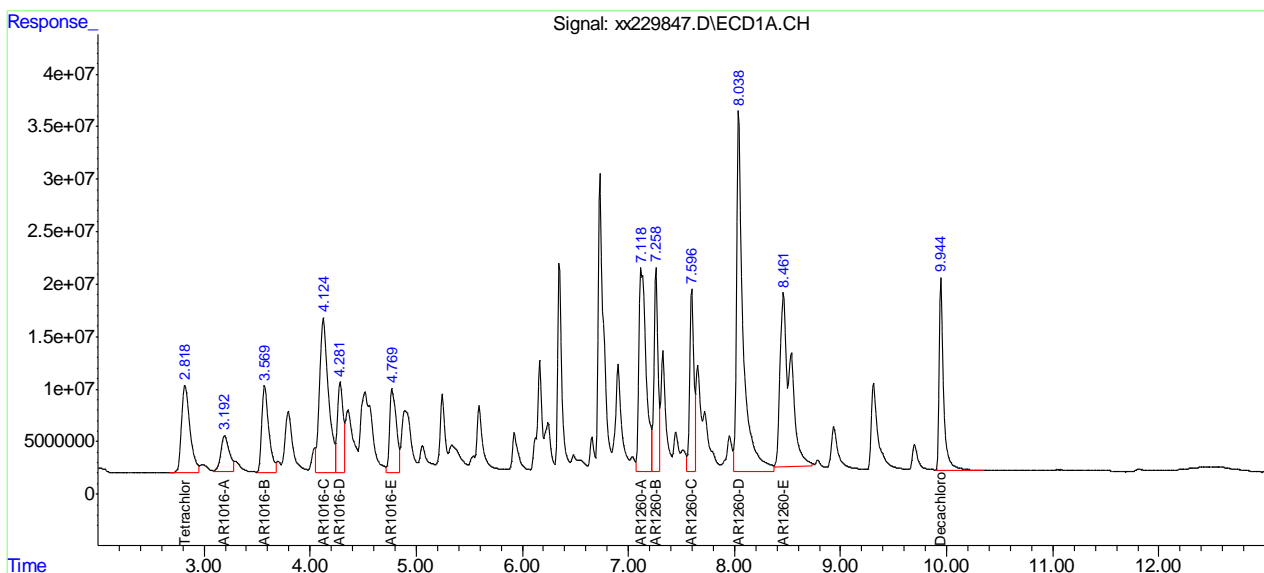
11.6.50
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229847.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 3:38 am
 Operator : edouarda
 Sample : cc6349-1000
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 06 08:43:54 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



11.6.50
11

Manual Integration Approval Summary

Sample Number: GXX6375-CC6349 Method: SW846 8082A
Lab FileID: XX229847.D Analyst approved: 06/06/18 08:59 Summer Kotb
Injection Time: 06/03/18 03:38 Supervisor approved: 06/07/18 09:17 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-A		1	3.19	Split peak
AR1260-E		1	8.46	Split peak
AR1260-A		2	8.83	Split peak
AR1260-D		2	9.74	Split peak
AR1260-E		2	10.28	Split peak

11.6.50.1

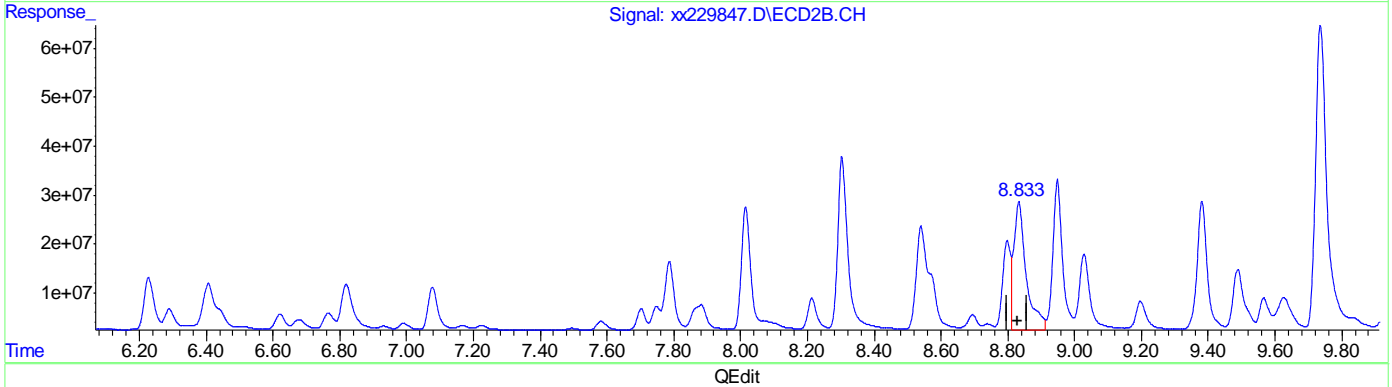
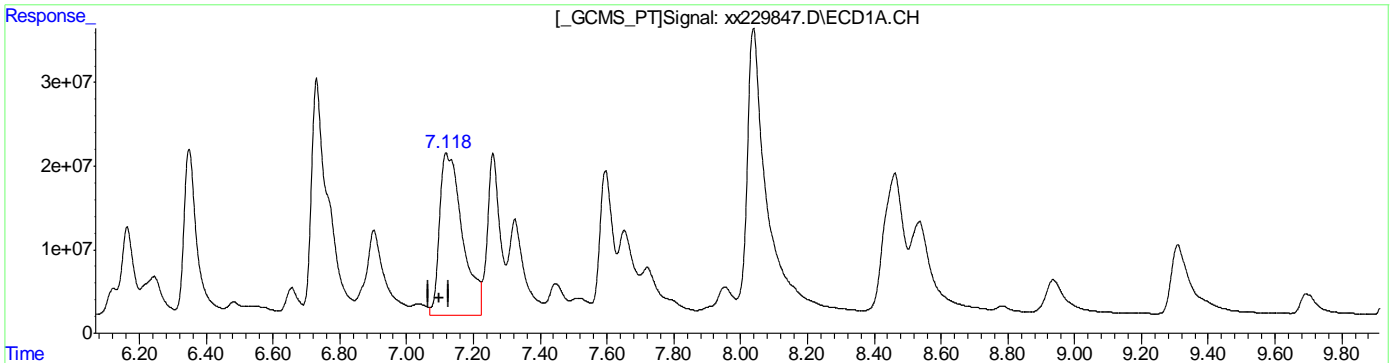
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229847.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 3:38 am
 Operator : edouarda
 Sample : cc6349-1000
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:51:06 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 7.118min 975.920PPB
 response 925304898

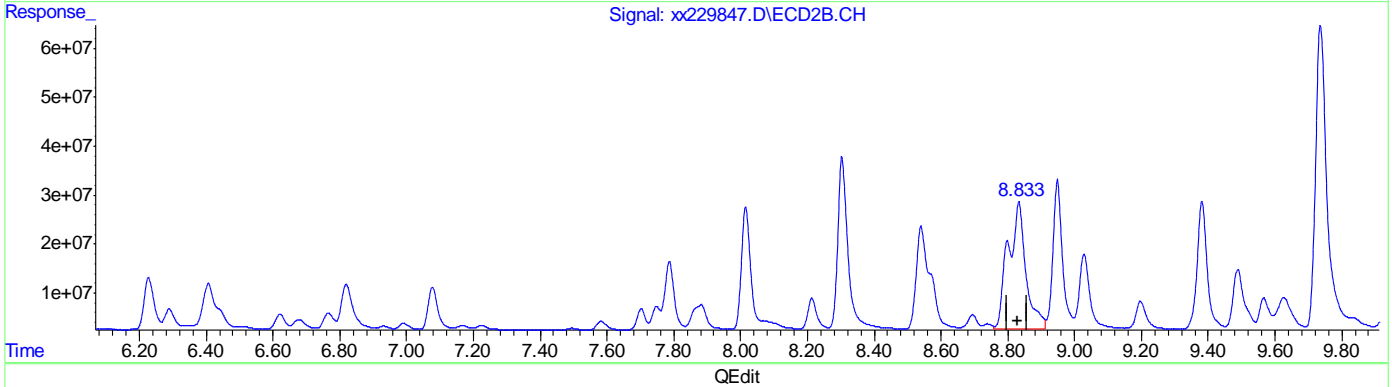
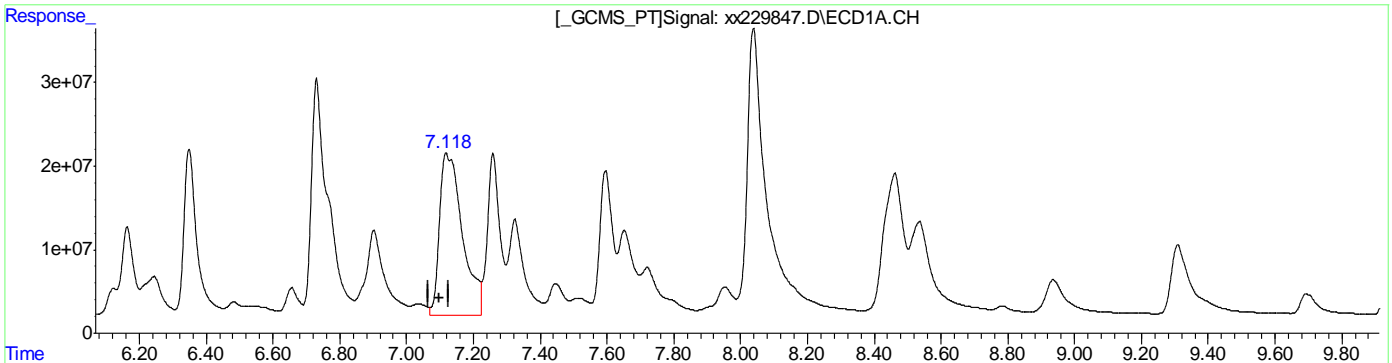
(46) AR1260-A #2
 8.834min 686.712PPB
 response 681237593

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229847.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 3:38 am
 Operator : edouarda
 Sample : cc6349-1000
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:51:06 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 7.118min 975.920PPB
 response 925304898

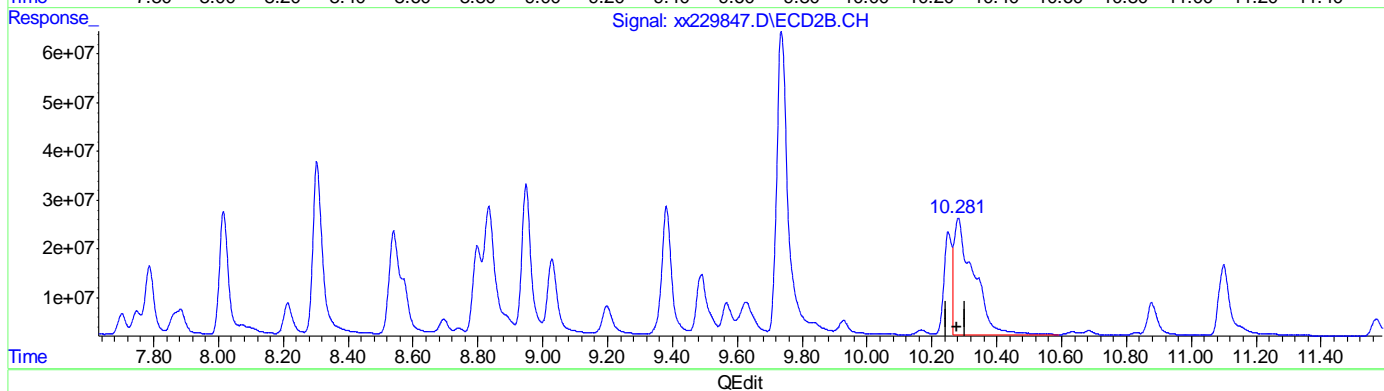
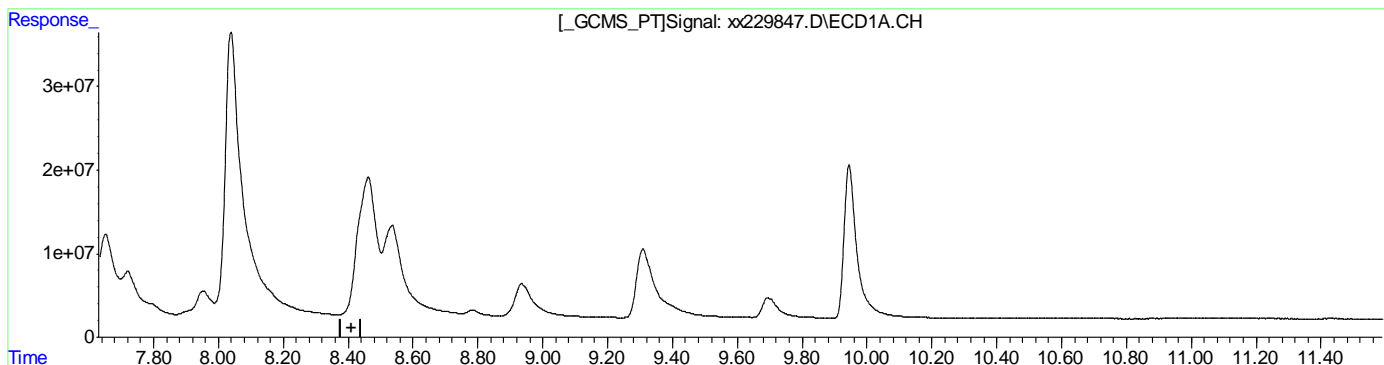
(46) AR1260-A #2
 8.833min 971.000PPB m
 response 963258631

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229847.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 3:38 am
 Operator : edouarda
 Sample : cc6349-1000
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:51:06 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 0.000min 0.000PPB
 response 0

(50) AR1260-E #2
 10.281min 857.548PPB
 response 1026674465

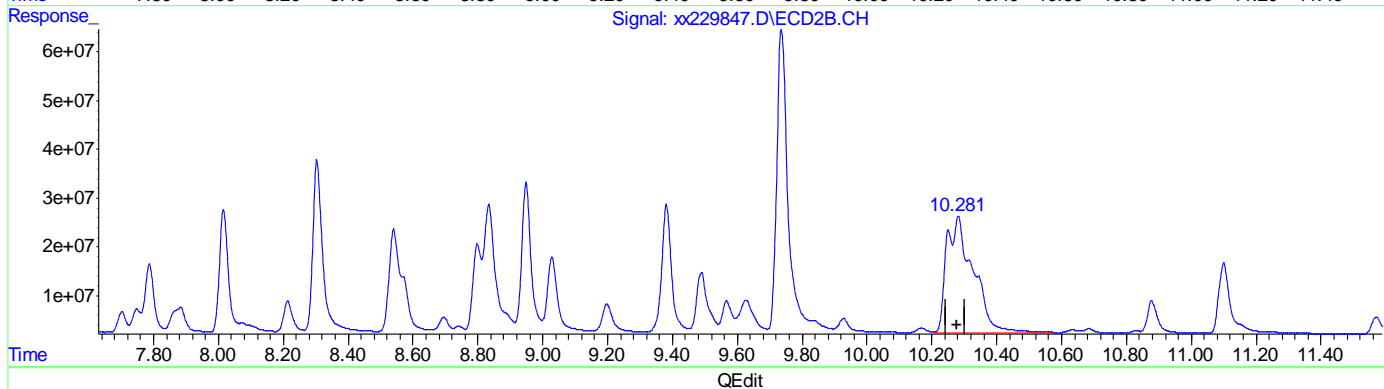
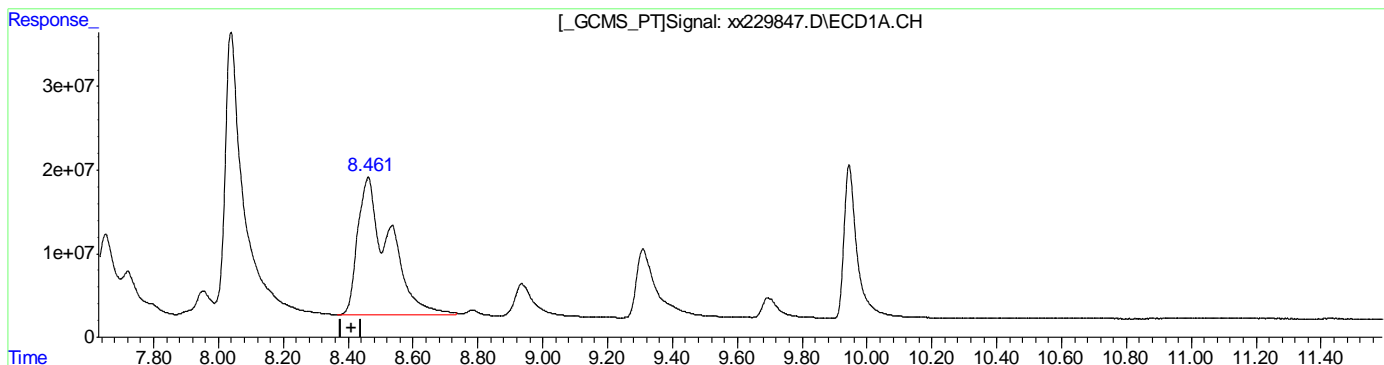
11.6.50.4
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229847.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 3:38 am
 Operator : edouarda
 Sample : cc6349-1000
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:51:06 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 8.461min 958.178PPB m
 response 1126083775

(50) AR1260-E #2
 10.281min 1142.195PPB m
 response 1367460143

(+) = Expected Retention Time
 PCB6349.M Mon Jun 04 08:52:08 2018

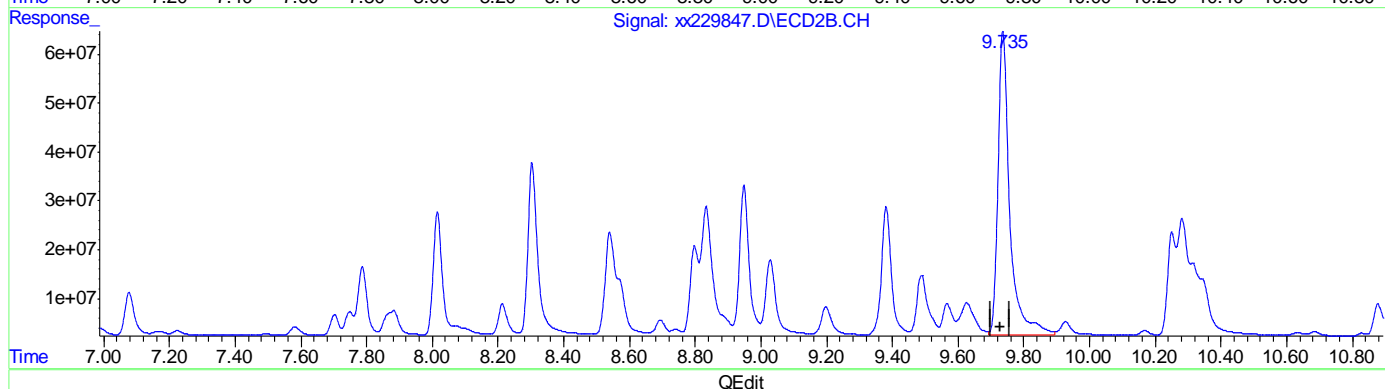
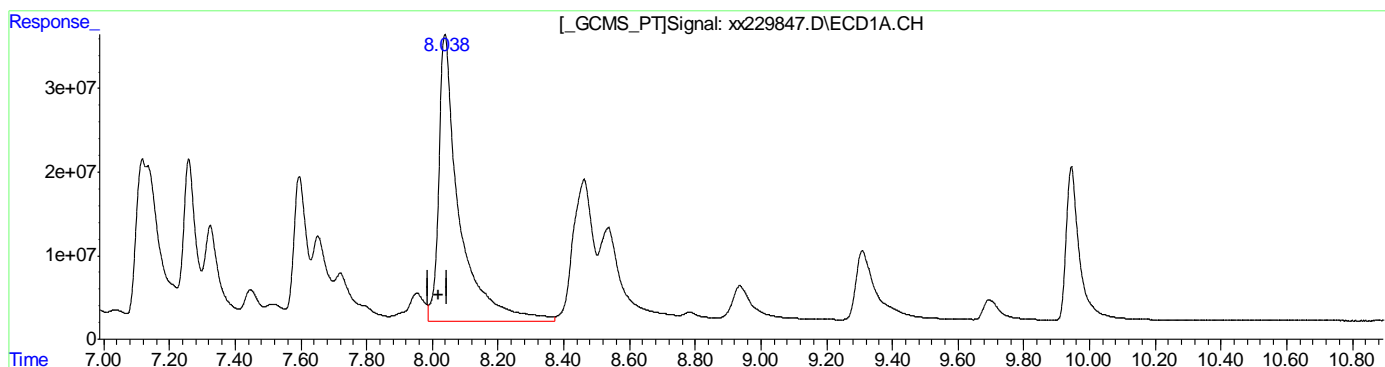
11.6.50.5
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229847.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 3:38 am
 Operator : edouarda
 Sample : cc6349-1000
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:52:05 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



(49) AR1260-D
 8.039min 1197.064PPB
 response 1472889485

(49) AR1260-D #2
 9.736min 1168.196PPB
 response 1560953538

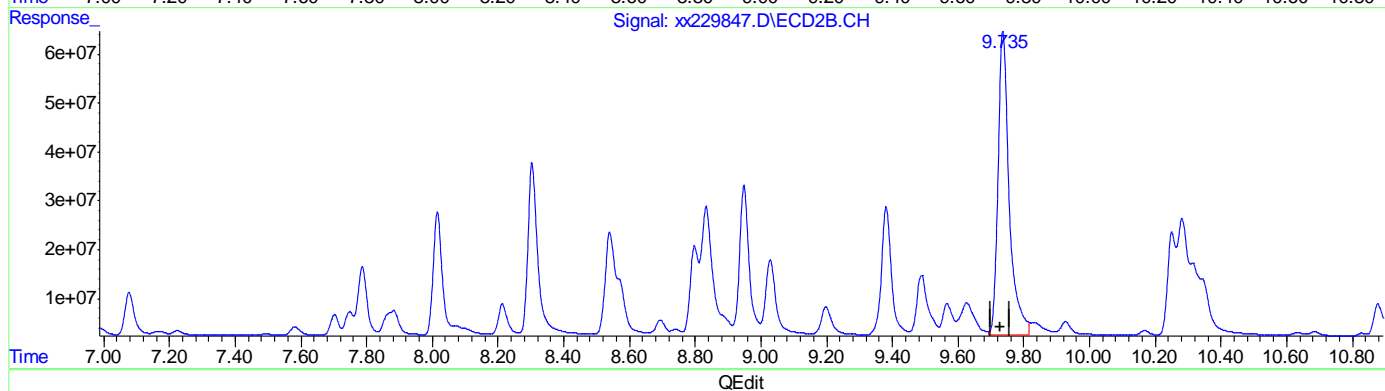
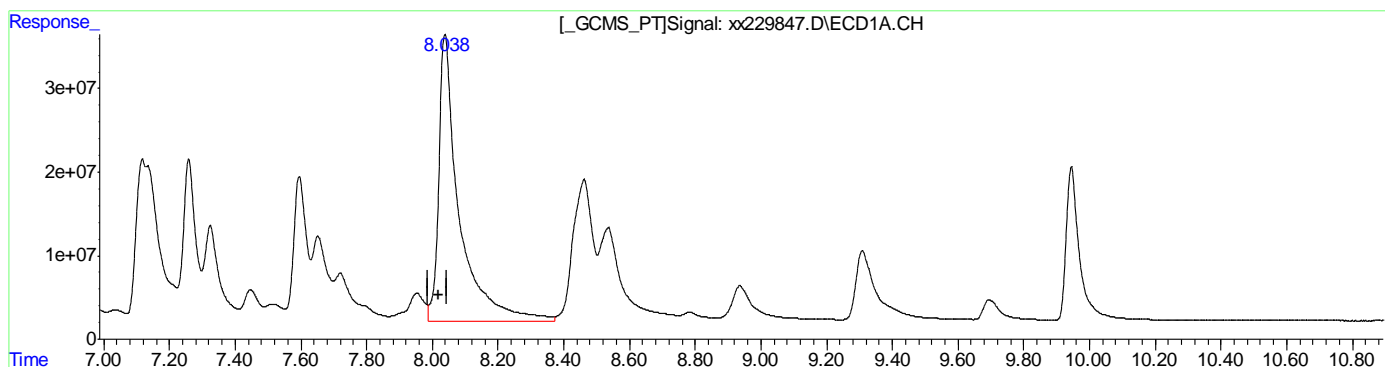
11.6.50.6
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229847.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 3:38 am
 Operator : edouarda
 Sample : cc6349-1000
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:52:05 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



(49) AR1260-D
 8.039min 1197.064PPB
 response 1472889485

(49) AR1260-D #2
 9.735min 1108.832PPB m
 response 1481630838

(+) = Expected Retention Time
 PCB6349.M Mon Jun 04 11:36:46 2018

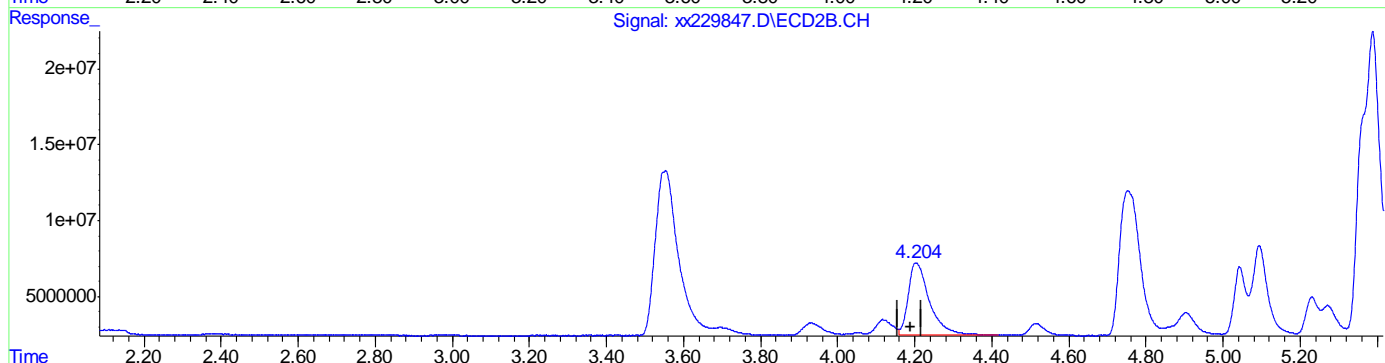
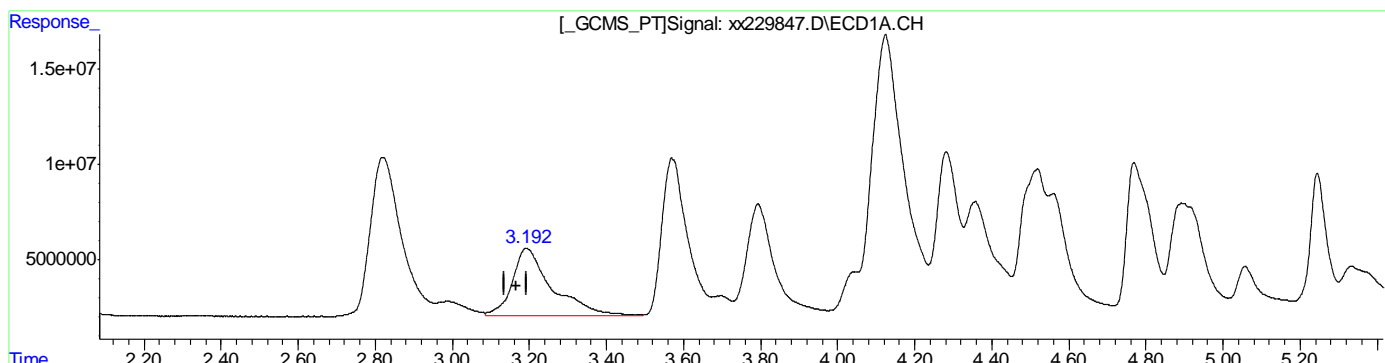
11.6.50.7
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229847.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 3:38 am
 Operator : edouarda
 Sample : cc6349-1000
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 11:36:44 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



(41) AR1016-A
 3.193min 1344.314PPB
 response 257582838

(41) AR1016-A #2
 4.203min 1088.959PPB
 response 181541995

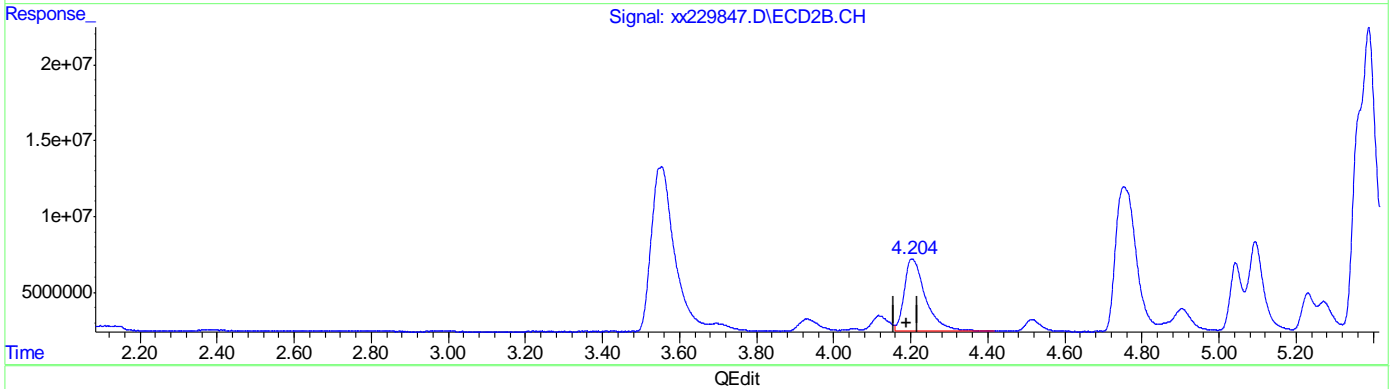
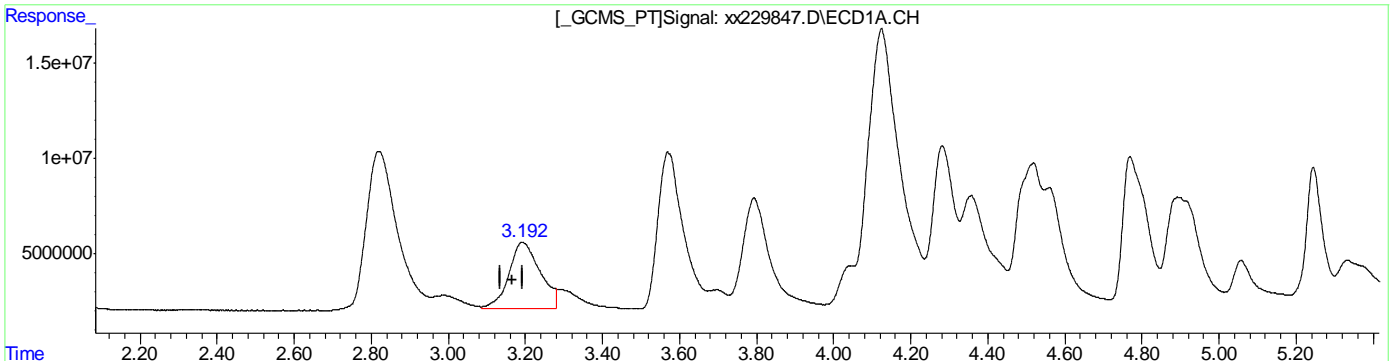
11.6.50.8
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229847.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 3:38 am
 Operator : edouarda
 Sample : cc6349-1000
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 11:36:44 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



(41) AR1016-A
 3.192min 1012.165PPB m
 response 193940016

(41) AR1016-A #2
 4.203min 1088.959PPB
 response 181541995

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229858.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 6:42 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 06 08:44:32 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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...	2.823f	3.550f	238.7E6	230.6E6	22.164	22.970
Spiked Amount	40.000		Recovery	=	55.41%	57.42%
51) S Decachlor...	9.942	11.943	267.5E6	253.9E6	21.370	22.198
Spiked Amount	40.000		Recovery	=	53.42%	55.50%
Target Compounds						
41) AR1016-A	3.198f	4.204f	96654870	93420479	504.438m	560.372
42) AR1016-B	3.576f	4.752	201.4E6	183.3E6	563.798	558.058
43) AR1016-C	4.128f	5.390	408.9E6	400.5E6	486.885m	530.231
44) AR1016-D	4.286f	5.577	173.9E6	171.0E6	565.293	544.284
45) AR1016-E	4.773f	6.229	179.8E6	113.5E6	563.483	515.490
46) AR1260-A	7.125f	8.832	461.7E6	472.6E6	486.915	476.394m
47) AR1260-B	7.261	8.949	256.4E6	306.3E6	603.400	554.580m
48) AR1260-C	7.599	9.381	229.9E6	284.9E6	528.798	561.456
49) AR1260-D	8.043f	9.735	718.2E6	736.2E6	583.716	550.995
50) AR1260-E	8.463f	10.282	583.8E6	711.2E6	496.769m	594.033m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

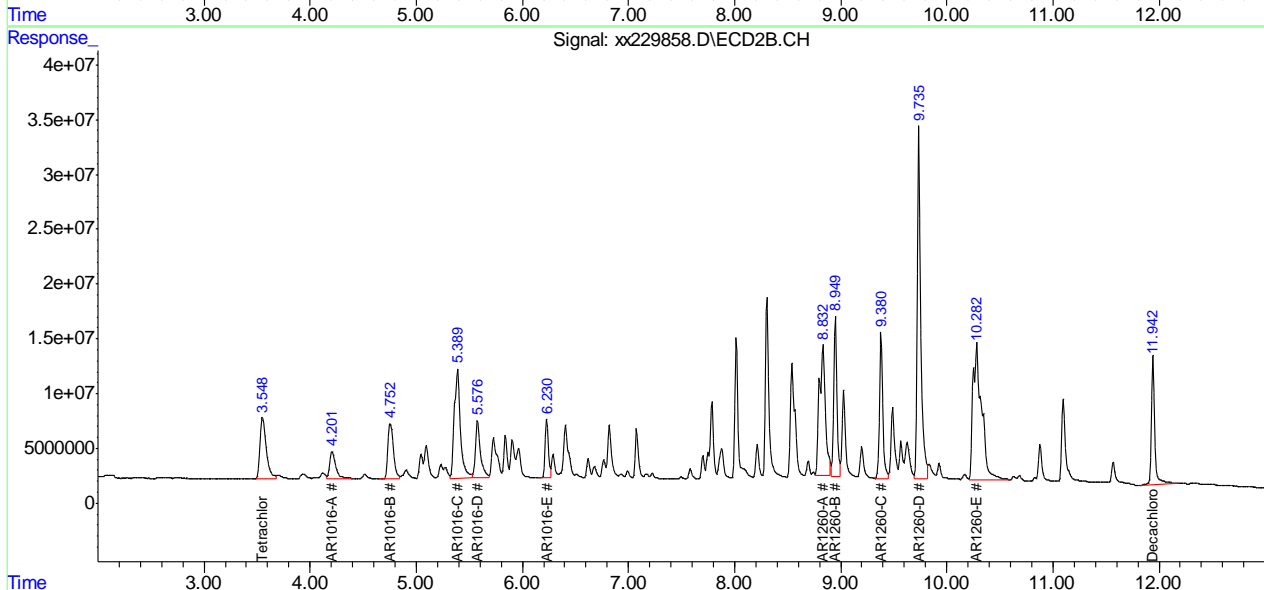
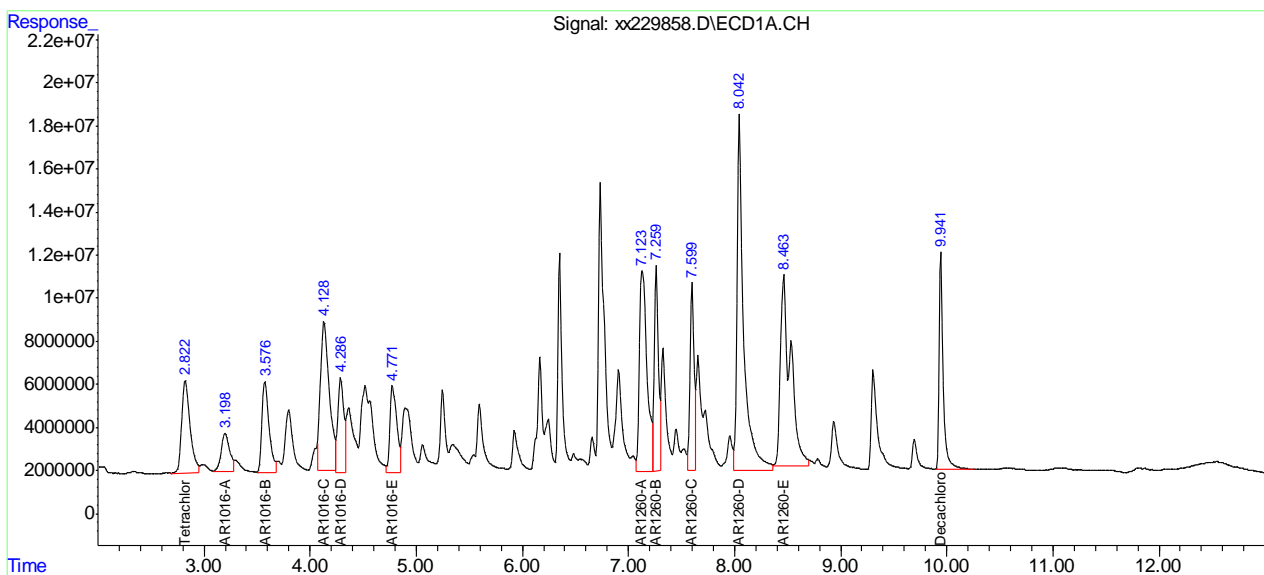
11.6.51
 11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229858.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 6:42 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 06 08:44:32 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



11.6.51
11

Manual Integration Approval Summary

Sample Number: GXX6375-CC6349 Method: SW846 8082A
Lab FileID: XX229858.D Analyst approved: 06/06/18 08:59 Summer Kotb
Injection Time: 06/03/18 06:42 Supervisor approved: 06/07/18 09:17 Gwendolyn Burns

Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-A		1	3.20	Split peak
AR1016-C		1	4.13	Split peak
AR1260-E		1	8.46	Split peak
AR1260-A		2	8.83	Split peak
AR1260-B		2	8.95	Split peak
AR1260-E		2	10.28	Split peak

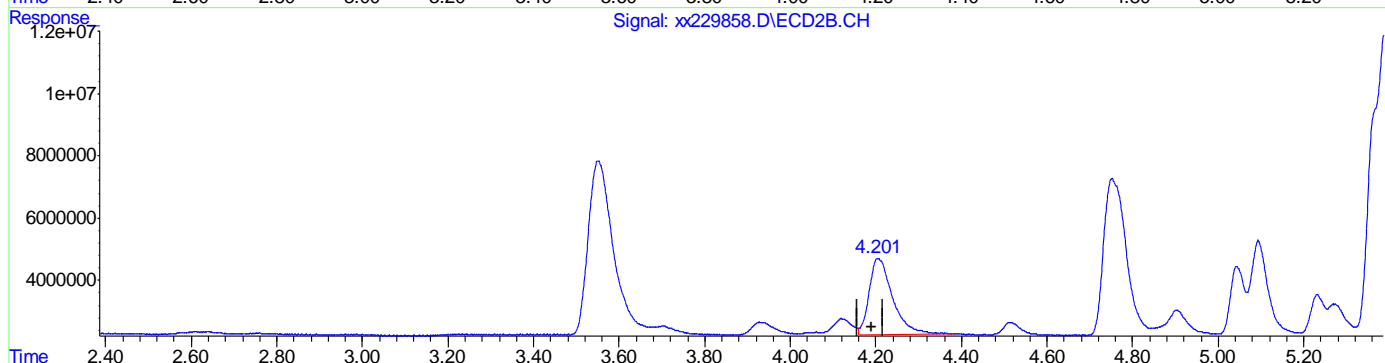
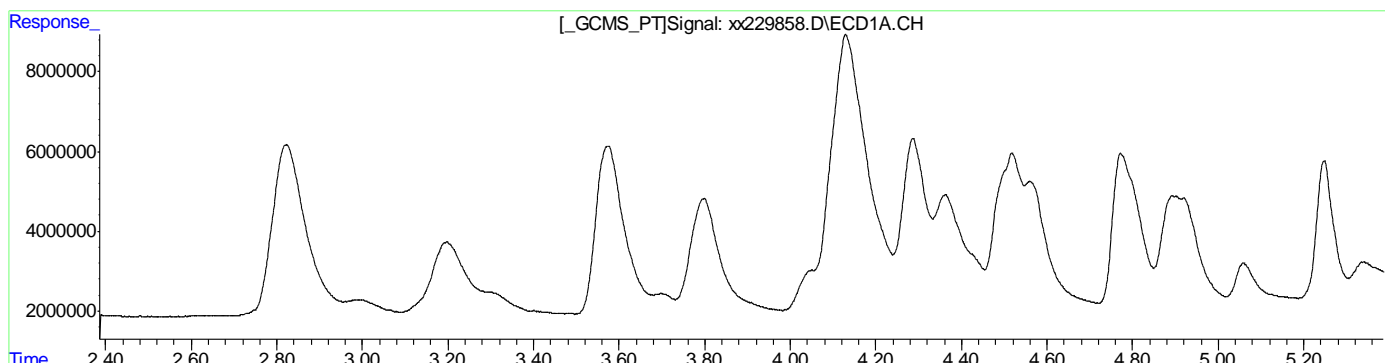
11.6.51.1
11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229858.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 6:42 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:46:17 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



(41) AR1016-A
 0.000min 0.000PPB
 response 0

(41) AR1016-A #2
 4.204min 560.372PPB
 response 93420479

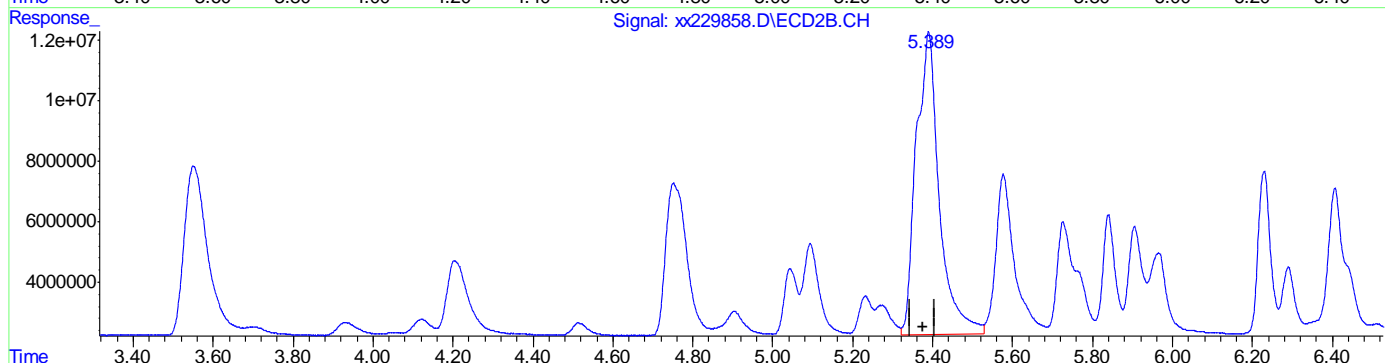
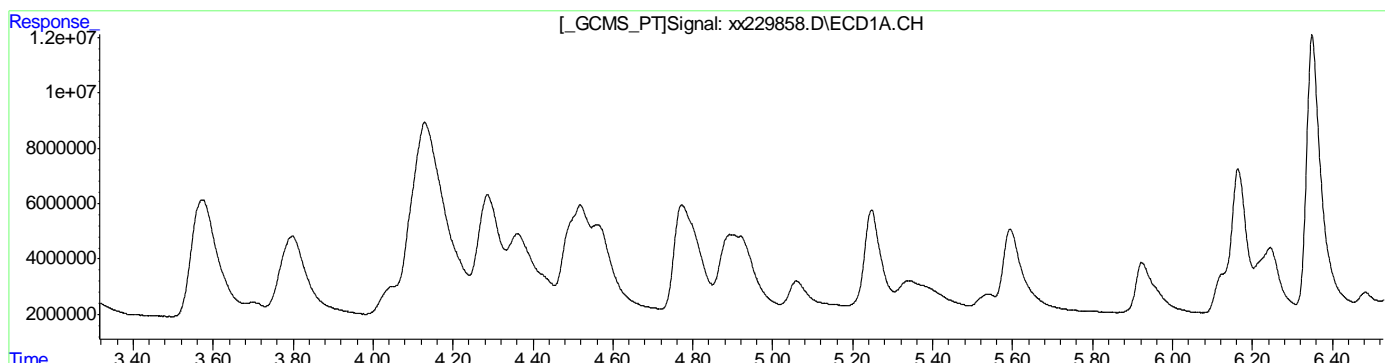
11.6.51.2
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229858.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 6:42 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:46:17 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



11.6513
11

(43) AR1016-C
 0.000min 0.000PPB
 response 0

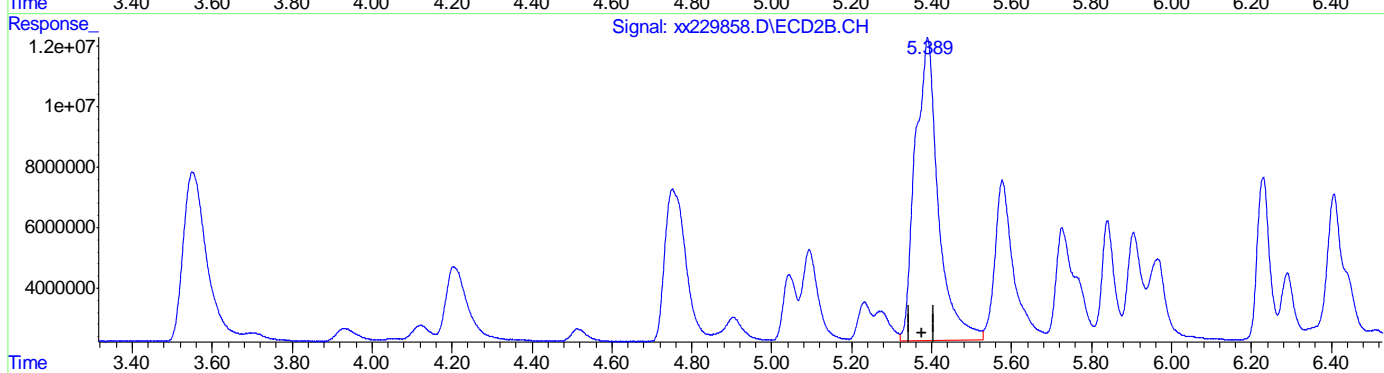
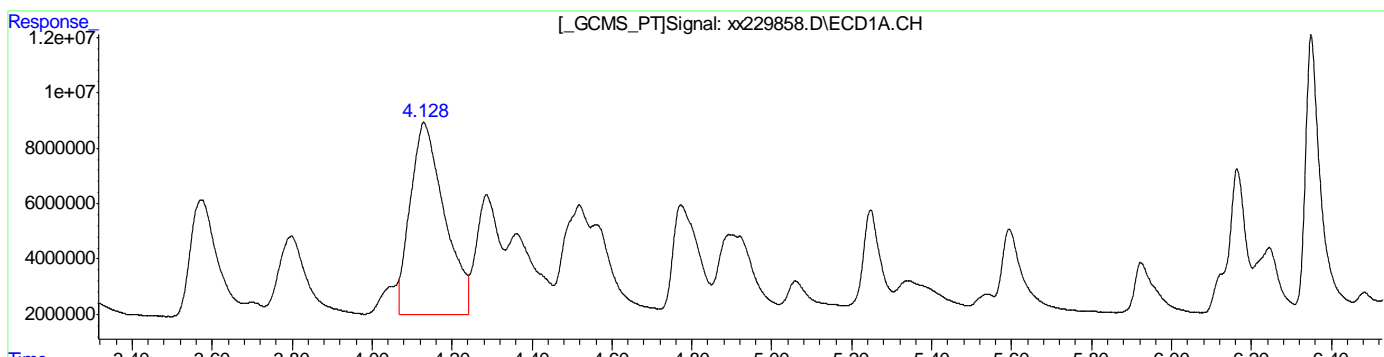
(43) AR1016-C #2
 5.390min 530.231PPB
 response 400471253

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229858.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 6:42 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:46:17 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 4.128min 486.885PPB m
 response 408941777

(43) AR1016-C #2
 5.390min 530.231PPB
 response 400471253

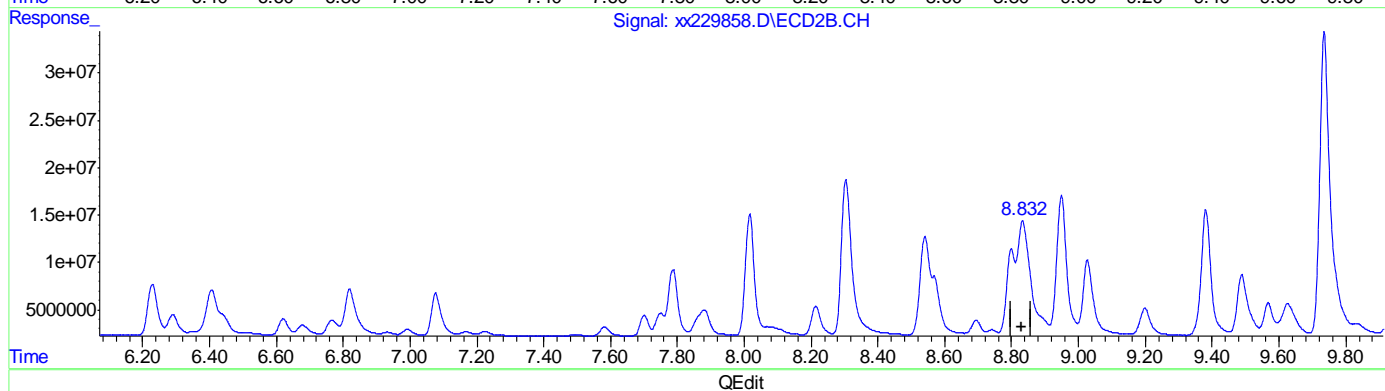
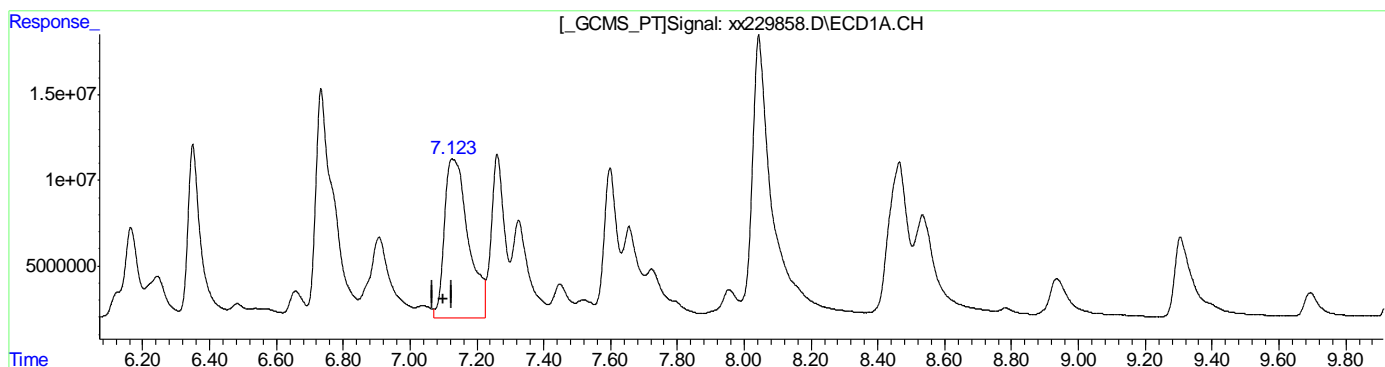
11.6.51.4
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229858.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 6:42 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:46:17 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 7.125min 486.915PPB
 response 461662219

(46) AR1260-A #2
 8.833min 355.235PPB
 response 352402958

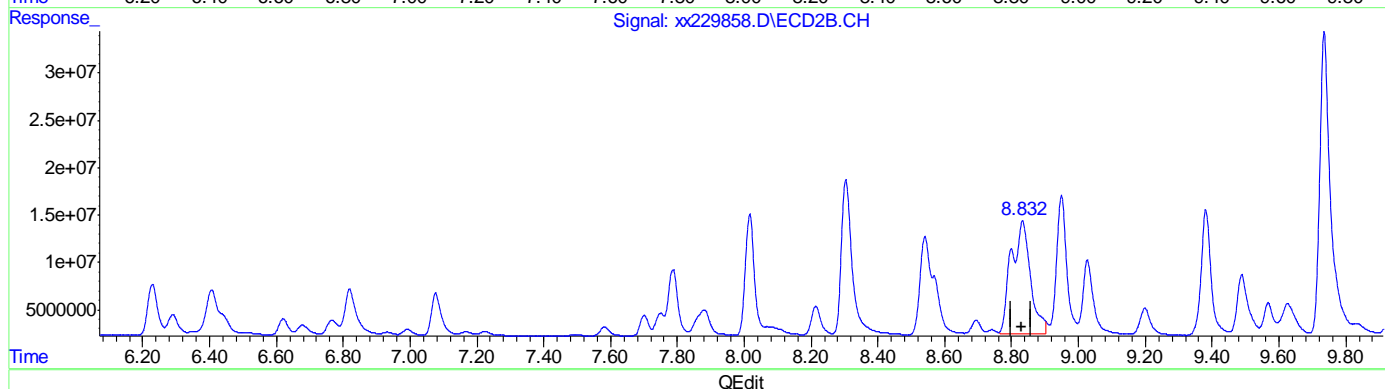
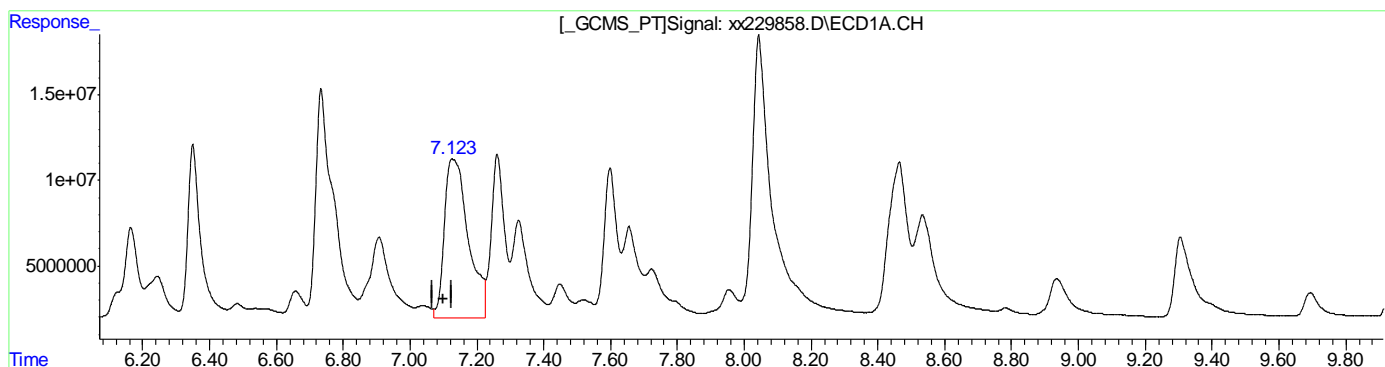
11.6.51.5
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229858.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 6:42 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:46:17 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 7.125min 486.915PPB
 response 461662219

(46) AR1260-A #2
 8.832min 476.394PPB m
 response 472595626

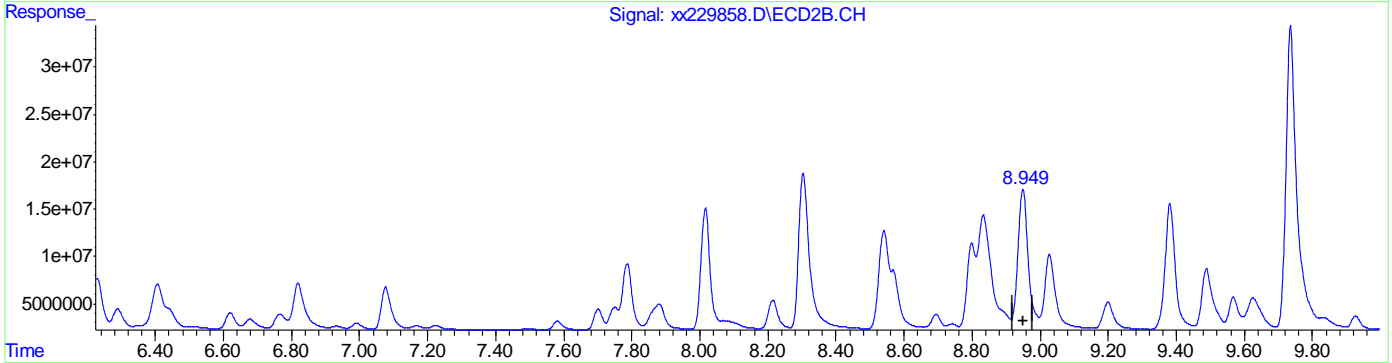
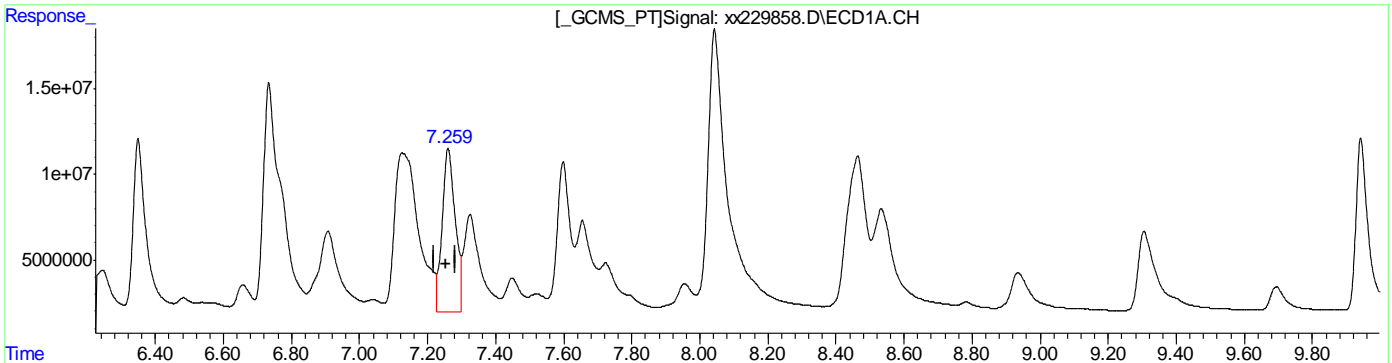
11.6.51.6
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229858.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 6:42 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:46:17 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



(47) AR1260-B
 7.261min 603.400PPB
 response 256391397

(47) AR1260-B #2
 8.949min 573.513PPB
 response 316801051

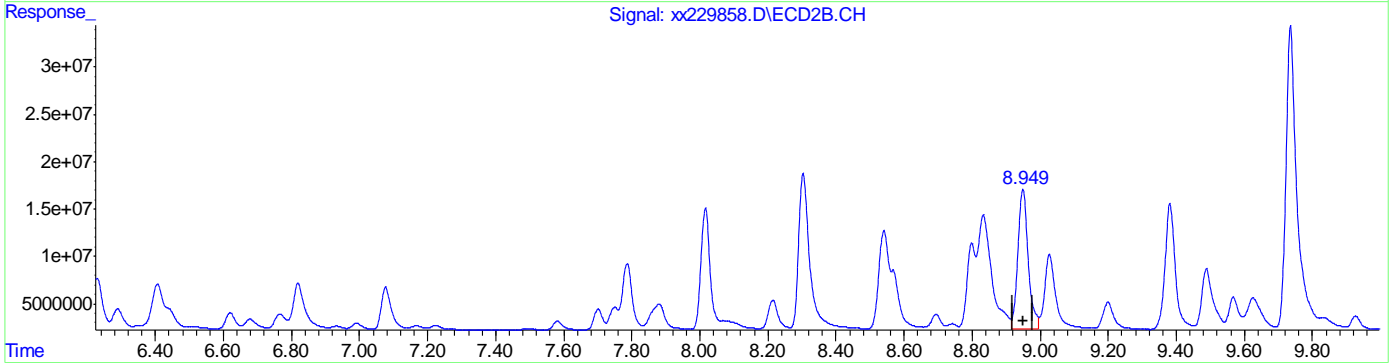
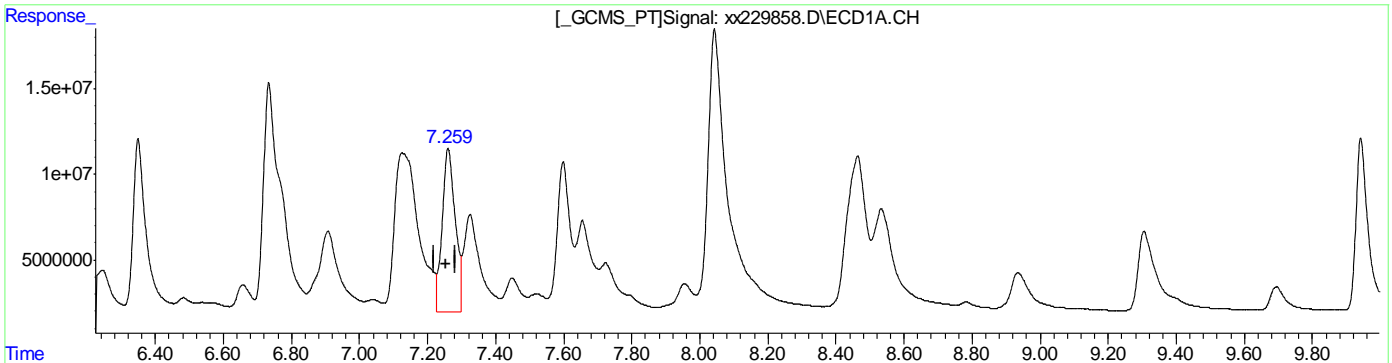
11.6.51.7
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229858.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 6:42 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:46:17 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



(47) AR1260-B
 7.261min 603.400PPB
 response 256391397

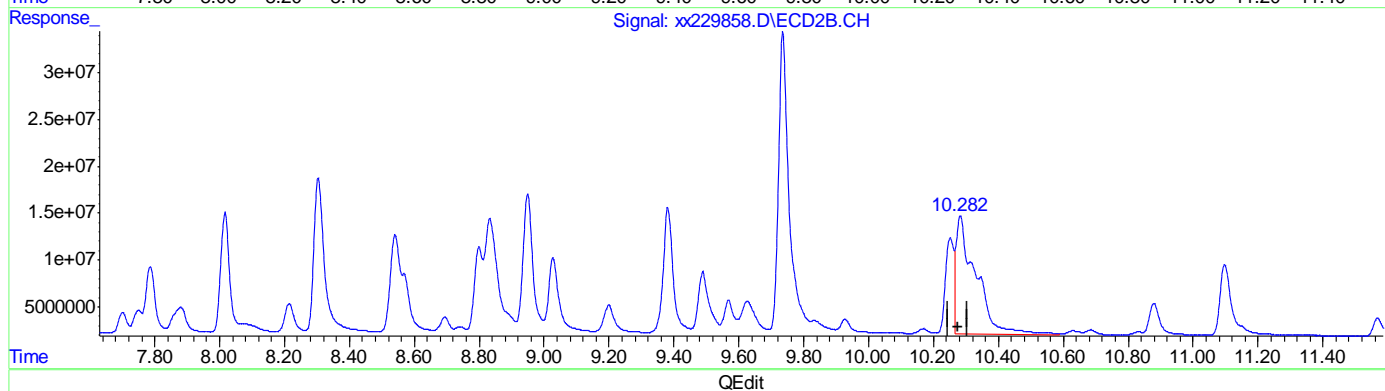
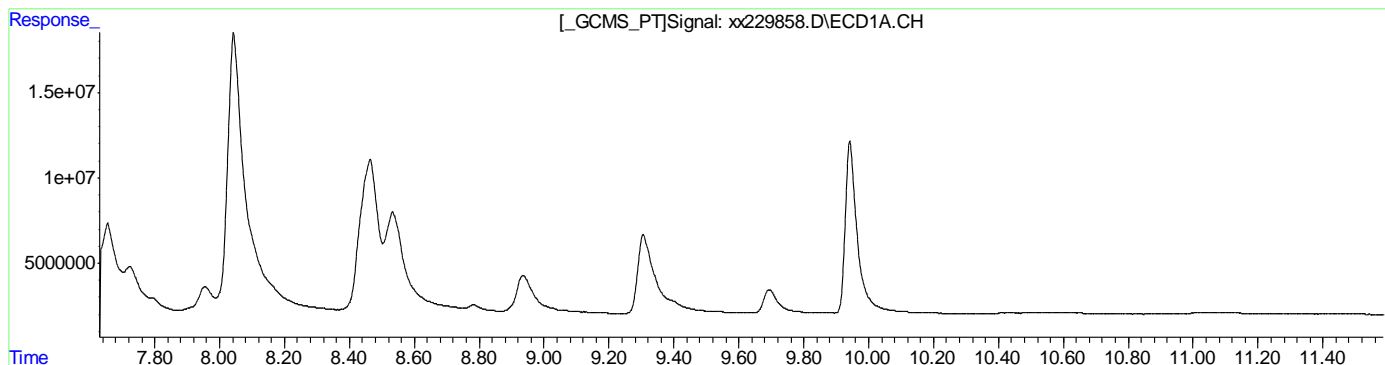
(47) AR1260-B #2
 8.949min 554.580PPB m
 response 306342535

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229858.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 6:42 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:46:17 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 0.000min 0.000PPB
 response 0

(50) AR1260-E #2
 10.283min 447.201PPB
 response 535398422

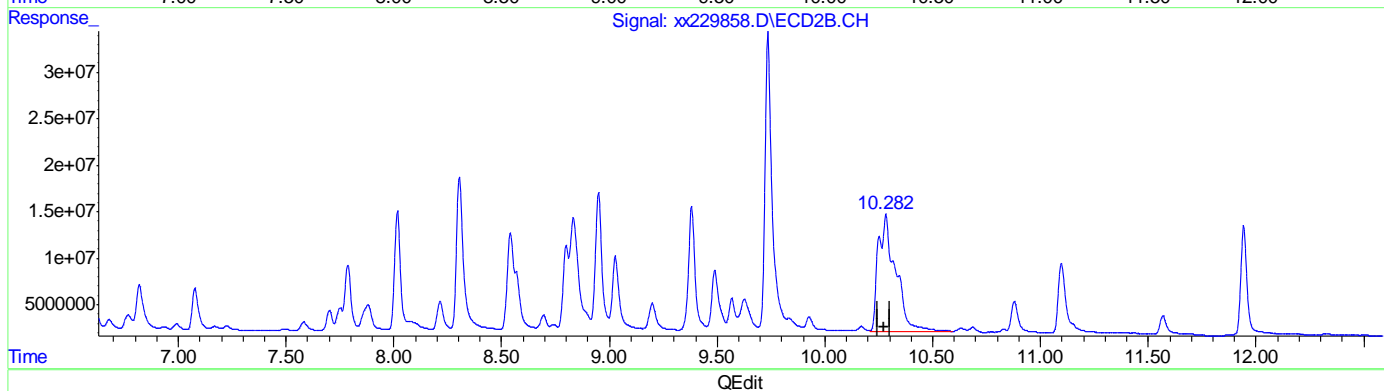
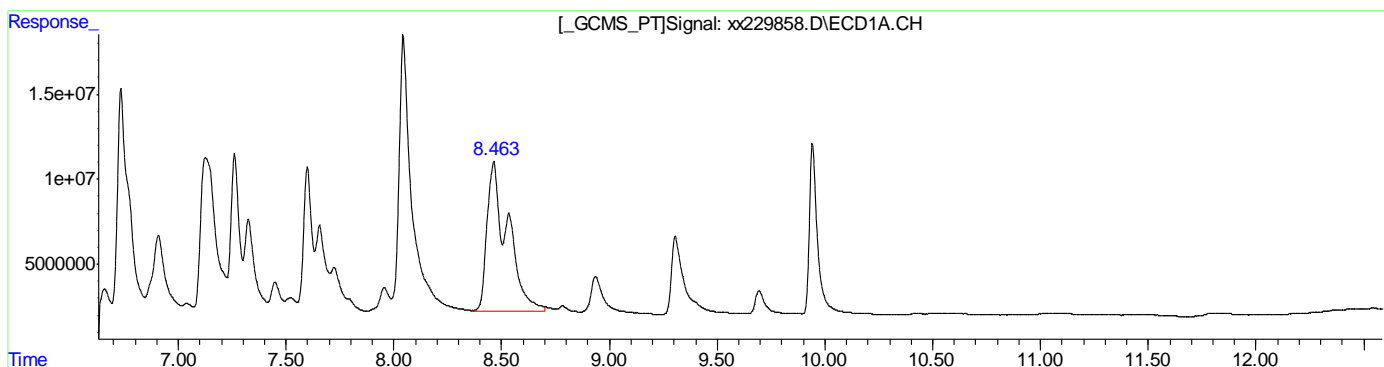
11.6.51.9
 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229858.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 6:42 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:46:17 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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
 8.463min 496.769PPB m
 response 583820680

(50) AR1260-E #2
 10.282min 594.033PPB m
 response 711188207

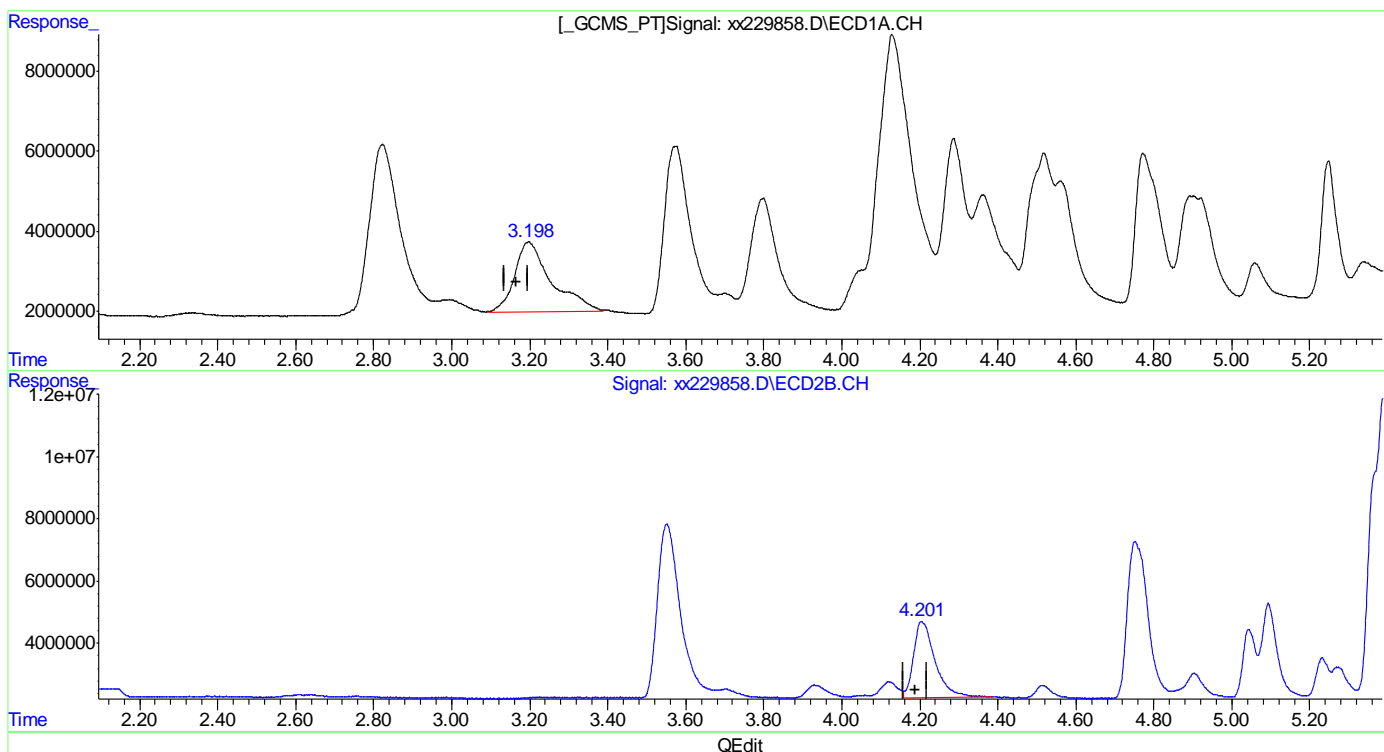
11.6.51.10 11

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229858.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 6:42 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:48:56 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



11.6.51.11
11

(41) AR1016-A
 3.198min 601.885PPB m
 response 115326721

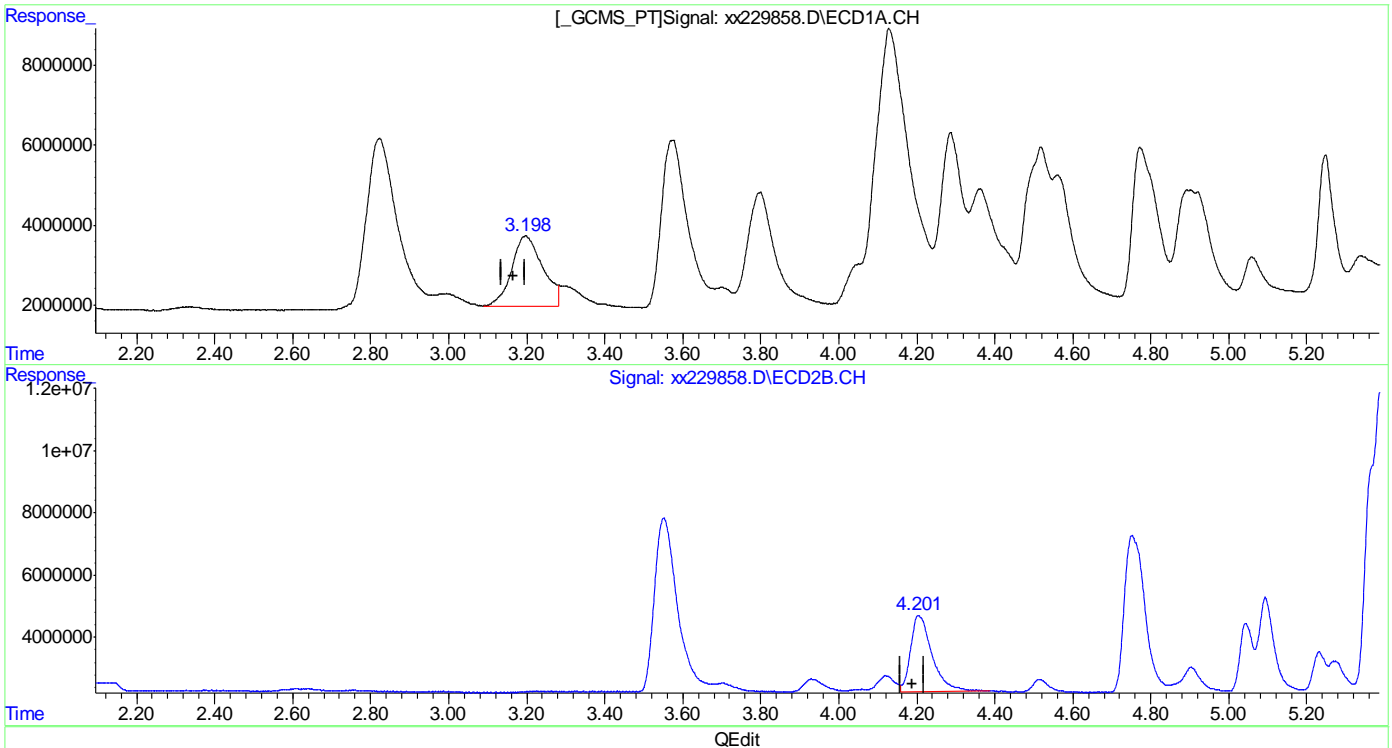
(41) AR1016-A #2
 4.204min 560.372PPB
 response 93420479

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
 Data File : xx229858.D
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03 Jun 2018 6:42 am
 Operator : edouarda
 Sample : cc6349-500
 Misc : op12448,GXX6375,300,,,2,1
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jun 04 08:48:56 2018
 Quant Method : C:\MSDCHEM\1\METHODS\PCB6349.M
 Quant Title :
 QLast Update : Tue May 15 08:36:20 2018
 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)



11.6.51.12
11

(41) AR1016-A
 3.198min 504.438PPB m
 response 96654870

(41) AR1016-A #2
 4.204min 560.372PPB
 response 93420479

Batch ID: 666 1671

Print Analyst Name: Dhara Sarpodia

Date: 04/30/18

Analyst Signature: DL

Standard Data

Standard Data

Lot #	Description	Conc.
SV 17-2432-20	Pest Mix	1ppb
-21	Pest Mix	2ppb
-22	Pest Mix	5ppb
-23	Pest Mix	10ppb
-24	Pest Mix	25ppb
-25	Pest Mix	50ppb
-26	Pest Mix	75ppb

Lot #	Description	Conc.
SV 17-2432-20	Pest Mix	100ppb
SV 17-2362-03	Chlordane	500ppb
-125	Toxaphene	500ppb
SV 17-2362-17	PEM	10-250ppb
SV 17-2432-05	IB	20ppb
-01	Pest STD	5ppm
170405	hexane (Ester)	—

Columns: 2000P 2000P

Method GC, FID

Initial Cal. Method 6/5/16

Injection Volume: 1.00ul

Date Archived: _____

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: 5/5/18

R	Data File	Sample ID	Ext. Batch	Test	MALS T X #	Dilution	IS	SU	Status (Data)	Comments
	6255778	del			1				OK	
	779	23			2				OK	
	780	DE 1671-1	Pest mix	1 st source	3				OK	
	781	-2			4				OK	
	782	-5			5				OK	
	783	-10			6				OK	
	784	DE 1671-25			7				OK	
	785	DE 1671-50			8				OK	
	786	-75			9				OK	
	787	-100			10				OK	
	788	-500	CHL		11				OK	
	789	-500	TOT		12				OK	
	790	DE 1671-25	Pest	2 nd source	13	10			OK	SV 17-2362-17 @ 250ppb
	791	-500	CHL		14				OK	SV 17-2432-19 @ 500ppb
	792	-500	TOT		15				OK	SV 17-2432-18 @ 500ppb
	793	-50	Alcohol		16	20			OK	SV 17-2285-141 @ 1000ppb
	794	-50	Hexan		17	20			OK	SV 17-2285-142 @ 1000ppb

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.

Results must be initialed, dated, and reason applied if not transcription error

©R016-09

Date: 5/25/17

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RETENTION TIME WINDOW DETERMINATION

Instrument ID: GC6G
 Method: SW846 8081B

	Lab FileID	Date/Time	Sample Number	Analyst
Std#1	6G55784.D	04/30/18 12:36	G6G1671-ICC1671	DHARAS
Std#2	6G55796.D	04/30/18 22:36	G6G1672-CC1671	CHRISTP
Std#3	6G55817.D	05/01/18 05:27	G6G1672-CC1671	CHRISTP

Compound	Sig#	Type	RT#1	RT#2	RT#3	Mean	Actual StdDev	Window (+/- 3*StdDev)
Endosulfan-I	2	REG	6.35	6.35	6.35	6.35	0.000	+/- 0.030 ^a
4,4'-DDE	2	REG	6.52	6.52	6.52	6.52	0.000	+/- 0.030 ^a
Dieldrin	2	REG	6.78	6.78	6.77	6.78	0.006	+/- 0.030 ^a
Endrin	2	REG	7.27	7.27	7.27	7.27	0.000	+/- 0.030 ^a
4,4'-DDD	2	REG	7.45	7.45	7.45	7.45	0.000	+/- 0.030 ^a
Endosulfan-II	2	REG	7.61	7.61	7.61	7.61	0.000	+/- 0.030 ^a
4,4'-DDT	2	REG	7.98	7.98	7.98	7.98	0.000	+/- 0.030 ^a
Endrin aldehyde	2	REG	8.18	8.18	8.18	8.18	0.000	+/- 0.030 ^a
Endosulfan sulfate	2	REG	8.64	8.64	8.64	8.64	0.000	+/- 0.030 ^a
Methoxychlor	2	REG	9.21	9.21	9.21	9.21	0.000	+/- 0.030 ^a
Mirex	2	REG	9.52	9.52	9.52	9.52	0.000	+/- 0.030 ^a
Endrin ketone	2	REG	9.59	9.59	9.58	9.59	0.006	+/- 0.030 ^a

(a) Default minimum StdDev of .01 minutes employed.

11.7.1
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RETENTION TIME WINDOW DETERMINATION

Instrument ID: GC6G
 Method: SW846 8081B

Std#	Lab FileID	Date/Time	Sample Number	Analyst
Std#1	6G55784.D	04/30/18 12:36	G6G1671-ICC1671	DHARAS
Std#2	6G55796.D	04/30/18 22:36	G6G1672-CC1671	CHRISTP
Std#3	6G55817.D	05/01/18 05:27	G6G1672-CC1671	CHRISTP

Compound	Sig#	Type	RT#1	RT#2	RT#3	Mean	Actual StdDev	Window (+ /- 3*StdDev)
1-Bromo-2-nitrobenzene	1	ISTD	1.94	1.94	1.94	1.94	0.000	+ /- 0.030 ^a
1-Bromo-2-nitrobenzene	2	ISTD	2.15	2.14	2.15	2.15	0.006	+ /- 0.030 ^a
Tetrachloro-m-xylene	1	SURR	2.53	2.53	2.53	2.53	0.000	+ /- 0.030 ^a
Decachlorobiphenyl	1	SURR	9.84	9.84	9.84	9.84	0.000	+ /- 0.030 ^a
Tetrachloro-m-xylene	2	SURR	2.93	2.93	2.93	2.93	0.000	+ /- 0.030 ^a
Decachlorobiphenyl	2	SURR	11.72	11.72	11.72	11.72	0.000	+ /- 0.030 ^a
Hexachlorobenzene	1	REG			2.86			NOT ENOUGH POINTS
alpha-BHC	1	REG	3.00	3.00	3.00	3.00	0.000	+ /- 0.030 ^a
gamma-BHC (Lindane)	1	REG	3.29	3.29	3.29	3.29	0.000	+ /- 0.030 ^a
beta-BHC	1	REG	3.36	3.36	3.36	3.36	0.000	+ /- 0.030 ^a
delta-BHC	1	REG	3.54	3.54	3.54	3.54	0.000	+ /- 0.030 ^a
Heptachlor	1	REG	3.78	3.78	3.78	3.78	0.000	+ /- 0.030 ^a
Aldrin	1	REG	4.11	4.11	4.11	4.11	0.000	+ /- 0.030 ^a
Alachlor	1	REG			4.25			NOT ENOUGH POINTS
Heptachlor epoxide	1	REG	4.81	4.82	4.81	4.81	0.006	+ /- 0.030 ^a
gamma-Chlordane	1	REG	4.97	4.98	4.98	4.98	0.006	+ /- 0.030 ^a
alpha-Chlordane	1	REG	5.15	5.15	5.15	5.15	0.000	+ /- 0.030 ^a
4,4'-DDE	1	REG	5.26	5.26	5.26	5.26	0.000	+ /- 0.030 ^a
Endosulfan-I	1	REG	5.32	5.32	5.32	5.32	0.000	+ /- 0.030 ^a
Dieldrin	1	REG	5.64	5.65	5.64	5.64	0.006	+ /- 0.030 ^a
Endrin	1	REG	5.96	5.97	5.96	5.96	0.006	+ /- 0.030 ^a
4,4'-DDD	1	REG	6.09	6.09	6.08	6.09	0.006	+ /- 0.030 ^a
Endosulfan-II	1	REG	6.28	6.29	6.28	6.28	0.006	+ /- 0.030 ^a
4,4'-DDT	1	REG	6.50	6.51	6.50	6.50	0.006	+ /- 0.030 ^a
Endrin aldehyde	1	REG	6.91	6.91	6.91	6.91	0.000	+ /- 0.030 ^a
Methoxychlor	1	REG	7.29	7.29	7.28	7.29	0.006	+ /- 0.030 ^a
Mirex	1	REG	7.44	7.44	7.44	7.44	0.000	+ /- 0.030 ^a
Endosulfan sulfate	1	REG	7.59	7.59	7.59	7.59	0.000	+ /- 0.030 ^a
Endrin ketone	1	REG	8.03	8.03	8.03	8.03	0.000	+ /- 0.030 ^a
Hexachlorobenzene	2	REG			3.42			NOT ENOUGH POINTS
alpha-BHC	2	REG	3.56	3.56	3.56	3.56	0.000	+ /- 0.030 ^a
gamma-BHC (Lindane)	2	REG	3.97	3.97	3.97	3.97	0.000	+ /- 0.030 ^a
beta-BHC	2	REG	4.05	4.05	4.05	4.05	0.000	+ /- 0.030 ^a
delta-BHC	2	REG	4.43	4.43	4.43	4.43	0.000	+ /- 0.030 ^a
Heptachlor	2	REG	4.53	4.53	4.53	4.53	0.000	+ /- 0.030 ^a
Alachlor	2	REG			4.78			NOT ENOUGH POINTS
Aldrin	2	REG	4.96	4.96	4.96	4.96	0.000	+ /- 0.030 ^a
Heptachlor epoxide	2	REG	5.76	5.76	5.76	5.76	0.000	+ /- 0.030 ^a
gamma-Chlordane	2	REG	6.04	6.04	6.04	6.04	0.000	+ /- 0.030 ^a
alpha-Chlordane	2	REG	6.26	6.26	6.26	6.26	0.000	+ /- 0.030 ^a

11.7.1
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Standard Data

Standard Data

Lot #	Description	Conc.

Lot #	Description	Conc.
182432-07	IB	20 ppb
	PC-31 ISID	5 ppm
	PC-31 MIX	75 ppm
	PC-31 MIX	50 ppm
	PCM	50 ppm
182432-07	HCXAME (P/MCER)	-

Columns: ZBCLPT/ZBCLPTT

Method 8081

Initial Cal. Method 6PST1671

Injection Volume: 1.0 uL

Date Archived:

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: 6/6/18

R	Data File	Sample ID	Ext. Batch	Test	MALS T X	Dilution	IS	SU	Status (Data)	Comments
	6G56976	DDT			1		/	/	OK	
	977	CC1671-50			4		/	/	OK	
	978	CC1671-500			30		/	/	not needed	
	979	IB			3		/	/	OK	
	980	OP12449-MB1	12449	tc147 8081 W	51		/	/	OK	
	981	OP12449-RS1			52		/	/	OK	
	982	OP12449-RSD			53		/	/	OK	
	983	JC67003-1			54		/	/	OK	
	984	-2			55		/	/	OK	
	985	-3			56		/	/	OK	
	986	-7			57		/	/	OK	
	987	JC66957-3			58		/	/	OK	
	988	JC67110-3			59		/	/	OK	
	989	-4			60		/	/	OK	
	990	OP12449-MS			61		/	/	OK	
	991	OP12449-MSD			62		/	/	OK	
	992	JC67110-5			63		/	/	OK	
	993	JC66951-4	12431	tc147 8081 S	64		/	/	OK	
	994	-5			65		/	/	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 spikeouts 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: G6G1701

Date: 6/6/18

Print Analyst Name: Rebecca Krug

Analyst Signature: RK

Lot #	Description	Conc.

Lot #	Description	Conc.
12431	7B	20 ppb
12431	PC-31 LSTD	1 ppm
12431	PC-31 MIA	25 ppb
12431	PC-31 MIA	50 ppb
12431	PC-31	1-25 ppb
12431	hexane (EPA)	-

Columns: ZBCLPT/ZBCLPT

Method 8081

Initial Cal. Method 6PST1671

Injection Volume: 1.0 uL

Date Archived:

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: 6/2/18

R	Data File	Sample ID	Ext. Batch	Test	MALS T X #	Dilution	IS	SU	Status (Data)	Comments
	6656995	JC66951-6	12431	tcl 8081	5	66	/	/	OK	
	996	-7				67	/	/	OK	
	997	-8				68	/	/	OK	
	998	JC67120-5	12508			69	5	/	OK	
	999	dat				1	/	/	OK	
	6657000	CC167175				2	/	/	OK	
	001	1B				3	/	/	OK	
	002	OP12567.MSI	12567	8081 tcl	5	70	/	/	OK	
	003	BSI				71	/	/	OK	
	004	JC67252-1				72	/	/	OK	
	005	3				73	/	/	OK	
	006	OP12567.MS				74	/	/	OK	
	007	M40				75	/	/	OK	
	008	JC67262-1				76	/	/	OK	
	009	JC67308-1				77	/	/	OK	
	010	2				78	/	/	OK	
	011	3				79	/	/	OK	
	012	JC67262-1				80	5	/	OK	
	013	1				81	100	/	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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SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: C8PC-511

Print Analyst Name: Dhruv Surani

Date: 06/11/18

Analyst Signature: DIC

Standard Data

Standard Data

Lot #	Description	Conc.
SV 18-2412-22	Pest Mix	1 Ppb
-21		2 Ppb
-24		5 Ppb
-23		20 Ppb
-24		25 Ppb
-25		50 Ppb
-26		75 Ppb

Lot #	Description	Conc.
SV 18-2412-01	Pest ESTD	5 PPM
MS 18-2412-05	PCM	50 (50 Ppb)
-02	23	20 Ppb
SV 18-2412-28	Pest 2nd source	250 Ppb
SV 18-2412-40	Toxiflame 1st sm	500 Ppb
-47	chloroform 1st sm	500 Ppb
18-2412-5	Hexane (1st sm)	-

Columns: 20CL02 | 20CL02

Method: Pest. 608

Initial Cal. Method: 8 PST 51

Injection Volume: 1.00

Date Archived:

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: 6/3/18

R	Data File	Sample ID	Ext. Batch	Test	MALS T X	Dilution	IS	SU	Status (Data)	Comments
	87158-024	delt			1				OK	
	805	delt			1				OK	
	806	23			2				OK	
	807	ESTD-1	Pest mix	1st source	3				OK	
	808	-2			4				OK	
	809	-5			5				OK	
	810	-10			6				OK	
	811	ESTD-25			7				OK	
	812	ESTD-50			8				OK	
	813	-75			9				OK	
	814	-100			10				OK	SV 18-2412-27
	815	-500	CHL		11				OK	
	816	-500	TOX		12				OK	
	817	ESTD-25	Pest	2nd source	13	10			OK	
	818	-500	CHL		14				OK	SV 18-2412-19 @ 500 Ppb
	819	-500	TOX		15				OK	SV 18-2412-19 @ 500 Ppb
	820	-50	ALY		16	20			OK	SV 18-2412-14 @ 1000 Ppb
	821	-50	Hex		17	20			OK	SV 18-2412-16 @ 1000 Ppb

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: QR016-09
Rev. Date: 5/25/17

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11.7.3 11



SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: 080-513

Print Analyst Name: Dhara Superior

Date: 06/12/18

Analyst Signature: DIC

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
11-214	pest 2370	5 ppm
-22A	pest mix	25 ppm
-227	pest mix	50 ppm
-25	PEM	50 ppm
-202	IB	20 ppm
17005	Hexane (H2O) -	-

Columns: ZHLOW 23CLOW

Method 8081

Initial Cal. Method 8 PST 511

Injection Volume: 1.0ul

Date Archived: _____

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: 6/13/18

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	IS	SU	Status (Data)	Comments
	82158222	addt				1				OK	
	833	ccs11-50				4				OK	ADMC, DOME, AIDMNH
	837	IB				3				OK	
	835	OP12576-MB2	12576-2	MDL5 font	W	11				OK	
	836	JCG3805-20C				12				OK	834
	837	-20C				13				OK	835
	838	-20C				14				OK	836
	839	-20C				15				OK	837
	840	-20C				16				OK	838
	841	-20C				17				OK	839
	842	OP12466-MB2	12466-2	MDL5 font	S	18				OK	
	843	JCG3805-20C				19				OK	834
	844	-20C				20				OK	835
	845	-20C				21				OK	836
	846	-20C				22				OK	837
	847	-20C				23				OK	838
	848	-20C				24				OK	839
	849	OP12449-MB1	12449			25				OK	
	850	JCG7003-1				26	S			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 signouts 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: Gxx6349

Print Analyst Name: Rebecca Krug

Date: 5/14/18

Analyst Signature: RK

Standard Data

Standard Data

Lot #	Description	Conc.
SV17.2285.85A	Ar1016/1260	50 ppb
.85B	Ar1016/1260	250 ppb
SV18.2432.34A	Ar1016/1260	500 ppb
.36B	Ar1016/1260	1000 ppb
SV17.2285.85C	Ar1016/1260	2000 ppb
.85F	Ar1016/1260	3000 ppb
SV18.2432.05	IB	20 ppb

Lot #	Description	Conc.
SV17.2362.20	Ar1221/1254	1000 ppb
.21	Ar1232/1262	1000 ppb
.22	Ar1242/1268	1000 ppb
.23	Ar1248	1000 ppb
180405	hexane (Fisher)	—

Columns: ZBCLOT/ZBCLETC

Method 8082

Initial Cal. Method PCB6349
PCB6321
RK5/14/18

Injection Volume: 1.0 L

Date Archived: _____

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: 5/15/18

R	Data File	Sample ID	Ext. Batch	Test	MALS T X	Dilution	IS	SU	Status (Data)	Comments
	XX228512	IB			2			/	OK	
	513	IC6349-50			6			/	OK	
	514	-250			7			/	OK	
	515	-500			8			/	OK	
	516	IC6349-1000			9			/	OK	
	517	IC6349-2000			10			/	OK	
	518	-3000			11			/	OK	
	519	IC6349-1000			12			/	OK	
	520	-1000			13			/	OK	
	521	-1000			14			/	OK	
	522	-1000			15			/	OK	
	523	ICV6349-1000			16			/	OK	SV17.2362.13
	524	-1000			17			/	OK	SV17.2362.12
	525	-1000			18			/	OK	SV17.2362.14
	526	-1000			19			/	OK	SV17.2362.15
	527	-1000			20			/	OK	SV17.2362.16
	528	Pest Mix			21			/	OK	SV17.2362.25

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 strikethroughs must be initialed, dated, and reason applied if not transcription error

Form: OR016-09

Rev. Date: 5/25/17

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RETENTION TIME WINDOW DETERMINATION

Instrument ID: GCXX
 Method: SW846 8082A

Std#	Lab FileID	Date/Time	Sample Number	Analyst
Std#1	XX228516.D	05/14/18 17:59	GXX6349-ICC6349	REBECCA
Std#2	XX228529.D	05/14/18 21:35	GXX6350-CC6349	REBECCA
Std#3	XX228540.D	05/15/18 00:36	GXX6350-CC6349	REBECCA

Compound	Sig#	Type	RT#1	RT#2	RT#3	Mean	Actual StdDev	Window (+/- 3*StdDev)
Tetrachloro-m-xylene	1	SURR	2.80	2.80	2.80	2.80	0.000	+/- 0.030 ^a
Decachlorobiphenyl	1	SURR	9.94	9.94	9.94	9.94	0.000	+/- 0.030 ^a
Tetrachloro-m-xylene	2	SURR	3.53	3.54	3.54	3.54	0.006	+/- 0.030 ^a
Decachlorobiphenyl	2	SURR	11.95	11.95	11.95	11.95	0.000	+/- 0.030 ^a
AR1016-A	1	REG	3.17	3.17	3.17	3.17	0.000	+/- 0.030 ^a
AR1016-B	1	REG	3.55	3.55	3.55	3.55	0.000	+/- 0.030 ^a
AR1016-C	1	REG	4.10	4.11	4.10	4.10	0.006	+/- 0.030 ^a
AR1016-D	1	REG	4.26	4.27	4.26	4.26	0.006	+/- 0.030 ^a
AR1016-E	1	REG	4.76	4.76	4.75	4.76	0.006	+/- 0.030 ^a
AR1260-A	1	REG	7.10	7.11	7.10	7.10	0.006	+/- 0.030 ^a
AR1260-B	1	REG	7.25	7.26	7.25	7.25	0.006	+/- 0.030 ^a
AR1260-C	1	REG	7.59	7.59	7.59	7.59	0.000	+/- 0.030 ^a
AR1260-D	1	REG	8.02	8.02	8.02	8.02	0.000	+/- 0.030 ^a
AR1260-E	1	REG	8.41	8.42	8.41	8.41	0.006	+/- 0.030 ^a
AR1016-A	2	REG	4.19	4.19	4.19	4.19	0.000	+/- 0.030 ^a
AR1016-B	2	REG	4.74	4.75	4.74	4.74	0.006	+/- 0.030 ^a
AR1016-C	2	REG	5.38	5.38	5.38	5.38	0.000	+/- 0.030 ^a
AR1016-D	2	REG	5.57	5.57	5.57	5.57	0.000	+/- 0.030 ^a
AR1016-E	2	REG	6.22	6.22	6.22	6.22	0.000	+/- 0.030 ^a
AR1260-A	2	REG	8.83	8.83	8.83	8.83	0.000	+/- 0.030 ^a
AR1260-B	2	REG	8.95	8.95	8.95	8.95	0.000	+/- 0.030 ^a
AR1260-C	2	REG	9.38	9.38	9.38	9.38	0.000	+/- 0.030 ^a
AR1260-D	2	REG	9.73	9.73	9.73	9.73	0.000	+/- 0.030 ^a
AR1260-E	2	REG	10.28	10.28	10.28	10.28	0.000	+/- 0.030 ^a

(a) Default minimum StdDev of .01 minutes employed.

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SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: 9x63K

Date: 6/2/018

Print Analyst Name: EDUARDO ADRIANA

Analyst Signature: EM

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
8042-78	AR 1016/126	500 ppb
788	AR 1016/126	100 ppb
05	IB	20 ppb
18015	Hexane (Kodak)	

Columns: 2000 I / 2000 II
 Method: 2082, 608
 Initial Cal. Method: PCB 6349
 Injection Volume: 1.0ul
 Date Archived:

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: 6/5/18

R	Data File	Sample ID	Ext. Batch	Test	MALS T X #	Dilution	IS	SU	Status (Data)	Comments
	xx279826	cc 6349-1000			1				OK	1016 A ↑ 1st
	727	IB			2				OK	
	828	OP12452-M31	12452	608 W	3				OK	
	829	-B311			4				OK	
	830	-B3D11			5				OK	
	931	12450-M31	12450	608 W	6				OK	
	932	-B31			7				OK	
	933	-B3D			8				OK	
	834/835	Hexane			100				OK	
	836	cc 6349-1000			9				OK	
	837	IB			2				OK	
	838	5C66982-1	12450	608 W	10				OK	
	839	5C66989-2			11				OK	
	840	5C67091-1			12				OK	
	841	5C66962-1	12452	608 W	13				OK	
	842	5C67110-3	12448	608 W	14				OK	
	843	OP12448-M)			15				OK	
	844	-M3D			16				OK	
	845/846	Hexane			100				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
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Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
180432-78A	AR 1016/1060	5cc ml
78B	AR 1016/1060	1cc ml
05	IB	2 ml
180405	hexane (fisher)	-

Columns: 2 DBP1 / 2 DBP2

Method 8082, 628

Initial Cal. Method PL06349

Injection Volume: 1.0 ul

Date Archived: _____

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: 6/5/18

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	IS	SU	Status (Data)	Comments
	1209 847	cc 6349-1000				12				OK	1016 A ↑ 1st
	848	IB				2				OK	
	849	OP12448MB1	12448	WUE 8-82	W	18				OK	
	850	-B51				14				OK	
	851	-B50				10				OK	
	852	5c63700-1				21				OK	
	853	-2				22				OK	
	854	-3				23				OK	
	855	-7				24				OK	
	856/857	hexane				100				OK	
	858	cc 6349-500				25				OK	1016 A ↑ 1st 1209 B ↑ 1st
	859	IB				2				OK	
	860	5c66957-3	12448	WUE 8-82	W	26				OK	
	861	5c67110-3				27				OK	
	862	-5				28				OK	
	863	5c6642-1	12456	2.025		29				OK	
	864	OP12456MB1				30				OK	
	865	-MB1				31				OK	
	866	5c66970-1				32				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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SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: GXX6375

Date: 6/2/2018

Print Analyst Name: EDWARD ADRIAN LEE

Analyst Signature: EL

Standard Data

Standard Data

Lot #	Description	Conc.

Lot #	Description	Conc.
182432-783	AR 1016 / 126c	5.0000
782	AR 1016 / 126c	1000.000
15	IB	20.000
1824105	Hexane (Fisher)	

Columns: 2BUP1 / 2BUP2

Method 8082, 608

Initial Cal. Method PC86349

Injection Volume: 1.0ul

Date Archived:

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: 6/5/18

R	Data File	Sample ID	Ext. Batch	Test	M T X	ALS #	Dilution	IS	SU	Status (Data)	Comments
	182432/866	hexane				100				OK	
	869	CC 6349-1000				33				OK	
	870	IB				2				OK	
	871	0912456.M31	12456	2082	S	34				OK	
	872	-851				35				OK	
	873	5C66947-2				36				OK	
	874	-3				37				OK	
	875	-4				38				OK	
	876	-5				39				OK	
	877	-6				40				OK	
	878/879	hexane				100				OK	
	880	CC 6349-500				41				OK	
	881	IB				2				OK	
	882	5C66947-2	12456	2082	S	42				OK	
	883	-8				43				OK	
	884	-9				44				OK	
	885	-10				45				OK	
	886	-11				46				OK	
	887	-12				47				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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Batch ID: GXX6375

Date: 6/2/2018

Print Analyst Name: EDWARD ADRIAN

Analyst Signature: EAL

Standard Data

Standard Data

Lot #	Description	Conc.

Lot #	Description	Conc.
82431-7A	AR 10b/126c	500 ppb
788	AR 10b/126c	100 ppb
CE	IB	20 ppb
180405	Hexane (Fisher)	

Columns: ZBCLP5 / ZBCLP11

Method 8022, 608

Initial Cal. Method PCB6349

Injection Volume: 1.0 ul

Date Archived:

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: 6/5/18

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	IS	SU	Status (Data)	Comments
	8229 866	5C66947-13	12456	8022	S	48				OK	
	889/890	hexane				100				OK	
	891	CC6249-1000				49				OK	plate B.D. 9 1st
	892	IB				2				OK	
	893	5C66947-14	12456	8022	S	50				OK	
	894	5C66947-4				51				OK	
	895	-6				52				OK	
	896	5C66952-1				53				OK	
	897	-2				54				OK	
	898/899	hexane				100				OK	
	901	CC6349-320				55				OK	
	902	IB				2				OK	
	903	OP81204-MQAA	81204	8022	W	56				OK	
	904	-B31AA				57				OK	
	905	-B32AA				58				OK	
	906	-B33AA				59				OK	
	907	-B34AA				60				OK	
	908/909	hexane				100				OK	
	910	CC6349-1000				61				OK	
	911	IB				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

Form: OR016-09

Rev. Date: 5/25/17

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8-7-189

Pest/PCB Extraction Log - Aqueous

LOGBOOK ID:

Date Started: 6-1-18
Date Finished: 6-1-18
Time Started: 19:40
Time Finished: 23:55

Extract Method (CHECK OFF "✓" / DO NOT CIRCLE):
Separatory Funnel: SW646 3510C/CLP/other: U
Continuous Liquid Liquid: SW646 3520C/CLP/other: _____

BATCH #	GC 12448	RACK#	Pcb-18
Setup by:	RM		
Extracted by:	RM		
Concentration:	PCB, EAL, AF		
Final Vol. Top-up:	1.0		
Violated by:	RM		
Supervisor Review:	RM-6-18		
Equipment/Range	ID	Observed Temp (C)	Corrected Temp (C)
Buchi Chiller	7.3	12.5	12.5
Buchi Chiller	77.53	11	11
Watersbank (70-80°C)			
Watersbank Chiller (80°C)			
NEVAP (2-3°C LPM)			
SURROGATE	LOT#	CONC (ppb)	AMT (mL)
PCB	0818158126	400	0.2
PCB LL			
WITNESS SIGN:	RM	SPICE SIGN:	AF
MATRIX SPIKE	LOT#	CONC	AMT (mL)
PEST			
PEST LL			
PCB	0818158126	400	0.2
PCB LL			
WITNESS SIGN:	RM	SPICE SIGN:	AF
SOLVENT	LOT#	BRAND	AMT (mL)
METH CHLOR	182934	PRIMA	100
HEXANE	150405	PRIMA	50
REAGENT	LOT#	BAKE BATCH #	BRAND
Sodium Sulfide	181817	5-21-18	PRIMA
Glass Wool	305817		100
Filter Paper			
Copper			
Florisil			
1:1 Sulfuric Acid			
Chlorine Strips			

Sample #	Analysis Type	Sample Bottle #	pH	Sample Description	Sample Volume (mL)	Final Extract	Extract Cleanup	Comments
1	MBI PCB	13	7.0	DIH2O	300	Color: CLEAR	GPC	
2	BST LVI	18	7.0	DIH2O	300	Color: CLEAR	Copper	
3	MSD	18	7.0	DIH2O	300	Color: CLEAR	H2SO4	
4	MSD	18	7.0	DIH2O	300	Color: CLEAR	Florisil	
5	MSD	18	7.0	DIH2O	300	Color: CLEAR	KMnO4	
6	MSD	18	7.0	DIH2O	300	Color: CLEAR		
7	MSD	18	7.0	DIH2O	300	Color: CLEAR		
8	MSD	18	7.0	DIH2O	300	Color: CLEAR		
9	MSD	18	7.0	DIH2O	300	Color: CLEAR		
10	MSD	18	7.0	DIH2O	300	Color: CLEAR		
11	MSD	18	7.0	DIH2O	300	Color: CLEAR		
12	MSD	18	7.0	DIH2O	300	Color: CLEAR		
13	MSD	18	7.0	DIH2O	300	Color: CLEAR		
14	MSD	18	7.0	DIH2O	300	Color: CLEAR		
15	MSD	18	7.0	DIH2O	300	Color: CLEAR		
16	MSD	18	7.0	DIH2O	300	Color: CLEAR		
17	MSD	18	7.0	DIH2O	300	Color: CLEAR		
18	MSD	18	7.0	DIH2O	300	Color: CLEAR		
19	MSD	18	7.0	DIH2O	300	Color: CLEAR		
20	MSD	18	7.0	DIH2O	300	Color: CLEAR		

QC Samples (MS, MSD, LINK and/or DUP, Link) Confirmed by:

SPECIAL PROCESSING INSTRUCTIONS

Rx Reason:

Spiking:

Weights/Volumes:

Required MS/MSD: 306710-4

Final Volume:

Other:

SGS Form: OP021A-10 Rev Date: 8/2/17

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LOGBOOK ID: 8-2189

Date Started: 8-1-15
Date Finished: 8-1-15
Time Started: 14:40
Time Finished: 2:35

Pest/PCB Extraction Log - Aqueous

Extract Method (CHECK OFF "✓" / DO NOT CIRCLE):
 Separatory Funnel: SW846 3510C/CLP/Other: ✓
 Continuous Liquid Liquid: SW846 3520C/CLP/Other: ✓

BATCH # GC 12449 RACK# PEX-2

Setup by: RM
 Extracted by: L.H.
 Concentrated by: K.G., F.A.L., A.F.
 Final Vol. Top-up: K.S.
 Valid by: L.G.

Supervisor Reviewer: [Signature] 6/118

Equipment/Range	ID	Observed Temp (C)	Corrected Temp (C)	Pressure/Rewrite
Buohi (65-71°C)	713	105	-	OK
Buohi Chiller	713	11	-	OK
Waterbath (70-80°C)				
Mandibular Chiller (60°C)				
NEVAP 023KTC LP00				

SUBROGATE LOT # CONCENTRATION (ppb) AMT (mL)
 PCB 68185406 40 0.2
 PCB LL
 WITNESS SIGN: RM SPIKE SIGN: AF

PEST LOT # CONCENTRATION (ppb) AMT (mL)
 PCB 08185406 250 ppb 0.2
 PCB LL
 WITNESS SIGN: RM SPIKE SIGN: AF

SOLVENT LOT # BRAND AMT (mL)
 METH CHLOR 182954 FISHKILL 15x3
 HEXANE 182405 FISHKILL 50

REAGENT LOT # BAKE BATCH # BRAND
 Sodium Sulfate 181847 5-3-00 FISHKILL
 Glass Wool 303817-2 FISHKILL
 Filter Paper 0117110005 FISHKILL
 Copper
 Flinn
 1:1 Sulfuric Acid
 Chlorine Strips

Sample #	Analysis Type	Sample Description	Sample Volume (mL)	Final Extract Vol (mL)	Color	Extract Cleanup			
						KMnO4	Florisil	H2SO4	Copper
MB1	PEST	DI-100	300	2.0	CLAY	/	/	/	/
BS1	LVI	DI-100	300	2.0	CLAY	/	/	/	/
BSD	MSD	DI-100	300	2.0	CLAY	/	/	/	/
MSD									
BS									
JC67110-4	MSD	1-16-10	300	2.0	CLAY	/	/	/	/
JC67110-1	MSD	1-16-10	300	2.0	CLAY	/	/	/	/
JC67110-3	MSD	1-16-10	300	2.0	CLAY	/	/	/	/
JC66957-3	MSD	1-16-10	300	2.0	CLAY	/	/	/	/
JC67110-5	MSD	1-16-10	300	2.0	CLAY	/	/	/	/
JC67110-4	MSD	1-16-10	300	2.0	CLAY	/	/	/	/

Comments: QC Samples (MS, MSD, LINK and/or DUP, Link) Confirmed by:

SPECIAL PROCESSING INSTRUCTIONS

Rx Reason:

Spiking:

Weights/Volumes:

Required MS/MSD: JC67110-4

Final Volume:

Other:

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SGS
 Form: OP021A-10
 Rev Date: 8/2/17

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: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060118W1.CSV Date Analyzed: 06/01/18 Methods: SW846 7470A
 Analyst: DP Run ID: MA44562
 Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:28	MA44562-STD1	1		B=2.0347E-004, C=-1.5241E-002, R=0.9999435
10:29	MA44562-STD2	1		STDB
10:30	MA44562-STD3	1		STDC
10:32	MA44562-STD4	1		STDD
10:33	MA44562-STD5	1		STDE
10:34	MA44562-STD6	1		STDF
10:42	MA44562-STD7	1		STDB
10:43	MA44562-STD8	1		STDC
10:45	MA44562-STD9	1		STDD
10:47	ZZZZZ	1		
10:52	ZZZZZ	1		
10:54	ZZZZZ	1		
10:55	ZZZZZ	1		
10:57	ZZZZZ	1		
11:08	ZZZZZ	1		
11:08	MA44562-ICV1	1		
11:09	MA44562-ICB1	1		
11:11	MA44562-CCV1	1		
11:12	MA44562-CCB1	1		
11:14	MA44562-CRI1	1		
11:23	MP7428-MB1	1		
11:24	MP7428-B1	1		
11:25	MP7428-S1	1		
11:27	MP7428-S2	1		
11:28	JC66933-1	1		(sample used for QC only; not part of login JC67003)
11:30	ZZZZZ	1		
11:31	ZZZZZ	1		
11:33	MA44562-CCV2	1		
11:34	MA44562-CCB2	1		
11:36	ZZZZZ	1		
11:37	ZZZZZ	1		
11:38	ZZZZZ	1		
11:39	ZZZZZ	1		

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060118W1.CSV Date Analyzed: 06/01/18 Methods: SW846 7470A
Analyst: DP Run ID: MA44562
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:41	ZZZZZZ	1		
11:42	MP7332-MB3	1		
11:43	MP7332-B3	1		
11:45	ZZZZZZ	1		
11:46	MA44562-CCV3	1		
11:47	MA44562-CCB3	1		
11:49	ZZZZZZ	1		
11:51	ZZZZZZ	1		
11:52	MP7429-MB1	1		
11:53	MP7429-B1	1		
11:54	MP7429-S1	1		
11:56	MP7429-S2	1		
11:58	JC66897-15	1		(sample used for QC only; not part of login JC67003)
11:59	ZZZZZZ	1		
12:00	MA44562-CCV4	1		
12:02	MA44562-CCB4	1		
12:03	ZZZZZZ	1		
12:05	ZZZZZZ	1		
12:06	ZZZZZZ	1		
12:07	ZZZZZZ	1		
12:09	ZZZZZZ	1		
12:10	ZZZZZZ	1		
12:11	ZZZZZZ	1		
12:12	ZZZZZZ	1		
12:14	MA44562-CCV5	1		
12:15	MA44562-CCB5	1		
12:17	ZZZZZZ	1		
12:18	ZZZZZZ	1		
12:19	ZZZZZZ	1		
12:21	ZZZZZZ	1		
12:22	ZZZZZZ	1		
12:23	ZZZZZZ	1		
12:25	ZZZZZZ	1		

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060118W1.CSV Date Analyzed: 06/01/18 Methods: SW846 7470A
Analyst: DP Run ID: MA44562
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:26	ZZZZZZ	1		
12:27	MA44562-CCV6	1		
12:28	MA44562-CCB6	1		
12:30	ZZZZZZ	1		
12:31	ZZZZZZ	1		
12:33	MP7430-MB1	1		
12:34	MP7430-B1	1		
12:35	ZZZZZZ	1		
12:37	MP7430-S2	1		
12:38	JC66971-2	1		(sample used for QC only; not part of login JC67003)
12:40	ZZZZZZ	1		
12:41	MA44562-CCV7	1		
12:43	MA44562-CCB7	1		
12:44	ZZZZZZ	1		
12:46	ZZZZZZ	1		
12:47	ZZZZZZ	1		
12:48	ZZZZZZ	1		
12:49	ZZZZZZ	1		
12:51	JC67003-1	1		
12:52	JC67003-2	1		
12:53	JC67003-3	1		
12:55	MA44562-CCV8	1		
12:56	MA44562-CCB8	1		
12:58	JC67003-4	1		
12:59	JC67003-5	1		
13:00	JC67003-6	1		
13:01	JC67003-7	1		
13:03	ZZZZZZ	1		
13:04	ZZZZZZ	1		
13:05	ZZZZZZ	1		
13:07	ZZZZZZ	1		
13:08	MA44562-CCV9	1		
13:09	MA44562-CCB9	1		

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060118W1.CSV Date Analyzed: 06/01/18 Methods: SW846 7470A
Analyst: DP Run ID: MA44562
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:11	ZZZZZZ	1		
13:12	MP7430-S1	1		
----->	Last reportable sample/prep for job JC67003			
13:21	MA44562-CCV10	1		
13:22	MA44562-CCB10	1		
----->	Last reportable CCB for job JC67003			
14:22	MA44562-CCV11	1		
14:23	MA44562-CCB11	1		
14:36	MP7442-MB1	1		
14:37	MP7442-B1	1		
14:38	MP7442-S1	1		
14:40	MP7442-S2	1		
14:41	JC66949-1	1		(sample used for QC only; not part of login JC67003)
14:43	ZZZZZZ	1		
14:44	ZZZZZZ	1		
14:46	ZZZZZZ	1		
14:47	MA44562-CCV12	1		
14:48	MA44562-CCB12	1		
14:50	ZZZZZZ	1		
14:51	ZZZZZZ	1		
14:52	ZZZZZZ	1		
14:54	ZZZZZZ	1		
14:55	ZZZZZZ	1		
14:56	ZZZZZZ	1		
14:58	ZZZZZZ	1		
14:59	ZZZZZZ	1		
15:00	MA44562-CCV13	1		
15:02	MA44562-CCB13	1		
15:03	ZZZZZZ	1		
15:04	ZZZZZZ	1		
15:06	ZZZZZZ	1		
15:07	ZZZZZZ	1		
15:08	MP7307-MB2	1		
15:10	MP7307-B2	1		
15:11	ZZZZZZ	1		

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060118W1.CSV Date Analyzed: 06/01/18 Methods: SW846 7470A
Analyst: DP Run ID: MA44562
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:12	ZZZZZ	1		
15:14	MA44562-CCV14	1		
15:15	MA44562-CCB14	1		
15:17	ZZZZZ	1		
15:18	ZZZZZ	1		
15:20	MA44562-CCV15	1		
15:22	MA44562-CCB15	1		

Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060118W1.CSV Date Analyzed: 06/01/18 Methods: SW846 7470A
 QC Limits: result < RL Run ID: MA44562 Units: ug/l

Time:			11:09		11:12		11:34		11:47	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.052	-0.0893	<0.20	-0.0698	<0.20	-0.0673	<0.20	-0.0779	<0.20

(*) Outside of QC limits
 (anr) Analyte not requested

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BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060118W1.CSV Date Analyzed: 06/01/18 Methods: SW846 7470A
 QC Limits: result < RL Run ID: MA44562 Units: ug/l

	Time:		12:02		12:15		12:28		12:43	
	Sample ID:		CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.052	-0.0722	<0.20	-0.0633	<0.20	-0.0545	<0.20	-0.0736	<0.20

(*) Outside of QC limits
 (anr) Analyte not requested

12.1.1
 12

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060118W1.CSV Date Analyzed: 06/01/18 Methods: SW846 7470A
 QC Limits: result < RL Run ID: MA44562 Units: ug/l

Time:			12:56			13:09			13:22
Sample ID:	RL	IDL	CCB8	final	CCB9	final	CCB10	final	
Metal			raw		raw		raw		final

Mercury	0.20	.052	-0.0714	<0.20	-0.0655	<0.20	-0.0702	<0.20	
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(*) Outside of QC limits
 (anr) Analyte not requested

12.1.1
 12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060118W1.CSV Date Analyzed: 06/01/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA44562 Units: ug/l

Time:		11:08			11:11			11:33		
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2		
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec	
Mercury	3	3.23	107.7	2.5	2.66	106.4	2.5	2.50	100.0	

(*) Outside of QC limits
(anr) Analyte not requested

12.1.2
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060118W1.CSV Date Analyzed: 06/01/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA44562 Units: ug/l

	Time:	11:46		12:00		12:14			
Sample ID:	CCV	CCV3		CCV	CCV4	CCV	CCV5		
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.37	94.8	2.5	2.51	100.4	2.5	2.58	103.2

(*) Outside of QC limits
(anr) Analyte not requested

12.1.2
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060118W1.CSV Date Analyzed: 06/01/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA44562 Units: ug/l

	Time:	12:27		12:41		12:55			
Sample ID:	CCV	CCV6	CCV	CCV7	CCV	CCV8			
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.49	99.6	2.5	2.49	99.6	2.5	2.50	100.0

(*) Outside of QC limits
(anr) Analyte not requested

12.1.2
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060118W1.CSV Date Analyzed: 06/01/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA44562 Units: ug/l

	Time:	13:08		13:21		
Sample ID:	CCV	CCV9	CCV	CCV10		
Metal	True	Results	% Rec	True	Results	
					% Rec	
Mercury	2.5	2.42	96.8	2.5	2.47	98.8

(*) Outside of QC limits
(anr) Analyte not requested

12.1.2
12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060118W1.CSV Date Analyzed: 06/01/18 Methods: SW846 7470A
QC Limits: 70 to 130 % Recovery Run ID: MA44562 Units: ug/l

Time:			11:14	
Sample ID:	CRI	CRIA	CRI1	
Metal	True	True	Results	% Rec

Mercury 0.20 0.207 103.5

(*) Outside of QC limits
(anr) Analyte not requested

12.1.3
12

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
 Analyst: ND Run ID: MA44612
 Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:47	MA44612-STD1	1		STDA
22:50	MA44612-STD2	1		STDB
22:53	ZZZZZZ	1		
22:56	ZZZZZZ	1		
22:59	MA44612-ICV1	1		
23:02	MA44612-ICB1	1		
23:05	MA44612-CCV1	1		
23:07	MA44612-CCB1	1		
23:11	MA44612-CRI1	1		
23:14	MA44612-CRID1	1		
23:17	MA44612-ICSA1	1		Saturation
23:20	MA44612-ICSAB1	1		Saturation
23:25	MA44612-ICSA2	1		
23:28	MA44612-ICSAB2	1		
23:31	MA44612-HSTD1	1		
23:34	MA44612-HSTD2	1		
23:37	MA44612-CCV2	1		
23:40	MA44612-CCB2	1		
23:43	ZZZZZZ	1		
23:46	ZZZZZZ	1		
23:49	ZZZZZZ	1		
23:52	MA44612-CCV3	1		
23:55	MA44612-CCB3	1		
23:58	ZZZZZZ	1		
00:01	ZZZZZZ	1		
00:04	MP7457-MB4	5		
00:07	MP7457-B5	5		
00:10	ZZZZZZ	5		
00:13	MP7521-MB1	1		Batch to reanalysis for Tl, Sb and AS. MB neg
00:16	MP7521-B1	1		
00:19	MP7521-S1	1		
00:22	MP7521-S2	1		
00:24	MA44612-CCV4	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
Analyst: ND Run ID: MA44612
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:28	MA44612-CCB4	1		
00:31	JC67310-1	1		(sample used for QC only; not part of login JC67003)
00:34	MP7521-SD1	5		
00:38	ZZZZZ	1		
00:41	MP7530-MB1	1		Batch to reanalysis for As and Tl, MB neg
00:45	MP7530-B1	1		
00:47	ZZZZZ	1		
00:50	MP7530-S1	1		
00:53	MP7530-S2	1		
00:57	MA44612-CCV5	1		
01:00	MA44612-CCB5	1		
01:03	MA44612-CRI2	1		
01:06	MA44612-CRID2	1		
01:09	MA44612-ICSA3	1		
01:12	MA44612-ICSAB3	1		
01:15	MA44612-CCV6	1		
01:18	MA44612-CCB6	1		
01:21	JC66897-23	1		(sample used for QC only; not part of login JC67003)
01:24	MP7530-SD1	5		
01:27	ZZZZZ	1		
01:30	ZZZZZ	1		
01:33	ZZZZZ	1		
01:36	ZZZZZ	1		
01:39	ZZZZZ	1		
01:42	ZZZZZ	1		
01:45	ZZZZZ	1		
01:49	MA44612-CCV7	1		
01:51	MA44612-CCB7	1		
01:55	ZZZZZ	1		
01:58	ZZZZZ	1		
02:01	ZZZZZ	1		
02:04	ZZZZZ	1		
02:07	ZZZZZ	1		

12.2
12

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
Analyst: ND Run ID: MA44612
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
02:10	ZZZZZZ	1		
02:13	ZZZZZZ	1		
02:16	ZZZZZZ	1		
02:19	ZZZZZZ	1		
02:22	MA44612-CCV8	1		
02:25	MA44612-CCB8	1		
02:28	MP7493-MB1	1		Analytical problems
02:31	MP7493-B1	1		
02:34	MP7493-S1	1		
02:37	MP7493-S2	1		
02:40	JC67110-4	1		(sample used for QC only; not part of login JC67003)
02:43	MP7493-SD1	5		
02:46	JC67003-1	1		
02:48	JC67003-2	1		
02:51	JC67003-3	1		S=220ppm
02:55	MA44612-CCV9	1		
02:57	MA44612-CCB9	1		
03:00	JC67003-4	1		
03:03	JC67003-5	1		
03:06	JC67003-6	1		High RSD
03:09	JC67003-7	1		
----->	Last reportable sample/prep for job JC67003			
03:12	ZZZZZZ	1		
03:15	ZZZZZZ	1		
03:18	ZZZZZZ	1		
03:21	ZZZZZZ	1		
03:24	MP7494-B1	1		CRI out for T1.
03:27	MA44612-CCV10	1		
03:30	MA44612-CCB10	1		
03:33	MP7494-MB1	1		
03:36	MP7494-S1	2		
03:39	MP7494-S2	2		
03:42	JC67085-4	2		(sample used for QC only; not part of login JC67003)
03:45	MP7494-SD1	10		

12.2
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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
Analyst: ND Run ID: MA44612
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
03:48	ZZZZZZ	1		
03:51	ZZZZZZ	2		
03:53	ZZZZZZ	1		
03:56	ZZZZZZ	10		
03:59	MA44612-CCV11	1		
04:02	MA44612-CCB11	1		
04:05	ZZZZZZ	5		
04:09	ZZZZZZ	25		
04:12	ZZZZZZ	1		
04:14	ZZZZZZ	5		
04:17	ZZZZZZ	2		
04:21	ZZZZZZ	5		
04:23	ZZZZZZ	1		
04:26	ZZZZZZ	1		
04:30	ZZZZZZ	5		
04:33	MA44612-CCV12	1		
04:36	MA44612-CCB12	1		
04:39	ZZZZZZ	1		
04:42	ZZZZZZ	1		
04:45	ZZZZZZ	1		
04:48	ZZZZZZ	1		
04:51	ZZZZZZ	1		
04:54	ZZZZZZ	1		
04:57	ZZZZZZ	1		
05:00	ZZZZZZ	1		
05:03	ZZZZZZ	1		
05:06	MA44612-CCV13	1		
05:08	MA44612-CCB13	1		
05:11	ZZZZZZ	1		
05:14	ZZZZZZ	1		
05:18	ZZZZZZ	1		
05:21	ZZZZZZ	1		
05:24	ZZZZZZ	1		

12.2
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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
Analyst: ND Run ID: MA44612
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
05:27	ZZZZZZ	1		
05:30	ZZZZZZ	1		
05:33	ZZZZZZ	1		
05:36	ZZZZZZ	1		
05:39	MA44612-CCV14	1		
05:41	MA44612-CCB14	1		
05:44	MA44612-CRI3	1		TL out
05:47	MA44612-CRID3	1		
05:51	MA44612-CCV15	1		
05:53	MA44612-CCB15	1		
----->	Last reportable CCB for job JC67003			
05:56	ZZZZZZ	1		
05:59	ZZZZZZ	1		
06:02	ZZZZZZ	1		
06:06	ZZZZZZ	1		
06:09	ZZZZZZ	1		
06:12	ZZZZZZ	1		
06:15	ZZZZZZ	1		
06:18	ZZZZZZ	1		
06:21	ZZZZZZ	1		
06:24	ZZZZZZ	1		
06:27	ZZZZZZ	1		
06:30	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

12.2
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INTERNAL STANDARD SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
 Analyst: ND Run ID: MA44612
 Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:47	MA44612-STD1	3612 R	81957 R	16203 R	6145 R
22:50	MA44612-STD2	3522	81965	16051	6289
22:53	ZZZZZZ	3590	82546	16260	6266
22:56	ZZZZZZ	3667	84421	16424	6220
22:59	MA44612-ICV1	3541	81134	16007	6186
23:02	MA44612-ICB1	3677	83557	16519	6227
23:05	MA44612-CCV1	3583	81602	16067	6242
23:07	MA44612-CCB1	3684	83702	16402	6227
23:11	MA44612-CRI1	3636	83569	16370	6175
23:14	MA44612-CRID1	3621	82953	16152	6152
23:17	MA44612-ICSA1	No results reported for the elements associated with this internal standard.			
23:20	MA44612-ICSAB1	No results reported for the elements associated with this internal standard.			
23:25	MA44612-ICSA2	3321	77943	15517	6091
23:28	MA44612-ICSAB2	3300	76598	15100	6072
23:31	MA44612-HSTD1	3590	82777	16253	6269
23:34	MA44612-HSTD2	3443	79626	15451	6156
23:37	MA44612-CCV2	3565	81889	15960	6220
23:40	MA44612-CCB2	3558	81447	15701	6058
23:43	ZZZZZZ	3640	83670	16292	6362
23:46	ZZZZZZ	3529	82879	16143	6138
23:49	ZZZZZZ	3599	82287	16008	6113
23:52	MA44612-CCV3	3544	81428	15957	6190
23:55	MA44612-CCB3	3651	83635	16127	6186
23:58	ZZZZZZ	3597	82691	16096	6117
00:01	ZZZZZZ	3588	83043	16136	6112
00:04	MP7457-MB4	3684	83834	15956	6259
00:07	MP7457-B5	3639	83415	16041	6225
00:10	ZZZZZZ	3684	84788	16386	6291
00:13	MP7521-MB1	3703	85162	16686	6243
00:16	MP7521-B1	3640	84261	16518	6280
00:19	MP7521-S1	3474	81068	15508	6067
00:22	MP7521-S2	3489	81594	15505	6088
00:24	MA44612-CCV4	3598	82601	15940	6267

12.2.1
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INTERNAL STANDARD SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
 Analyst: ND Run ID: MA44612
 Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
00:28	MA44612-CCB4	3697	86774	16134	6250
00:31	JC67310-1	3573	82737	15592	6133
00:34	MP7521-SD1	3669	84054	15984	6298
00:38	ZZZZZ	3701	85346	16522	6234
00:41	MP7530-MB1	3598	84475	16615	6089
00:45	MP7530-B1	3570	82828	16430	6184
00:47	ZZZZZ	3609	83848	16019	6187
00:50	MP7530-S1	3601	83612	16434	6255
00:53	MP7530-S2	3528	81024	16005	6154
00:57	MA44612-CCV5	3577	81349	15885	6228
01:00	MA44612-CCB5	3624	82569	16430	6133
01:03	MA44612-CRI2	3628	84010	15984	6155
01:06	MA44612-CRID2	3581	81863	15933	6077
01:09	MA44612-ICSA3	3353	78914	15364	6110
01:12	MA44612-ICSAB3	3376	78204	15372	6155
01:15	MA44612-CCV6	3546	81250	15810	6180
01:18	MA44612-CCB6	3646	83001	16115	6170
01:21	JC66897-23	3720	84734	16361	6340
01:24	MP7530-SD1	3670	84501	16168	6236
01:27	ZZZZZ	3610	82512	16068	6192
01:30	ZZZZZ	3619	84348	15938	6157
01:33	ZZZZZ	3628	83464	16184	6217
01:36	ZZZZZ	3581	83514	16002	6139
01:39	ZZZZZ	3636	84188	16246	6222
01:42	ZZZZZ	3624	84313	16248	6116
01:45	ZZZZZ	3620	83698	15931	6199
01:49	MA44612-CCV7	3521	80865	15566	6145
01:51	MA44612-CCB7	3638	82688	15942	6152
01:55	ZZZZZ	3544	83133	15832	6082
01:58	ZZZZZ	3563	80839	15519	6102
02:01	ZZZZZ	3644	83771	16473	6174
02:04	ZZZZZ	3629	82791	16224	6199
02:07	ZZZZZ	3738	85571	16300	6273

12.2.1
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INTERNAL STANDARD SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
 Analyst: ND Run ID: MA44612
 Parameters: Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Mg, Mn, Ni, K, Se, Ag, Na, V, Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
02:10	ZZZZZZ	3656	83553	16056	6258
02:13	ZZZZZZ	3683	84496	16319	6247
02:16	ZZZZZZ	3622	83735	16239	6123
02:19	ZZZZZZ	3689	84291	16354	6201
02:22	MA44612-CCV8	3540	80874	15697	6161
02:25	MA44612-CCB8	3665	83539	15954	6182
02:28	MP7493-MB1	3677	85047	16490	6184
02:31	MP7493-B1	3570	82354	15899	6157
02:34	MP7493-S1	3574	83424	16075	6169
02:37	MP7493-S2	3562	84019	16128	6160
02:40	JC67110-4	3641	84326	16106	6158
02:43	MP7493-SD1	3652	83757	15970	6181
02:46	JC67003-1	3578	81431	15835	6081
02:48	JC67003-2	3609	83111	16108	6103
02:51	JC67003-3	3641	84346	16084	6238
02:55	MA44612-CCV9	3582	81188	15757	6213
02:57	MA44612-CCB9	3599	81945	15794	6087
03:00	JC67003-4	3561	84049	16093	6061
03:03	JC67003-5	3640	83207	15909	6170
03:06	JC67003-6	3630	83670	14903	6150
03:09	JC67003-7	3616	83813	16165	6135
03:12	ZZZZZZ	3605	83103	16121	6117
03:15	ZZZZZZ	3601	82335	15753	6109
03:18	ZZZZZZ	3622	83455	16095	6113
03:21	ZZZZZZ	3621	83922	15891	6107
03:24	MP7494-B1	3623	82996	16128	6227
03:27	MA44612-CCV10	3603	82283	15673	6239
03:30	MA44612-CCB10	3586	84476	16062	6067
03:33	MP7494-MB1	3583	81772	15691	6048
03:36	MP7494-S1	3790	86206	16551	6239
03:39	MP7494-S2	3806	87385	16434	6258
03:42	JC67085-4	3806	86894	16446	6216
03:45	MP7494-SD1	3744	84335	16177	6271

12.2.1
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INTERNAL STANDARD SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
 Analyst: ND Run ID: MA44612
 Parameters: Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Mg, Mn, Ni, K, Se, Ag, Na, V, Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
03:48	ZZZZZZ	3638	86168	16506	6120
03:51	ZZZZZZ	3750	85429	16270	6285
03:53	ZZZZZZ	3750	86035	16257	6337
03:56	ZZZZZZ	3731	84511	16065	6300
03:59	MA44612-CCV11	3640	81746	15480	6287
04:02	MA44612-CCB11	3711	84650	16103	6240
04:05	ZZZZZZ	3700	83583	15604	6312
04:09	ZZZZZZ	3671	83871	15756	6245
04:12	ZZZZZZ	3709	84269	16424	6280
04:14	ZZZZZZ	3709	84955	16051	6287
04:17	ZZZZZZ	3693	84807	16008	6209
04:21	ZZZZZZ	3710	78903	16236	6206
04:23	ZZZZZZ	3584	82629	15757	6145
04:26	ZZZZZZ	3593	82990	15343	6121
04:30	ZZZZZZ	3681	84274	15763	6240
04:33	MA44612-CCV12	3609	82696	15613	6235
04:36	MA44612-CCB12	3717	84872	15948	6236
04:39	ZZZZZZ	3731	85704	16251	6261
04:42	ZZZZZZ	3700	84968	16219	6231
04:45	ZZZZZZ	3740	87268	16300	6254
04:48	ZZZZZZ	3637	83716	16167	6127
04:51	ZZZZZZ	3622	83036	15766	6117
04:54	ZZZZZZ	3686	84400	15969	6198
04:57	ZZZZZZ	3641	83622	15777	6139
05:00	ZZZZZZ	3665	83528	16175	6180
05:03	ZZZZZZ	3765	85559	16287	6318
05:06	MA44612-CCV13	3557	81638	15520	6162
05:08	MA44612-CCB13	3685	84160	15890	6189
05:11	ZZZZZZ	3707	85290	16311	6202
05:14	ZZZZZZ	3573	83209	15440	6090
05:18	ZZZZZZ	3612	83628	15381	6144
05:21	ZZZZZZ	3676	83352	15396	6220
05:24	ZZZZZZ	3595	82271	15141	6117

12.2.1
12

INTERNAL STANDARD SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
 Analyst: ND Run ID: MA44612
 Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
05:27	ZZZZZZ	3913	89130	16980	6299
05:30	ZZZZZZ	3907	82186	16618	6294
05:33	ZZZZZZ	3887	88136	16830	6268
05:36	ZZZZZZ	3909	88143	16535	6300
05:39	MA44612-CCV14	3608	82289	15673	6226
05:41	MA44612-CCB14	3682	83193	15636	6191
05:44	MA44612-CRI3	3713	79294	15945	6250
05:47	MA44612-CRID3	3695	83130	15815	6220
05:51	MA44612-CCV15	3641	82519	15803	6293
05:53	MA44612-CCB15	3499	84786	15894	5937
05:56	ZZZZZZ	3733	84689	16021	6290
05:59	ZZZZZZ	3715	85183	15998	6255
06:02	ZZZZZZ	3688	83417	15838	6193
06:06	ZZZZZZ	3663	83312	15892	6191
06:09	ZZZZZZ	3672	83416	15765	6182
06:12	ZZZZZZ	3729	84406	15943	6317
06:15	ZZZZZZ	3605	83550	15549	6116
06:18	ZZZZZZ	3723	85456	15858	6246
06:21	ZZZZZZ	3728	84752	16103	6248
06:24	ZZZZZZ	3539	78021	15656	6207
06:27	ZZZZZZ	3657	84806	15512	6185
06:30	ZZZZZZ	3746	85597	16013	6296

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 %

12.2.1
12

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA44612 Units: ug/l

Metal	Time:		23:02		23:07		23:40		23:55	
	Sample ID:	RL	IDL	ICB1	final	CCB1	final	CCB2	final	CCB3	final
Aluminum	200	19	5.80	<200	-7.70	<200	-7.30	<200	-18.2	<200
Antimony	6.0	2.4	2.50	<6.0	1.80	<6.0	1.10	<6.0	2.50	<6.0
Arsenic	3.0	1.2	0.300	<3.0	0.800	<3.0	0.800	<3.0	1.10	<3.0
Barium	200	.6	0.00	<200	-0.300	<200	0.700	<200	0.700	<200
Beryllium	1.0	.2	0.00	<1.0	0.00	<1.0	-0.100	<1.0	0.00	<1.0
Bismuth	20	3.2								
Boron	100	1.5	anr							
Cadmium	3.0	.4	0.00	<3.0	-0.200	<3.0	0.300	<3.0	0.00	<3.0
Calcium	5000	5.5	3.40	<5000	2.90	<5000	8.00	<5000	2.00	<5000
Chromium	10	.7	0.100	<10	-0.100	<10	0.00	<10	0.00	<10
Cobalt	50	.4	-0.200	<50	0.00	<50	-0.500	<50	-0.600	<50
Copper	10	1.1	-0.500	<10	-0.600	<10	-0.300	<10	-1.00	<10
Iron	100	3.5	0.600	<100	1.00	<100	2.40	<100	0.700	<100
Lead	3.0	2.2	anr							
Lithium	50	3.4								
Magnesium	5000	25	10.9	<5000	6.30	<5000	1.40	<5000	-4.30	<5000
Manganese	15	.14	0.00	<15	-0.100	<15	-0.100	<15	-0.100	<15
Molybdenum	20	.4								
Nickel	10	.5	-0.800	<10	-0.300	<10	-0.300	<10	0.00	<10
Phosphorus	50	2								
Potassium	10000	60	-49.9	<10000	21.8	<10000	17.5	<10000	-14.0	<10000
Selenium	10	3.7	0.200	<10	-2.20	<10	0.00	<10	-1.90	<10
Silicon	200	1.8								
Silver	10	.7	0.00	<10	-0.100	<10	0.200	<10	-0.600	<10
Sodium	10000	35	12.3	<10000	-13.6	<10000	8.00	<10000	7.20	<10000
Strontium	10	.2								
Sulfur	50	3.1								
Thallium	2.0	1.8	anr							
Tin	10	.9								
Titanium	10	.7								
Tungsten	50	2.2								
Vanadium	50	.8	0.500	<50	-0.200	<50	0.00	<50	-0.100	<50
Zinc	20	.2	0.00	<20	0.100	<20	0.100	<20	0.00	<20

12.2.2
12

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

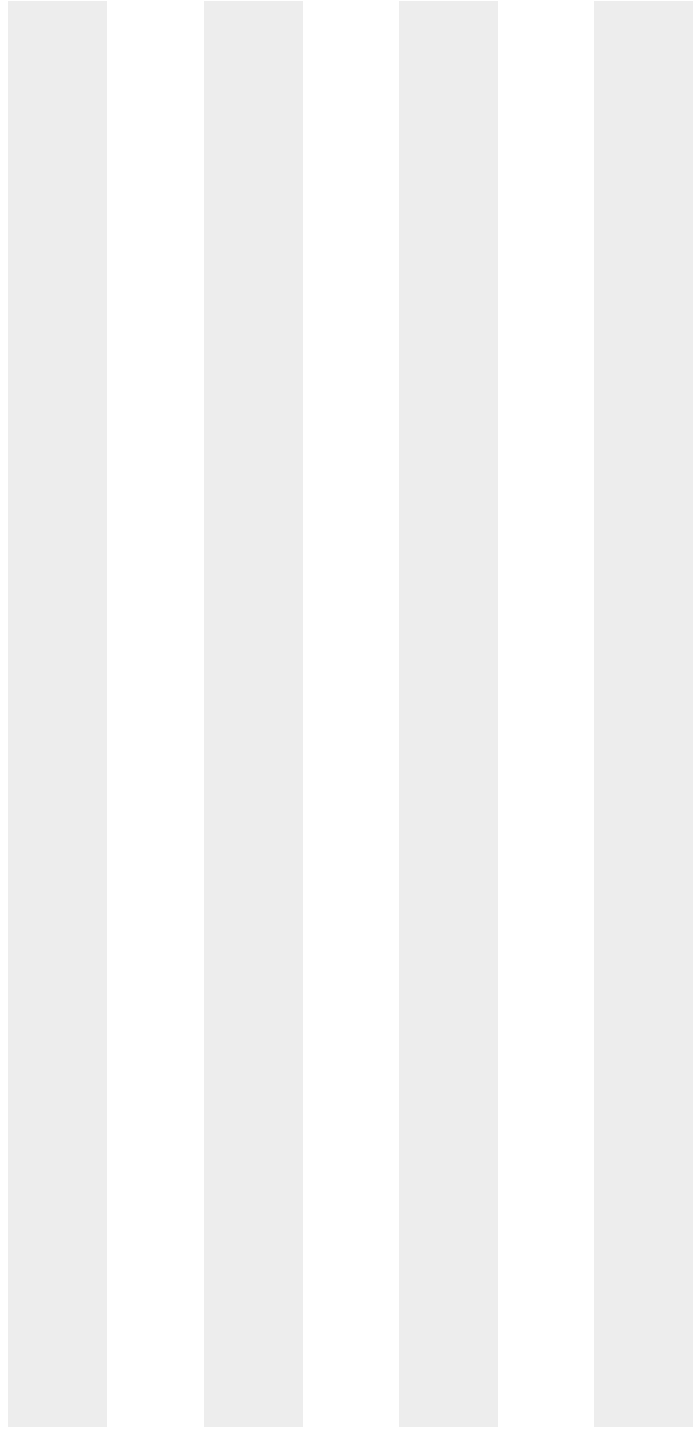
Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
 QC Limits: result < RL Run ID: MA44612 Units: ug/l

Time:			23:02		23:07		23:40		23:55	
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



12.2.2
 12

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA44612 Units: ug/l

Time: Sample ID:	RL	IDL	00:28 CCB4 raw	final	01:00 CCB5 raw	final	01:18 CCB6 raw	final	01:51 CCB7 raw	final
Aluminum	200	19	-5.40	<200	-16.2	<200	-9.70	<200	-6.50	<200
Antimony	6.0	2.4	1.50	<6.0	1.90	<6.0	0.500	<6.0	1.30	<6.0
Arsenic	3.0	1.2	-0.100	<3.0	-0.400	<3.0	-0.700	<3.0	-0.100	<3.0
Barium	200	.6	0.600	<200	0.500	<200	0.300	<200	0.300	<200
Beryllium	1.0	.2	0.00	<1.0	-0.100	<1.0	0.00	<1.0	0.00	<1.0
Bismuth	20	3.2								
Boron	100	1.5	anr							
Cadmium	3.0	.4	-0.100	<3.0	0.00	<3.0	-0.100	<3.0	-0.100	<3.0
Calcium	5000	5.5	-2.10	<5000	-3.80	<5000	-2.30	<5000	3.70	<5000
Chromium	10	.7	-0.100	<10	-0.200	<10	0.400	<10	-0.100	<10
Cobalt	50	.4	-0.600	<50	-0.400	<50	-0.600	<50	-0.400	<50
Copper	10	1.1	-1.70	<10	-1.30	<10	-1.00	<10	-0.700	<10
Iron	100	3.5	-2.10	<100	3.30	<100	1.50	<100	1.20	<100
Lead	3.0	2.2	anr							
Lithium	50	3.4								
Magnesium	5000	25	9.50	<5000	14.4	<5000	20.9	<5000	6.70	<5000
Manganese	15	.14	0.00	<15	0.00	<15	0.00	<15	0.00	<15
Molybdenum	20	.4								
Nickel	10	.5	-0.200	<10	0.00	<10	-0.100	<10	-0.500	<10
Phosphorus	50	2								
Potassium	10000	60	174	<10000	86.5	<10000	52.9	<10000	39.7	<10000
Selenium	10	3.7	-3.70	<10	-2.70	<10	-1.30	<10	-2.20	<10
Silicon	200	1.8								
Silver	10	.7	-0.400	<10	0.200	<10	-0.900	<10	-0.800	<10
Sodium	10000	35	219	<10000	115	<10000	84.4	<10000	115	<10000
Strontium	10	.2								
Sulfur	50	3.1								
Thallium	2.0	1.8	anr							
Tin	10	.9								
Titanium	10	.7								
Tungsten	50	2.2								
Vanadium	50	.8	0.400	<50	-0.200	<50	-0.100	<50	-0.300	<50
Zinc	20	.2	0.100	<20	0.00	<20	-0.200	<20	0.200	<20

12.2.2
12

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

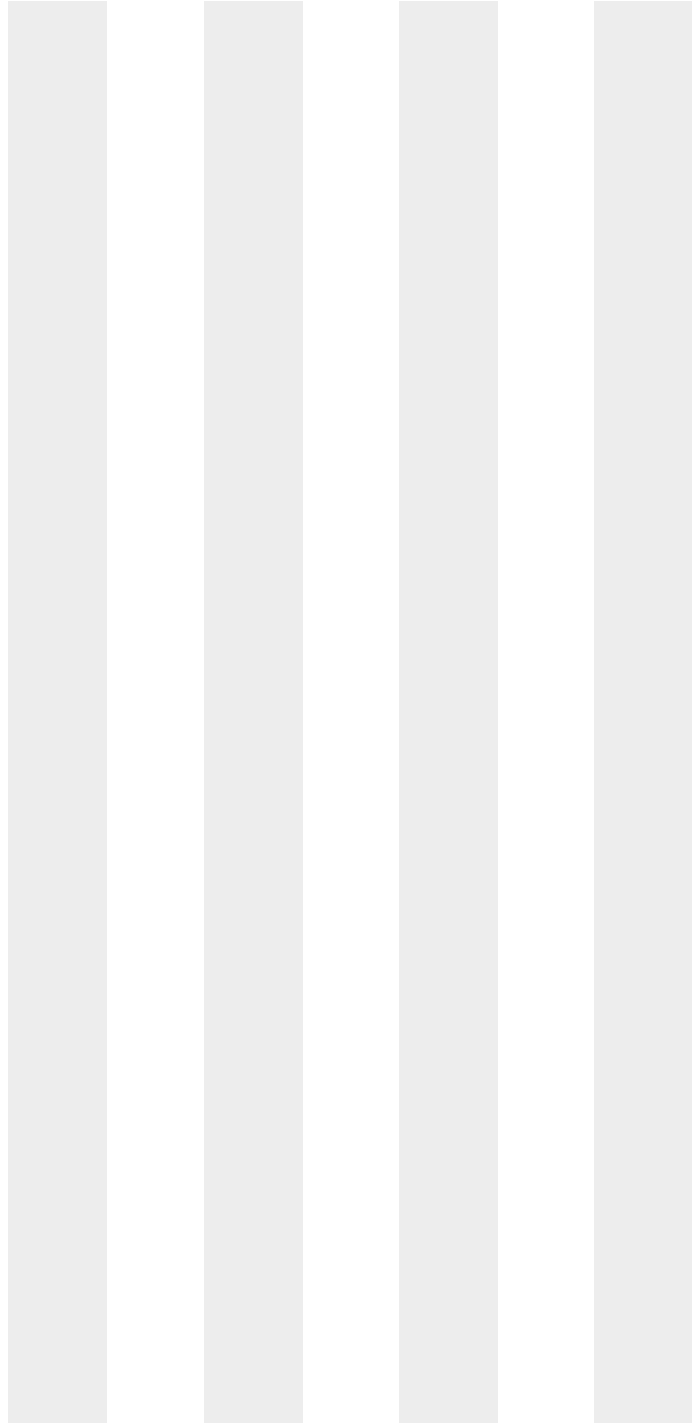
Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
 QC Limits: result < RL Run ID: MA44612 Units: ug/l

Time:			00:28		01:00		01:18		01:51	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final

Zirconium 10 .3

(*) Outside of QC limits
 (anr) Analyte not requested



12.2.2
 12

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA44612 Units: ug/l

Metal	Time:		02:25		02:57		03:30		04:02	
	Sample ID:	RL	IDL	CCB8	CCB9	CCB10	CCB11	raw	final	raw	final
Aluminum	200	19	-12.2	<200	3.20	<200	-15.4	<200	-21.3	<200
Antimony	6.0	2.4	-0.100	<6.0	2.60	<6.0	0.600	<6.0	0.200	<6.0
Arsenic	3.0	1.2	-1.00	<3.0	-0.300	<3.0	-0.700	<3.0	0.800	<3.0
Barium	200	.6	0.800	<200	0.800	<200	0.600	<200	1.00	<200
Beryllium	1.0	.2	0.00	<1.0	-0.100	<1.0	-0.100	<1.0	-0.100	<1.0
Bismuth	20	3.2								
Boron	100	1.5	anr							
Cadmium	3.0	.4	-0.200	<3.0	0.200	<3.0	0.00	<3.0	-0.200	<3.0
Calcium	5000	5.5	-4.60	<5000	2.20	<5000	-2.40	<5000	-1.70	<5000
Chromium	10	.7	0.400	<10	0.300	<10	-0.200	<10	-0.100	<10
Cobalt	50	.4	-0.100	<50	-0.200	<50	-0.300	<50	0.100	<50
Copper	10	1.1	-1.90	<10	-1.10	<10	-2.20	<10	-2.60	<10
Iron	100	3.5	0.00	<100	6.00	<100	-1.20	<100	0.00	<100
Lead	3.0	2.2	anr							
Lithium	50	3.4								
Magnesium	5000	25	10.2	<5000	28.8	<5000	-10.3	<5000	-6.20	<5000
Manganese	15	.14	0.00	<15	-0.100	<15	0.00	<15	0.00	<15
Molybdenum	20	.4								
Nickel	10	.5	-0.400	<10	-0.100	<10	-0.400	<10	-0.600	<10
Phosphorus	50	2								
Potassium	10000	60	60.5	<10000	50.8	<10000	11.6	<10000	-12.2	<10000
Selenium	10	3.7	-1.40	<10	-0.700	<10	-2.20	<10	-0.400	<10
Silicon	200	1.8								
Silver	10	.7	-0.100	<10	-0.800	<10	-1.40	<10	-1.50	<10
Sodium	10000	35	104	<10000	70.3	<10000	48.0	<10000	39.6	<10000
Strontium	10	.2								
Sulfur	50	3.1								
Thallium	2.0	1.8	anr							
Tin	10	.9								
Titanium	10	.7								
Tungsten	50	2.2								
Vanadium	50	.8	-0.200	<50	0.00	<50	-0.400	<50	-0.600	<50
Zinc	20	.2	0.100	<20	0.200	<20	0.100	<20	0.100	<20

12.2.2
12

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

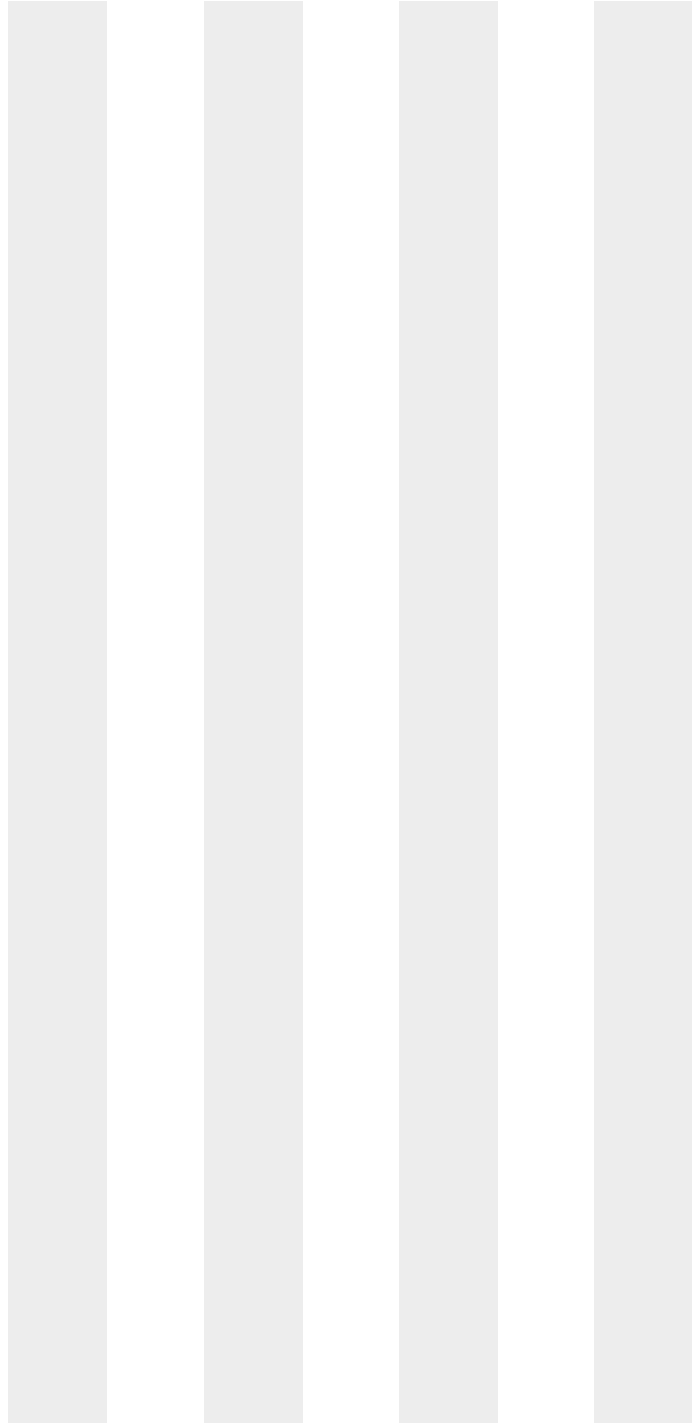
Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
 QC Limits: result < RL Run ID: MA44612 Units: ug/l

Time:	02:25	02:57	03:30	04:02						
Sample ID:	CCB8	CCB9	CCB10	CCB11						
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final

Zirconium 10 .3

(*) Outside of QC limits
 (anr) Analyte not requested



12.2.2
 12

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA44612 Units: ug/l

Metal	Time:		04:36		05:08		05:41		05:53		
	Sample ID:	RL	IDL	CCB12	CCB13	CCB14	CCB15	raw	final	raw	final
Aluminum	200	19		-0.100	<200	-4.30	<200	0.700	<200	2.30	<200
Antimony	6.0	2.4		-0.100	<6.0	1.90	<6.0	2.30	<6.0	3.40	<6.0
Arsenic	3.0	1.2		0.500	<3.0	-0.600	<3.0	0.00	<3.0	-1.00	<3.0
Barium	200	.6		0.900	<200	1.00	<200	0.700	<200	0.900	<200
Beryllium	1.0	.2		-0.100	<1.0	0.00	<1.0	0.00	<1.0	-0.100	<1.0
Bismuth	20	3.2									
Boron	100	1.5		anr							
Cadmium	3.0	.4		-0.100	<3.0	0.100	<3.0	0.100	<3.0	0.00	<3.0
Calcium	5000	5.5		-0.700	<5000	-3.60	<5000	-4.90	<5000	-2.20	<5000
Chromium	10	.7		-0.100	<10	-0.500	<10	-0.100	<10	-0.100	<10
Cobalt	50	.4		-0.600	<50	-0.100	<50	-0.500	<50	-0.400	<50
Copper	10	1.1		-2.40	<10	-3.00	<10	-1.20	<10	-1.60	<10
Iron	100	3.5		-0.800	<100	-1.50	<100	1.90	<100	0.600	<100
Lead	3.0	2.2		anr							
Lithium	50	3.4									
Magnesium	5000	25		6.80	<5000	6.70	<5000	-6.80	<5000	4.20	<5000
Manganese	15	.14		-0.100	<15	-0.100	<15	-0.100	<15	-0.100	<15
Molybdenum	20	.4									
Nickel	10	.5		-0.400	<10	0.100	<10	-0.700	<10	-0.100	<10
Phosphorus	50	2									
Potassium	10000	60		73.1	<10000	30.0	<10000	123	<10000	105	<10000
Selenium	10	3.7		-1.20	<10	-0.900	<10	-2.60	<10	-0.400	<10
Silicon	200	1.8									
Silver	10	.7		-0.700	<10	-0.700	<10	0.00	<10	-0.400	<10
Sodium	10000	35		140	<10000	60.4	<10000	291	<10000	187	<10000
Strontium	10	.2									
Sulfur	50	3.1									
Thallium	2.0	1.8		anr							
Tin	10	.9									
Titanium	10	.7									
Tungsten	50	2.2									
Vanadium	50	.8		-0.200	<50	-0.500	<50	-1.00	<50	-0.300	<50
Zinc	20	.2		0.400	<20	0.00	<20	0.00	<20	-0.200	<20

12.2.2
12

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

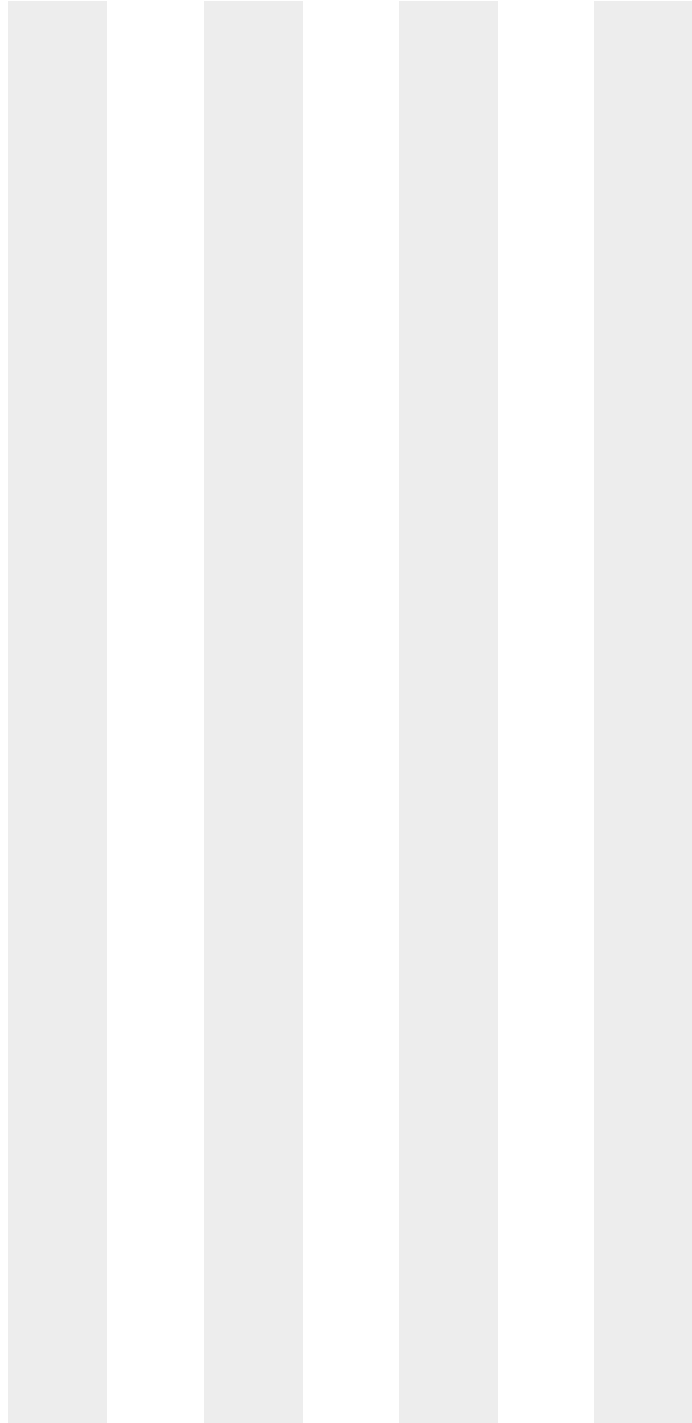
Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
 QC Limits: result < RL Run ID: MA44612 Units: ug/l

Time:	04:36	05:08	05:41	05:53						
Sample ID:	CCB12	CCB13	CCB14	CCB15						
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final

Zirconium 10 .3

(*) Outside of QC limits
 (anr) Analyte not requested



12.2.2
 12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44612 Units: ug/l

Metal	Time:	22:59			23:05			23:37		
	Sample ID:	ICV	ICV1	CCV	CCV1	CCV	CCV2	ICV	ICV1	CCV
	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec	
Aluminum	40000	41100	102.8	40000	41600	104.0	40000	40600	101.5	
Antimony	2000	2060	103.0	2000	2040	102.0	2000	2030	101.5	
Arsenic	2000	2080	104.0	2000	2040	102.0	2000	2040	102.0	
Barium	2000	2100	105.0	2000	2070	103.5	2000	2070	103.5	
Beryllium	2000	2130	106.5	2000	2110	105.5	2000	2060	103.0	
Bismuth										
Boron	anr									
Cadmium	2000	2050	102.5	2000	2030	101.5	2000	2010	100.5	
Calcium	40000	41100	102.8	40000	42300	105.8	40000	41500	103.8	
Chromium	2000	2070	103.5	2000	2120	106.0	2000	2060	103.0	
Cobalt	2000	2120	106.0	2000	2080	104.0	2000	2070	103.5	
Copper	2000	2090	104.5	2000	2050	102.5	2000	2000	100.0	
Iron	40000	40900	102.3	40000	41800	104.5	40000	41100	102.8	
Lead	anr									
Lithium										
Magnesium	40000	41000	102.5	40000	42100	105.3	40000	41800	104.5	
Manganese	2000	2100	105.0	2000	2100	105.0	2000	2070	103.5	
Molybdenum										
Nickel	2000	2110	105.5	2000	2100	105.0	2000	2080	104.0	
Phosphorus										
Potassium	40000	41000	102.5	40000	42100	105.3	40000	41200	103.0	
Selenium	2000	2030	101.5	2000	2010	100.5	2000	2020	101.0	
Silicon										
Silver	250	259	103.6	250	261	104.4	250	258	103.2	
Sodium	40000	41700	104.3	40000	41800	104.5	40000	41700	104.3	
Strontium										
Sulfur										
Thallium	anr									
Tin										
Titanium										
Tungsten										
Vanadium	2000	2130	106.5	2000	2090	104.5	2000	2050	102.5	
Zinc	2000	2090	104.5	2000	2060	103.0	2000	2050	102.5	

12.2.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44612 Units: ug/l

	Time:		22:59		23:05		23:37
Sample ID:	ICV	ICV1	CCV	CCV1	CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True
Zirconium							

(*) Outside of QC limits
(anr) Analyte not requested

12.2.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44612 Units: ug/l

Metal	Time:	23:52			00:24			00:57		
	Sample ID:	CCV	CCV3	% Rec	CCV	CCV4	% Rec	CCV	CCV5	% Rec
Aluminum	40000	41100	102.8	40000	41000	102.5	40000	40900	102.3	
Antimony	2000	2060	103.0	2000	2020	101.0	2000	2030	101.5	
Arsenic	2000	2080	104.0	2000	2030	101.5	2000	2050	102.5	
Barium	2000	2100	105.0	2000	2110	105.5	2000	2090	104.5	
Beryllium	2000	2080	104.0	2000	2070	103.5	2000	2060	103.0	
Bismuth										
Boron	anr									
Cadmium	2000	2050	102.5	2000	2010	100.5	2000	2020	101.0	
Calcium	40000	41900	104.8	40000	41700	104.3	40000	41800	104.5	
Chromium	2000	2100	105.0	2000	2060	103.0	2000	2080	104.0	
Cobalt	2000	2100	105.0	2000	2050	102.5	2000	2060	103.0	
Copper	2000	2040	102.0	2000	2010	100.5	2000	2030	101.5	
Iron	40000	41500	103.8	40000	41500	103.8	40000	41300	103.3	
Lead	anr									
Lithium										
Magnesium	40000	42200	105.5	40000	42200	105.5	40000	42100	105.3	
Manganese	2000	2110	105.5	2000	2080	104.0	2000	2090	104.5	
Molybdenum										
Nickel	2000	2120	106.0	2000	2070	103.5	2000	2080	104.0	
Phosphorus										
Potassium	40000	41600	104.0	40000	41500	103.8	40000	41400	103.5	
Selenium	2000	2050	102.5	2000	2010	100.5	2000	2030	101.5	
Silicon										
Silver	250	261	104.4	250	256	102.4	250	259	103.6	
Sodium	40000	42300	105.8	40000	41300	103.3	40000	41900	104.8	
Strontium										
Sulfur										
Thallium	anr									
Tin										
Titanium										
Tungsten										
Vanadium	2000	2090	104.5	2000	2060	103.0	2000	2070	103.5	
Zinc	2000	2080	104.0	2000	2030	101.5	2000	2040	102.0	

12.2.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44612 Units: ug/l

	Time:	23:52		00:24		00:57	
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



12.2.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44612 Units: ug/l

Time:	01:15	01:49	02:22						
Sample ID:	CCV	CCV6	CCV7	CCV8					
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	41500	103.8	40000	41600	104.0	40000	40400	101.0
Antimony	2000	2030	101.5	2000	2060	103.0	2000	1990	99.5
Arsenic	2000	2050	102.5	2000	2080	104.0	2000	2020	101.0
Barium	2000	2120	106.0	2000	2130	106.5	2000	2050	102.5
Beryllium	2000	2080	104.0	2000	2090	104.5	2000	2020	101.0
Bismuth									
Boron	anr								
Cadmium	2000	2010	100.5	2000	2040	102.0	2000	1980	99.0
Calcium	40000	42200	105.5	40000	42500	106.3	40000	41000	102.5
Chromium	2000	2070	103.5	2000	2080	104.0	2000	2040	102.0
Cobalt	2000	2060	103.0	2000	2080	104.0	2000	2020	101.0
Copper	2000	2010	100.5	2000	2030	101.5	2000	1990	99.5
Iron	40000	41900	104.8	40000	42000	105.0	40000	40700	101.8
Lead	anr								
Lithium									
Magnesium	40000	42800	107.0	40000	43000	107.5	40000	41700	104.3
Manganese	2000	2080	104.0	2000	2090	104.5	2000	2050	102.5
Molybdenum									
Nickel	2000	2080	104.0	2000	2110	105.5	2000	2040	102.0
Phosphorus									
Potassium	40000	41700	104.3	40000	42200	105.5	40000	40200	100.5
Selenium	2000	2030	101.5	2000	2050	102.5	2000	1990	99.5
Silicon									
Silver	250	257	102.8	250	260	104.0	250	253	101.2
Sodium	40000	42600	106.5	40000	42800	107.0	40000	41200	103.0
Strontium									
Sulfur									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	2000	2060	103.0	2000	2070	103.5	2000	2020	101.0
Zinc	2000	2040	102.0	2000	2070	103.5	2000	2010	100.5

12.2.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44612 Units: ug/l

	Time:		01:15		01:49		02:22				
Sample ID:	CCV	CCV6		CCV		CCV7		CCV		CCV8	
Metal	True	Results	% Rec	True <td></td> <th>Results</th> <td>% Rec</td> <th>True <td></td> <th>Results</th> <td>% Rec</td> </th>		Results	% Rec	True <td></td> <th>Results</th> <td>% Rec</td>		Results	% Rec

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested



12.2.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44612 Units: ug/l

Metal	Sample ID: CCV True	02:55 CCV9		CCV True	03:27 CCV10		CCV True	03:59 CCV11	
		Results	% Rec		Results	% Rec		Results	% Rec
Aluminum	40000	40100	100.3	40000	40100	100.3	40000	40500	101.3
Antimony	2000	1990	99.5	2000	1950	97.5	2000	1920	96.0
Arsenic	2000	2000	100.0	2000	1980	99.0	2000	1940	97.0
Barium	2000	2050	102.5	2000	2040	102.0	2000	2060	103.0
Beryllium	2000	2010	100.5	2000	2000	100.0	2000	2020	101.0
Bismuth									
Boron	anr								
Cadmium	2000	1970	98.5	2000	1940	97.0	2000	1900	95.0
Calcium	40000	40900	102.3	40000	40900	102.3	40000	41300	103.3
Chromium	2000	2030	101.5	2000	1980	99.0	2000	1990	99.5
Cobalt	2000	2010	100.5	2000	1980	99.0	2000	1950	97.5
Copper	2000	1970	98.5	2000	1930	96.5	2000	1930	96.5
Iron	40000	40400	101.0	40000	40400	101.0	40000	40800	102.0
Lead	anr								
Lithium									
Magnesium	40000	41500	103.8	40000	41400	103.5	40000	41900	104.8
Manganese	2000	2030	101.5	2000	1990	99.5	2000	1990	99.5
Molybdenum									
Nickel	2000	2040	102.0	2000	2010	100.5	2000	1980	99.0
Phosphorus									
Potassium	40000	40200	100.5	40000	40100	100.3	40000	40400	101.0
Selenium	2000	1970	98.5	2000	1950	97.5	2000	1920	96.0
Silicon									
Silver	250	252	100.8	250	246	98.4	250	247	98.8
Sodium	40000	41300	103.3	40000	41200	103.0	40000	41600	104.0
Strontium									
Sulfur									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	2000	2010	100.5	2000	1960	98.0	2000	1960	98.0
Zinc	2000	1990	99.5	2000	1960	98.0	2000	1930	96.5

12.2.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44612 Units: ug/l

	Time:	02:55		03:27		03:59
Sample ID:	CCV	CCV9	CCV	CCV10	CCV	CCV11
Metal	True	Results % Rec	True	Results % Rec	True	Results % Rec

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested



12.2.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44612 Units: ug/l

Metal	Sample ID: CCV True	04:33 CCV12		CCV True	05:06 CCV13		CCV True	05:39 CCV14	
		Results	% Rec		Results	% Rec		Results	% Rec
Aluminum	40000	39700	99.3	40000	39900	99.8	40000	39700	99.3
Antimony	2000	1920	96.0	2000	1950	97.5	2000	1930	96.5
Arsenic	2000	1950	97.5	2000	1980	99.0	2000	1960	98.0
Barium	2000	2030	101.5	2000	2030	101.5	2000	2030	101.5
Beryllium	2000	1980	99.0	2000	1990	99.5	2000	1980	99.0
Bismuth									
Boron	anr								
Cadmium	2000	1910	95.5	2000	1940	97.0	2000	1920	96.0
Calcium	40000	40500	101.3	40000	40700	101.8	40000	40500	101.3
Chromium	2000	1950	97.5	2000	1970	98.5	2000	1970	98.5
Cobalt	2000	1960	98.0	2000	1980	99.0	2000	1960	98.0
Copper	2000	1890	94.5	2000	1910	95.5	2000	1920	96.0
Iron	40000	40100	100.3	40000	40200	100.5	40000	40100	100.3
Lead	anr								
Lithium									
Magnesium	40000	41300	103.3	40000	41500	103.8	40000	41300	103.3
Manganese	2000	1950	97.5	2000	1970	98.5	2000	1970	98.5
Molybdenum									
Nickel	2000	1990	99.5	2000	2010	100.5	2000	2000	100.0
Phosphorus									
Potassium	40000	39600	99.0	40000	39800	99.5	40000	39800	99.5
Selenium	2000	1930	96.5	2000	1950	97.5	2000	1930	96.5
Silicon									
Silver	250	242	96.8	250	244	97.6	250	245	98.0
Sodium	40000	40700	101.8	40000	41000	102.5	40000	40800	102.0
Strontium									
Sulfur									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	2000	1920	96.0	2000	1940	97.0	2000	1940	97.0
Zinc	2000	1940	97.0	2000	1960	98.0	2000	1940	97.0

12.2.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

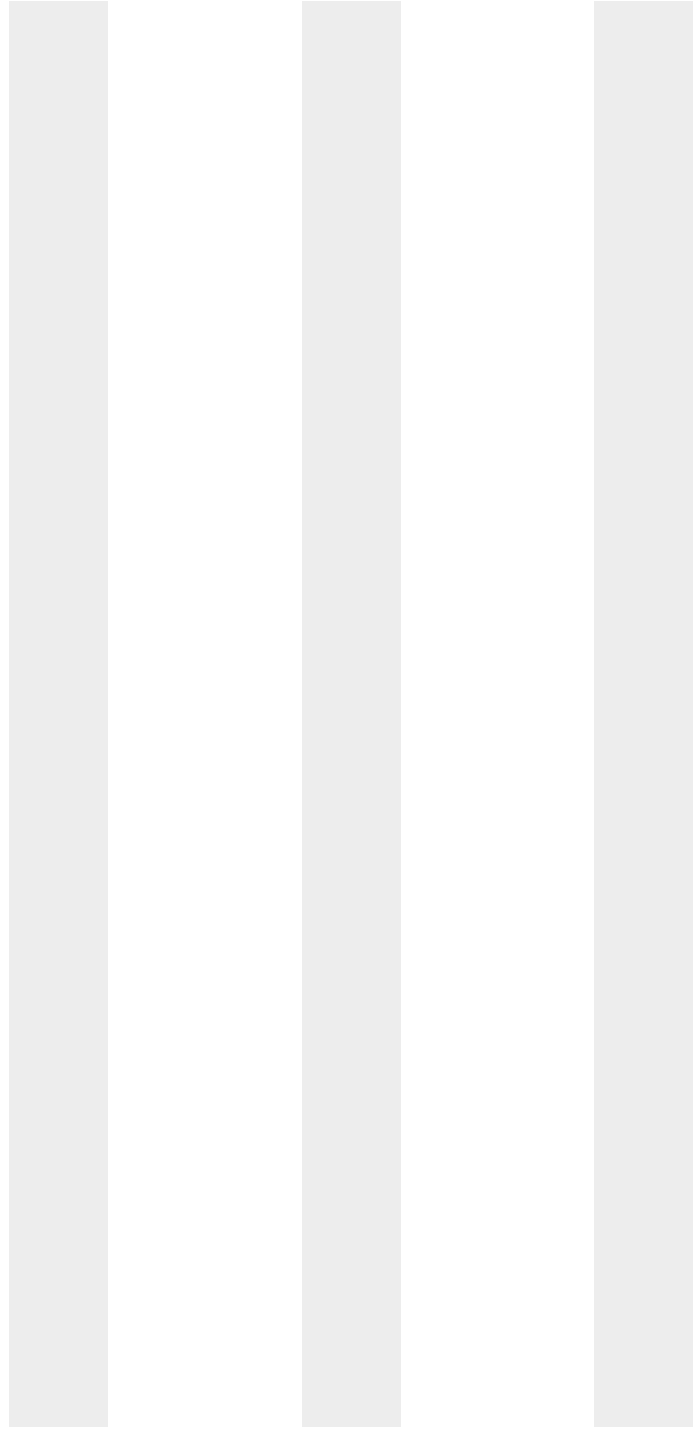
Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44612 Units: ug/l

	Time:	04:33		05:06		05:39	
Sample ID:	CCV	CCV12	CCV	CCV13	CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True
		Results	% Rec	Results	% Rec	Results	% Rec

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested



12.2.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44612 Units: ug/l

Metal	Sample ID: CCV	True	Results	% Rec
Aluminum	40000	40000	39300	98.3
Antimony	2000	2000	1920	96.0
Arsenic	2000	2000	1950	97.5
Barium	2000	2000	2010	100.5
Beryllium	2000	2000	1960	98.0
Bismuth				
Boron	anr			
Cadmium	2000	2000	1910	95.5
Calcium	40000	40000	40100	100.3
Chromium	2000	2000	1970	98.5
Cobalt	2000	2000	1960	98.0
Copper	2000	2000	1910	95.5
Iron	40000	40000	39600	99.0
Lead	anr			
Lithium				
Magnesium	40000	40000	40800	102.0
Manganese	2000	2000	1980	99.0
Molybdenum				
Nickel	2000	2000	1990	99.5
Phosphorus				
Potassium	40000	40000	39500	98.8
Selenium	2000	2000	1920	96.0
Silicon				
Silver	250	250	245	98.0
Sodium	40000	40000	40600	101.5
Strontium				
Sulfur				
Thallium	anr			
Tin				
Titanium				
Tungsten				
Vanadium	2000	2000	1950	97.5
Zinc	2000	2000	1940	97.0

12.2.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

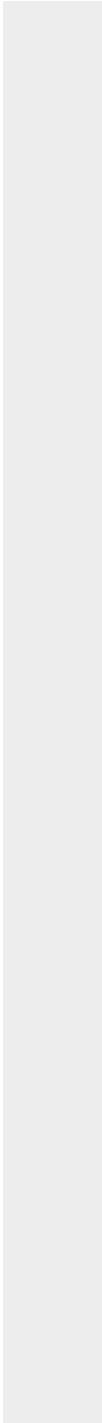
Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44612 Units: ug/l

Time:	05:51		
Sample ID: CCV	CCV15		
Metal	True	Results	% Rec

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested



12.2.3
12

HIGH STANDARD CHECK SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
 QC Limits: 90 to 110 % Recovery Run ID: MA44612 Units: ug/l

Time:	23:31	23:34				
Sample ID:	HSTD	HSTD1	HSTD	HSTD2	HSTD	HSTD2
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum				300000	315000	105.0
Antimony	5000	5130	102.6			
Arsenic	5000	5150	103.0			
Barium	5000	5430	108.6			
Beryllium	5000	5370	107.4			
Bismuth						
Boron	anr					
Cadmium	5000	5140	102.8			
Calcium				150000	156000	104.0
Chromium	5000	5410	108.2			
Cobalt	5000	5380	107.6			
Copper	5000	5210	104.2			
Iron				150000	155000	103.3
Lead	anr					
Lithium						
Magnesium				300000	315000	105.0
Manganese	5000	5370	107.4			
Molybdenum						
Nickel	5000	5430	108.6			
Phosphorus						
Potassium				150000	159000	106.0
Selenium	5000	5100	102.0			
Silicon						
Silver	625	645	103.2			
Sodium				150000	160000	106.7
Strontium						
Sulfur						
Thallium	anr					
Tin						
Titanium						
Tungsten						
Vanadium	5000	5310	106.2			
Zinc	5000	5370	107.4			

12.2.4
12

HIGH STANDARD CHECK SUMMARY

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44612 Units: ug/l

Time:	23:31	23:34	
Sample ID:	HSTD1	HSTD2	
Metal	True	True	
Results	% Rec	Results	% Rec

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested

12.2.4
12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
 QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA44612 Units: ug/l

Time:	23:11	23:14	01:03						
Sample ID:	CRI1	CRID1	CRID2	Results	% Rec	Results	% Rec	Results	% Rec
Metal	True	True	True						
Aluminum	200	500	100	194	97.0	111	111.0	189	94.5
Antimony	6.0	20	3.0	7.60	126.7	1.80U	0.0* (a)	7.70	128.3
Arsenic	8.0	20	3.0	9.00	112.5	2.80	93.3	9.20	115.0
Barium	200		4.0	202	101.0	4.70	117.5	207	103.5
Beryllium	2.0		1.0	2.00	100.0	1.00	100.0	2.00	100.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	2.90	96.7	1.00	100.0	2.80	93.3
Calcium	5000	2000	1000	5140	102.8	1120	112.0	5190	103.8
Chromium	10		2.0	9.80	98.0	2.30	115.0	9.90	99.0
Cobalt	50		3.0	52.3	104.6	2.70	90.0	51.2	102.4
Copper	10		2.0	8.50	85.0	-0.600U	0.0* (a)	8.10	81.0
Iron	100	500		103	103.0			101	101.0
Lead	3.0	20	2.5	anr					
Lithium	50								
Magnesium	5000	2000	100	5190	103.8	114	114.0	5330	106.6
Manganese	15		3.0	15.3	102.0	3.20	106.7	15.2	101.3
Molybdenum	20								
Nickel	10		4.0	9.60	96.0	4.30	107.5	10.3	103.0
Phosphorus	50								
Potassium	5000		2000	5090	101.8	2160	108.0	5180	103.6
Selenium	10	20	5.0	10.2	102.0	3.00U	0.0* (a)	7.40	74.0
Silicon	200								
Silver	5.0		2.0	4.60	92.0	0.300U	0.0* (a)	4.70	94.0
Sodium	5000		1000	5130	102.6	1100	110.0	5340	106.8
Strontium	10								
Sulfur	50								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	51.0	102.0	2.10	105.0	49.4	98.8
Zinc	20		10	20.0	100.0	11.0	110.0	20.3	101.5

12.2.5
12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
 QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA44612 Units: ug/l

Time:	23:11		23:14		01:03		
Sample ID:	CRI	CRIA	CRID	CRID1	CRID2	CRID3	
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.

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
 QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA44612 Units: ug/l

Time:	01:06	05:44	05:47						
Sample ID:	CRID2	CRI3	CRID3	Results	% Rec	Results	% Rec	Results	% Rec
Metal	True	True	True						
Aluminum	200	500	100	107	107.0	196	98.0	90.2	90.2
Antimony	6.0	20	3.0	0.400U	0.0* (a)	7.70	128.3	0.300U	0.0* (a)
Arsenic	8.0	20	3.0	2.30	76.7	8.70	108.8	3.20	106.7
Barium	200		4.0	4.60	115.0	202	101.0	5.20	130.0
Beryllium	2.0		1.0	0.900	90.0	1.80	90.0	0.900	90.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	0.600	60.0*(a)	2.80	93.3	0.700	70.0
Calcium	5000	2000	1000	1090	109.0	5080	101.6	1070	107.0
Chromium	10		2.0	1.50	75.0	10.2	102.0	1.60	80.0
Cobalt	50		3.0	3.10	103.3	49.5	99.0	2.70	90.0
Copper	10		2.0	-0.900U	0.0* (a)	9.60	96.0	-2.20	0.0* (a)
Iron	100	500				101	101.0		
Lead	3.0	20	2.5	anr					
Lithium	50								
Magnesium	5000	2000	100	131	131.0*(a)	5240	104.8	105	105.0
Manganese	15		3.0	3.20	106.7	16.0	106.7	3.00	100.0
Molybdenum	20								
Nickel	10		4.0	4.60	115.0	9.90	99.0	4.20	105.0
Phosphorus	50								
Potassium	5000		2000	2150	107.5	5050	101.0	2150	107.5
Selenium	10	20	5.0	2.50U	0.0* (a)	7.00	70.0	1.90U	0.0* (a)
Silicon	200								
Silver	5.0		2.0	0.500U	0.0* (a)	4.60	92.0	-0.500U	0.0* (a)
Sodium	5000		1000	1180	118.0	5350	107.0	1280	128.0
Strontium	10								
Sulfur	50								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	2.00	100.0	52.6	105.2	1.30	65.0*(a)
Zinc	20		10	11.0	110.0	19.6	98.0	10.6	106.0

12.2.5
12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
 QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA44612 Units: ug/l

Time:	01:06		05:44		05:47				
Sample ID:	CRI	CRIA	CRID	CRID2	CRI3	CRID3			
Metal	True	True	True	Results	% Rec	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: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA44612 Units: ug/l

Metal	Time:		23:25		23:28		01:09		01:12	
	Sample ID:	ICSAB	ICSAB	ICSAB2	ICSAB2	ICSAB2	ICSAB3	ICSAB3	ICSAB3	ICSAB3
	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	545000	109.0	534000	106.8	542000	108.4	512000	102.4
Antimony		1000	9.10		1090	109.0	9.30		1030	103.0
Arsenic		1000	1.90		1100	110.0	2.20		1060	106.0
Barium		500	2.10		529	105.8	2.00		507	101.4
Beryllium		500	0.00		510	102.0	0.100		485	97.0
Bismuth		500	6.90		551	110.2	-0.200		522	104.4
Boron		500	-1.50		543	108.6	-0.900		519	103.8
Cadmium		1000	-0.200		1060	106.0	-0.500		1010	101.0
Calcium	400000	400000	403000	100.8	418000	104.5	406000	101.5	405000	101.3
Chromium		500	0.500		512	102.4	0.600		485	97.0
Cobalt		500	-0.600		502	100.4	-0.800		479	95.8
Copper		500	-3.40		537	107.4	-2.70		510	102.0
Iron	200000	200000	200000	100.0	213000	106.5	198000	99.0	203000	101.5
Lead		1000	1.20		997	99.7	2.80		949	94.9
Lithium		500	-0.200		541	108.2	4.00		516	103.2
Magnesium	500000	500000	530000	106.0	551000	110.2	528000	105.6	530000	106.0
Manganese		500	-2.40		522	104.4	-2.50		494	98.8
Molybdenum		500	-0.600		523	104.6	0.300		499	99.8
Nickel		1000	-0.300		996	99.6	-0.100		954	95.4
Phosphorus		500	0.400		531	106.2	1.80		508	101.6
Potassium			85.7		135		217		228	
Selenium		1000	6.50		1060	106.0	2.60		1020	102.0
Silicon		500	8.10		542	108.4	8.50		515	103.0
Silver		1000	3.40		1100	110.0	2.90		1050	105.0
Sodium			6.30		19.7		151		156	
Strontium		500	-2.90		534	106.8	-3.10		511	102.2
Sulfur		500	16.8		536	107.2	17.7		507	101.4
Thallium		1000	-0.900		1030	103.0	3.60		985	98.5
Tin		500	-3.70		504	100.8	-5.50		477	95.4
Titanium		500	-2.30		532	106.4	-2.10		508	101.6
Tungsten		500	2.70		523	104.6	1.00		501	100.2
Vanadium		500	6.80		531	106.2	7.20		503	100.6
Zinc		1000	1.30		1000	100.0	1.40		950	95.0

12.2.6 12

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
 Part 1 - ICSA and ICSAB Standards

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060718M2.ICP Date Analyzed: 06/07/18 Methods: SW846 6010C
 QC Limits: 80 to 120 % Recovery Run ID: MA44612 Units: ug/l

Time:		23:25		23:28		01:09		01:12		
Sample ID:	ICSAB	ICSAB	ICSAB2	ICSAB2	ICSAB2	ICSAB3	ICSAB3	ICSAB3	ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec

Zirconium 500 -3.60 511 102.2 -4.90 480 96.0

(*) Outside of QC limits
 (anr) Analyte not requested

12.2.6
 12

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44616
 Parameters: Ca,Fe,Pb,Mg,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:04	MA44616-STD1	1		STDA
12:07	MA44616-STD2	1		STDB
12:10	ZZZZZZ	1		
12:13	ZZZZZZ	1		
12:16	ZZZZZZ	1		
12:19	ZZZZZZ	1		
12:22	MA44616-ICV1	1		
12:25	MA44616-ICB1	1		
12:28	MA44616-CCV1	1		
12:30	MA44616-CCB1	1		
12:33	MA44616-CRI1	1		
12:37	MA44616-CRID1	1		See rerun
12:40	MA44616-ICSA1	1		
12:43	MA44616-ICSAB1	1		
12:46	MA44616-HSTD1	1		
12:49	MA44616-HSTD2	1		Minerals
12:52	ZZZZZZ	1		
12:55	ZZZZZZ	1		
12:58	ZZZZZZ	1		
13:01	MA44616-CCV2	1		
13:04	MA44616-CCB2	1		
13:07	MA44616-CRID2	1		
13:10	MP7494-MB1	1		
13:13	MP7494-B1	1		
13:16	MP7494-S1	2		
13:18	MP7494-S2	2		
13:21	JC67085-4	2		(sample used for QC only; not part of login JC67003)
13:24	MP7494-SD1	10		
13:27	ZZZZZZ	1		
13:30	ZZZZZZ	1		
13:33	MA44616-CCV3	1		
13:36	MA44616-CCB3	1		
13:39	ZZZZZZ	2		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44616
Parameters: Ca,Fe,Pb,Mg,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:42	ZZZZZZ	1		
13:45	ZZZZZZ	10		
13:48	ZZZZZZ	5		
13:52	ZZZZZZ	1		
13:55	ZZZZZZ	5		
13:58	ZZZZZZ	2		
14:01	ZZZZZZ	5		
14:04	ZZZZZZ	1		
14:07	MA44616-CCV4	1		
14:10	MA44616-CCB4	1		
14:13	ZZZZZZ	1		
14:17	ZZZZZZ	1		
14:20	ZZZZZZ	1		
14:23	ZZZZZZ	5		
14:26	MP7493-MB1	1		
14:29	MP7493-B1	1		
14:32	MP7493-S1	1		
14:34	MP7493-S2	1		
14:37	JC67110-4	1		(sample used for QC only; not part of login JC67003)
14:40	MA44616-CCV5	1		
14:43	MA44616-CCB5	1		
14:46	MP7493-SD1	5		
14:49	JC67003-1	1		
14:52	JC67003-2	1		
14:55	JC67003-3	5		
14:58	JC67003-4	1		
15:01	JC67003-5	1		
15:04	JC67003-6	1		
15:07	JC67003-7	1		
----->	Last reportable sample/prep for job JC67003			
15:10	ZZZZZZ	1		
15:13	MA44616-CCV6	1		
15:16	MA44616-CCB6	1		
15:19	ZZZZZZ	1		

12.3
12

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44616
Parameters: Ca,Fe,Pb,Mg,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:22	ZZZZZZ	1		
15:25	ZZZZZZ	1		
15:28	ZZZZZZ	2		
15:33	ZZZZZZ	1		
15:36	ZZZZZZ	100		
15:39	ZZZZZZ	1		
15:42	MA44616-CRI2	1		
15:45	MA44616-CRID3	1		
15:48	MA44616-CCV7	1		
15:51	MA44616-CCB7	1		
15:54	ZZZZZZ	1		
15:57	MA44616-CRID4	1		
16:00	MA44616-CRI3	1		
16:08	MA44616-CCV8	1		
16:10	MA44616-CCB8	1		
16:13	ZZZZZZ	1		
16:16	ZZZZZZ	2		
16:19	ZZZZZZ	2		
16:22	ZZZZZZ	1		
16:25	ZZZZZZ	1		
16:28	ZZZZZZ	10		
16:31	ZZZZZZ	2		
16:34	ZZZZZZ	3		
16:38	MA44616-CCV9	1		
16:40	MA44616-CCB9	1		
16:43	ZZZZZZ	1		
16:46	MP7545-MB1	5		
16:50	MP7545-B1	5		
16:52	MP7545-S1	5		
16:55	MP7545-S2	5		
16:58	JC67397-1A	5		(sample used for QC only; not part of login JC67003)
17:01	MP7545-SD1	25		
17:04	ZZZZZZ	10		

12.3
12

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44616
Parameters: Ca,Fe,Pb,Mg,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:07	MA44616-CCV10	1		
17:10	MA44616-CCB10	1		
17:13	MA44616-CRI4	1		
17:16	MA44616-CRID5	1		
17:20	MA44616-CRI5	1		
17:23	MA44616-ICSA2	1		
17:26	MA44616-ICSAB2	1		
17:29	MA44616-CCV11	1		
17:32	MA44616-CCB11	1		
----->	Last reportable CCB for job JC67003			
17:37	ZZZZZ	1		
17:40	ZZZZZ	1		
17:43	ZZZZZ	1		
17:46	ZZZZZ	1		
17:49	ZZZZZ	1		
17:53	ZZZZZ	1		
17:56	ZZZZZ	1		
17:59	ZZZZZ	1		
18:02	ZZZZZ	1		
18:05	ZZZZZ	1		
18:08	ZZZZZ	1		
18:11	MA44616-CCV12	1		
18:14	MA44616-CCB12	1		
18:17	MP7547-MB1	1		
18:20	MP7547-B1	1		
18:23	MP7547-S1	1		
18:25	MP7547-S2	1		
18:28	JC67303-1	1		(sample used for QC only; not part of login JC67003)
18:31	MP7547-SD1	5		
18:34	ZZZZZ	1		
18:37	ZZZZZ	1		
18:40	ZZZZZ	1		
18:43	MA44616-CCV13	1		
18:46	MA44616-CCB13	1		

12.3
12

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44616
Parameters: Ca,Fe,Pb,Mg,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:49	ZZZZZZ	1		
18:52	ZZZZZZ	1		
18:55	ZZZZZZ	1		
18:58	ZZZZZZ	1		
19:01	ZZZZZZ	1		
19:04	ZZZZZZ	1		
19:07	ZZZZZZ	1		
19:10	ZZZZZZ	1		
19:13	ZZZZZZ	1		
19:16	MA44616-CCV14	1		
19:19	MA44616-CCB14	1		
19:22	ZZZZZZ	1		
19:25	ZZZZZZ	1		
19:28	ZZZZZZ	1		
19:31	ZZZZZZ	1		
19:34	ZZZZZZ	1		
19:37	ZZZZZZ	1		
19:40	ZZZZZZ	1		
19:43	MP7506-B2	1		
19:46	MP7506-MB2	1		
19:49	MA44616-CCV15	1		
19:52	MA44616-CCB15	1		
19:55	ZZZZZZ	1		
19:58	ZZZZZZ	1		
20:01	ZZZZZZ	1		
20:04	ZZZZZZ	1		
20:07	MP7507-MB2	5		
20:10	MP7507-B2	5		
20:13	ZZZZZZ	1		
20:16	MP7562-B1	5		
20:19	MP7562-MB1	5		
20:22	MA44616-CCV16	1		
20:24	MA44616-CCB16	1		

12.3
12

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44616
Parameters: Ca,Fe,Pb,Mg,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:27	MP7562-S1	5		
20:30	MP7562-S2	5		
20:33	JC67497-5	5		(sample used for QC only; not part of login JC67003)
20:36	MP7562-SD1	25		
20:39	ZZZZZZ	5		
20:42	ZZZZZZ	5		
20:45	ZZZZZZ	5		
20:48	MP7561-B1	5		
20:51	MP7561-MB1	5		
20:54	MA44616-CCV17	1		
20:57	MA44616-CCB17	1		
21:00	MP7561-S1	5		
21:03	MP7561-S2	5		
21:06	JC67308-1A	5		(sample used for QC only; not part of login JC67003)
21:09	MP7561-SD1	25		
21:12	ZZZZZZ	5		
21:16	ZZZZZZ	5		
21:19	ZZZZZZ	5		
21:22	ZZZZZZ	5		
21:25	ZZZZZZ	5		
21:28	MA44616-CCV18	1		
21:31	MA44616-CCB18	1		
21:34	ZZZZZZ	5		
21:37	ZZZZZZ	5		
21:40	ZZZZZZ	5		
21:43	ZZZZZZ	5		
21:46	ZZZZZZ	5		
21:50	ZZZZZZ	5		
21:53	ZZZZZZ	5		
21:56	ZZZZZZ	2		
21:59	ZZZZZZ	1		
22:02	MA44616-CCV19	1		
22:05	MA44616-CCB19	1		

12.3
12

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44616
Parameters: Ca,Fe,Pb,Mg,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:08	ZZZZZZ	1		
22:11	MP7496-S1	2		
22:14	MP7496-S2	2		
22:16	JC67082-1	2		(sample used for QC only; not part of login JC67003)
22:20	MP7496-SD1	10		
22:23	MP7496-S3	2		
22:25	MP7496-S4	2		
22:28	ZZZZZZ	10		
22:31	MA44616-CCV20	1		
22:34	MA44616-CCB20	1		
22:37	ZZZZZZ	10		
22:40	ZZZZZZ	2		
22:43	ZZZZZZ	10		
22:46	ZZZZZZ	5		
22:49	ZZZZZZ	2		
22:52	MA44616-CCV21	1		
22:55	MA44616-CCB21	1		
22:58	MA44616-CRI6	1		
23:01	MA44616-CRID6	1		TLNJ out
23:05	MA44616-CCV22	1		
23:08	MA44616-CCB22	1		

Refer to raw data for calibration curve and standards.

12.3
12

INTERNAL STANDARD SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44616
 Parameters: Ca,Fe,Pb,Mg,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:04	MA44616-STD1	5922 R	114690 R	15993 R	9177 R
12:07	MA44616-STD2	5707	114410	16179	8592
12:10	ZZZZZZ	5702	113550	15720	8603
12:13	ZZZZZZ	5860	114770	16182	9090
12:16	ZZZZZZ	5989	114430	16380	9351
12:19	ZZZZZZ	5873	115410	16573	8949
12:22	MA44616-ICV1	5719	114350	16358	8614
12:25	MA44616-ICB1	5988	118000	16811	9243
12:28	MA44616-CCV1	5687	112790	16530	8565
12:30	MA44616-CCB1	6009	119060	16660	9259
12:33	MA44616-CRI1	5888	117140	16438	9044
12:37	MA44616-CRID1	No results reported for the elements associated with this internal standard.			
12:40	MA44616-ICSA1	5317	106470	15226	7899
12:43	MA44616-ICSAB1	5454	109090	15641	8111
12:46	MA44616-HSTD1	5907	116730	16461	9196
12:49	MA44616-HSTD2	5464	109520	15320	8016
12:52	ZZZZZZ	5845	116980	16034	9215
12:55	ZZZZZZ	6006	119080	16782	9416
12:58	ZZZZZZ	6175	120050	16501	9490
13:01	MA44616-CCV2	5912	115970	16184	8852
13:04	MA44616-CCB2	5958	116470	16101	9173
13:07	MA44616-CRID2	6000	114780	16090	9225
13:10	MP7494-MB1	5955	119760	16824	9146
13:13	MP7494-B1	6012	119840	16716	9047
13:16	MP7494-S1	6042	120070	16996	8715
13:18	MP7494-S2	6044	118780	16661	8722
13:21	JC67085-4	6159	122390	17117	8940
13:24	MP7494-SD1	5879	115410	16083	8952
13:27	ZZZZZZ	6045	119770	16825	8888
13:30	ZZZZZZ	5917	115910	16284	8785
13:33	MA44616-CCV3	5847	115310	15904	8744
13:36	MA44616-CCB3	6073	119240	16590	9321
13:39	ZZZZZZ	6035	119620	16564	9000

12.3.1
12

INTERNAL STANDARD SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44616
 Parameters: Ca,Fe,Pb,Mg,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:42	ZZZZZZ	5975	119920	16664	8921
13:45	ZZZZZZ	5826	116320	15969	8838
13:48	ZZZZZZ	No results reported for the elements associated with this internal standard.			
13:52	ZZZZZZ	5863	116290	16497	8740
13:55	ZZZZZZ	6059	119920	16610	9079
13:58	ZZZZZZ	5988	119620	16674	8918
14:01	ZZZZZZ	5944	117670	16154	8820
14:04	ZZZZZZ	5901	115940	16301	9083
14:07	MA44616-CCV4	5994	117360	16588	8934
14:10	MA44616-CCB4	5972	119270	16638	9179
14:13	ZZZZZZ	5873	117440	16504	8746
14:17	ZZZZZZ	6154	120390	16843	9407
14:20	ZZZZZZ	5895	116970	16284	9062
14:23	ZZZZZZ	5636	113770	15736	8346
14:26	MP7493-MB1	6014	116680	16544	9219
14:29	MP7493-B1	5841	115370	16143	8793
14:32	MP7493-S1	5666	114610	16112	8318
14:34	MP7493-S2	5635	113790	15923	8285
14:37	JC67110-4	5717	114180	15729	8432
14:40	MA44616-CCV5	5851	115370	16069	8746
14:43	MA44616-CCB5	6050	117580	16385	9278
14:46	MP7493-SD1	5911	116710	16286	8959
14:49	JC67003-1	6026	118870	16712	9112
14:52	JC67003-2	5731	114670	15990	8548
14:55	JC67003-3	5932	116610	16277	9055
14:58	JC67003-4	6029	119430	16595	9092
15:01	JC67003-5	5929	118440	16385	8900
15:04	JC67003-6	6010	118730	16462	8969
15:07	JC67003-7	5803	115190	16232	8657
15:10	ZZZZZZ	5793	116530	16253	8584
15:13	MA44616-CCV6	5871	114880	16027	8759
15:16	MA44616-CCB6	6107	118550	16421	9346
15:19	ZZZZZZ	5864	117690	16299	8702

12.3.1
12

INTERNAL STANDARD SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44616
 Parameters: Ca,Fe,Pb,Mg,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:22	ZZZZZZ	5660	113600	16022	8425
15:25	ZZZZZZ	5870	118190	16405	8697
15:28	ZZZZZZ	5900	117010	16169	8819
15:33	ZZZZZZ	5783	115770	16243	8576
15:36	ZZZZZZ	5998	115100	16110	9054
15:39	ZZZZZZ	6233	125160	17392	8491
15:42	MA44616-CRI2	5887	115710	16168	8998
15:45	MA44616-CRID3	6164	121100	16759	9411
15:48	MA44616-CCV7	5951	118490	16450	8870
15:51	MA44616-CCB7	6065	117690	16285	9303
15:54	ZZZZZZ	6109	119540	16574	9365
15:57	MA44616-CRID4	5864	114050	15839	8998
16:00	MA44616-CRI3	6061	118730	16429	9238
16:08	MA44616-CCV8	5977	118510	16361	8905
16:10	MA44616-CCB8	6001	116270	16225	9206
16:13	ZZZZZZ	5989	116950	16310	9170
16:16	ZZZZZZ	5988	115780	16247	9047
16:19	ZZZZZZ	6103	119020	16639	9012
16:22	ZZZZZZ	5957	118340	16280	8746
16:25	ZZZZZZ	6206	119720	16578	9464
16:28	ZZZZZZ	5965	115310	16084	9036
16:31	ZZZZZZ	6114	119320	16565	8989
16:34	ZZZZZZ	6048	118680	16221	9194
16:38	MA44616-CCV9	6010	117140	16417	8931
16:40	MA44616-CCB9	5980	117090	16233	9185
16:43	ZZZZZZ	6179	121480	16722	9439
16:46	MP7545-MB1	6050	115210	15420	9263
16:50	MP7545-B1	6044	117590	16269	9162
16:52	MP7545-S1	5799	116040	16138	8672
16:55	MP7545-S2	5743	115420	15913	8596
16:58	JC67397-1A	5979	116620	16028	8947
17:01	MP7545-SD1	6069	118970	16185	9238
17:04	ZZZZZZ	6107	119240	16421	9216

12.3.1
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INTERNAL STANDARD SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44616
 Parameters: Ca,Fe,Pb,Mg,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:07	MA44616-CCV10	6033	118020	16313	8957
17:10	MA44616-CCB10	6076	118400	16233	9283
17:13	MA44616-CRI4	6189	118780	16322	9388
17:16	MA44616-CRID5	5951	115680	16093	9104
17:20	MA44616-CRI5	6076	119790	16464	9227
17:23	MA44616-ICSA2	5523	110120	15728	8111
17:26	MA44616-ICSAB2	5560	111300	15733	8193
17:29	MA44616-CCV11	5842	111950	15546	8705
17:32	MA44616-CCB11	6050	117420	16268	9256
17:37	ZZZZZZ	5869	114180	15826	8964
17:40	ZZZZZZ	6077	119480	16474	9259
17:43	ZZZZZZ	5942	115510	15941	9058
17:46	ZZZZZZ	5577	112230	15247	8228
17:49	ZZZZZZ	5617	113630	15517	8327
17:53	ZZZZZZ	5796	109000	15644	8354
17:56	ZZZZZZ	6036	116800	16046	9254
17:59	ZZZZZZ	5911	115140	15926	9078
18:02	ZZZZZZ	6056	117780	16244	9240
18:05	ZZZZZZ	5953	115290	15853	9090
18:08	ZZZZZZ	6054	118170	16402	9209
18:11	MA44616-CCV12	5722	112580	15646	8531
18:14	MA44616-CCB12	6037	117240	16196	9220
18:17	MP7547-MB1	6040	117640	16187	9204
18:20	MP7547-B1	5832	113540	15981	8732
18:23	MP7547-S1	5802	113770	15790	8541
18:25	MP7547-S2	5972	116330	16217	8791
18:28	JC67303-1	6187	119380	16777	9159
18:31	MP7547-SD1	5896	113370	15681	8921
18:34	ZZZZZZ	5956	114930	15940	8860
18:37	ZZZZZZ	6178	119970	16595	8939
18:40	ZZZZZZ	5961	117250	16207	8751
18:43	MA44616-CCV13	5899	116090	16087	8774
18:46	MA44616-CCB13	5946	117240	16264	9101

12.3.1
12

INTERNAL STANDARD SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44616
 Parameters: Ca,Fe,Pb,Mg,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:49	ZZZZZZ	6315	123060	16941	9009
18:52	ZZZZZZ	6206	120450	16616	9028
18:55	ZZZZZZ	5985	118510	16348	8654
18:58	ZZZZZZ	6147	119370	16549	8979
19:01	ZZZZZZ	6237	121890	17032	9040
19:04	ZZZZZZ	6141	118430	16792	9011
19:07	ZZZZZZ	6385	125150	17449	8891
19:10	ZZZZZZ	5998	116120	16120	8917
19:13	ZZZZZZ	5988	116860	16176	8754
19:16	MA44616-CCV14	5820	114210	15590	8669
19:19	MA44616-CCB14	5970	115130	15825	9119
19:22	ZZZZZZ	6088	119910	16344	8801
19:25	ZZZZZZ	6056	119200	16386	8754
19:28	ZZZZZZ	6260	121790	16949	8888
19:31	ZZZZZZ	6032	117800	16392	8948
19:34	ZZZZZZ	5965	115610	16340	8779
19:37	ZZZZZZ	6256	120820	16689	9269
19:40	ZZZZZZ	5915	110990	15525	8344
19:43	MP7506-B2	5859	115680	15641	8772
19:46	MP7506-MB2	6052	117470	16111	9210
19:49	MA44616-CCV15	5818	114570	15646	8668
19:52	MA44616-CCB15	5880	115950	16036	9027
19:55	ZZZZZZ	5935	116320	15954	9130
19:58	ZZZZZZ	6238	122110	16786	9527
20:01	ZZZZZZ	5962	117130	15881	9175
20:04	ZZZZZZ	6084	118950	16331	9310
20:07	MP7507-MB2	5964	116010	15972	9125
20:10	MP7507-B2	5939	116140	16028	9000
20:13	ZZZZZZ	5974	118980	16252	9295
20:16	MP7562-B1	5925	116030	15985	8979
20:19	MP7562-MB1	6117	118860	16105	9337
20:22	MA44616-CCV16	5768	113380	15517	8604
20:24	MA44616-CCB16	5950	115190	15900	9103

12.3.1
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INTERNAL STANDARD SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44616
 Parameters: Ca,Fe,Pb,Mg,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:27	MP7562-S1	5888	115530	15807	8854
20:30	MP7562-S2	5933	116170	16071	8922
20:33	JC67497-5	5935	115520	15837	8987
20:36	MP7562-SD1	5920	114730	15825	9037
20:39	ZZZZZZ	5912	114970	15974	8940
20:42	ZZZZZZ	5953	116550	15773	9013
20:45	ZZZZZZ	6084	116520	16103	9206
20:48	MP7561-B1	5780	114550	15663	8429
20:51	MP7561-MB1	5874	116270	15885	8614
20:54	MA44616-CCV17	5794	113970	15594	8634
20:57	MA44616-CCB17	6044	117740	16101	9245
21:00	MP7561-S1	5741	114280	15635	8373
21:03	MP7561-S2	5770	114770	15590	8411
21:06	JC67308-1A	5778	114260	15681	8449
21:09	MP7561-SD1	5999	116360	15861	9002
21:12	ZZZZZZ	5689	114710	15729	8310
21:16	ZZZZZZ	5759	114950	15638	8403
21:19	ZZZZZZ	5917	117420	16059	8659
21:22	ZZZZZZ	5790	114640	15781	8497
21:25	ZZZZZZ	5832	116420	16004	8576
21:28	MA44616-CCV18	5891	115760	16078	8789
21:31	MA44616-CCB18	6078	118380	16077	9310
21:34	ZZZZZZ	5757	114840	15819	8452
21:37	ZZZZZZ	5780	114790	15826	8466
21:40	ZZZZZZ	5721	114470	15571	8360
21:43	ZZZZZZ	5753	114840	15907	8440
21:46	ZZZZZZ	5619	113340	15613	8241
21:50	ZZZZZZ	5752	115030	15640	8414
21:53	ZZZZZZ	5877	117380	15842	8617
21:56	ZZZZZZ	6013	114550	16078	8638
21:59	ZZZZZZ	5834	113950	15620	8761
22:02	MA44616-CCV19	5873	115980	15851	8764
22:05	MA44616-CCB19	6012	116560	15919	9214

12.3.1
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INTERNAL STANDARD SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44616
 Parameters: Ca,Fe,Pb,Mg,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:08	ZZZZZZ	5978	116540	16055	9143
22:11	MP7496-S1	5707	113450	15631	8423
22:14	MP7496-S2	5687	114480	15745	8406
22:16	JC67082-1	5722	115010	15729	8474
22:20	MP7496-SD1	5868	115510	15903	8881
22:23	MP7496-S3	5642	113670	15661	8331
22:25	MP7496-S4	5686	114160	15596	8389
22:28	ZZZZZZ	5979	117210	15978	9188
22:31	MA44616-CCV20	5841	114710	15748	8713
22:34	MA44616-CCB20	6138	118230	16202	9372
22:37	ZZZZZZ	5934	116520	15829	9094
22:40	ZZZZZZ	5883	116580	16055	9022
22:43	ZZZZZZ	5925	116370	15881	9117
22:46	ZZZZZZ	5911	116970	16052	9068
22:49	ZZZZZZ	6019	119270	16192	9197
22:52	MA44616-CCV21	5819	114540	15653	8697
22:55	MA44616-CCB21	6010	116030	15847	9203
22:58	MA44616-CRI6	5995	116310	15930	9132
23:01	MA44616-CRID6	6110	118700	16244	9328
23:05	MA44616-CCV22	5905	116560	15947	8806
23:08	MA44616-CCB22	5995	116660	15992	9192

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 %

12.3.1
12

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: result < RL Run ID: MA44616 Units: ug/l

Metal	RL	IDL	12:25		12:30		13:04		13:36	
			ICB1	final	CCB1	final	CCB2	final	CCB3	final
Aluminum	200	19	anr							
Antimony	6.0	2.4	anr							
Arsenic	3.0	1.2	anr							
Barium	200	.6	anr							
Beryllium	1.0	.2	anr							
Bismuth	20	3.2								
Boron	100	1.5								
Cadmium	3.0	.4	anr							
Calcium	5000	5.5	-0.700	<5000	0.00	<5000	-2.00	<5000	-2.00	<5000
Chromium	10	.7	anr							
Cobalt	50	.4	anr							
Copper	10	1.1	anr							
Iron	100	3.5	-3.30	<100	-2.00	<100	-3.70	<100	-2.20	<100
Lead	3.0	2.2	-0.900	<3.0	-1.40	<3.0	0.100	<3.0	-0.700	<3.0
Lithium	50	3.4								
Magnesium	5000	25	26.7	<5000	20.1	<5000	28.3	<5000	51.2	<5000
Manganese	15	.14	anr							
Molybdenum	20	.4	anr							
Nickel	10	.5	anr							
Phosphorus	50	2								
Potassium	10000	60	anr							
Selenium	10	3.7	anr							
Silicon	200	1.8								
Silver	10	.7	anr							
Sodium	10000	35	anr							
Strontium	10	.2								
Sulfur	50	3.1								
Thallium	2.0	1.8	0.00	<2.0	-0.800	<2.0	0.100	<2.0	-1.10	<2.0
Tin	10	.9								
Titanium	10	.7								
Tungsten	50	2.2								
Vanadium	50	.8	anr							
Zinc	20	.2	anr							

12.3.2
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BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

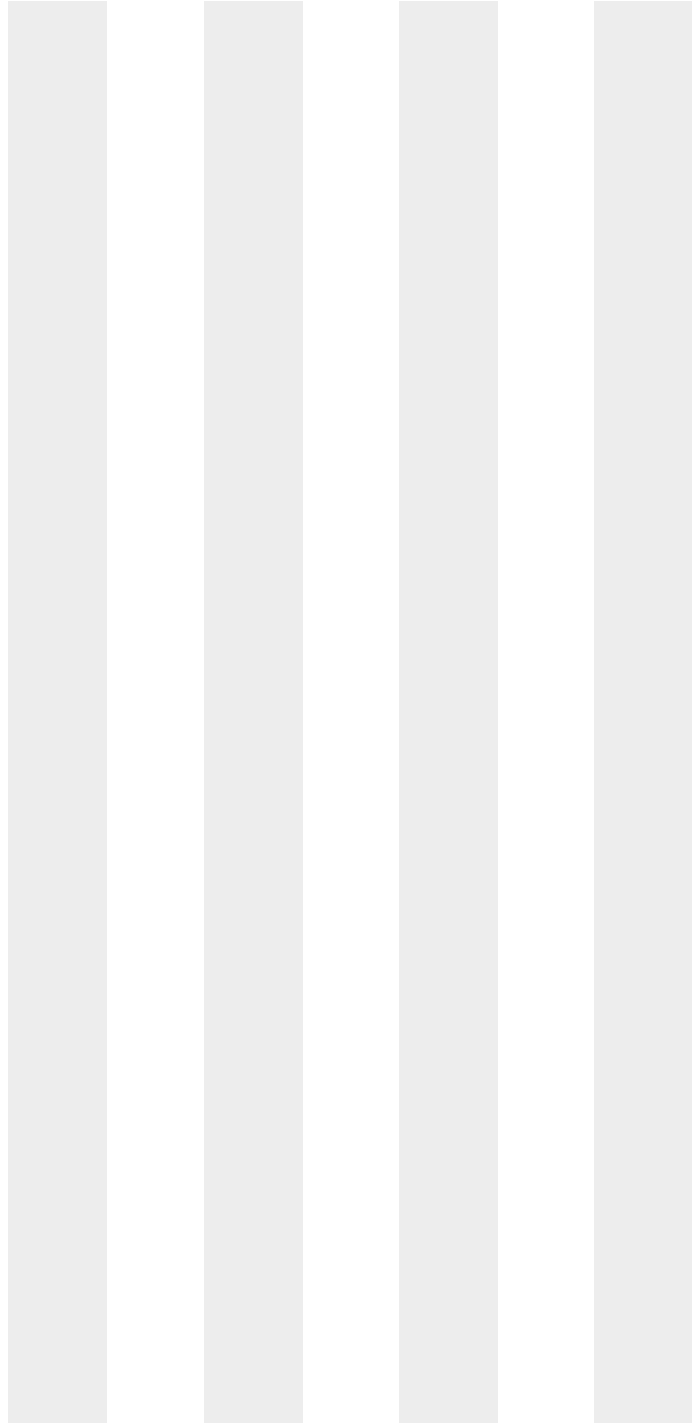
Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: result < RL Run ID: MA44616 Units: ug/l

Time:			12:25		12:30		13:04		13:36	
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



12.3.2
 12

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: result < RL Run ID: MA44616 Units: ug/l

Metal	RL	IDL	Time:	14:10	14:43	15:16	15:51				
			Sample ID:	CCB4	CCB5	CCB6	CCB7	raw	final		
Aluminum	200	19		anr							
Antimony	6.0	2.4		anr							
Arsenic	3.0	1.2		anr							
Barium	200	.6		anr							
Beryllium	1.0	.2		anr							
Bismuth	20	3.2									
Boron	100	1.5									
Cadmium	3.0	.4		anr							
Calcium	5000	5.5		-0.300	<5000	0.700	<5000	-3.80	<5000	-5.00	<5000
Chromium	10	.7		anr							
Cobalt	50	.4		anr							
Copper	10	1.1		anr							
Iron	100	3.5		-4.60	<100	-2.00	<100	-3.10	<100	-1.70	<100
Lead	3.0	2.2		-0.200	<3.0	0.700	<3.0	-0.400	<3.0	0.800	<3.0
Lithium	50	3.4									
Magnesium	5000	25		51.2	<5000	42.4	<5000	41.7	<5000	29.8	<5000
Manganese	15	.14		anr							
Molybdenum	20	.4		anr							
Nickel	10	.5		anr							
Phosphorus	50	2									
Potassium	10000	60		anr							
Selenium	10	3.7		anr							
Silicon	200	1.8									
Silver	10	.7		anr							
Sodium	10000	35		anr							
Strontium	10	.2									
Sulfur	50	3.1									
Thallium	2.0	1.8		1.20	<2.0	0.500	<2.0	-0.200	<2.0	-1.50	<2.0
Tin	10	.9									
Titanium	10	.7									
Tungsten	50	2.2									
Vanadium	50	.8		anr							
Zinc	20	.2		anr							

12.3.2
12

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

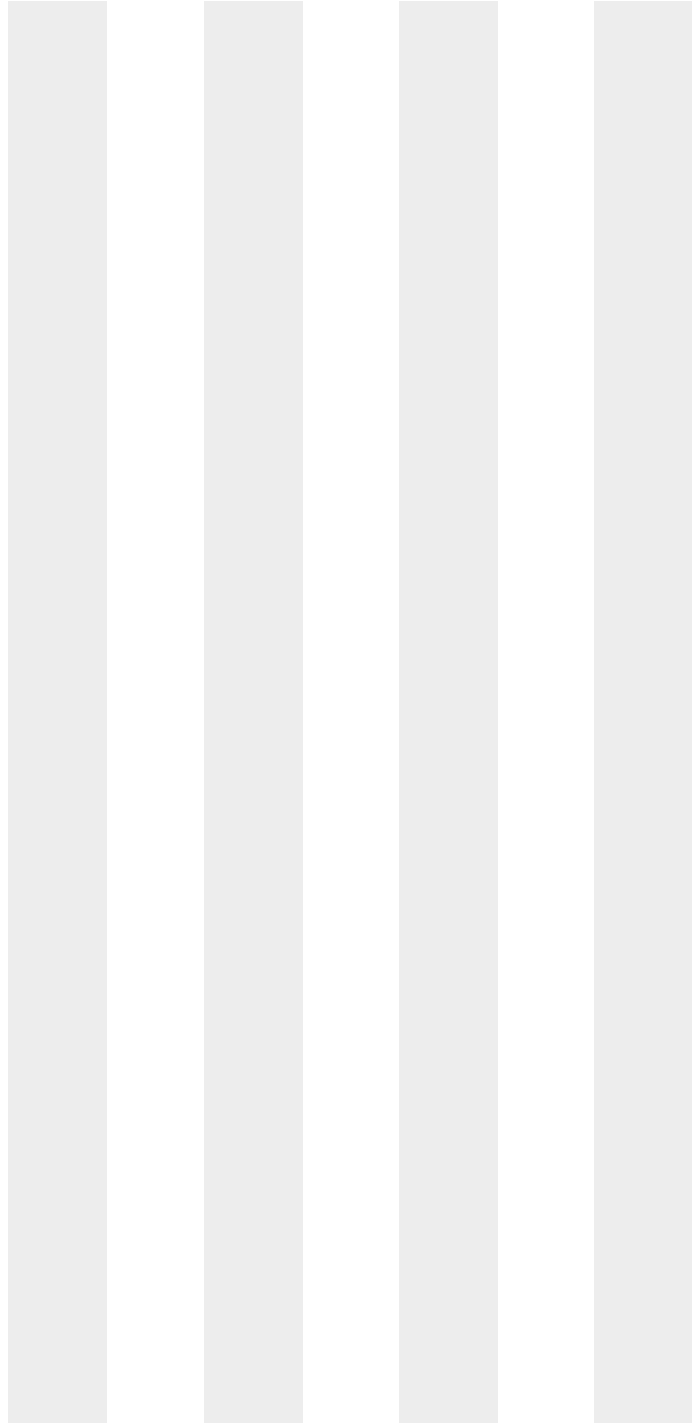
Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: result < RL Run ID: MA44616 Units: ug/l

Time:	14:10	14:43	15:16	15:51						
Sample ID:	CCB4	CCB5	CCB6	CCB7						
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final

Zirconium 10 .3

(*) Outside of QC limits
 (anr) Analyte not requested



12.3.2
 12

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA44616 Units: ug/l

Metal	RL	IDL	16:10	final	16:40	final	17:10	final	17:32	final
			CCB8 raw		CCB9 raw		CCB10 raw		CCB11 raw	
Aluminum	200	19	anr							
Antimony	6.0	2.4	anr							
Arsenic	3.0	1.2	anr							
Barium	200	.6	anr							
Beryllium	1.0	.2	anr							
Bismuth	20	3.2								
Boron	100	1.5								
Cadmium	3.0	.4	anr							
Calcium	5000	5.5	-1.90	<5000	-1.10	<5000	8.50	<5000	-5.50	<5000
Chromium	10	.7	anr							
Cobalt	50	.4	anr							
Copper	10	1.1	anr							
Iron	100	3.5	-2.90	<100	-1.80	<100	-2.90	<100	-1.90	<100
Lead	3.0	2.2	0.100	<3.0	0.200	<3.0	-1.20	<3.0	-1.00	<3.0
Lithium	50	3.4								
Magnesium	5000	25	36.5	<5000	20.9	<5000	18.0	<5000	25.0	<5000
Manganese	15	.14	anr							
Molybdenum	20	.4	anr							
Nickel	10	.5	anr							
Phosphorus	50	2								
Potassium	10000	60	anr							
Selenium	10	3.7	anr							
Silicon	200	1.8								
Silver	10	.7	anr							
Sodium	10000	35	anr							
Strontium	10	.2								
Sulfur	50	3.1								
Thallium	2.0	1.8	1.50	<2.0	0.300	<2.0	0.500	<2.0	0.600	<2.0
Tin	10	.9								
Titanium	10	.7								
Tungsten	50	2.2								
Vanadium	50	.8	anr							
Zinc	20	.2	anr							

12.3.2
12

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

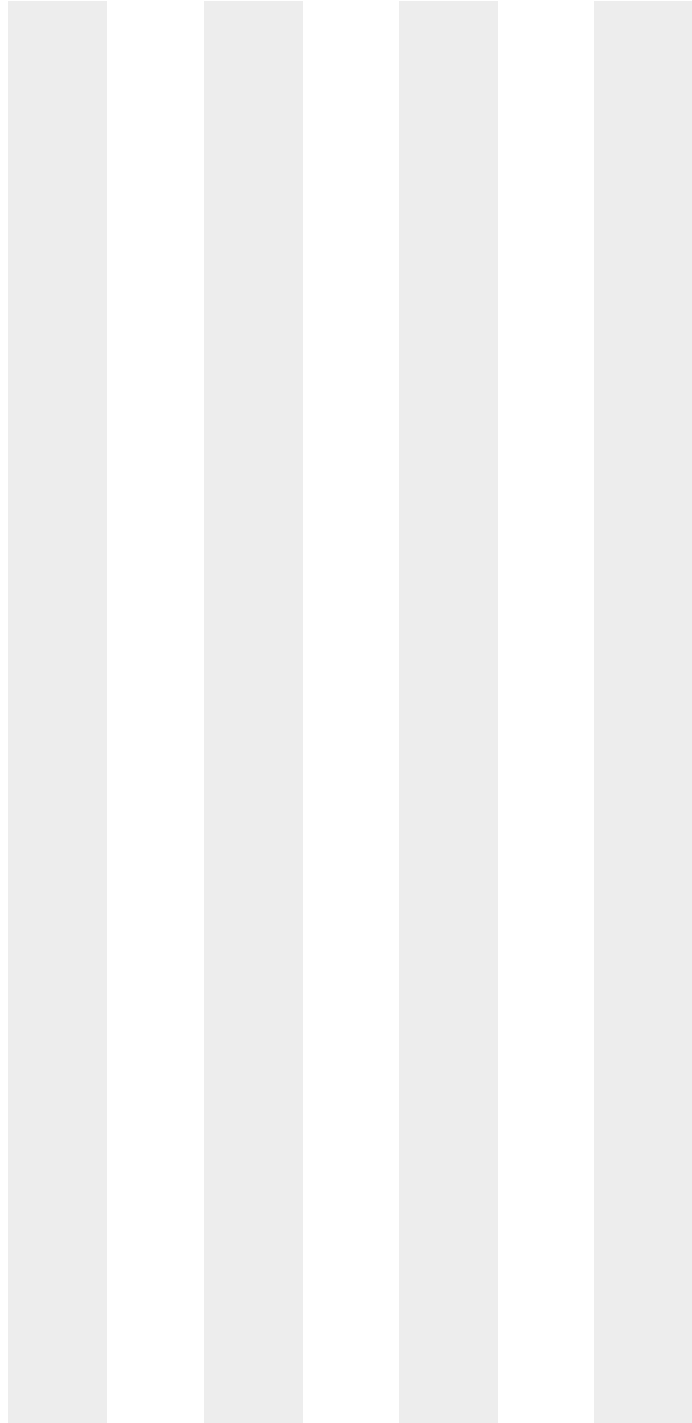
Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: result < RL Run ID: MA44616 Units: ug/l

Time:	16:10	16:40	17:10	17:32						
Sample ID:	CCB8	CCB9	CCB10	CCB11						
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final

Zirconium 10 .3

(*) Outside of QC limits
 (anr) Analyte not requested



12.3.2
 12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44616 Units: ug/l

Metal	Time: Sample ID: ICV True	12:22			12:28			13:01		
		ICV1	Results	% Rec	CCV	CCV1	% Rec	CCV	CCV2	% Rec
Aluminum	anr									
Antimony	anr									
Arsenic	anr									
Barium	anr									
Beryllium	anr									
Bismuth										
Boron										
Cadmium	anr									
Calcium	40000	39100	97.8	40000	39600	99.0	40000	39400	98.5	
Chromium	anr									
Cobalt	anr									
Copper	anr									
Iron	40000	38700	96.8	40000	39600	99.0	40000	39300	98.3	
Lead	2000	2030	101.5	2000	2060	103.0	2000	1990	99.5	
Lithium										
Magnesium	40000	39300	98.3	40000	39700	99.3	40000	39700	99.3	
Manganese	anr									
Molybdenum	anr									
Nickel	anr									
Phosphorus										
Potassium	anr									
Selenium	anr									
Silicon										
Silver	anr									
Sodium	anr									
Strontium										
Sulfur										
Thallium	2000	2050	102.5	2000	2090	104.5	2000	2020	101.0	
Tin										
Titanium										
Tungsten										
Vanadium	anr									
Zinc	anr									

12.3.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44616 Units: ug/l

	Time:		12:22		12:28		13:01		
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



12.3.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44616 Units: ug/l

Metal	Sample ID:	13:33			14:07			14:40		
		CCV	CCV3	% Rec	CCV	CCV4	% Rec	CCV	CCV5	% Rec
Aluminum	anr									
Antimony	anr									
Arsenic	anr									
Barium	anr									
Beryllium	anr									
Bismuth										
Boron										
Cadmium	anr									
Calcium	40000	40900	102.3	40000	39800	99.5	40000	40600	101.5	
Chromium	anr									
Cobalt	anr									
Copper	anr									
Iron	40000	40700	101.8	40000	39600	99.0	40000	40400	101.0	
Lead	2000	2030	101.5	2000	2000	100.0	2000	2030	101.5	
Lithium										
Magnesium	40000	41200	103.0	40000	40100	100.3	40000	40900	102.3	
Manganese	anr									
Molybdenum	anr									
Nickel	anr									
Phosphorus										
Potassium	anr									
Selenium	anr									
Silicon										
Silver	anr									
Sodium	anr									
Strontium										
Sulfur										
Thallium	2000	2050	102.5	2000	2010	100.5	2000	2050	102.5	
Tin										
Titanium										
Tungsten										
Vanadium	anr									
Zinc	anr									

12.3.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44616 Units: ug/l

	Time:		13:33		14:07		14:40		
Sample ID:	CCV	CCV3		CCV		CCV4		CCV	
Metal	True	Results	% Rec	True <td></td> <th>Results</th> <td>% Rec</td> <th>True <td></td> </th>		Results	% Rec	True <td></td>	

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested



12.3.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44616 Units: ug/l

Metal	Sample ID:	15:13			15:48			16:08		
		CCV	CCV6	% Rec	CCV	CCV7	% Rec	CCV	CCV8	% Rec
Aluminum	anr									
Antimony	anr									
Arsenic	anr									
Barium	anr									
Beryllium	anr									
Bismuth										
Boron										
Cadmium	anr									
Calcium	40000	40500	101.3	40000	38500	96.3	40000	38800	97.0	
Chromium	anr									
Cobalt	anr									
Copper	anr									
Iron	40000	40300	100.8	40000	38300	95.8	40000	38600	96.5	
Lead	2000	2030	101.5	2000	1970	98.5	2000	1940	97.0	
Lithium										
Magnesium	40000	40700	101.8	40000	38900	97.3	40000	39100	97.8	
Manganese	anr									
Molybdenum	anr									
Nickel	anr									
Phosphorus										
Potassium	anr									
Selenium	anr									
Silicon										
Silver	anr									
Sodium	anr									
Strontium										
Sulfur										
Thallium	2000	2060	103.0	2000	2000	100.0	2000	1970	98.5	
Tin										
Titanium										
Tungsten										
Vanadium	anr									
Zinc	anr									

12.3.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44616 Units: ug/l

	Time:		15:13		15:48		16:08				
Sample ID:	CCV	CCV6		CCV		CCV7		CCV		CCV8	
Metal	True	Results	% Rec	True <td></td> <th>Results</th> <td>% Rec</td> <th>True <td></td> <th>Results</th> <td>% Rec</td> </th>		Results	% Rec	True <td></td> <th>Results</th> <td>% Rec</td>		Results	% Rec

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested



12.3.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44616 Units: ug/l

Metal	Sample ID: CCV	16:38		CCV	17:07		CCV	17:29	
		CCV9	Results		CCV10	Results		CCV11	Results
	True		% Rec	True		% Rec	True		% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	40000	39000	97.5	40000	39100	97.8	40000	40800	102.0
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	38800	97.0	40000	38900	97.3	40000	40500	101.3
Lead	2000	1960	98.0	2000	1950	97.5	2000	2010	100.5
Lithium									
Magnesium	40000	39300	98.3	40000	39300	98.3	40000	41100	102.8
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Phosphorus									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Strontium									
Sulfur									
Thallium	2000	1990	99.5	2000	1980	99.0	2000	2030	101.5
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

12.3.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

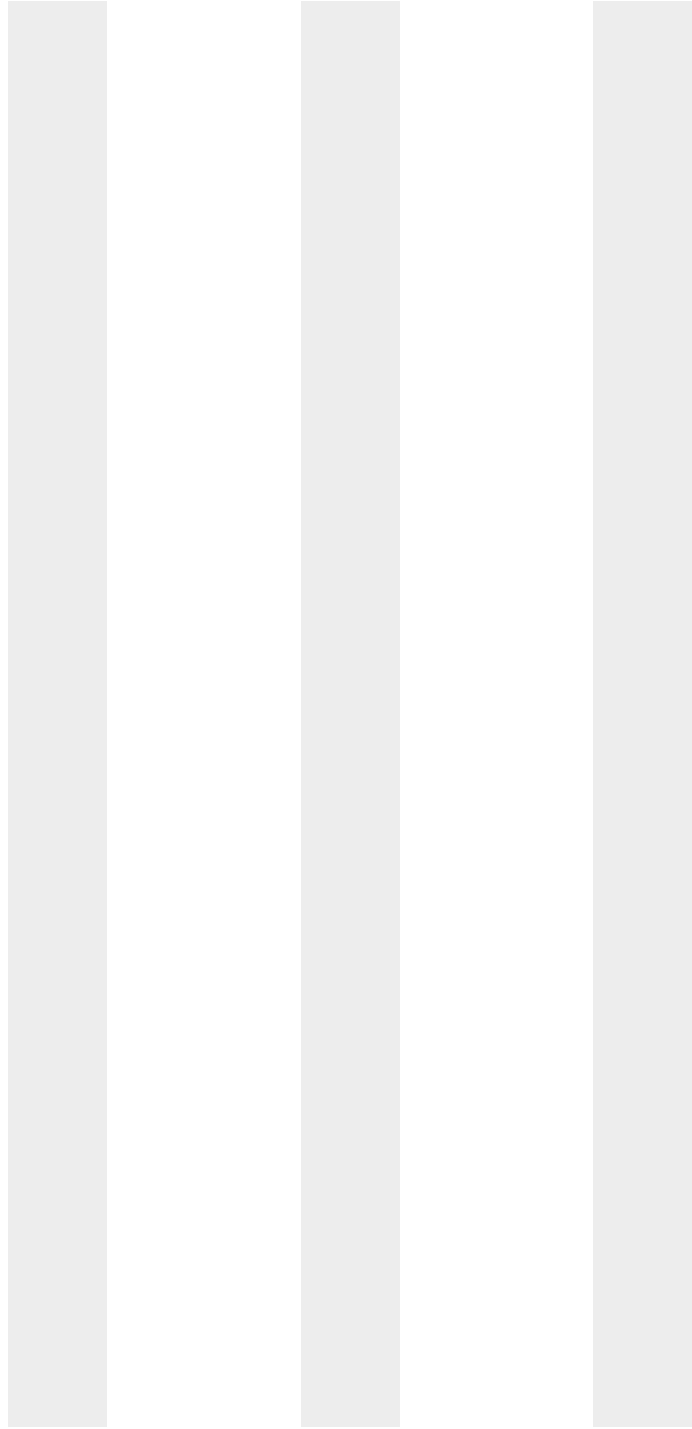
Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44616 Units: ug/l

	Time:				16:38		17:07		17:29	
Sample ID:	CCV	CCV9	CCV	CCV10	CCV	CCV11				
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec	

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested



12.3.3
12

HIGH STANDARD CHECK SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 90 to 110 % Recovery Run ID: MA44616 Units: ug/l

Time:	12:46	12:49				
Sample ID:	HSTD	HSTD1	HSTD	HSTD2		
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Bismuth						
Boron						
Cadmium	anr					
Calcium				150000	156000	104.0
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron				150000	156000	104.0
Lead	5000	5200	104.0			
Lithium						
Magnesium				300000	315000	105.0
Manganese	anr					
Molybdenum	anr					
Nickel	anr					
Phosphorus						
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Sulfur						
Thallium	5000	5240	104.8			
Tin						
Titanium						
Tungsten						
Vanadium	anr					
Zinc	anr					

12.3.4
12

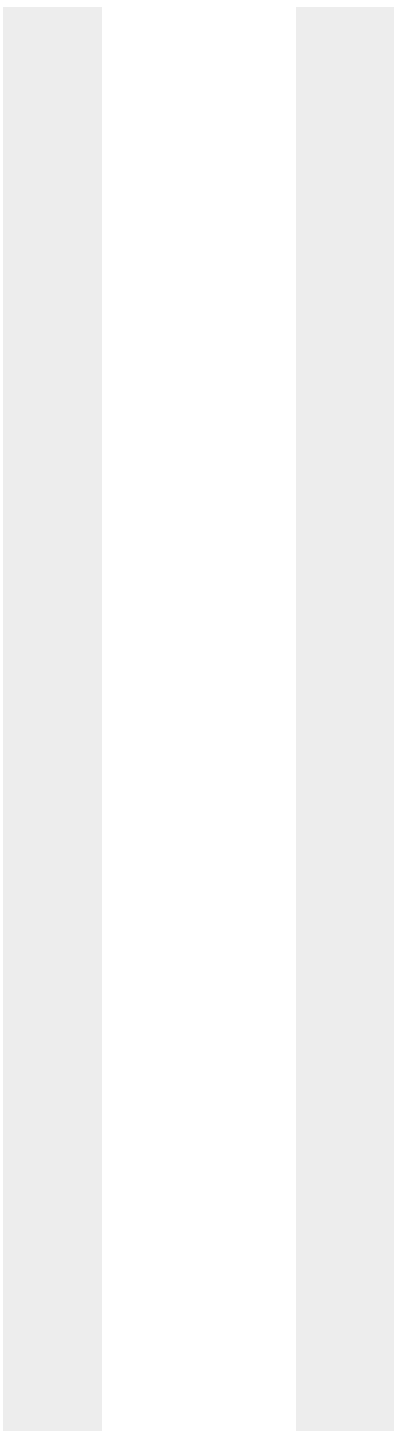
HIGH STANDARD CHECK SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 90 to 110 % Recovery Run ID: MA44616 Units: ug/l

Time:	12:46	12:49	
Sample ID:	HSTD1	HSTD2	
Metal	True	Results	% Rec

Zirconium
 (*) Outside of QC limits
 (anr) Analyte not requested



12.3.4
12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 70 to 130 % Recovery Run ID: MA44616 Units: ug/l

Time:	12:33	13:07	15:42						
Sample ID:	CRI1	CRID2	CRID2	CRID2	% Rec	% Rec	% Rec	% Rec	% Rec
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	5050	101.0	1090	109.0	5140	102.8
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		96.7	96.7			96.9	96.9
Lead	3.0	20	2.5	2.80	93.3	-0.300U	0.0* (a)	2.30	76.7
Lithium	50								
Magnesium	5000	2000	100	5180	103.6	148	148.0*(a)	5240	104.8
Manganese	15		3.0	anr					
Molybdenum	20			anr					
Nickel	10		4.0	anr					
Phosphorus	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		2.0	anr					
Sodium	5000		1000	anr					
Strontium	10								
Sulfur	50								
Thallium	10		2.0	8.90	89.0	1.70	85.0	8.30	83.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

12.3.5
12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 70 to 130 % Recovery Run ID: MA44616 Units: ug/l

Time:	12:33		13:07		15:42				
Sample ID:	CRI	CRIA	CRID	CRID2	CRID2	CRID2			
Metal	True	True	True	Results	% Rec	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.

12.3.5
12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 70 to 130 % Recovery Run ID: MA44616 Units: ug/l

Time:	15:45	15:57	16:00						
Sample ID:	CRID3	CRID4	CRID3						
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	1000	100.0	1090	109.0	5040	100.8
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500						94.6	94.6
Lead	3.0	20	2.5	-0.600U	0.0* (a)	-0.100U	0.0* (a)	3.00	100.0
Lithium	50								
Magnesium	5000	2000	100	137	137.0*(a	131	131.0*(a	5150	103.0
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Phosphorus	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		2.0	anr					
Sodium	5000		1000	anr					
Strontium	10								
Sulfur	50								
Thallium	10		2.0	2.40	120.0	1.90	95.0	8.90	89.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

12.3.5
12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 70 to 130 % Recovery Run ID: MA44616 Units: ug/l

Time:				15:45			15:57			16:00
Sample ID:	CRI	CRIA	CRID	CRID3			CRID4			CRID3
Metal	True	True	True	Results	% Rec	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.

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 70 to 130 % Recovery Run ID: MA44616 Units: ug/l

Time:	17:13	17:16	17:20						
Sample ID:	CRI	CRIA	CRID	CRI4		CRID5		CRI5	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	5050	101.0	1060	106.0	4940	98.8
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		96.1	96.1			91.8	91.8
Lead	3.0	20	2.5	3.20	106.7	0.200U	0.0* (a)	3.10	103.3
Lithium	50								
Magnesium	5000	2000	100	5140	102.8	139	139.0*(a)	5030	100.6
Manganese	15		3.0	anr					
Molybdenum	20			anr					
Nickel	10		4.0	anr					
Phosphorus	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		2.0	anr					
Sodium	5000		1000	anr					
Strontium	10								
Sulfur	50								
Thallium	10		2.0	9.80	98.0	1.80	90.0	8.50	85.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

12.3.5
12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 70 to 130 % Recovery Run ID: MA44616 Units: ug/l

Time:	17:13	17:16	17:20
Sample ID:	CRI	CRID5	CRIS
Metal	True	True	True
	Results	% Rec	Results

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.

12.3.5
12

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA44616 Units: ug/l

Metal	Time:		12:40		12:43		17:23		17:26	
	Sample ID:	ICSAB	ICSAL	% Rec	ICSAB1	% Rec	ICSA2	% Rec	ICSAB2	% Rec
Aluminum	500000	500000	538000	107.6	522000	104.4	524000	104.8	504000	100.8
Antimony		1000	-0.400		1030	103.0	-2.70		977	97.7
Arsenic		1000	-1.50		1040	104.0	-1.50		995	99.5
Barium		500	1.00		496	99.2	1.30		484	96.8
Beryllium		500	-0.100		481	96.2	-0.200		463	92.6
Bismuth		500	1.90		511	102.2	5.10		492	98.4
Boron		500	-6.50		492	98.4	-10.5		469	93.8
Cadmium		1000	0.400		996	99.6	0.400		950	95.0
Calcium	400000	400000	402000	100.5	393000	98.3	382000	95.5	389000	97.3
Chromium		500	0.200		479	95.8	0.00		462	92.4
Cobalt		500	0.300		486	97.2	0.300		466	93.2
Copper		500	-0.600		497	99.4	-1.40		477	95.4
Iron	200000	200000	195000	97.5	200000	100.0	185000	92.5	195000	97.5
Lead		1000	5.70		956	95.6	5.50		925	92.5
Lithium		500	0.300		510	102.0	-1.90		490	98.0
Magnesium	500000	500000	521000	104.2	512000	102.4	495000	99.0	500000	100.0
Manganese		500	-0.600		502	100.4	-1.00		479	95.8
Molybdenum		500	0.500		487	97.4	0.00		469	93.8
Nickel		1000	-0.500		959	95.9	-0.200		926	92.6
Phosphorus		500	5.90		503	100.6	7.90		486	97.2
Potassium			122		149		-15.6		19.9	
Selenium		1000	6.80		1050	105.0	4.90		1020	102.0
Silicon		500	-1.00		506	101.2	3.90		487	97.4
Silver		1000	3.00		1020	102.0	0.700		979	97.9
Sodium			5.40		-8.10		-62.7		-63.0	
Strontium		500	-2.70		514	102.8	-2.60		502	100.4
Sulfur		500	-26.3		469	93.8	-27.4		451	90.2
Thallium		1000	-3.40		1030	103.0	0.200		991	99.1
Tin		500	-4.90		465	93.0	-3.30		442	88.4
Titanium		500	-1.90		495	99.0	-2.30		474	94.8
Tungsten		500	8.80		486	97.2	5.20		463	92.6
Vanadium		500	1.50		491	98.2	1.50		468	93.6
Zinc		1000	0.500		946	94.6	0.600		906	90.6

12.3.6 12

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
 Part 1 - ICSA and ICSAB Standards

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

File ID: SC060818M1.ICP Date Analyzed: 06/08/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 80 to 120 % Recovery Run ID: MA44616 Units: ug/l

Time:			12:40			12:43			17:23			17:26
Sample ID:	ICSA	ICSAB	ICSAL	% Rec	ICSAB1	% Rec	ICSAB2	% Rec	ICSAB2	% Rec		

Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-2.80		472	94.4	-2.90		451	90.2

(*) Outside of QC limits
 (anr) Analyte not requested

12.3.6
12

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7430
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 06/01/18

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.052	.13	-0.013	<0.20

Associated samples MP7430: JC67003-1, JC67003-2, JC67003-3, JC67003-4, JC67003-5, JC67003-6, JC67003-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

12.4.1
12

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7430
 Matrix Type: AQUEOUS

Methods: SW846 7470A
 Units: ug/l

Prep Date: 06/01/18

Metal	JC66971-2 Original MSD	Spikelot HGPW3	% Rec	MSD RPD	QC Limit
Mercury	0.0	2.1	2	105.0	0.0 20

Associated samples MP7430: JC67003-1, JC67003-2, JC67003-3, JC67003-4, JC67003-5, JC67003-6, JC67003-7

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

12.4.2
 12

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7430
 Matrix Type: AQUEOUS

Methods: SW846 7470A
 Units: ug/l

Prep Date: 06/01/18

Metal	JC66971-2 Original MS		Spike lot HGPW3	% Rec	QC Limits
Mercury	0.0	2.1	2	105.0	75-125

Associated samples MP7430: JC67003-1, JC67003-2, JC67003-3, JC67003-4, JC67003-5, JC67003-6, JC67003-7

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

12.4.2
 12

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7430
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 06/01/18

Metal	BSP Result	Spikelot HGPW3	% Rec	QC Limits
Mercury	2.1	2	105.0	80-120

Associated samples MP7430: JC67003-1, JC67003-2, JC67003-3, JC67003-4, JC67003-5, JC67003-6, JC67003-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

12.4.3
12

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7493
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/05/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	19	33	-9.1	<200
Antimony	6.0	2.4	4.3	2.8	<6.0
Arsenic	3.0	1.2	2.7	-0.40	<3.0
Barium	200	.6	1.3	0.50	<200
Beryllium	1.0	.2	.4	-0.20	<1.0
Bismuth	20	3.2	5		
Boron	100	1.5	13		
Cadmium	3.0	.4	.7	0.30	<3.0
Calcium	5000	5.5	29	2.0	<5000
Chromium	10	.7	.85	0.0	<10
Cobalt	50	.4	.72	-0.40	<50
Copper	10	1.1	3.2	-1.5	<10
Iron	100	3.5	32	3.9	<100
Lead	3.0	2.2	2.6	-0.60	<3.0
Lithium	50	3.4	15		
Magnesium	5000	25	64	16.3	<5000
Manganese	15	.14	.42	0.0	<15
Molybdenum	20	.4	1.4		
Nickel	10	.5	1.3	-0.50	<10
Phosphorus	50	2	13		
Potassium	10000	60	230	23.7	<10000
Selenium	10	3.7	6.6	0.40	<10
Silicon	200	1.8	45		
Silver	10	.7	3.1	-0.80	<10
Sodium	10000	35	130	121	<10000
Strontium	10	.2	.3		
Sulfur	50	3.1	15		
Thallium	2.0	1.8	1.6	0.0	<2.0
Tin	10	.9	2.4		
Titanium	10	.7	1.8		
Tungsten	50	2.2	14		
Vanadium	50	.8	1.3	-0.10	<50
Zinc	20	.2	4	0.90	<20

12.5.1
12

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7493
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/05/18

Metal	RL	IDL	MDL	MB	
				raw	final

Zirconium 10 .3 2

Associated samples MP7493: JC67003-1, JC67003-2, JC67003-3, JC67003-4, JC67003-5, JC67003-6, JC67003-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

12.5.1
12

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7493
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 06/05/18

Metal	JC67110-4 Original MS		SpikeLot MPSPK2	% Rec	QC Limits
Aluminum	134	25100	25000	99.9	75-125
Antimony	0.0	1950	2000	97.5	75-125
Arsenic	0.0	1960	2000	98.0	75-125
Barium	192	2210	2000	100.9	75-125
Beryllium	0.0	1970	2000	98.5	75-125
Bismuth					
Boron					
Cadmium	0.0	1950	2000	97.5	75-125
Calcium	151000	176000	25000	100.0	75-125
Chromium	1.7	1920	2000	95.9	75-125
Cobalt	0.40	1950	2000	97.5	75-125
Copper	0.0	1950	2000	97.5	75-125
Iron	3100	27900	25000	99.2	75-125
Lead	15.9	2000	2000	99.2	75-125
Lithium					
Magnesium	114000	139000	25000	100.0	75-125
Manganese	542	2480	2000	96.9	75-125
Molybdenum					
Nickel	2.0	1980	2000	98.9	75-125
Phosphorus					
Potassium	21500	46700	25000	100.8	75-125
Selenium	0.0	1940	2000	97.0	75-125
Silicon					
Silver	0.0	254	250	101.6	75-125
Sodium	62100	87500	25000	101.6	75-125
Strontium					
Sulfur					
Thallium	0.0	1990	2000	99.5	75-125
Tin					
Titanium					
Tungsten					
Vanadium	1.1	1930	2000	96.4	75-125
Zinc	3.8	1900	2000	94.8	75-125

12.5.2
12

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7493
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/05/18

Metal	JC67110-4 Original MS	Spike lot MPSPK2	% Rec	QC Limits
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Zirconium

Associated samples MP7493: JC67003-1, JC67003-2, JC67003-3, JC67003-4, JC67003-5, JC67003-6, JC67003-7

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

12.5.2
12

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7493
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 06/05/18

Metal	JC67110-4 Original MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit	
Aluminum	134	25100	25000	99.9	0.0	20
Antimony	0.0	1980	2000	99.0	1.5	20
Arsenic	0.0	1980	2000	99.0	1.0	20
Barium	192	2210	2000	100.9	0.0	20
Beryllium	0.0	1980	2000	99.0	0.5	20
Bismuth						
Boron						
Cadmium	0.0	1980	2000	99.0	1.5	20
Calcium	151000	175000	25000	96.0	0.6	20
Chromium	1.7	1920	2000	95.9	0.0	20
Cobalt	0.40	1990	2000	99.5	2.0	20
Copper	0.0	1950	2000	97.5	0.0	20
Iron	3100	27900	25000	99.2	0.0	20
Lead	15.9	2020	2000	100.2	1.0	20
Lithium						
Magnesium	114000	138000	25000	96.0	0.7	20
Manganese	542	2480	2000	96.9	0.0	20
Molybdenum						
Nickel	2.0	2010	2000	100.4	1.5	20
Phosphorus						
Potassium	21500	46900	25000	101.6	0.4	20
Selenium	0.0	1980	2000	99.0	2.0	20
Silicon						
Silver	0.0	251	250	100.4	1.2	20
Sodium	62100	87300	25000	100.8	0.2	20
Strontium						
Sulfur						
Thallium	0.0	2020	2000	101.0	1.5	20
Tin						
Titanium						
Tungsten						
Vanadium	1.1	1930	2000	96.4	0.0	20
Zinc	3.8	1930	2000	96.3	1.6	20

12.5.2
12

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7493
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 06/05/18

Metal	JC67110-4 Original MSD	Spikelet MPSPK2	% Rec	MSD RPD	QC Limit
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Zirconium

Associated samples MP7493: JC67003-1, JC67003-2, JC67003-3, JC67003-4, JC67003-5, JC67003-6, JC67003-7

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

12.5.2
 12

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7493
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 06/05/18

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	25300	25000	101.2	80-120
Antimony	1940	2000	97.0	80-120
Arsenic	1950	2000	97.5	80-120
Barium	2050	2000	102.5	80-120
Beryllium	2010	2000	100.5	80-120
Bismuth				
Boron				
Cadmium	1940	2000	97.0	80-120
Calcium	25800	25000	103.2	80-120
Chromium	1990	2000	99.5	80-120
Cobalt	2000	2000	100.0	80-120
Copper	1920	2000	96.0	80-120
Iron	25600	25000	102.4	80-120
Lead	1980	2000	99.0	80-120
Lithium				
Magnesium	26200	25000	104.8	80-120
Manganese	1990	2000	99.5	80-120
Molybdenum				
Nickel	2030	2000	101.5	80-120
Phosphorus				
Potassium	25300	25000	101.2	80-120
Selenium	1940	2000	97.0	80-120
Silicon				
Silver	249	250	99.6	80-120
Sodium	26000	25000	104.0	80-120
Strontium				
Sulfur				
Thallium	2000	2000	100.0	80-120
Tin				
Titanium				
Tungsten				
Vanadium	1970	2000	98.5	80-120
Zinc	1970	2000	98.5	80-120

12.5.3
 12

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7493
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/05/18

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
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Zirconium

Associated samples MP7493: JC67003-1, JC67003-2, JC67003-3, JC67003-4, JC67003-5, JC67003-6, JC67003-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

12.5.3
12

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC67003
 Account: BBLNYS - Arcadis
 Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7493
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 06/05/18

Metal	JC67110-4 Original	SDL 1:5	%DIF	QC Limits
Aluminum	134	205	53.4 (a)	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	0.00	0.00	NC	0-10
Barium	192	200	4.4	0-10
Beryllium	0.00	0.00	NC	0-10
Bismuth				
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium	151000	159000	5.1	0-10
Chromium	1.70	4.00	135.3(a)	0-10
Cobalt	0.400	0.00	100.0(a)	0-10
Copper	0.00	0.00	NC	0-10
Iron	3100	3250	4.9	0-10
Lead	15.9	16.7	5.0	0-10
Lithium				
Magnesium	114000	121000	6.3	0-10
Manganese	542	574	5.9	0-10
Molybdenum				
Nickel	2.00	0.00	100.0(a)	0-10
Phosphorus				
Potassium	21500	22900	6.3	0-10
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium	62100	65400	5.4	0-10
Strontium				
Sulfur				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Tungsten				
Vanadium	1.10	0.00	100.0(a)	0-10
Zinc	3.80	33.4	778.9(a)	0-10

12.5.4
 12

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7493
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/05/18

Metal	JC67110-4	QC
	Original SDL 1:5	%DIF Limits

Zirconium

Associated samples MP7493: JC67003-1, JC67003-2, JC67003-3, JC67003-4, JC67003-5, JC67003-6, JC67003-7

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).

12.5.4
12

Instrument Detection Limits

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Instrument ID: LEEMANHG9	Effective Date: 05/30/18
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Analyte	IDL ug/l
Mercury	.0521

The above applies to the following instrument runs:
MA44562

12.6
12

Instrument Detection Limits

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Instrument ID: SSTRACE3	Effective Date: 03/16/18
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Analyte	IDL ug/l
Aluminum	18.9
Antimony	2.4
Arsenic	1.2
Barium	.6
Beryllium	.2
Bismuth	3.2
Boron	1.5
Cadmium	.4
Calcium	5.5
Chromium	.7
Cobalt	.4
Copper	1.1
Iron	3.5
Lead	2.2
Lithium	3.4
Magnesium	24.5
Manganese	.14
Molybdenum	.4
Nickel	.5
Phosphorus	2
Potassium	59.5
Selenium	3.7
Silicon	1.8
Silver	.7
Sodium	34.5
Sulfur	3.1
Strontium	.2
Thallium	1.8
Tin	.9
Titanium	.7
Tungsten	2.2
Vanadium	.8
Yttrium	5
Zinc	.2
Zirconium	.3

The above applies to the following instrument runs:
MA44612,MA44616

12.6
12

Instrument Linear Ranges

Job Number: JC67003

Account: BBLNYS Arcadis

Project: National Grid, Philly Coke, Philadelphia PA

Instrument ID: LEEMANHG9	Effective Date: 02/26/18
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Analyte	Linear Range ug/l
Mercury	5

The above applies to the following instrument runs:
MA44562

12.6
12

Instrument Linear Ranges

Job Number: JC67003
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Instrument ID: SSTRACE3	Effective Date: 12/09/15
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Analyte	Linear Range ug/l
Aluminum	60000
Antimony	10000
Arsenic	10000
Barium	10000
Beryllium	10000
Bismuth	10000
Boron	10000
Cadmium	10000
Calcium	300000
Chromium	10000
Cobalt	10000
Copper	10000
Iron	300000
Lead	10000
Lithium	10000
Magnesium	600000
Manganese	10000
Molybdenum	10000
Nickel	10000
Palladium	10000
Potassium	300000
Selenium	10000
Silicon	50000
Silver	1250
Sodium	300000
Sulfur	100000
Strontium	10000
Thallium	10000
Tin	10000
Titanium	10000
Tungsten	10000
Vanadium	10000
Zinc	10000
Zirconium	10000

The above applies to the following instrument runs:
MA44612,MA44616

12.6
12

Metals Analysis

Raw Data

MA44562

Method: Accutest

Operator: Admin

Date of Analysis: 01 Jun 2018 08:56:36

Sample ID	Date	Type	Units	Conc.	μ Abs.	Wt.	Vol.
STDA - 1	01 Jun 2018 10:28:11	Std	ug/l	-	1	1.000	1.000
STDB - 1	01 Jun 2018 10:29:30	Std	ug/l	-	950	1.000	1.000
STDC - 1	01 Jun 2018 10:30:48	Std	ug/l	-	2732	1.000	1.000
STDD - 1	01 Jun 2018 10:32:09	Std	ug/l	-	4679	1.000	1.000
STDE - 1	01 Jun 2018 10:33:30	Std	ug/l	-	12508	1.000	1.000
STDF - 1	01 Jun 2018 10:34:59	Std	ug/l	-	24570	1.000	1.000
STDB - 1	01 Jun 2018 10:42:27	Std	ug/l	-	977	1.000	1.000
STDC - 1	01 Jun 2018 10:43:46	Std	ug/l	-	2635	1.000	1.000
STDD - 1	01 Jun 2018 10:45:06	Std	ug/l	-	4975	1.000	1.000
ICVCONF - 1	01 Jun 2018 10:47:48	SMPL	ug/l	3.2514	16055	1.000	1.000
ICBCONF - 1	01 Jun 2018 10:52:47	SMPL	ug/l	-0.1066	-449	1.000	1.000
CCVCONF - 1	01 Jun 2018 10:54:08	CK STND	ug/l	108.0% 2.7000	13345	1.000	1.000
CCBCONF - 1	01 Jun 2018 10:55:24	CK STND	ug/l	-0.0903	-369	1.000	1.000
CRICONF - 1	01 Jun 2018 10:57:08	SMPL	ug/l	0.1778	949	1.000	1.000
STOPCONF - 1	01 Jun 2018 11:08:14	SMPL	ug/l	-0.0152	0	1.000	1.000
ICV - 1	01 Jun 2018 11:08:39	SMPL	ug/l	3.2349	15974	1.000	1.000
ICB - 1	01 Jun 2018 11:09:55	SMPL	ug/l	-0.0893	-364	1.000	1.000
CCV - 1	01 Jun 2018 11:11:38	CK STND	ug/l	106.5% 2.6628	13162	1.000	1.000
CCB - 1	01 Jun 2018 11:12:54	CK STND	ug/l	-0.0698	-268	1.000	1.000
CRI - 1	01 Jun 2018 11:14:37	SMPL	ug/l	0.2071	1093	1.000	1.000
MP7428-MB1 - 1	01 Jun 2018 11:23:07	SMPL	ug/l	0.0033	91	1.000	1.000
MP7428-B1 - 1	01 Jun 2018 11:24:23	SMPL	ug/l	2.1378	10582	1.000	1.000
MP7428-S1 - 1	01 Jun 2018 11:25:40	SMPL	ug/l	2.1254	10521	1.000	1.000
MP7428-S2 - 1	01 Jun 2018 11:27:15	SMPL	ug/l	1.9325	9573	1.000	1.000
JC66933-1 - 1	01 Jun 2018 11:28:53	SMPL	ug/l	-0.0541	-191	1.000	1.000
JC66933-2 - 1	01 Jun 2018 11:30:31	SMPL	ug/l	-0.0258	-52	1.000	1.000
JC66933-3 - 1	01 Jun 2018 11:31:49	SMPL	ug/l	-0.0102	25	1.000	1.000
CCV - 1	01 Jun 2018 11:33:07	CK STND	ug/l	99.9% 2.4976	12350	1.000	1.000
CCB - 1	01 Jun 2018 11:34:23	CK STND	ug/l	-0.0673	-256	1.000	1.000
JC66933-4 - 1	01 Jun 2018 11:36:04	SMPL	ug/l	-0.0008	71	1.000	1.000
JC66933-5 - 1	01 Jun 2018 11:37:23	SMPL	ug/l	-0.0179	-13	1.000	1.000
JC66933-6 - 1	01 Jun 2018 11:38:41	SMPL	ug/l	0.0051	100	1.000	1.000
JC66933-7 - 1	01 Jun 2018 11:39:58	SMPL	ug/l	-0.0032	59	1.000	1.000
JC66929-1A - 1	01 Jun 2018 11:41:15	SMPL	ug/l	-0.0181	-14	1.000	1.000
MP7332-MB3 - 1	01 Jun 2018 11:42:32	SMPL	ug/l	-0.0134	9	1.000	1.000
MP7332-B3 - 1	01 Jun 2018 11:43:48	SMPL	ug/l	2.0239	10022	1.000	1.000
DA5707-1 - 1	01 Jun 2018 11:45:05	SMPL	ug/l	0.0442	292	1.000	1.000
CCV - 1	01 Jun 2018 11:46:41	CK STND	ug/l	94.7% 2.3684	11715	1.000	1.000
CCB - 1	01 Jun 2018 11:47:59	CK STND	ug/l	-0.0779	-308	1.000	1.000
JC66983-1 - 1	01 Jun 2018 11:49:45	SMPL	ug/l	-0.0079	36	1.000	1.000
JC66957-3A - 1	01 Jun 2018 11:51:02	SMPL	ug/l	-0.0102	25	1.000	1.000
MP7429-MB1 - 1	01 Jun 2018 11:52:20	SMPL	ug/l	-0.0154	-1	1.000	1.000
MP7429-B1 - 1	01 Jun 2018 11:53:37	SMPL	ug/l	2.1340	10563	1.000	1.000
MP7429-S1 - 1	01 Jun 2018 11:54:55	SMPL	ug/l	2.2845	11303	1.000	1.000
MP7429-S2 - 1	01 Jun 2018 11:56:31	SMPL	ug/l	2.1661	10721	1.000	1.000
JC66897-15 - 1	01 Jun 2018 11:58:08	SMPL	ug/l	-0.0565	-203	1.000	1.000
JC66897-7 - 1	01 Jun 2018 11:59:43	SMPL	ug/l	0.1445	785	1.000	1.000
CCV - 1	01 Jun 2018 12:00:59	CK STND	ug/l	100.2% 2.5061	12392	1.000	1.000
CCB - 1	01 Jun 2018 12:02:18	CK STND	ug/l	-0.0722	-280	1.000	1.000
JC66897-8 - 1	01 Jun 2018 12:03:56	SMPL	ug/l	-0.0224	-35	1.000	1.000
JC66897-10 - 1	01 Jun 2018 12:05:13	SMPL	ug/l	-0.0130	11	1.000	1.000
JC66897-11 - 1	01 Jun 2018 12:06:30	SMPL	ug/l	0.0340	242	1.000	1.000
JC66897-12 - 1	01 Jun 2018 12:07:46	SMPL	ug/l	0.2696	1400	1.000	1.000
JC66897-13 - 1	01 Jun 2018 12:09:04	SMPL	ug/l	-0.0922	-378	1.000	1.000
JC66897-14 - 1	01 Jun 2018 12:10:24	SMPL	ug/l	0.0161	154	1.000	1.000
JC66897-16 - 1	01 Jun 2018 12:11:42	SMPL	ug/l	0.0635	387	1.000	1.000
JC66897-17 - 1	01 Jun 2018 12:12:59	SMPL	ug/l	-0.0159	-3	1.000	1.000
CCV - 1	01 Jun 2018 12:14:19	CK STND	ug/l	103.3% 2.5824	12767	1.000	1.000
CCB - 1	01 Jun 2018 12:15:35	CK STND	ug/l	-0.0633	-236	1.000	1.000
JC66897-18 - 1	01 Jun 2018 12:17:14	SMPL	ug/l	-0.0195	-21	1.000	1.000
JC66946-1 - 1	01 Jun 2018 12:18:32	SMPL	ug/l	0.0246	196	1.000	1.000
JC66946-2 - 1	01 Jun 2018 12:19:51	SMPL	ug/l	-0.0091	30	1.000	1.000
JC66946-3 - 1	01 Jun 2018 12:21:08	SMPL	ug/l	0.0196	171	1.000	1.000
JC66946-4 - 1	01 Jun 2018 12:22:25	SMPL	ug/l	0.0000	75	1.000	1.000
JC66946-5 - 1	01 Jun 2018 12:23:43	SMPL	ug/l	-0.0392	-118	1.000	1.000
JC66973-1 - 1	01 Jun 2018 12:25:00	SMPL	ug/l	-0.0116	18	1.000	1.000
JC66970-3 - 1	01 Jun 2018 12:26:17	SMPL	ug/l	0.0218	182	1.000	1.000
CCV - 1	01 Jun 2018 12:27:34	CK STND	ug/l	99.5% 2.4874	12300	1.000	1.000
CCB - 1	01 Jun 2018 12:28:50	CK STND	ug/l	-0.0545	-193	1.000	1.000

MA44562

Method: Accutest

Operator: Admin

Date of Analysis: 01 Jun 2018 08:56:36

Sample ID	Date	Type	Units	Conc.	μ Abs.	Wt.	Vol.
DURTYTUBECONF - 1	01 Jun 2018 12:30:30	SMPL	ug/l	0.1363	745	1.000	1.000
JC66989-1 - 1	01 Jun 2018 12:31:47	SMPL	ug/l	-0.0641	-240	1.000	1.000
MP7430-MB1 - 1	01 Jun 2018 12:33:07	SMPL	ug/l	-0.0128	12	1.000	1.000
MP7430-B1 - 1	01 Jun 2018 12:34:24	SMPL	ug/l	2.1287	10537	1.000	1.000
DURTYTUBECONF - 1	01 Jun 2018 12:35:42	SMPL	ug/l	2.3948	11845	1.000	1.000
MP7430-S2 - 1	01 Jun 2018 12:37:18	SMPL	ug/l	2.1002	10397	1.000	1.000
JC66971-2 - 1	01 Jun 2018 12:38:56	SMPL	ug/l	-0.0600	-220	1.000	1.000
JC66971-1 - 1	01 Jun 2018 12:40:31	SMPL	ug/l	-0.0232	-39	1.000	1.000
CCV - 1	01 Jun 2018 12:41:48	CK STND	ug/l	99.6% 2.4900	12313	1.000	1.000
CCB - 1	01 Jun 2018 12:43:04	CK STND	ug/l	-0.0736	-287	1.000	1.000
JC66971-3 - 1	01 Jun 2018 12:44:44	SMPL	ug/l	-0.0183	-15	1.000	1.000
SAMPLECONF - 1	01 Jun 2018 12:46:01	SMPL	ug/l	-0.0169	-8	1.000	1.000
JC66971-4 - 1	01 Jun 2018 12:47:18	SMPL	ug/l	-0.0100	26	1.000	1.000
JC66971-5 - 1	01 Jun 2018 12:48:35	SMPL	ug/l	0.0682	410	1.000	1.000
JC66971-6 - 1	01 Jun 2018 12:49:52	SMPL	ug/l	-0.0279	-62	1.000	1.000
JC67003-1 - 1	01 Jun 2018 12:51:11	SMPL	ug/l	0.0187	167	1.000	1.000
JC67003-2 - 1	01 Jun 2018 12:52:28	SMPL	ug/l	0.0452	297	1.000	1.000
JC67003-3 - 1	01 Jun 2018 12:53:46	SMPL	ug/l	0.0057	103	1.000	1.000
CCV - 1	01 Jun 2018 12:55:05	CK STND	ug/l	100.0% 2.4988	12356	1.000	1.000
CCB - 1	01 Jun 2018 12:56:21	CK STND	ug/l	-0.0714	-276	1.000	1.000
JC67003-4 - 1	01 Jun 2018 12:58:00	SMPL	ug/l	0.0021	85	1.000	1.000
JC67003-5 - 1	01 Jun 2018 12:59:18	SMPL	ug/l	0.0051	100	1.000	1.000
JC67003-6 - 1	01 Jun 2018 13:00:37	SMPL	ug/l	-0.0024	63	1.000	1.000
JC67003-7 - 1	01 Jun 2018 13:01:54	SMPL	ug/l	0.0663	401	1.000	1.000
JC66957-3 - 1	01 Jun 2018 13:03:11	SMPL	ug/l	-0.0295	-70	1.000	1.000
JC66929-6 - 1	01 Jun 2018 13:04:30	SMPL	ug/l	0.0053	101	1.000	1.000
JC66897-7CONF - 1	01 Jun 2018 13:05:47	SMPL	ug/l	0.1408	767	1.000	1.000
JC66897-12CONF - 1	01 Jun 2018 13:07:04	SMPL	ug/l	0.2474	1291	1.000	1.000
CCV - 1	01 Jun 2018 13:08:24	CK STND	ug/l	96.9% 2.4221	11979	1.000	1.000
CCB - 1	01 Jun 2018 13:09:43	CK STND	ug/l	-0.0655	-247	1.000	1.000
JC66982-1 - 1	01 Jun 2018 13:11:23	SMPL	ug/l	-0.0006	72	1.000	1.000
MP7430-S1 - 1	01 Jun 2018 13:12:40	SMPL	ug/l	2.1258	10523	1.000	1.000
CCV - 1	01 Jun 2018 13:21:10	CK STND	ug/l	98.7% 2.4668	12199	1.000	1.000
CCB - 1	01 Jun 2018 13:22:25	CK STND	ug/l	-0.0702	-270	1.000	1.000
CCV - 1	01 Jun 2018 14:22:26	CK STND	ug/l	98.8% 2.4689	12209	1.000	1.000
CCB - 1	01 Jun 2018 14:23:41	CK STND	ug/l	-0.0665	-252	1.000	1.000
MP7442-MB1 - 1	01 Jun 2018 14:36:13	SMPL	ug/l	0.0043	96	1.000	1.000
MP7442-B1 - 1	01 Jun 2018 14:37:30	SMPL	ug/l	2.2715	11239	1.000	1.000
MP7442-S1 - 1	01 Jun 2018 14:38:48	SMPL	ug/l	2.2302	11036	1.000	1.000
MP7442-S2 - 1	01 Jun 2018 14:40:23	SMPL	ug/l	2.2392	11080	1.000	1.000
JC66949-1 - 1	01 Jun 2018 14:41:58	SMPL	ug/l	-0.0506	-174	1.000	1.000
JC66943-1A - 1	01 Jun 2018 14:43:32	SMPL	ug/l	-0.0138	7	1.000	1.000
JC67019-4 - 1	01 Jun 2018 14:44:50	SMPL	ug/l	0.0242	194	1.000	1.000
JC67023-1A - 1	01 Jun 2018 14:46:07	SMPL	ug/l	-0.0100	26	1.000	1.000
CCV - 1	01 Jun 2018 14:47:27	CK STND	ug/l	101.3% 2.5317	12518	1.000	1.000
CCB - 1	01 Jun 2018 14:48:43	CK STND	ug/l	-0.0726	-282	1.000	1.000
JC66951-1A - 1	01 Jun 2018 14:50:22	SMPL	ug/l	-0.0022	64	1.000	1.000
JC66951-2A - 1	01 Jun 2018 14:51:40	SMPL	ug/l	0.0010	80	1.000	1.000
JC66951-3A - 1	01 Jun 2018 14:52:57	SMPL	ug/l	-0.0038	56	1.000	1.000
JC66951-4A - 1	01 Jun 2018 14:54:15	SMPL	ug/l	-0.0120	16	1.000	1.000
JC66951-5A - 1	01 Jun 2018 14:55:33	SMPL	ug/l	-0.0081	35	1.000	1.000
JC66951-6A - 1	01 Jun 2018 14:56:50	SMPL	ug/l	-0.0118	17	1.000	1.000
JC66951-7A - 1	01 Jun 2018 14:58:08	SMPL	ug/l	-0.0132	10	1.000	1.000
JC66951-8A - 1	01 Jun 2018 14:59:26	SMPL	ug/l	-0.0097	27	1.000	1.000
CCV - 1	01 Jun 2018 15:00:45	CK STND	ug/l	99.9% 2.4963	12344	1.000	1.000
CCB - 1	01 Jun 2018 15:02:00	CK STND	ug/l	-0.0842	-339	1.000	1.000
JC66957-1AB - 1	01 Jun 2018 15:03:39	SMPL	ug/l	-0.0026	62	1.000	1.000
JC66957-2AB - 1	01 Jun 2018 15:04:57	SMPL	ug/l	0.0031	90	1.000	1.000
JC66976-1A - 1	01 Jun 2018 15:06:15	SMPL	ug/l	-0.0018	66	1.000	1.000
TD21677-1B - 1	01 Jun 2018 15:07:32	SMPL	ug/l	-0.0120	16	1.000	1.000
MP7307-MB2 - 1	01 Jun 2018 15:08:50	SMPL	ug/l	-0.0016	67	1.000	1.000
MP7307-B2 - 1	01 Jun 2018 15:10:08	SMPL	ug/l	2.2414	11091	1.000	1.000
TD21675-1B - 1	01 Jun 2018 15:11:25	SMPL	ug/l	0.0029	89	1.000	1.000
TD21676-1B - 1	01 Jun 2018 15:12:59	SMPL	ug/l	-0.0488	-165	1.000	1.000
CCV - 1	01 Jun 2018 15:14:17	CK STND	ug/l	100.0% 2.4996	12360	1.000	1.000
CCB - 1	01 Jun 2018 15:15:33	CK STND	ug/l	-0.0779	-308	1.000	1.000
MP7440-FMBCONF - 1	01 Jun 2018 15:17:12	SMPL	ug/l	-0.0195	-21	1.000	1.000
MP7440-FLCCONF - 1	01 Jun 2018 15:18:29	SMPL	ug/l	2.1360	10573	1.000	1.000
CCV - 1	01 Jun 2018 15:20:49	CK STND	ug/l	100.7% 2.5177	12449	1.000	1.000

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Method: Accutest Operator: Admin Date of Analysis: 01 Jun 2018 08:56:36

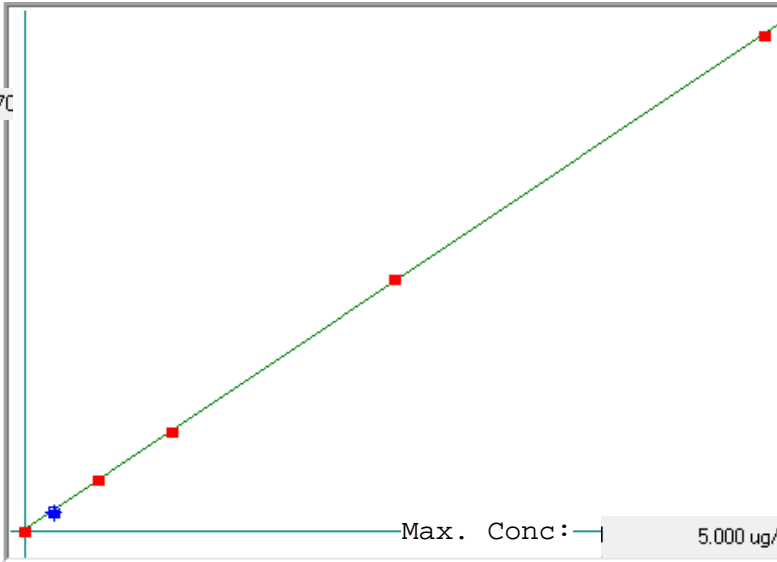
Sample ID	Date	Type	Units	Conc.	μ Abs.	Wt.	Vol.
CCB - 1	01 Jun 2018 15:22:04	CK STND	ug/l	-0.0846	-341	1.000	1.000

Accutest

Linear

μ Abs. :

24570



A= 0.0000e+000

B= 2.0347e-004

C= -1.5241e-002

Rho= 0.9999435

Accept=Accepted

Accepted Date=

06/01/18 10:47

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
STDA	0.000	-0.015	-0.015	1	0.000	1				
STDB	0.200	0.184	-0.016	977	0.0 %	977				
STDC	0.500	0.521	0.021	2635	0.0 %	2635				
STDD	1.000	0.997	-0.003	4975	0.0 %	4975				
STDE	2.500	2.530	0.030	12508	0.0 %	12508				
STDF	5.000	4.984	-0.016	24570	0.0 %	24570				

13.1.1
13

Sample Name: STDA Acquired: 6/7/2018 22:47:29 Type: Cal
Method: Accutest XPress(v421) 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	.0061	.0002	.0009	.0003	-0.0002	.0079	.0001	.0003	-0.0007
Stddev	.0003	.0000	.0004	.0002	.0001	.0001	.0001	.0001	.0000
%RSD	4.843	.4646	48.07	67.54	21.75	1.174	58.66	44.93	2.727
#1	.0063	.0002	.0012	.0002	-.0003	.0079	.0002	.0002	-.0007
#2	.0059	.0002	.0006	.0005	-.0002	.0078	.0001	.0004	-.0007
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	-0.0007	-0.0000	-0.0008	-0.0001	.0006	.0005	-0.0010	.0081
Stddev	.0000	.0001	.0002	.0001	.0001	.0001	.0001	.0001	.0003
%RSD	8.952	8.961	770.1	8.798	56.98	18.06	11.11	7.695	4.171
#1	.0003	-.0006	.0001	-.0007	-.0001	.0005	.0004	-.0009	.0083
#2	.0002	-.0007	-.0002	-.0008	-.0002	.0007	.0005	-.0010	.0078
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	.0000	.0001	-0.0006	-0.0052	.0026	-0.0007	.0031	.0001	.0005
Stddev	.0001	.0003	.0008	.0006	.0003	.0002	.0006	.0003	.0003
%RSD	256.4	400.9	129.3	10.72	10.13	34.48	18.64	435.3	69.92
#1	-.0000	-.0001	-.0001	-.0048	.0028	-.0008	.0035	-.0001	.0007
#2	.0001	.0003	-.0012	-.0056	.0025	-.0005	.0027	.0002	.0002
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	-0.0001	.0016	-0.0010	-0.0067	.0002	-0.0011	-0.0138		
Stddev	.0001	.0001	.0000	.0002	.0002	.0003	.0001		
%RSD	43.01	5.238	3.646	2.296	81.89	23.62	.3691		
#1	-.0001	.0015	-.0010	-.0066	.0001	-.0009	-.0138		
#2	-.0002	.0017	-.0010	-.0068	.0003	-.0013	-.0138		

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Sample Name: STDA Acquired: 6/7/2018 22:47:29 Type: Cal
Method: Accutest XPress(v421) 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	81957.	16203.	3611.6	6145.1
Stddev	14.	93.	16.0	12.4
%RSD	.01763	.57241	.44352	.20205
#1	81947.	16137.	3600.2	6136.3
#2	81967.	16268.	3622.9	6153.8

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Sample Name: STDb Acquired: 6/7/2018 22:50:29 Type: Cal
Method: Accutest XPress(v421) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6.318	8.474	4.951	2.218	5.069	9.643	3.091	1.841	0.735
Stddev	.068	.104	.081	.035	.0052	.0123	.035	.028	.0009
%RSD	1.082	1.225	1.629	1.555	1.032	1.279	1.140	1.498	1.172
#1	6.366	8.548	4.894	2.193	5.032	.9556	3.066	1.822	.0729
#2	6.270	8.401	5.008	2.242	5.106	.9731	3.116	1.861	.0741
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	.7496	6.658	.6596	2.485	.7716	.5447	.7339	2.788	5.556
Stddev	.0091	.100	.0105	.0034	.0112	.0084	.0126	.035	.063
%RSD	1.211	1.496	1.587	1.377	1.453	1.538	1.714	1.257	1.133
#1	.7431	6.588	.6522	2.461	.7637	.5388	.7250	2.813	5.601
#2	.7560	6.729	.6670	2.509	.7795	.5507	.7428	2.763	5.512
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	3.772	6.138	1.294	5.703	1.324	2.746	2.427	.9345	10.84
Stddev	.050	.0085	.006	.050	.022	.044	.040	.0147	.12
%RSD	1.327	1.393	.4796	.8714	1.656	1.622	1.654	1.575	1.091
#1	3.807	.6199	1.298	5.738	1.309	2.714	2.398	.9241	10.93
#2	3.736	.6078	1.290	5.668	1.340	2.777	2.455	.9449	10.76
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	.6097	1.354	1.693	3.788	.6822	1.621	.8225		
Stddev	.0071	.021	.021	.0066	.0113	.016	.0122		
%RSD	1.159	1.539	1.208	1.731	1.650	1.009	1.486		
#1	.6047	1.339	1.679	3.742	.6743	1.633	.8138		
#2	.6147	1.369	1.707	3.835	.6902	1.610	.8311		

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Sample Name: STDb Acquired: 6/7/2018 22:50:29 Type: Cal
Method: Accutest XPress(v421) 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	81965.	16051.	3522.0	6289.0
Stddev	437.	235.	8.6	12.3
%RSD	.53302	1.4629	.24551	.19591
#1	82274.	15885.	3528.1	6297.7
#2	81656.	16217.	3515.9	6280.3

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Sample Name: cvconf Acquired: 6/7/2018 22:53:22 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.057	2.063	2.016	2.075	2.076	2.010	2.086	2.083	2.576
Stddev	.003	.004	.015	.014	.004	.004	.003	.017	.0006
%RSD	.1350	.1755	.7504	.6633	.1747	.1817	.1327	.8173	.2380

Check ?
Value Range

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.070	2.049	2.032	2.042	2.066	2.003	2.021	40.57	41.32
Stddev	.004	.015	.008	.009	.015	.013	.013	.04	.15
%RSD	.2054	.7160	.3828	.4481	.7436	.6296	.6166	.0905	.3544

Check ?
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	41.01	41.38	41.20	41.35	2.017	2.046	5.142	2.046	2.057
Stddev	.02	.15	.35	.20	.014	.016	.035	.013	.003
%RSD	.0509	.3515	.8535	.4769	.6966	.7976	.6755	.6520	.1475

Check ?
Value Range

Sample Name: cvconf Acquired: 6/7/2018 22:53:22 Type: QC
 Method: Accutest XPress(v421) 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	2.077	2.043	2.083	2.001	2.012	2.077	2.023
Stddev	.003	.011	.001	.014	.019	.011	.015
%RSD	.1531	.5134	.0415	.6796	.9229	.5125	.7617

Check ?
Value Range

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	82546.	16260.	3589.5	6265.5
Stddev	11.	25.	5.8	8.9
%RSD	.01306	.15377	.16088	.14190

Check ?
Value Range

#1	2.075	2.036	2.082	1.991	1.999	2.069	2.012
#2	2.080	2.051	2.084	2.011	2.025	2.084	2.034

Sample Name: cbcconf Acquired: 6/7/2018 22:56:13 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: 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	.0001	.0000	-0.0005	.0001	-0.0010	-0.0000	.0003	-0.0006
Stddev	.0000	.0000	.0001	.0002	.0001	.0005	.0001	.0004	.0007
%RSD	5.322	21.83	1132.	37.16	100.2	48.35	759.5	107.4	119.4

Check ?
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	-0.0003	.0001	.0014	.0002	.0012	-0.0007	.0023	-0.0089	.0003
Stddev	.0010	.0001	.0000	.0001	.0005	.0028	.0008	.0072	.0001
%RSD	302.3	283.1	.7770	40.85	38.27	385.1	34.20	81.64	46.67

Check ?
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	.0006	-0.0155	-0.0123	-0.0008	.0043	.0001	.0027	.0010	.0000
Stddev	.0008	.0035	.0433	.0080	.0010	.0001	.0017	.0010	.0002
%RSD	143.6	22.46	351.5	975.5	22.29	45.39	62.27	108.5	510.6

Check ?
High Limit
Low Limit

Sample Name: cbcconf Acquired: 6/7/2018 22:56:13 Type: QC
 Method: Accutest XPress(v421) 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	-0.0014	-0.0000	.0021	-0.0004	-0.0027	.0006
Stddev	.0001	.0007	.0004	.0016	.0020	.0030	.0005
%RSD	46.78	45.90	979.9	75.60	551.7	112.9	78.91

Check ?
High Limit
Low Limit

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	84421.	16424.	3666.9	6219.6
Stddev	953.	45.	23.1	36.3
%RSD	1.1290	.27108	.62954	.58411

Check ?
High Limit
Low Limit

#1	.0001	-0.0010	-0.0003	.0033	-0.0017	-0.0048	.0003
#2	.0002	-0.0019	.0002	.0010	.0010	-0.0005	.0010

Sample Name: ICV 2 Acquired: 6/7/2018 22:59:16 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.101	2.134	2.053	2.117	2.074	2.091	2.096	2.108	2.587
Stddev	.010	.015	.008	.009	.023	.021	.022	.008	.0035
%RSD	.4649	.7054	.3680	.4124	1.124	.9806	1.076	.3933	1.361
#1	2.094	2.123	2.048	2.111	2.057	2.077	2.080	2.103	2.562
#2	2.108	2.144	2.059	2.123	2.090	2.106	2.112	2.114	2.612

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.125	2.091	2.078	2.060	2.069	2.031	2.055	41.13	41.14
Stddev	.023	.008	.010	.016	.012	.009	.009	.24	.29
%RSD	1.089	.3710	.4837	.7960	.5929	.4443	.4554	.5772	.7007
#1	2.109	2.085	2.071	2.048	2.061	2.025	2.048	40.97	40.94
#2	2.142	2.096	2.085	2.071	2.078	2.038	2.061	41.30	41.35

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.86	40.95	40.97	41.70	2.083	2.038	4.989	2.025	2.136
Stddev	.23	.17	.34	.23	.008	.009	.016	.006	.013
%RSD	.5657	.4110	.8354	.5592	.4016	.4503	.3232	.3037	.5854
#1	40.70	40.84	40.73	41.54	2.077	2.031	4.978	2.021	2.127
#2	41.02	41.07	41.22	41.87	2.089	2.044	5.001	2.029	2.145

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: ICV 2 Acquired: 6/7/2018 22:59:16 Type: QC
 Method: Accutest XPress(v421) 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	2.104	1.979	2.081	2.011	2.025	2.073	2.063
Stddev	.022	.005	.021	.012	.016	.013	.006
%RSD	1.057	.2648	1.013	.5818	.7814	.6291	.2704
#1	2.088	1.975	2.066	2.002	2.013	2.064	2.059
#2	2.120	1.983	2.096	2.019	2.036	2.083	2.067

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	81134.	16007.	3541.0	6186.4
Stddev	418.	122.	2.1	.6
%RSD	.51515	.76250	.05904	.00997
#1	81429.	15920.	3539.5	6186.8
#2	80838.	16093.	3542.5	6186.0

Sample Name: ICB Acquired: 6/7/2018 23:02:07 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.000	0.000	0.000	-0.002	0.001	-0.005	-0.000	-0.008	0.000
Stddev	.0004	.0001	.0002	.0000	.0000	.0004	.0000	.0009	.0009
%RSD	1955.	281.3	1613.	10.30	7.392	80.56	141.1	119.1	11830.
#1	.0003	-0.000	-0.001	-0.002	.0002	-0.008	-0.000	-0.014	.0006
#2	-0.0003	.0001	.0002	-0.002	.0001	-0.002	-0.000	-0.001	-0.006

Check ? High Limit Low Limit
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0.005	-0.000	0.003	0.005	-0.009	0.002	0.025	0.058	0.034
Stddev	.0001	.0000	.0004	.0014	.0034	.0009	.0018	.0093	.0002
%RSD	17.19	88.55	108.6	283.9	386.9	393.6	70.32	161.5	6.786
#1	.0005	-0.000	.0006	.0014	.0015	-0.004	.0037	-0.008	.0032
#2	.0004	-0.000	.0001	-0.0005	-0.0033	.0008	.0013	.0123	.0036

Check ? High Limit Low Limit
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0.006	0.109	-0.0499	0.123	0.032	0.007	-0.011	0.011	-0.001
Stddev	.0030	.0107	.0028	.0115	.0001	.0002	.0010	.0006	.0001
%RSD	472.8	98.09	5.623	93.83	2.559	21.78	91.69	56.59	258.1
#1	.0028	.0034	-.0519	.0204	.0033	.0006	-.0018	.0007	-.0001
#2	-.0015	.0185	-.0479	.0041	.0031	.0008	-.0004	.0016	.0000

Check ? High Limit Low Limit
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: ICB Acquired: 6/7/2018 23:02:07 Type: QC
 Method: Accutest XPress(v421) 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	0.006	0.077	0.008	0.032	-0.0013	-0.000	0.023
Stddev	.0001	.0001	.0002	.0006	.0036	.0010	.0006
%RSD	13.29	.8158	26.36	20.08	282.5	367400.	25.00
#1	.0006	.0077	.0006	.0027	-0.0038	.0007	.0027
#2	.0005	.0077	.0009	.0036	.0013	-0.0007	.0019

Check ? High Limit Low Limit
 Chk Pass Chk Fail Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	83557.	16519.	3677.2	6226.7
Stddev	395.	120.	16.4	18.3
%RSD	.47331	.72938	.44615	.29439
#1	83277.	16434.	3688.8	6239.7
#2	83837.	16604.	3665.6	6213.8

Sample Name: CCV Acquired: 6/7/2018 23:05:09 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.074	2.108	2.029	2.084	2.118	2.052	2.103	2.095	2.613
Stddev	.006	.005	.007	.009	.017	.023	.017	.010	.0019
%RSD	.3042	.2504	.3719	.4472	.7809	1.101	.8054	.4745	.7090
#1	2.070	2.104	2.024	2.077	2.107	2.036	2.091	2.088	2600
#2	2.079	2.112	2.034	2.091	2.130	2.068	2.115	2.102	2626

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	2.093	2.062	2.038	2.051	2.068	2.011	2.037	41.60	42.28
Stddev	.016	.005	.002	.010	.011	.005	.006	.06	.14
%RSD	.7606	.2509	.1134	.4738	.5303	.2532	.2891	.1491	.3406
#1	2.082	2.058	2.036	2.044	2.060	2.007	2.032	41.56	42.18
#2	2.104	2.066	2.040	2.058	2.076	2.014	2.041	41.64	42.38

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	41.76	42.07	42.09	41.78	2.018	2.064	5.166	2.054	2.090
Stddev	.10	.15	.23	.25	.008	.004	.017	.008	.005
%RSD	.2453	.3471	.5409	.5950	.3750	.2115	.3228	.3839	.2304
#1	41.68	41.97	41.93	41.61	2.013	2.061	5.154	2.049	2.087
#2	41.83	42.18	42.25	41.96	2.023	2.067	5.177	2.060	2.093

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value Range

Sample Name: CCV Acquired: 6/7/2018 23:05:09 Type: QC
 Method: Accutest XPress(v421) 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	2.098	2.074	2.107	2.016	2.034	2.085	2.033
Stddev	.018	.006	.017	.008	.014	.010	.001
%RSD	.8450	.2906	.7879	.3757	.6965	.5012	.0249
#1	2.085	2.070	2.095	2.011	2.024	2.077	2.034
#2	2.111	2.078	2.119	2.022	2.044	2.092	2.033

Check ? Chk Pass 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	81602.	16067.	3582.5	6242.1
Stddev	224.	72.	16.6	23.1
%RSD	.27416	.44767	.46336	.36964
#1	81443.	16118.	3570.7	6225.8
#2	81760.	16017.	3594.2	6258.4

Sample Name: CCB Acquired: 6/7/2018 23:07:59 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.003	.0000	-0.002	.0000	-0.001	-0.006	-0.001	-0.003	-0.001
Stddev	.0002	.0000	.0001	.0004	.0001	.0003	.0001	.0003	.0003
%RSD	63.62	136.5	40.89	5872.	116.0	53.85	69.42	95.17	387.2
#1	-0.002	.0000	-0.002	-0.003	-0.000	-0.008	-0.001	-0.001	.0001
#2	-0.005	.0000	-0.001	.0003	-0.001	-0.004	-0.002	-0.006	-0.003

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	-0.002	.0001	.0008	-0.015	-0.003	-0.022	.0018	-0.077	.0029
Stddev	.0006	.0000	.0014	.0009	.0008	.0016	.0025	.0085	.0005
%RSD	256.6	28.95	167.7	59.25	253.7	73.00	137.2	110.5	16.46
#1	-0.006	.0001	-0.002	-0.021	.0003	-0.033	.0036	-0.017	.0032
#2	.0002	.0001	.0018	-0.008	-0.009	-0.010	.0001	-0.138	.0025

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 High Limit Low Limit

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.0063	.0218	-0.136	.0034	.0002	-0.007	.0009	-0.000
Stddev	.0011	.0111	.0035	.0157	.0006	.0001	.0000	.0000	.0001
%RSD	107.7	176.1	16.16	115.9	18.98	27.32	5.596	.4851	211.2
#1	.0017	.0141	.0194	-0.025	.0029	.0003	-0.007	.0009	.0000
#2	.0002	-0.0015	.0243	-0.247	.0038	.0002	-0.007	.0009	-0.001

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 High Limit Low Limit

Sample Name: CCB Acquired: 6/7/2018 23:07:59 Type: QC
 Method: Accutest XPress(v421) 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	.0007	-0.001	.0000	-0.010	-0.026	.0002
Stddev	.0008	.0011	.0002	.0001	.0019	.0001	.0009
%RSD	118.0	152.0	196.6	995.9	186.4	2.123	531.5
#1	.0012	-0.001	.0000	-0.001	.0003	-0.025	-0.004
#2	.0001	.0015	-0.003	.0001	-0.023	-0.026	.0008

Check ? Chk Pass 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	83702.	16402.	3683.5	6226.8
Stddev	193.	137.	5.6	2
%RSD	.23050	.83573	.15300	.00372
#1	83838.	16305.	3679.5	6226.6
#2	83565.	16498.	3687.5	6226.9

Sample Name: CRI Acquired: 6/7/2018 23:11:02 Type: QC
 Method: Accutest XPress(v421) 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	.2018	.0020	.0029	.0523	.0098	.0085	.0153	.0096
Stddev	.0010	.0000	.0002	.0010	.0004	.0002	.0004	.0005
%RSD	.4804	2.333	6.411	1.833	4.003	2.943	2.747	5.002
#1	.2011	.0021	.0028	.0516	.0101	.0086	.0150	.0093
#2	.2025	.0020	.0030	.0529	.0095	.0083	.0156	.0100

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046	.0510	.0200	.0090	.0099	W .0023	.0102	W .0076
Stddev	.0004	.0013	.0002	.0026	.0006	.0011	.0018	.0030
%RSD	9.409	2.457	1.182	28.59	5.703	48.23	17.98	39.43
#1	.0043	.0501	.0198	.0108	.0095	.0015	.0115	.0055
#2	.0049	.0519	.0202	.0072	.0103	.0030	.0089	.0097

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Warn Chk Pass Chk Warn
 .0030
 -20.00% .0060
 20.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1937	5.135	.1027	5.191	5.088	5.129	.1008	.0205
Stddev	.0030	.021	.0026	.043	.009	.034	.0001	.0002
%RSD	1.535	.4106	2.548	.8204	.1709	.6619	.0516	1.090
#1	.1958	5.120	.1009	5.161	5.095	5.105	.1008	.0204
#2	.1916	5.150	.1046	5.221	5.082	5.153	.1009	.0207

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: CRI Acquired: 6/7/2018 23:11:02 Type: QC
 Method: Accutest XPress(v421) 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	.2014	.0112	.0099	.0106	.0507	.0117	.0501	.0175
Stddev	.0006	.0005	.0001	.0009	.0017	.0003	.0043	.0013
%RSD	.3059	4.551	1.064	8.636	3.264	2.735	8.574	7.649
#1	.2010	.0108	.0098	.0113	.0495	.0114	.0532	.0184
#2	.2018	.0115	.0099	.0100	.0518	.0119	.0471	.0166

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	.0534	.0492
Stddev	.0007	.0015
%RSD	1.254	3.060
#1	.0538	.0481
#2	.0529	.0503

Check ? Value Range
 Chk Pass Chk Pass

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	83569.	16370.	3636.2	6174.9
Stddev	547.	20.	17.9	22.9
%RSD	.65431	.11996	.49120	.37098
#1	83956.	16384.	3623.6	6158.7
#2	83182.	16357.	3648.9	6191.1

Sample Name: CRID Acquired: 6/7/2018 23:14:03 Type: QC
 Method: Accutest XPress(v421) 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	.0047	.0010	.0010	.0027	.0023	F -.0006	.0032	.0043
Stddev	.0002	.0000	.0006	.0001	.0011	.0001	.0000	.0001
%RSD	4.996	3.940	58.70	5.501	48.50	14.44	.4764	3.084
#1	.0046	.0011	.0006	.0028	.0032	-.0006	.0032	.0044
#2	.0049	.0010	.0014	.0026	.0015	-.0007	.0031	.0042

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Pass
 .0020
 -30.00% .0020
 -30.00%

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0003	.0021	.0110	.0028	.0026	F -.0008	F .0030	F .0018
Stddev	.0008	.0003	.0000	.0001	.0006	.0022	.0004	.0018
%RSD	219.0	14.64	.1628	4.929	24.26	254.6	13.41	98.63
#1	-.0002	.0019	.0110	.0027	.0021	-.0024	.0033	.0031
#2	-.0009	.0023	.0110	.0029	.0030	-.0007	.0027	.0006

Check ? Value Range
 Chk Fail Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Fail Chk Fail
 .0020
 -30.00% .0025
 -30.00% .0050
 -30.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1111	1.119	.0026	.1142	2.158	1.101	-.0005	.0003
Stddev	.0011	.019	.0020	.0043	.002	.021	.0008	.0003
%RSD	.9767	1.727	75.89	3.789	.0814	1.910	157.9	95.00
#1	.1103	1.106	.0041	.1172	2.160	1.086	-.0011	.0001
#2	.1118	1.133	.0012	.1111	2.157	1.116	.0001	.0006

Check ? Value Range
 Chk Pass Chk Pass None Chk Pass Chk Pass Chk Pass None None

Sample Name: CRID Acquired: 6/7/2018 23:14:03 Type: QC
 Method: Accutest XPress(v421) 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	.0002	-.0001	.0007	-.0005	-.0003	-.0011	-.0001
Stddev	.0003	.0003	.0003	.0011	.0007	.0001	.0014	.0002
%RSD	32.62	172.6	182.9	149.5	133.7	38.54	129.4	298.8
#1	-.0007	.0004	-.0003	.0015	-.0000	-.0003	-.0001	-.0002
#2	-.0011	-.0000	-.0000	-.0000	-.0011	-.0002	-.0021	.0001

Check ? Value Range
 None None None None None None None None

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	.0005	.0000
Stddev	.0026	.0014
%RSD	519.9	307.2
#1	.0023	-.0009
#2	-.0013	.0010

Check ? Value Range
 None None

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	82953.	16152.	3621.2	6151.6
Stddev	268.	116.	8.8	8.5
%RSD	.32356	.71984	.24295	.13838
#1	83143.	16234.	3627.5	6157.6
#2	82763.	16069.	3615.0	6145.6

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, Check? High Limit, Low Limit. Data for ICSA sample, acquired 6/7/2018 23:17:04. Elements include Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Ag.

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Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, Check? High Limit, Low Limit. Data for ICSA sample, acquired 6/7/2018 23:17:04. Elements include Si, Sn, Sr, Ti, W, Zr, S, Bi.

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Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, Check? Value Range. Data for ICSAB sample, acquired 6/7/2018 23:20:11. Elements include Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Ag, V, Zn, As, Ti, Pb, Se, Sb, Al, Ca, Fe, K, Na, B, Mo, Si, Sn, Sr.

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Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, Check? Value Range. Data for ICSAB sample, acquired 6/7/2018 23:20:11. Elements include Ti, W, Zr, S, Bi, Li, P, Y, In.

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Sample Name: icsa Acquired: 6/7/2018 23:25:17 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.0000	-0.002	-0.006	.0005	-0.034	-0.024	-0.003	.0034
Stddev	.0004	.0001	.0001	.0005	.0003	.0012	.0004	.0006	.0016
%RSD	17.94	439.4	71.29	72.97	53.39	35.15	15.60	190.3	47.39
#1	.0018	-0.0000	-0.001	-0.003	.0003	-0.043	-0.027	.0001	.0022
#2	.0024	.0001	-0.003	-0.010	.0007	-0.026	-0.022	-0.008	.0045

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	.0068	.0013	.0019	-0.0009	.0012	.0065	.0091	544.5	403.1
Stddev	.0002	.0001	.0008	.0023	.0062	.0039	.0044	24.0	3.9
%RSD	2.775	9.512	39.85	254.9	532.0	60.24	48.54	4.406	.9704
#1	.0066	.0012	.0014	-.0025	-.0032	.0037	.0059	527.5	400.3
#2	.0069	.0014	.0024	-.0007	-.0055	.0093	.0122	561.4	405.8

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 High Limit
 Low Limit

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	199.7	529.7	.0857	.0063	-.0015	-.0006	.0081	-.0037	-.0029
Stddev	2.8	7.5	.0714	.0155	.0022	.0000	.0002	.0003	.0001
%RSD	1.384	1.408	83.39	245.0	143.8	8.333	1.947	8.864	1.933
#1	197.7	524.4	.0352	.0173	.0000	-.0006	.0080	-.0035	-.0029
#2	201.6	535.0	.1362	-.0046	-.0031	-.0005	.0082	-.0040	-.0030

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 High Limit
 Low Limit

Sample Name: icsa Acquired: 6/7/2018 23:25:17 Type: QC
 Method: Accutest XPress(v421) 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	-0.0023	.0027	-0.0036	.0168	.0069	-0.002	.0004
Stddev	.0001	.0034	.0005	.0002	.0007	.0020	.0003
%RSD	2.870	127.0	13.20	1.127	9.665	906.2	69.95
#1	-.0023	.0003	-.0039	.0166	.0064	-.0017	.0002
#2	-.0022	.0051	-.0033	.0169	.0073	.0012	.0007

Check ? Chk Pass 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	77943.	15517.	3321.3	6091.4
Stddev	592.	213.	11.5	13.2
%RSD	.75953	1.3703	.34713	.21618
#1	77524.	15668.	3329.4	6100.7
#2	78362.	15367.	3313.1	6082.1

Sample Name: icsab Acquired: 6/7/2018 23:28:24 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5292	.5100	1.063	.5018	.5122	.5374	.5217	.9960	1.102
Stddev	.0041	.0049	.001	.0005	.0008	.0006	.0000	.0015	.001
%RSD	.7712	.9666	.1082	.1070	.1605	.1148	.0023	.1458	.0421
#1	.5321	.5134	1.064	.5014	.5117	.5369	.5217	.9970	1.102
#2	.5263	.5065	1.062	.5022	.5128	.5378	.5217	.9950	1.102

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	.5310	1.000	1.099	1.026	.9867	1.059	1.087	533.8	418.4
Stddev	.0007	.000	.001	.004	.0034	.007	.005	7.0	6.5
%RSD	.1316	.0310	.0912	.3814	.3445	.6590	.5012	1.318	1.545
#1	.5315	1.000	1.098	1.029	.9992	1.064	1.083	528.8	423.0
#2	.5305	1.000	1.100	1.023	.9943	1.054	1.091	538.8	413.8

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	212.7	550.9	.1354	.0197	.5430	.5232	.5422	.5035	.5340
Stddev	2.1	5.0	.0354	.0085	.0017	.0013	.0005	.0037	.0051
%RSD	1.009	.9113	26.16	42.90	.3220	.2448	.0984	.7406	.9523
#1	214.3	554.4	.1605	.0137	.5442	.5241	.5426	.5061	.5376
#2	211.2	547.3	.1104	.0257	.5418	.5223	.5418	.5009	.5304

Check ? Chk Pass Chk Pass None None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value Range

Sample Name: icsab Acquired: 6/7/2018 23:28:24 Type: QC
 Method: Accutest XPress(v421) 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	.5319	.5225	.5110	.5363	.5511	.5406	.5306
Stddev	.0007	.0062	.0012	.0002	.0008	.0037	.0020
%RSD	.1304	1.189	.2446	.0439	.1394	.6782	.3778
#1	.5324	.5269	.5101	.5361	.5517	.5432	.5292
#2	.5314	.5182	.5119	.5365	.5506	.5380	.5320

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	76598.	15100.	3299.8	6072.1
Stddev	663.	265.	7.4	14.6
%RSD	.86503	1.7543	.22511	.23993
#1	76129.	14913.	3294.5	6061.8
#2	77066.	15287.	3305.0	6082.4

Sample Name: HSTD Acquired: 6/7/2018 23:31:24 Type: QC									
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000									
User: admin Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.427	5.365	5.137	5.378	5.409	5.212	5.371	5.430	6.452
Stddev	.029	.023	.052	.052	.016	.013	.059	.057	.0014
%RSD	.5249	.4292	1.007	.9706	.2909	.2551	1.107	1.042	.2174
#1	5.407	5.349	5.100	5.342	5.398	5.202	5.329	5.390	6.442
#2	5.448	5.382	5.173	5.415	5.421	5.221	5.413	5.470	6.462
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	5.310	5.365	5.150	5.258	5.320	5.104	5.133	-0.434	-1.290
Stddev	.021	.055	.055	.055	.044	.061	.064	.0128	.0039
%RSD	.4031	1.019	1.059	1.051	.8268	1.187	1.249	29.42	2.997
#1	5.295	5.327	5.112	5.219	5.288	5.061	5.088	-0.343	-1.263
#2	5.325	5.404	5.189	5.297	5.351	5.147	5.178	-0.524	-1.317
Check ?	None	None	None	None	None	None	None	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	-0.193	0.0630	0.1627	0.0420	5.116	5.194	25.51	5.211	5.416
Stddev	.0017	.0049	.0417	.0013	.053	.058	.30	.053	.022
%RSD	8.741	7.740	25.64	2.995	1.045	1.123	1.188	1.017	4.055
#1	-0.181	.0596	.1332	.0429	5.079	5.153	25.30	5.174	5.401
#2	-0.204	.0665	.1922	.0411	5.154	5.236	25.73	5.249	5.432
Check ?	None	None	None	None	None	None	None	None	None
Value Range									

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Sample Name: HSTD Acquired: 6/7/2018 23:31:24 Type: QC							
Method: Accutest XPress(v421) 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	5.362	5.247	5.346	48.64	5.058	5.485	5.162
Stddev	.027	.060	.019	.51	.052	.043	.065
%RSD	.5032	1.135	.3507	1.040	1.025	.7769	1.259
#1	5.343	5.205	5.333	48.28	5.022	5.454	5.116
#2	5.381	5.290	5.360	49.00	5.095	5.515	5.208
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	82777.	16253.	3590.1	6268.9			
Stddev	284.	16.	18.7	31.4			
%RSD	.34282	.09955	.51967	.50085			
#1	82977.	16264.	3603.3	6291.1			
#2	82576.	16241.	3576.9	6246.7			

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Sample Name: HSTD Acquired: 6/7/2018 23:34:20 Type: QC									
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000									
User: admin Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.0001	-0.002	-0.008	.0013	-0.018	-0.015	-0.005	.0036
Stddev	.0002	.0002	.0001	.0001	.0003	.0006	.0001	.0001	.0003
%RSD	10.27	337.9	58.71	11.02	23.34	35.41	8.465	17.79	8.917
#1	.0015	.0002	-0.003	-0.008	.0015	-0.022	-0.015	-0.006	.0039
#2	.0018	-0.001	-0.001	-0.009	.0011	-0.013	-0.016	-0.004	.0034
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	.0056	0.004	0.022	-0.380	0.011	0.022	0.058	315.4	156.2
Stddev	.0003	.0001	.0002	.0012	.0014	.0063	.0005	.3	0
%RSD	6.031	26.30	9.780	3.107	136.3	282.1	8.966	.0935	.0063
#1	.0053	.0003	.0021	-0.372	.0000	.0067	.0062	315.7	156.2
#2	.0058	.0005	.0024	-0.389	.0021	-0.022	.0054	315.2	156.3
Check ?	None	None	None	None	None	None	None	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	155.1	315.0	158.7	160.4	0.055	0.009	0.127	-0.029	-0.012
Stddev	.1	.0	.9	.3	.0008	.0016	.0005	.0000	.0003
%RSD	.0412	.0023	.5682	.1954	14.83	179.6	4.261	.3051	24.03
#1	155.1	315.0	158.1	160.2	.0060	.0020	.0123	-0.0029	-0.014
#2	155.1	315.0	159.4	160.6	.0049	-0.002	.0130	-0.0029	-0.010
Check ?	None	None	None	None	None	None	None	None	None
Value Range									

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Sample Name: HSTD Acquired: 6/7/2018 23:34:20 Type: QC							
Method: Accutest XPress(v421) 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	-0.009	.0001	-0.036	.0083	-0.005	.0020	-0.012
Stddev	.0006	.0001	.0001	.0036	.0066	.0021	.0001
%RSD	65.36	117.0	3.936	43.95	1369.	106.3	7.086
#1	-0.005	.0002	-0.035	.0057	.0042	.0005	-0.013
#2	-0.014	.0000	-0.037	.0108	-0.052	.0035	-0.012
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	79626.	15451.	3442.7	6156.1			
Stddev	317.	35.	27.0	35.7			
%RSD	.39783	.22564	.78297	.57950			
#1	79850.	15475.	3423.6	6130.9			
#2	79402.	15426.	3461.7	6181.3			

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Sample Name: ccv Acquired: 6/7/2018 23:37:18 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.072	2.059	2.014	2.066	2.063	2.001	2.074	2.083	2.575
Stddev	.015	.015	.022	.020	.011	.016	.011	.020	.0011
%RSD	.7316	.7257	1.076	.9619	.5197	.8207	.5221	.9651	.4108
#1	2.061	2.048	1.998	2.052	2.055	1.989	2.067	2.069	2.567
#2	2.083	2.069	2.029	2.080	2.071	2.012	2.082	2.097	2.582

Check ?
Value Range

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.054	2.046	2.040	2.041	2.053	2.016	2.025	40.60	41.46
Stddev	.013	.021	.021	.019	.028	.021	.027	.26	.36
%RSD	.6188	1.007	1.014	.9478	1.344	1.033	1.316	.6521	.8802
#1	2.045	2.032	2.026	2.028	2.033	2.001	2.006	40.41	41.20
#2	2.063	2.061	2.055	2.055	2.073	2.031	2.044	40.78	41.71

Check ?
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	41.08	41.75	41.15	41.73	2.022	2.050	5.145	2.037	2.066
Stddev	.27	.33	.45	.41	.024	.022	.056	.027	.015
%RSD	.6536	.7802	1.102	.9807	1.172	1.056	1.091	1.334	.7063
#1	40.89	41.52	40.82	41.45	2.005	2.035	5.106	2.018	2.055
#2	41.27	41.98	41.47	42.02	2.039	2.065	5.185	2.057	2.076

Check ?
Value Range

Sample Name: ccv Acquired: 6/7/2018 23:37:18 Type: QC
 Method: Accutest XPress(v421) 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	2.079	2.050	2.068	1.998	2.020	2.083	2.026
Stddev	.009	.026	.011	.021	.026	.020	.024
%RSD	.4338	1.254	.5186	1.049	1.280	.9351	1.204
#1	2.072	2.031	2.061	1.983	2.002	2.069	2.009
#2	2.085	2.068	2.076	2.013	2.039	2.097	2.043

Check ?
Value Range

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	81889.	15960.	3565.3	6220.2
Stddev	83.	97.	1.9	15.5
%RSD	.10162	.60575	.05454	.24920
#1	81830.	16028.	3564.0	6209.2
#2	81948.	15891.	3566.7	6231.2

Sample Name: ccb Acquired: 6/7/2018 23:40:08 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: 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	-0.0001	.0003	-0.0005	.0000	-0.0003	-0.0001	-0.0003	.0002
Stddev	.0002	.0000	.0001	.0006	.0003	.0001	.0002	.0012	.0004
%RSD	32.10	56.12	38.09	111.2	900.7	29.26	235.2	431.3	221.4
#1	.0009	-0.0000	.0004	-0.001	.0002	-0.0004	.0000	-0.0011	.0004
#2	.0006	-0.0001	.0002	-0.0010	-0.0002	-0.0002	-0.0002	.0005	-0.0001

Check ?
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	-0.000	.0001	.0008	-0.004	-0.016	-0.000	.0011	-0.073	.0080
Stddev	.0001	.0001	.0014	.0018	.0012	.0026	.0022	.0191	.0004
%RSD	862.9	142.9	172.9	436.8	77.84	9976.	198.7	263.2	5.355
#1	.0001	-0.0000	-0.0002	.0008	-0.0025	-0.0019	-0.0005	.0063	.0083
#2	-0.0001	.0001	.0018	-0.0016	-0.0007	.0018	.0027	-0.0208	.0077

Check ?
High Limit
Low Limit

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024	.0014	.0175	.0080	.0031	.0008	.0004	.0017	-0.0001
Stddev	.0012	.0219	.0161	.0054	.0003	.0005	.0000	.0009	.0001
%RSD	48.23	1536.	91.93	66.74	9.967	65.28	9.560	55.33	189.0
#1	.0016	-0.0140	.0061	.0042	.0034	.0012	.0004	.0023	.0000
#2	.0033	.0169	.0289	.0118	.0029	.0004	.0004	.0010	-0.0002

Check ?
High Limit
Low Limit

Sample Name: ccb Acquired: 6/7/2018 23:40:08 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	-0.0019	.0001	-0.0004	-0.0006	-0.0009	.0002
Stddev	.0012	.0002	.0002	.0010	.0005	.0008	.0002
%RSD	122.4	12.29	281.2	246.5	79.31	90.33	90.30
#1	.0018	-0.0017	.0002	-0.0012	-0.0009	-0.0014	.0004
#2	.0001	-0.0020	-0.0001	.0003	-0.0003	-0.0003	.0001

Check ?
High Limit
Low Limit

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	81447.	15701.	3558.0	6058.4
Stddev	240.	193.	3.8	4.0
%RSD	.29431	1.2286	.10729	.06554
#1	81616.	15565.	3555.3	6055.6
#2	81277.	15838.	3560.7	6061.2

Sample Name: feconf Acquired: 6/7/2018 23:43:11 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0004	-0.0000	-0.0008	-0.0008	-0.0004	-0.0033	-0.0017	.0000	.0039
Stddev	.0003	.0000	.0002	.0003	.0003	.0004	.0000	.0004	.0010
%RSD	71.28	70.28	23.36	36.06	74.51	12.08	1.893	1149.	24.56
#1	.0002	-0.0001	-0.0009	-0.0010	-0.0002	-0.0035	-0.0017	.0003	.0046
#2	.0007	-0.0000	-0.0006	-0.0006	-0.0007	-0.0030	-0.0017	-0.0003	.0032
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0054	-0.0027	.0040	-0.0000	.0040	.0003	.0031	-0.0035	.0318
Stddev	.0000	.0001	.0028	.0022	.0009	.0001	.0021	.0012	.0034
%RSD	.7378	5.222	69.56	5898.	21.55	32.19	66.39	34.92	10.60
#1	.0054	-0.0026	.0060	-0.0016	.0046	.0002	.0046	-0.0044	.0294
#2	.0053	-0.0028	.0020	.0015	.0033	.0003	.0017	-0.0027	.0342
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	203.6	.0233	.0818	.0215	-0.0008	.0004	.0042	-0.0009	-0.0000
Stddev	.8	.0074	.0491	.0010	.0001	.0008	.0013	.0005	.0000
%RSD	.3812	31.86	60.08	4.557	9.072	206.0	31.70	50.25	128.9
#1	203.0	.0181	.1165	.0208	-0.0008	-0.0002	.0033	-0.0006	-0.0000
#2	204.1	.0286	.0470	.0222	-0.0007	-0.0009	.0051	-0.0013	-0.0001
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	.0001	-0.0036	-0.0038	.0026	.0083	-0.0042	-0.0070		
Stddev	.0011	.0006	.0000	.0019	.0007	.0024	.0007		
%RSD	1555.	16.77	.8680	70.99	8.409	56.77	9.556		
#1	.0009	-0.0040	-0.0038	.0040	.0088	-.0025	-.0075		
#2	-.0007	-0.0031	-0.0038	.0013	.0078	-.0058	-.0066		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	83670.	16292.	3639.5	6361.7					
Stddev	430.	41.	.6	3.5					
%RSD	.51378	.25314	.01740	.05481					
#1	83974.	16321.	3639.0	6359.3					
#2	83366.	16263.	3639.9	6364.2					

Sample Name: crconf Acquired: 6/7/2018 23:46:11 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0007	.0001	-0.0002	-0.0005	F 10.77	-0.0008	-0.0011	.0006	-0.0003
Stddev	.0005	.0000	.0000	.0003	.07	.0002	.0000	.0003	.0003
%RSD	64.99	31.03	5.805	64.95	.6659	29.33	2.608	55.05	79.44
#1	.0004	.0001	-0.0002	-0.0003	10.72	-0.0006	-0.0012	.0003	-0.0002
#2	.0010	.0001	-0.0002	-0.0007	10.82	-0.0010	-0.0011	.0008	-0.0005
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	-0.0039	.0133	-0.0003	.0006	.0024	-0.0014	.0004	.0264	.0570
Stddev	.0005	.0000	.0034	.0013	.0002	.0015	.0016	.0008	.0001
%RSD	11.89	.0504	1173.	217.1	9.135	106.3	425.5	3.216	.2170
#1	-.0042	.0133	-.0027	-.0003	.0025	-.0003	.0015	.0258	.0569
#2	-.0036	.0133	.0021	.0015	.0022	-.0024	-.0008	.0270	.0571
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	.0004	.0113	-0.0470	-0.0128	-0.0001	.0010	.0106	-0.0013	-0.0000
Stddev	.0021	.0120	.0509	.0002	.0011	.0003	.0017	.0006	.0001
%RSD	556.4	106.1	108.3	1.188	1478.	26.27	16.01	42.54	159.8
#1	.0019	.0028	-0.1110	-0.0127	-.0009	.0012	.0094	-.0009	-0.0001
#2	-.0011	.0198	-0.0829	-0.0129	.0007	.0008	.0118	-.0017	-0.0000
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	-0.0023	.0033	.0009	.0027	.0141	-0.0012	-0.0012		
Stddev	.0002	.0018	.0002	.0001	.0037	.0007	.0011		
%RSD	10.77	55.27	23.47	3.222	26.00	59.19	96.39		
#1	-.0021	.0045	.0008	.0027	.0115	-.0007	-.0019		
#2	-.0024	.0020	.0011	.0028	.0167	-.0017	-.0004		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	82879.	16143.	3528.5	6137.9					
Stddev	63.	7.	17.7	18.4					
%RSD	.07558	.04464	.50066	.29922					
#1	82835.	16148.	3516.0	6124.9					
#2	82924.	16137.	3540.9	6150.9					

Sample Name: asconf Acquired: 6/7/2018 23:49:13 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	
Avg	.0000	-0.0000	-0.0004	-0.0003	.0009	-0.0008	.0001	-0.0001	
Stddev	.0002	.0001	.0002	.0004	.0006	.0002	.0000	.0012	
%RSD	740.2	589.9	65.02	143.1	66.09	18.40	11.39	2018.	
#1	.0002	.0000	-0.0002	-0.0006	.0013	-0.0010	.0001	-0.0009	
#2	-.0001	-0.0001	-0.0005	.0000	.0005	-0.0007	.0001	.0008	
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	
Avg	-0.0003	-0.0002	.0024	5.331	F -0.0034	.0029	-0.0046	.0028	
Stddev	.0008	.0011	.0001	.072	.0026	.0011	.0013	.0002	
%RSD	250.4	612.2	3.569	1.347	76.91	38.16	27.34	7.527	
#1	-.0008	-0.0009	.0024	5.280	-.0015	.0037	-.0037	.0029	
#2	.0002	.0006	.0023	5.381	-.0052	.0021	-.0055	.0026	
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	
Avg	-0.0033	-0.0019	.0048	.0478	-0.0449	.0256	-0.0009	.0006	
Stddev	.0073	.0020	.0029	.0062	.1165	.0236	.0010	.0004	
%RSD	218.6	104.0	59.80	12.95	259.2	92.20	116.6	68.91	
#1	-.0085	-.0033	.0068	.0522	-.0374	.0089	-.0002	.0003	
#2	.0018	-.0005	.0028	.0434	-.1273	.0423	-.0016	.0009	
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230	
Avg	.0062	.0014	-0.0001	.0011	-0.0028	.0000	-0.0017	-0.0032	
Stddev	.0031	.0001	.0000	.0005	.0002	.0003	.0018	.0031	
%RSD	49.47	6.150	8.612	43.07	8.887	26690.	105.4	96.59	
#1	.0040	.0013	-.0001	.0014	-.0030	.0002	-.0004	-.0010	
#2	.0084	.0014	-.0001	.0007	-.0026	-.0002	-.0029	-.0054	
Elem	Li6707	P_1774							
Avg	-0.0013	.0012							
Stddev	.0012	.0009							
%RSD	93.38	73.46							
#1	-.0021	.0006							
#2	-.0004	.0018							

Sample Name: asconf Acquired: 6/7/2018 23:49:13 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	82287.	16008.	3599.2	6113.4					
Stddev	275.	339.	15.9	24.1					
%RSD	.33452	2.1147	.44159	.39500					
#1	82092.	15769.	3610.4	6130.5					
#2	82481.	16248.	3587.9	6096.3					

Sample Name: ccv Acquired: 6/7/2018 23:52:15 Type: QC
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Rows include Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280 and #1, #2.

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Rows include V_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179 and #1, #2.

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Rows include Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077 and #1, #2.

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Rows include V_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179 and #1, #2.

Sample Name: ccv Acquired: 6/7/2018 23:52:15 Type: QC
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Rows include Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774 and #1, #2.

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 4 columns: Int. Std. Units, Cts/S, Avg, Stddev, %RSD. Rows include Y_3600, Y_3710, Y_2243, In2306 and #1, #2.

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 4 columns: Int. Std. Units, Cts/S, Avg, Stddev, %RSD. Rows include Y_3600, Y_3710, Y_2243, In2306 and #1, #2.

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 4 columns: Int. Std. Units, Cts/S, Avg, Stddev, %RSD. Rows include Y_3600, Y_3710, Y_2243, In2306 and #1, #2.

Sample Name: ccb Acquired: 6/7/2018 23:55:05 Type: QC
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Rows include Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280 and #1, #2.

Check ? High Limit Low Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Rows include V_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179 and #1, #2.

Check ? High Limit Low Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Rows include Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077 and #1, #2.

Check ? High Limit Low Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Rows include Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077 and #1, #2.

Sample Name: ccb Acquired: 6/7/2018 23:55:05 Type: QC
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Rows include Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774 and #1, #2.

Check ? High Limit Low Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 4 columns: Int. Std. Units, Cts/S, Avg, Stddev, %RSD. Rows include Y_3600, Y_3710, Y_2243, In2306 and #1, #2.

Check ? High Limit Low Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 4 columns: Int. Std. Units, Cts/S, Avg, Stddev, %RSD. Rows include Y_3600, Y_3710, Y_2243, In2306 and #1, #2.

Check ? High Limit Low Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 4 columns: Int. Std. Units, Cts/S, Avg, Stddev, %RSD. Rows include Y_3600, Y_3710, Y_2243, In2306 and #1, #2.

Sample Name: sampleconf Acquired: 6/7/2018 23:58:09 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0045	.0010	.0010	.0029	.0022	-0.006	.0031	.0042	-0.002
Stddev	.0001	.0001	.0005	.0000	.0002	.0006	.0000	.0001	.0000
%RSD	2.284	8.965	53.02	.0978	9.274	99.26	.0242	3.476	2.020
#1	.0046	.0009	.0006	.0029	.0021	-.0002	.0031	.0041	-.0002
#2	.0045	.0011	.0013	.0029	.0023	-.0010	.0031	.0043	-.0002
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0017	.0110	.0043	-0.0003	.0010	.0027	.0019	.0950	1.104
Stddev	.0003	.0001	.0019	.0017	.0001	.0003	.0001	.0088	.001
%RSD	16.82	1.280	43.64	508.6	8.503	11.24	6.847	9.250	.0786
#1	.0019	.0111	.0030	.0009	.0010	.0029	.0020	.1012	1.105
#2	.0015	.0109	.0056	-.0016	.0011	.0025	.0018	.0888	1.104
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	.0015	.0914	2.063	1.086	-0.007	.0001	-0.025	.0003	-0.001
Stddev	.0021	.0200	.089	.002	.0004	.0005	.0005	.0002	.0003
%RSD	134.8	21.84	4.297	.1520	50.16	398.3	19.72	72.32	364.3
#1	.0001	.0773	2.126	1.087	-.0005	-.0002	-.0028	.0002	-.0001
#2	.0030	.1055	2.000	1.085	-.0009	.0004	-.0021	.0005	-.0003
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	.0003	-0.0017	.0002	-0.0004	.0010	-0.0024	-0.006		
Stddev	.0006	.0014	.0000	.0022	.0017	.0030	.0003		
%RSD	214.9	80.27	2.406	542.0	166.2	124.5	44.32		
#1	.0008	-0.0027	.0002	.0011	.0022	-.0003	-.0004		
#2	-.0002	-0.0007	.0002	-.0019	-.0002	-.0046	-.0008		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	82691.	16096.	3597.3	6116.8					
Stddev	348.	113.	9.2	11.4					
%RSD	42110	.70423	.25698	.18605					
#1	82937.	16016.	3603.8	6124.9					
#2	82445.	16176.	3590.7	6108.8					

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Sample Name: sampleconf Acquired: 6/8/2018 0:01:10 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.2059	.0019	.0029	.0522	.0101	.0079	.0153	.0100	.0052
Stddev	.0008	.0000	.0003	.0010	.0001	.0001	.0000	.0000	.0009
%RSD	.4077	1.631	9.810	1.984	.8828	1.631	.1539	.4726	17.99
#1	.2064	.0019	.0027	.0514	.0101	.0080	.0153	.0101	.0045
#2	.2053	.0019	.0031	.0529	.0100	.0078	.0153	.0100	.0059
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0509	.0206	.0093	.0092	.0022	.0076	.0091	.1874	5.204
Stddev	.0003	.0008	.0007	.0016	.0027	.0002	.0014	.0125	.034
%RSD	.6171	4.056	7.847	17.22	125.5	2.154	15.37	6.687	.6472
#1	.0511	.0200	.0087	.0081	.0002	.0078	.0101	.1963	5.227
#2	.0507	.0212	.0098	.0103	.0041	.0075	.0081	.1786	5.180
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	.1041	5.248	5.081	5.217	.0994	.0202	.2022	.0096	.0101
Stddev	.0000	.023	.029	.006	.0037	.0000	.0081	.0002	.0001
%RSD	.0309	.4351	.5719	.1199	3.724	.2277	4.016	1.941	.6643
#1	.1040	5.264	5.060	5.221	.0968	.0201	.1965	.0098	.0101
#2	.1041	5.232	5.101	5.212	.1020	.0202	.2080	.0095	.0100
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	.0108	.0480	.0116	.0476	.0178	.0488	.0515		
Stddev	.0003	.0042	.0001	.0001	.0005	.0011	.0031		
%RSD	3.125	8.656	.6916	.1582	2.912	2.228	6.026		
#1	.0106	.0451	.0117	.0475	.0181	.0496	.0493		
#2	.0111	.0509	.0116	.0476	.0174	.0480	.0537		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	83043.	16136.	3587.7	6111.6					
Stddev	284.	183.	79.4	110.9					
%RSD	.34143	1.1370	2.2139	1.8148					
#1	83244.	16006.	3643.8	6190.1					
#2	82843.	16266.	3531.5	6033.2					

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Sample Name: mp7457-mb5 2 Acquired: 6/8/2018 0:04:10 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	
Avg	.0091	-0.0007	-0.0017	-0.0025	.0016	.0066	.0029	.0050	
Stddev	.0002	.0005	.0001	.0013	.0007	.0001	.0001	.0004	
%RSD	1.977	82.23	4.025	53.56	42.00	1.302	3.974	8.988	
#1	.0092	-.0010	-.0017	-.0034	.0020	.0065	.0028	.0047	
#2	.0090	-.0003	-.0016	-.0015	.0011	.0067	.0030	.0053	
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	
Avg	-0.0001	.0002	.0098	.0037	-0.0009	-0.0127	-0.0165	.0089	
Stddev	.0027	.0013	.0002	.0136	.0091	.0010	.0019	.0079	
%RSD	3643.	864.4	2.129	370.9	964.5	7.940	11.72	88.70	
#1	.0018	.0011	.0096	-.0060	-.0073	-.0120	-.0152	.0145	
#2	-.0020	-.0008	.0099	.0133	.0055	-.0135	-.0179	.0033	
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	
Avg	-0.0564	.3553	.0997	.0552	.8514	W 1442.	-0.0084	.0006	
Stddev	.0583	.0007	.0047	.1241	.2038	.12.	.0032	.0018	
%RSD	103.4	.1859	4.669	224.9	23.94	.8123	50.80	315.6	
#1	-.0152	.3548	.0965	-.0326	.9955	1434.	-.0041	.0019	
#2	-.0976	.3557	.1030	.1429	.7072	1450.	-.0087	-.0007	
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230	
Avg	.1987	.0033	.0016	.0023	-0.0066	-0.0010	.0846	.0054	
Stddev	.0006	.0003	.0005	.0029	.0128	.0014	.0029	.0148	
%RSD	.2918	8.022	33.00	122.6	193.3	137.2	3.370	274.8	
#1	.1991	.0034	.0012	.0044	-.0157	-.0000	.0866	-.0051	
#2	.1982	.0031	.0020	.0003	.0024	-.0020	.0826	.0158	
Elem	Li6707	P_1774							
Avg	-0.0085	.0801							
Stddev	.0046	.0031							
%RSD	54.10	3.840							
#1	-.0118	.0823							
#2	-.0053	.0780							

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Sample Name: mp7457-mb5 2 Acquired: 6/8/2018 0:04:10 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	83834.	15956.	3683.6	6259.2
Stddev	559.	61.	21.7	25.1
%RSD	.66690	.38496	.59011	.40034
#1	83439.	15913.	3668.2	6241.5
#2	84230.	16000.	3699.0	6276.9

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Sample Name: mp7457-b4 Acquired: 6/8/2018 0:07:17 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 5.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	2.021	2.004	1.987	2.067	1.999	1.908	1.989	2.093
Stddev	.006	.007	.023	.016	.008	.004	.003	.021
%RSD	.2898	.3704	1.169	.7762	.4014	.2231	.1653	1.004
#1	2.025	2.010	1.971	2.056	1.993	1.905	1.987	2.078
#2	2.017	1.999	2.004	2.079	2.005	1.911	1.991	2.108
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	2.482	1.990	2.022	1.945	2.038	2.053	1.986	1.953
Stddev	.0017	.001	.023	.030	.024	.019	.027	.042
%RSD	.6922	.0233	1.131	1.536	1.191	.9458	1.341	2.152
#1	.2469	1.989	2.006	1.924	2.021	2.039	1.967	1.924
#2	.2494	1.990	2.038	1.966	2.055	2.067	2.005	1.983
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	25.10	25.82	25.80	25.86	25.87	W 1420.	1.929	1.979
Stddev	.07	.09	.18	.18	.21	5.	.031	.029
%RSD	.2694	.3655	.6811	.7095	.8197	.3734	1.629	1.471
#1	25.14	25.89	25.93	25.99	25.72	1424.	1.907	1.958
#2	25.05	25.75	25.68	25.73	26.02	1416.	1.951	2.000
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	.0901	1.972	2.011	1.999	1.957	1.976	.0579	.0313
Stddev	.0086	.020	.004	.007	.025	.004	.0017	.0068
%RSD	9.547	1.005	.1752	.3521	1.255	.1961	2.964	21.73
#1	.0840	1.958	2.013	1.994	1.940	1.973	.0591	.0265
#2	.0961	1.986	2.008	2.004	1.975	1.979	.0567	.0361
Elem	Li6707	P_1774						
Avg	.0119	1.985						
Stddev	.0033	.028						
%RSD	27.29	1.409						
#1	.0142	1.965						
#2	.0096	2.005						

Sample Name: mp7457-b4 Acquired: 6/8/2018 0:07:17 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 5.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	83415.	16041.	3639.1	6225.0
Stddev	287.	93.	2.2	3.4
%RSD	.34418	.57922	.06058	.05463
#1	83212.	15975.	3640.7	6222.6
#2	83618.	16106.	3637.6	6227.4

Sample Name: jc65976-1r Acquired: 6/8/2018 0:10:14 Type: Unk
 Method: Accutest XPress(v421) 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
Avg	0.221	-0.006	0.032	1.785	0.032	0.061	15.58	3.007	-0.098
Stddev	.0001	.0005	.0013	.0003	.0002	.0024	.09	.024	.0013
%RSD	.4195	79.45	42.14	.1837	7.534	40.01	.5977	.7923	13.44
#1	.0222	-0.0010	.0022	.1767	.0030	.0044	15.64	2.990	-0.108
#2	.0221	-0.0003	.0041	.1763	.0034	.0078	15.51	3.024	-0.089
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	-0.0037	F 157.9	0.0269	0.0558	0.0298	-0.0283	0.0237	-0.1522	124.0
Stddev	.0003	.8	.0024	.0015	.0053	.0183	.0039	.0110	.1
%RSD	7.933	4947	8.821	2.597	17.83	64.74	16.30	7.244	.0516
#1	-0.0035	157.3	.0252	.0548	.0336	-.0153	.0210	.1444	124.0
#2	-0.0039	158.4	.0286	.0569	.0261	-.0413	.0264	.1600	123.9
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	10.48	3.416	3.204	1329.	2.741	0.086	8.288	-0.0007	3.758
Stddev	.02	.037	.057	.7	.007	.0011	.081	.0009	.0007
%RSD	.1533	1.090	1.778	.5304	.2564	13.19	.9711	124.3	.1826
#1	10.47	3.390	3.164	1324.	.2746	.0094	8.344	-0.0013	.3763
#2	10.49	3.442	3.245	1334.	.2736	.0078	8.231	-0.0001	.3753
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	0.029	6.891	-0.026	5.724	0.004	0.0205	3.234		
Stddev	.0036	.0082	.0010	.021	.0009	.0021	.020		
%RSD	123.5	1.191	38.82	.3644	221.3	10.47	.6062		
#1	.0004	6.949	-0.0033	5.709	.0010	.0220	3.220		
#2	.0055	6.833	-0.0019	5.739	-.0002	.0189	3.248		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	84788.	16386.	3684.2	6291.4					
Stddev	743.	19.	16.2	20.6					
%RSD	.87661	.11447	.44033	.32702					
#1	84263.	16400.	3672.7	6276.9					
#2	85314.	16373.	3695.6	6306.0					

Sample Name: mp7521-mb1 2 Acquired: 6/8/2018 0:13:16 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: water Custom ID2: Custom ID3:
 Comment: due

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	-0.001	-0.001	-0.002	-0.007	0.004	-0.012	-0.001	-0.004	-0.008
Stddev	.0007	.0001	.0001	.0001	.0008	.0005	.0001	.0002	.0004
%RSD	691.8	99.11	36.32	17.20	234.5	44.44	68.73	49.16	48.28
#1	.0004	-0.0000	-0.0002	-0.0006	-0.0002	-0.0008	-0.0001	-0.0006	-0.0006
#2	-0.0006	-0.0002	-0.0001	-0.0008	.0010	-0.0015	-0.0000	-0.0003	-0.0011
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	-0.0005	0.030	-0.0016	-0.0019	0.000	-0.0032	0.0031	-0.0086	-0.0019
Stddev	.0007	.0001	.0003	.0008	.0026	.0003	.0012	.0014	.0025
%RSD	138.8	3.635	17.19	41.81	817.2	10.85	37.55	15.87	131.3
#1	-0.0010	.0030	-0.0014	-0.0024	-0.0018	-0.0029	.0039	-0.0076	-0.0037
#2	-0.0000	.0029	-0.0018	-0.0013	-0.0019	-0.0034	.0023	-0.0096	-0.0001
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	0.001	0.041	0.477	0.606	-0.0029	0.005	0.010	-0.006	-0.001
Stddev	.0014	.0183	.0690	.0040	.0003	.0002	.0014	.0005	.0001
%RSD	2495.	130.0	144.5	6.664	9.790	40.39	13.59	89.59	223.6
#1	-0.0010	.0011	-0.0011	.0577	-0.0031	.0004	.0091	-0.0002	.0000
#2	.0011	.0270	.0965	.0634	-0.0027	.0007	.0111	-0.0009	-0.0002
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	0.009	-0.0028	0.004	0.015	-0.0016	0.018	0.013		
Stddev	.0001	.0012	.0001	.0027	.0004	.0007	.0000		
%RSD	11.65	43.27	18.18	188.8	26.97	39.31	1.779		
#1	.0010	-0.0037	.0004	-0.0005	-0.0019	.0013	.0013		
#2	.0008	-0.0019	.0003	.0034	-0.0013	.0023	.0013		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	85162.	16686.	3703.0	6243.4					
Stddev	833.	66.	11.2	16.0					
%RSD	.97828	.39550	.30130	.25645					
#1	84573.	16639.	3695.1	6232.1					
#2	85751.	16732.	3710.9	6254.8					

Sample Name: mp7521-b1 Acquired: 6/8/2018 0:16:19 Type: Unk Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3: Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 5 rows (Avg, Stddev, %RSD, #1, #2) for multiple elements.

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Sample Name: mp7521-s1 Acquired: 6/8/2018 0:19:07 Type: Unk Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3: Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 5 rows (Avg, Stddev, %RSD, #1, #2) for multiple elements.

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Sample Name: mp7521-s2 Acquired: 6/8/2018 0:22:02 Type: Unk Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3: Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 5 rows (Avg, Stddev, %RSD, #1, #2) for multiple elements.

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Sample Name: CCV Acquired: 6/8/2018 0:24:58 Type: QC Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3: Comment:

Table with 10 columns (Elem Units, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 5 rows (Avg, Stddev, %RSD, #1, #2) for multiple elements.

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Sample Name: CCV Acquired: 6/8/2018 0:24:58 Type: QC
 Method: Accutest XPress(v421) 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	2.094	2.054	2.074	1.979	2.015	2.117	2.028
Stddev	.054	.011	.052	.004	.014	.058	.020
%RSD	2.569	.5130	2.493	.2036	.6904	2.721	.9647
#1	2.056	2.046	2.038	1.976	2.005	2.076	2.014
#2	2.132	2.061	2.111	1.982	2.025	2.158	2.041

Check ?
Value Range

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	82601.	15940.	3598.0	6267.4
Stddev	1685.	262.	15.0	21.7
%RSD	2.0397	1.6425	.41643	.34564
#1	83792.	16125.	3608.6	6282.7
#2	81410.	15755.	3587.4	6252.1

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Sample Name: CCB Acquired: 6/8/2018 0:28:40 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: 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	-0.001	-0.006	-0.001	-0.017	.0000	-0.002	-0.004
Stddev	.0005	.0002	.0003	.0000	.0001	.0007	.0000	.0003	.0006
%RSD	83.06	2122.	408.4	7.093	150.9	41.53	116.3	151.9	159.9
#1	.0002	.0001	-.0003	-.0006	-.0002	-.0012	.0000	-.0004	.0001
#2	.0009	-.0001	.0001	-.0006	.0000	-.0022	.0000	.0000	-.0009

Check ?
High Limit

Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0001	-0.001	.0020	.0002	-0.0037	.0015	-0.0054	-0.0021
Stddev	.0000	.0001	.0013	.0004	.0011	.0002	.0006	.0027	.0053
%RSD	10.44	52.30	1420.	18.96	567.6	5.231	36.24	49.25	247.0
#1	.0004	.0001	-.0009	.0022	.0010	-.0036	.0019	-.0035	-.0059
#2	.0004	.0002	-.0010	.0017	-.0006	-.0039	.0011	-.0073	.0016

Check ?
High Limit

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0021	.0095	.1735	.2185	.0028	.0006	-0.0004	.0011	-0.0000
Stddev	.0000	.0122	.1086	.0047	.0003	.0002	.0003	.0008	.0000
%RSD	.2456	128.4	62.59	2.166	10.75	31.67	68.53	68.80	32.88
#1	-.0021	.0182	.2503	.2218	.0026	.0007	-.0002	.0006	-.0000
#2	-.0021	.0009	.0967	.2151	.0030	.0005	-.0006	.0016	-.0000

Check ?
High Limit

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Sample Name: CCB Acquired: 6/8/2018 0:28:40 Type: QC
 Method: Accutest XPress(v421) 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	.0009	.0002	.0021	-0.0021	.0007	.0010
Stddev	.0006	.0004	.0000	.0047	.0014	.0001	.0016
%RSD	141.2	51.12	19.45	223.3	68.85	20.22	157.6
#1	.0009	.0006	.0002	-.0012	-.0011	.0006	.0022
#2	.0000	.0012	.0003	.0055	-.0031	.0008	-.0001

Check ?
High Limit

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	86774.	16134.	3696.8	6249.8
Stddev	3583.	141.	9.2	16.8
%RSD	4.1295	.87572	.24804	.26900
#1	84240.	16234.	3703.3	6261.7
#2	89308.	16034.	3690.3	6237.9

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Sample Name: jc67310-1 Acquired: 6/8/2018 0:31:43 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1754	.0001	-0.0001	.0003	.0014	.0015	.7773	.0033	.0003
Stddev	.0033	.0000	.0001	.0001	.0008	.0003	.0017	.0007	.0007
%RSD	1.866	11.96	152.8	36.85	56.04	20.71	2.129	20.82	283.1
#1	.1730	.0001	-.0002	.0002	.0008	.0017	.7785	.0038	-.0003
#2	.1777	.0001	.0000	.0003	.0020	.0013	.7761	.0028	.0008

Check ?
High Limit

Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0557	.0027	.0081	.0012	.0051	.0032	.0729	146.5
Stddev	.0000	.0016	.0007	.0022	.0009	.0018	.0020	.0153	2.3
%RSD	.1294	2.808	26.33	27.08	71.26	34.91	60.79	20.95	1.576
#1	.0007	.0546	.0022	.0096	.0006	.0063	.0019	.0621	144.9
#2	.0007	.0568	.0032	.0065	.0018	.0038	.0046	.0837	148.1

Check ?
High Limit

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.504	223.3	80.71	F 1690.	.9453	.0040	8.941	-0.0021	1.728
Stddev	.062	3.8	2.08	.	.0253	.0002	.228	.0007	.030
%RSD	1.773	1.681	2.580	.0182	2.675	4.190	2.552	35.09	1.754
#1	3.460	220.7	79.24	1690.	.9274	.0041	8.780	-.0016	1.707
#2	3.548	226.0	82.19	1690.	.9632	.0039	9.103	-.0026	1.749

Check ?
High Limit

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	.0022	-0.0007	F 148.8	-0.0019	.0764	.1782
Stddev	.0008	.0012	.0001	3.7	.0058	.0052	.0052
%RSD	46.66	51.95	17.03	2.479	314.2	6.840	2.936
#1	.0011	.0014	-.0007	146.2	-.0060	.0727	.1745
#2	.0022	.0030	-.0006	151.4	.0023	.0801	.1819

Check ?
High Limit

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	82737.	15592.	3572.6	6133.0
Stddev	358.	214.	40.1	55.9
%RSD	.43308	1.3714	1.1214	.91147
#1	82483.	15743.	3600.9	6172.5
#2	82990.	15441.	3544.3	6093.5

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Sample Name: mp7521-sd1 Acquired: 6/8/2018 0:34:45 Type: Unk
 Method: Accutest XPress(v421) 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
Avg	-1780	-0007	-0010	-0019	0015	-0035	8031	0026	0019
Stddev	.0010	.0001	.0017	.0002	.0012	.0053	.0080	.0005	.0009
%RSD	.5738	7.387	179.3	10.29	77.51	152.4	.9988	18.70	46.84
#1	.1773	-0008	-0022	-0020	.0023	-0072	.7975	.0029	.0025
#2	.1788	-0007	.0003	-0017	.0007	.0003	8088	.0022	.0013
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	0015	0613	0118	0183	0069	-0089	0033	0259	148.7
Stddev	.0009	.0009	.0204	.0052	.0142	.0078	.0016	.0806	.6
%RSD	60.17	1.509	173.2	28.51	207.3	87.45	48.01	310.9	.3763
#1	.0021	.0606	-0026	.0146	-0032	-0034	.0022	-0311	148.3
#2	.0009	.0619	.0262	.0220	.0170	-0145	.0044	.0830	149.1
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	3.547	226.1	79.31	F 1888.	9270	0053	8.826	-0039	1.716
Stddev	.005	1.2	.83	5.	.0152	.0004	.100	.0011	.008
%RSD	.1492	.5234	1.045	.2453	1.645	7.068	1.135	28.86	.4838
#1	3.551	225.2	78.73	1884.	.9162	.0051	8.755	-.0031	1.710
#2	3.543	226.9	79.90	1891.	.9378	.0056	8.897	-.0047	1.722
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	0065	0047	0007	147.0	-0051	1089	1831		
Stddev	.0019	.0048	.0001	1.8	.0054	.0202	.0028		
%RSD	28.75	102.1	13.49	1.234	106.9	18.53	1.524		
#1	.0078	.0080	.0007	145.7	-.0089	.1232	.1812		
#2	.0052	.0013	.0006	148.3	-.0012	.0946	.1851		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	84054.	15984.	3668.5	6298.1					
Stddev	53.	23.	7.4	14.4					
%RSD	.06287	.14658	.20087	.22868					
#1	84091.	16000.	3673.7	6308.3					
#2	84016.	15967.	3663.3	6287.9					

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Sample Name: jc67308-6 Acquired: 6/8/2018 0:38:57 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment: due

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	0039	0001	0000	-0005	0001	-0017	0002	-0000	-0007
Stddev	.0002	.0001	.0002	.0001	.0002	.0003	.0001	.0002	.0002
%RSD	3.864	107.1	10460.	13.53	255.4	16.75	36.69	9459.	23.92
#1	.0038	.0001	.0002	-0004	.0002	-.0015	.0003	.0001	-.0008
#2	.0040	.0000	-.0002	-0005	-.0001	-.0019	.0002	-.0001	-.0006
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	-0005	0010	-0006	-0012	0003	-0030	0019	0234	0330
Stddev	.0003	.0001	.0003	.0007	.0002	.0013	.0028	.0145	.0038
%RSD	56.27	5.667	40.18	54.90	48.59	42.60	145.5	62.12	11.56
#1	-.0006	.0011	-.0008	-.0017	.0002	-.0039	.0038	.0131	.0303
#2	-.0003	.0010	-.0005	-.0008	.0004	-.0021	-.0001	.0337	.0357
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	0020	-0218	2346	4577	0011	0002	6308	-0002	0030
Stddev	.0010	.0201	.0290	.0129	.0006	.0005	.0101	.0006	.0001
%RSD	50.70	92.24	12.38	2.810	50.63	283.7	1.600	256.5	4.026
#1	.0013	-.0076	.2141	.4668	.0015	-.0002	.6237	-.0007	.0029
#2	.0028	-.0361	.2551	.4487	.0007	.0005	.6380	.0002	.0031
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	0006	0018	-0003	0104	-0019	0019	0020		
Stddev	.0002	.0008	.0002	.0005	.0007	.0001	.0004		
%RSD	32.01	45.52	76.18	4.944	39.73	6.400	18.04		
#1	.0005	.0024	-.0004	.0108	-.0024	.0020	.0023		
#2	.0008	.0012	-.0001	.0100	-.0013	.0018	.0018		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	85346.	16522.	3700.8	6233.5					
Stddev	67.	45.	.2	.4					
%RSD	.07825	.27280	.00493	.00574					
#1	85393.	16554.	3700.6	6233.8					
#2	85299.	16490.	3700.9	6233.3					

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Sample Name: mp7530-mb1.2 Acquired: 6/8/2018 0:41:59 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment: water

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	
Avg	0002	-0000	0001	-0006	-0001	-0014	-0001	-0001	
Stddev	.0006	.0000	.0001	.0002	.0002	.0002	.0000	.0001	
%RSD	318.9	142.4	125.4	34.77	311.2	13.76	32.99	177.3	
#1	.0006	.0000	.0000	-.0008	.0001	-.0012	-.0001	-.0001	
#2	-.0002	-.0001	.0001	-.0005	-.0002	-.0015	-.0001	-.0000	
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	
Avg	-0001	-0005	0008	0015	F -0029	-0010	-0024	0010	
Stddev	.0009	.0002	.0000	.0008	.0007	.0011	.0027	.0015	
%RSD	1289.	39.75	5.064	54.58	25.27	105.8	112.8	150.7	
#1	.0006	-.0006	.0008	.0009	-.0024	-.0018	-.0043	-.0001	
#2	-.0007	-.0004	.0009	.0021	-.0034	-.0003	-.0005	.0020	
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	
Avg	-0008	0045	0034	0115	1942	2146	-0017	0005	
Stddev	.0064	.0001	.0007	.0122	.0449	.0059	.0009	.0004	
%RSD	824.8	1.271	19.70	106.8	23.11	2.744	52.39	86.90	
#1	-.0053	.0044	.0030	.0201	.2260	.2104	-.0011	.0008	
#2	.0038	.0045	.0039	.0028	.1625	.2188	-.0023	.0002	
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230	
Avg	0068	0004	-0001	0002	0016	0000	0019	-0048	
Stddev	.0017	.0011	.0001	.0007	.0013	.0003	.0032	.0058	
%RSD	24.61	261.4	128.3	288.0	80.42	1097.	173.2	119.8	
#1	.0056	-.0003	-.0000	-.0002	.0007	.0002	-.0004	-.0089	
#2	.0080	.0012	-.0001	.0007	.0025	-.0002	.0041	-.0007	
Elem	Li6707	P_1774							
Avg	0011	0013							
Stddev	.0005	.0000							
%RSD	44.96	3.763							
#1	.0014	.0013							
#2	.0007	.0013							

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Sample Name: mp7530-mb1.2 Acquired: 6/8/2018 0:41:59 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment: water

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	84475.	16615.	3598.2	6088.5
Stddev	1034.	166.	13.0	12.4
%RSD	1.2242	.99643	.36187	.20375
#1	85206.	16732.	3588.9	6079.7
#2	83744.	16498.	3607.4	6097.3

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Sample Name: mp7530-b1 Acquired: 6/8/2018 0:45:01 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280, Avg, Stddev, %RSD, #1, #2 for various elements.

Sample Name: jc67505-1 Acquired: 6/8/2018 0:47:51 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: due

Table with columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280, Avg, Stddev, %RSD, #1, #2 for various elements.

Sample Name: mp7530-s1 Acquired: 6/8/2018 0:50:56 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280, Avg, Stddev, %RSD, #1, #2 for various elements.

Sample Name: mp7530-s2 Acquired: 6/8/2018 0:53:50 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280, Avg, Stddev, %RSD, #1, #2 for various elements.

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Sample Name: ccv Acquired: 6/8/2018 0:57:06 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.089	2.060	2.017	2.061	2.077	2.025	2.090	2.084	2.591
Stddev	.028	.029	.001	.003	.029	.030	.031	.003	.0032
%RSD	1.352	1.421	.0326	.1200	1.406	1.481	1.470	.1207	1.247
#1	2.069	2.040	2.018	2.063	2.057	2.004	2.068	2.086	2.569
#2	2.109	2.081	2.017	2.060	2.098	2.047	2.112	2.082	2.614

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	2.065	2.044	2.046	2.042	2.041	2.025	2.030	40.94	41.75
Stddev	.029	.001	.004	.006	.002	.000	.004	.56	.64
%RSD	1.381	.0316	.2099	.3166	.1021	.0217	.2073	1.358	1.524
#1	2.045	2.044	2.049	2.047	2.042	2.026	2.033	40.54	41.30
#2	2.086	2.044	2.043	2.038	2.039	2.025	2.027	41.33	42.20

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value Range

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.34	42.06	41.35	41.94	2.025	2.056	5.128	2.031	2.082
Stddev	.57	.74	.66	.70	.002	.002	.006	.001	.029
%RSD	1.381	1.765	1.588	1.675	.0866	.1068	.1206	.0351	1.389
#1	40.94	41.53	40.89	41.45	2.026	2.055	5.133	2.031	2.062
#2	41.75	42.58	41.82	42.44	2.023	2.058	5.124	2.032	2.103

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value Range

Sample Name: ccv Acquired: 6/8/2018 0:57:06 Type: QC
 Method: Accutest XPress(v421) 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	2.109	2.060	2.087	1.989	2.029	2.089	2.042
Stddev	.031	.004	.028	.002	.008	.030	.000
%RSD	1.480	.2076	1.336	.1069	.3994	1.436	.0176
#1	2.087	2.057	2.067	1.991	2.023	2.068	2.042
#2	2.131	2.063	2.107	1.988	2.034	2.110	2.042

Check ? Chk Pass 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	81349.	15885.	3576.8	6228.3
Stddev	714.	187.	17.0	28.4
%RSD	.87736	1.1795	4.7531	4.5676
#1	81854.	16017.	3564.8	6208.2
#2	80844.	15752.	3588.8	6248.4

Sample Name: ccb Acquired: 6/8/2018 1:00:06 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: 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	-0.0001	.0000	-0.0004	-0.0002	-0.0013	-0.0000	.0000	.0002
Stddev	.0002	.0001	.0002	.0001	.0008	.0002	.0000	.0002	.0004
%RSD	37.77	124.1	1218.	20.19	388.7	18.97	92.51	1133.	152.8
#1	.0004	-0.0002	.0002	-0.0003	-0.0008	-0.0011	-0.0000	.0001	.0005
#2	.0007	-0.0000	-0.0001	-0.0004	.0004	-0.0015	-0.0000	-0.0001	-0.0000

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	-0.0002	.0000	-0.0004	-0.0004	-0.0006	-0.0027	.0019	-0.0162	-0.0038
Stddev	.0011	.0002	.0002	.0012	.0016	.0013	.0000	.0004	.0029
%RSD	676.7	384.5	35.63	276.8	295.6	50.37	1.583	2.758	77.02
#1	.0006	-0.0001	-0.0003	.0004	.0006	-0.0017	.0018	-0.0165	-0.0059
#2	-0.0009	.0002	-0.0005	-0.0012	-0.0017	-0.0036	.0019	-0.0158	-0.0017

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 High Limit
 Low Limit

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	.0144	.0865	.1151	.0028	.0008	.0003	.0008	-0.0001
Stddev	.0031	.0067	.0671	.0088	.0000	.0002	.0016	.0002	.0001
%RSD	91.49	46.44	77.58	7.667	1.573	23.29	497.0	20.58	141.6
#1	.0012	.0191	.1339	.1213	.0029	.0009	.0015	.0010	.0000
#2	.0055	.0097	.0390	.1089	.0028	.0007	-0.0008	.0007	-0.0002

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 High Limit
 Low Limit

Sample Name: ccb Acquired: 6/8/2018 1:00:06 Type: QC
 Method: Accutest XPress(v421) 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	-0.0011	.0003	.0010	-0.0030	.0015	.0009
Stddev	.0006	.0013	.0005	.0005	.0018	.0017	.0002
%RSD	93.75	120.7	167.4	55.11	60.51	111.6	22.05
#1	.0010	-0.0002	.0007	.0014	-0.0017	.0027	.0007
#2	.0002	-0.0021	-0.0001	.0006	-0.0042	.0003	.0010

Check ? Chk Pass 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	82569.	16430.	3624.3	6132.5
Stddev	119.	1031.	18.4	22.8
%RSD	.14467	6.2776	.50889	.37217
#1	82484.	17159.	3611.3	6116.3
#2	82653.	15700.	3637.4	6148.6

Sample Name: cri Acquired: 6/8/2018 1:03:08 Type: QC
 Method: Accutest XPress(v421) 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	.2069	.0020	.0028	.0512	.0099	.0081	.0152	.0103
Stddev	.0013	.0000	.0000	.0015	.0004	.0004	.0004	.0000
%RSD	.6062	1.494	1.353	2.987	3.696	5.210	2.475	.4602
#1	.2078	.0020	.0028	.0501	.0101	.0078	.0149	.0103
#2	.2060	.0020	.0029	.0523	.0096	.0084	.0154	.0103
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0047	.0494	.0203	.0092	.0106	.0034	W .0074	W .0077
Stddev	.0015	.0011	.0001	.0010	.0021	.0020	.0000	.0006
%RSD	31.62	2.306	.5980	10.70	19.26	58.41	.5433	7.351
#1	.0037	.0486	.0202	.0099	.0092	.0020	.0074	.0081
#2	.0058	.0502	.0204	.0085	.0121	.0048	.0074	.0073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Warn	Chk Warn
Value Range						.0100	.0060	-20.00%
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1886	5.191	.1009	5.329	5.180	5.335	.0998	.0198
Stddev	.0171	.041	.0024	.063	.083	.018	.0008	.0001
%RSD	9.080	.7969	2.330	1.173	1.609	.3408	.8244	.5626
#1	.2008	5.221	.1026	5.373	5.121	5.347	.0992	.0199
#2	.1765	5.162	.0993	5.284	5.239	5.322	.1004	.0198
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								

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Sample Name: cri Acquired: 6/8/2018 1:03:08 Type: QC
 Method: Accutest XPress(v421) 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	.2002	.0097	.0100	.0111	.0498	.0118	.0489	.0177
Stddev	.0048	.0003	.0000	.0001	.0008	.0001	.0011	.0018
%RSD	2.378	2.650	.4055	1.159	1.573	.5960	2.259	10.06
#1	.1968	.0098	.0100	.0110	.0493	.0117	.0481	.0190
#2	.2036	.0095	.0101	.0112	.0504	.0118	.0497	.0165
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								
Elem	Li6707	P_1774						
Units	ppm	ppm						
Avg	.0525	.0510						
Stddev	.0033	.0016						
%RSD	6.219	3.150						
#1	.0502	.0498						
#2	.0548	.0521						
Check ?	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	84010.	15984.	3627.8	6155.1				
Stddev	1725.	22.	11.3	10.4				
%RSD	2.0535	.13795	.31049	.16886				
#1	85230.	15968.	3635.8	6162.5				
#2	82790.	16000.	3619.8	6147.8				

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Sample Name: crid Acquired: 6/8/2018 1:06:09 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046	.0009	F .0006	.0031	.0015	F -.0009	.0032	.0046
Stddev	.0001	.0002	.0001	.0005	.0001	.0008	.0002	.0003
%RSD	2.553	17.87	22.86	16.48	4.686	90.53	7.076	6.936
#1	.0046	.0008	.0005	.0034	.0016	-.0003	.0030	.0043
#2	.0047	.0010	.0007	.0027	.0015	-.0014	.0034	.0048
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value Range			.0010			.0020		
			-30.00%			-30.00%		
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0005	.0020	.0110	.0023	.0014	F .0014	F .0025	F .0004
Stddev	.0004	.0001	.0001	.0024	.0012	.0015	.0001	.0006
%RSD	86.74	6.008	1.350	105.8	84.32	108.7	5.915	172.3
#1	.0002	.0021	.0109	.0040	.0006	.0025	.0023	.0008
#2	.0008	.0019	.0112	.0006	.0023	.0003	.0026	-.0001
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
Value Range	.0020					.0025	.0050	.0030
	-30.00%					-30.00%	-30.00%	-30.00%
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1065	1.086	.0036	F .1305	2.147	1.178	-.0004	.0003
Stddev	.0031	.020	.0004	.0013	.108	.032	.0000	.0003
%RSD	2.887	1.796	10.61	.9962	5.021	2.740	5.181	83.90
#1	.1087	1.073	.0039	.1314	2.071	1.155	-.0004	.0005
#2	.1043	1.100	.0034	.1295	2.223	1.201	-.0004	.0001
Check ?	Chk Pass	Chk Pass	None	Chk Fail	Chk Pass	Chk Pass	None	None
Value Range				.1000				
				30.00%				

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Sample Name: crid Acquired: 6/8/2018 1:06:09 Type: QC
 Method: Accutest XPress(v421) 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	-.0002	.0000	.0011	-.0004	-.0002	-.0005	.0020
Stddev	.0000	.0005	.0000	.0005	.0020	.0000	.0007	.0012
%RSD	2.352	245.8	109.8	48.55	580.8	3.112	121.3	59.93
#1	-.0015	-.0006	.0000	.0015	-.0018	-.0002	-.0010	.0029
#2	-.0015	.0002	.0000	.0007	.0011	-.0003	-.0001	.0012
Check ?	None	None	None	None	None	None	None	None
Value Range								
Elem	Li6707	P_1774						
Units	ppm	ppm						
Avg	-.0001	.0020						
Stddev	.0001	.0008						
%RSD	191.4	40.36						
#1	.0000	.0014						
#2	-.0002	.0025						
Check ?	None	None						
Value Range								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	81863.	15933.	3580.7	6078.5				
Stddev	1399.	273.	20.6	25.3				
%RSD	1.7092	1.7133	.57522	4.1581				
#1	82853.	16126.	3595.3	6094.3				
#2	80874.	15740.	3566.2	6058.6				

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Sample Name: icsa Acquired: 6/8/2018 1:09:40 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0001	-0.0005	-0.0008	.0006	-0.0027	-0.0025	-0.0001	.0029
Stddev	.0002	.0001	.0005	.0002	.0005	.0012	.0008	.0002	.0024
%RSD	9.372	86.01	99.98	21.93	92.76	43.50	32.60	250.2	83.83
#1	.0019	.0001	-0.0008	-0.0009	.0009	-0.0018	-0.0019	-0.0002	.0046
#2	.0021	.0000	-0.0001	-0.0007	.0002	-0.0035	-0.0031	.0001	.0012

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 High Limit
 Low Limit

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0072	.0014	.0022	.0036	.0028	.0026	.0093	542.4	406.2
Stddev	.0004	.0001	.0002	.0019	.0012	.0019	.0016	6.9	1.3
%RSD	5.680	6.355	8.133	53.93	42.93	70.88	16.89	1.269	.3126
#1	.0069	.0013	.0023	.0050	.0019	.0039	.0081	547.3	407.1
#2	.0075	.0014	.0021	.0022	.0036	.0013	.0104	537.6	405.3

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 High Limit
 Low Limit

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	197.5	528.2	.2166	.1512	-0.0009	.0003	.0085	-0.0055	-0.0031
Stddev	2.2	6.5	.0369	.0067	.0006	.0002	.0014	.0002	.0002
%RSD	1.128	1.227	17.02	4.458	67.12	63.17	16.03	4.082	5.521
#1	199.0	532.7	.1906	.1559	-0.0005	.0002	.0094	-0.0053	-0.0030
#2	195.9	523.6	.2427	.1464	-0.0013	.0005	.0075	-0.0056	-0.0032

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 High Limit
 Low Limit

Sample Name: icsa Acquired: 6/8/2018 1:09:40 Type: QC
 Method: Accutest XPress(v421) 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	-0.0021	.0010	-0.0049	.0177	-0.0002	.0040	.0018
Stddev	.0004	.0005	.0008	.0017	.0012	.0006	.0008
%RSD	20.28	55.18	16.25	9.538	600.6	15.52	46.52
#1	-0.0024	.0006	-0.0043	.0165	-0.0011	.0044	.0012
#2	-0.0018	.0014	-0.0054	.0189	.0007	.0035	.0023

Check ? Chk Pass 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	78914.	15364.	3352.7	6109.5
Stddev	844.	146.	10.5	18.6
%RSD	1.0691	.95226	.31299	.30494
#1	79510.	15260.	3360.1	6122.7
#2	78317.	15467.	3345.3	6096.3

Sample Name: icsab Acquired: 6/8/2018 1:12:47 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5074	.4846	1.012	.4790	.4845	.5101	.4943	.9539	1.045
Stddev	.0001	.0008	.013	.0045	.0012	.0005	.0002	.0100	.001
%RSD	.0275	.1616	1.261	.9362	.2491	.0926	.0436	1.043	.0739
#1	.5075	.4840	1.003	.4758	.4854	.5098	.4942	.9469	1.045
#2	.5073	.4851	1.021	.4821	.4836	.5104	.4945	.9610	1.046

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	.5027	.9501	1.057	.9846	.9487	1.019	1.026	512.1	404.5
Stddev	.0014	.0106	.010	.0066	.0096	.007	.011	11.7	3.0
%RSD	.2720	1.115	.9681	.6716	1.014	.6738	1.053	2.282	.7463
#1	.5018	.9426	1.050	.9799	.9419	1.014	1.019	503.8	402.3
#2	.5037	.9576	1.064	.9893	.9555	1.024	1.034	520.3	406.6

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value Range

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	203.3	529.9	.2282	.1556	.5193	.4988	.5153	.4772	.5114
Stddev	.1	1.3	.0286	.0168	.0061	.0067	.0048	.0065	.0001
%RSD	.0339	.2466	12.53	10.82	1.176	1.343	.9410	1.369	.0251
#1	203.3	529.0	.2080	.1675	.5150	.4941	.5118	.4725	.5113
#2	203.4	530.8	.2484	.1437	.5237	.5035	.5187	.4818	.5114

Check ? Chk Pass Chk Pass None None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value Range

Sample Name: icsab Acquired: 6/8/2018 1:12:47 Type: QC
 Method: Accutest XPress(v421) 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	.5081	.5005	.4795	.5073	.5221	.5164	.5078
Stddev	.0016	.0038	.0005	.0077	.0057	.0034	.0050
%RSD	.3114	.7648	.1136	1.509	1.099	.6557	.9756
#1	.5092	.4978	.4791	.5019	.5180	.5140	.5043
#2	.5070	.5032	.4799	.5127	.5261	.5188	.5113

Check ? Chk Pass 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	78204.	15372.	3375.7	6155.3
Stddev	203.	63.	8.7	6.2
%RSD	.25999	.40954	.25856	.10054
#1	78348.	15417.	3381.9	6159.7
#2	78061.	15328.	3369.5	6150.9

Sample Name: ccv Acquired: 6/8/2018 1:15:51 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.123	2.080	2.014	2.057	2.069	2.013	2.079	2.081	2.574
Stddev	.003	.004	.020	.018	.002	.003	.004	.019	.0004
%RSD	.1293	.1882	.9808	.8611	.0751	.1559	.1712	.8953	.1367
#1	2.125	2.083	2.000	2.045	2.070	2.011	2.077	2.068	2.571
#2	2.121	2.077	2.028	2.070	2.068	2.015	2.082	2.094	2.576

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	2.044	2.050	2.037	2.043	2.025	2.026	41.48	42.24
Stddev	.001	.016	.014	.019	.018	.014	.020	.05	.04
%RSD	.0614	.7729	.6645	.9263	.8986	.6840	.9659	.1274	.1062
#1	2.054	2.032	2.040	2.024	2.030	2.015	2.012	41.51	42.27
#2	2.055	2.055	2.060	2.050	2.056	2.034	2.040	41.44	42.20

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value Range

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.86	42.80	41.72	42.64	2.018	2.055	5.111	2.028	2.111
Stddev	.04	.13	.11	.06	.018	.018	.049	.013	.002
%RSD	.0845	.3051	.2595	.1411	.8907	.8856	.9535	.6523	.1000
#1	41.88	42.89	41.64	42.69	2.006	2.042	5.077	2.019	2.113
#2	41.83	42.71	41.79	42.60	2.031	2.068	5.145	2.037	2.110

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value Range

Sample Name: ccv Acquired: 6/8/2018 1:15:51 Type: QC
 Method: Accutest XPress(v421) 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	2.100	2.059	2.080	1.982	2.020	2.122	2.040
Stddev	.005	.018	.003	.016	.017	.008	.016
%RSD	.2371	.8558	.1285	.8115	.8495	.3755	.8027
#1	2.097	2.047	2.078	1.970	2.008	2.128	2.028
#2	2.104	2.072	2.082	1.993	2.032	2.117	2.051

Check ? Chk Pass 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	81250.	15810.	3545.8	6180.0
Stddev	371.	44.	2.5	5.6
%RSD	.45603	.27858	.07051	.08987
#1	80988.	15779.	3547.6	6183.9
#2	81512.	15841.	3544.0	6176.1

Sample Name: ccb Acquired: 6/8/2018 1:18:41 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: 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	-0.0000	-0.0001	-0.0006	.0004	-0.0010	-0.0000	-0.0001	-0.0009
Stddev	.0003	.0000	.0001	.0005	.0004	.0005	.0001	.0001	.0000
%RSD	87.34	85.96	138.9	93.84	111.5	43.41	390.2	56.50	5.149
#1	.0005	-0.0000	-0.0000	-0.0002	.0001	-0.0007	-0.0001	-0.0001	-0.0008
#2	.0001	-0.0000	-0.0002	-0.0009	.0007	-0.0014	.0000	-0.0002	-0.0009

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 High Limit Low Limit

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0001	-0.0002	-0.0007	.0015	-0.0002	-0.0013	.0005	-0.0097	-0.0023
Stddev	.0000	.0001	.0019	.0007	.0003	.0022	.0014	.0115	.0083
%RSD	5.173	40.75	260.6	50.17	112.8	165.0	278.9	118.6	366.2
#1	-0.0001	-0.0001	.0006	.0020	-.0004	.0002	-.0005	-.0016	-.0082
#2	-0.0001	-0.0002	-.0020	.0009	-.0000	-.0029	.0015	-.0178	.0036

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 High Limit Low Limit

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0209	.0529	.0844	.0009	.0000	-0.0006	.0009	-0.0001
Stddev	.0040	.0008	.0170	.0089	.0000	.0004	.0029	.0007	.0001
%RSD	275.6	3.641	32.09	10.57	4.433	1824.	486.1	78.99	73.52
#1	.0043	.0214	.0649	.0907	.0009	.0003	-.0027	.0014	-.0001
#2	-.0014	.0203	.0409	.0781	.0009	-.0002	.0015	.0004	-.0000

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 High Limit Low Limit

Sample Name: ccb Acquired: 6/8/2018 1:18:41 Type: QC
 Method: Accutest XPress(v421) 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	.0014	-0.0011	.0001	-0.0023	-0.0013	.0014	.0019
Stddev	.0008	.0016	.0002	.0010	.0008	.0005	.0004
%RSD	54.26	147.2	143.4	44.06	61.98	34.62	20.57
#1	.0019	-.0023	-.0000	-.0030	-.0007	.0010	.0016
#2	.0009	.0000	.0003	-.0016	-.0018	.0017	.0022

Check ? Chk Pass 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	83001.	16115.	3646.1	6169.7
Stddev	426.	219.	5	3.8
%RSD	.51339	1.3588	.01492	.06078
#1	82699.	15960.	3645.7	6172.4
#2	83302.	16270.	3646.5	6167.1

Sample Name: jc66897-23 Acquired: 6/8/2018 1:21:43 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0135	-0.001	.0001	-0.0006	.0622	-0.0018	.0029	-0.0004	-0.0000
Stddev	.0003	.0001	.0002	.0001	.0002	.0004	.0000	.0008	.0008
%RSD	1.990	84.08	256.9	19.07	.3435	19.92	1.182	223.0	2080.
#1	.0134	-0.001	-0.001	-0.0007	.0621	-0.0015	.0029	-0.0009	.0006
#2	.0137	-0.002	.0002	-0.0005	.0624	-0.0020	.0029	.0002	-0.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0020	.0004	.0001	.0038	-0.0009	-0.0020	.0001	-0.0024	47.43
Stddev	.0003	.0001	.0004	.0015	.0015	.0015	.0008	.0041	.11
%RSD	15.15	16.27	390.2	38.88	165.8	76.03	1072.	171.2	2405
#1	.0018	.0005	-0.0002	.0028	.0002	-0.0009	-0.0005	-0.0053	47.35
#2	.0022	.0004	.0004	.0049	-0.0020	-0.0031	.0006	.0005	47.51

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	.0087	25.77	4.649	196.7	2.187	.0003	11.82	-0.0029	-0.138
Stddev	.0042	.08	.001	2.0	.0020	.0003	.19	.0001	.0000
%RSD	47.68	.3080	.0136	1.038	.9052	119.6	1.593	3.436	.0300
#1	.0117	25.71	4.650	198.1	.2173	.0000	11.68	-0.0029	.1139
#2	.0058	25.82	4.649	195.2	.2201	.0005	11.95	-0.0028	.1138

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	-0.0006	-0.0023	-0.0051	23.85	-0.0039	.0016	.0530
Stddev	.0004	.0024	.0003	.32	.0029	.0044	.0016
%RSD	59.82	102.6	5.647	1.329	73.45	279.1	3.069
#1	-0.0004	-0.0040	-0.0049	23.63	-0.0019	.0047	.0518
#2	-0.0009	-0.0006	-0.0053	24.08	-0.0060	-0.0015	.0541

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	84734.	16361.	3719.5	6340.1
Stddev	298.	31.	11.6	23.1
%RSD	.35182	.18661	.31163	.36399
#1	84945.	16383.	3727.7	6356.4
#2	84523.	16340.	3711.3	6323.8

Sample Name: mp7530-sd1 Acquired: 6/8/2018 1:24:48 Type: Unk
Method: Accutest XPress(v421) 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
Avg	.0154	-0.001	-0.0011	-0.0030	.0662	-0.0063	.0027	-0.0041	-0.0032
Stddev	.0005	.0001	.0004	.0044	.0018	.0018	.0002	.0010	.0002
%RSD	3.056	94.93	41.35	145.5	2.681	28.35	6.000	25.22	6.263
#1	.0151	-0.002	-0.0014	.0001	.0649	-0.0076	.0026	-0.0048	-0.0033
#2	.0157	-0.000	-0.0007	-0.0061	.0675	-0.0050	.0028	-0.0033	-0.0030

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0025	.0034	-0.0007	-0.0038	-0.0025	-0.0035	.0070	-0.0541	48.38
Stddev	.0021	.0006	.0038	.0068	.0074	.0112	.0086	.0408	.16
%RSD	84.41	17.55	545.3	180.9	290.7	323.5	123.5	75.43	.3222
#1	.0010	.0038	.0020	.0010	.0027	-0.0114	.0130	-0.0830	48.49
#2	.0040	.0029	-0.0034	-0.0086	-0.0078	.0045	.0009	-0.0252	48.27

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	.0087	26.69	4.743	206.3	2.139	.0008	12.05	.0046	.1168
Stddev	.0115	.02	.176	1.2	.0003	.0030	.17	.0022	.0006
%RSD	132.4	.0760	3.707	.5785	.1176	398.1	1.379	47.02	.5365
#1	.0168	26.70	4.619	205.4	.2141	-0.0014	11.93	.0062	.1164
#2	.0006	26.67	4.868	207.1	.2137	.0029	12.17	.0031	.1173

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	.0030	-0.0075	-0.0051	24.39	-0.0117	-0.0024	.0548
Stddev	.0001	.0106	.0003	.33	.0142	.0117	.0035
%RSD	2.147	141.5	6.126	1.344	121.9	492.3	6.297
#1	.0030	-0.0150	-0.0053	24.16	-0.0016	.0059	.0524
#2	.0031	.0000	-0.0049	24.62	-0.0218	-0.0107	.0573

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	84501.	16168.	3670.3	6236.1
Stddev	188.	75.	6.0	3.5
%RSD	.22270	.46474	.16460	.05643
#1	84368.	16115.	3674.6	6238.6
#2	84635.	16221.	3666.0	6233.6

Sample Name: jc66897-22 Acquired: 6/8/2018 1:27:47 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	.0801	.0002	.0003	.0014	.5987	.0293	3.590	.0049
Stddev	.0001	.0001	.0001	.0001	.0007	.0002	.003	.0005
%RSD	.1628	37.58	38.88	9.609	.1117	.7456	.0804	9.864
#1	.0800	.0001	.0003	.0015	.5982	.0291	3.588	.0052
#2	.0802	.0002	.0002	.0013	.5992	.0294	3.592	.0046

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	-0.0003	.0080	.0867	.0015	F_-0.0047	.0023	-0.0007	-0.0007
Stddev	.0008	.0004	.0013	.0010	.0010	.0006	.0016	.0002
%RSD	282.4	5.443	1.518	68.63	20.60	24.58	222.7	31.79
#1	-0.0008	.0083	.0858	.0022	-0.0054	.0027	-0.0018	-0.0005
#2	-0.0003	.0077	.0877	.0008	-0.0040	.0019	.0004	-0.0009

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	3.191	60.01	4.548	17.80	36.07	185.4	1.084	.0019
Stddev	.018	.56	.041	.21	.46	1.5	.0015	.0000
%RSD	.5663	.9335	.8907	1.203	1.277	.8080	1.371	2.157
#1	3.178	59.61	4.519	17.65	35.74	184.3	.1073	.0018
#2	3.203	60.41	4.577	17.95	36.39	186.4	.1094	.0019

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	11.13	.0147	.1800	.1894	-0.0004	-0.0034	18.79	-0.011
Stddev	.16	.0003	.0016	.0008	.0007	.0002	.29	.0012
%RSD	1.398	2.193	.8948	.4226	162.0	7.063	1.519	104.5
#1	11.02	.0145	.1789	.1900	-0.0009	-0.0032	18.58	-0.0003
#2	11.24	.0149	.1812	.1888	.0001	-0.0036	18.99	-0.0019

Elem	Li6707	P_1774
Avg	.0047	.1470
Stddev	.0050	.0016
%RSD	106.0	1.110
#1	.0083	.1458
#2	.0012	.1481

Sample Name: jc66897-22 Acquired: 6/8/2018 1:27:47 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	82512.	16068.	3610.4	6191.9
Stddev	80.	69.	6.5	11.0
%RSD	.09684	.43184	.18002	.17797
#1	82455.	16117.	3605.8	6184.1
#2	82568.	16019.	3615.0	6199.7

Sample Name: jc66897-24 Acquired: 6/8/2018 1:30:46 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0801	.0000	.0001	.0003	.0022	-0.0006	.3314	.0013	.0000
Stddev	.0006	.0000	.0000	.0003	.0003	.0000	.0018	.0004	.0002
%RSD	.7961	30.17	15.64	126.1	15.32	3.401	.5411	27.08	511.5
#1	.0805	.0000	.0001	.0000	.0020	-0.0006	.3301	.0011	-0.001
#2	.0796	.0000	.0001	.0005	.0024	-0.0006	.3327	.0016	.0002
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0023	.0050	.0011	-0.0008	.0016	-0.0006	.0028	1.108	107.2
Stddev	.0001	.0000	.0006	.0012	.0018	.0003	.0020	.007	.3
%RSD	6.399	.7075	56.62	141.3	114.3	54.08	71.02	.6423	2870
#1	.0022	.0050	.0016	-0.0017	.0003	-0.0004	.0042	1.113	107.4
#2	.0024	.0050	.0007	-0.0000	.0029	-0.0009	.0014	1.103	106.9
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	1.051	28.01	3.341	155.4	.0623	.0009	6.658	-0.0008	5.402
Stddev	.003	.16	.044	.3	.0010	.0004	.090	.0005	.0018
%RSD	.2441	.5714	1.333	.2015	1.569	46.12	1.357	59.20	.3369
#1	1.053	28.12	3.310	155.6	.0616	.0012	6.595	-0.0005	.5415
#2	1.049	27.89	3.373	155.2	.0630	.0006	6.722	-0.0011	.5389
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	.0497	-0.0009	-0.0025	28.44	-0.0015	.0042	.0421		
Stddev	.0012	.0041	.0002	.42	.0051	.0020	.0006		
%RSD	2.460	440.2	8.030	1.483	330.8	48.08	1.534		
#1	.0489	.0019	-0.0026	28.14	-0.0052	.0057	.0426		
#2	.0506	-0.0038	-0.0023	28.74	.0021	.0028	.0416		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	84348.	15938.	3619.1	6156.9					
Stddev	144.	112.	3.7	6.7					
%RSD	.17073	.70419	.10099	.10951					
#1	84450.	15859.	3621.6	6161.7					
#2	84246.	16017.	3616.5	6152.2					

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Sample Name: jc66897-25 Acquired: 6/8/2018 1:33:44 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	.0041	-0.0000	.0000	-0.0010	.0997	-0.0009	.0260	.0108
Stddev	.0003	.0000	.0001	.0000	.0024	.0006	.0002	.0001
%RSD	7.486	35.03	942.0	.8435	2.451	73.14	.9264	1.196
#1	.0044	-0.0000	-0.0001	-0.0011	.0979	-0.004	.0259	.0107
#2	.0039	-0.0000	-0.0001	-0.0010	.1014	-0.0013	.0262	.0109
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	.0002	.0018	.0017	-0.0003	.0032	-0.0016	-0.0006	-0.0020
Stddev	.0001	.0005	.0001	.0001	.0025	.0009	.0037	.0006
%RSD	34.93	29.65	3.093	41.64	78.17	55.66	626.9	29.16
#1	.0002	.0015	.0018	-0.0004	.0014	-0.0022	-0.0032	-0.0016
#2	.0001	.0022	.0017	-0.0002	.0049	-0.0010	.0020	-0.0024
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	-0.173	20.95	.0062	10.45	5.921	238.2	1.122	.0009
Stddev	.0131	.15	.0029	.08	.039	1.0	.011	.0002
%RSD	75.72	.7386	46.98	.8012	.6616	.4205	1.012	22.83
#1	-0.080	20.84	.0082	10.39	5.894	238.9	1.114	.0011
#2	-0.265	21.06	.0041	10.51	5.949	237.5	1.130	.0008
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	18.39	-0.0025	.0362	-0.0006	.0004	F -0.0104	26.41	-0.0048
Stddev	.17	.0005	.0002	.0005	.0038	.0002	.26	.0016
%RSD	.9115	20.66	.5911	82.40	915.3	1.518	.9843	33.15
#1	18.27	-0.0029	.0361	-0.0002	.0031	-0.0102	26.23	-0.0037
#2	18.51	-0.0022	.0364	-0.0009	-0.0023	-0.0105	26.59	-0.0060
Elem	Li6707	P_1774						
Avg	.0088	.1184						
Stddev	.0010	.0013						
%RSD	11.07	1.074						
#1	.0094	.1175						
#2	.0081	.1193						

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Sample Name: jc66897-25 Acquired: 6/8/2018 1:33:44 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	83464.	16184.	3628.0	6216.8
Stddev	31.	31.	7.5	6.7
%RSD	.03727	.19136	.20578	.10832
#1	83442.	16206.	3633.3	6221.6
#2	83486.	16162.	3622.7	6212.1

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Sample Name: jc66897-26 Acquired: 6/8/2018 1:36:49 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	.0802	-0.0001	-0.0001	-0.0005	.5023	-0.0013	.3133	-0.0008
Stddev	.0005	.0001	.0000	.0004	.0045	.0006	.0041	.0004
%RSD	6.602	57.36	17.02	94.16	9.000	47.42	1.314	48.72
#1	.0806	-0.0002	-0.0002	-0.0008	.4991	-0.0017	.3104	-0.0005
#2	.0798	-0.0001	-0.0001	-0.0002	.5055	-0.0008	.3162	-0.0010
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	.0009	.0033	.0014	.0009	-0.0000	-0.0012	.0011	F -0.0031
Stddev	.0001	.0007	.0001	.0015	.0020	.0009	.0011	.0022
%RSD	15.57	22.08	9.206	167.0	599.3	74.27	102.0	68.93
#1	.0010	.0028	.0013	-0.0002	-0.0014	-0.0018	.0003	-0.0016
#2	.0008	.0038	.0015	.0019	.0014	-0.0006	.0018	-0.0046
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	-0.108	93.25	.0179	37.76	5.362	198.3	1.077	.0001
Stddev	.0163	.08	.0006	.04	.033	.1	.0021	.0001
%RSD	150.5	.0828	3.148	.1014	.6184	.0601	1.942	83.22
#1	.0007	93.30	.0175	37.79	5.338	198.4	.1062	.0002
#2	-0.223	93.19	.0183	37.74	5.385	198.2	.1092	.0000
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	7.909	-0.0025	.3223	-0.0001	-0.0003	-0.0042	20.75	-0.0033
Stddev	.103	.0006	.0003	.0004	.0015	.0005	.29	.0014
%RSD	1.300	25.84	.0990	570.0	515.9	11.28	1.416	42.94
#1	7.837	-0.0030	.3225	.0002	.0008	-0.0039	20.54	-0.0023
#2	7.982	-0.0021	.3220	-0.0004	-0.0013	-0.0045	20.95	-0.0043
Elem	Li6707	P_1774						
Avg	.0046	.0389						
Stddev	.0016	.0009						
%RSD	36.15	2.267						
#1	.0033	.0383						
#2	.0055	.0395						

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Sample Name: jc66897-26 Acquired: 6/8/2018 1:36:49 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	83514.	16002.	3580.8	6139.4
Stddev	820.	238.	6.3	13.7
%RSD	.98205	1.4853	.17499	.22339
#1	84094.	15834.	3585.2	6149.1
#2	82934.	16170.	3576.4	6129.7

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Sample Name: jc66897-27 Acquired: 6/8/2018 1:39:50 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	.0040	-0.0011	.0002	-0.0009	.1004	-0.012	.0254	.0109
Stddev	.0002	.0002	.0001	.0000	.0002	.0004	.0000	.0000
%RSD	5.364	121.4	67.02	3.950	.2045	33.03	.0507	.1425
#1	.0039	-0.002	.0003	-0.0008	.1005	-0.015	.0254	.0109
#2	.0042	-0.000	.0001	-0.0009	.1002	-0.010	.0254	.0109
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	-0.0005	.0014	.0009	-0.0011	-0.0009	-0.0023	-0.0028	-0.0016
Stddev	.0008	.0007	.0002	.0002	.0009	.0034	.0032	.0004
%RSD	171.5	52.80	20.85	16.15	93.33	146.9	115.6	23.98
#1	-0.011	.0019	.0008	-0.010	-0.016	-0.048	-0.005	-0.019
#2	.0001	.0009	.0011	-0.012	-0.003	.0001	-0.0051	-0.014
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	-0.0039	20.55	.0106	10.18	5.861	237.9	1.128	.0011
Stddev	.0236	.13	.0054	.07	.055	3.8	.018	.0001
%RSD	604.5	.6298	50.71	.7320	.9361	1.595	1.550	7.526
#1	.0128	20.46	.0068	10.13	5.822	240.6	1.116	.0011
#2	-0.206	20.65	.0144	10.23	5.900	235.2	1.140	.0010
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	18.39	-0.0028	.0353	.0005	-0.0028	F -0.0102	26.55	-0.0023
Stddev	.28	.0002	.0003	.0003	.0015	.0004	.38	.0019
%RSD	1.534	5.968	.9306	73.36	54.09	4.149	1.431	84.59
#1	18.19	-0.027	.0351	.0007	-0.0039	-0.0099	26.28	-0.009
#2	18.59	-0.029	.0356	.0002	-0.017	-0.105	26.82	-0.037
Elem	Li6707	P_1774						
Avg	.0071	.1208						
Stddev	.0035	.0008						
%RSD	49.10	.6256						
#1	.0096	.1202						
#2	.0046	.1213						

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Sample Name: jc66897-27 Acquired: 6/8/2018 1:39:50 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	84188.	16246.	3635.9	6222.0
Stddev	910.	25.	.5	4.5
%RSD	1.0803	.15160	.01371	.07303
#1	83545.	16229.	3636.2	6225.2
#2	84831.	16263.	3635.5	6218.8

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Sample Name: jc66897-29 Acquired: 6/8/2018 1:42:55 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	.0003	-0.0011	.0001	-0.0005	.0006	-0.0009	.0002	-0.0004
Stddev	.0001	.0000	.0001	.0002	.0006	.0005	.0001	.0007
%RSD	16.74	12.33	122.5	37.24	92.75	49.72	27.97	181.0
#1	.0003	-0.0011	.0001	-0.0006	.0002	-0.0006	.0002	-0.0009
#2	.0004	-0.001	.0000	-0.0003	.0010	-0.013	.0001	.0001
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	-0.0002	-0.0006	.0004	.0005	F -0.0041	.0002	-0.0022	.0016
Stddev	.0002	.0007	.0000	.0017	.0008	.0009	.0011	.0024
%RSD	110.0	108.7	1.275	310.5	19.24	473.9	51.89	151.9
#1	.0003	-0.0011	.0004	.0017	-0.047	.0009	-0.030	.0033
#2	.0000	-0.011	.0004	-0.0006	-0.0035	-0.005	-0.014	-0.001
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	-0.0063	.0328	.0031	.0285	-0.0099	-0.1460	-0.0009	.0002
Stddev	.0077	.0068	.0034	.0250	.0720	.0007	.0002	.0001
%RSD	122.6	20.86	111.3	87.69	725.5	.4863	26.62	44.37
#1	-0.118	.0376	.0007	.0108	-0.0608	.1455	-0.011	.0002
#2	-0.008	.0279	.0055	.0461	.0410	.1465	-0.007	.0003
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	.0098	-0.0005	.0000	.0007	-0.0025	.0003	.0039	-0.0038
Stddev	.0020	.0007	.0001	.0004	.0012	.0003	.0023	.0017
%RSD	20.65	158.6	160.4	56.55	46.15	100.0	58.56	44.76
#1	.0113	-0.010	.0001	.0004	-0.0033	.0001	.0056	-0.0050
#2	.0084	.0001	-0.000	.0010	-0.017	.0005	.0023	-0.0026
Elem	Li6707	P_1774						
Avg	-0.0023	.0021						
Stddev	.0011	.0000						
%RSD	49.82	.4853						
#1	-0.0031	.0021						
#2	-0.0015	.0021						

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Sample Name: jc66897-29 Acquired: 6/8/2018 1:42:55 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	84313.	16248.	3624.1	6115.7
Stddev	694.	256.	14.7	28.8
%RSD	.82267	1.5728	.40461	.47062
#1	83823.	16068.	3634.5	6136.1
#2	84804.	16429.	3613.8	6095.4

Sample Name: jc66897-30 Acquired: 6/8/2018 1:45:57 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	.1000	-0.0000	-0.0003	.0000	.0007	.0000	6.050	.0015
Stddev	.0014	.0002	.0002	.0001	.0006	.0003	.006	.0004
%RSD	1.411	620.8	68.42	295.5	96.40	635.3	.1079	25.30
#1	.1010	-.0002	-.0005	.0001	.0002	.0002	6.045	.0012
#2	.0990	.0001	-.0002	-.0000	.0011	-.0002	6.055	.0017
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	.0003	-0.0012	.0022	.0008	.0055	-0.0024	-0.0042	-0.0008
Stddev	.0001	.0003	.0000	.0004	.0032	.0026	.0008	.0009
%RSD	51.62	27.71	.0497	42.62	58.56	111.0	18.47	121.5
#1	.0004	-.0014	.0022	.0006	.0032	-.0005	-.0047	-.0001
#2	.0002	-.0010	.0022	.0011	.0078	-.0042	-.0036	-.0014
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	.2817	152.0	7.695	55.12	4.147	F 454.3	.2501	.0011
Stddev	.0003	1.0	.064	.39	.024	.7	.0035	.0003
%RSD	.0925	.6861	.8338	.7085	.5690	.1602	1.391	27.18
#1	.2815	152.7	7.740	55.40	4.130	453.8	.2477	.0009
#2	.2819	151.3	7.649	54.84	4.163	454.8	.2526	.0013
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	19.09	-0.0029	.5161	.0115	-0.0049	F -0.0116	5.237	-0.0049
Stddev	.18	.0016	.0028	.0000	.0003	.0001	.055	.0001
%RSD	.9569	56.11	.5414	.1771	5.969	1.287	1.052	2.024
#1	18.96	-.0017	.5181	.0115	-.0052	-.0117	5.198	-.0050
#2	19.22	-.0040	.5141	.0115	-.0047	-.0115	5.276	-.0048
Elem	Li6707	P_1774						
Avg	.0115	.0863						
Stddev	.0032	.0001						
%RSD	27.50	.0981						
#1	.0138	.0862						
#2	.0093	.0864						

Sample Name: jc66897-30 Acquired: 6/8/2018 1:45:57 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	83698.	15931.	3620.3	6199.3
Stddev	590.	12.	2.7	9.6
%RSD	.70527	.07558	.07429	.15452
#1	83281.	15939.	3618.4	6192.5
#2	84116.	15922.	3622.2	6206.1

Sample Name: ccv Acquired: 6/8/2018 1:49:08 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.126	2.089	2.043	2.082	2.082	2.029	2.092	2.109	2.603
Stddev	.027	.021	.026	.026	.000	.006	.003	.024	.0003
%RSD	1.264	1.031	1.265	1.255	.0016	.2964	.1295	1.122	.1124
#1	2.107	2.074	2.025	2.063	2.082	2.033	2.094	2.092	.2606
#2	2.145	2.104	2.062	2.100	2.082	2.024	2.090	2.126	.2601
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	2.067	2.073	2.080	2.059	2.059	2.053	2.060	41.62	42.48
Stddev	.000	.026	.029	.026	.029	.020	.031	.46	.45
%RSD	.0120	1.243	1.411	1.269	1.432	.9660	1.508	1.111	1.051
#1	2.067	2.055	2.059	2.041	2.038	2.039	2.038	41.29	42.17
#2	2.067	2.091	2.101	2.078	2.080	2.067	2.082	41.95	42.80
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.95	42.95	42.15	42.77	2.046	2.088	5.193	2.056	2.118
Stddev	.41	.36	.56	.56	.026	.027	.067	.024	.026
%RSD	.9774	.8371	1.320	1.301	1.296	1.302	1.293	1.171	1.249
#1	41.66	42.70	41.75	42.38	2.027	2.068	5.146	2.039	2.099
#2	42.24	43.20	42.54	43.17	2.065	2.107	5.240	2.073	2.136
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Sample Name: ccv Acquired: 6/8/2018 1:49:08 Type: QC
 Method: Accutest XPress(v421) 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	2.116	2.083	2.088	2.001	2.054	2.126	2.076
Stddev	.006	.028	.004	.026	.025	.022	.029
%RSD	.2938	1.341	.1748	1.315	1.230	1.041	1.409

#1	2.121	2.064	2.091	1.983	2.036	2.111	2.055
#2	2.112	2.103	2.085	2.020	2.072	2.142	2.096

Check ?
Value
Range

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	80865.	15566.	3520.5	6144.7
Stddev	110.	43.	11.6	11.8
%RSD	.13592	.27819	.32918	.19140

#1	80943.	15597.	3528.7	6153.0
#2	80787.	15536.	3512.3	6136.4

Sample Name: ccb Acquired: 6/8/2018 1:51:59 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: 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	-0.001	-0.004	-0.001	-0.007	.0000	-0.005	-0.008
Stddev	.0005	.0001	.0003	.0003	.0000	.0005	.0000	.0002	.0004
%RSD	198.5	389.1	404.8	81.04	54.25	64.63	522.1	38.40	50.76

#1	.0006	.0001	-.0002	-.0002	-.0001	-.0010	-.0000	-.0006	-.0005
#2	-.0001	-.0001	.0001	-.0007	-.0000	-.0004	.0000	-.0004	-.0011

Check ?
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	-0.003	.0002	-0.001	-0.009	-0.003	-0.022	.0013	-0.0065	.0037
Stddev	.0003	.0000	.0011	.0022	.0011	.0015	.0012	.0005	.0002
%RSD	120.3	1.893	1235.	255.2	409.8	70.93	91.84	7.717	5.161

#1	-.0000	.0002	.0007	.0007	-.0011	-.0033	.0022	-.0069	.0038
#2	-.0005	.0002	-.0009	-.0025	.0005	-.0011	.0005	-.0062	.0036

Check ?
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	.0067	.0397	.1145	-0.012	.0006	.0013	.0012	.0001
Stddev	.0026	.0041	.0906	.0119	.0014	.0001	.0013	.0005	.0000
%RSD	217.7	60.94	228.6	119.4	119.4	23.50	94.59	41.31	43.51

#1	.0031	.0096	.1037	.1061	-.0021	.0005	.0022	.0015	.0001
#2	-.0007	.0038	-.0244	.1229	-.0002	.0007	.0004	.0008	.0001

Check ?
High Limit
Low Limit

Sample Name: ccb Acquired: 6/8/2018 1:51:59 Type: QC
 Method: Accutest XPress(v421) 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	.0013	-0.0026	.0002	-0.001	-0.0021	-0.0005	.0008
Stddev	.0002	.0012	.0000	.0005	.0000	.0015	.0009
%RSD	15.28	47.42	21.80	452.2	.0096	303.8	106.3

#1	.0011	-.0035	.0002	.0002	-.0021	-.0016	.0015
#2	.0014	-.0017	.0001	-.0005	-.0021	.0006	.0002

Check ?
High Limit
Low Limit

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	82688.	15942.	3638.0	6151.5
Stddev	436.	54.	6.3	17.4
%RSD	.52678	.33604	.17191	.28299

#1	82380.	15904.	3633.6	6139.2
#2	82996.	15980.	3642.4	6163.8

Sample Name: jc66897-31 Acquired: 6/8/2018 1:55:01 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0502	.0000	.0003	-0.013	.0032	-0.002	.2754	.0003	.0006
Stddev	.0013	.0000	.0004	.0000	.0001	.0011	.0045	.0000	.0009
%RSD	2.631	72.54	141.5	3.421	3.295	510.3	1.627	14.28	151.4

#1	.0493	.0001	.0006	-.0012	.0033	-.0010	.2722	.0003	.0012
#2	.0512	.0000	-.0000	-.0013	.0032	.0006	.2786	.0003	-.0000

Check ?
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	.0025	.0011	.0005	.0002	-0.016	.0000	-0.019	.0241	210.0
Stddev	.0006	.0001	.0026	.0009	.0007	.0008	.0010	.0173	2.9
%RSD	23.94	6.779	562.0	571.5	47.00	1996.	50.71	71.69	1.385

#1	.0021	.0012	.0023	.0008	-.0010	-.0005	-.0025	.0364	208.0
#2	.0030	.0011	-.0014	-.0005	-.0021	.0006	-.0012	.0119	212.1

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0215	98.89	4.138	234.3	1.251	.0016	16.11	-0.0033	.6144
Stddev	.0015	2.78	.108	2.2	.0009	.0001	.09	.0018	.0170
%RSD	6.881	2.815	2.608	.9222	.7206	3.197	.5875	52.94	2.761

#1	.0205	96.92	4.062	232.8	.1257	.0015	16.18	-.0046	.6024
#2	.0226	100.9	4.214	235.8	.1245	.0016	16.04	-.0021	.6264

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	83133.	15832.	3543.9	6082.0
Stddev	382.	303.	44.7	70.2
%RSD	.45987	1.9139	1.2619	1.1534

#1	83404.	16047.	3512.3	6032.4
#2	82863.	15618.	3575.5	6131.6

Sample Name: jc66897-32 Acquired: 6/8/2018 1:58:12 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280		
Avg	-3176	-0001	-0001	.0018	.0015	.0005	4.251	.0042	.0005		
Stddev	.0070	.0002	.0003	.0003	.0004	.0004	.087	.0004	.0001		
%RSD	2.205	241.3	449.4	15.50	28.28	82.11	2.050	9.146	12.06		
#1	.3127	.0001	.0001	.0020	.0018	.0002	4.189	.0039	.0005		
#2	.3226	-.0002	-.0002	.0016	.0012	.0008	4.313	.0045	.0004		
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179		
Avg	-0020	.0283	.0006	.0046	-.0017	-.0031	.0023	.0164	148.5		
Stddev	.0004	.0002	.0019	.0018	.0032	.0024	.0003	.0090	2.6		
%RSD	21.51	.7979	292.3	39.99	191.2	77.68	13.12	54.62	1.731		
#1	-.0023	.0284	-.0007	.0033	.0006	-.0049	.0021	.0228	146.7		
#2	-.0017	.0281	.0019	.0059	-.0040	-.0014	.0025	.0101	150.3		
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077		
Avg	2.914	20.18	12.31	F 1118.	.0782	.0002	8.154	-.0024	.9234		
Stddev	.066	.34	.35	.7	.0012	.0004	.004	.0003	.0185		
%RSD	2.251	1.691	2.835	.6382	1.489	153.6	.0450	14.54	2.007		
#1	2.868	19.94	12.07	1113.	.0774	.0005	8.152	-.0027	.9103		
#2	2.961	20.42	12.56	1124.	.0791	-.0000	8.157	-.0022	.9365		
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774				
Avg	-0008	-0031	-0046	13.44	-.0003	.0190	.0373				
Stddev	.0001	.0027	.0001	.00	.0018	.0017	.0005				
%RSD	10.55	88.73	3.158	.0202	673.0	8.775	1.381				
#1	-.0009	-.0050	-.0047	13.44	-.0016	.0179	.0370				
#2	-.0007	-.0011	-.0045	13.44	.0010	.0202	.0377				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306							
Avg	80839.	15519.	3563.4	6101.6							
Stddev	335.	200.	15.7	15.7							
%RSD	.41390	1.2910	.43969	.25802							
#1	81075.	15660.	3552.3	6090.5							
#2	80602.	15377.	3574.4	6112.8							

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Sample Name: jc66897-33 Acquired: 6/8/2018 2:01:22 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280		
Avg	.0113	.0000	.0002	.0087	.0009	.0027	.0832	.0006	.0002		
Stddev	.0005	.0001	.0001	.0003	.0002	.0007	.0002	.0001	.0003		
%RSD	4.562	1048.	36.46	3.572	17.08	27.10	.2200	22.27	161.3		
#1	.0109	.0000	.0003	.0089	.0011	.0032	.0833	.0007	.0004		
#2	.0116	-.0000	.0002	.0085	.0008	.0021	.0831	.0005	-.0000		
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179		
Avg	.0014	.0014	.0001	-.0009	-.0013	-.0006	.0004	.1304	36.94		
Stddev	.0003	.0001	.0013	.0014	.0005	.0010	.0019	.0182	.96		
%RSD	23.53	8.659	1037.	145.9	34.54	157.3	508.9	13.94	2.610		
#1	.0011	.0015	-.0008	-.0019	-.0016	-.0013	.0017	.1176	36.25		
#2	.0016	.0014	.0011	.0000	-.0010	.0001	-.0009	.1433	37.62		
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077		
Avg	2.159	12.46	4.802	4.312	.1048	.0008	9.340	-.0023	.0740		
Stddev	.0082	.31	.0530	.075	.0015	.0001	.138	.0002	.0023		
%RSD	3.797	2.509	11.03	1.738	1.441	7.670	1.475	7.836	3.172		
#1	.2101	12.24	.4427	4.259	.1037	.0008	9.243	-.0021	.0724		
#2	.2217	12.68	.5176	4.365	.1059	.0009	9.438	-.0024	.0757		
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774				
Avg	.0042	-.0013	-.0051	1.241	-.0019	.0040	.0177				
Stddev	.0005	.0015	.0001	.016	.0001	.0023	.0008				
%RSD	12.32	117.1	2.266	1.319	4.552	57.04	4.563				
#1	.0038	-.0002	-.0050	1.229	-.0018	.0024	.0172				
#2	.0046	-.0024	-.0052	1.252	-.0019	.0056	.0183				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306							
Avg	83771.	16473.	3644.0	6174.1							
Stddev	290.	214.	15.4	24.2							
%RSD	.34577	1.2980	.42203	.39271							
#1	83566.	16624.	3654.9	6191.2							
#2	83976.	16322.	3633.1	6156.9							

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Sample Name: jc67368-1 Acquired: 6/8/2018 2:04:23 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316			
Avg	.0213	.0001	.0001	-.0005	.0021	.0011	.1564	.0030			
Stddev	.0012	.0000	.0001	.0003	.0001	.0006	.0018	.0002			
%RSD	5.560	12.07	105.0	55.41	6.409	54.00	1.142	5.267			
#1	.0221	.0001	.0001	-.0003	.0021	.0015	.1577	.0031			
#2	.0204	.0002	.0000	-.0007	.0020	.0007	.1551	.0029			
Elem	Ag3280	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068			
Avg	.0007	.0014	.0037	.0021	.0018	-.0005	-.0031	-.0005			
Stddev	.0004	.0002	.0002	.0015	.0013	.0013	.0005	.0035			
%RSD	60.14	13.36	4.133	69.15	71.34	239.3	16.80	682.7			
#1	.0004	.0012	.0038	.0011	.0009	-.0014	-.0035	-.0019			
#2	.0010	.0015	.0036	.0031	.0027	-.0004	-.0027	-.0030			
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020			
Avg	.0405	143.8	9.792	11.71	4.689	F 339.3	.0239	.0008			
Stddev	.0134	1.8	.150	.11	.061	12.2	.0019	.0000			
%RSD	33.13	1.220	1.531	.9709	1.302	3.606	7.829	.1507			
#1	.0310	145.0	9.898	11.79	4.626	347.9	.0252	.0008			
#2	.0500	142.5	9.686	11.63	4.712	330.6	.0226	.0008			
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230			
Avg	29.93	-.0051	.4110	.0018	-.0009	F -.0180	.9277	-.0072			
Stddev	1.40	.0014	.0060	.0007	.0018	.0007	.0418	.0013			
%RSD	4.691	28.00	1.460	41.89	202.0	3.666	4.502	17.46			
#1	30.92	-.0061	.4153	.0023	.0004	-.0185	.9572	-.0081			
#2	28.94	-.0041	.4068	.0012	-.0021	-.0175	.8982	-.0063			
Elem	Li6707	P_1774									
Avg	.0053	.5821									
Stddev	.0010	.0267									
%RSD	19.49	4.592									
#1	.0046	.6010									
#2	.0060	.5632									

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Sample Name: jc67368-1 Acquired: 6/8/2018 2:04:23 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306							
Avg	82791.	16224.	3629.2	6199.0							
Stddev	1470.	172.	167.9	235.5							
%RSD	1.7753	1.0605	4.6263	3.7988							
#1	81752.	16102.	3510.5	6032.5							
#2	83830.	16346.	3748.0	6365.5							

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Sample Name: jc67368-2 Acquired: 6/8/2018 2:07:27 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0816	.0040	.0015	.0337	.0006	-0.0012	.3202	.0325	-0.0009
Stddev	.0019	.0000	.0002	.0004	.0005	.0000	.0013	.0003	.0007
%RSD	2.365	.1058	14.42	1.129	80.56	.9827	.4191	.8556	75.38
#1	.0802	.0040	.0017	.0334	.0003	-0.0012	.3193	.0323	-0.0004
#2	.0830	.0040	.0014	.0340	.0009	-0.0012	.3212	.0327	-0.0013
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0005	.0886	.0025	.0001	.0006	-0.0002	.0007	7.253	25.71
Stddev	.0002	.0011	.0001	.0001	.0012	.0005	.0022	.167	.62
%RSD	48.10	1.210	5.732	92.75	185.4	246.9	304.5	2.299	2.405
#1	.0007	.0879	.0024	.0000	-0.0002	.0001	.0023	7.135	25.28
#2	.0003	.0894	.0026	.0002	.0015	-0.0005	-0.0008	7.371	26.15
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	.3533	16.74	7.484	F 345.2	.0430	.0005	3.830	-0.007	.1836
Stddev	.0073	.41	.316	10.3	.0014	.0000	.047	.0006	.0041
%RSD	2.060	2.425	4.219	2.984	3.215	10.82	1.225	88.87	2.235
#1	.3481	16.46	7.260	337.9	.0420	.0004	3.797	-0.003	.1807
#2	.3584	17.03	7.707	352.5	.0440	.0005	3.864	-0.0012	.1865
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	.0016	-0.0012	-0.0013	15.67	-0.0022	.0078	.0078		
Stddev	.0001	.0004	.0002	.19	.0008	.0003	.0011		
%RSD	8.321	32.59	14.91	1.191	36.85	4.174	13.91		
#1	.0017	-0.0015	-0.0014	15.54	-0.0016	.0076	.0070		
#2	.0015	-0.0010	-0.0011	15.80	-0.0028	.0081	.0086		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	85571.	16300.	3738.0	6272.6					
Stddev	385.	329.	9.9	19.6					
%RSD	44942	2.0190	.26432	.31171					
#1	85843.	16533.	3745.0	6286.4					
#2	85299.	16067.	3731.0	6258.7					

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Sample Name: jc67368-3 Acquired: 6/8/2018 2:10:31 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Avg	.0703	-0.0011	.0001	-0.0002	.0011	-0.0005	.8767	.0007	.0000	
Stddev	.0010	.0000	.0002	.0006	.0001	.0003	.0088	.0000	.0000	
%RSD	1.426	20.54	165.6	298.0	4.475	71.24	1.003	5.253		
#1	.0711	-0.0011	.0003	.0002	.0012	-0.0002	.8704	.0008	.0000	
#2	.0696	-0.0000	-0.0000	-0.0006	.0011	-0.0007	.8829	.0007	.0000	
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068		
Avg	-0.0005	.0013	.0020	.0032	.0009	-0.0001	-0.0000	.0005		
Stddev	.0003	.0003	.0003	.0006	.0017	.0024	.0000	.0005		
%RSD	59.03	23.59	12.82	18.46	200.7	4008.	11.74	99.28		
#1	-0.0007	.0015	.0022	.0037	.0021	.0017	-0.0000	.0001		
#2	-0.0003	.0011	.0018	.0028	-0.0004	-0.0018	-0.0000	.0008		
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020		
Avg	.0542	113.8	20.72	21.84	7.994	F 392.9	.0338	.0001		
Stddev	.0028	.5	.13	.09	.096	6.2	.0010	.0004		
%RSD	5.149	.4342	.6142	.4162	1.206	1.568	2.924	305.0		
#1	.0562	114.2	20.81	21.90	7.926	397.3	.0331	-0.001		
#2	.0522	113.5	20.63	21.78	8.062	388.6	.0345	-0.004		
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230		
Avg	22.29	-0.0036	.6263	.0010	-0.0032	F -0.0134	5.967	-0.0031		
Stddev	.27	.0002	.0024	.0004	.0002	.0001	.068	.0005		
%RSD	1.206	4.237	.3890	37.03	7.147	.5879	1.132	15.68		
#1	22.10	-0.0035	.6280	.0012	-0.0034	-0.0133	5.919	-0.0028		
#2	22.48	-0.0037	.6246	.0007	-0.0031	-0.0134	6.014	-0.0035		
Elem	Li6707	P_1774								
Avg	.0066	.1048								
Stddev	.0010	.0019								
%RSD	15.88	1.806								
#1	.0059	.1035								
#2	.0073	.1061								

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Sample Name: jc67368-3 Acquired: 6/8/2018 2:10:31 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	83553.	16056.	3656.0	6258.3
Stddev	65.	178.	5.1	6.3
%RSD	.07795	1.1105	.14086	.10145
#1	83507.	15930.	3659.6	6262.8
#2	83599.	16182.	3652.3	6253.9

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Sample Name: jc67368-4 Acquired: 6/8/2018 2:13:36 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0664	.0011	.0004	.0274	.0010	-0.0008	.3179	.0203	-0.0005
Stddev	.0010	.0000	.0004	.0007	.0007	.0002	.0024	.0004	.0001
%RSD	1.528	1.479	89.53	2.425	67.84	19.32	.7562	1.957	15.27
#1	.0657	.0011	.0001	.0269	.0005	-0.0010	.3196	.0206	-0.0005
#2	.0672	.0011	.0006	.0278	.0015	-0.0007	.3162	.0200	-0.0006
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	-0.0004	.0746	-0.0009	.0016	.0017	-0.0006	.0026	2.123	25.23
Stddev	.0002	.0007	.0001	.0009	.0005	.0023	.0041	.038	.44
%RSD	53.25	.9564	12.16	56.87	28.86	416.5	155.2	1.779	1.744
#1	-0.0005	.0741	-0.0008	.0010	.0014	.0011	-0.0003	2.097	24.91
#2	-0.0002	.0751	-0.0010	.0022	.0021	-0.0022	.0055	2.150	25.54
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	.2228	9.946	10.32	105.4	.0331	.0004	4.516	-0.0009	.0652
Stddev	.0035	.146	.22	2.0	.0003	.0003	.053	.0001	.0010
%RSD	1.559	1.471	2.162	1.871	8223	76.32	1.177	10.22	1.475
#1	.2203	9.843	10.16	104.0	.0329	.0006	4.479	-0.0009	.0645
#2	.2253	10.05	10.48	106.8	.0333	.0002	4.554	-0.0010	.0659
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	.0013	-0.0007	-0.0020	15.11	-0.0032	.0043	.0061		
Stddev	.0004	.0008	.0000	.18	.0000	.0003	.0014		
%RSD	27.93	124.3	.6003	1.188	.9716	7.743	23.07		
#1	.0011	-0.0013	-0.0020	14.98	-0.0032	.0045	.0071		
#2	.0016	-0.0001	-0.0020	15.24	-0.0032	.0040	.0051		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	84496.	16319.	3683.1	6246.9					
Stddev	888.	191.	20.3	30.7					
%RSD	1.0509	1.1691	.55216	.49178					
#1	83868.	16454.	3697.5	6268.6					
#2	85124.	16184.	3668.8	6225.2					

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Sample Name: jc67368-5 Acquired: 6/8/2018 2:16:34 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0820	.0041	.0035	.1625	.0007	.0075	4.066	.1444	-.0001
Stddev	.0035	.0003	.0000	.0003	.0005	.0008	.064	.0011	.0001
%RSD	4.218	6.118	.7187	.1667	67.37	10.71	1.578	.7834	89.04
#1	.0844	.0043	.0035	.1623	.0004	.0070	4.021	.1436	-.0002
#2	.0795	.0040	.0036	.1627	.0011	.0081	4.111	.1452	-.0000
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	-.0018	.2932	.0008	.0025	.0055	-.0032	.0011	4.668	43.91
Stddev	.0007	.0018	.0013	.0005	.0027	.0029	.0026	.169	1.59
%RSD	35.91	.6044	167.8	21.19	50.13	92.82	237.7	3.625	3.616
#1	-.0023	.2919	-.0001	.0029	.0074	-.0052	.0030	4.787	45.04
#2	-.0014	.2944	.0017	.0021	.0035	-.0011	-.0008	4.548	42.79
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	.8400	32.49	15.34	F 312.6	.0478	-.0003	8.428	-.0014	3.293
Stddev	.0355	1.13	.42	9.4	.0003	.0007	.051	.0000	.0125
%RSD	4.227	3.487	2.718	2.992	.6765	247.8	6.114	2.651	3.801
#1	.8651	33.29	15.63	319.2	.0476	-.0002	8.391	-.0014	.3382
#2	.8149	31.69	15.05	306.0	.0481	-.0008	8.464	-.0014	.3205
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	.0021	.0006	-.0040	25.47	-.0055	.0111	.0486		
Stddev	.0000	.0007	.0003	.12	.0021	.0001	.0001		
%RSD	2.275	120.6	7.080	.4652	39.25	1.089	.2527		
#1	.0021	.0001	-.0038	25.39	-.0070	.0111	.0487		
#2	.0021	.0011	-.0042	25.56	-.0039	.0110	.0486		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	83735.	16239.	3621.6	6123.0					
Stddev	924.	529.	5.3	13.1					
%RSD	1.1032	3.2571	.14581	.21347					
#1	84389.	15865.	3617.9	6113.7					
#2	83082.	16613.	3625.4	6132.2					

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Sample Name: jc67368-7 Acquired: 6/8/2018 2:19:44 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0011	-.0002	-.0001	-.0005	-.0001	-.0011	.0004	-.0001	-.0001
Stddev	.0004	.0001	.0004	.0000	.0002	.0008	.0000	.0000	.0006
%RSD	37.96	49.54	283.5	.6076	241.2	74.05	4.943	487.8	
#1	.0014	-.0001	.0001	-.0005	-.0002	-.0005	.0004	-.0003	
#2	.0008	-.0002	-.0004	-.0005	.0001	-.0016	.0004	-.0005	
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	
Avg	-.0002	-.0005	.0016	-.0006	F -.0037	.0005	-.0012	.0031	
Stddev	.0009	.0001	.0001	.0003	.0012	.0015	.0014	.0010	
%RSD	555.0	12.46	6.416	47.16	31.65	279.4	115.7	33.79	
#1	.0005	-.0006	.0016	-.0008	-.0028	.0016	-.0002	.0024	
#2	-.0008	-.0005	.0017	-.0004	-.0045	-.0005	-.0022	.0038	
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	
Avg	-.0156	.0422	.0029	.0188	.1920	.2740	.0099	.0006	
Stddev	.0052	.0000	.0027	.0277	.0105	.0169	.0006	.0004	
%RSD	33.56	.1025	93.20	147.5	5.467	6.168	5.719	66.03	
#1	-.0119	.0422	.0010	.0383	.1846	.2860	.0095	.0003	
#2	-.0193	.0423	.0049	-.0008	.1994	.2621	.0103	.0009	
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230	
Avg	.0398	-.0006	.0001	.0009	-.0014	.0001	.0089	-.0040	
Stddev	.0012	.0001	.0000	.0002	.0015	.0001	.0004	.0014	
%RSD	2.953	24.70	6.129	20.41	105.7	85.08	4.079	36.38	
#1	.0406	-.0005	.0002	.0007	-.0004	.0000	.0086	-.0050	
#2	.0390	-.0006	.0001	.0010	-.0024	.0001	.0091	-.0029	
Elem	Li6707	P_1774							
Avg	.0030	.0026							
Stddev	.0013	.0020							
%RSD	43.43	76.37							
#1	.0039	.0040							
#2	.0021	.0012							

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Sample Name: jc67368-7 Acquired: 6/8/2018 2:19:44 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	84291.	16354.	3688.5	6201.1
Stddev	510.	103.	17.8	28.8
%RSD	.60555	.62680	.48290	.46441
#1	83930.	16282.	3675.9	6180.8
#2	84652.	16427.	3701.1	6221.5

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Sample Name: ccv Acquired: 6/8/2018 2:22:47 Type: QC
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.053	2.020	1.977	2.017	2.043	1.989	2.047	2.044	.2529
Stddev	.008	.005	.016	.016	.033	.034	.026	.016	.0029
%RSD	.3949	.2647	.7935	.8113	1.623	1.694	1.279	.7729	1.152
#1	2.058	2.023	1.966	2.005	2.067	2.013	2.065	2.033	.2550
#2	2.047	2.016	1.988	2.028	2.020	1.965	2.028	2.055	.2509
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.021	2.006	2.016	2.006	1.998	1.992	1.991	40.36	41.04
Stddev	.027	.019	.019	.017	.023	.014	.020	.15	.17
%RSD	1.343	.9436	.9628	.8474	1.129	.6789	1.018	.3760	.4202
#1	2.040	1.993	2.002	1.994	1.982	1.983	1.976	40.47	41.16
#2	2.002	2.019	2.030	2.018	2.014	2.002	2.005	40.25	40.92
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.67	41.67	40.22	41.15	1.980	2.021	5.022	1.984	2.046
Stddev	.18	.24	.03	.06	.019	.016	.044	.016	.006
%RSD	.4363	.5683	.0827	.1450	.9526	.8061	.8824	.8128	.2980
#1	40.79	41.84	40.24	41.20	1.967	2.010	4.991	1.973	2.050
#2	40.54	41.51	40.20	41.11	1.993	2.033	5.054	1.996	2.041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

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Sample Name: ccv Acquired: 6/8/2018 2:22:47 Type: QC
Method: Accutest XPress(v421) 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	2.076	2.027	2.047	1.942	1.991	2.039	2.012
Stddev	.028	.021	.030	.023	.016	.003	.018
%RSD	1.366	1.044	1.448	1.172	.8259	.1270	.8791

#1	2.096	2.012	2.068	1.925	1.979	2.041	2.000
#2	2.056	2.042	2.026	1.958	2.002	2.037	2.025

Check ?
Value Range
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	80874	15697	3539.7	6161.1
Stddev	394.	3.	2.7	8.3
%RSD	.48667	.02039	.07696	.13505

#1	80595.	15695.	3541.6	6167.0
#2	81152.	15699.	3537.8	6155.2

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Sample Name: ccb Acquired: 6/8/2018 2:25:37 Type: QC
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.0000	-0.002	-0.001	.0004	-0.019	-0.000	-0.004
Stddev	.0007	.0000	.0002	.0000	.0001	.0002	.0000	.0002
%RSD	78.69	44.70	103.7	25.30	41.76	8.214	1377.	45.95

#1	.0004	.0000	-0.003	-0.001	.0003	-0.021	-0.000	-0.003
#2	.0013	.0000	-0.001	-0.002	.0005	-0.018	.0000	-0.006

Check ?
High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.001	-0.002	.0001	-0.010	F -.0034	F .0033	-0.014	-0.001
Stddev	.0000	.0002	.0000	.0017	.0033	.0003	.0014	.0004
%RSD	8.003	88.39	23.87	169.3	97.38	8.031	98.39	488.0

#1	-0.001	-0.001	.001	-0.023	-0.011	.0035	-0.004	.002
#2	-0.001	-0.003	.002	.002	-0.058	.0031	-0.024	-0.004

Check ?
High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Fail Chk Pass Chk Pass

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.122	-0.046	-0.000	.0102	.0605	-0.1039	-0.027	-0.001
Stddev	.0077	.0016	.0037	.0147	.0443	.0212	.0008	.0011
%RSD	62.75	35.05	18450.	144.3	73.17	20.44	30.30	91.12

#1	-0.176	-0.057	.026	.0205	.0919	.0889	-0.033	-0.001
#2	-0.068	-0.034	-0.027	-0.002	.0292	.1189	-0.021	-0.000

Check ?
High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

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Sample Name: ccb Acquired: 6/8/2018 2:25:37 Type: QC
Method: Accutest XPress(v421) 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	.0016	.0010	.0001	.0009	-0.0022	.0001	.0023	-0.007
Stddev	.0003	.0002	.0000	.0001	.0016	.0004	.0017	.0012
%RSD	17.40	25.00	41.50	13.42	73.35	331.5	75.16	187.5

#1	.0018	.0008	.0001	.0010	-0.010	.0004	.0035	.002
#2	.0014	.0012	.0000	.0008	-0.0033	-0.002	.0011	-0.015

Check ?
High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	-0.016	.0012
Stddev	.0008	.0011
%RSD	49.24	93.92

#1	-0.022	.0020
#2	-0.011	.0004

Check ?
High Limit Low Limit
Chk Pass Chk Pass

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	83539	15954	3665.3	6182.0
Stddev	392.	152.	1.	5.5
%RSD	.46946	.95256	.00345	.08927

#1	83816.	15846.	3665.4	6178.1
#2	83262.	16061.	3665.2	6185.9

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Sample Name: mp7493-mb1 2 Acquired: 6/8/2018 2:28:38 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: WALTER

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-0.002	.0003	-0.004	.0000	-0.015	-0.000	-0.005
Stddev	.0001	.0000	.0003	.0001	.0000	.0001	.0001	.0001
%RSD	24.77	1.682	80.68	21.80	48.07	6.188	357.9	14.31

#1	.0004	-0.002	.0005	-0.003	.0000	-0.015	-0.001	-0.004
#2	.0005	-0.002	.0001	-0.005	.0001	-0.016	.0000	-0.005

Check ?
High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0008	-0.001	.0009	-0.004	F -.0044	.0019	.0004	.0028
Stddev	.0000	.0005	.0001	.0006	.0015	.0032	.0009	.0003
%RSD	4.252	382.7	9.806	142.0	34.43	164.9	231.8	10.79

#1	-0.008	-0.005	.0009	.0000	-0.054	.0042	-0.002	.0030
#2	-0.008	.0002	.0008	-0.008	-0.033	-0.003	.0010	.0026

Check ?
High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.091	.0020	.0039	.0163	.0237	-0.1214	-0.032	.0009
Stddev	.0093	.0022	.0014	.0153	.0894	.0043	.0004	.0004
%RSD	102.1	110.4	36.97	93.92	377.0	3.540	13.47	42.95

#1	-0.025	.0036	.0049	.0055	-0.095	.1184	-0.035	.0012
#2	-0.0157	.0004	.0029	.0271	-0.0869	.1245	-0.029	.0007

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0319	-0.002	-0.001	.0012	-0.002	.0003	.0051	-0.016
Stddev	.0019	.0005	.0003	.0002	.0019	.0002	.0040	.0013
%RSD	6.079	218.1	196.7	16.57	822.8	59.43	78.70	81.30

#1	.0305	.0001	.0001	.0014	.0011	.0005	.0079	-0.007
#2	.0332	-0.006	-0.003	.0011	-0.016	.0002	.0022	-0.025

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	-0.013	.0034
Stddev	.0029	.0006
%RSD	223.2	18.01

#1	-0.034	.0029
#2	.0008	.0038

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Sample Name: mp7493-mb12 Acquired: 6/8/2018 2:28:38 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: WATER

Table with 5 columns: Int. Std., Y_3600, Y_3710, Y_2243, In2306. Rows include Avg, Stddev, %RSD, #1, and #2.

Table with 5 columns: #1, #2, 84293, 16440, 3684.9, 6195.4, 85801, 16540, 3669.4, 6171.6

Sample Name: mp7493-b12 Acquired: 6/8/2018 2:31:39 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 11 columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Rows include Avg, Stddev, %RSD, #1, and #2.

Table with 11 columns: #1, #2, 2.047, 2.007, 1.927, 1.990, 1.964, 1.901, 1.971, 2.018, 2.048, 2.457, 2.522

Table with 11 columns: Elem, V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179. Rows include Avg, Stddev, %RSD, #1, and #2.

Table with 11 columns: #1, #2, 1.946, 1.958, 1.937, 1.959, 1.968, 1.924, 1.928, 25.24, 25.73, 1.988, 1.988, 1.971, 1.985, 1.989, 1.961, 1.955, 25.33, 25.91

Table with 11 columns: Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077. Rows include Avg, Stddev, %RSD, #1, and #2.

Table with 11 columns: #1, #2, 25.55, 26.11, 25.08, 25.95, 1.924, 1.955, .7272, 1.917, 2.034, 25.69, 26.35, 25.50, 26.13, 1.958, 1.983, .7425, 1.943, 2.042

Table with 11 columns: Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774. Rows include Avg, Stddev, %RSD, #1, and #2.

Table with 11 columns: #1, #2, 1.976, 1.873, 1.951, .0459, .0346, -.0012, 1.951, 2.020, 1.900, 1.994, .0469, -.0003, 1.984

Table with 5 columns: Int. Std., Y_3600, Y_3710, Y_2243, In2306. Rows include Avg, Stddev, %RSD, #1, and #2.

Table with 5 columns: #1, #2, 82803, 15967, 3569.8, 6156.9, 81905, 15832, 3569.3, 6156.6

Sample Name: mp7493-s1 Acquired: 6/8/2018 2:34:28 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 11 columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Rows include Avg, Stddev, %RSD, #1, and #2.

Table with 11 columns: #1, #2, 2.217, 1.982, 1.930, 1.933, 1.927, 1.954, 2.488, 1.955, 2524, 2.193, 1.964, 1.974, 1.975, 1.915, 1.948, 2.476, 2.000, 2545

Table with 11 columns: Elem, V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179. Rows include Avg, Stddev, %RSD, #1, and #2.

Table with 11 columns: #1, #2, 1.935, 1.883, 1.937, 1.961, 1.938, 1.921, 1.925, 25.22, 176.7, 1.925, 1.923, 1.976, 1.995, 1.986, 1.965, 1.972, 24.95, 174.8

Table with 11 columns: Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077. Rows include Avg, Stddev, %RSD, #1, and #2.

Table with 11 columns: #1, #2, 28.04, 139.9, 46.78, 87.82, 2.362, 1.931, 12.98, 1.879, 3.393, 27.73, 138.1, 46.71, 87.20, 2.414, 1.977, 13.29, 1.917, 3.360

Table with 11 columns: Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774. Rows include Avg, Stddev, %RSD, #1, and #2.

Table with 11 columns: #1, #2, 1.969, 1.935, 1.936, 52.57, .0331, .1166, 2.382, 1.962, 1.973, 1.926, 53.74, .0313, .1122, 2.433

Table with 5 columns: Int. Std., Y_3600, Y_3710, Y_2243, In2306. Rows include Avg, Stddev, %RSD, #1, and #2.

Table with 5 columns: #1, #2, 83011, 15986, 3578.1, 6177.2, 83837, 16165, 3569.0, 6160.0

Sample Name: mp7493-s2 Acquired: 6/8/2018 2:37:16 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 11 columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Rows include Avg, Stddev, %RSD, #1, and #2.

Table with 11 columns: #1, #2, 2.211, 1.976, 1.942, 1.944, 1.916, 1.940, 2.466, 1.969, 2493, 2.215, 1.983, 2.026, 2.027, 1.928, 1.951, 2.487, 2.052, 2517

Table with 11 columns: Elem, V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179. Rows include Avg, Stddev, %RSD, #1, and #2.

Table with 11 columns: #1, #2, 1.921, 1.896, 1.935, 1.959, 1.955, 1.932, 1.933, 25.07, 174.9, 1.937, 1.973, 2.025, 2.044, 2.027, 2.018, 2.023, 25.07, 175.3

Table with 11 columns: Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077. Rows include Avg, Stddev, %RSD, #1, and #2.

Table with 11 columns: #1, #2, 27.85, 138.1, 46.78, 87.10, 2.373, 1.945, 12.95, 1.894, 3.375, 27.94, 138.5, 47.07, 87.54, 2.477, 13.54, 1.963, 3.379

Table with 11 columns: Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774. Rows include Avg, Stddev, %RSD, #1, and #2.

Table with 11 columns: #1, #2, 1.951, 1.935, 1.921, 52.52, .0294, .1149, 2.397, 1.964, 2.022, 1.932, 54.67, .0281, .1147, 2.494

Table with 5 columns: Int. Std., Y_3600, Y_3710, Y_2243, In2306. Rows include Avg, Stddev, %RSD, #1, and #2.

Table with 5 columns: #1, #2, 84253, 16125, 3597.4, 6217.6, 83786, 16131, 3527.4, 6101.4

Sample Name: jc67003-6 Acquired: 6/8/2018 3:06:50 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 5 columns: Int. Std., Y_3600, Y_3710, Y_2243, In2306. Rows include Avg, Stddev, %RSD, #1, #2.

Sample Name: jc67003-7 Acquired: 6/8/2018 3:09:47 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Large table with 12 columns (Ba4554 to Ag3280) and 13 rows (Elem, Avg, Stddev, %RSD, #1, #2).

Sample Name: jc67110-1 Acquired: 6/8/2018 3:12:43 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 12 columns and 13 rows, including standard deviation and recovery data.

Sample Name: jc67110-2 Acquired: 6/8/2018 3:15:40 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 12 columns and 13 rows, including standard deviation and recovery data.

Sample Name: jc67110-3 Acquired: 6/8/2018 3:18:37 Type: Unk Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3: Comment:

Table with 11 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 2 rows (#1, #2) for each element, showing Avg, Stddev, and %RSD values.

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Sample Name: jc67110-5 Acquired: 6/8/2018 3:21:35 Type: Unk Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3: Comment:

Table with 11 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 2 rows (#1, #2) for each element, showing Avg, Stddev, and %RSD values.

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Sample Name: mp7494-b1.2 Acquired: 6/8/2018 3:24:33 Type: Unk Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3: Comment:

Table with 11 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 2 rows (#1, #2) for each element, showing Avg, Stddev, and %RSD values.

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Sample Name: cvv Acquired: 6/8/2018 3:27:25 Type: QC Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3: Comment:

Table with 11 columns (Elem Units, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 2 rows (#1, #2) for each element, showing Avg, Stddev, and %RSD values.

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Sample Name: ccv Acquired: 6/8/2018 3:27:25 Type: QC
 Method: Accutest XPress(v421) 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	1.988	1.985	1.897	1.951	2.031	1.973
Stddev	.019	.023	.016	.018	.021	.000	.025
%RSD	.9313	1.142	.7784	.9620	1.078	.0043	1.294
#1	2.003	1.972	1.974	1.884	1.936	2.031	1.955
#2	2.030	2.004	1.996	1.910	1.965	2.031	1.991

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value High Limit
 Range Low Limit

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	82283.	15673.	3602.7	6239.4
Stddev	503.	96.	5.3	6.6
%RSD	.61094	.61501	.14769	.10586

#1	82638.	15605.	3606.5	6244.0
#2	81927.	15741.	3599.0	6234.7

Sample Name: ccb Acquired: 6/8/2018 3:30:15 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: 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	-.0001	-.0000	-.0003	-.0002	-.0022	-.0000	-.0004	-.0014
Stddev	.0008	.0002	.0000	.0002	.0005	.0005	.0000	.0004	.0008
%RSD	134.9	167.8	29.28	80.23	226.6	22.76	8.332	86.94	61.71
#1	.0000	.0000	-.0000	-.0001	-.0006	-.0018	-.0000	-.0002	-.0020
#2	.0011	-.0002	-.0001	-.0005	.0001	-.0025	-.0000	-.0007	-.0008

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value High Limit
 Range 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	.0001	-.0007	-.0003	-.0008	-.0022	.0006	-.0154	-.0024
Stddev	.0002	.0002	.0015	.0023	.0012	.0005	.0046	.0180	.0008
%RSD	56.35	125.6	220.1	861.6	146.4	22.36	760.6	116.7	31.80

#1	-.0002	.0000	-.0017	-.0019	-.0016	-.0018	-.0026	-.0282	-.0019
#2	-.0005	.0002	.0004	.0014	.0000	-.0025	.0038	-.0027	-.0030

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value High Limit
 Range 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	-.0103	.0116	-.0480	-.0010	.0006	.0005	.0003	.0001
Stddev	.0020	.0420	.0831	.0901	.0007	.0002	.0019	.0012	.0002
%RSD	168.9	408.2	716.6	19.00	69.75	39.48	360.5	357.9	285.5

#1	.0002	-.0400	-.0471	.0415	-.0005	.0004	.0019	-.0005	-.0001
#2	-.0026	.0194	.0703	.0544	-.0015	.0008	-.0008	.0012	.0003

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value High Limit
 Range Low Limit

Sample Name: ccb Acquired: 6/8/2018 3:30:15 Type: QC
 Method: Accutest XPress(v421) 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	.0012	.0007	.0004	.0006	-.0018	-.0000	.0019
Stddev	.0005	.0000	.0005	.0010	.0001	.0024	.0009
%RSD	37.57	2.184	124.5	183.8	3.318	16540.	47.14
#1	.0015	.0007	.0000	.0013	-.0018	-.0017	.0026
#2	.0009	.0007	.0007	-.0002	-.0018	.0017	.0013

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value High Limit
 Range Low Limit

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	84476.	16062.	3586.2	6066.7
Stddev	402.	97.	103.5	138.7
%RSD	.47598	.60630	2.8859	2.2868

#1	84760.	16131.	3513.0	5968.6
#2	84191.	15993.	3659.3	6164.8

Sample Name: mp7494-mb1 Acquired: 6/8/2018 3:33:16 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment: water

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	-.0001	.0003	-.0005	-.0004	-.0014	.0009	-.0005	-.0006
Stddev	.0001	.0001	.0001	.0001	.0000	.0007	.0000	.0001	.0007
%RSD	15.21	49.84	24.22	12.12	3.902	50.52	3.093	17.84	117.5
#1	.0009	-.0001	.0003	-.0005	-.0004	-.0009	.0009	-.0006	-.0001
#2	.0011	-.0001	.0002	-.0004	-.0004	-.0019	.0009	-.0004	-.0011

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value High Limit
 Range 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	.0009	-.0013	-.0019	-.0004	-.0019	.0046	-.0054	.0066
Stddev	.0004	.0001	.0023	.0001	.0005	.0007	.0025	.0182	.0027
%RSD	117.8	11.28	184.8	2.608	123.0	38.06	53.92	338.4	40.79

#1	-.0001	.0008	.0004	-.0020	-.0008	-.0014	.0028	-.0182	.0085
#2	-.0006	.0010	-.0029	-.0019	-.0001	-.0024	.0063	.0075	.0047

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0058	-.0117	.0822	-.0017	.0010	.0188	-.0003	-.0001
Stddev	.0006	.0261	.0627	.0126	.0005	.0007	.0001	.0007	.0000
%RSD	132.4	452.4	534.7	15.33	28.31	75.37	.3094	209.5	28.92

#1	.0000	.0242	-.0561	.0911	-.0020	.0005	.0188	-.0008	-.0001
#2	.0009	-.0127	.0326	.0733	-.0013	.0015	.0187	.0002	-.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	-.0008	.0002	-.0384	-.0044	-.0045	.0035
Stddev	.0004	.0000	.0000	.0006	.0052	.0010	.0007
%RSD	49.58	1.813	21.41	1.467	119.3	22.31	21.18

#1	.0005	-.0008	.0002	.0380	-.0080	-.0053	.0030
#2	.0010	-.0008	.0001	.0388	-.0007	-.0038	.0040

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	81772.	15691.	3583.2	6047.9
Stddev	218.	93.	19.6	20.8
%RSD	.26623	.59043	.54731	.34355

#1	81926.	15625.	3569.3	6033.2
#2	81618.	15756.	3597.1	6062.6

Sample Name: mp7494-s1 Acquired: 6/8/2018 3:36:19 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 3 rows per element (Avg, Stddev, %RSD). Includes #1 and #2 sub-rows for each element.

Sample Name: mp7494-s2 Acquired: 6/8/2018 3:39:13 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 3 rows per element (Avg, Stddev, %RSD). Includes #1 and #2 sub-rows for each element.

Sample Name: jc67085-4 Acquired: 6/8/2018 3:42:08 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 3 rows per element (Avg, Stddev, %RSD). Includes #1 and #2 sub-rows for each element.

Sample Name: mp7494-sd1 Acquired: 6/8/2018 3:45:05 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 3 rows per element (Avg, Stddev, %RSD). Includes #1 and #2 sub-rows for each element.

132 13

Sample Name: jc67085-1 Acquired: 6/8/2018 3:48:03 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 11 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 11 rows (Avg, Stddev, %RSD, #1, #2) for various elements including V, Zr, Sr, and Int. Std.

Sample Name: jc67085-3 Acquired: 6/8/2018 3:51:00 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 11 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 11 rows (Avg, Stddev, %RSD, #1, #2) for various elements including V, Zr, Sr, and Int. Std.

Sample Name: jc67085-5 Acquired: 6/8/2018 3:53:57 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 11 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 11 rows (Avg, Stddev, %RSD, #1, #2) for various elements including V, Zr, Sr, and Int. Std.

Sample Name: jc67085-6 Acquired: 6/8/2018 3:56:54 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 11 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 11 rows (Avg, Stddev, %RSD, #1, #2) for various elements including V, Zr, Sr, and Int. Std.

Sample Name: ccv Acquired: 6/8/2018 3:59:54 Type: QC
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.063	2.021	1.899	1.948	1.986	1.933	1.989	1.980	2.468
Stddev	.021	.015	.016	.014	.003	.002	.010	.014	.022
%RSD	1.014	.7641	.8291	.7057	.1297	.0918	.4917	.7281	.9056
#1	2.048	2.010	1.888	1.939	1.984	1.932	1.982	1.970	2.452
#2	2.078	2.032	1.910	1.958	1.988	1.935	1.996	1.990	2.484

Check ? Value Range
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.959	1.925	1.939	1.938	1.920	1.916	1.915	40.51	41.31
Stddev	.006	.015	.020	.017	.014	.017	.018	.23	.30
%RSD	.3327	.7980	1.018	.8591	.7057	.9097	.9541	.5660	.7175
#1	1.954	1.914	1.925	1.926	1.910	1.903	1.903	40.35	41.10
#2	1.964	1.936	1.953	1.949	1.929	1.928	1.928	40.67	41.52

Check ? Value Range
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

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	41.90	40.44	41.59	1.908	1.951	4.822	1.897	2.057
Stddev	.28	.28	.51	.44	.015	.016	.045	.012	.018
%RSD	.6867	.6634	1.267	1.063	.7824	.8092	.9393	.6406	.8822
#1	40.63	41.71	40.08	41.28	1.898	1.940	4.790	1.889	2.044
#2	41.02	42.10	40.81	41.90	1.919	1.962	4.854	1.906	2.070

Check ? Value Range
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: ccv Acquired: 6/8/2018 3:59:54 Type: QC
Method: Accutest XPress(v421) 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	2.025	1.952	1.988	1.861	1.920	2.044	1.939
Stddev	.009	.015	.006	.017	.015	.020	.017
%RSD	.4182	.7686	.3079	.8973	.7680	.9793	.8485
#1	2.019	1.942	1.984	1.849	1.910	2.030	1.928
#2	2.031	1.963	1.993	1.873	1.930	2.058	1.951

Check ? Value Range
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	81746.	15480.	3639.9	6287.3
Stddev	233.	70.	8.7	14.7
%RSD	.28517	.45444	.23844	.23405
#1	81582.	15430.	3646.1	6297.7
#2	81911.	15530.	3633.8	6276.9

Sample Name: ccb Acquired: 6/8/2018 4:02:44 Type: QC
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	-0.0001	-0.0002	.0001	-0.0001	F -.0026	-0.0000	-0.0006
Stddev	.0004	.0000	.0000	.0004	.0010	.0005	.0001	.0006
%RSD	39.54	32.54	7.649	373.7	1418.	20.89	654.0	105.5
#1	.0013	-0.0002	-0.0002	-0.0002	-0.0008	-0.0022	.0000	-0.0010
#2	.0007	-0.0001	-0.0002	.0004	.0006	-0.0030	-0.0001	-0.0002

Check ? High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail .0024 Low Limit -.0024

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.015	-0.0006	.0001	.0008	-0.0003	.0012	-0.0004	.0002
Stddev	.0002	.0004	.0000	.0007	.0005	.0000	.0011	.0024
%RSD	14.00	68.89	38.11	91.66	166.2	1.067	309.2	1210.
#1	-0.016	-0.0009	.0001	.0013	-0.0006	.0012	.0004	-0.0015
#2	-0.013	-0.0003	.0001	.0003	.0001	.0012	-0.0011	.0019

Check ? High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0213	-0.0017	.0000	-0.0062	-0.0122	.0396	-0.0028	.0001
Stddev	.0025	.0004	.0004	.0132	.0030	.0059	.0004	.0005
%RSD	11.84	25.01	27580.	211.6	24.65	14.87	12.50	456.9
#1	-0.195	-0.0014	.0003	-0.0156	-0.0101	.0354	-0.0026	-0.0002
#2	-0.0231	-0.0020	-0.0003	.0031	-0.0143	.0437	-0.0031	.0004

Check ? High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: ccb Acquired: 6/8/2018 4:02:44 Type: QC
Method: Accutest XPress(v421) 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	.0013	-0.0000	.0011	-0.0004	.0002	.0039	-0.0027
Stddev	.0010	.0008	.0001	.0002	.0012	.0001	.0027	.0064
%RSD	190.9	63.49	496.1	21.38	300.8	59.00	69.74	238.6
#1	-0.0002	.0007	.0001	.0010	.0004	.0001	.0059	-0.0072
#2	.0013	.0018	-0.0001	.0013	-0.0012	.0003	.0020	.0018

Check ? High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	-0.0007	.0009
Stddev	.0019	.0006
%RSD	255.0	66.29
#1	-0.0020	.0005
#2	.0006	.0014

Check ? High Limit Low Limit
Chk Pass Chk Pass

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	84650.	16103.	3710.5	6240.0
Stddev	404.	112.	28.8	39.5
%RSD	.47761	.69630	.77500	.63370
#1	84364.	16024.	3730.9	6267.9
#2	84936.	16183.	3690.2	6212.0

Sample Name: jc67085-7 Acquired: 6/8/2018 4:05:45 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 5.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	.0978	-0.0013	.0019	2.032	.0089	.0374	F 133.1	1.949
Stddev	.0003	.0006	.0008	.004	.0059	.0002	1.3	.002
%RSD	.3231	47.84	41.43	.1853	66.17	.5254	1.004	.1050
#1	.0976	-.0008	.0013	2.030	.0047	.0372	132.1	1.951
#2	.0980	-.0017	.0024	2.035	.0130	.0375	134.0	1.948
Elem	Ag3280	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068
Avg	-0.0002	-0.1679	.7048	F -.0278	.1209	.0005	.1100	F -.0167
Stddev	.0008	.0071	.0003	.0029	.0037	.0068	.0033	.0081
%RSD	343.3	4.225	.0472	10.52	3.023	1436.	2.971	48.32
#1	-.0008	-.1629	.7050	-.0257	.1235	.0053	.1123	-.0225
#2	.0004	-.1729	.7045	-.0298	.1183	-.0043	.1076	-.0110
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	1.269	130.2	47.80	40.86	456.1	F 4825.	.0159	-0.0088
Stddev	.064	.9	.41	.30	.0	7.	.0027	.0001
%RSD	5.033	6.985	.8640	.7334	.0049	.1473	16.83	1.674
#1	1.314	130.9	48.09	41.08	456.1	4820.	.0178	-.0089
#2	1.224	129.6	47.50	40.65	456.1	4830.	.0140	-.0087
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	82.87	4306	.5278	.1044	-.0107	.0853	F 4472.	.0001
Stddev	.20	.0023	.0020	.0026	.0057	.0007	34.	.0032
%RSD	.2433	.5267	.3832	2.523	53.50	8.691	.7683	2294.
#1	83.01	4290	.5292	.1026	-.0066	.0858	4448.	-.0021
#2	82.72	4322	.5263	.1063	-.0147	.0848	4497.	.0024
Elem	Li6707	P_1774						
Avg	.0884	F 76.61						
Stddev	.0049	.01						
%RSD	5.586	.0168						
#1	.0849	76.60						
#2	.0919	76.62						

Sample Name: jc67085-7 Acquired: 6/8/2018 4:05:45 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 5.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	83583.	15604.	3700.3	6312.4
Stddev	763.	141.	3.5	4.6
%RSD	.91312	.90535	.09349	.07235
#1	84123.	15504.	3697.8	6309.2
#2	83043.	15704.	3702.7	6315.6

Sample Name: jc67085-7 Acquired: 6/8/2018 4:09:00 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 25.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.1088	-0.0041	-0.0014	2.068	-0.0017	.0141	143.8	1.983	-0.0161
Stddev	.0099	.0006	.0057	.002	.0171	.0179	2.0	.001	.0128
%RSD	9.121	15.19	411.1	.0933	1033.	127.0	1.363	.0375	79.39
#1	.1018	-.0045	-.0054	2.066	-.0137	.0267	145.2	1.984	-.0071
#2	.1158	-.0036	.0026	2.069	.0104	.0014	142.5	1.983	-.0251
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	-0.0394	.7466	-0.0411	1.353	-0.0643	.1048	-0.0060	.8934	130.6
Stddev	.0108	.0082	.0383	.0796	.0125	.0677	.0284	.1924	2.3
%RSD	27.43	1.104	93.27	58.86	19.36	64.64	470.0	21.53	1.760
#1	-.0317	.7408	-.0682	.0790	-.0555	.1527	.0140	.7573	128.9
#2	-.0470	.7525	-.0140	.1916	-.0731	.0569	-.0261	1.029	132.2
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	47.94	41.12	445.2	5025.	-0.0710	.0049	86.76	.4202	.5291
Stddev	.81	1.30	10.6	94.	.0003	.0138	.28	.0001	.0035
%RSD	1.689	3.172	2.390	1.861	.3935	283.0	.3275	.0300	.6557
#1	47.37	40.20	437.7	4959.	-.0708	-.0049	86.56	.4203	.5266
#2	48.51	42.04	452.7	5091.	-.0712	.0147	86.96	.4202	.5315
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	1.228	.0014	1.205	F 5559.	-0.207	.0696	79.22		
Stddev	.0123	.0516	.0026	.39.	.0364	.0115	.57		
%RSD	10.04	3684.	2.186	.6948	176.2	16.50	.7221		
#1	.1141	-.0351	.1224	5531.	-.0464	.0777	78.82		
#2	.1315	-.0379	.1186	5586.	.0051	.0615	79.63		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	83871.	15756.	3671.3	6244.8					
Stddev	980.	31.	7.5	2.7					
%RSD	1.1683	.19861	.20392	.04269					
#1	83179.	15778.	3676.6	6246.7					
#2	84564.	15734.	3666.0	6243.0					

Sample Name: jc67085-8 Acquired: 6/8/2018 4:12:04 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0411	.0001	.0008	.0445	.0256	.0163	1.248	.0554	.0005
Stddev	.0001	.0000	.0002	.0006	.0006	.0002	.004	.0009	.0001
%RSD	.3324	37.12	21.38	1.455	2.385	1.482	.3302	1.621	18.44
#1	.0410	.0002	.0007	.0441	.0260	.0161	1.251	.0548	.0006
#2	.0412	.0001	.0009	.0450	.0252	.0164	1.245	.0561	.0005
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0112	.0466	-0.0011	.0013	.0014	-0.0004	-0.0007	7.084	15.45
Stddev	.0001	.0006	.0008	.0002	.0004	.0016	.0008	.060	.13
%RSD	.7416	1.270	75.08	14.65	32.57	353.0	117.3	.8526	.8126
#1	.0113	.0462	-.0005	.0011	.0017	.0007	-.0013	7.126	15.53
#2	.0111	.0470	-.0016	.0014	.0011	.0016	-.0001	7.041	15.36
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	9.259	9.089	12.98	69.92	.0077	.0018	19.71	.3393	.0410
Stddev	.077	.070	.07	.32	.0000	.0002	.25	.0036	.0004
%RSD	.8280	.7699	.5586	.4636	.1091	12.88	1.282	1.068	.9700
#1	9.314	9.138	13.03	70.15	.0077	.0017	19.54	.3368	.0413
#2	9.205	9.039	12.93	69.69	.0077	.0020	19.89	.3419	.0407
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	.3815	-0.0020	-0.0095	28.79	.0036	.0095	6.498		
Stddev	.0001	.0005	.0001	.35	.0019	.0006	.080		
%RSD	.0233	23.02	1.150	1.221	54.13	5.884	1.231		
#1	.3814	-.0017	-.0095	28.54	.0022	.0099	6.442		
#2	.3816	-.0023	-.0096	29.03	.0050	.0091	6.555		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	84269.	16424.	3708.6	6280.4					
Stddev	97.	85.	3.6	10.0					
%RSD	.11507	.51563	.09581	.15887					
#1	84200.	16364.	3711.1	6287.4					
#2	84338.	16484.	3706.1	6273.3					

Sample Name: jc67085-9 Acquired: 6/8/2018 4:14:59 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 2 rows (#1, #2) for each element, showing Avg, Stddev, and %RSD values.

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Sample Name: jc67085-10 Acquired: 6/8/2018 4:17:56 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 2 rows (#1, #2) for each element, showing Avg, Stddev, and %RSD values.

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Sample Name: jc67085-11 Acquired: 6/8/2018 4:21:00 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 2 rows (#1, #2) for each element, showing Avg, Stddev, and %RSD values.

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Sample Name: jc67095-1 Acquired: 6/8/2018 4:23:57 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 2 rows (#1, #2) for each element, showing Avg, Stddev, and %RSD values.

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13.2 13

Sample Name: jc67156-2 Acquired: 6/8/2018 4:26:59 Type: Unk
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	1.052	-0.001	-0.005	.0039	.0004	-0.004	5.458	.0020	.0004
Stddev	.005	.0001	.0004	.0004	.0000	.0000	.012	.0002	.0013
%RSD	.4549	83.78	68.46	11.16	8.835	5.331	.2194	8.144	322.9
#1	1.056	-0.001	-0.008	.0042	.0005	-0.005	5.449	.0021	-0.005
#2	1.049	-0.000	-0.003	.0036	-0.004	-0.004	5.466	.0019	.0014
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	-0.0018	.0107	-0.0000	.0072	-0.0026	-0.0005	-0.0007	.3430	F 403.5
Stddev	.0001	.0004	.0006	.0023	.0001	.0033	.0014	.0043	1.0
%RSD	6.783	4.168	2995.	32.26	3.618	724.3	183.0	1.250	2560
#1	-0.019	.0104	.0004	.0088	-0.0027	.0019	-0.017	.3400	404.3
#2	-0.017	.0110	-0.004	.0056	-0.0026	-0.0028	.0002	.3460	402.8
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	1.097	82.50	6.320	F 851.6	.2383	.0046	8.800	-0.0018	2.126
Stddev	.0007	.65	.112	4.0	.0046	.0005	.138	.0007	.009
%RSD	.6396	.7863	1.778	.4734	1.913	9.765	1.571	36.75	4.118
#1	1.102	82.96	6.241	854.4	.2351	.0050	8.702	-0.013	2.133
#2	1.092	82.04	6.400	848.7	.2416	.0043	8.897	-0.023	2.120
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	.0025	.0002	-0.0039	19.00	-0.0014	.0263	.0270		
Stddev	.0002	.0007	.0004	.28	.0047	.0008	.0018		
%RSD	9.302	411.8	10.46	1.453	335.8	3.087	6.522		
#1	.0024	.0007	-0.0041	18.81	-0.0047	.0269	.0282		
#2	.0027	-0.0003	-0.0036	19.20	-0.0019	.0258	.0257		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	82990.	15343.	3592.6	6121.4					
Stddev	800.	27.	7.6	2.1					
%RSD	.96380	.17593	.21076	.03497					
#1	82425.	15324.	3597.9	6119.9					
#2	83556.	15362.	3587.2	6122.9					

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Sample Name: jc67156-2 Acquired: 6/8/2018 4:30:15 Type: Unk
 Method: Accutest XPress(v421) 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
Avg	1.054	-0.006	.0006	.0017	-0.0013	-0.0098	5.691	-0.0010	-0.0011
Stddev	.006	.0004	.0011	.0006	.0023	.0050	.048	.0022	.0004
%RSD	.5590	67.38	183.7	34.13	169.8	51.14	.8364	220.5	31.77
#1	1.050	-0.009	.0014	.0013	-0.0029	-0.0133	5.658	.0006	-0.0014
#2	1.058	-0.003	-0.002	.0021	.0003	-0.0062	5.725	-0.0026	-0.0009
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	-0.0027	.0133	-0.0006	.0097	-0.0020	-0.0015	-0.0054	.2980	418.6
Stddev	.0009	.0012	.0028	.0071	.0023	.0055	.0140	.1106	1.5
%RSD	33.86	9.278	426.4	72.87	113.4	47.79	260.2	37.13	3574
#1	-0.0033	.0124	.0013	.0147	-0.0004	-0.0076	.0045	.2198	417.5
#2	-0.020	.0142	-0.0026	.0047	-0.0037	-0.0154	-0.0153	.3762	419.6
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	.0999	84.82	6.782	897.8	.2141	.0067	8.649	-0.0052	2.115
Stddev	.0212	.39	.403	7.4	.0015	.0023	.055	.0001	.009
%RSD	21.24	.4621	5.949	.8231	.6953	33.84	.6365	1.617	.4336
#1	.1150	84.55	6.496	892.6	.2151	.0051	8.610	-0.0051	2.108
#2	.0849	85.10	7.067	903.1	.2130	.0083	8.688	-0.0052	2.121
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	.0062	-0.0005	-0.0055	18.60	-0.0176	.0393	.0324		
Stddev	.0068	.0009	.0005	.06	.0085	.0159	.0010		
%RSD	109.7	176.5	9.025	2968	48.20	40.48	3.161		
#1	.0014	-0.0012	-0.0052	18.56	-0.0116	.0280	.0331		
#2	.0110	.0001	-0.0059	18.64	-0.0236	.0505	.0316		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	84274.	15763.	3680.9	6239.6					
Stddev	282.	16.	21.0	33.4					
%RSD	.33454	.09891	.56999	.53551					
#1	84473.	15752.	3666.1	6215.9					
#2	84074.	15774.	3695.8	6263.2					

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Sample Name: cvc Acquired: 6/8/2018 4:33:16 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: 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	1.980	1.913	1.959	1.948	1.892	1.949	1.993	2.417
Stddev	.005	.009	.012	.015	.015	.019	.018	.016	.0016
%RSD	.2329	.4572	.6408	.7519	.7430	1.016	.9325	.8023	.6676
#1	2.030	1.986	1.905	1.949	1.937	1.879	1.936	1.982	2.406
#2	2.023	1.973	1.922	1.970	1.958	1.906	1.962	2.005	2.429
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	1.920	1.939	1.954	1.942	1.927	1.931	1.924	39.68	40.50
Stddev	.017	.012	.016	.016	.011	.013	.014	.19	.13
%RSD	.8974	.6210	.6260	.8122	.5767	.6552	.7241	.4846	.3146
#1	1.907	1.930	1.945	1.931	1.919	1.922	1.915	39.82	40.59
#2	1.932	1.947	1.962	1.953	1.935	1.940	1.934	39.54	40.41
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.07	41.27	39.61	40.69	1.921	1.968	4.865	1.910	2.013
Stddev	.14	.11	.10	.06	.018	.012	.041	.009	.005
%RSD	.3614	.2612	.2586	.1424	.9139	.5979	.8436	.4587	.2515
#1	40.17	41.35	39.54	40.73	1.909	1.959	4.836	1.904	2.017
#2	39.96	41.20	39.68	40.65	1.934	1.976	4.894	1.916	2.010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

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Sample Name: cvc Acquired: 6/8/2018 4:33:16 Type: QC
 Method: Accutest XPress(v421) 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	1.986	1.967	1.947	1.863	1.926	2.013	1.951
Stddev	.017	.014	.017	.018	.014	.004	.009
%RSD	.8317	.6902	.8951	.9911	.7405	.2254	.4541
#1	1.974	1.957	1.935	1.850	1.916	2.016	1.945
#2	1.998	1.976	1.960	1.876	1.936	2.010	1.957
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	82696.	15613.	3608.8	6235.3			
Stddev	110.	132.	11.7	10.1			
%RSD	.13342	.84499	.32295	.16147			
#1	82774.	15519.	3600.6	6228.1			
#2	82618.	15706.	3617.0	6242.4			

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Sample Name: fa54707-3 Acquired: 6/8/2018 4:45:06 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	.0154	-0.001	-0.001	.0008	.0150	-0.0020	-0.1686	.0005
Stddev	.0002	.0000	.0000	.0003	.0010	.0007	.0034	.0005
%RSD	1.391	36.61	39.39	38.35	6.442	34.80	2.034	102.8
#1	.0153	-0.001	-0.001	.0011	.0157	-0.0015	.1710	.0009
#2	.0156	-0.001	-0.001	.0006	.0143	-0.0025	.1662	.0001

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	.0000	.0016	.0008	.0035	F -.0025	-0.0024	-0.0008	.0029
Stddev	.0001	.0003	.0002	.0007	.0004	.0006	.0010	.0002
%RSD	776.9	20.50	21.57	21.29	15.43	26.30	120.5	6.710
#1	.0001	.0013	.0007	.0029	-.0023	-.0020	-.0015	.0031
#2	-.0001	.0018	.0009	.0040	-.0028	-.0029	-.0001	.0028

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	.0756	144.8	.0556	37.61	65.42	96.34	4.060	.0007
Stddev	.0043	.1	.0001	.12	.27	.05	.056	.0006
%RSD	5.691	.0612	.1901	.3112	.4107	.0526	1.372	79.46
#1	.0726	144.7	.0557	37.69	65.23	96.37	4.021	.0011
#2	.0787	144.9	.0555	37.53	65.61	96.30	4.099	.0003

Elem	Si2124	Sr1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	1.004	-0.009	.3360	.0000	-0.0002	.0010	8.085	-0.011
Stddev	.018	.0003	.0002	.0008	.0005	.0002	.116	.0032
%RSD	1.751	31.48	.0570	4038.	292.9	15.17	1.435	295.3
#1	.9911	-.0007	.3359	.0006	-.0005	.0011	8.003	-.0012
#2	1.016	-.0011	.3362	-.0006	.0002	.0009	8.167	-.0034

Elem	Li6707	P_1774
Avg	.0012	.0203
Stddev	.0031	.0016
%RSD	246.0	7.710
#1	-.0009	.0192
#2	.0034	.0215

Sample Name: fa54707-3 Acquired: 6/8/2018 4:45:06 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	87268.	16300.	3739.8	6254.3
Stddev	1775.	118.	6.4	11.9
%RSD	2.0343	.72607	.16995	.18991
#1	86013.	16216.	3735.3	6245.9
#2	88524.	16383.	3744.3	6262.7

Sample Name: fa54707-4 Acquired: 6/8/2018 4:48:05 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.1231	-0.001	.0003	.0001	.0125	-0.0014	.0219	-0.0005	.0003
Stddev	.0016	.0001	.0002	.0007	.0007	.0013	.0006	.0004	.0006
%RSD	1.298	36.28	70.97	783.4	5.728	88.40	.3079	77.89	203.1
#1	.1220	-.0001	.0005	-.0004	.0130	-.0005	.2023	-.0002	.0007
#2	.1243	-.0002	.0002	.0006	.0120	-.0023	.2014	-.0008	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0012	.0041	.0012	.0015	-0.0027	.0007	.0016	.0500	210.1
Stddev	.0005	.0001	.0001	.0016	.0005	.0001	.0010	.0202	4.4
%RSD	47.38	3.655	10.38	107.8	18.33	10.16	60.14	40.38	2.094
#1	.0008	.0040	.0011	.0003	-.0024	.0007	.0023	.0357	213.2
#2	.0015	.0042	.0013	.0026	-.0031	.0006	.0009	.0643	207.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Avg	.0128	41.87	47.69	77.30	4.600	.0005	11.19	-0.0020	1.881
Stddev	.0033	.59	.97	1.37	.035	.0001	.08	.0017	.030
%RSD	25.79	1.395	2.044	1.775	.7541	26.92	.6757	88.89	1.577
#1	.0151	41.56	47.00	76.33	4.575	.0006	11.14	-.0032	1.860
#2	.0105	42.38	48.38	78.27	4.624	.0004	11.24	-.0007	1.901

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	.0001	.0013	-0.0031	16.34	-0.0039	.0002	.0355
Stddev	.0007	.0009	.0002	.10	.0011	.0009	.0019
%RSD	802.5	66.38	6.759	.5923	28.23	394.0	5.367
#1	-.0004	.0020	-.0032	16.27	-.0031	-.0004	.0342
#2	.0006	.0007	-.0029	16.41	-.0047	.0009	.0369

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	83716.	16167.	3637.3	6127.3
Stddev	391.	130.	20.7	30.3
%RSD	.46756	.80341	.56989	.49381
#1	83993.	16259.	3622.6	6105.9
#2	83439.	16075.	3651.9	6148.7

Sample Name: fa54707-5 Acquired: 6/8/2018 4:51:09 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	.0456	-0.001	.0001	-0.0005	.0051	-0.0012	.1397	-0.001
Stddev	.0000	.0000	.0000	.0001	.0006	.0005	.0001	.0005
%RSD	.0997	14.08	23.72	24.93	10.90	43.76	.0950	769.2
#1	.0457	-.0001	.0001	-.0006	.0047	-.0016	.1396	-.0003
#2	.0456	-.0001	.0001	-.0004	.0054	-.0009	.1397	-.0004

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	.0003	.0021	.0007	.0018	-0.0013	F -.0033	-0.0012	.0007
Stddev	.0002	.0007	.0000	.0014	.0033	.0009	.0012	.0009
%RSD	76.25	33.03	.3698	78.95	256.0	27.68	95.58	125.7
#1	.0004	.0016	.0007	.0008	.0010	-.0040	-.0020	.0001
#2	.0001	.0026	.0007	.0028	-.0036	-.0027	-.0004	.0013

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	.2511	135.5	2.061	27.23	36.37	58.90	2.581	.0008
Stddev	.0138	.4	.005	.01	.21	.13	.039	.0007
%RSD	5.493	.2876	.2430	.0208	.5820	.2154	1.540	82.45
#1	.2414	135.3	2.064	27.24	36.22	58.81	2.533	.0004
#2	.2609	135.8	2.057	27.23	36.52	58.99	2.589	.0013

Elem	Si2124	Sr1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	1.789	-0.008	.8373	.0063	-0.0001	.0014	43.77	-0.029
Stddev	.028	.0001	.0013	.0008	.0014	.0000	.74	.0013
%RSD	1.579	7.638	.1581	12.46	2531.	.9585	1.681	46.43
#1	1.769	-.0007	.8382	.0068	-.0010	.0014	43.25	-.0019
#2	1.809	-.0008	.8363	.0057	.0009	.0013	44.29	-.0038

Elem	Li6707	P_1774
Avg	.0011	.0172
Stddev	.0021	.0012
%RSD	191.6	6.775
#1	.0026	.0164
#2	-.0004	.0180

Sample Name: fa54707-5 Acquired: 6/8/2018 4:51:09 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	83036.	15766.	3621.8	6117.3
Stddev	86.	102.	13.4	19.3
%RSD	.10373	.64531	.36889	.31540
#1	82975.	15838.	3631.3	6131.0
#2	83097.	15694.	3612.4	6103.7

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Sample Name: fa54707-6 Acquired: 6/8/2018 4:54:08 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0170	-0.0001	.0003	-0.0007	.0032	-0.0021	.0788	-0.0001	-0.0007
Stddev	.0003	.0000	.0002	.0001	.0002	.0003	.0014	.0010	.0000
%RSD	2.042	.7158	85.10	9.501	6.854	12.44	1.805	803.1	6.286
#1	.0167	-0.0001	.0001	-0.0006	.0033	-.0023	.0778	-.0009	-.0008
#2	.0172	-0.0001	.0004	-0.0007	.0030	-.0019	.0798	.0006	-.0007
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	-0.0002	.0018	.0006	-0.0003	-0.0026	-0.0028	.0006	.0896	70.29
Stddev	.0011	.0001	.0004	.0032	.0005	.0012	.0000	.0088	.55
%RSD	585.1	8.023	77.73	958.6	20.46	43.41	1.070	9.811	.7765
#1	.0006	.0019	.0003	-.0026	-.0022	-.0019	.0006	.0959	69.91
#2	-.0010	.0017	.0009	-.0019	-.0029	-.0036	.0006	.0834	70.68
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	.0239	15.18	12.19	17.35	.7520	.0000	2.472	-0.0016	4.329
Stddev	.0002	.04	.27	.23	.0102	.0005	.037	.0013	.0045
%RSD	.9314	.2446	2.184	1.315	1.363	1655.	1.497	83.45	1.030
#1	.0240	15.16	12.00	17.18	.7448	.0004	2.446	-.0007	4.298
#2	.0237	15.21	12.38	17.51	.7593	-.0003	2.498	-.0025	4.361
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	.0020	-0.0028	-0.0007	12.76	-0.0017	-0.0014	.0116		
Stddev	.0005	.0006	.0003	.17	.0035	.0043	.0001		
%RSD	25.62	20.18	38.69	1.365	207.0	309.4	.7227		
#1	.0016	-.0024	-.0005	12.64	.0008	.0017	.0115		
#2	.0023	-.0032	-.0009	12.89	-.0042	-.0045	.0116		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	84400.	15969.	3686.3	6198.2					
Stddev	384.	71.	3.9	14.0					
%RSD	.45502	.44518	.10457	.22574					
#1	84672.	16019.	3689.0	6208.1					
#2	84128.	15918.	3683.5	6188.3					

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Sample Name: fa54707-7 Acquired: 6/8/2018 4:57:06 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	.0436	-0.0000	-0.0001	-0.0010	.0014	-0.0017	.0940	-0.0002
Stddev	.0008	.0001	.0001	.0003	.0009	.0002	.0008	.0002
%RSD	1.882	153.3	160.3	30.52	66.28	14.23	.8367	146.8
#1	.0430	-.0001	-.0001	-.0012	.0007	-.0016	.0935	-.0000
#2	.0442	.0000	.0000	-.0008	.0020	-.0019	.0946	-.0003
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	-0.0001	.0002	.0004	-0.0011	F_-0.0028	-0.0003	-0.0021	.0017
Stddev	.0000	.0000	.0001	.0003	.0031	.0008	.0013	.0030
%RSD	58.05	27.32	28.77	23.92	110.2	313.5	62.46	180.8
#1	-.0000	.0002	.0003	-.0009	-.0050	-.0003	-.0031	.0038
#2	-.0001	.0001	.0005	-.0012	-.0006	-.0008	-.0012	-.0005
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	.0100	82.50	5403	13.63	6.767	11.34	.5585	.0003
Stddev	.0169	1.38	.0134	.23	.150	.23	.0104	.0007
%RSD	169.6	1.668	2.481	1.696	2.220	2.037	1.865	246.7
#1	.0219	81.53	.5309	13.46	6.661	11.18	.5512	-.0007
#2	-.0020	83.47	.5498	13.79	6.874	11.50	.5659	-.0002
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	3.698	-0.0012	.5381	-0.0007	-0.0013	-0.0018	7.493	-0.0038
Stddev	.066	.0006	.0083	.0001	.0015	.0002	.121	.0024
%RSD	1.778	47.10	1.542	10.01	111.8	11.81	1.612	63.79
#1	3.651	-.0016	.5322	-.0006	-.0003	-.0016	7.408	-.0056
#2	3.744	-.0008	.5440	-.0007	-.0023	-.0019	7.578	-.0021
Elem	Li6707	P_1774						
Avg	-0.0004	.0155						
Stddev	.0058	.0001						
%RSD	1595.	.5560						
#1	-.0044	.0154						
#2	.0037	.0155						

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Sample Name: fa54707-7 Acquired: 6/8/2018 4:57:06 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	83622.	15777.	3641.2	6139.3
Stddev	644.	293.	21.1	30.7
%RSD	.76966	1.8567	.57824	.49997
#1	84077.	15984.	3656.1	6161.0
#2	83167.	15570.	3626.3	6117.6

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Sample Name: fa54707-8 Acquired: 6/8/2018 5:00:04 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Rows: Avg, Stddev, %RSD, #1, #2.

Table with columns: Elem, V_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179. Rows: Avg, Stddev, %RSD, #1, #2.

Table with columns: Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077. Rows: Avg, Stddev, %RSD, #1, #2.

Table with columns: Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774. Rows: Avg, Stddev, %RSD, #1, #2.

Table with columns: Int. Std., Y_3600, Y_3710, Y_2243, In2306. Rows: Avg, Stddev, %RSD, #1, #2.

Sample Name: fa54707-9 Acquired: 6/8/2018 5:03:05 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Rows: Avg, Stddev, %RSD, #1, #2.

Table with columns: Elem, V_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179. Rows: Avg, Stddev, %RSD, #1, #2.

Table with columns: Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077. Rows: Avg, Stddev, %RSD, #1, #2.

Table with columns: Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774. Rows: Avg, Stddev, %RSD, #1, #2.

Table with columns: Int. Std., Y_3600, Y_3710, Y_2243, In2306. Rows: Avg, Stddev, %RSD, #1, #2.

Sample Name: ccv Acquired: 6/8/2018 5:06:04 Type: QC
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem Units, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Rows: Avg, Stddev, %RSD, #1, #2.

Check ? Value Range
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with columns: Elem Units, V_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179. Rows: Avg, Stddev, %RSD, #1, #2.

Check ? Value Range
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with columns: Elem Units, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077. Rows: Avg, Stddev, %RSD, #1, #2.

Check ? Value Range
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: ccv Acquired: 6/8/2018 5:06:04 Type: QC
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem Units, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774. Rows: Avg, Stddev, %RSD, #1, #2.

Check ? Value Range
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with columns: Int. Std., Y_3600, Y_3710, Y_2243, In2306. Rows: Avg, Stddev, %RSD, #1, #2.

Check ? Value Range
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

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Sample Name: ccb Acquired: 6/8/2018 5:08:54 Type: QC
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 9 columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail .0024 Chk Pass Chk Pass

Table with 9 columns: Elem, Ag3280, V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 9 columns: Elem, Al3961, Ca3179, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: ccb Acquired: 6/8/2018 5:08:54 Type: QC
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 11 columns: Elem, Si2124, Sn1899, Sr4077, Ti3349, W_2079, Zr3391, S_1820, Bi2230. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 2 columns: Elem, Li6707, P_1774. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit Chk Pass Chk Pass

Table with 4 columns: Int. Std., Y_3600, Y_3710, Y_2243, In2306. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit Chk Pass Chk Pass

Sample Name: fa54707-10 Acquired: 6/8/2018 5:11:56 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Table with 10 columns: Elem, V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Table with 10 columns: Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Table with 10 columns: Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Table with 4 columns: Int. Std., Y_3600, Y_3710, Y_2243, In2306. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Table with 4 columns: Int. Std., Y_3600, Y_3710, Y_2243, In2306. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Sample Name: jc67310-2 Acquired: 6/8/2018 5:14:57 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 11 columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Table with 10 columns: Elem, V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Table with 10 columns: Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Table with 10 columns: Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Table with 4 columns: Int. Std., Y_3600, Y_3710, Y_2243, In2306. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Table with 4 columns: Int. Std., Y_3600, Y_3710, Y_2243, In2306. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Zoom In

Zoom Out

Sample Name: jc67310-3 Acquired: 6/8/2018 5:18:01 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280, Avg, Stddev, %RSD, #1, #2, etc.

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Zoom In

Zoom Out

Sample Name: jc67310-4 Acquired: 6/8/2018 5:21:03 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280, Avg, Stddev, %RSD, #1, #2, etc.

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Zoom In

Zoom Out

Sample Name: jc67310-5 Acquired: 6/8/2018 5:24:04 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280, Avg, Stddev, %RSD, #1, #2, etc.

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Zoom In

Zoom Out

Sample Name: jc67328-3 Acquired: 6/8/2018 5:27:07 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280, Avg, Stddev, %RSD, #1, #2, etc.

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Sample Name: ccv Acquired: 6/8/2018 5:39:05 Type: QC
 Method: Accutest XPress(v421) 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	2.011	1.970	1.971	1.874	1.935	2.013	1.965
Stddev	.009	.031	.012	.043	.030	.011	.037
%RSD	.4460	1.569	.6010	2.314	1.569	.5587	1.872

#1	2.017	1.948	1.979	1.843	1.913	2.021	1.939
#2	2.004	1.992	1.963	1.904	1.956	2.005	1.991

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value High Limit
 Range Low Limit

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	82289.	15673.	3608.4	6226.2
Stddev	28.	55.	21.0	28.1
%RSD	.03430	.35042	.58208	.45151

#1	82309.	15711.	3623.3	6246.1
#2	82269.	15634.	3593.5	6206.3

Sample Name: ccb Acquired: 6/8/2018 5:41:55 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0000	.0001	-0.005	-0.001	-0.012	-0.001	-0.007	-0.000
Stddev	.0000	.0001	.0001	.0002	.0006	.0007	.0001	.0002	.0005
%RSD	3.320	234.2	142.4	37.42	541.1	60.63	83.00	33.10	4953.

#1	.0007	.0001	-0.0000	-0.004	.0003	-0.017	-0.000	-0.006	.0003
#2	.0007	-0.0000	.0001	-0.007	-0.005	-0.007	-0.001	-0.009	-0.003

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value High Limit
 Range Low Limit

Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.010	.0000	.0000	.0014	.0008	-0.0026	.0023	.0007	-0.0049
Stddev	.0008	.0000	.0001	.0017	.0015	.0040	.0016	.0114	.0010
%RSD	83.52	261.1	3653.	121.1	178.9	152.3	70.31	1687.	20.11

#1	-0.015	.0000	-0.001	.0025	-0.002	.0002	.0011	.0088	-0.042
#2	-0.004	-0.0000	.0001	.0002	.0018	-0.0054	.0034	-0.0074	-0.0056

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value High Limit
 Range Low Limit

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019	-0.0068	.1228	.2909	-0.0013	.0003	.0015	.0004	-0.0001
Stddev	.0004	.0132	.0079	.0054	.0013	.0001	.0009	.0005	.0000
%RSD	23.65	193.3	6.415	1.872	96.28	25.53	61.12	115.8	61.40

#1	.0016	.0025	.1172	.2870	-0.004	.0004	.0021	.0001	-0.0000
#2	.0022	-0.162	.1283	.2947	-0.022	.0002	.0009	.0008	-0.001

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value High Limit
 Range Low Limit

Sample Name: ccb Acquired: 6/8/2018 5:41:55 Type: QC
 Method: Accutest XPress(v421) 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	-0.0016	.0001	.0019	-0.0012	-0.0009	.0030
Stddev	.0004	.0027	.0004	.0013	.0010	.0015	.0004
%RSD	65.90	167.0	492.5	66.93	84.13	168.0	11.99

#1	.0008	-0.0036	-0.002	.0028	-0.0018	-0.0020	.0028
#2	.0003	.0003	.0004	.0010	-0.0005	.0002	.0033

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value High Limit
 Range Low Limit

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	83193.	15636.	3681.5	6190.6
Stddev	809.	63.	11.7	12.4
%RSD	.97265	.40495	.31890	.20077

#1	83765.	15681.	3689.8	6199.4
#2	82621.	15591.	3673.2	6181.8

Sample Name: cri Acquired: 6/8/2018 5:44:57 Type: QC
 Method: Accutest XPress(v421) 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	.0022	.0018	.0028	.0495	.0102	.0096	.0160	.0099
Stddev	.0001	.0001	.0005	.0014	.0002	.0038	.0018	.0006
%RSD	.0375	3.303	18.82	2.842	2.046	38.99	11.30	5.938

#1	.0022	.0017	.0032	.0486	.0104	.0123	.0172	.0103
#2	.0021	.0018	.0024	.0505	.0101	.0070	.0147	.0094

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value High Limit
 Range Low Limit

Elem	Ag3280	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046	.0526	.0196	.0087	F .0055	.0029	W .0070	W .0077
Stddev	.0003	.0066	.0001	.0017	.0002	.0013	.0005	.0010
%RSD	6.291	12.48	.3161	19.35	3.760	47.08	6.613	13.42

#1	.0048	.0572	.0196	.0099	.0057	.0019	.0067	.0070
#2	.0044	.0479	.0196	.0075	.0054	.0038	.0074	.0085

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Warn Chk Warn
 Value .0100 .0100 .0100 .0100 .0100 .0100 .0100 .0100
 Range -30.00% -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	.1957	5.075	1.008	5.240	5.054	5.353	.0933	.0192
Stddev	.0152	.034	.0015	.058	.029	.022	.0027	.0001
%RSD	7.778	.6695	1.506	1.098	.5703	.4208	2.872	.4176

#1	.2065	5.099	.1019	5.280	5.033	5.369	.0914	.0191
#2	.1849	5.051	.0998	5.199	5.074	5.337	.0952	.0192

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value High Limit
 Range Low Limit

Sample Name: cri Acquired: 6/8/2018 5:44:57 Type: QC
 Method: Accutest XPress(v421) 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	.1922	.0093	.0100	.0111	.0463	W_.0123	.0499	.0201
Stddev	.0057	.0003	.0003	.0022	.0008	.0015	.0040	.0018
%RSD	2.965	3.635	3.111	20.01	1.634	12.32	8.052	8.937
#1	.1882	.0091	.0102	.0127	.0458	.0133	.0527	.0214
#2	.1963	.0096	.0098	.0096	.0469	.0112	.0470	.0188
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
Value						.0100		
Range						20.00%		
Elem	Li6707	P_1774						
Units	ppm	ppm						
Avg	.0515	.0505						
Stddev	.0026	.0003						
%RSD	5.122	.6645						
#1	.0534	.0502						
#2	.0497	.0507						
Check ?	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	79294.	15945.	3713.1	6249.7				
Stddev	7522.	41.	15.0	20.4				
%RSD	9.4864	.25440	.40365	.32604				
#1	73975.	15974.	3723.7	6264.1				
#2	84613.	15916.	3702.5	6235.3				

Sample Name: crid Acquired: 6/8/2018 5:47:58 Type: QC
 Method: Accutest XPress(v421) 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	.0009	.0007	.0027	.0016	F-.0022	.0030	.0042
Stddev	.0005	.0000	.0002	.0003	.0005	.0002	.0001	.0004
%RSD	8.929	5.059	28.89	12.04	30.91	7.586	4.190	8.520
#1	.0055	.0009	.0009	.0024	.0012	-.0021	.0031	.0040
#2	.0049	.0009	.0006	.0029	.0019	-.0023	.0030	.0045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value						.0020		
Range						-30.00%		
Elem	Ag3280	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F-.0005	F-.0013	.0106	.0032	F-.0002	.0019	F-.0019	F-.0003
Stddev	.0010	.0003	.0002	.0004	.0036	.0001	.0009	.0007
%RSD	197.8	23.64	2.050	12.76	2194.	2.712	45.71	259.7
#1	-.0002	.0011	.0104	.0029	-.0024	.0019	.0013	.0007
#2	-.0012	.0016	.0107	.0035	.0027	.0018	.0026	-.0002
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail
Value	.0020	.0020			.0020		.0050	.0030
Range	-30.00%	-30.00%			-30.00%		-30.00%	-30.00%
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0902	1.072	.0035	.1053	2.154	1.277	-.0032	.0007
Stddev	.0232	.012	.0014	.0045	.019	.018	.0003	.0002
%RSD	25.73	1.104	41.39	4.309	8951	1.425	8.443	34.82
#1	.1066	1.081	.0025	.1085	2.168	1.290	-.0030	.0009
#2	.0738	1.064	.0045	.1021	2.141	1.264	-.0034	.0005
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Sample Name: crid Acquired: 6/8/2018 5:47:58 Type: QC
 Method: Accutest XPress(v421) 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	-.0022	.0000	.0000	.0007	-.0015	-.0000	.0042	-.0029
Stddev	.0011	.0024	.0000	.0005	.0013	.0002	.0031	.0005
%RSD	51.49	6784.	148.3	73.51	89.63	643.6	73.89	18.38
#1	-.0030	-.0017	.0001	.0003	-.0005	.0001	.0020	-.0033
#2	-.0014	.0018	-.0000	.0010	-.0024	-.0001	.0064	-.0025
Check ?	None	None	None	None	None	None	None	None
Value								
Range								
Elem	Li6707	P_1774						
Units	ppm	ppm						
Avg	.0009	.0023						
Stddev	.0008	.0006						
%RSD	89.06	25.10						
#1	.0015	.0027						
#2	.0003	.0019						
Check ?	None	None						
Value								
Range								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	83130.	15815.	3695.1	6219.8				
Stddev	676.	196.	11.2	18.4				
%RSD	.81345	1.2422	.30272	.29649				
#1	82652.	15676.	3687.2	6206.7				
#2	83608.	15954.	3703.0	6232.8				

Sample Name: ccv Acquired: 6/8/2018 5:51:02 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.008	1.960	1.913	1.961	1.971	1.914	1.975	1.991	2.445
Stddev	.002	.002	.018	.021	.023	.026	.023	.020	.0022
%RSD	.0747	.1112	.9435	1.084	1.159	1.363	1.169	.9909	.8931
#1	2.007	1.961	1.900	1.946	1.955	1.896	1.959	1.977	.2429
#2	2.009	1.958	1.926	1.976	1.987	1.933	1.992	2.005	.2460
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.945	1.940	1.952	1.941	1.932	1.922	1.924	39.26	40.13
Stddev	.024	.015	.014	.026	.019	.018	.020	.06	.00
%RSD	1.235	.7928	.7194	1.347	.9647	.9132	1.036	.1568	.0102
#1	1.928	1.929	1.942	1.922	1.919	1.910	1.910	39.30	40.13
#2	1.962	1.951	1.962	1.959	1.945	1.935	1.939	39.22	40.12
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	39.55	40.76	39.46	40.62	1.920	1.964	4.854	1.913	1.996
Stddev	.08	.16	.12	.16	.021	.016	.041	.019	.002
%RSD	.1920	.3892	.2949	.3973	1.077	.7979	.8350	1.007	.0801
#1	39.60	40.64	39.38	40.50	1.906	1.953	4.825	1.899	1.995
#2	39.49	40.87	39.54	40.73	1.935	1.975	4.883	1.926	1.997
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

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Sample Name: ccv Acquired: 6/8/2018 5:51:02 Type: QC
 Method: Accutest XPress(v421) 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	2.008	1.963	1.971	1.864	1.929	1.996	1.952
Stddev	.023	.019	.024	.015	.019	.006	.018
%RSD	1.137	.9573	1.199	.8194	.9882	.2884	.9057
#1	1.992	1.950	1.954	1.853	1.916	1.992	1.939
#2	2.024	1.977	1.987	1.875	1.943	2.000	1.964

Check ? High Limit Low Limit
 Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	82519.	15803.	3641.0	6293.4
Stddev	234.	.	7.0	4.8
%RSD	.28359	.00242	.19231	.07689
#1	82684.	15802.	3636.0	6289.9
#2	82354.	15803.	3646.0	6296.8

Sample Name: ccb Acquired: 6/8/2018 5:53:52 Type: QC
 Method: Accutest XPress(v421) 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	.0009	-0.001	.0000	-0.004	-0.001	-0.016	-0.001	-0.001
Stddev	.0006	.0001	.0001	.0001	.0001	.0003	.0000	.0007
%RSD	70.04	59.52	268.3	27.38	55.07	20.89	16.08	575.3
#1	.0005	-0.001	.0001	-0.003	-0.001	-0.018	-0.001	.0004
#2	.0014	-0.002	-0.0000	-0.005	-0.001	-0.014	-0.001	-0.006

Check ? High Limit Low Limit
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.004	-0.003	-0.002	-0.010	F -0.026	-0.022	-0.004	.0034
Stddev	.0006	.0001	.0000	.0001	.0043	.0005	.0005	.0008
%RSD	175.6	33.14	13.70	7.515	161.9	20.31	134.9	24.33
#1	-0.008	-0.002	-0.002	-0.010	.0004	-0.025	-0.000	.0028
#2	.0001	-0.004	-0.002	-0.011	-0.057	-0.019	-0.008	.0040

Check ? High Limit Low Limit
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Pass Chk Pass
 .0020
 -0.020

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023	-0.0022	.0006	.0042	.1053	.1869	-0.008	.0003
Stddev	.0093	.0010	.0012	.0068	.0080	.0022	.0005	.0002
%RSD	403.4	45.90	196.8	161.9	7.552	1.193	61.11	58.98
#1	.0088	-0.0028	.0014	-0.006	.0997	.1885	-0.004	.0002
#2	-0.043	-0.0015	-0.002	.0090	.1109	.1853	-0.011	.0004

Check ? High Limit Low Limit
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: ccb Acquired: 6/8/2018 5:53:52 Type: QC
 Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044	.0014	-0.0001	.0008	-0.0026	.0005	.0000	.0002
Stddev	.0029	.0003	.0001	.0015	.0004	.0001	.0080	.0014
%RSD	67.24	22.29	51.98	197.3	17.15	28.77	70990.	659.9
#1	.0065	.0017	-0.0001	.0018	-0.0029	.0004	.0057	.0012
#2	.0023	.0012	-0.0002	-0.0003	-0.0023	.0006	-0.0057	-0.0008

Check ? High Limit Low Limit
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	-0.014	.0023
Stddev	.0013	.0013
%RSD	93.12	55.83
#1	-0.024	.0014
#2	-0.005	.0033

Check ? High Limit Low Limit
 Chk Pass Chk Pass

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	84786.	15894.	3499.2	5936.5
Stddev	1492.	62.	196.8	275.9
%RSD	1.7594	.38779	5.6254	4.6477
#1	85841.	15851.	3638.4	6131.6
#2	83732.	15938.	3360.0	5741.4

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ba 455.403 { 74}	<input checked="" type="checkbox"/>	1	Zr	0.000941	0.000000	No
Be 313.042 {108}	<input checked="" type="checkbox"/>	6	V	0.001510	0.000000	No
			Mo	-0.000047	0.000000	No
			Ti	-0.000218	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}	<input checked="" type="checkbox"/>	11	As	0.014448	0.000000	No
			Ni	-0.000647	0.000000	No
			Fe	0.000002	0.000000	No
			V	0.000091	0.000000	No
			Ba	0.000064	0.000000	No
			Co	-0.000853	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	-0.001000	0.000000	No
Co 228.616 {448}	<input checked="" type="checkbox"/>	7	Fe	0.000024	0.000000	No
			Mo	-0.000972	0.000000	No
			Ni	0.000091	0.000000	No
			Ti	0.001920	0.000000	No
			Ba	0.000238	0.000000	No
			W	-0.001840	0.000000	No
Cr 267.716 {126}	<input checked="" type="checkbox"/>	8	Cd	-0.000510	0.000000	No
			Mn	0.000440	0.000000	No
			V	0.000473	0.000000	No
			Mo	-0.000082	0.000000	No
			Fe	-0.000008	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
Cu 324.754 {104}2	<input checked="" type="checkbox"/>	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	-0.000186	0.000000	No
			Zn	-0.000041	0.000000	No
			Co	-0.001082	0.000000	No
			Si	0.000016	0.000000	No
			Mn	-0.000087	0.000000	No
			Se	0.000050	0.000000	No
			Sb	0.000069	0.000000	No
			W	0.000000	0.000000	No
			Al	0.000002	0.000000	No
Mn 257.610 {131}	<input checked="" type="checkbox"/>	4	Fe	-0.000098	0.000000	No
			Si	0.000010	0.000000	No
			Ba	0.000004	0.000000	No
Ni 231.604 {446}	<input checked="" type="checkbox"/>	8	Ni	0.000028	0.000000	No
			Fe	0.000026	0.000000	No
			Zn	-0.000013	0.000000	No
			Be	0.000213	0.000000	No
			Co	-0.000220	0.000000	No
			Ti	0.000209	0.000000	No
			Mo	0.000026	0.000000	No
			Cu	0.000050	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	<input checked="" type="checkbox"/>	14	Se	0.000100	0.000000	No
			Mn	0.000152	0.000000	No
			Mo	-0.000188	-0.000003	No
			Ti	-0.000302	0.000000	No
			Fe	-0.000281	0.000000	No
			Zn	0.000044	0.000000	No
			Ca	-0.000003	0.000000	No
			Zr	0.006454	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	-0.002132	0.000000	No
			Al	-0.000002	0.000000	No
V 292.402 {115}	<input checked="" type="checkbox"/>	6	W	-0.000010	0.000000	No
			Ti	0.000689	0.000000	No
			Mo	-0.000304	0.000000	No
			Fe	-0.000003	0.000000	No
			Sr	-0.000100	0.000000	No
			Cr	-0.005182	0.000000	No
Zn 206.200 {464}	<input checked="" type="checkbox"/>	9	Mn	-0.001587	0.000000	No
			Cr	-0.000850	0.000000	No
			Fe	0.000026	0.000000	No
			Si	0.000015	0.000000	No
			Mn	-0.000045	0.000000	No
			Ba	-0.000060	0.000000	No
			Sn	0.000255	0.000000	No
			Cu	0.001248	0.000000	No
			As	0.000055	0.000000	No
As 189.042 {478}	<input checked="" type="checkbox"/>	17	Be	0.000364	0.000000	No
			Al	0.000002	0.000000	No
			Fe	-0.000028	0.000000	No
			Ca	0.000002	0.000000	No
			Mo	0.000486	0.000000	No
			Cr	-0.009669	0.000000	No
			Ba	0.000083	0.000000	No
			Sn	-0.000037	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	0.000000	0.000000	No
			Cu	0.000038	0.000000	No
			Co	-0.000453	0.000000	No
			Zr	0.000036	0.000000	No
			Tl 190.856 {477}	<input checked="" type="checkbox"/>	24	Mn	-0.000080	0.000000	No
S	0.000007	0.000000				No
Cr	0.000209	0.000000				No
Mo	-0.009550	0.000000				No
Al	-0.000006	0.000000				No
Fe	-0.000034	0.000000				No
V	-0.027920	0.000000				No
Mn	0.001626	0.000000				No
Si	-0.000101	0.000000				No
Ca	0.000003	0.000000				No
Ti	-0.002520	0.000000	No			
Mg	-0.000002	0.000000	No			

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Co	0.005062	0.000000	No
			Sr	0.000010	0.000000	No
			B	-0.000003	0.000000	No
			Ba	0.000034	0.000000	No
			Zn	-0.000023	0.000000	No
			As	0.000068	0.000000	No
			W	-0.060000	0.000000	No
			Cu	-0.000049	0.000000	No
			Zr	0.000056	0.000000	No
			Pb	-0.000020	0.000000	No
			S	-0.000158	0.000000	No
			Sn	-0.000086	0.000000	No
			Li	0.000000	0.000000	No
			K	0.000250	0.000000	No
Pb 220.353 (453)	<input checked="" type="checkbox"/>	20	Al	-0.000157	0.000000	No
			Fe	0.000034	0.000000	No
			Ca	0.000003	0.000000	No
			Mn	0.000054	0.000000	No
			Mo	-0.001463	0.000000	No
			Cu	0.000054	0.000000	No
			Co	0.000064	0.000000	No
			Ti	-0.000650	0.000000	No
			Si	0.000133	0.000000	No
			Ba	-0.000022	0.000000	No
			Sb	-0.000200	0.000000	No
			Sr	-0.000033	0.000000	No
			W	-0.005000	0.000000	No
			Mg	0.000002	0.000000	No
			Cd	0.000012	0.000000	No
			Cr	-0.000031	0.000000	No
			Zr	-0.000382	0.000000	No
			Ni	-0.000003	0.000000	No
			S	0.000004	0.000000	No
Se 196.090 (472)	<input checked="" type="checkbox"/>	22	Zn	-0.000106	0.000000	No
			Al	-0.000000	0.000000	No
			Ca	-0.000008	0.000000	No
			Mn	0.000594	0.000000	No
			Mo	0.000050	0.000000	No
			Fe	-0.000145	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	-0.000143	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	0.000108	0.000000	No
			Ba	-0.000046	0.000000	No
			Mg	-0.000006	0.000000	No
			Pb	-0.000011	0.000000	No
			Ni	-0.000100	0.000000	No
			Cr	-0.000024	0.000000	No
			S	-0.000032	0.000000	No
Sb 206.833 (463)	<input checked="" type="checkbox"/>	17	Fe	-0.000008	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Al	-0.000009	0.000000	No
			Ca	-0.000001	0.000000	No
			Ni	-0.000616	0.000000	No
			Cr	0.015550	0.000000	No
			V	-0.003078	0.000000	No
			Zn	-0.000115	0.000000	No
			Mo	0.000491	0.000000	No
			Ti	0.000652	0.000000	No
			Sn	-0.011300	0.000000	No
			Mg	-0.000001	0.000000	No
			Zr	-0.000463	0.000000	No
			Sr	0.000031	0.000000	No
			B	-0.000100	0.000000	No
			Co	0.000049	0.000000	No
			W	0.000000	0.000000	No
			Si	0.000131	0.000000	No
Al 396.152 { 85}	<input checked="" type="checkbox"/>	5	Si	0.000652	0.000000	No
			Ca	0.000018	0.000000	No
			Mo	0.044851	0.000000	No
			Zr	0.005268	0.000000	No
			Ti	-0.000583	0.000000	No
Ca 317.933 {106}	<input checked="" type="checkbox"/>	14	Fe	0.000012	0.000000	No
			W	0.003960	0.000000	No
			Tl	0.004950	0.000000	No
			Be	0.001840	0.000000	No
			Ba	0.003500	0.000000	No
			Cu	-0.000822	0.000000	No
			Cd	0.003700	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}	<input checked="" type="checkbox"/>	10	Si	0.000819	0.000000	No
			Tl	-0.002602	0.000000	No
			Cr	0.002280	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}	<input checked="" type="checkbox"/>	3	Mo	-0.020250	0.000000	No
			W	-0.006578	0.000000	No
			Mn	-0.002445	0.000000	No
K 766.490 { 44}	<input checked="" type="checkbox"/>	11	Fe	-0.000440	0.000000	No
			Al	0.000077	0.000000	No
			Ca	-0.000121	0.000000	No
			Mn	-0.000570	0.000000	No
			Si	-0.003000	0.000000	No
			V	-0.002000	0.000000	No
			Sn	-0.004700	0.000000	No
			Ba	-0.002700	0.000000	No
			Mo	-0.000850	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Cu	-0.000000	0.000000	No
			Ni	-0.010000	0.000000	No
Na 589.592 { 57}	<input checked="" type="checkbox"/>	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}	<input checked="" type="checkbox"/>	1	Mo	0.038137	0.000000	No
Mo 202.030 {467}	<input checked="" type="checkbox"/>	2	Al	-0.000004	0.000000	No
			Fe	-0.000010	0.000000	No
Si 212.412 {459}	<input checked="" type="checkbox"/>	12	Sr	0.000366	0.000000	No
			Ni	0.002092	0.000000	No
			Mo	0.031190	0.000000	No
			V	0.034576	0.000000	No
			Ti	0.002619	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	0.003000	0.000000	No
			W	0.000000	0.000000	No
Sn 189.989 {478}	<input checked="" type="checkbox"/>	4	Ti	-0.002242	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}	<input checked="" type="checkbox"/>	2	Ca	0.000043	0.000000	No
			Si	0.000033	0.000000	No
Ti 334.904 {101}	<input checked="" type="checkbox"/>	3	Cr	0.000189	0.000000	No
			Mo	0.001070	0.000000	No
			Si	0.000035	0.000000	No
Y 360.073 { 94}* Y 371.030 { 91}* Y 224.306 {451}* In 230.606 {446}* W 207.911 {462}	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	None None None None 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	0.009921	0.000000	No
			Sn	0.001300	0.000000	No
			Zr	-0.002570	0.000000	No
			B	0.000009	0.000000	No
			Sb	-0.003000	0.000000	No
			Co	-0.001000	0.000000	No
			Ni	-0.003000	0.000000	No
			Be	-0.001000	0.000000	No
			Se	-0.002600	0.000000	No
			Cu	-0.000138	0.000000	No
			Ti	-0.002600	0.000000	No
Zr 339.198 { 99}	<input checked="" type="checkbox"/>	6	Mo	0.001069	0.000000	No
			Ti	0.000400	0.000000	No
			Fe	-0.000055	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Si	0.000615	0.000000	No
			S	-0.000030	0.000000	No
			Cr	-0.000700	0.000000	No
S 182.034 {485}	<input checked="" type="checkbox"/>	7	Mo	0.000477	0.000000	No
			Al	-0.000095	0.000000	No
			Fe	-0.000018	0.000000	No
			Mn	0.004620	0.000000	No
			W	-0.045000	0.000000	No
			Ca	0.000056	0.000000	No
			Mg	0.000071	0.000000	No
Bi 223.061 {451}	<input checked="" type="checkbox"/>	6	Ti	-0.055180	0.000000	No
			V	-0.001680	0.000000	No
			Co	-0.002380	0.000000	No
			Ca	-0.000002	0.000000	No
			Mg	-0.000000	0.000000	No
			Fe	0.000123	0.000000	No
Li 670.784 {50}	<input checked="" type="checkbox"/>	2	Ca	0.000003	0.000000	No
			Fe	0.000004	0.000000	No
P 177.495 {490}	<input checked="" type="checkbox"/>	1	Mn	-0.006184	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}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.006096	1.576533	0.000000	1.000000
Be 313.042 {108}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.000220	2.115737	0.000000	1.000000
Cd 228.802 {448}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.000877	1.222616	0.000000	1.000000
Co 228.616 {448}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.000313	0.554653	0.000000	1.000000
Cr 267.716 {126}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	-0.000246	0.126690	0.000000	1.000000
Cu 324.754 {104}2	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.007881	0.240264	0.000000	1.000000
Mn 257.610 {131}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.000142	0.774289	0.000000	1.000000
Ni 231.604 {446}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.000290	0.459875	0.000000	1.000000
Ag 328.068 {103}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	-0.000689	0.150401	0.000000	1.000000
V 292.402 {115}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.000251	0.188560	0.000000	1.000000
Zn 206.200 {464}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	-0.000673	1.662223	0.000000	1.000000
As 189.042 {478}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	-0.000027	0.166641	0.000000	1.000000
Tl 190.856 {477}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	-0.000790	0.068426	0.000000	1.000000
Pb 220.353 {453}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	-0.000146	0.194831	0.000000	1.000000
Se 196.090 {472}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.000599	0.136415	0.000000	1.000000
Sb 206.833 {463}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.000484	0.183160	0.000000	1.000000
Al 396.152 { 85}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	-0.000962	0.034776	0.000000	1.000000
Ca 317.933 {106}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.008080	0.069251	0.000000	1.000000
Fe 259.940 {130}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.000039	0.047143	0.000000	1.000000
Mg 279.079 {121}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.000076	0.007683	0.000000	1.000000
K 766.490 { 44}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	-0.000616	0.016212	0.000000	1.000000
Na 589.592 { 57}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	-0.005191	0.071398	0.000000	1.000000
B 208.959 {462}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.002649	0.318245	0.000000	1.000000
Mo 202.030 {467}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	-0.000680	0.686754	0.000000	1.000000
Si 212.412 {459}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.003103	0.234425	0.000000	1.000000
Sn 189.989 {478}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.000060	0.233833	0.000000	1.000000
Sr 407.771 { 83}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.000480	2.708067	0.000000	1.000000
Ti 334.904 {101}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	-0.000122	0.152253	0.000000	1.000000
Y 360.073 { 94}*	6/8/2018 9:10:27	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 371.030 { 91}*	6/8/2018 9:10:27	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 224.306 {451}*	6/8/2018 9:10:27	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
In 230.606 {446}*	6/8/2018 9:10:27	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
W 207.911 {462}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.001594	0.340340	0.000000	1.000000
Zr 339.198 { 99}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	-0.001010	0.423004	0.000000	1.000000
S 182.034 {485}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	-0.006734	0.100367	0.000000	1.000000
Bi 223.061 {451}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	0.000212	0.180780	0.000000	1.000000
Li 670.784 { 50}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	None	-0.001130	0.405524	0.000000	1.000000
P 177.495 {490}	6/8/2018 9:10:27	6/7/2018 22:53:07	Linear	1/Conc	-0.013787	0.210368	0.000000	1.000000

Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MLQ	Status	Reslope		QC Norm	
						Slope	Y-int	Slope factor	Offset
Ba 455.403 { 74}	1.000000	0.000000	0.000499	0.001662	OK	1.000000	0.000000	1	0
Be 313.042 {108}	1.000000	0.000000	0.000134	0.000445	OK	1.000000	0.000000	1	0
Cd 228.802 {448}	1.000000	0.000000	0.000366	0.001221	OK	1.000000	0.000000	1	0
Co 228.616 {448}	1.000000	0.000000	0.000587	0.001956	OK	1.000000	0.000000	1	0
Cr 267.716 {126}	1.000000	0.000000	0.000721	0.002404	OK	1.000000	0.000000	1	0
Cu 324.754 {104}2	1.000000	0.000000	0.000885	0.002951	OK	1.000000	0.000000	1	0
Mn 257.610 {131}	1.000000	0.000000	0.000109	0.000364	OK	1.000000	0.000000	1	0
Ni 231.604 {446}	1.000000	0.000000	0.000810	0.002700	OK	1.000000	0.000000	1	0
Ag 328.068 {103}	1.000000	0.000000	0.000939	0.003131	OK	1.000000	0.000000	1	0
V 292.402 {115}	1.000000	0.000000	0.000845	0.002818	OK	1.000000	0.000000	1	0
Zn 206.200 {464}	1.000000	0.000000	0.000225	0.000751	OK	1.000000	0.000000	1	0
As 189.042 {478}	1.000000	0.000000	0.001874	0.006247	OK	1.000000	0.000000	1	0
Tl 190.856 {477}	1.000000	0.000000	0.003130	0.010433	OK	1.000000	0.000000	1	0
Pb 220.353 {453}	1.000000	0.000000	0.002949	0.009829	OK	1.000000	0.000000	1	0
Se 196.090 {472}	1.000000	0.000000	0.002886	0.009620	OK	1.000000	0.000000	1	0
Sb 206.833 {463}	1.000000	0.000000	0.002672	0.008906	OK	1.000000	0.000000	1	0
Al 396.152 { 85}	1.000000	0.000000	0.017785	0.059284	OK	1.000000	0.000000	1	0
Ca 317.933 {106}	1.000000	0.000000	0.005077	0.016922	OK	1.000000	0.000000	1	0
Fe 259.940 {130}	1.000000	0.000000	0.003842	0.012808	OK	1.000000	0.000000	1	0
Mg 279.079 {121}	1.000000	0.000000	0.030226	0.100754	OK	1.000000	0.000000	1	0
K 766.490 { 44}	1.000000	0.000000	0.072032	0.240107	OK	1.000000	0.000000	1	0
Na 589.592 { 57}	1.000000	0.000000	0.016194	0.053980	OK	1.000000	0.000000	1	0
B 208.959 {462}	1.000000	0.000000	0.001097	0.003656	OK	1.000000	0.000000	1	0
Mo 202.030 {467}	1.000000	0.000000	0.000625	0.002083	OK	1.000000	0.000000	1	0
Si 212.412 {459}	1.000000	0.000000	0.002083	0.006942	OK	1.000000	0.000000	1	0
Sn 189.989 {478}	1.000000	0.000000	0.001266	0.004220	OK	1.000000	0.000000	1	0
Sr 407.771 { 83}	1.000000	0.000000	0.000193	0.000642	OK	1.000000	0.000000	1	0
Ti 334.904 {101}	1.000000	0.000000	0.000843	0.002809	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	0.002466	0.008221	OK	1.000000	0.000000	1	0
Zr 339.198 { 99}	1.000000	0.000000	0.000427	0.001423	OK	1.000000	0.000000	1	0
S 182.034 {485}	1.000000	0.000000	0.003217	0.010724	OK	1.000000	0.000000	1	0
Bi 223.061 {451}	1.000000	0.000000	0.003592	0.011972	OK	1.000000	0.000000	1	0
Li 670.784 { 50}	1.000000	0.000000	0.002809	0.009364	OK	1.000000	0.000000	1	0
P 177.495 {490}	1.000000	0.000000	0.001533	0.005109	OK	1.000000	0.000000	1	0

Sample Name: STDA Acquired: 6/8/2018 12:04:12 Type: Cal
Method: Accutest XPress(v426) 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	.0063	.0004	.0003	.0001	-.0001	.0059	.0001	.0003	-.0006
Stddev	.0011	.0000	.0002	.0000	.0000	.0001	.0000	.0000	.0000
%RSD	17.33	2.965	57.46	25.93	50.05	2.067	13.10	17.17	1.219
#1	.0056	.0004	.0002	.0001	-.0001	.0060	.0001	.0003	-.0006
#2	.0071	.0004	.0004	.0001	-.0001	.0058	.0001	.0002	-.0006
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	-.0005	-.0004	.0002	-.0000	.0001	-.0009	.0076
Stddev	.0000	.0002	.0004	.0000	.0003	.0001	.0001	.0002	.0002
%RSD	9.685	137.1	69.95	4.265	117.3	281.8	278.4	21.20	2.772
#1	.0002	-.0003	-.0003	-.0004	.0000	.0000	.0002	-.0008	.0077
#2	.0002	-.0000	-.0008	-.0004	.0004	-.0001	-.0001	-.0011	.0074
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	-.0002	-.0014	.0028	.0025	-.0005	.0016	.0003	-.0003
Stddev	.0001	.0001	.0008	.0005	.0001	.0001	.0000	.0000	.0003
%RSD	45.21	30.83	54.13	19.49	5.526	18.80	1.886	7.173	102.4
#1	.0002	-.0002	-.0009	.0024	.0024	-.0004	.0016	.0003	-.0005
#2	.0003	-.0001	-.0020	.0032	.0026	-.0005	.0016	.0003	-.0001
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S		
Avg	-.0000	.0005	-.0007	-.0030	.0001	.0012	-.0124		
Stddev	.0000	.0001	.0002	.0000	.0002	.0017	.0001		
%RSD	31.83	17.67	22.89	1.232	127.1	142.2	4.171		
#1	-.0000	.0006	-.0009	-.0030	.0000	.0023	-.0124		
#2	-.0000	.0005	-.0006	-.0030	.0003	-.0000	-.0124		

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Sample Name: STDA Acquired: 6/8/2018 12:04:12 Type: Cal
Method: Accutest XPress(v426) 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	114690	15993	5922.1	9176.8
Stddev	262	100	33.5	34.1
%RSD	.22804	.62405	.56600	.37188
#1	114500	15922	5945.8	9200.9
#2	114870	16063	5898.4	9152.7

Raw Data MA44616 page 2 of 159

Sample Name: STDb Acquired: 6/8/2018 12:07:14 Type: Cal
Method: Accutest XPress(v426) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6.719	8.706	4.107	2.429	4.921	9.353	2.932	1.932	0.702
Stddev	.033	.033	.018	.010	.0025	.0015	.042	.007	.0003
%RSD	.4898	.3762	.4290	.4231	.4996	.1629	1.438	.3672	.4942
#1	6.696	8.683	4.095	2.422	4.903	.9342	2.902	1.927	.0699
#2	6.742	8.730	4.120	2.436	4.938	.9364	2.962	1.937	.0704
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	.7431	5.188	44.14	30.66	8.195	3.188	5.629	2.896	5.576
Stddev	.0053	.026	.0017	.0008	.0033	.0011	.0020	.020	.038
%RSD	.7078	.5071	.3803	.2673	.4047	.3552	.3614	.7058	.6874
#1	.7393	5.169	44.02	30.60	8.171	3.180	.5614	2.882	5.548
#2	.7468	5.206	44.26	30.72	8.218	3.196	.5643	2.911	5.603
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	3.781	6.055	1.374	6.045	9.143	2.697	1.912	8.547	11.42
Stddev	.020	.0036	.013	.040	.0027	.011	.010	.0040	.07
%RSD	.5351	.5895	.9361	.6628	.2952	.4176	.5010	.4628	.6556
#1	3.767	.6030	1.365	6.017	9.124	2.689	1.905	.8519	11.37
#2	3.796	.6080	1.383	6.074	9.162	2.705	1.918	.8575	11.47
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	.6152	1.349	1.759	2076	6.076	1.721	.4937		
Stddev	.0033	.006	.009	.0008	.0023	.010	.0018		
%RSD	.5445	.4599	.5401	.3868	.3813	.5967	.3595		
#1	.6128	1.345	1.752	2071	6.060	1.714	.4924		
#2	.6176	1.353	1.765	2082	6.092	1.728	.4950		

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Sample Name: STDb Acquired: 6/8/2018 12:07:14 Type: Cal
Method: Accutest XPress(v426) 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	114410	16179	5707.4	8591.5
Stddev	612	34	12.7	14.9
%RSD	.53512	.21071	.22290	.17380
#1	114840	16203	5716.4	8602.0
#2	113980	16155	5698.4	8580.9

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Sample Name: CCVCONF Acquired: 6/8/2018 12:10:23 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.072	2.079	2.032	2.058	2.029	1.981	2.092	2.066	2.520
Stddev	.005	.001	.022	.017	.012	.012	.014	.018	.0012
%RSD	.2515	.0635	1.075	.8127	.6096	.6211	.6513	.8583	.4665
#1	2.068	2.078	2.017	2.047	2.020	1.972	2.082	2.054	2.512
#2	2.076	2.080	2.048	2.070	2.037	1.989	2.101	2.079	2.528

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value Range

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.020	2.066	2.030	2.094	2.064	2.038	2.040	41.03	41.44
Stddev	.013	.023	.022	.010	.015	.021	.023	.23	.24
%RSD	.6526	1.122	1.063	.4849	.7133	1.023	1.129	.5682	.5880
#1	2.011	2.050	2.014	2.087	2.054	2.023	2.024	40.86	41.27
#2	2.030	2.082	2.045	2.101	2.074	2.052	2.057	41.19	41.61

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value Range

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.53	41.48	40.96	41.40	2.048	2.050	5.109	2.062	2.067
Stddev	.19	.25	.43	.25	.016	.020	.055	.024	.011
%RSD	.4557	.6126	1.049	.6115	.7660	.9678	1.067	1.167	.5099
#1	41.40	41.31	40.66	41.22	2.037	2.036	5.071	2.045	2.059
#2	41.66	41.66	41.27	41.57	2.059	2.064	5.148	2.079	2.074

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value Range

Sample Name: CCVCONF Acquired: 6/8/2018 12:10:23 Type: QC
 Method: Accutest XPress(v426) 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	2.016	2.023	2.023	2.002	2.049	2.054	2.032
Stddev	.012	.027	.014	.025	.018	.014	.022
%RSD	.6042	1.326	.6777	1.249	.8890	.6931	1.084
#1	2.008	2.004	2.013	1.985	2.036	2.044	2.017
#2	2.025	2.042	2.033	2.020	2.062	2.064	2.048

Check ? Chk Pass 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	113550.	15720.	5702.3	8603.0
Stddev	40.	14.	21.3	4.8
%RSD	.03559	.09085	.37280	.05617
#1	113580.	15710.	5717.4	8606.4
#2	113520.	15730.	5687.3	8599.6

Sample Name: CCBCONF Acquired: 6/8/2018 12:13:14 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.008	.0000	.0000	-0.0000	-0.0007	-0.0007	-0.0000	-0.0002	.0009
Stddev	.0002	.0001	.0003	.0002	.0006	.0003	.0000	.0001	.0004
%RSD	21.67	322.4	2566.	2371.	84.27	48.99	186.7	50.99	50.65
#1	-0.009	.0001	.0002	.0001	-0.010	-0.009	-0.000	-0.001	.0012
#2	-0.007	-0.000	-0.002	-0.001	-0.003	-0.004	.000	-0.002	.0006

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 High Limit Low Limit

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.008	-0.001	.0002	.0000	-0.0002	.0008	.0007	-0.0036	.0010
Stddev	.0003	.0000	.0001	.0010	.0013	.0022	.0009	.0071	.0074
%RSD	33.59	58.68	32.15	3553.	729.7	272.3	117.4	196.6	710.6
#1	-0.006	-0.000	.0001	-0.007	-0.011	-0.008	.0014	.0014	.0063
#2	-0.010	-0.001	.0002	.0007	.0007	.0024	.0001	-0.0086	-0.042

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	-0.0034	.0522	-0.0266	-0.018	-0.004	.0002	.0027	-0.0004	.0002
Stddev	.0018	.0058	.0356	.0080	.0003	.0002	.0016	.0004	.0000
%RSD	54.00	11.14	133.8	449.3	80.18	110.1	60.43	117.5	11.83
#1	-0.021	.0563	-0.014	-0.075	-0.002	.0000	.0015	-0.001	.0002
#2	-0.047	.0481	-0.0518	.0039	-0.007	.0003	.0039	-0.007	.0002

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 High Limit Low Limit

Sample Name: CCBCONF Acquired: 6/8/2018 12:13:14 Type: QC
 Method: Accutest XPress(v426) 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	.0005	.0004	.0023	-0.0003	.0021	.0023
Stddev	.0000	.0008	.0000	.0001	.0001	.0004	.0002
%RSD	10.44	162.8	5.232	2.823	27.92	20.62	8.591
#1	.0002	.0011	.0005	.0022	-0.002	.0024	.0024
#2	.0002	-0.001	.0004	.0023	-0.003	.0018	.0021

Check ? Chk Pass 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	114770.	16182.	5860.4	9090.1
Stddev	368.	15.	10.0	20.5
%RSD	.32057	.09150	.17083	.22562
#1	114510.	16192.	5853.3	9075.6
#2	115030.	16171.	5867.4	9104.6

Zoom In
Zoom Out

Sample Name: mpcnf Acquired: 6/8/2018 12:16:17 Type: Unk
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	-0.001	-0.000	0.000	0.002	-0.009	0.003	0.000	0.001	0.007
Stddev	.002	.001	.000	.001	.000	.002	.000	.002	.000
%RSD	206.3	368.6	8.287	61.79	2.135	90.79	227.9	278.7	5.554
#1	.0001	-0.000	.000	.001	-.0008	.001	.000	.002	.008
#2	-.0003	-.0001	-.000	-.002	-.0009	-.004	-.000	-.001	-.007
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.001	-0.003	0.004	0.020	-0.005	-0.011	-0.001	-0.004	0.008
Stddev	.003	.000	.002	.020	.003	.011	.009	.0083	.0036
%RSD	351.9	5.702	57.30	101.2	54.04	104.0	597.5	88.65	437.3
#1	-.0001	-.0003	.0006	.0006	-.0003	-.0018	-.0008	-.0153	-.0017
#2	.0003	-.0003	-.002	.0034	-.0007	-.0003	-.0005	-.0035	.0033
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	-0.034	0.364	-1.113	-0.548	-0.048	-0.001	-0.011	-0.015	0.001
Stddev	.012	.0094	.0219	.0046	.013	.001	.009	.002	.001
%RSD	36.82	25.70	19.64	8.466	26.14	97.43	81.69	10.34	45.65
#1	-.0025	.0431	-.0958	-.0515	-.0039	-.000	-.0005	-.0014	.002
#2	-.0042	.0298	-.1267	-.0581	-.0057	-.002	-.0017	-.0016	.001
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	0.005	0.004	0.001	-0.013	0.001	-0.046	0.010		
Stddev	.004	.005	.000	.007	.021	.009	.002		
%RSD	80.57	137.2	11.72	54.66	1432.	20.05	23.21		
#1	.0008	.0008	.001	-.0008	-.0013	-.0039	.0012		
#2	-.0002	-.000	.001	-.0018	.0016	-.0052	.0008		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	114430.	16380.	5989.2	9351.4					
Stddev	1077.	233.	6.6	3.5					
%RSD	.94152	1.4221	.10939	.03692					
#1	115190.	16545.	5984.6	9348.9					
#2	113670.	16216.	5993.9	9353.8					

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Zoom In
Zoom Out

Sample Name: bcnf Acquired: 6/8/2018 12:19:20 Type: Unk
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	2.007	1.978	2.034	2.022	2.024	1.936	2.085	2.038	2.407
Stddev	.029	.020	.006	.006	.003	.005	.005	.004	.0021
%RSD	1.471	.9928	.2783	.2993	.1704	.2827	.2218	.2158	.8755
#1	1.986	1.964	2.030	2.017	2.022	1.932	2.081	2.035	2.392
#2	2.027	1.992	2.038	2.026	2.026	1.940	2.088	2.041	2.422
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	1.985	2.076	1.981	2.117	2.041	2.094	1.989	25.25	25.58
Stddev	.002	.002	.012	.011	.007	.010	.020	.19	.29
%RSD	.1028	.0813	.5794	.5345	.3433	.4873	.9928	.7561	1.143
#1	1.984	2.074	1.972	2.125	2.036	2.087	1.975	25.11	25.37
#2	1.987	2.077	1.989	2.109	2.046	2.101	2.003	25.38	25.79
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	25.53	25.80	25.64	25.74	2.020	1.963	-0.0525	1.948	1.994
Stddev	.24	.23	.43	.35	.009	.009	.002	.002	.028
%RSD	.9247	.9093	1.685	1.377	.4324	.4733	.1972	.0848	1.412
#1	25.36	25.63	25.33	25.49	2.013	1.957	-.0526	1.949	1.974
#2	25.70	25.96	25.94	25.99	2.026	1.970	-.0524	1.947	2.014
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	1.972	1.832	1.967	0.094	0.027	-0.0056	1.985		
Stddev	.004	.005	.003	.006	.007	.004	.006		
%RSD	.1973	.2578	.1689	6.372	3.262	7.640	.3175		
#1	1.969	1.829	1.964	.0098	.0232	-.0053	1.980		
#2	1.974	1.835	1.969	.0090	.0222	-.0060	1.989		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	115410.	16573.	5873.2	8949.0					
Stddev	622.	76.	16.0	16.3					
%RSD	.53878	.46021	.27174	.18250					
#1	114970.	16519.	5861.9	8937.5					
#2	115850.	16626.	5884.5	8960.6					

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Zoom In
Zoom Out

Sample Name: icv Acquired: 6/8/2018 12:22:11 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.999	2.029	1.994	2.067	1.930	1.910	2.036	2.005	2.535
Stddev	.011	.008	.021	.023	.007	.010	.006	.021	.0066
%RSD	.5259	.3987	1.046	1.091	.3589	.5173	.3099	1.036	.2194
#1	1.992	2.023	1.979	2.051	1.925	1.903	2.032	1.990	2.531
#2	2.006	2.035	2.008	2.083	1.935	1.917	2.040	2.020	2.539
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	1.975	2.009	2.070	2.045	2.025	2.099	2.050	39.85	39.09
Stddev	.004	.024	.024	.018	.021	.018	.024	.24	.27
%RSD	.2147	1.199	1.138	.8776	1.021	.8773	1.155	.6075	.6936
#1	1.972	1.992	2.054	2.032	2.011	2.086	2.033	39.68	38.90
#2	1.978	2.026	2.087	2.057	2.040	2.112	2.066	40.02	39.28
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.65	39.34	39.24	40.93	2.068	2.000	5.283	1.988	2.004
Stddev	.18	.33	.44	.33	.019	.022	.068	.025	.013
%RSD	.4663	.8313	1.133	.8015	.9003	1.091	1.291	1.248	.6511
#1	38.52	39.11	38.93	40.70	2.055	1.985	5.235	1.970	1.995
#2	38.78	39.57	39.56	41.16	2.081	2.016	5.331	2.005	2.013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

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Zoom In
Zoom Out

Sample Name: icv Acquired: 6/8/2018 12:22:11 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Avg	1.987	2.117	1.967	2.021	2.038	1.973	2.032		
Stddev	.005	.018	.004	.018	.019	.008	.019		
%RSD	.2421	.8639	.2225	.8973	.9146	.4272	.9319		
#1	1.983	2.104	1.964	2.008	2.025	1.967	2.019		
#2	1.990	2.130	1.971	2.033	2.051	1.979	2.046		
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	114350.	16358.	5719.3	8613.9					
Stddev	528.	19.	9.6	13.7					
%RSD	.46177	.11568	.16811	.15903					
#1	113970.	16371.	5726.1	8623.5					
#2	114720.	16345.	5712.5	8604.2					

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Sample Name: icb Acquired: 6/8/2018 12:25:01 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.004	0.001	0.000	0.002	-0.003	-0.006	0.000	-0.002	0.001
Stddev	.0000	.0000	.0000	.0002	.0003	.0001	.0000	.0002	.0002
%RSD	4.315	3.739	127.9	125.3	102.1	8.321	2599.	88.87	273.3

Check ? 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	-0.001	-0.001	0.008	-0.000	-0.009	-0.002	0.009	-0.153	-0.007
Stddev	.0003	.0000	.0002	.0005	.0007	.0020	.0009	.0215	.0013
%RSD	247.5	42.91	28.60	109.7	80.78	808.1	100.5	140.3	199.2

Check ? 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	-0.003	0.267	0.082	-0.045	-0.023	0.009	0.016	0.002	0.000
Stddev	.0008	.0080	.0133	.0015	.0007	.0004	.0011	.0001	.0000
%RSD	22.86	29.93	163.0	32.52	30.48	41.50	67.63	26.21	88.49

Check ? High Limit Low Limit

Sample Name: icb Acquired: 6/8/2018 12:25:01 Type: QC
 Method: Accutest XPress(v426) 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	0.007	F_0189	0.010	0.004	0.007	-0.010	0.023
Stddev	.0004	.0010	.0001	.0019	.0006	.0004	.0000
%RSD	56.42	5.242	6.230	430.3	88.28	36.01	1.479

Check ? High Limit Low Limit

Int. Std. Units	Y_3600	Y_3710	Y_2243	In2306
Cts/S	118000.	16811.	5988.1	9243.1
Avg	199.	69.	18.2	24.8
Stddev	.16835	.41308	.30345	.26777

Check ? High Limit Low Limit

Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	117860.	16761.	5975.3	9225.6
Stddev	118140.	16860.	6001.0	9260.6

Sample Name: ccv Acquired: 6/8/2018 12:28:06 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.985	1.983	2.025	2.053	2.035	1.983	2.086	2.062	2.513
Stddev	.008	.008	.000	.004	.021	.029	.026	.001	.0032
%RSD	.4027	.4140	.0178	.1934	1.010	1.469	1.262	.0680	1.261

Check ? Value Range

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.017	2.051	2.023	2.092	2.058	2.030	2.035	39.23	39.56
Stddev	.028	.002	.001	.001	.002	.005	.003	.11	.20
%RSD	1.364	.0830	.0657	.0275	.1030	.2459	.1676	.2890	.4967

Check ? 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	39.61	39.71	39.07	39.53	2.039	2.048	5.093	2.052	1.988
Stddev	.21	.05	.28	.19	.003	.001	.001	.006	.007
%RSD	.5299	.1271	.7081	.4734	.1400	.0332	.0114	.2878	.3384

Check ? Value Range

Sample Name: ccv Acquired: 6/8/2018 12:28:06 Type: QC
 Method: Accutest XPress(v426) 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	2.012	2.027	2.023	2.000	2.050	1.960	2.032
Stddev	.027	.001	.025	.005	.003	.013	.001
%RSD	1.338	.0364	1.251	.2568	.1253	.6364	.0698

Check ? Value Range

Int. Std. Units	Y_3600	Y_3710	Y_2243	In2306
Cts/S	112790.	16530.	5687.3	8564.5
Avg	83.	15.	41.1	51.8
Stddev	.07398	.08994	.72260	.60439

Check ? Value Range

Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	112730.	16519.	5658.2	8527.9
Stddev	112850.	16541.	5716.3	8601.1

Sample Name: ccb Acquired: 6/8/2018 12:30:56 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.007	0.000	-0.001	0.001	-0.006	-0.004	0.000	0.002	0.006
Stddev	.0000	.0001	.0001	.0001	.0002	.0002	.0000	.0004	.0004
%RSD	3.782	574.0	84.36	105.0	26.97	44.80	185.8	252.0	73.99
#1	-0.007	0.001	-0.000	0.002	-0.008	-0.003	-0.000	0.005	0.008
#2	-0.007	-0.000	-0.001	0.000	-0.005	-0.006	0.001	-0.001	0.003

Check ? 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	-0.005	-0.001	0.000	-0.008	-0.014	0.004	0.009	0.009	0.000
Stddev	.0001	.0001	.0007	.0018	.0019	.0012	.0009	.0026	.0014
%RSD	31.36	68.89	1603.	217.4	137.2	299.8	102.1	304.9	4733.
#1	-0.006	-0.000	-0.005	-0.020	-0.000	-0.004	.0015	.0027	.0010
#2	-0.004	-0.001	0.006	0.004	-0.028	0.012	0.002	-0.010	-0.009

Check ? 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	-0.020	0.201	-0.0209	-0.166	-0.029	0.004	0.017	-0.007	0.001
Stddev	.0012	.0253	.0128	.0005	.0001	.0002	.0009	.0009	.0000
%RSD	61.51	125.4	61.02	2.949	5.028	53.97	55.37	127.5	26.70
#1	-0.011	0.380	-0.119	-0.170	-0.028	0.006	0.010	-0.001	0.001
#2	-0.028	0.023	-0.300	-0.163	-0.030	0.003	0.023	-0.014	0.001

Check ? High Limit Low Limit

Sample Name: ccb Acquired: 6/8/2018 12:30:56 Type: QC
 Method: Accutest XPress(v426) 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	-0.002	F_0061	0.006	0.013	-0.012	-0.020	0.025
Stddev	.0004	.0008	.0001	.0005	.0022	.0014	.0003
%RSD	210.6	12.58	22.37	39.79	180.3	69.84	10.35
#1	.0001	.0056	.0007	.0017	.0003	-0.0030	.0023
#2	-0.005	.0067	.0005	.0009	-0.027	-0.010	.0027

Check ? High Limit Low Limit

Int. Std. Units	Y_3600	Y_3710	Y_2243	In2306
Cts/S		Cts/S	Cts/S	Cts/S
Avg	119060.	16660.	6009.4	9258.6
Stddev	143.	29.	14.5	30.9
%RSD	.12007	.17699	.24155	.33353
#1	119160.	16681.	6019.6	9280.4
#2	118960.	16639.	5999.1	9236.7

Sample Name: CRI Acquired: 6/8/2018 12:33:59 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2001	.0019	.0030	0.508	0.093	0.089	0.156	0.102	0.055
Stddev	.0007	.0000	.0001	.0002	.0002	.0003	.0000	.0007	.0001
%RSD	.3512	1.027	3.014	.3359	2.058	3.347	.2575	6.554	1.904
#1	.2006	.0019	.0031	.0507	.0092	.0087	.0155	.0097	.0056
#2	.1996	.0020	.0030	.0509	.0094	.0091	.0156	.0107	.0055

Check ? Value Range

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0.0489	0.205	0.089	0.089	0.028	0.113	0.063	0.1866	5.051
Stddev	.0007	.0001	.0008	.0003	.0014	.0005	.0004	.0009	.021
%RSD	1.378	.5038	9.312	3.259	50.39	4.803	6.734	.4793	.4123
#1	.0484	.0204	.0095	.0091	.0038	.0109	.0060	.1860	5.065
#2	.0494	.0206	.0083	.0087	.0018	.0116	.0066	.1872	5.036

Check ? 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	0.067	5.176	4.935	5.059	0.956	0.206	2.032	0.095	0.098
Stddev	.0030	.010	.052	.001	.0004	.0001	.0019	.0000	.0001
%RSD	3.093	.1936	1.060	.0122	.4295	.5716	.9369	.2159	1.304
#1	.0946	5.183	4.972	5.059	.0959	.0205	.2018	.0095	.0099
#2	.0988	5.169	4.898	5.060	.0953	.0207	.2045	.0095	.0097

Check ? Value Range

Sample Name: CRI Acquired: 6/8/2018 12:33:59 Type: QC
 Method: Accutest XPress(v426) 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	0.098	0.0544	0.017	0.047	0.200	0.0519	0.0528
Stddev	.0003	.0036	.0000	.0000	.0010	.0011	.0010
%RSD	2.760	6.575	.0906	.0022	5.165	2.149	1.801
#1	.0100	.0518	.0118	.0487	.0192	.0511	.0534
#2	.0096	.0569	.0117	.0487	.0207	.0527	.0521

Check ? Value Range

Int. Std. Units	Y_3600	Y_3710	Y_2243	In2306
Cts/S		Cts/S	Cts/S	Cts/S
Avg	117140.	16438.	5887.7	9043.7
Stddev	399.	47.	6.6	13.4
%RSD	.34076	.28615	.11293	.14804
#1	117420.	16405.	5883.0	9034.2
#2	116860.	16472.	5892.4	9053.1

Sample Name: CRID Acquired: 6/8/2018 12:37:01 Type: QC
 Method: Accutest XPress(v426) 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	.0034	.0009	.0009	.0031	.0017	F -.0012	.0031	.0038
Stddev	.0003	.0001	.0000	.0002	.0001	.0003	.0000	.0000
%RSD	7.866	8.082	.0783	7.115	8.210	22.74	.0008	.0286
#1	.0032	.0008	.0009	.0030	.0016	-.0010	.0031	.0038
#2	.0036	.0010	.0009	.0033	.0018	-.0014	.0031	.0038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value						.0020		
Range						-30.00%		
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0007	.0021	.0100	.0021	.0025	F -.0000	.0036	F -.0009
Stddev	.0000	.0001	.0001	.0000	.0009	.0007	.0035	.0003
%RSD	6.624	6.080	1.036	.6623	37.47	2309.	96.18	30.45
#1	.0007	.0020	.0100	.0021	.0018	.0005	.0012	-.0007
#2	.0007	.0022	.0101	.0021	.0031	-.0005	.0061	-.0011
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value	.0020					.0025		.0030
Range	-30.00%					-30.00%		-30.00%
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0846	1.001	-.0020	F .1461	1.943	.9937	-.0042	.0001
Stddev	.0041	.002	.0017	.0085	.005	.0043	.0001	.0003
%RSD	4.864	2.261	84.47	5.813	.2382	4.346	2.521	216.8
#1	.0875	.9992	-.0008	.1521	1.940	.9967	-.0043	.0003
#2	.0817	1.002	-.0032	.1401	1.946	.9906	-.0041	-.0001
Check ?	Chk Pass	Chk Pass	None	Chk Fail	Chk Pass	Chk Pass	None	None
Value				.1000				
Range				30.00%				

Sample Name: CRID Acquired: 6/8/2018 12:37:01 Type: QC
 Method: Accutest XPress(v426) 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	-.0012	.0002	-.0001	-.0002	.0037	.0001	.0030	.0009
Stddev	.0011	.0002	.0000	.0005	.0003	.0002	.0015	.0024
%RSD	94.49	68.01	13.32	289.9	8.658	153.5	49.59	258.2
#1	-.0004	.0001	-.0001	.0002	.0035	-.0000	.0040	.0027
#2	-.0020	.0004	-.0001	-.0005	.0039	.0002	.0019	-.0008
Check ?	None	None	None	None	None	None	None	None
Value								
Range								
Elem	Li6707	P_1774						
Units	ppm	ppm						
Avg	-.0009	.0014						
Stddev	.0010	.0012						
%RSD	111.6	85.11						
#1	-.0017	.0005						
#2	-.0002	.0022						
Check ?	None	None						
Value								
Range								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	119240.	16841.	6093.6	9367.8				
Stddev	57.	73.	14.8	11.2				
%RSD	.04744	.43325	.24328	.11933				
#1	119280.	16790.	6083.2	9359.9				
#2	119200.	16893.	6104.1	9375.7				

Sample Name: ICSA Acquired: 6/8/2018 12:40:05 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	-.0001	.0004	.0003	.0002	-.0006	-.0006	-.0005	.0030
Stddev	.0001	.0000	.0002	.0002	.0004	.0004	.0001	.0002	.0002
%RSD	4.924	53.66	47.58	50.20	216.2	72.56	8.824	43.36	8.076
#1	.0011	-.0001	.0003	.0002	.0005	-.0009	-.0007	-.0007	.0028
#2	.0010	-.0000	.0006	.0005	-.0001	-.0003	-.0006	-.0004	.0032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0005	-.0015	-.0034	.0057	.0068	-.0004	537.9	401.8
Stddev	.0004	.0003	.0014	.0002	.0000	.0070	.0035	4.7	5.8
%RSD	25.03	59.69	91.35	6.701	.3956	102.7	831.4	.8646	1.450
#1	.0012	.0003	-.0005	-.0035	.0057	.0019	-.0029	541.2	397.7
#2	.0018	.0007	-.0025	-.0032	.0057	.0117	.0020	534.6	405.9
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	195.2	520.8	.1224	.0054	-.0065	.0005	-.0010	-.0049	-.0027
Stddev	.3	2.2	.0221	.0041	.0014	.0002	.0003	.0005	.0003
%RSD	.1298	.4244	18.03	75.61	20.99	30.47	30.36	9.463	11.32
#1	195.1	519.2	.1068	.0082	-.0074	.0004	-.0012	-.0052	-.0025
#2	195.4	522.4	.1380	.0025	-.0055	.0006	-.0008	-.0046	-.0029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Sample Name: ICSA Acquired: 6/8/2018 12:40:05 Type: QC
 Method: Accutest XPress(v426) 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	.0088	-.0028	-.0263	.0019	.0003	.0059
Stddev	.0004	.0017	.0001	.0001	.0010	.0010	.0003
%RSD	22.26	19.35	2.382	.3332	54.67	293.7	5.669
#1	-.0022	.0076	-.0028	-.0263	.0026	.0011	.0062
#2	-.0016	.0100	-.0028	-.0262	.0011	-.0004	.0057
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	106470.	15226.	5316.5	7899.0			
Stddev	931.	26.	1.1	6.1			
%RSD	.87404	.17040	.02083	.07735			
#1	105810.	15208.	5315.7	7903.3			
#2	107130.	15244.	5317.3	7894.7			

Sample Name: ICSAB Acquired: 6/8/2018 12:43:11 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4963	4810	9958	4856	4785	4973	5020	9586	1.022
Stddev	.0132	.0113	.0054	.0025	.0023	.0041	.0035	.0073	.008
%RSD	2.657	2.345	.5390	.5243	.4768	.8218	.7050	.7631	.8169
#1	.4870	.4730	.9920	.4838	.4769	.4944	.4995	.9534	1.016
#2	.5056	.4890	.9996	.4874	.4801	.5002	.5045	.9638	1.028

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4906	9456	1.038	1.027	9562	1.046	1.025	521.5	392.9
Stddev	.0036	.0058	.007	.008	.0021	.004	.002	2.7	18.0
%RSD	.7273	.6158	.7170	.7482	.2209	.3748	.1887	.5162	4.578
#1	.4881	.9415	1.033	1.022	.9547	1.043	1.027	519.6	380.2
#2	.4932	.9497	1.043	1.033	.9577	1.049	1.024	523.4	405.6

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	200.3	511.8	-.1488	-.0081	4916	4866	.5056	4648	5.137
Stddev	4.6	12.3	.0498	.0117	.0033	.0039	.0000	.0010	.0131
%RSD	2.297	2.399	33.47	144.1	.6742	.8000	.0011	.2135	2.550
#1	197.1	503.1	.1136	.0002	4892	4838	.5056	.4641	5.045
#2	203.6	520.4	.1840	-.0164	4939	4893	.5056	.4655	5.230

Check ? Value Range
 Chk Pass Chk Pass None None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

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Sample Name: ICSAB Acquired: 6/8/2018 12:43:11 Type: QC
 Method: Accutest XPress(v426) 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	4946	4855	4721	4692	5112	5101	5027
Stddev	.0045	.0011	.0046	.0016	.0039	.0158	.0037
%RSD	.0909	.2328	.9648	.3425	.7577	3.103	.7412
#1	.4914	.4863	.4689	.4680	.5085	.4989	.5001
#2	.4978	.4847	.4754	.4703	.5140	.5213	.5054

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Int. Std. Units	Y_3600	Y_3710	Y_2243	In2306
Cts/S				
Avg	109090.	15641.	5454.2	8110.8
Stddev	360.	231.	5.3	3.9
%RSD	.33016	1.4770	.09788	.04827
#1	108830.	15804.	5450.4	8108.0
#2	109340.	15478.	5458.0	8113.5

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Sample Name: HSTD 2 Acquired: 6/8/2018 12:46:13 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.104	5.063	5.072	5.131	5.163	5.019	5.219	5.178	6.189
Stddev	.040	.030	.023	.025	.017	.009	.039	.026	.0001
%RSD	.7762	.5987	.4487	.4967	.3345	.1726	.7385	.5125	.0135
#1	5.076	5.032	5.056	5.113	5.176	5.025	5.192	5.159	6.188
#2	5.132	5.074	5.088	5.149	5.151	5.013	5.246	5.197	6.190

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.046	5.276	5.031	5.236	5.204	5.067	5.108	-0.164	-1.183
Stddev	.008	.029	.032	.010	.030	.026	.024	.0087	.0019
%RSD	.1610	.5587	.6387	.1870	.5703	.5150	.4692	53.22	1.639
#1	5.052	5.255	5.008	5.229	5.183	5.048	5.091	-.0225	-.1169
#2	5.041	5.297	5.054	5.243	5.225	5.085	5.125	-.0102	-.1197

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass None None

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.183	0.057	0.1353	0.0058	5.054	5.127	26.80	5.206	5.118
Stddev	.0001	.0381	.0083	.0037	.025	.028	.16	.030	.039
%RSD	.5753	68.42	6.154	64.37	4.892	.5458	.6097	.5688	.7610
#1	-.0182	.0288	.1294	.0032	5.036	5.107	26.69	5.185	5.091
#2	-.0183	.0827	.1412	.0085	5.071	5.147	26.92	5.227	5.146

Check ? Value Range
 None None None None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

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Sample Name: HSTD 2 Acquired: 6/8/2018 12:46:13 Type: QC
 Method: Accutest XPress(v426) 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	5.071	5.157	5.044	48.19	5.151	5.129	5.021
Stddev	.001	.029	.010	.18	.030	.047	.024
%RSD	.0240	.5549	.2000	.3758	.5852	.9066	.4834
#1	5.071	5.137	5.051	48.07	5.130	5.096	5.004
#2	5.072	5.177	5.037	48.32	5.172	5.161	5.039

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Int. Std. Units	Y_3600	Y_3710	Y_2243	In2306
Cts/S				
Avg	116730.	16461.	5907.1	9195.6
Stddev	809.	133.	3.3	8.6
%RSD	.69309	.80869	.05655	.09301
#1	116160.	16555.	5904.7	9189.5
#2	117300.	16366.	5909.5	9201.6

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Sample Name: HSTD Acquired: 6/8/2018 12:49:09 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Units, Avg, Stddev, %RSD. Rows include Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280.

#1, #2 rows with numerical data for each element.

Check ? Value Range
None None None None None None None None None

Table with columns: Elem, Units, Avg, Stddev, %RSD. Rows include V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179.

#1, #2 rows with numerical data for each element.

Check ? Value Range
None None None None None None None Chk Pass Chk Pass

Table with columns: Elem, Units, Avg, Stddev, %RSD. Rows include Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077.

#1, #2 rows with numerical data for each element.

Check ? Value Range
Chk Pass Chk Pass Chk Pass Chk Pass None None None None None

Sample Name: HSTD Acquired: 6/8/2018 12:49:09 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Units, Avg, Stddev, %RSD. Rows include Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774.

#1, #2 rows with numerical data for each element.

Check ? Value Range
None None None None None None None None

Table with columns: Int. Std. Units, Cts/S, Avg, Stddev, %RSD. Rows include Y_3600, Y_3710, Y_2243, In2306.

#1, #2 rows with numerical data for each element.

Sample Name: FECONF Acquired: 6/8/2018 12:52:07 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Units, Avg, Stddev, %RSD. Rows include Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280.

#1, #2 rows with numerical data for each element.

Table with columns: Elem, Units, Avg, Stddev, %RSD. Rows include V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179.

#1, #2 rows with numerical data for each element.

Table with columns: Elem, Units, Avg, Stddev, %RSD. Rows include Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077.

#1, #2 rows with numerical data for each element.

Table with columns: Elem, Units, Avg, Stddev, %RSD. Rows include Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774.

#1, #2 rows with numerical data for each element.

Table with columns: Int. Std. Units, Cts/S, Avg, Stddev, %RSD. Rows include Y_3600, Y_3710, Y_2243, In2306.

#1, #2 rows with numerical data for each element.

Sample Name: CRCONF Acquired: 6/8/2018 12:55:09 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Units, Avg, Stddev, %RSD. Rows include Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280.

#1, #2 rows with numerical data for each element.

Table with columns: Elem, Units, Avg, Stddev, %RSD. Rows include Ag3280, V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068.

#1, #2 rows with numerical data for each element.

Table with columns: Elem, Units, Avg, Stddev, %RSD. Rows include Al3961, Ca3179, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020.

#1, #2 rows with numerical data for each element.

Table with columns: Elem, Units, Avg, Stddev, %RSD. Rows include Si2124, Sn1899, Sr4077, Ti3349, W_2079, Zr3391, S_1820, Bi2230.

#1, #2 rows with numerical data for each element.

Table with columns: Elem, Units, Avg, Stddev, %RSD. Rows include Li6707, P_1774.

#1, #2 rows with numerical data for each element.

Sample Name: CRCONF Acquired: 6/8/2018 12:55:09 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	119080.	16782.	6005.6	9415.7
Stddev	772.	17.	88.7	123.1
%RSD	.64840	.09948	1.4768	1.3076
#1	119630.	16794.	5942.9	9328.7
#2	118540.	16771.	6068.3	9502.8

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Sample Name: ASCONF Acquired: 6/8/2018 12:58:12 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	-0.002	-0.001	-0.008	-0.001	-0.002	-0.013	-0.000	-0.000	-0.005
Stddev	.004	.001	.001	.001	.004	.002	.000	.004	.003
%RSD	153.1	142.8	6.952	157.6	201.3	13.89	726.1	6136.	64.24
#1	.0000	-.0002	-.0008	.0000	.0001	-.0014	.0000	.0003	.0003
#2	-.0005	.0000	-.0009	-.0002	-.0005	-.0012	-.0000	-.0003	.0008
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	-0.001	.010	5.074	-0.002	-0.005	-0.006	.003	-0.063	-0.0480
Stddev	.003	.002	.080	.007	.014	.008	.003	.0096	.0009
%RSD	367.5	18.85	1.573	310.1	269.4	151.4	81.88	152.4	1.795
#1	-.0003	.0008	5.018	.0003	-.0015	-.0011	.0005	.0005	-.0474
#2	.0001	.0011	5.131	-.0007	.0005	.0000	.0001	-.0131	-.0486
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	-0.045	.0285	-0.794	-0.469	-0.058	.002	.0117	-0.000	.002
Stddev	.035	.0123	.0605	.050	.005	.000	.010	.000	.001
%RSD	77.89	43.10	76.24	10.74	8.403	19.19	8.870	10.24	26.82
#1	-.0070	.0198	-.1222	-.0504	-.0062	.0003	.0110	-.0000	.0002
#2	-.0020	.0372	-.0366	-.0433	-.0055	.0002	.0125	-.0000	.0002
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	.0001	.0016	.0001	.0034	-0.007	-0.022	.0014		
Stddev	.002	.0012	.0001	.0003	.0026	.0013	.0016		
%RSD	184.5	71.97	178.3	9.544	352.1	59.89	113.6		
#1	.0002	.0025	-.0000	.0032	-.0026	-.0031	.0025		
#2	-.0000	.0008	.0001	.0036	.0011	-.0013	.0003		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	120050.	16501.	6174.7	9489.6					
Stddev	872.	56.	12.9	15.5					
%RSD	.72597	.33840	.20848	.16317					
#1	119430.	16461.	6183.8	9500.6					
#2	120660.	16540.	6165.6	9478.7					

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Sample Name: CCV Acquired: 6/8/2018 13:01:14 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem Units	Ba4554 ppm	Be3130 ppm	Cd2288 ppm	Co2286 ppm	Cr2677 ppm	Cu3247 ppm	Mn2576 ppm	Ni2316 ppm	Ag3280 ppm
Avg	1.974	1.962	1.929	1.971	1.947	1.886	2.003	1.985	2.401
Stddev	.009	.015	.015	.020	.002	.007	.002	.017	.0006
%RSD	.4819	.7667	.7779	.9936	.1149	.3818	.0907	.8566	.2470
#1	1.981	1.973	1.918	1.957	1.946	1.881	2.001	1.973	2.397
#2	1.968	1.952	1.940	1.984	1.949	1.891	2.004	1.997	2.405

Check ? Value Range
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem Units	V_2924 ppm	Zn2062 ppm	As1890 ppm	Tl1908 ppm	Pb2203 ppm	Se1960 ppm	Sb2068 ppm	Al3961 ppm	Ca3179 ppm
Avg	1.928	1.977	1.944	2.021	1.986	1.958	1.938	39.01	39.35
Stddev	.004	.019	.020	.016	.020	.015	.018	.23	.14
%RSD	.2257	.9421	1.009	.7982	.9805	.7440	.9153	.5861	.3558
#1	1.925	1.964	1.931	2.010	1.972	1.947	1.925	39.17	39.45
#2	1.931	1.990	1.958	2.033	2.000	1.968	1.950	38.85	39.25

Check ? Value Range
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem Units	Fe2599 ppm	Mg2790 ppm	K_7664 ppm	Na5895 ppm	B_2089 ppm	Mo2020 ppm	Si2124 ppm	Sn1899 ppm	Sr4077 ppm
Avg	39.32	39.68	38.72	39.38	1.954	4.859	1.961	1.977	
Stddev	.21	.23	.13	.13	.014	.017	.042	.018	.005
%RSD	.5287	.5763	.3310	.3317	.7053	.8903	.8622	.9080	.2461
#1	39.47	39.85	38.63	39.47	1.939	4.830	1.948	1.980	
#2	39.18	39.52	38.81	39.29	1.959	4.889	1.974	1.973	

Check ? Value Range
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

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Sample Name: CCV Acquired: 6/8/2018 13:01:14 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem Units	Ti3349 ppm	W_2079 ppm	Zr3391 ppm	S_1820 ppm	Bi2230 ppm	Li6707 ppm	P_1774 ppm		
Avg	1.931	1.932	1.928	1.919	1.951	1.940	1.950		
Stddev	.001	.013	.004	.010	.015	.013	.014		
%RSD	.0432	.6602	.2057	.5414	.7590	.6776	.7330		
#1	1.930	1.923	1.926	1.911	1.941	1.949	1.940		
#2	1.931	1.941	1.931	1.926	1.961	1.931	1.960		

Check ? Value Range
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Int. Std.	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S					
Avg	115970.	16184.	5912.2	8852.0					
Stddev	1165.	230.	6.0	4.8					
%RSD	1.0042	1.4226	.10206	.05417					
#1	115140.	16021.	5907.9	8848.6					
#2	116790.	16347.	5916.5	8855.4					

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Sample Name: CCB Acquired: 6/8/2018 13:04:05 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.004	-0.001	-0.001	-0.001	-0.008	-0.004	-0.000	0.002	0.005
Stddev	.0003	.0000	.0001	.0003	.0003	.0003	.0002	.0000	.0001
%RSD	98.81	43.03	43.58	221.4	34.71	64.57	793.8	9.361	24.55
#1	-0.001	-0.000	-0.001	.0003	-0.009	-0.006	-0.001	.0002	.0006
#2	-0.006	-0.001	-0.002	-0.001	-0.006	-0.002	.0001	.0001	.0004

Check ? High Limit Low Limit
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.005	-0.002	0.010	0.001	0.001	0.014	0.013	-0.001	-0.020
Stddev	.0005	.0000	.0011	.0000	.0015	.0006	.0003	.0001	.0043
%RSD	95.98	18.44	107.9	40.50	1648.	41.31	21.60	2.212	220.7
#1	-0.002	-0.002	.018	.0000	-0.010	.0010	.0015	-0.002	-0.050
#2	-0.008	-0.002	.002	.0001	.0012	.0018	.0011	-0.006	.0011

Check ? High Limit Low Limit
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.037	0.283	-0.118	-0.522	-0.040	0.001	0.021	-0.004	0.001
Stddev	.0015	.0034	.0277	.0140	.0006	.0001	.0009	.0003	.0000
%RSD	40.48	11.88	233.9	26.73	14.80	56.71	41.19	72.21	33.63
#1	-0.027	.0307	-0.314	-0.621	-0.035	.0002	.0015	-0.002	.0002
#2	-0.048	.0259	.0077	-0.424	-0.044	.0001	.0027	-0.006	.0001

Check ? High Limit Low Limit
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: CCB Acquired: 6/8/2018 13:04:05 Type: QC
 Method: Accutest XPress(v426) 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	0.001	0.032	0.003	-0.002	0.008	-0.031	0.017
Stddev	.0004	.0000	.0001	.0027	.0014	.0026	.0014
%RSD	386.8	1.070	50.40	1308.	178.7	82.63	80.81
#1	-0.002	.0031	.0004	.0017	.0017	-0.050	.0026
#2	.0004	.0032	.0002	-0.021	-0.002	-0.013	.0007

Check ? High Limit Low Limit
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	116470.	16101.	5958.2	9173.4
Stddev	577.	20.	1.9	1.3
%RSD	49570	12491	03107	01387
#1	116880.	16087.	5959.5	9172.5
#2	116060.	16116.	5956.9	9174.3

Sample Name: crid Acquired: 6/8/2018 13:07:09 Type: QC
 Method: Accutest XPress(v426) 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	0.038	0.010	0.010	0.033	0.014	F - 0.004	0.033	0.038
Stddev	.0000	.0000	.0000	.0003	.0004	.0005	.0001	.0002
%RSD	.3931	3.942	4.264	8.748	28.52	104.4	2.262	4.184
#1	.0038	.0009	.0011	.0035	.0017	-0.008	.0033	.0037
#2	.0038	.0010	.0010	.0031	.0011	-0.001	.0034	.0039

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail -0.020 -30.00% Chk Pass Chk Pass

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 0.010	0.015	0.0105	0.032	0.017	F - 0.003	0.045	F 0.003
Stddev	.0010	.0000	.0002	.0004	.0014	.0002	.0008	.0023
%RSD	102.1	.4090	1.462	11.85	85.05	70.17	18.34	692.3
#1	.0017	.0015	.0107	.0030	.0027	-0.002	.0039	.0020
#2	.0003	.0015	.0104	.0035	.0007	-0.005	.0051	-0.013

Check ? Value Range
 Chk Fail -0.020 Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail -0.025 -30.00% Chk Pass Chk Fail -0.030 -30.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.022	1.085	0.007	F 1.476	2.057	1.037	-0.049	-0.001
Stddev	.0029	.009	.0016	.0048	.033	.001	.0005	.0001
%RSD	2.814	.8371	232.5	3.261	1.609	.0476	9.254	141.9
#1	.1002	1.079	.0019	.1442	2.081	1.037	-0.046	.0000
#2	.1042	1.092	-0.005	.1510	2.034	1.038	-0.052	-0.001

Check ? Value Range
 Chk Pass Chk Pass None Chk Fail -0.1000 30.00% Chk Pass Chk Pass None None

Sample Name: crid Acquired: 6/8/2018 13:07:09 Type: QC
 Method: Accutest XPress(v426) 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	-0.010	-0.000	0.000	0.002	0.003	0.003	0.011	-0.004
Stddev	.0001	.0002	.0000	.0004	.0005	.0001	.0017	.0014
%RSD	9.976	866.0	489.8	223.2	169.9	37.00	154.3	321.8
#1	-0.011	.0001	.0000	-0.001	-0.001	.0003	-0.001	.0005
#2	-0.009	-0.001	-0.000	.0004	.0006	.0002	.0022	-0.014

Check ? Value Range
 None None None None None None None None

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	-0.006	0.015
Stddev	.0007	.0004
%RSD	119.2	23.59
#1	-0.001	.0018
#2	-0.011	.0013

Check ? Value Range
 None None

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	114780.	16090.	5999.7	9225.0
Stddev	468.	130.	134.6	190.1
%RSD	.40737	.81072	2.2429	2.0605
#1	115110.	16183.	5904.6	9090.6
#2	114450.	15998.	6094.9	9359.4

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Zoom In
Zoom Out

Sample Name: mp7494-mb1 2
Method: Accutest XPress(v426)
User: admin
Comment:

Acquired: 6/8/2018 13:10:11
Type: Unk
Mode: CONC
Corr. Factor: 1.000000
Custom ID1:
Custom ID2:
Custom ID3:

Table with 10 columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Rows include Avg, Stddev, %RSD, #1, #2 for multiple elements and Int. Std. Avg, Stddev, %RSD for Y_3600, Y_3710, Y_2243, In2306.

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Zoom In
Zoom Out

Sample Name: mp7494-b1
Method: Accutest XPress(v426)
User: admin
Comment:

Acquired: 6/8/2018 13:13:14
Type: Unk
Mode: CONC
Corr. Factor: 1.000000
Custom ID1:
Custom ID2:
Custom ID3:

Table with 10 columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Rows include Avg, Stddev, %RSD, #1, #2 for multiple elements and Int. Std. Avg, Stddev, %RSD for Y_3600, Y_3710, Y_2243, In2306.

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Zoom In
Zoom Out

Sample Name: mp7494-s1
Method: Accutest XPress(v426)
User: admin
Comment:

Acquired: 6/8/2018 13:16:03
Type: Unk
Mode: CONC
Corr. Factor: 2.000000
Custom ID1:
Custom ID2:
Custom ID3:

Table with 10 columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Rows include Avg, Stddev, %RSD, #1, #2 for multiple elements and Int. Std. Avg, Stddev, %RSD for Y_3600, Y_3710, Y_2243, In2306.

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Zoom In
Zoom Out

Sample Name: mp7494-s2
Method: Accutest XPress(v426)
User: admin
Comment:

Acquired: 6/8/2018 13:18:57
Type: Unk
Mode: CONC
Corr. Factor: 2.000000
Custom ID1:
Custom ID2:
Custom ID3:

Table with 10 columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Rows include Avg, Stddev, %RSD, #1, #2 for multiple elements and Int. Std. Avg, Stddev, %RSD for Y_3600, Y_3710, Y_2243, In2306.

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Sample Name: jc67085-2 Acquired: 6/8/2018 13:30:52 Type: Unk
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	115910.	16284.	5916.9	8785.4
Stddev	561.	53.	8.3	20.3
%RSD	.48435	.32622	.14010	.23075
#1	115510.	16247.	5922.8	8799.7
#2	116300.	16322.	5911.1	8771.1

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Sample Name: ccv Acquired: 6/8/2018 13:33:53 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.039	2.025	1.970	2.012	2.004	1.948	2.055	2.031	2.463
Stddev	.001	.004	.013	.013	.005	.008	.008	.010	.0006
%RSD	.0671	.2031	.6497	.6448	.2313	.4266	.4061	.4757	.2563
#1	2.038	2.028	1.961	2.003	2.001	1.942	2.049	2.024	2.459
#2	2.040	2.022	1.979	2.021	2.007	1.954	2.061	2.038	2.468

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	1.978	2.018	1.983	2.054	2.030	1.995	1.986	40.55	40.94
Stddev	.010	.011	.009	.011	.011	.010	.013	.10	.10
%RSD	.5017	.5387	.4568	.5284	.5496	.5016	.6584	.2371	.2389
#1	1.971	2.010	1.977	2.046	2.022	1.988	1.976	40.62	41.01
#2	1.985	2.026	1.989	2.062	2.038	2.002	1.995	40.48	40.87

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value Range

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.73	41.24	40.32	40.78	1.989	2.001	4.958	2.001	2.048
Stddev	.11	.16	.01	.04	.014	.011	.030	.012	.001
%RSD	.2678	.3775	.0221	.0859	.6990	.5401	.6117	.6138	.0535
#1	40.81	41.35	40.31	40.76	1.980	1.994	4.936	1.992	2.047
#2	40.65	41.13	40.33	40.81	1.999	2.009	4.979	2.009	2.049

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value Range

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Sample Name: ccv Acquired: 6/8/2018 13:33:53 Type: QC
 Method: Accutest XPress(v426) 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	1.987	1.977	1.984	1.959	1.996	2.002	1.998
Stddev	.010	.013	.009	.011	.013	.001	.011
%RSD	.5255	.6618	.4527	.5451	.6449	.0720	.5270
#1	1.980	1.968	1.977	1.951	1.987	2.003	1.990
#2	1.995	1.987	1.990	1.966	2.005	2.001	2.005

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 Value Range

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	115310.	15904.	5847.3	8744.0
Stddev	413.	127.	10.5	15.2
%RSD	.35802	.80055	.17948	.17427
#1	115020.	15814.	5839.9	8733.2
#2	115600.	15994.	5854.7	8754.8

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Sample Name: ccb Acquired: 6/8/2018 13:36:44 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.003	-0.001	-0.001	-0.001	-0.003	-0.013	.0001	.0003	.0002
Stddev	.0002	.0002	.0001	.0003	.0002	.0001	.0000	.0003	.0001
%RSD	69.82	258.2	125.9	537.6	60.53	10.37	14.36	129.0	68.77
#1	-0.002	.0001	-0.002	.0002	-0.004	-0.014	.0001	.0000	.0001
#2	-0.005	-0.002	-0.000	-0.003	-0.002	-0.012	.0001	.0005	.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	-0.008	-0.002	.0007	-0.011	-0.007	-0.011	.0020	-0.071	-0.020
Stddev	.0001	.0000	.0007	.0006	.0004	.0009	.0008	.0238	.0026
%RSD	10.04	23.50	98.67	56.50	54.12	83.94	40.94	334.9	130.1
#1	-0.009	-0.002	.0002	-0.016	-0.010	-0.018	.0026	.0097	-0.002
#2	-0.008	-0.002	.0012	-0.007	-0.004	-0.005	.0014	-0.0240	-0.038

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	-0.022	.0512	-0.1090	-0.523	-0.049	.0002	.0026	-0.0006	.0001
Stddev	.0021	.0064	.0322	.0232	.0005	.0001	.0005	.0000	.0002
%RSD	94.72	12.54	29.51	44.41	9.297	36.10	19.77	2.745	102.1
#1	-0.007	.0466	-.1317	-0.359	-0.053	.0002	.0022	-0.0006	.0000
#2	-0.037	.0557	-0.862	-0.687	-0.046	.0001	.0030	-0.0006	.0003

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 High Limit Low Limit

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Sample Name: ccb Acquired: 6/8/2018 13:36:44 Type: QC
 Method: Accutest XPress(v426) 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	.0025	.0004	.0003	.0007	-.0010	.0027
Stddev	.0000	.0017	.0000	.0007	.0010	.0020	.0002
%RSD	16.74	70.40	7.743	219.2	142.1	191.5	7.152

#1	.0001	.0012	.0004	.0008	.0014	-.0025	.0026
#2	.0001	.0037	.0003	-.0002	-.0000	.0004	.0029

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
 High Limit
 Low Limit

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	119240.	16590.	6073.4	9321.3
Stddev	320.	181.	2.2	5.2
%RSD	.26854	1.0888	.03687	.05581

#1	119470.	16718.	6075.0	9325.0
#2	119020.	16463.	6071.8	9317.6

Sample Name: jc67085-3 Acquired: 6/8/2018 13:39:47 Type: Unk
 Method: Accutest XPress(v426) 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
Avg	.0914	-.0001	.0116	.0804	.0025	.0347	7.326	.0890	.0004
Stddev	.0001	.0001	.0000	.0006	.0003	.0005	.035	.0011	.0010
%RSD	.1119	145.3	.0842	.7922	11.98	1.304	.4788	1.242	231.7

#1	.0914	-.0001	.0116	.0799	.0027	.0344	7.301	.0882	.0012
#2	.0915	.0000	.0116	.0808	.0023	.0350	7.350	.0898	-.0003

Elem V_2924 Zn2062 As1890 Ti1908 Pb2203 Se1960 Sb2068 Al3961 Ca3179
 Avg .0081 .1463 .0001 -.0002 .0079 .0028 -.0030 2.786
 Stddev .0007 .0010 .0003 .0003 .0017 .0004 .0048 .016 .36
 %RSD 8.625 .7036 223.6 152.0 21.95 15.73 160.9 .5722 4585

#1	.0086	.1456	.0003	-.0004	.0067	.0031	-.0064	2.775	78.99
#2	.0076	.1470	-.0001	.0000	.0091	.0025	.0004	2.797	79.50

Elem Fe2599 Mg2790 K_7664 Na5895 B_2089 Mo2020 Si2124 Sn1899 Sr4077
 Avg 3.201 40.02 3.715 94.47 .0410 .0004 17.05 .0152 .1434
 Stddev .005 .10 .190 .83 .0012 .0001 .11 .0017 .0005
 %RSD .1585 .2385 5.104 .8805 2.835 27.23 .6703 11.47 .3816

#1	3.204	39.95	3.581	93.89	.0401	.0003	16.96	.0139	.1430
#2	3.197	40.09	3.849	95.06	.0418	.0004	17.13	.0164	.1438

Elem Ti3349 W_2079 Zr3391 S_1820 Bi2230 Li6707 P_1774
 Avg .0739 .0016 -.0047 87.82 .0032 .0014 .2539
 Stddev .0004 .0020 .0000 .54 .0002 .0024 .0050
 %RSD .5835 129.4 .4519 .6094 5.242 173.5 1.961

#1	.0736	.0030	-.0047	87.44	.0031	-.0003	.2504
#2	.0742	.0001	-.0047	88.20	.0033	.0030	.2575

Int. Std. Y_3600 Y_3710 Y_2243 In2306
 Avg 119620. 16564. 6035.1 9000.0
 Stddev 557. 56. 22.3 17.0
 %RSD .46553 .33653 .36917 .18867

#1	119230.	16525.	6019.3	8988.0
#2	120020.	16604.	6050.8	9012.0

Sample Name: jc67085-5 Acquired: 6/8/2018 13:42:52 Type: Unk
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0298	.0002	.0042	.0727	.0026	.2636	3.757	.0495	.0007
Stddev	.0000	.0001	.0001	.0014	.0002	.0014	.016	.0007	.0003
%RSD	.1521	33.93	1.417	1.930	7.985	.5295	.4316	1.456	46.91

#1	.0299	.0002	.0042	.0717	.0027	.2626	3.746	.0490	.0009
#2	.0298	.0001	.0043	.0737	.0024	.2645	3.769	.0501	.0004

Elem V_2924 Zn2062 As1890 Ti1908 Pb2203 Se1960 Sb2068 Al3961 Ca3179
 Avg .0036 .1562 -.0008 .0002 .0031 .0034 -.0019 .5109 61.30
 Stddev .0000 .0022 .0017 .0003 .0006 .0012 .0003 .0014 .52
 %RSD 1.124 1.423 222.0 174.7 19.07 35.36 15.53 .2767 .8498

#1	.0036	.1546	.0004	.0004	.0027	.0026	-.0021	.5119	60.93
#2	.0036	.1577	-.0020	-.0000	.0036	.0043	-.0017	.5099	61.67

Elem Fe2599 Mg2790 K_7664 Na5895 B_2089 Mo2020 Si2124 Sn1899 Sr4077
 Avg 2.132 29.84 7.049 83.47 .0379 .0006 15.39 .0114 .1159
 Stddev .010 .26 .159 1.10 .0010 .0005 .21 .0012 .0011
 %RSD .4600 .8752 2.253 1.318 2.667 93.56 1.393 10.24 .9079

#1	2.125	29.66	6.937	82.70	.0372	.0002	15.24	.0105	.1152
#2	2.139	30.03	7.162	84.25	.0386	.0010	15.54	.0122	.1166

Elem Ti3349 W_2079 Zr3391 S_1820 Bi2230 Li6707 P_1774
 Avg .0187 .0016 -.0060 77.40 -.0022 .0015 .8822
 Stddev .0001 .0003 .0000 .95 .0012 .0012 .0125
 %RSD .3860 16.49 .6558 1.224 57.02 78.31 1.414

#1	.0186	.0014	-.0060	76.73	-.0030	.0007	.8734
#2	.0187	.0018	-.0061	78.07	-.0013	.0024	.8910

Int. Std. Y_3600 Y_3710 Y_2243 In2306
 Avg 119920. 16664. 5975.1 8921.3
 Stddev 850. 210. 6.9 8.6
 %RSD .70893 1.2591 .11582 .09642

#1	119320.	16812.	5980.0	8927.4
#2	120520.	16515.	5970.2	8915.2

Sample Name: jc67085-6 Acquired: 6/8/2018 13:45:54 Type: Unk
 Method: Accutest XPress(v426) 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
Avg	.0258	.0009	.0313	.3103	.1117	.0782	29.26	.4333	-.0012
Stddev	.0021	.0008	.0003	.0043	.0025	.0014	.18	.0073	.0012
%RSD	8.147	95.54	1.057	1.384	2.230	1.851	.6280	1.680	100.1

#1	.0273	.0015	.0310	.3073	.1134	.0772	29.13	.4281	-.0021
#2	.0243	.0003	.0315	.3134	.1099	.0792	29.39	.4384	-.0004

Elem V_2924 Zn2062 As1890 Ti1908 Pb2203 Se1960 Sb2068 Al3961 Ca3179
 Avg .0217 .3063 -.0028 -.0109 -.0051 -.0109 .0140 1.455 85.09
 Stddev .0015 .0035 .0143 .0099 .0099 .0227 .0236 .025 .35
 %RSD 6.685 1.144 514.8 90.66 193.5 209.4 168.4 1.707 .4160

#1	.0207	.3038	-.0129	-.0179	-.0121	.0052	.0307	1.473	84.84
#2	.0227	.3088	.0073	-.0039	.0019	-.0269	-.0027	1.438	85.34

Elem Fe2599 Mg2790 K_7664 Na5895 B_2089 Mo2020 Si2124 Sn1899 Sr4077
 Avg 4.281 40.41 41.16 417.6 -.0343 .0025 22.98 .0128 .2190
 Stddev .061 .10 .16 3.4 .0019 .0017 .25 .0001 .0008
 %RSD 1.421 .2562 .3881 .8182 5.645 67.62 1.071 .9026 .3665

#1	4.238	40.49	41.05	415.1	-.0357	.0037	22.81	.0127	.2185
#2	4.324	40.34	41.28	420.0	-.0330	.0013	23.16	.0129	.2196

Elem Ti3349 W_2079 Zr3391 S_1820 Bi2230 Li6707 P_1774
 Avg .0680 .0165 .0041 399.6 .0156 -.0024 3.177
 Stddev .0047 .0025 .0025 4.2 .0024 .0266 .040
 %RSD 6.973 14.92 61.23 1.050 15.55 1131. 1.248

#1	.0647	.0183	.0023	396.6	.0138	-.0212	3.149
#2	.0714	.0148	.0059	402.5	.0173	.0165	3.205

Int. Std. Y_3600 Y_3710 Y_2243 In2306
 Avg 116320. 15969. 5825.9 8837.8
 Stddev 1394. 30. 13.4 14.6
 %RSD 1.1985 .18812 .23017 .16512

#1	117310.	15990.	5816.5	8827.5
#2	115330.	15947.	5835.4	8848.1

Sample Name: jc67085-7 Acquired: 6/8/2018 13:48:55 Type: Unk
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 5.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	.0998	-0.013	.0042	2.326	.0103	.0512	F 141.3	2.220
Stddev	.0048	.0003	.0014	.017	.0000	.0004	1.4	.013
%RSD	4.830	24.35	33.76	.7282	.1967	.7058	.9569	.5932

#1	.0964	-0.016	.0052	2.314	.0103	.0515	140.4	2.210
#2	.1032	-0.011	.0032	2.338	.0103	.0510	142.3	2.229

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	.0067	-0.0590	.8336	F -.0390	.0012	-0.0110	.1849	F -.0153
Stddev	.0034	.0056	.0053	.0023	.0068	.0002	.0019	.0037
%RSD	50.52	9.520	.6396	5.928	585.3	1.910	1.050	24.14

#1	.0043	-0.0550	.8299	-0.0406	.0060	-0.0111	.1835	-0.179
#2	.0090	-0.0629	.8374	-0.0374	-0.0037	-0.1008	.1862	-0.127

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	1.300	139.0	51.61	43.16	485.4	F 499.1	-0.067	-0.077
Stddev	.096	1.7	.77	.50	7.9	130.	.0018	.0006
%RSD	7.346	1.201	1.496	1.157	1.627	2.610	26.26	7.958

#1	1.368	137.8	51.07	42.81	479.8	4899.	-0.080	-0.081
#2	1.233	140.1	52.16	43.51	491.0	5083.	-0.055	-0.073

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	95.12	4856	.5645	.1078	-0.0030	.1100	F 5548.	.0034
Stddev	.41	.0042	.0070	.0022	.0021	.0006	16.	.0086
%RSD	.4261	.8591	1.242	2.083	71.01	.5530	.2903	253.8

#1	94.83	4827	.5596	.1062	-0.0045	.1095	5537.	-0.027
#2	95.40	4886	.5695	.1094	-0.0015	.1104	5560.	.0095

Elem	Li6707	P_1774
Avg	.0888	F 89.29
Stddev	.0041	.69
%RSD	4.578	.7737

#1	.0860	88.81
#2	.0917	89.78

Sample Name: jc67085-7 Acquired: 6/8/2018 13:48:55 Type: Unk
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 5.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	112230.	15794.	5534.6	7935.0
Stddev	504.	178.	14.9	22.2
%RSD	.44898	1.1239	.26862	.28036

#1	112590.	15919.	5524.1	7919.2
#2	111870.	15668.	5545.1	7950.7

Sample Name: jc67085-8 Acquired: 6/8/2018 13:52:09 Type: Unk
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0408	.0001	.0010	.0470	.0254	.0181	1.300	.0576	.0007
Stddev	.0005	.0001	.0002	.0006	.0003	.0004	.011	.0008	.0000
%RSD	1.207	108.5	22.72	1.318	1.347	1.984	.8126	1.471	4.818

#1	.0405	.0000	.0008	.0465	.0252	.0179	1.293	.0570	.0007
#2	.0412	.0002	.0012	.0474	.0256	.0184	1.308	.0582	.0007

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0124	.0499	-0.0010	-0.0013	.0018	-0.0016	-0.0011	7.223	15.61
Stddev	.0003	.0006	.0003	.0012	.0006	.0019	.0009	.033	.14
%RSD	2.335	1.256	33.68	95.66	35.40	116.6	78.90	.4611	.9247

#1	.0122	.0495	-0.0012	-0.0021	.0013	-0.0003	-0.0005	7.199	15.50
#2	.0126	.0504	-0.0007	-0.0004	.0022	-0.0030	-0.0018	7.246	15.71

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	9.428	9.152	13.14	69.93	.0050	.0016	20.74	.3662	.0421
Stddev	.078	.074	.15	.81	.0010	.0002	.29	.0050	.0004
%RSD	.8308	.8133	1.144	1.154	19.57	14.83	1.419	1.353	.9309

#1	9.373	9.100	13.04	69.36	.0043	.0014	20.53	.3627	.0419
#2	9.484	9.205	13.25	70.50	.0056	.0017	20.95	.3697	.0424

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	.3776	.0016	-0.0098	31.38	.0013	.0056	6.797
Stddev	.0028	.0000	.0006	.45	.0009	.0001	.083
%RSD	.7502	1.265	5.964	1.440	65.36	1.985	1.368

#1	.3756	.0017	-0.0094	31.06	.0020	.0056	6.731
#2	.3796	.0016	-0.0103	31.70	.0007	.0057	6.863

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	116290.	16497.	5863.0	8740.0
Stddev	186.	28.	27.0	41.5
%RSD	.16030	.17030	.46116	.47452

#1	116420.	16517.	5882.1	8769.3
#2	116160.	16477.	5843.8	8710.6

Sample Name: jc67085-9 Acquired: 6/8/2018 13:55:05 Type: Unk
 Method: Accutest XPress(v426) 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
Avg	.0308	.0008	.0116	.2115	-0.0003	.0465	15.70	.1160	.0028
Stddev	.0007	.0007	.0001	.0038	.0005	.0006	.03	.0013	.0020
%RSD	2.170	88.59	.6827	1.781	162.0	1.377	.2114	1.111	73.53

#1	.0303	.0003	.0115	.2088	-0.0007	.0461	15.68	.1151	.0042
#2	.0312	.0012	.0117	.2142	.0000	.0470	15.73	.1169	.0013

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0135	.3976	.0044	-0.0012	.0015	.0105	-0.0059	2.287	102.8
Stddev	.0021	.0040	.0024	.0035	.0004	.0138	.0032	.020	.2
%RSD	15.29	1.010	53.17	284.6	24.14	131.5	54.76	.8783	.1659

#1	.0120	.3947	.0061	-0.0037	.0017	.0202	-0.0036	2.301	102.7
#2	.0149	.4004	.0028	-0.0013	.0012	.0007	-0.0082	2.273	102.9

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	10.90	53.55	51.01	388.9	.0264	.0008	26.42	.0208	.2357
Stddev	.04	.04	.39	2.6	.0031	.0002	.18	.0005	.0004
%RSD	.3600	.0772	.7675	.6571	11.87	25.40	.6641	2.389	.1557

#1	10.87	53.58	50.73	387.1	.0241	.0007	26.29	.0204	.2354
#2	10.92	53.52	51.29	390.7	.0286	.0010	26.54	.0211	.2359

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	.0156	.0054	-0.0054	330.4	-0.0079	.0120	3.467
Stddev	.0003	.0031	.0004	1.8	.0002	.0023	.029
%RSD	1.980	57.17	7.145	.5586	2.190	19.39	.8388

#1	.0154	.0032	-0.0051	329.1	-0.0080	.0137	3.446
#2	.0158	.0076	-0.0056	331.7	-0.0077	.0104	3.487

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	119920.	16610.	6059.2	9078.5
Stddev	210.	76.	3.1	5.4
%RSD	.17532	.45505	.05115	.05907

#1	119770.	16664.	6061.4	9082.3
#2	120060.	16557.	6057.0	9074.7

Sample Name: jc67085-10 Acquired: 6/8/2018 13:58:08 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and multiple rows of data including Avg, Stddev, %RSD, and individual sample results (#1, #2).

Sample Name: jc67085-11 Acquired: 6/8/2018 14:01:11 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and multiple rows of data including Avg, Stddev, %RSD, and individual sample results (#1, #2).

Sample Name: jc67085-12 Acquired: 6/8/2018 14:04:08 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and multiple rows of data including Avg, Stddev, %RSD, and individual sample results (#1, #2).

Sample Name: jc67085-12 Acquired: 6/8/2018 14:04:08 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 5 columns (Int. Std., Y_3600, Y_3710, Y_2243, In2306) and multiple rows of data including Avg, Stddev, %RSD, and individual sample results (#1, #2).

Sample Name: ccv Acquired: 6/8/2018 14:07:12 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.993	1.971	1.936	1.983	1.987	1.930	2.035	2.000	2.444
Stddev	.016	.016	.009	.006	.006	.002	.003	.004	.003
%RSD	.7964	.8249	.4515	.2854	.3057	.1182	.1401	.1744	.1203

#1 1.982 1.960 1.929 1.979 1.991 1.931 2.037 1.997 2.446
#2 2.005 1.983 1.942 1.987 1.982 1.928 2.033 2.002 2.442

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.960	1.978	1.950	2.014	1.997	1.959	1.953	39.30	39.81
Stddev	.003	.006	.006	.005	.006	.009	.007	.36	.39
%RSD	.1617	.3042	.3358	.2394	.2849	.4832	.3747	.9236	.9881

#1 1.962 1.973 1.945 2.011 1.993 1.952 1.948 39.04 39.53
#2 1.957 1.982 1.954 2.018 2.002 1.966 1.958 39.56 40.09

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	39.57	40.10	39.32	39.83	1.949	1.969	4.879	1.964	1.998
Stddev	.35	.30	.43	.38	.011	.009	.019	.011	.018
%RSD	.8879	.7404	1.091	.9414	.5466	.4391	.3956	.5675	.9141

#1 39.32 39.89 39.02 39.57 1.941 1.963 4.866 1.956 1.986
#2 39.81 40.31 39.63 40.10 1.956 1.975 4.893 1.971 2.011

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
Value Range

Sample Name: ccv Acquired: 6/8/2018 14:07:12 Type: QC
Method: Accutest XPress(v426) 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	1.972	1.940	1.968	1.924	1.968	1.950	1.960
Stddev	.000	.007	.003	.010	.009	.018	.009
%RSD	.0215	.3844	.1303	.4984	.4599	.9344	.4825

#1 1.972 1.935 1.970 1.917 1.961 1.937 1.953
#2 1.971 1.945 1.966 1.931 1.974 1.963 1.966

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	117360.	16588.	5994.1	8934.0
Stddev	1304.	59.	9.7	21.9
%RSD	1.1114	.35827	.16221	.24489

#1 116430. 16630. 5987.2 8918.5
#2 118280. 16546. 6001.0 8949.5

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
Value Range

Sample Name: ccb Acquired: 6/8/2018 14:10:55 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.003	-0.000	.002	-0.000	-0.007	-0.009	.000	.000	.005
Stddev	.0005	.0001	.0000	.0001	.0002	.0003	.0000	.0002	.0003
%RSD	182.5	259.8	27.66	338.2	29.27	36.22	95.83	3280.	67.35

#1 -.0001 -.0000 .0001 -.0000 -.0005 -.0011 .0000 .0001 .0002
#2 -.0006 -.0001 -.0002 -.0001 -.0008 -.0006 .0000 -.0001 .0007

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
High Limit Low Limit

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.004	-0.002	.002	.0012	-0.002	-0.005	.007	-0.236	-0.003
Stddev	.0000	.0001	.0010	.0008	.0011	.0017	.0005	.0107	.0012
%RSD	10.57	60.73	423.6	67.72	575.9	363.3	74.86	45.30	448.7

#1 -0.004 -0.003 .0009 .0006 .0006 -0.017 .0010 -0.160 -0.011
#2 -0.003 -0.001 -.0004 .0017 -.0010 .0007 .0003 -0.311 .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	-0.0046	.0512	-0.0554	-0.0475	-0.0053	.0005	.0087	-0.0005	-0.000
Stddev	.0005	.0023	.0031	.0168	.0004	.0003	.0007	.0007	.0001
%RSD	11.96	4.420	5.537	35.31	7.328	52.57	7.565	128.1	198.9

#1 -0.0050 .0528 -0.0532 -0.0594 -0.0050 .0007 .0083 -0.0010 -0.001
#2 -0.0042 .0496 -0.0576 -0.0357 -0.0055 .0003 .0092 -0.0000 .0000

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
High Limit Low Limit

Sample Name: ccb Acquired: 6/8/2018 14:10:55 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0007	.0005	-0.006	.0019	.0001	.0028
Stddev	.0004	.0006	.0001	.0002	.0006	.0012	.0007
%RSD	89.48	89.66	17.76	28.62	28.81	136.1	23.50

#1 .0002 .0011 .0004 -.0008 .0015 .0009 .0033
#2 .0007 .0003 .0005 -.0005 .0023 -.0007 .0023

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
High Limit Low Limit

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	119270.	16638.	5971.6	9178.5
Stddev	1648.	101.	46.0	63.5
%RSD	1.3817	.60938	.77015	.69229

#1 120430. 16710. 6004.1 9223.4
#2 118100. 16567. 5939.0 9133.6

Sample Name: jc67095-1 Acquired: 6/8/2018 14:13:58 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 4 columns (Int. Std, Y_3600, Y_3710, Y_2243, In2306) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 4 columns (Int. Std, Y_3600, Y_3710, Y_2243, In2306) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Sample Name: jc67095-2 Acquired: 6/8/2018 14:17:02 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 4 columns (Int. Std, Y_3600, Y_3710, Y_2243, In2306) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 4 columns (Int. Std, Y_3600, Y_3710, Y_2243, In2306) and 4 rows (Avg, Stddev, %RSD, #1, #2).

133 13

Sample Name: jc67108-18 Acquired: 6/8/2018 14:20:03 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 4 columns (Int. Std, Y_3600, Y_3710, Y_2243, In2306) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 4 columns (Int. Std, Y_3600, Y_3710, Y_2243, In2306) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Sample Name: jc67156-2 Acquired: 6/8/2018 14:23:06 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 4 columns (Int. Std, Y_3600, Y_3710, Y_2243, In2306) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 4 columns (Int. Std, Y_3600, Y_3710, Y_2243, In2306) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Sample Name: jc67110-4 Acquired: 6/8/2018 14:37:40 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.1941	-0.000	.0003	.0007	.0009	.0012	.5613	.0021	.0007
Stddev	.0014	.0000	.0003	.0002	.0000	.0001	.0006	.0004	.0002
%RSD	.7350	321.7	114.9	27.70	3.577	5.959	.1104	17.79	32.54
#1	.1951	.0000	.0005	.0006	.0009	.0013	.5617	.0024	.0005
#2	.1931	-0.000	.0000	.0009	.0009	.0012	.5609	.0018	.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0018	.0037	.0004	.0005	.0159	.0037	.0001	.1234	154.5
Stddev	.0003	.0001	.0003	.0022	.0004	.0014	.0014	.0199	1.1
%RSD	14.30	1.384	69.95	483.5	2.630	38.39	1866.	16.14	.7007
#1	.0016	.0037	.0002	.0020	.0156	.0027	.0011	.1093	155.3
#2	.0020	.0038	.0006	-0.011	.0162	.0047	-0.009	.1375	153.7

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	3.181	115.9	21.96	62.94	4.312	.0023	13.13	-0.0025	1.414
Stddev	.040	.6	.07	.14	.0020	.0001	.09	.0003	.011
%RSD	1.256	.4767	.3402	.2217	.4633	6.248	.7040	11.58	.7520
#1	3.209	116.3	22.01	63.04	4.298	.0022	13.06	-0.0023	1.421
#2	3.152	115.5	21.91	62.85	4.327	.0024	13.19	-0.0027	1.406

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	.0041	.0156	-.0043	55.42	-.0014	.1172	.4581
Stddev	.0001	.0018	.0000	.40	.0011	.0006	.0021
%RSD	1.718	11.88	.0730	.7163	74.67	.5147	.4488
#1	.0040	.0169	-.0043	55.14	-.0022	.1177	.4567
#2	.0041	.0143	-.0043	55.71	-.0007	.1168	.4596

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	114180.	15729.	5716.5	8431.5
Stddev	394.	62.	19.8	31.0
%RSD	.34507	.39118	.34578	.36797
#1	113900.	15773.	5702.5	8409.5
#2	114460.	15686.	5730.5	8453.4

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Sample Name: ccv Acquired: 6/8/2018 14:40:40 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	2.027	2.005	1.966	2.008	1.990	1.927	2.040	2.026	2.445
Stddev	.003	.001	.016	.015	.006	.010	.007	.016	.0003
%RSD	.1263	.0579	.8101	.7650	.2920	.5312	.3452	.7866	.1346
#1	2.025	2.006	1.955	1.997	1.986	1.920	2.035	2.015	2.443
#2	2.029	2.004	1.977	2.019	1.994	1.934	2.045	2.037	2.447

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	1.964	2.011	1.983	2.048	2.025	1.993	1.985	40.29	40.63
Stddev	.010	.012	.014	.016	.017	.016	.011	.12	.09
%RSD	.4990	.5969	.7107	.7682	.8596	.7814	.5500	.3045	.2166
#1	1.957	2.003	1.973	2.037	2.013	1.982	1.977	40.38	40.69
#2	1.970	2.020	1.993	2.060	2.037	2.004	1.993	40.21	40.56

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	40.42	40.93	40.04	40.47	1.987	1.997	4.959	1.992	2.039
Stddev	.12	.12	.01	.14	.014	.014	.040	.013	.002
%RSD	.2933	.2922	.0363	.3476	.7161	.6948	.7978	.6718	.0874
#1	40.50	41.02	40.03	40.37	1.977	1.988	4.931	1.983	2.040
#2	40.33	40.85	40.05	40.57	1.997	2.007	4.987	2.002	2.037

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	114180.	15729.	5716.5	8431.5
Stddev	394.	62.	19.8	31.0
%RSD	.34507	.39118	.34578	.36797
#1	113900.	15773.	5702.5	8409.5
#2	114460.	15686.	5730.5	8453.4

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Sample Name: ccv Acquired: 6/8/2018 14:40:40 Type: QC
Method: Accutest XPress(v426) 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
Avg	1.975	1.969	1.970	1.950	1.994	1.984	1.991
Stddev	.009	.011	.008	.014	.021	.007	.012
%RSD	.4705	.5564	.4198	.6938	1.036	.3627	.6211
#1	1.968	1.962	1.964	1.940	1.980	1.979	1.982
#2	1.981	1.977	1.976	1.960	2.009	1.989	2.000

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	115370.	16069.	5850.9	8745.6
Stddev	418.	27.	8.2	1.9
%RSD	.36208	.16970	.13961	.02007
#1	115080.	16049.	5845.1	8746.8
#2	115670.	16088.	5856.6	8744.3

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Sample Name: ccb Acquired: 6/8/2018 14:43:31 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	-0.004	.0000	-0.001	-0.000	-0.005	-0.003	.0000	-0.001	.0011
Stddev	.0001	.0001	.0001	.0000	.0005	.0000	.0000	.0004	.0002
%RSD	35.44	930.8	209.3	14.90	103.9	7.016	36.49	622.1	17.73
#1	-0.005	.0001	.0000	-0.000	-0.008	-0.003	.0000	.0002	.0009
#2	-0.003	-0.001	-0.001	-0.000	-0.001	-0.003	.0000	-0.003	.0012

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	-0.002	-0.000	.0014	.005	.0007	.0020	.0009	.0027	.0007
Stddev	.0005	.0001	.0003	.0004	.0016	.0021	.0004	.0002	.0005
%RSD	262.4	302.7	24.95	69.97	234.9	108.7	40.84	8.254	881.6
#1	-0.006	-0.001	.0011	.008	-0.005	.0035	.0012	.0028	-0.039
#2	.0002	.0000	.0016	.003	.0019	.0005	.0007	.0025	.0054

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	-0.020	.0424	-0.0650	-0.0531	-0.039	.0003	.0044	-0.0007	.0022
Stddev	.0030	.0044	.0657	.0132	.0000	.0004	.0008	.0000	.0001
%RSD	146.1	10.44	101.1	24.92	.7092	140.3	18.51	.7100	34.59
#1	.0001	.0455	-.1115	-.0437	-.0040	.0006	.0039	-.0007	.0002
#2	-.0041	.0392	-.0186	-.0624	-.0039	.0000	.0050	-.0007	.0002

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Zoom In
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Sample Name: ccb Acquired: 6/8/2018 14:43:31 Type: QC
Method: Accutest XPress(v426) 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	.0035	.0004	-0.004	-0.011	-0.020	.0032
Stddev	.0001	.0000	.0001	.0019	.0011	.0022	.0013
%RSD	17.60	.7036	16.73	523.5	95.75	108.0	39.40

#1	.0007	.0034	.0003	-0.017	-0.004	-0.005	.0023
#2	.0005	.0035	.0004	.0010	-0.019	-0.036	.0041

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
High Limit
Low Limit

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	117580.	16385.	6050.1	9277.9
Stddev	222.	15.	18.3	24.5
%RSD	.18857	.09028	.30201	.26386

#1	117430.	16396.	6037.2	9260.6
#2	117740.	16375.	6063.0	9295.2

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Sample Name: mp7493-sd1 Acquired: 6/8/2018 14:46:34 Type: Unk
Method: Accutest XPress(v426) 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
Avg	.1816	-0.006	-0.003	.0009	-0.022	-0.030	.5589	.0007	.0008
Stddev	.0006	.0004	.0001	.0015	.0008	.0041	.0008	.0005	.0010
%RSD	.3408	62.48	48.57	167.8	36.36	137.7	.1515	69.22	130.3

#1	.1820	-0.008	-0.004	.0019	-0.016	-0.059	.5583	.0011	.0015
#2	.1811	-0.003	-0.002	-0.002	-0.028	-0.001	.5595	.0004	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	-0.021	.0090	.0091	.0006	.0167	-0.030	.0105	.1231	148.4
Stddev	.0000	.0000	.0005	.0026	.0050	.0056	.0053	.0163	1.7
%RSD	1.131	.0042	5.059	446.1	29.95	189.4	50.09	13.25	1.117

#1	-0.021	.0090	.0088	-0.012	.0203	-0.069	.0142	.1346	147.2
#2	-0.020	.0090	.0095	.0024	.0132	.0010	.0068	.1116	149.6

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	3.021	112.2	20.46	59.49	.3961	.0018	12.84	-0.073	1.340
Stddev	.018	.8	.05	.68	.0061	.0007	.12	.0017	.015
%RSD	.5849	.7207	.2371	1.148	1.529	36.67	.9172	23.50	1.097

#1	3.009	111.6	20.43	59.01	.3918	.0023	12.76	-.0085	1.329
#2	3.034	112.8	20.50	59.98	4.004	.0013	12.93	-.0061	1.350

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	.0037	.0207	-0.041	53.82	-0.041	.0898	.4593
Stddev	.0011	.0006	.0006	.50	.0095	.0007	.0080
%RSD	29.07	2.667	15.05	.9223	234.7	.7959	1.742

#1	.0029	.0211	-0.045	53.47	.0027	.0904	.4536
#2	.0044	.0203	-0.037	54.17	-.0108	.0893	.4649

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	116710.	16286.	5910.5	8959.4
Stddev	1126.	139.	8.0	13.1
%RSD	.96461	.85315	.13461	.14636

#1	115910.	16384.	5916.1	8968.6
#2	117500.	16188.	5904.9	8950.1

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Sample Name: jc67003-1 Acquired: 6/8/2018 14:49:33 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0705	-0.001	.0001	.0017	.0051	.0030	.6212	.0030	.0009
Stddev	.0010	.0001	.0002	.0002	.0001	.0007	.0013	.0003	.0004
%RSD	1.465	99.34	138.5	9.095	1.856	24.11	.2159	10.34	41.47

#1	.0698	-0.001	.0003	.0018	.0050	.0025	.6202	.0027	.0011
#2	.0712	-0.000	.0000	.0016	.0051	.0036	.6221	.0032	.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0025	.0319	.0041	.0000	.0077	.0028	.0012	.9528	56.74
Stddev	.0000	.0003	.0002	.0009	.0024	.0026	.0027	.0166	.65
%RSD	1.363	.9260	5.060	3505.	30.77	92.75	232.9	1.737	1.145

#1	.0025	.0317	.0039	-0.006	.0060	.0046	-0.008	.9645	56.28
#2	.0026	.0321	.0042	.0007	.0093	.0010	.0031	.9411	57.20

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	2.748	10.10	1.701	3.265	.0597	.0014	14.95	-0.028	2.265
Stddev	.029	.17	.006	.043	.0002	.0001	.16	.0007	.0027
%RSD	1.059	1.651	.3613	1.308	.3317	9.796	1.045	25.68	1.210

#1	2.727	9.981	1.705	3.235	.0596	.0015	14.84	-0.023	2.245
#2	2.768	10.22	1.697	3.295	.0599	.0013	15.07	-0.033	2.284

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	.0180	.0009	-0.074	24.59	-0.013	.0179	.2506
Stddev	.0001	.0005	.0000	.25	.0001	.0007	.0031
%RSD	.3398	51.13	.4270	.9977	11.44	3.704	1.217

#1	.0180	.0012	-0.074	24.41	-.0014	.0174	.2484
#2	.0179	.0006	-0.074	24.76	-.0012	.0184	.2527

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	118870.	16712.	6026.2	9112.3
Stddev	656.	38.	14.1	24.5
%RSD	.55150	.22708	.23467	.26849

#1	118400.	16685.	6036.2	9129.6
#2	119330.	16739.	6016.2	9095.0

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Sample Name: jc67003-3 Acquired: 6/8/2018 14:55:30 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 3 rows (Avg, Stddev, %RSD) for multiple samples.

Sample Name: jc67003-4 Acquired: 6/8/2018 14:58:30 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 3 rows (Avg, Stddev, %RSD) for multiple samples.

Sample Name: jc67003-5 Acquired: 6/8/2018 15:01:30 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 3 rows (Avg, Stddev, %RSD) for multiple samples.

Sample Name: jc67003-6 Acquired: 6/8/2018 15:04:29 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 3 rows (Avg, Stddev, %RSD) for multiple samples.

Zoom In Zoom Out

Sample Name: jc67003-7 Acquired: 6/8/2018 15:07:30 Type: Unk
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.2420	.0000	.0000	.0010	.0048	.0185	1.158	.0052	.0043
Stddev	.0020	.0000	.0000	.0002	.0002	.0003	.005	.0003	.0004
%RSD	.8261	157.1	34.59	18.71	3.265	1.822	.4221	5.177	8.790
#1	.2406	-.0000	.0001	.0009	.0049	.0182	1.154	.0051	.0046
#2	.2434	.0000	.0000	.0011	.0047	.0187	1.161	.0054	.0041

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0066	.1403	.0084	-.0012	.2064	-.0016	-.0012	1.622	104.8
Stddev	.0005	.0020	.0007	.0009	.0018	.0022	.0006	.018	.3
%RSD	7.635	1.443	8.682	70.48	.8734	144.1	54.43	1.087	.2702
#1	.0070	.1389	.0089	-.0006	.2051	.0000	-.0007	1.610	104.6
#2	.0063	.1417	.0079	-.0019	.2077	-.0031	-.0016	1.635	105.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	17.44	44.17	16.47	11.81	.1472	.0009	14.22	-.0013	6.030
Stddev	.07	.14	.10	.11	.0024	.0001	.14	.0003	.0026
%RSD	.4096	.3080	.5828	.8938	1.637	9.573	.9981	20.75	.4251
#1	17.39	44.07	16.40	11.73	.1455	.0009	14.12	-.0011	.6012
#2	17.49	44.26	16.54	11.88	.1489	.0008	14.32	-.0014	.6049

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	.0455	.0012	-.0072	15.52	-.0004	.0323	.2675
Stddev	.0002	.0015	.0000	.17	.0012	.0001	.0045
%RSD	.5081	123.3	2451	1.107	328.5	.1815	1.675
#1	.0454	.0002	-.0072	15.40	-.0012	.0323	.2643
#2	.0457	.0023	-.0073	15.64	.0005	.0322	.2706

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	115190.	16232.	5802.8	8657.1
Stddev	149.	16.	12.1	17.0
%RSD	.12918	.10128	.20932	.19649
#1	115090.	16220.	5811.4	8669.1
#2	115300.	16244.	5794.2	8645.1

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Sample Name: jc67110-1 Acquired: 6/8/2018 15:10:28 Type: Unk
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0639	-.0001	.0001	.0025	.0028	.0054	.6741	.0053	.0008
Stddev	.0002	.0001	.0001	.0001	.0000	.0001	.0048	.0001	.0001
%RSD	.3165	78.16	42.27	2.942	.6966	2.145	.7154	1.549	12.74
#1	.0638	-.0002	.0001	.0026	.0029	.0055	.6707	.0054	.0007
#2	.0641	-.0001	.0002	.0025	.0028	.0053	.6775	.0053	.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0125	.0562	.0357	-.0007	.0126	.0060	.0024	1.622	104.8
Stddev	.0006	.0007	.0013	.0004	.0002	.0026	.0007	.0135	.8
%RSD	4.884	1.313	3.682	59.47	1.529	43.86	28.87	186.0	.5551
#1	.0129	.0557	.0348	-.0010	.0127	.0041	.0029	.0169	151.2
#2	.0120	.0567	.0366	-.0004	.0124	.0078	.0019	-.0023	152.4

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	9.375	122.4	17.42	15.75	.3573	.0106	13.62	-.0024	1.308
Stddev	.043	.6	.20	.13	.0045	.0003	.17	.0009	.007
%RSD	.4574	.5012	1.147	.8101	1.263	2.658	1.243	40.10	.5352
#1	9.345	121.9	17.28	15.66	.3541	.0108	13.50	-.0030	1.303
#2	9.406	122.8	17.56	15.84	.3605	.0104	13.74	-.0017	1.313

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	-.0006	.0016	-.0064	49.49	-.0024	.0273	.2129
Stddev	.0000	.0013	.0001	.64	.0004	.0006	.0036
%RSD	4.452	77.55	1.252	1.301	16.25	2.189	1.693
#1	-.0006	.0007	-.0063	49.03	-.0027	.0269	.2103
#2	-.0005	.0025	-.0064	49.94	-.0021	.0277	.2154

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	116530.	16253.	5792.6	8584.4
Stddev	264.	59.	18.4	22.2
%RSD	.22693	.36548	.31752	.25909
#1	116720.	16295.	5805.6	8600.2
#2	116340.	16211.	5779.6	8568.7

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Zoom In Zoom Out

Sample Name: ccv Acquired: 6/8/2018 15:13:27 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.024	1.998	1.968	2.010	2.004	1.940	2.046	2.028	2.447
Stddev	.004	.003	.019	.019	.003	.000	.003	.018	.0010
%RSD	.1745	.1589	.9762	.9344	.1286	.0000	.1668	.8975	.4086
#1	2.021	2.000	1.954	1.997	2.006	1.940	2.048	2.015	2.440
#2	2.026	1.995	1.981	2.023	2.002	1.940	2.044	2.041	2.454

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.970	2.008	1.983	2.059	2.029	1.995	1.987	40.15	40.45
Stddev	.001	.016	.018	.008	.019	.025	.015	.01	.05
%RSD	.0694	.8070	.9311	.3703	.9283	1.231	.7684	.0164	.1282
#1	1.971	1.997	1.969	2.053	2.016	1.978	1.976	40.15	40.41
#2	1.969	2.020	1.996	2.064	2.042	2.012	1.998	40.16	40.49

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.30	40.74	39.88	40.27	1.984	1.998	4.946	1.991	2.032
Stddev	.06	.07	.24	.11	.016	.019	.046	.015	.003
%RSD	.1476	.1728	.6109	.2685	.8118	.9509	.9358	.7416	.1326
#1	40.34	40.79	39.70	40.19	1.973	1.985	4.914	1.980	2.030
#2	40.26	40.69	40.05	40.35	1.995	2.012	4.979	2.001	2.034

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	114880.	16027.	5871.4	8758.6
Stddev	822.	105.	1.0	4
%RSD	.71585	.65445	.01694	.00482
#1	114300.	15952.	5870.7	8758.3
#2	115460.	16101.	5872.1	8758.9

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Zoom In Zoom Out

Sample Name: ccv Acquired: 6/8/2018 15:13:27 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.976	1.968	1.978	1.955	1.996	1.973	1.996
Stddev	.003	.018	.000	.018	.019	.003	.018
%RSD	.1676	.9049	.0001	.9365	.9727	.1637	.8815
#1	1.978	1.956	1.978	1.942	1.982	1.971	1.984
#2	1.973	1.981	1.978	1.968	2.010	1.976	2.009

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	114880.	16027.	5871.4	8758.6
Stddev	822.	105.	1.0	4
%RSD	.71585	.65445	.01694	.00482
#1	114300.	15952.	5870.7	8758.3
#2	115460.	16101.	5872.1	8758.9

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Sample Name: ccb Acquired: 6/8/2018 15:16:18 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.004	-0.000	0.001	0.000	-0.005	-0.018	-0.000	-0.001	0.005
Stddev	.0003	.0001	.0001	.0002	.0003	.0002	.0000	.0001	.0006
%RSD	67.21	236.3	102.0	101.8	57.73	9.392	123.8	171.2	119.0

Check ? High Limit Low Limit
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.001	-0.001	0.009	-0.002	-0.004	-0.007	0.010	-0.090	-0.038
Stddev	.0004	.0000	.0011	.0006	.0017	.0011	.0006	.0061	.0005
%RSD	278.0	12.74	132.3	320.3	394.3	157.8	56.78	68.08	13.83

Check ? High Limit Low Limit
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.031	0.017	-0.0699	-0.0590	-0.0060	0.003	0.034	-0.004	0.002
Stddev	.0034	.0171	.0413	.0095	.0009	.0001	.0000	.0004	.0000
%RSD	110.8	40.90	58.98	16.14	14.77	17.43	.8438	102.6	4.919

Check ? High Limit Low Limit
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

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Sample Name: ccb Acquired: 6/8/2018 15:16:18 Type: QC
 Method: Accutest XPress(v426) 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	0.005	0.014	0.004	0.000	-0.003	-0.017	0.024
Stddev	.0001	.0002	.0002	.0012	.0011	.0019	.0002
%RSD	11.11	13.12	47.99	377.6	320.4	112.5	6.270

Check ? High Limit Low Limit
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Int. Std. Units	Y_3600	Y_3710	Y_2243	In2306
Cts/S				
Avg	118550	16421	6107.4	9346.4
Stddev	643.	49.	6.2	.1
%RSD	.54252	.29769	.10119	.00152

#1 118090. 16386. 6103.0 9346.3
 #2 119000. 16455. 6111.7 9346.5

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Sample Name: jc67110-2 Acquired: 6/8/2018 15:19:20 Type: Unk
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0.0521	-0.002	0.003	0.049	0.010	0.077	0.4764	0.105	0.011
Stddev	.0003	.0000	.0001	.0000	.0000	.0002	.0015	.0001	.0002
%RSD	.5035	1.847	28.50	26.41	3.615	2.221	.3102	.6114	18.40

#1 .0520 -0.002 .003 .0049 .0010 .0076 .4754 .0105 .0009
 #2 .0523 -0.002 .002 .0049 .0009 .0078 .4775 .0106 .0012

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0.016	0.0237	0.073	-0.004	0.053	0.037	0.009	0.0875	0.161
Stddev	.0003	.0004	.0013	.0002	.0004	.0009	.0008	.0194	.7
%RSD	21.62	1.524	18.45	50.43	7.371	23.31	96.56	22.20	4044

#1 .0013 .0234 .0082 -0.0003 .0050 .0031 .0003 .1012 160.5
 #2 .0018 .0240 .0063 -0.0006 .0056 .0044 .0015 .0738 161.5

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.915	95.08	11.31	17.08	2.462	0.078	14.42	-0.029	8700
Stddev	.035	.25	.11	.12	.0026	.0003	.15	.0001	.0029
%RSD	.6006	.2663	.9518	.6960	1.057	3.875	1.037	2.948	.3352

#1 5.890 94.90 11.23 17.00 .2444 .0076 14.32 -0.029 8679
 #2 5.941 95.25 11.38 17.17 .2480 .0080 14.53 -0.030 8721

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0.024	0.005	-0.065	53.87	-0.017	0.235	14.171
Stddev	.0000	.0015	.0002	.52	.0008	.0006	.0014
%RSD	.0052	280.2	2.755	.9730	45.31	2.464	1.026

#1 .0024 -0.005 -0.064 53.50 -0.022 .0231 .1361
 #2 .0024 .0016 -0.066 54.24 -0.011 .0239 .1381

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Sample Name: jc67110-3 Acquired: 6/8/2018 15:22:17 Type: Unk
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0.3478	-0.001	0.001	0.008	0.015	0.021	0.3967	0.007	0.009
Stddev	.0012	.0000	.0004	.0001	.0000	.0001	.0031	.0001	.0004
%RSD	.3432	50.82	313.0	18.43	1.892	6.263	.7828	16.27	39.31

#1 .3470 -0.001 -0.001 .0007 .0016 .0022 .3945 .0007 .0012
 #2 .3487 -0.001 .0004 .0009 .0015 .0020 .3989 .0008 .0007

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0.017	0.037	0.072	-0.000	0.048	-0.001	-0.008	0.6746	102.7
Stddev	.0003	.0000	.0002	.0020	.0004	.0001	.0001	.0065	.5
%RSD	18.08	.0107	2.376	5702.	7.878	67.59	15.75	.9573	.5010

#1 .0019 .0037 .0074 -0.0015 .0046 -0.0001 -0.0009 .6792 102.3
 #2 .0015 .0037 .0071 .0014 .0051 -0.0002 -0.0007 .6701 103.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.560	73.68	14.84	47.02	3.088	0.001	10.98	-0.026	9881
Stddev	.003	.27	.20	.25	.0029	.0004	.10	.0003	.0030
%RSD	.0738	.3608	1.341	.5418	.9499	262.6	.8796	11.39	.3015

#1 3.558 73.49 14.70 46.84 .3067 -0.0001 10.91 -0.023 .9860
 #2 3.562 73.87 14.98 47.20 .3109 .0004 11.04 -0.028 .9902

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0.0228	0.025	-0.057	6318	-0.014	1.563	7.263
Stddev	.0004	.0000	.0001	.0081	.0032	.0020	.0068
%RSD	1.755	1.962	2.077	1.281	223.6	1.285	.9398

#1 .0225 .0025 -0.057 6261 -0.037 .1549 .7215
 #2 .0230 .0024 -0.058 6375 .0008 .1578 .7311

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Zoom In
Zoom Out

Sample Name: jc67110-5 Acquired: 6/8/2018 15:25:16 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 10 rows (Avg, Stddev, %RSD, #1, #2, Elem, V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179, #1, #2, Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077, #1, #2, Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774, #1, #2, Int. Std., Y_3600, Y_3710, Y_2243, In2306, Avg, Stddev, %RSD, #1, #2)

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Zoom In
Zoom Out

Sample Name: jc67085-3 Acquired: 6/8/2018 15:28:15 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 10 rows (Avg, Stddev, %RSD, #1, #2, Elem, V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179, #1, #2, Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077, #1, #2, Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774, #1, #2, Int. Std., Y_3600, Y_3710, Y_2243, In2306, Avg, Stddev, %RSD, #1, #2)

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Zoom In
Zoom Out

Sample Name: jc67110-3 Acquired: 6/8/2018 15:33:31 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 10 rows (Avg, Stddev, %RSD, #1, #2, Elem, V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179, #1, #2, Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077, #1, #2, Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774, #1, #2, Int. Std., Y_3600, Y_3710, Y_2243, In2306, Avg, Stddev, %RSD, #1, #2)

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Zoom In
Zoom Out

Sample Name: jc67085-7 Acquired: 6/8/2018 15:36:30 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 100.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 10 rows (Avg, Stddev, %RSD, #1, #2, Elem, V_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179, #1, #2, Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077, #1, #2, Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774, #1, #2, Int. Std., Y_3600, Y_3710, Y_2243, In2306, Avg, Stddev, %RSD, #1, #2)

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Sample Name: sampleconf Acquired: 6/8/2018 15:39:28 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 9 columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316. Rows include Avg, Stddev, %RSD for multiple elements and sample numbers #1 and #2.

Sample Name: sampleconf Acquired: 6/8/2018 15:39:28 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 5 columns: Int. Std., Y_3600, Y_3710, Y_2243, In2306. Rows include Avg, Stddev, %RSD for multiple elements and sample numbers #1 and #2.

Sample Name: cri Acquired: 6/8/2018 15:42:37 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 9 columns: Elem Units, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316. Rows include Avg, Stddev, %RSD, Check ? Value Range, and sample numbers #1 and #2.

Sample Name: cri Acquired: 6/8/2018 15:42:37 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem Units, Si2124, Sn1899, Sr4077, Ti3349, W_2079, Zr3391, S_1820, Bi2230. Rows include Avg, Stddev, %RSD, Check ? Value Range, and sample numbers #1 and #2.

Sample Name: crid Acquired: 6/8/2018 15:45:38 Type: QC
Method: Accutest XPress(v426) 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	.0008	.0009	.0031	.0015	F -.0014	.0030	.0040
Stddev	.0004	.0001	.0002	.0002	.0003	.0005	.0000	.0001
%RSD	8.966	6.523	16.41	5.829	16.27	38.35	.1629	2.119

#1	.0044	.0008	.0010	.0029	.0014	-.0010	.0030	.0041
#2	.0038	.0009	.0008	.0032	.0017	-.0018	.0030	.0039

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value						.0020		
Range						-30.00%		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0004	.0020	.0099	.0037	.0024	F -.0006	F .0028	F .0001
Stddev	.0000	.0003	.0003	.0021	.0000	.0012	.0016	.0013
%RSD	5.717	16.32	2.838	55.73	.0363	208.2	56.66	1157.

#1	.0004	.0018	.0097	.0022	.0024	.0003	.0040	.0011
#2	.0004	.0022	.0101	.0052	.0024	-.0014	.0017	-.0008

Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
Value	.0020					.0025	.0050	.0030
Range	-30.00%					-30.00%	-30.00%	-30.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0880	1.003	-.0030	F .1371	1.923	.9539	-.0085	.0000
Stddev	.0092	.012	.0001	.0437	.017	.0054	.0001	.0003
%RSD	10.45	1.230	4.718	24.77	.8690	5.671	.9856	1602.

#1	.0815	.9941	-.0031	.1611	1.935	.9501	-.0085	-.0002
#2	.0945	1.012	-.0029	.1131	1.911	.9578	-.0086	.0003

Check ?	Chk Pass	Chk Pass	None	Chk Fail	Chk Pass	Chk Pass	None	None
Value				.1000				
Range				30.00%				

Sample Name: crid Acquired: 6/8/2018 15:45:38 Type: QC
Method: Accutest XPress(v426) 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	.0001	-.0000	.0001	.0006	.0004	.0003	.0022	-.0003
Stddev	.0005	.0002	.0001	.0001	.0002	.0001	.0015	.0000
%RSD	736.2	550.8	66.59	18.11	66.83	29.60	69.11	13.51

#1	-.0003	.0001	.0001	.0007	.0002	.0004	.0032	-.0003
#2	.0004	-.0002	.0001	.0005	.0005	.0002	.0011	-.0003

Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	-.0007	.0025
Stddev	.0010	.0022
%RSD	160.8	87.16

#1	.0001	.0040
#2	-.0014	.0010

Check ?	None	None
Value		
Range		

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	121100.	16759.	6164.3	9410.6
Stddev	420.	3.	16.6	16.7
%RSD	.34710	.01514	.26980	.17766

#1	120800.	16758.	6152.5	9398.8
#2	121400.	16761.	6176.0	9422.5

Sample Name: ccv Acquired: 6/8/2018 15:48:42 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.920	1.902	1.912	1.958	1.912	1.854	1.951	1.977	2.352
Stddev	.006	.003	.031	.027	.021	.022	.020	.029	.0029
%RSD	.3047	.1510	1.609	1.395	1.071	1.166	1.034	1.488	1.224

#1	1.916	1.900	1.890	1.939	1.897	1.839	1.937	1.956	2.332
#2	1.924	1.904	1.934	1.977	1.926	1.869	1.966	1.998	2.373

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	1.880	1.957	1.929	2.001	1.974	1.941	1.930	38.12	38.52
Stddev	.020	.033	.029	.025	.031	.030	.032	.05	.07
%RSD	1.036	1.671	1.519	1.235	1.571	1.562	1.668	.1275	.1773

#1	1.866	1.934	1.908	1.983	1.952	1.919	1.907	38.09	38.48
#2	1.893	1.980	1.950	2.018	1.996	1.962	1.953	38.16	38.57

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	38.33	38.92	37.91	38.32	1.929	1.949	4.823	1.936	1.928
Stddev	.01	.10	.28	.25	.031	.030	.082	.029	.008
%RSD	.0377	.2609	.7309	.6416	1.614	1.529	1.707	1.479	.4363

#1	38.34	38.85	37.71	38.15	1.907	1.928	4.765	1.916	1.922
#2	38.32	38.99	38.10	38.50	1.951	1.970	4.882	1.956	1.934

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Sample Name: ccv Acquired: 6/8/2018 15:48:42 Type: QC
Method: Accutest XPress(v426) 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	1.888	1.919	1.886	1.892	1.942	1.876	1.942
Stddev	.022	.030	.020	.032	.028	.009	.030
%RSD	1.183	1.559	1.062	1.664	1.457	.4914	1.558

#1	1.872	1.898	1.871	1.870	1.922	1.870	1.921
#2	1.903	1.940	1.900	1.914	1.962	1.883	1.964

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	118490.	16450.	5951.4	8870.4
Stddev	553.	20.	23.5	28.8
%RSD	.46703	.11870	.39495	.32469

#1	118880.	16436.	5968.0	8890.8
#2	118100.	16464.	5934.8	8850.1

Sample Name: ccb Acquired: 6/8/2018 15:51:33 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 10 columns: Elem, V_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 10 columns: Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Check ? High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: ccb Acquired: 6/8/2018 15:51:33 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 4 columns: Int. Std. Units, Y_3600, Y_3710, Y_2243, In2306. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: jc67108-18 Acquired: 6/8/2018 15:54:45 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 10 columns: Elem, V_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 10 columns: Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 10 columns: Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit
Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: crid Acquired: 6/8/2018 15:57:50 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit
Chk Fail Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Pass

Table with 10 columns: Elem, Ag3280, V_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit
Chk Fail Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Fail

Table with 10 columns: Elem, Al3961, Ca3179, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020. Rows include Units, Avg, Stddev, %RSD, #1, #2.

Check ? High Limit Low Limit
Chk Pass Chk Pass None Chk Fail Chk Pass Chk Pass None None

Check ? High Limit Low Limit
Chk Pass Chk Pass None Chk Fail Chk Pass Chk Pass None None

Sample Name: crid Acquired: 6/8/2018 15:57:50 Type: QC								
Method: Accutest XPress(v426) 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	.0010	-0.002	.0002	-0.000	.0008	.0002	-0.008	-0.011
Stddev	.0001	.0006	.0000	.0000	.0005	.0000	.0031	.0007
%RSD	8.535	284.7	11.53	239.2	65.75	23.05	369.4	69.42
#1	.0011	.0002	.0002	-0.000	.0004	.0001	-0.030	-0.005
#2	.0009	-0.006	.0002	.0000	.0011	.0002	.0014	-0.016
Check ?	None	None	None	None	None	None	None	None
Value Range								
Elem	Li6707	P_1774						
Units	ppm	ppm						
Avg	-0.033	.0034						
Stddev	.0022	.0007						
%RSD	68.95	21.58						
#1	-.0048	.0039						
#2	-.0017	.0029						
Check ?	None	None						
Value Range								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	114050.	15839.	5864.2	8998.4				
Stddev	40.	57.	13.9	26.0				
%RSD	.03473	.35883	.23720	.28920				
#1	114080.	15879.	5854.4	8980.0				
#2	114020.	15799.	5874.0	9016.8				

Sample Name: cri Acquired: 6/8/2018 16:00:54 Type: QC								
Method: Accutest XPress(v426) 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	.1966	.0018	.0029	.0494	.0092	.0085	.0152	.0099
Stddev	.0003	.0000	.0002	.0002	.0001	.0004	.0001	.0003
%RSD	.1511	.5972	7.569	.3481	1.441	4.706	.3484	3.182
#1	.1963	.0018	.0028	.0493	.0093	.0088	.0152	.0097
#2	.1968	.0018	.0031	.0495	.0091	.0083	.0153	.0101
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054	.0487	.0199	.0089	.0089	.0030	.0116	W .0075
Stddev	.0005	.0006	.0000	.0004	.0018	.0005	.0011	.0017
%RSD	9.242	1.261	2.466	4.071	20.04	16.10	9.109	22.81
#1	.0050	.0482	.0200	.0091	.0077	.0034	.0123	.0063
#2	.0057	.0491	.0199	.0086	.0102	.0027	.0108	.0087
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn
Value Range								.0060 20.00%
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1228	5.038	.0946	5.152	4.908	4.975	.0887	.0199
Stddev	.0135	.013	.0014	.017	.002	.002	.0003	.0001
%RSD	7.395	.2518	1.467	.3371	.0495	.0469	.3296	.7144
#1	.1732	5.029	.0956	5.139	4.906	4.976	.0885	.0198
#2	.1923	5.047	.0937	5.164	4.909	4.973	.0889	.0200
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								

Sample Name: cri Acquired: 6/8/2018 16:00:54 Type: QC								
Method: Accutest XPress(v426) 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	.1955	.0084	.0100	.0095	.0488	.0108	.0463	.0215
Stddev	.0013	.0003	.0001	.0002	.0004	.0002	.0011	.0013
%RSD	.6687	3.553	.7464	1.626	.7921	1.489	2.306	5.851
#1	.1945	.0082	.0100	.0096	.0491	.0107	.0456	.0224
#2	.1964	.0086	.0099	.0094	.0485	.0109	.0471	.0206
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								
Elem	Li6707	P_1774						
Units	ppm	ppm						
Avg	.0479	.0519						
Stddev	.0002	.0010						
%RSD	.3516	1.911						
#1	.0480	.0526						
#2	.0478	.0512						
Check ?	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	118730.	16429.	6061.4	9237.7				
Stddev	288.	3.	18.5	14.7				
%RSD	.24226	.01980	.30578	.15922				
#1	118940.	16427.	6048.3	9227.3				
#2	118530.	16432.	6074.5	9248.1				

Sample Name: ccv Acquired: 6/8/2018 16:08:01 Type: QC									
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000									
User: admin	Custom ID1:	Custom ID2:	Custom ID3:						
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.939	1.919	1.879	1.923	1.904	1.853	1.953	1.945	.2347
Stddev	.002	.002	.018	.018	.007	.005	.005	.018	.0013
%RSD	.1074	.0853	.9289	.9256	.3480	.2732	.2753	.9185	.5413
#1	1.938	1.920	1.867	1.910	1.909	1.856	1.956	1.933	.2356
#2	1.941	1.918	1.891	1.935	1.899	1.849	1.949	1.958	.2338
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	1.877	1.924	1.894	1.968	1.943	1.906	1.895	38.44	38.80
Stddev	.008	.019	.019	.016	.017	.017	.019	.01	.01
%RSD	.4065	1.006	1.025	.8135	.8532	.8785	.9912	.0388	.0348
#1	1.883	1.910	1.880	1.956	1.931	1.894	1.882	38.43	38.81
#2	1.872	1.937	1.908	1.979	1.955	1.918	1.908	38.45	38.79
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	38.64	39.14	38.06	38.72	1.899	1.919	4.738	1.901	1.943
Stddev	.03	.12	.27	.13	.020	.016	.051	.019	.004
%RSD	.0764	.2980	.7164	.3456	1.043	.8202	1.079	.9885	.1891
#1	38.67	39.06	37.86	38.62	1.885	1.908	4.702	1.888	1.941
#2	38.62	39.23	38.25	38.81	1.913	1.930	4.774	1.914	1.946
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									

Sample Name: ccv Acquired: 6/8/2018 16:08:01 Type: QC
 Method: Accutest XPress(v426) 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	1.898	1.892	1.886	1.860	1.914	1.898	1.909
Stddev	.005	.016	.007	.024	.017	.003	.020
%RSD	.2924	.8688	.3981	1.280	.8600	.1626	1.027
#1	1.902	1.880	1.891	1.844	1.902	1.895	1.896
#2	1.894	1.903	1.881	1.877	1.925	1.900	1.923

Check ?
Value
Range

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	118510.	16361.	5977.1	8904.7
Stddev	382.	35.	19.8	28.3
%RSD	.32265	.21665	.33167	.31814

#1	118230.	16386.	5991.1	8924.7
#2	118780.	16335.	5963.1	8884.7

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Sample Name: ccb Acquired: 6/8/2018 16:10:50 Type: QC
 Method: Accutest XPress(v426) 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	-0.000	-0.000	-0.000	-0.002	-0.003	-0.007	-0.001	-0.000
Stddev	.0000	.0000	.0000	.0000	.0003	.0004	.0000	.0002
%RSD	149.7	68.27	112.5	17.29	95.62	51.24	26.00	874.8
#1	-0.000	-0.000	-0.000	-0.002	-0.001	-0.010	-0.001	-0.001
#2	-0.001	-0.001	-0.000	-0.002	-0.005	-0.005	.0001	-0.002

Check ?
High Limit
Low Limit

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.002	-0.002	-0.001	.0009	.0015	.0001	-0.004	-0.004
Stddev	.0003	.0002	.0001	.0001	.0008	.0001	.0016	.0003
%RSD	196.7	128.2	63.43	6.765	52.94	94.90	452.8	65.74

#1	-0.004	-0.000	-0.001	.0009	.0020	.0001	-0.015	-0.006
#2	.0001	-0.004	-0.002	.0008	.0009	.0000	.0008	-0.002

Check ?
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	-0.0113	-0.0019	-0.0029	.0365	-0.1169	-0.0604	-0.0072	-0.002
Stddev	.0101	.0034	.0022	.0113	.0033	.0050	.0004	.0002
%RSD	89.57	180.5	78.21	30.99	2.821	8.222	4.910	110.4

#1	-0.041	.0005	-0.045	.0285	-0.1146	-0.0569	-0.074	.0004
#2	-0.184	-0.042	-0.013	.0445	-0.193	-0.0639	-0.069	.0000

Check ?
High Limit
Low Limit

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Sample Name: ccb Acquired: 6/8/2018 16:10:50 Type: QC
 Method: Accutest XPress(v426) 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	.0017	-0.0009	.0003	-0.0002	.0013	.0003	-0.0011	-0.0007
Stddev	.0008	.0000	.0000	.0003	.0010	.0002	.0034	.0011
%RSD	44.76	3.134	3.286	116.1	77.35	58.60	317.0	165.5
#1	.0023	-0.0009	.0003	-0.004	.0006	.0002	-0.0035	-0.0014
#2	.0012	-0.0009	.0002	-0.0000	.0020	.0005	.0013	.0001

Check ?
High Limit
Low Limit

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F -0.040	.0036
Stddev	.0012	.0005
%RSD	30.45	14.73

#1	-0.032	.0032
#2	-0.049	.0040

Check ?
High Limit
Low Limit

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	116270.	16225.	6001.2	9205.9
Stddev	134.	9.	14.6	11.9
%RSD	.11518	.05283	.24336	.12957

#1	116360.	16231.	5990.9	9197.5
#2	116170.	16218.	6011.5	9214.3

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Sample Name: mp7523-mb1conf Acquired: 6/8/2018 16:13:52 Type: Unk
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: 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	.0003	.0003	.0003	.0006	.0009	.0008	.0008	.0003
Stddev	.0004	.0000	.0002	.0002	.0002	.0007	.0000	.0001	.0003
%RSD	56.69	3.998	50.54	70.90	26.53	70.08	.5536	7.636	86.29
#1	.0005	.0003	.0002	.0002	.0005	.0005	.0008	.0008	.0001
#2	.0011	.0003	.0005	.0005	.0007	.0014	.0008	.0007	.0005

Check ?
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	.0132	.0003	-0.0008	.0002	-0.0000	.0016	.0021	.1967
Stddev	.0003	.0001	.0014	.0016	.0009	.0014	.0006	.0212	.0021
%RSD	126.3	.9902	478.6	205.2	364.3	9790.	35.02	78.16	1.057

#1	.0004	.0133	-0.0007	.0004	.0009	-0.0010	.0012	.0421	.1952
#2	.0000	.0131	.0013	-0.0019	-0.004	.0010	.0020	.0121	.1982

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0336	.0730	-0.0946	.0557	-0.0069	.0006	.0575	.0177	.0011
Stddev	.0006	.0067	.0167	.0016	.0001	.0000	.0002	.0002	.0000
%RSD	1.822	9.213	17.61	2.844	1.521	3.202	.3639	1.114	1.894

#1	.0341	.0777	-0.0828	.0546	-0.0068	.0006	.0577	.0178	.0011
#2	.0332	.0682	-0.1064	.0569	-0.0069	.0006	.0574	.0175	.0011

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.0006	.0007	.0130	-0.0004	-0.0015	.0239
Stddev	.0004	.0002	.0001	.0027	.0008	.0003	.0010
%RSD	34.77	25.02	7.421	21.05	215.0	19.30	4.030

#1	.0015	.0007	.0008	.0111	-0.0009	-0.0013	.0245
#2	.0009	.0005	.0007	.0149	.0002	-0.0017	.0232

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	116950.	16310.	5989.1	9170.1
Stddev	95.	133.	7.	15.1
%RSD	.08102	.81346	.01102	.16425

#1	116890.	16404.	5989.6	9159.4
#2	117020.	16216.	5988.6	9180.7

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Zoom In
Zoom Out

Sample Name: jc67300-1.2 Acquired: 6/8/2018 16:16:54 Type: Unk
Method: Accutest XPress(v426) 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
Avg	.3038	.0027	.0042	.0753	.2243	.6622	2.897	.1750	.0023
Stddev	.0002	.0000	.0001	.0001	.0002	.0005	.002	.0009	.0014
%RSD	.0769	1.049	2.685	.1463	.1087	.0827	.0655	.5005	62.26
#1	.3037	.0028	.0043	.0752	.2245	.6626	2.896	.1743	.0033
#2	.3040	.0027	.0041	.0754	.2241	.6618	2.898	.1756	.0013
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.3279	1.161	.1003	.0011	.8338	.0082	.0129	51.00	135.8
Stddev	.0005	.006	.0017	.0023	.0050	.0039	.0065	.02	.2
%RSD	.1431	.5414	1.698	197.5	.6046	47.82	50.49	.0414	.1798
#1	.3283	1.157	.1016	.0027	.8302	.0110	.0175	50.98	135.6
#2	.3276	1.166	.0991	-.0005	.8373	.0054	.0083	51.01	135.9
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	326.2	68.58	4.976	2.207	2.749	.0245	5.657	.0779	2.868
Stddev	.4	.18	.008	.006	.0019	.0005	.029	.0017	.0013
%RSD	.1145	.2640	.1583	.2664	.6787	2.181	.5222	2.178	.4643
#1	326.0	68.46	4.982	2.211	.2735	.0242	5.636	.0767	2.858
#2	326.5	68.71	4.971	2.203	.2762	.0249	5.678	.0791	2.877
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	4.290	.0078	.0358	6.215	.0722	.0782	2.764		
Stddev	.003	.0013	.0003	.049	.0001	.0052	.019		
%RSD	.0604	16.61	.7688	.7886	.1516	6.662	.6758		
#1	4.291	.0069	.0356	6.180	.0721	.0819	2.751		
#2	4.288	.0087	.0360	6.250	.0723	.0745	2.777		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	115780.	16247.	5988.2	9047.2					
Stddev	492.	45.	41.4	54.4					
%RSD	.42525	.27744	.69104	.60176					
#1	115430.	16279.	5959.0	9008.8					
#2	116130.	16215.	6017.5	9085.7					

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Zoom In
Zoom Out

Sample Name: jc66944-1r Acquired: 6/8/2018 16:19:49 Type: Unk
Method: Accutest XPress(v426) 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
Avg	1.458	.0073	-.0005	.1037	2.460	1.947	13.98	.2440	.0005
Stddev	.039	.0004	.0006	.0001	.0035	.0038	.10	.0008	.0017
%RSD	2.676	4.925	122.6	.1060	1.405	1.970	.7294	.3315	367.8
#1	1.430	.0070	-.0008	.1037	2.435	1.920	13.91	.2434	-.0007
#2	1.486	.0075	-.0001	.1036	2.484	1.974	14.05	.2445	.0017
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.2535	.5090	.0323	-.0005	.1035	.0048	-.0012	101.1	130.3
Stddev	.0033	.0030	.0004	.0014	.0047	.0022	.0023	2.2	2.8
%RSD	1.319	.5961	1.121	273.2	4.552	44.94	194.2	2.149	2.111
#1	.2512	.5069	.0326	-.0015	.1001	.0064	.0004	99.59	128.3
#2	.2559	.5112	.0321	.0005	.1068	.0033	-.0028	102.7	132.2
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	237.3	58.28	24.60	1.778	1.082	0.166	6.459	0.202	2.499
Stddev	5.3	1.36	.49	.011	.0005	.0010	.025	.0014	.0064
%RSD	2.235	2.339	1.991	.5928	.4501	6.219	.3920	6.887	2.550
#1	233.6	57.32	24.26	1.771	.1078	.0173	6.441	.0192	2.454
#2	241.1	59.25	24.95	1.786	.1085	.0159	6.477	.0212	2.544
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	2.901	.0011	.0498	3.822	0.0380	0.2626	4.558		
Stddev	.039	.0007	.0004	.0062	.0026	.0073	.021		
%RSD	1.327	60.53	.8317	1.633	6.882	2.791	.4649		
#1	2.874	.0006	.0496	.3778	.0361	.2574	4.543		
#2	2.928	.0016	.0501	.3867	.0398	2.677	4.573		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	119020.	16639.	6102.8	9011.8					
Stddev	789.	130.	5.4	2.5					
%RSD	.66319	.78374	.08920	.02761					
#1	119580.	16731.	6106.7	9013.6					
#2	118460.	16547.	6099.0	9010.1					

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Zoom In
Zoom Out

Sample Name: jc66944-2r Acquired: 6/8/2018 16:22:51 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	1.021	.0042	.0000	.0653	1.1485	1.193	3.993	1.1493	0.022
Stddev	.006	.0001	.0001	.0009	.0007	.0008	.069	.0015	.0000
%RSD	.6293	2.882	548.4	1.307	.5028	.7081	1.734	1.027	.9069
#1	1.017	.0041	-.0001	.0647	1.1480	1.187	3.944	1.1482	.0022
#2	1.026	.0043	.0001	.0659	1.1490	1.199	4.042	1.1504	.0022
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	1.952	3.237	.0184	.0013	.0639	.0019	-.0017	72.17	90.80
Stddev	.0017	.0042	.0011	.0001	.0001	.0016	.0006	.36	.52
%RSD	.8634	1.295	5.798	11.21	.1893	81.25	38.32	.4939	.5752
#1	1.940	3.207	.0177	.0012	.0638	.0008	-.0021	71.91	90.43
#2	1.964	3.267	.0192	.0014	.0640	.0030	-.0012	72.42	91.17
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	155.7	42.08	16.01	1.953	0.0616	0.0066	7.621	0.0181	0.1417
Stddev	.7	.17	.15	.004	.0017	.0005	.074	.0003	.0006
%RSD	.4357	.4042	.9622	.2276	2.713	7.483	.9663	1.401	.4028
#1	155.2	41.96	15.90	1.950	.0605	.0063	7.569	.0183	.1413
#2	156.2	42.20	16.12	1.956	.0628	.0070	7.673	.0179	.1421
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	2.661	.0032	.0421	1.031	0.0373	0.1928	2.638		
Stddev	.023	.0001	.0001	.008	.0009	.0015	.030		
%RSD	.8595	4.641	.2649	.7525	2.509	.7865	1.124		
#1	2.645	.0033	.0420	1.026	.0366	.1939	2.617		
#2	2.678	.0031	.0421	1.037	.0379	.1917	2.659		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	118340.	16280.	5957.1	8745.9					
Stddev	286.	33.	4	11.7					
%RSD	.24153	.20557	.00707	.13381					
#1	118540.	16257.	5957.4	8754.2					
#2	118140.	16304.	5956.8	8737.6					

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Zoom In
Zoom Out

Sample Name: mp7485-mb1conf Acquired: 6/8/2018 16:25:53 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	0.001	-.0001	.0001	.0001	-.0002	.0001	.0003	.0004	.0004
Stddev	.0003	.0000	.0001	.0002	.0002	.0001	.0000	.0002	.0005
%RSD	377.3	43.56	125.6	147.5	112.6	100.4	15.16	53.05	116.9
#1	-.0001	-.0001	.0000	-.0000	-.0000	.0000	.0003	.0005	.0001
#2	.0003	-.0001	.0001	.0003	-.0003	.0002	.0003	.0002	.0007
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	-.0003	.0044	-.0021	-.0001	-.0009	.0011	.0011	-.0013	-.112
Stddev	.0004	.0003	.0023	.0006	.0013	.0014	.0004	.0029	.0098
%RSD	137.5	5.735	112.3	467.9	139.9	120.3	37.02	222.8	8.820
#1	-.0000	.0046	-.0004	-.0005	-.0000	.0002	.0008	-.0033	.1043
#2	-.0006	.0042	-.0037	-.0003	-.0018	.0021	.0014	.0007	.1182
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	0.0175	.0547	-.0481	.0896	-.0076	.0003	0.065	.0185	.0006
Stddev	.0002	.0009	.0384	.0028	.0000	.0002	.0003	.0006	.0001
%RSD	1.322	1.690	79.75	3.166	.3377	58.52	.7301	3.095	9.770
#1	0.0174	.0540	-.0210	.0876	-.0076	.0002	.0463	.0189	.0006
#2	0.0177	.0553	-.0752	.0917	-.0076	.0004	.0468	.0181	.0007
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	0.006	.0009	.0008	.0112	.0000	-.0027	.0242		
Stddev	.0000	.0016	.0001	.0026	.0009	.0030	.0003		
%RSD	7.066	187.9	11.94	23.16	15830.	111.8	1.204		
#1	.0007	-.0003	.0007	.0093	.0007	-.0049	.0240		
#2	.0006	.0020	.0009	.0130	-.0006	-.0006	.02		

Table with columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Includes sample name, method, user, and various data points for multiple elements.

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Table with columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Includes sample name, method, user, and various data points for multiple elements.

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Table with columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Includes sample name, method, user, and various data points for multiple elements.

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Table with columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Includes sample name, method, user, and various data points for multiple elements.

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133 13

Sample Name: ccv Acquired: 6/8/2018 16:38:01 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.916	1.904	1.910	1.875	1.931	1.900	1.925
Stddev	.014	.020	.011	.022	.020	.010	.019
%RSD	.7104	1.070	.5953	1.177	1.008	.5377	1.003
#1	1.907	1.889	1.902	1.859	1.917	1.893	1.912
#2	1.926	1.918	1.918	1.890	1.944	1.908	1.939

Check ?
Value
Range

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	117140	16417	6010.0	8931.3
Stddev	164.	86.	9.1	18.2
%RSD	.14024	.52569	.15060	.20374
#1	117260.	16478.	6016.4	8944.2
#2	117030.	16356.	6003.6	8918.4

Sample Name: ccb Acquired: 6/8/2018 16:40:51 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: 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	-0.0001	.0000	.0002	-0.0006	-0.0007	.0001	-0.0003	.0004
Stddev	.0001	.0000	.0001	.0000	.0003	.0004	.0000	.0005	.0000
%RSD	49.15	38.16	609.5	5.091	44.62	54.33	31.96	162.4	4.277
#1	.0002	-0.0001	-0.0000	.0002	-0.0004	-0.0010	.0000	.0007	.0004
#2	.0001	-0.0000	.0001	.0002	-0.0008	-0.0004	.0001	-0.0000	.0004

Check ?
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	-0.0003	-0.0002	.0012	.0003	.0002	-0.0009	-0.0001	-0.0124	-0.0011
Stddev	.0002	.0001	.0001	.0005	.0004	.0022	.0004	.0078	.0040
%RSD	69.75	54.89	8.251	184.4	187.6	241.6	502.6	62.84	373.1
#1	-0.0002	-0.0001	.0012	-0.0001	.0005	-0.0025	-0.0004	-0.0069	-0.0039
#2	-0.0005	-0.0003	.0011	.0006	-0.0001	.0006	.0002	-0.0179	.0018

Check ?
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	-0.0018	.0209	-1.004	-0.638	-0.078	.0002	.0029	-0.012	.0003
Stddev	.0003	.0001	.0024	.0046	.0015	.0000	.0015	.0004	.0000
%RSD	16.52	.6389	2.366	7.196	19.47	18.16	52.37	30.99	16.37
#1	-0.0016	.0210	-1.021	-0.671	-0.067	.0002	.0019	-0.0015	.0003
#2	-0.0020	.0208	-0.988	-0.606	-0.089	.0001	.0040	-0.0009	.0003

Check ?
High Limit
Low Limit

133
13

Sample Name: ccb Acquired: 6/8/2018 16:40:51 Type: QC
 Method: Accutest XPress(v426) 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	.0006	.0003	-0.0003	-0.0017	-0.0037	.0031
Stddev	.0002	.0014	.0001	.0007	.0037	.0018	.0007
%RSD	160.3	243.7	41.70	208.4	215.4	49.00	22.47
#1	.0003	.0016	.0002	.0002	.0009	-0.0024	.0035
#2	-0.0000	-0.0004	.0004	-0.0008	-0.0043	-0.0049	.0026

Check ?
High Limit
Low Limit

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	117090	16233	5979.8	9184.8
Stddev	644.	10.	43.8	52.4
%RSD	.55040	.06358	.73226	.57016
#1	117540.	16241.	6010.8	9221.8
#2	116630.	16226.	5948.9	9147.7

Sample Name: mp7495-mb1conf Acquired: 6/8/2018 16:43:55 Type: Unk
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0006	-0.0001	.0001	-0.0002	-0.0005	-0.0005	.0000	.0000	.0000
Stddev	.0001	.0000	.0000	.0001	.0001	.0002	.0000	.0000	.0001
%RSD	10.67	.0777	15.85	45.37	26.41	45.22	162.8	50.21	694.0
#1	-0.0006	-0.0001	.0001	-0.0001	-0.0007	-0.0007	-0.0000	.0000	.0001
#2	-0.0007	-0.0001	.0001	-0.0002	-0.0004	-0.0003	.0000	.0000	-0.0000

Check ?
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	-0.0004	.0005	.0002	.0008	-0.0009	-0.0009	.0025	-0.0071	.0042
Stddev	.0001	.0001	.0008	.0009	.0011	.0008	.0010	.0066	.0018
%RSD	18.50	15.94	472.3	108.5	125.7	97.31	41.78	93.43	42.48
#1	-0.0005	.0006	.0008	.0015	-0.0017	-0.0015	.0018	-0.0024	.0030
#2	-0.0004	.0005	-0.0004	.0002	-0.0001	-0.0003	.0032	-0.0117	.0055

Check ?
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	-0.0029	.0339	-0.882	-0.754	-0.081	.0003	.0105	-0.0008	.0000
Stddev	.0034	.0091	.0201	.0046	.0003	.0004	.0004	.0003	.0002
%RSD	118.3	26.84	22.78	6.150	3.896	141.2	3.575	41.66	1161.
#1	-0.0005	.0403	-0.740	-0.722	-0.078	.0000	.0108	-0.0005	.0001
#2	-0.0053	.0274	-1.025	-0.787	-0.083	.0005	.0102	-0.0010	-0.001

Check ?
High Limit
Low Limit

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0000	.0002	.0005	.0040	-0.0005	-0.0021	.0035
Stddev	.0002	.0001	.0001	.0007	.0018	.0029	.0004
%RSD	455.5	60.74	28.34	17.28	330.3	135.5	12.70
#1	.0001	.0003	.0004	.0035	-0.0018	-0.0041	.0032
#2	-0.0002	.0001	.0006	.0045	.0007	-0.0001	.0038

Check ?
High Limit
Low Limit

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	121480	16722	6179.0	9439.0
Stddev	142.	32.	12.9	21.0
%RSD	.11718	.19320	.20829	.22270
#1	121580.	16699.	6188.1	9453.9
#2	121380.	16745.	6169.9	9424.2

Sample Name: mp7545-mb12 Acquired: 6/8/2018 16:46:57 Type: Konk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: new

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0037	-0.006	.0009	.0010	-0.0036	-0.0023	.0032	-0.0005	.0032
Stddev	.0006	.0004	.0003	.0006	.0013	.0004	.0002	.0012	.0001
%RSD	17.01	63.51	28.84	63.53	35.06	18.33	5.852	262.5	2.454
#1	.0041	-0.009	.0007	.0015	-.0027	-.0026	.0031	-.0014	.0032
#2	.0032	-0.003	.0010	.0006	-.0045	-.0020	.0034	.0004	.0033
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0002	.0842	-0.0035	-0.0037	.0018	.0020	.0137	.0273	.4099
Stddev	.0008	.0005	.0010	.0061	.0002	.0070	.0001	.0281	.0092
%RSD	448.3	.5446	29.74	163.9	9.401	345.3	.8905	102.9	2.247
#1	.0007	.0838	-.0043	.0006	.0017	.0070	.0136	.0074	.4164
#2	-.0004	.0845	-.0028	-.0086	.0019	-.0029	.0138	.0471	.4034
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	.0336	.2437	1.985	.8230	-.0337	-.0011	1.058	-.0025	.0024
Stddev	.0075	.0365	.110	.0355	.0040	.0007	.012	.0015	.0005
%RSD	22.25	14.98	5.517	4.309	11.75	63.88	1.113	61.57	22.80
#1	.0283	.2179	2.062	.8481	-.0365	-.0016	1.050	-.0036	.0027
#2	.0389	.2695	1.967	.7979	-.0309	-.0006	1.067	-.0014	.0020
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	.0013	.0078	.0006	.3460	-.0018	-.0167	.3783		
Stddev	.0036	.0011	.0004	.0191	.0011	.0184	.0080		
%RSD	283.7	14.38	55.74	5.517	59.09	109.8	2.118		
#1	-.0013	.0086	.0004	.3325	-.0026	-.0297	.3726		
#2	.0038	.0070	.0009	.3595	-.0011	-.0037	.3840		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	115210.	15420.	6050.4	9263.0					
Stddev	151.	112.	20.3	29.2					
%RSD	.13068	.72366	.33544	.31551					
#1	115320.	15499.	6036.1	9242.4					
#2	115100.	15341.	6064.8	9283.7					

Sample Name: mp7545-b1 Acquired: 6/8/2018 16:50:00 Type: Konk
Method: Accutest XPress(v426) 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
Avg	1.969	1.909	1.871	1.916	1.938	1.778	1.991	1.952	2.336
Stddev	.009	.003	.003	.004	.006	.006	.004	.002	.0045
%RSD	.4789	.1632	.1484	.2273	.3176	.3393	.2234	.0790	1.907
#1	1.976	1.911	1.869	1.913	1.933	1.774	1.988	1.951	2.304
#2	1.963	1.906	1.873	1.919	1.942	1.782	1.994	1.953	2.367
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	1.887	1.971	1.855	1.952	1.946	1.885	1.870	24.91	27.43
Stddev	.007	.006	.005	.002	.003	.013	.007	.21	.12
%RSD	.3499	.3036	.2671	.0756	.1397	.6744	.3756	.8353	.4394
#1	1.883	1.967	1.852	1.951	1.948	1.876	1.865	25.05	27.51
#2	1.892	1.975	1.859	1.953	1.944	1.894	1.875	24.76	27.34
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	25.21	25.88	24.44	25.02	1.819	1.918	2.106	1.888	1.979
Stddev	.23	.26	.08	.13	.002	.001	.0089	.006	.005
%RSD	.9205	1.014	.3316	.5235	.0887	.0333	4.221	.3031	2.301
#1	25.38	26.06	24.50	25.12	1.818	1.917	2.169	1.884	1.982
#2	25.05	25.69	24.38	24.93	1.820	1.918	2.043	1.892	1.976
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	1.874	1.799	1.870	2.756	.0294	-.0084	1.883		
Stddev	.005	.010	.003	.0039	.0066	.0018	.005		
%RSD	.2521	.5493	.1624	1.403	22.55	20.99	.2511		
#1	1.871	1.792	1.868	2.729	.0341	-.0072	1.879		
#2	1.877	1.806	1.872	2.784	.0247	-.0096	1.886		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	117590.	16269.	6043.6	9162.2					
Stddev	30.	157.	9.2	4.5					
%RSD	.02515	.96649	.15268	.04905					
#1	117570.	16158.	6050.1	9165.3					
#2	117610.	16380.	6037.1	9159.0					

Sample Name: mp7545-s1 Acquired: 6/8/2018 16:52:50 Type: Konk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	2.131	1.856	2.243	1.925	1.858	3.809	13.36	2.398
Stddev	.002	.004	.004	.007	.007	.018	.06	.005
%RSD	.1108	.2023	.1750	.3851	.3647	.4669	.4333	.2025
#1	2.129	1.859	2.240	1.920	1.863	3.821	13.40	2.395
#2	2.132	1.854	2.246	1.931	1.853	3.796	13.32	2.402
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	2.365	1.843	12.33	1.884	1.897	4.539	1.911	1.899
Stddev	.0006	.012	.00	.002	.008	.013	.003	.013
%RSD	.2718	.6555	.0104	.0874	.3993	.2869	.1707	.6808
#1	2.360	1.851	12.33	1.882	1.902	4.530	1.909	1.890
#2	2.369	1.834	12.33	1.885	1.891	4.548	1.913	1.908
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	24.72	W 1447.	24.46	70.16	29.85	42.51	1.949	1.892
Stddev	.04	.21	.06	.03	.25	.17	.007	.002
%RSD	.1776	1.416	.2308	.0443	.8362	.4115	.3575	.0785
#1	24.69	1462.	24.42	70.18	29.67	42.39	1.944	1.891
#2	24.75	1433.	24.50	70.14	30.02	42.64	1.954	1.893
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	7.757	1.839	3.165	1.827	1.859	1.830	177.4	.0252
Stddev	.018	.002	.010	.011	.008	.008	.0	.0139
%RSD	.2284	.1307	.3031	.6040	.4530	.4283	.0041	54.94
#1	7.744	1.841	3.158	1.835	1.853	1.836	177.4	.0350
#2	7.769	1.837	3.171	1.820	1.865	1.825	177.4	.0154
Elem	Li6707	P_1774						
Avg	.0268	2.022						
Stddev	.0039	.008						
%RSD	14.40	.3951						
#1	.0295	2.028						
#2	.0241	2.016						

Sample Name: mp7545-s1 Acquired: 6/8/2018 16:52:50 Type: Konk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	118040.	16138.	5798.8	8672.1
Stddev	1019.	8.	20.9	25.5
%RSD	.87782	.04883	.36026	.29371
#1	115320.	16144.	5784.1	8654.1
#2	116760.	16132.	5813.6	8690.2

Sample Name: mp7545-s2 Acquired: 6/8/2018 16:55:46 Type: Unk
 Method: Accutest XPress(v426) 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
Avg	2.207	1.923	2.282	1.955	1.904	3.931	13.74	2.436	2.450
Stddev	.009	.012	.002	.001	.001	.007	.02	.006	.009
%RSD	.3980	.6301	.0714	.0501	.0636	.1779	.1645	.2577	.3778
#1	2.213	1.932	2.281	1.954	1.905	3.936	13.76	2.432	2.456
#2	2.201	1.915	2.283	1.956	1.903	3.926	13.73	2.441	2.443
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	1.886	12.56	1.916	1.935	4.628	1.957	1.919	25.45	1509.
Stddev	.006	.03	.003	.007	.004	.004	.000	.16	9.
%RSD	.3393	.2140	.1702	.3768	.0936	.2010	.0085	.6097	.5816
#1	1.891	12.54	1.914	1.930	4.625	1.954	1.919	25.56	1515.
#2	1.882	12.58	1.918	1.940	4.631	1.960	1.919	25.34	1503.
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	25.31	72.56	30.67	44.28	1.991	1.922	7.962	1.869	3.285
Stddev	.21	.02	.30	.14	.004	.003	.003	.001	.019
%RSD	.8123	.0319	.9742	.3173	.2028	.1375	.0374	.0636	.5919
#1	25.45	72.54	30.88	44.38	1.988	1.920	7.964	1.870	3.298
#2	25.16	72.58	30.46	44.18	1.994	1.924	7.960	1.868	3.271
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	1.867	1.895	1.872	181.6	.0301	.0199	2.064		
Stddev	.005	.003	.008	.3	.0067	.0073	.009		
%RSD	.2610	.1647	.4052	.1612	22.42	36.61	4.250		
#1	1.870	1.898	1.878	181.4	.0253	.0147	2.070		
#2	1.863	1.893	1.867	181.8	.0349	.0250	2.058		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	115420.	15913.	5743.1	8595.6					
Stddev	495.	58.	8.7	6.6					
%RSD	4.2889	.36663	.15108	.07672					
#1	115070.	15871.	5749.3	8600.2					
#2	115770.	15954.	5737.0	8590.9					

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Sample Name: jc67397-1a Acquired: 6/8/2018 16:58:40 Type: Unk
 Method: Accutest XPress(v426) 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
Avg	2.220	-0.003	.3613	.0511	.0101	2.000	11.51	4.898	
Stddev	.0005	.0000	.0012	.0009	.0014	.013	.09	.0019	
%RSD	.2420	1.752	.3284	1.740	13.67	.6531	.8087	.3948	
#1	.2223	-.0003	.3605	.0518	.0111	2.010	11.58	4.884	
#2	.2216	-.0003	.3622	.0505	.0092	1.991	11.45	4.911	
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	
Avg	.0046	.0062	10.18	.0008	.0000	2.570	.0087	.0146	
Stddev	.0028	.0009	.03	.0053	.0014	.000	.0022	.0038	
%RSD	61.57	15.25	.3117	679.8	6317.	.0086	25.45	26.04	
#1	.0026	.0055	10.16	.0045	.0010	2.570	.0103	.0119	
#2	.0066	.0069	10.20	-.0029	-.0010	2.570	.0072	.0173	
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	
Avg	2.960	W 1419.	.1988	46.62	5.040	17.82	.0739	-.0005	
Stddev	.0105	8.	.0082	.04	.033	.01	.0001	.0003	
%RSD	3.535	.5922	4.126	.0803	.6581	.0280	.1748	49.56	
#1	.2886	1413.	.2046	46.59	5.016	17.82	.0738	-.0007	
#2	.3034	1425.	.1930	46.64	5.063	17.83	.0740	-.0003	
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230	
Avg	7.517	-.0084	1.274	-.0078	.0196	.0048	171.8	.0051	
Stddev	.020	.0002	.002	.0003	.0007	.0008	.2	.0049	
%RSD	.2607	2.330	.1342	4.132	3.821	16.81	.1224	97.38	
#1	7.503	-.0085	1.275	-.0076	.0201	.0053	171.7	.0086	
#2	7.531	-.0082	1.272	-.0080	.0191	.0042	172.0	.0016	
Elem	Li6707	P_1774							
Avg	.0155	.1184							
Stddev	.0109	.0034							
%RSD	70.23	2.901							
#1	.0078	.1159							
#2	.0233	.1208							

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Sample Name: jc67397-1a Acquired: 6/8/2018 16:58:40 Type: Unk
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 5.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	116620.	16028.	5978.8	8946.5
Stddev	1143.	87.	22.6	24.0
%RSD	.98042	.54053	.37869	.26855
#1	115810.	16089.	5962.8	8929.5
#2	117420.	15966.	5994.8	8963.5

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Sample Name: mp7545-sd1 Acquired: 6/8/2018 17:01:45 Type: Unk
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 25.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	2.291	-0.025	.3823	.0530	.0141	2.054	12.46	.5423	.0040
Stddev	.0074	.0029	.0037	.0041	.0139	.018	.02	.0000	.0051
%RSD	3.223	117.0	.9628	7.672	98.68	.9017	.1937	.0017	128.6
#1	.2343	-.0004	.3849	.0501	.0240	2.041	12.48	.5423	.0004
#2	.2238	-.0045	.3797	.0558	.0043	2.067	12.44	.5423	.0076
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0109	11.27	.0179	.0113	2.817	.0205	.0233	.0709	1583.
Stddev	.0085	.00	.0031	.0089	.026	.0421	.0623	.1979	47.
%RSD	78.33	.0345	17.41	79.11	.9276	205.4	267.1	279.2	2.994
#1	.0169	11.27	.0157	.0176	2.836	-.0093	-.0207	-.0691	1617.
#2	.0049	11.27	.0201	.0050	2.799	.0502	.0673	.2109	1550.
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	1.431	52.14	3.842	17.53	-.0975	-.0002	7.986	-.0405	1.380
Stddev	.0243	1.20	1.716	.07	.0187	.0021	.007	.0068	.038
%RSD	16.95	2.301	44.65	.3982	19.17	830.0	.0936	16.76	2.747
#1	.1260	52.99	2.629	17.58	-.1107	.0012	7.991	-.0454	1.407
#2	.1603	51.29	5.055	17.48	-.0843	-.0017	7.981	-.0357	1.353
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774		
Avg	-.0096	.0244	.0082	182.1	.0575	-.0418	.2060		
Stddev	.0031	.0043	.0014	.4	.0545	.0108	.0186		
%RSD	32.43	17.62	16.86	.2008	94.83	25.80	9.045		
#1	-.0118	.0275	.0092	182.3	.0189	-.0342	.2191		
#2	-.0074	.0214	.0072	181.8	.0961	-.0494	.1928		
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	118970.	16185.	6069.3	9238.3					
Stddev	579.	367.	9.2	13.6					
%RSD	4.8707	2.2697	.15107	.14683					
#1	118560.	15926.	6062.8	9228.7					
#2	119380.	16445.	6075.8	9247.9					

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Sample Name: jc67031-18 Acquired: 6/8/2018 17:04:46 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 10.00000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: check

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, V_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 4 columns (Int. Std., Y_3600, Y_3710, Y_2243, In2306) and 4 rows (Avg, Stddev, %RSD, #1, #2).

Table with 4 columns (#1, #2) and 4 rows (118890., 16580., 6165.1, 9304.8; 119590., 16262., 6049.1, 9126.5).

Sample Name: ccv Acquired: 6/8/2018 17:07:46 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280) and 4 rows (Units, Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, V_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179) and 4 rows (Units, Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020, Si2124, Sn1899, Sr4077) and 4 rows (Units, Avg, Stddev, %RSD, #1, #2).

Table with 10 columns (Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774) and 4 rows (Units, Avg, Stddev, %RSD, #1, #2).

Table with 4 columns (#1, #2) and 4 rows (38.86, 39.21, 38.15, 38.79, 1.888, 1.914, 4.711, 1.892, 1.956; 38.83, 39.29, 38.56, 38.89, 1.906, 1.927, 4.755, 1.902, 1.958).

Table with 4 columns (Check ? Value Range) and 4 rows (Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass).

Sample Name: ccv Acquired: 6/8/2018 17:07:46 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ti3349, W_2079, Zr3391, S_1820, Bi2230, Li6707, P_1774) and 4 rows (Units, Avg, Stddev, %RSD, #1, #2).

Table with 4 columns (Check ? Value Range) and 4 rows (Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass).

Table with 4 columns (Int. Std., Y_3600, Y_3710, Y_2243, In2306) and 4 rows (Units, Avg, Stddev, %RSD, #1, #2).

Table with 4 columns (#1, #2) and 4 rows (117970., 16299., 6019.7, 8946.1; 118070., 16327., 6046.9, 8966.9).

Sample Name: ccb Acquired: 6/8/2018 17:10:37 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns (Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316) and 4 rows (Units, Avg, Stddev, %RSD, #1, #2).

Table with 4 columns (Check ? High Limit Low Limit) and 4 rows (Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass).

Table with 10 columns (Elem, Ag3280, V_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068) and 4 rows (Units, Avg, Stddev, %RSD, #1, #2).

Table with 4 columns (#1, #2) and 4 rows (0.003, -0.005, -0.003, 0.001, 0.001, -0.012, 0.017, 0.013; 0.004, -0.003, -0.002, 0.006, 0.010, -0.013, -0.006, 0.002).

Table with 4 columns (Check ? High Limit Low Limit) and 4 rows (Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass).

Table with 10 columns (Elem, Al3961, Ca3179, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020) and 4 rows (Units, Avg, Stddev, %RSD, #1, #2).

Table with 4 columns (#1, #2) and 4 rows (-0.131, -0.055, -0.033, 0.266, -0.756, -0.454, -0.070, 0.003; 0.196, 0.224, -0.025, 0.095, -0.892, -0.710, -0.071, 0.004).

Table with 4 columns (Check ? High Limit Low Limit) and 4 rows (Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Pass).

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Sample Name: ccb Acquired: 6/8/2018 17:10:37 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, Sn1899, Sr4077, Ti3349, W_2079, Zr3391, S_1820, Bi2230. Values include ppm, Cts/S, and RSD percentages.

Check ? High Limit Low Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 3 columns: Elem, Units, Avg, Stddev, %RSD. Values for Li6707 and P_1774.

Table with 3 columns: #1, #2, values. Values for Li6707 and P_1774.

Check ? High Limit Low Limit Chk Fail Chk Pass .0040 -.0040

Table with 5 columns: Int. Std. Units, Avg, Stddev, %RSD, Y_3600, Y_3710, Y_2243, In2306. Values include Cts/S and RSD percentages.

Table with 5 columns: #1, #2, values. Values for Int. Std. Units.

Sample Name: cri Acquired: 6/8/2018 17:13:40 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316. Values include ppm and RSD percentages.

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Warn .0100 -20.00%

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, Ag3280, V_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068. Values include ppm and RSD percentages.

Table with 10 columns: #1, #2, values. Values for Ag3280, V_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068.

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Warn .0060 20.00%

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, Al3961, Ca3179, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020. Values include ppm and RSD percentages.

Table with 10 columns: #1, #2, values. Values for Al3961, Ca3179, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020.

Sample Name: cri Acquired: 6/8/2018 17:13:40 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, Sn1899, Sr4077, Ti3349, W_2079, Zr3391, S_1820, Bi2230. Values include ppm, Cts/S, and RSD percentages.

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 3 columns: Elem, Units, Avg, Stddev, %RSD. Values for Li6707 and P_1774.

Table with 3 columns: #1, #2, values. Values for Li6707 and P_1774.

Check ? Value Range Chk Pass Chk Pass

Table with 5 columns: Int. Std. Units, Avg, Stddev, %RSD, Y_3600, Y_3710, Y_2243, In2306. Values include Cts/S and RSD percentages.

Table with 5 columns: #1, #2, values. Values for Int. Std. Units.

Sample Name: cri Acquired: 6/8/2018 17:13:40 Type: QC
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316. Values include ppm and RSD percentages.

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail .0020 -30.00%

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, Ag3280, V_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068. Values include ppm and RSD percentages.

Table with 10 columns: #1, #2, values. Values for Ag3280, V_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068.

Check ? Value Range Chk Fail .0020 -30.00% Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail .0025 -30.00% Chk Fail .0050 -30.00% Chk Fail .0030 -30.00%

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, Al3961, Ca3179, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020. Values include ppm and RSD percentages.

Table with 10 columns: #1, #2, values. Values for Al3961, Ca3179, Fe2599, Mg2790, K_7664, Na5895, B_2089, Mo2020.

Check ? Value Range Chk Pass Chk Pass None Chk Fail .1000 30.00% Chk Pass Chk Pass None None

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Sample Name: crid Acquired: 6/8/2018 17:16:42 Type: QC
 Method: Accutest XPress(v426) 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	-0.002	-0.004	.0000	-0.000	.0010	-0.001	.0005	-0.006
Stddev	.0011	.0009	.0000	.0001	.0007	.0002	.0002	.0006
%RSD	438.5	218.8	152.1	696.3	71.03	262.2	45.83	96.61

#1	.0005	.0002	-0.0000	.0001	.0014	-0.002	.0006	-0.002
#2	-0.0010	-0.0010	.0000	-0.0001	.0005	.0001	.0003	-0.0010

Check ?	None	None	None	None	None	None	None	None
Value Range								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	-0.019	.0039
Stddev	.0006	.0008
%RSD	30.53	21.92

#1	-.0023	.0033
#2	-.0015	.0045

Check ?	None	None
Value Range		

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	115680.	16093.	5950.8	9104.4
Stddev	81.	11.	20.6	30.6
%RSD	.07013	.06995	.34667	.33593

#1	115740.	16085.	5965.4	9126.0
#2	115630.	16101.	5936.2	9082.8

Sample Name: cri Acquired: 6/8/2018 17:20:22 Type: QC
 Method: Accutest XPress(v426) 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	.1915	.0017	.0027	.0490	.0093	W .0078	.0149	.0097
Stddev	.0002	.0001	.0000	.0006	.0003	.0001	.0002	.0001
%RSD	.1065	3.666	1.453	1.260	2.805	1.623	1.196	1.018

#1	.1913	.0018	.0027	.0486	.0091	.0077	.0147	.0098
#2	.1916	.0017	.0027	.0495	.0094	.0078	.0150	.0097

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
Value Range						.0100		
						-20.00%		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052	.0466	.0195	.0069	.0085	.0031	W .0120	W .0076
Stddev	.0000	.0003	.0002	.0011	.0004	.0019	.0000	.0010
%RSD	.5515	.6459	8.566	15.83	4.854	61.87	.2059	13.08

#1	.0052	.0464	.0194	.0076	.0088	.0017	.0120	.0083
#2	.0051	.0468	.0197	.0061	.0082	.0044	.0120	.0069

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Warn
Value Range							.0100	.0060
							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	.1943	4.936	.0918	5.029	4.754	4.828	.0874	.0197
Stddev	.0120	.029	.0001	.030	.132	.052	.0008	.0001
%RSD	6.157	.5984	.0773	.5950	2.785	1.083	.9262	.6986

#1	.2028	4.915	.0917	5.008	4.660	4.791	.0869	.0196
#2	.1859	4.957	.0918	5.050	4.847	4.865	.0880	.0198

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								

Sample Name: cri Acquired: 6/8/2018 17:20:22 Type: QC
 Method: Accutest XPress(v426) 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	.1941	.0087	.0097	.0093	.0496	.0100	.0475	.0207
Stddev	.0003	.0006	.0000	.0005	.0018	.0002	.0004	.0017
%RSD	.1320	6.710	.2091	5.508	3.530	1.907	.7926	8.195

#1	.1943	.0091	.0096	.0090	.0484	.0098	.0473	.0219
#2	.1940	.0083	.0097	.0097	.0508	.0101	.0478	.0195

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	.0485	.0531
Stddev	.0009	.0019
%RSD	1.871	3.613

#1	.0479	.0517
#2	.0491	.0544

Check ?	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	119790.	16464.	6075.7	9227.0
Stddev	371.	96.	8.5	4.5
%RSD	.31006	.58087	.13988	.04912

#1	119530.	16531.	6069.7	9223.8
#2	120060.	16396.	6081.7	9230.2

Sample Name: iccsa Acquired: 6/8/2018 17:23:22 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	-0.0002	.0004	.0003	.0000	-0.0014	-0.0010	-0.0002	.0007
Stddev	.0004	.0001	.0001	.0001	.0000	.0004	.0003	.0003	.0010
%RSD	29.64	42.61	28.47	47.58	107.6	25.27	29.80	114.0	135.4

#1	.0015	-0.0002	.0004	.0004	.0000	-0.0011	-0.0008	-0.0004	.0014
#2	.0010	-0.0001	.0003	.0002	.0001	-0.0016	-0.0013	-0.0000	.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	.0015	.0006	-0.015	.0002	.0055	.0049	-0.0027	523.7	382.3
Stddev	.0000	.0002	.0018	.0016	.0029	.0018	.0007	8.1	5.0
%RSD	.9116	36.93	119.9	757.9	52.29	36.97	26.50	1.541	1.309

#1	.0015	.0004	-0.028	-0.009	.0034	.0062	-0.0022	518.0	378.7
#2	.0015	.0007	-0.002	.0013	.0075	.0036	-0.0033	529.5	385.8

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	184.5	495.0	-0.156	-0.0627	-0.105	-0.0000	.0039	-0.0033	-0.0026
Stddev	.6	1.8	.0307	.0045	.0007	.0008	.0037	.0006	.0001
%RSD	.3095	.3684	196.4	7.196	6.551	9820.	93.12	18.65	2.427

#1	184.1	493.8	-0.373	-0.0659	-0.100	.0005	.0065	-0.0037	-0.0025
#2	184.9	496.3	.0061	-0.0595	-0.110	-0.0005	.0013	-0.0028	-0.0026

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Sample Name: icsa Acquired: 6/8/2018 17:23:22 Type: QC
 Method: Accutest XPress(v426) 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	-0.023	.0052	-0.029	-0.0274	.0051	-0.019	.0079
Stddev	.0003	.0001	.0003	.0027	.0005	.0019	.0019
%RSD	15.19	1.378	12.02	9.726	10.22	95.96	24.47
#1	-0.020	.0051	-0.026	-0.0292	.0047	-0.006	.0066
#2	-0.025	.0052	-0.031	-0.0255	.0054	-0.032	.0093

Check ? High Limit Low Limit
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	110120.	15728.	5523.2	8110.8
Stddev	1566.	31.	3.5	7.3
%RSD	1.4220	.19880	.06426	.09027
#1	111230.	15750.	5520.7	8105.6
#2	109010.	15706.	5525.7	8116.0

Sample Name: ICSAB Acquired: 6/8/2018 17:26:29 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4836	.4625	.9504	4663	4617	4773	4785	.9262	.9787
Stddev	.0024	.0030	.0084	.0038	.0012	.0011	.0004	.0072	.0018
%RSD	.4864	.6451	.8832	.8190	.2631	.2350	.0740	.7804	.1812
#1	.4819	.4603	.9444	.4636	.4625	.4765	.4782	.9211	.9775
#2	.4852	.4646	.9563	.4690	.4608	.4781	.4787	.9314	.9800

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4675	.9062	.9953	.9906	9247	1.016	.9770	504.1	389.1
Stddev	.0003	.0072	.0103	.0040	.0077	.004	.0086	6.2	4.4
%RSD	.0677	.7914	1.033	.4079	.8352	.3613	.8753	1.231	1.140
#1	.4672	.9012	.9880	.9877	.9192	1.013	.9710	499.7	392.2
#2	.4677	.9113	1.003	.9934	.9302	1.018	.9831	508.5	386.0

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	195.3	499.6	.0199	-0.630	4687	4692	4868	4420	5018
Stddev	1.0	2.5	.0587	.0116	.0020	.0047	.0017	.0041	.0035
%RSD	.5245	.5002	294.5	18.47	.4313	1.011	.3419	.9236	.6889
#1	194.6	497.8	.0615	-.0548	4672	4658	4857	4391	4994
#2	196.1	501.3	-.0216	-.0713	4701	4725	4880	4448	5043

Check ? Value Range
 Chk Pass Chk Pass None None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: ICSAB Acquired: 6/8/2018 17:26:29 Type: QC
 Method: Accutest XPress(v426) 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	.4737	.4632	.4514	.4514	.4915	.4896	.4857
Stddev	.0003	.0046	.0003	.0043	.0030	.0049	.0043
%RSD	.0682	.9905	.0637	.9473	.6119	1.009	.8944
#1	.4740	.4600	.4516	.4484	.4894	.4861	.4827
#2	.4735	.4665	.4512	.4544	.4937	.4931	.4888

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	111300.	15733.	5560.4	8192.6
Stddev	729.	40.	1.9	12.0
%RSD	.65465	.25514	.03394	.14651
#1	110780.	15762.	5559.1	8184.1
#2	111810.	15705.	5561.8	8201.1

Sample Name: ccv Acquired: 6/8/2018 17:29:30 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.025	1.998	1.940	1.982	2.027	1.968	2.066	2.010	2.487
Stddev	.020	.018	.008	.007	.010	.012	.014	.005	.0021
%RSD	.9926	.9029	.4059	.3387	.5101	.5897	.6806	.2650	.8578
#1	2.011	1.985	1.946	1.987	2.019	1.959	2.056	2.014	2.472
#2	2.040	2.011	1.935	1.977	2.034	1.976	2.076	2.006	2.502

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.986	1.990	1.959	2.025	2.008	1.973	1.953	40.40	40.83
Stddev	.012	.009	.012	.012	.003	.011	.009	.36	.39
%RSD	.6017	.4544	.6198	.5803	.1694	.5702	.4807	.8964	.9603
#1	1.978	1.997	1.967	2.033	2.011	1.981	1.959	40.14	40.55
#2	1.994	1.984	1.950	2.016	2.006	1.965	1.946	40.65	41.11

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.45	41.07	40.12	40.66	1.963	1.988	4.879	1.957	2.039
Stddev	.34	.18	.54	.44	.009	.008	.023	.004	.018
%RSD	.8446	.4444	1.335	1.090	.4739	.4159	.4639	.2271	.8900
#1	40.21	40.94	39.74	40.34	1.969	1.994	4.895	1.960	2.027
#2	40.70	41.20	40.50	40.97	1.956	1.982	4.863	1.953	2.052

Check ? Value Range
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: ccv Acquired: 6/8/2018 17:29:30 Type: QC
 Method: Accutest XPress(v426) 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	2.004	1.959	2.003	1.908	1.978	1.984	1.980
Stddev	.012	.008	.011	.007	.007	.022	.011
%RSD	.6136	.4023	.5456	.3841	.3460	1.123	.5379
#1	1.995	1.965	1.995	1.914	1.983	1.969	1.987
#2	2.013	1.954	2.011	1.903	1.974	2.000	1.972

Check ?
Value
Range

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	111950.	15546.	5842.3	8704.8
Stddev	115.	90.	53.2	69.5
%RSD	.10232	.57898	.91044	.79785

#1	111870.	15610.	5804.7	8655.7
#2	112030.	15482.	5879.9	8754.0

Sample Name: ccb Acquired: 6/8/2018 17:32:21 Type: QC
 Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 1.000000
 User: admin Custom ID1: Custom ID2: Custom ID3:
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.003	-0.001	-0.001	0.002	-0.006	-0.007	0.000	0.005	0.003
Stddev	.003	.001	.001	.002	.003	.004	.000	.007	.001
%RSD	97.49	92.89	72.48	110.6	50.56	55.90	.3763	143.9	36.16
#1	-0.001	-0.002	-0.002	0.000	-0.004	-0.004	0.000	-0.000	0.004
#2	-0.005	-0.000	-0.001	0.003	-0.008	-0.010	0.000	0.010	0.002

Check ?
High Limit
Low Limit

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	-0.002	-0.001	0.005	0.006	-0.010	0.016	0.019	0.025	-0.055
Stddev	.004	.001	.008	.004	.009	.008	.004	.019	.059
%RSD	189.1	160.3	162.6	63.97	96.18	51.26	19.96	77.14	107.8

#1	-0.004	0.000	-0.001	0.003	-0.016	0.022	0.016	0.038	-0.013
#2	0.001	-0.001	0.011	0.009	-0.003	0.010	0.022	0.011	-0.096

Check ?
High Limit
Low Limit

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	-0.019	0.0250	-1.337	-0.847	-0.073	0.004	0.032	-0.005	0.002
Stddev	.0018	.0173	.0118	.0059	.002	.000	.0015	.003	.000
%RSD	97.84	69.33	8.854	6.950	2.943	5.377	45.77	66.27	11.40

#1	-0.006	0.0373	-1.421	-0.889	-0.071	0.003	0.022	-0.003	0.002
#2	-0.032	0.0128	-1.253	-0.806	-0.074	0.004	0.043	-0.008	0.001

Check ?
High Limit
Low Limit

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Sample Name: ccb Acquired: 6/8/2018 17:32:21 Type: QC
 Method: Accutest XPress(v426) 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	0.006	0.019	0.004	0.009	-0.011	-0.024	0.034
Stddev	.0000	.0014	.0001	.0006	.0002	.0007	.0002
%RSD	5.032	75.75	29.59	70.83	16.77	29.68	5.330
#1	.0006	.0029	.0005	.0004	-.0012	-.0029	.0036
#2	.0006	.0009	.0003	.0013	-.0010	-.0019	.0033

Check ?
High Limit
Low Limit

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	117420.	16268.	6049.7	9255.7
Stddev	433.	59.	4.2	9.0
%RSD	.36857	.36414	.06937	.09674

#1	117730.	16310.	6046.8	9249.3
#2	117120.	16226.	6052.7	9262.0

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ba 455.403 { 74}	<input checked="" type="checkbox"/>	1	Zr	0.000941	0.000000	No
Be 313.042 {108}	<input checked="" type="checkbox"/>	6	V	0.001480	0.000000	No
			Mo	-0.000047	0.000000	No
			Ti	-0.000218	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}	<input checked="" type="checkbox"/>	11	As	0.010848	0.000000	No
			Ni	-0.000647	0.000000	No
			Fe	0.000002	0.000000	No
			V	0.000091	0.000000	No
			Ba	0.000064	0.000000	No
			Co	-0.001154	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	-0.001000	0.000000	No
Co 228.616 {448}	<input checked="" type="checkbox"/>	7	Fe	0.000024	0.000000	No
			Mo	-0.000972	0.000000	No
			Ni	0.000091	0.000000	No
			Ti	0.001920	0.000000	No
			Ba	0.000238	0.000000	No
			W	-0.001840	0.000000	No
			Cd	-0.000510	0.000000	No
Cr 267.716 {126}	<input checked="" type="checkbox"/>	8	Mn	0.000440	0.000000	No
			V	-0.000027	0.000000	No
			Mo	-0.000082	0.000000	No
			Fe	-0.000008	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
Cu 324.754 {104}2	<input checked="" type="checkbox"/>	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	-0.000186	0.000000	No
			Zn	-0.000041	0.000000	No
			Co	-0.001082	0.000000	No
			Si	0.000016	0.000000	No
			Mn	-0.000087	0.000000	No
			Se	0.000050	0.000000	No
			Sb	0.000069	0.000000	No
			W	0.000000	0.000000	No
			Al	0.000002	0.000000	No
Mn 257.610 {131}	<input checked="" type="checkbox"/>	4	Fe	-0.000098	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}	<input checked="" type="checkbox"/>	8	Fe	0.000026	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
			Cu	0.000050	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	<input checked="" type="checkbox"/>	14	Se	0.000100	0.000000	No
			Mn	0.000152	0.000000	No
			Mo	-0.000188	-0.000003	No
			Ti	-0.000302	0.000000	No
			Fe	-0.000256	0.000000	No
			Zn	0.000044	0.000000	No
			Ca	-0.000003	0.000000	No
			Zr	0.006454	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	-0.002620	0.000000	No
			Al	-0.000002	0.000000	No
V 292.402 {115}	<input checked="" type="checkbox"/>	6	W	-0.000010	0.000000	No
			Ti	0.000689	0.000000	No
			Mo	-0.000304	0.000000	No
			Fe	0.000022	0.000000	No
			Sr	-0.000100	0.000000	No
			Cr	-0.005380	0.000000	No
Zn 206.200 {464}	<input checked="" type="checkbox"/>	9	Mn	-0.002700	0.000000	No
			Cr	-0.000850	0.000000	No
			Fe	0.000026	0.000000	No
			Si	0.000015	0.000000	No
			Mn	-0.000045	0.000000	No
			Ba	-0.000060	0.000000	No
			Sn	0.000255	0.000000	No
			Cu	0.001248	0.000000	No
			As	0.000055	0.000000	No
As 189.042 {478}	<input checked="" type="checkbox"/>	17	Be	0.000364	0.000000	No
			Al	0.000002	0.000000	No
			Fe	-0.000113	0.000000	No
			Ca	0.000002	0.000000	No
			Mo	0.002586	0.000000	No
			Cr	0.000512	0.000000	No
			Ba	0.000083	0.000000	No
			Sn	-0.000037	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	0.000000	0.000000	No
			Cu	0.000038	0.000000	No
			Co	0.000047	0.000000	No
			Zr	0.000036	0.000000	No
			Tl 190.856 {477}	<input checked="" type="checkbox"/>	24	Mn	-0.000080	0.000000	No
S	0.000007	0.000000				No
Cr	0.000209	0.000000				No
Mo	-0.006850	0.000000				No
Al	-0.000006	0.000000				No
Fe	-0.000034	0.000000				No
V	-0.003220	0.000000				No
Mn	0.001126	0.000000				No
Si	-0.000001	0.000000				No
Ca	-0.000002	0.000000				No
Ti	-0.000720	0.000000				No
Mg	-0.000002	0.000000	No			

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Co	0.004162	0.000000	No
			Sr	0.000010	0.000000	No
			B	-0.000003	0.000000	No
			Ba	0.000034	0.000000	No
			Zn	-0.000023	0.000000	No
			As	0.000068	0.000000	No
			W	0.000000	0.000000	No
			Cu	-0.000049	0.000000	No
			Zr	0.000056	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
Pb 220.353 (453)	<input checked="" type="checkbox"/>	20	Al	-0.000123	0.000000	No
			Fe	0.000039	0.000000	No
			Ca	0.000003	0.000000	No
			Mn	0.000054	0.000000	No
			Mo	-0.001463	0.000000	No
			Cu	-0.000246	0.000000	No
			Co	0.000064	0.000000	No
			Ti	-0.000650	0.000000	No
			Si	0.000133	0.000000	No
			Ba	-0.000022	0.000000	No
			Sb	-0.000200	0.000000	No
			Sr	-0.000033	0.000000	No
			W	-0.005000	0.000000	No
			Mg	0.000002	0.000000	No
			Cd	0.000012	0.000000	No
			Cr	-0.000031	0.000000	No
			Zr	-0.000382	0.000000	No
			Ni	-0.000003	0.000000	No
			S	0.000004	0.000000	No
Se 196.090 (472)	<input checked="" type="checkbox"/>	22	Zn	-0.000106	0.000000	No
			Al	-0.000000	0.000000	No
			Ca	-0.000008	0.000000	No
			Mn	0.000594	0.000000	No
			Mo	0.000050	0.000000	No
			Fe	-0.000190	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	-0.000143	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	0.000108	0.000000	No
			Ba	-0.000046	0.000000	No
			Mg	-0.000006	0.000000	No
			Pb	-0.000011	0.000000	No
			Ni	-0.000100	0.000000	No
			Cr	-0.000024	0.000000	No
			S	-0.000032	0.000000	No
Sb 206.833 (463)	<input checked="" type="checkbox"/>	17	Fe	0.000008	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Al	0.000003	0.000000	No
			Ca	-0.000001	0.000000	No
			Ni	-0.000616	0.000000	No
			Cr	0.019050	0.000000	No
			V	-0.003078	0.000000	No
			Zn	-0.000115	0.000000	No
			Mo	0.000491	0.000000	No
			Ti	0.000652	0.000000	No
			Sn	-0.011300	0.000000	No
			Mg	-0.000001	0.000000	No
			Zr	-0.000463	0.000000	No
			Sr	0.000031	0.000000	No
			B	-0.000100	0.000000	No
			Co	0.000049	0.000000	No
			W	0.000000	0.000000	No
			Si	0.000131	0.000000	No
Al 396.152 { 85}	<input checked="" type="checkbox"/>	5	Si	0.000652	0.000000	No
			Ca	0.000018	0.000000	No
			Mo	0.044851	0.000000	No
			Zr	0.005268	0.000000	No
			Ti	-0.000583	0.000000	No
Ca 317.933 {106}	<input checked="" type="checkbox"/>	14	Fe	0.000012	0.000000	No
			W	0.003960	0.000000	No
			Tl	0.004950	0.000000	No
			Be	0.001840	0.000000	No
			Ba	0.003500	0.000000	No
			Cu	-0.000822	0.000000	No
			Cd	0.003700	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}	<input checked="" type="checkbox"/>	10	Si	0.000819	0.000000	No
			Tl	-0.002602	0.000000	No
			Cr	0.002280	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}	<input checked="" type="checkbox"/>	3	Mo	-0.020250	0.000000	No
			W	-0.006578	0.000000	No
			Mn	-0.002445	0.000000	No
K 766.490 { 44}	<input checked="" type="checkbox"/>	11	Fe	-0.000440	0.000000	No
			Al	0.000077	0.000000	No
			Ca	-0.000121	0.000000	No
			Mn	-0.000570	0.000000	No
			Si	-0.003000	0.000000	No
			V	-0.002000	0.000000	No
			Sn	-0.004700	0.000000	No
			Ba	-0.002700	0.000000	No
			Mo	-0.000850	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Cu	-0.000000	0.000000	No
			Ni	-0.010000	0.000000	No
Na 589.592 { 57}	<input checked="" type="checkbox"/>	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}	<input checked="" type="checkbox"/>	1	Mo	0.038137	0.000000	No
Mo 202.030 {467}	<input checked="" type="checkbox"/>	2	Al	-0.000004	0.000000	No
			Fe	-0.000010	0.000000	No
Si 212.412 {459}	<input checked="" type="checkbox"/>	12	Sr	0.000366	0.000000	No
			Ni	0.002092	0.000000	No
			Mo	0.031190	0.000000	No
			V	0.034576	0.000000	No
			Ti	0.002619	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	0.003000	0.000000	No
			W	0.000000	0.000000	No
Sn 189.989 {478}	<input checked="" type="checkbox"/>	4	Ti	-0.002242	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}	<input checked="" type="checkbox"/>	2	Ca	0.000043	0.000000	No
			Si	0.000033	0.000000	No
Ti 334.904 {101}	<input checked="" type="checkbox"/>	3	Cr	0.000189	0.000000	No
			Mo	0.001070	0.000000	No
			Si	0.000035	0.000000	No
Y 360.073 { 94}* Y 371.030 { 91}* Y 224.306 {451}* In 230.606 {446}* W 207.911 {462}	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	None None None None 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	0.009921	0.000000	No
			Sn	0.001300	0.000000	No
			Zr	-0.002570	0.000000	No
			B	0.000009	0.000000	No
			Sb	-0.003000	0.000000	No
			Co	-0.001000	0.000000	No
			Ni	-0.003000	0.000000	No
			Be	-0.001000	0.000000	No
			Se	-0.002600	0.000000	No
			Cu	-0.000138	0.000000	No
			Ti	-0.002600	0.000000	No
Zr 339.198 { 99}	<input checked="" type="checkbox"/>	6	Mo	0.001069	0.000000	No
			Ti	0.000400	0.000000	No
			Fe	-0.000055	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Si	0.000615	0.000000	No
			S	-0.000030	0.000000	No
			Cr	-0.000700	0.000000	No
S 182.034 {485}	<input checked="" type="checkbox"/>	7	Mo	0.000477	0.000000	No
			Al	-0.000095	0.000000	No
			Fe	-0.000018	0.000000	No
			Mn	0.004620	0.000000	No
			W	-0.045000	0.000000	No
			Ca	0.000056	0.000000	No
			Mg	0.000071	0.000000	No
Bi 223.061 {451}	<input checked="" type="checkbox"/>	6	Ti	-0.055180	0.000000	No
			V	-0.001680	0.000000	No
			Co	-0.002380	0.000000	No
			Ca	-0.000002	0.000000	No
			Mg	-0.000000	0.000000	No
			Fe	0.000123	0.000000	No
Li 670.784 {50}	<input checked="" type="checkbox"/>	2	Ca	0.000003	0.000000	No
			Fe	0.000004	0.000000	No
P 177.495 {490}	<input checked="" type="checkbox"/>	1	Mn	-0.006184	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}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.006326	1.676546	0.000000	1.000000
Be 313.042 {108}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.000417	2.173667	0.000000	1.000000
Cd 228.802 {448}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.000306	1.018405	0.000000	1.000000
Co 228.616 {448}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.000114	0.607633	0.000000	1.000000
Cr 267.716 {126}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	-0.000086	0.123000	0.000000	1.000000
Cu 324.754 {104}2	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.005934	0.233453	0.000000	1.000000
Mn 257.610 {131}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.000071	0.734334	0.000000	1.000000
Ni 231.604 {446}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.000269	0.482399	0.000000	1.000000
Ag 328.068 {103}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	-0.000595	0.143423	0.000000	1.000000
V 292.402 {115}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.000209	0.187087	0.000000	1.000000
Zn 206.200 {464}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	-0.000161	1.294969	0.000000	1.000000
As 189.042 {478}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	-0.000518	0.110410	0.000000	1.000000
Tl 190.856 {477}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	-0.000378	0.077227	0.000000	1.000000
Pb 220.353 {453}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.000235	0.206721	0.000000	1.000000
Se 196.090 {472}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	-0.000036	0.079999	0.000000	1.000000
Sb 206.833 {463}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.000054	0.139988	0.000000	1.000000
Al 396.152 { 85}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	-0.000942	0.036120	0.000000	1.000000
Ca 317.933 {106}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.007582	0.069499	0.000000	1.000000
Fe 259.940 {130}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.000231	0.047258	0.000000	1.000000
Mg 279.079 {121}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	-0.000181	0.007582	0.000000	1.000000
K 766.490 { 44}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	-0.001431	0.017227	0.000000	1.000000
Na 589.592 { 57}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.002771	0.075575	0.000000	1.000000
B 208.959 {462}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.002541	0.219571	0.000000	1.000000
Mo 202.030 {467}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	-0.000468	0.674451	0.000000	1.000000
Si 212.412 {459}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.001588	0.184755	0.000000	1.000000
Sn 189.989 {478}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.000281	0.213795	0.000000	1.000000
Sr 407.771 { 83}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	-0.000282	2.851964	0.000000	1.000000
Ti 334.904 {101}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	-0.000032	0.153604	0.000000	1.000000
Y 360.073 { 94}*	6/9/2018 11:57:30	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 371.030 { 91}*	6/9/2018 11:57:30	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 224.306 {451}*	6/9/2018 11:57:30	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
In 230.606 {446}*	6/9/2018 11:57:30	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
W 207.911 {462}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.000538	0.339319	0.000000	1.000000
Zr 339.198 { 99}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	-0.000735	0.439337	0.000000	1.000000
S 182.034 {485}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	-0.002991	0.054831	0.000000	1.000000
Bi 223.061 {451}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.000149	0.161015	0.000000	1.000000
Li 670.784 { 50}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	None	0.001162	0.429938	0.000000	1.000000
P 177.495 {490}	6/9/2018 11:57:30	6/8/2018 12:10:08	Linear	1/Conc	-0.012397	0.127311	0.000000	1.000000

Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MLQ	Status	Reslope		QC Norm	
						Slope	Y-int	Slope factor	Offset
Ba 455.403 { 74}	1.000000	0.000000	0.000459	0.001529	OK	1.000000	0.000000	1	0
Be 313.042 {108}	1.000000	0.000000	0.000128	0.000428	OK	1.000000	0.000000	1	0
Cd 228.802 {448}	1.000000	0.000000	0.000262	0.000874	OK	1.000000	0.000000	1	0
Co 228.616 {448}	1.000000	0.000000	0.000338	0.001127	OK	1.000000	0.000000	1	0
Cr 267.716 {126}	1.000000	0.000000	0.000514	0.001712	OK	1.000000	0.000000	1	0
Cu 324.754 {104}2	1.000000	0.000000	0.000633	0.002110	OK	1.000000	0.000000	1	0
Mn 257.610 {131}	1.000000	0.000000	0.000080	0.000265	OK	1.000000	0.000000	1	0
Ni 231.604 {446}	1.000000	0.000000	0.000487	0.001622	OK	1.000000	0.000000	1	0
Ag 328.068 {103}	1.000000	0.000000	0.000685	0.002284	OK	1.000000	0.000000	1	0
V 292.402 {115}	1.000000	0.000000	0.000591	0.001970	OK	1.000000	0.000000	1	0
Zn 206.200 {464}	1.000000	0.000000	0.000171	0.000571	OK	1.000000	0.000000	1	0
As 189.042 {478}	1.000000	0.000000	0.001549	0.005162	OK	1.000000	0.000000	1	0
Tl 190.856 {477}	1.000000	0.000000	0.001710	0.005701	OK	1.000000	0.000000	1	0
Pb 220.353 {453}	1.000000	0.000000	0.001591	0.005303	OK	1.000000	0.000000	1	0
Se 196.090 {472}	1.000000	0.000000	0.002900	0.009665	OK	1.000000	0.000000	1	0
Sb 206.833 {463}	1.000000	0.000000	0.002070	0.006901	OK	1.000000	0.000000	1	0
Al 396.152 { 85}	1.000000	0.000000	0.016800	0.056001	OK	1.000000	0.000000	1	0
Ca 317.933 {106}	1.000000	0.000000	0.004970	0.016566	OK	1.000000	0.000000	1	0
Fe 259.940 {130}	1.000000	0.000000	0.003712	0.012374	OK	1.000000	0.000000	1	0
Mg 279.079 {121}	1.000000	0.000000	0.029969	0.099897	OK	1.000000	0.000000	1	0
K 766.490 { 44}	1.000000	0.000000	0.066134	0.220446	OK	1.000000	0.000000	1	0
Na 589.592 { 57}	1.000000	0.000000	0.014941	0.049805	OK	1.000000	0.000000	1	0
B 208.959 {462}	1.000000	0.000000	0.000940	0.003133	OK	1.000000	0.000000	1	0
Mo 202.030 {467}	1.000000	0.000000	0.000375	0.001251	OK	1.000000	0.000000	1	0
Si 212.412 {459}	1.000000	0.000000	0.001566	0.005220	OK	1.000000	0.000000	1	0
Sn 189.989 {478}	1.000000	0.000000	0.000803	0.002678	OK	1.000000	0.000000	1	0
Sr 407.771 { 83}	1.000000	0.000000	0.000179	0.000598	OK	1.000000	0.000000	1	0
Ti 334.904 {101}	1.000000	0.000000	0.000578	0.001928	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	0.001477	0.004923	OK	1.000000	0.000000	1	0
Zr 339.198 { 99}	1.000000	0.000000	0.000286	0.000952	OK	1.000000	0.000000	1	0
S 182.034 {485}	1.000000	0.000000	0.003330	0.011100	OK	1.000000	0.000000	1	0
Bi 223.061 {451}	1.000000	0.000000	0.002398	0.007995	OK	1.000000	0.000000	1	0
Li 670.784 { 50}	1.000000	0.000000	0.002582	0.008607	OK	1.000000	0.000000	1	0
P 177.495 {490}	1.000000	0.000000	0.001592	0.005306	OK	1.000000	0.000000	1	0



Mercury Hot Block Digestion Log

Product HG / EHG / HGCLP
 Matrix: (Ag) / Liq / DW

MA Batch #: MA44562
 Analyst: DP
 Date: 6/1/2018
 Balance ID: B24
 Reagents: See attached sheet
 Auto pipet ID: M-72

Methods (Circle as appropriate)
 EPA 245.1 SW846 7470A

Required corrected Temp. Range is 90-95 C.

Hot Block # 6 Start Time: 8:00 End Time: 10:00 Tube # 1-44

Start Temp: 96C Corrected Start Temp: 94C Correction: -2 Thermometer ID: 4151157

End Temp: 96C Corrected End Temp: 94C Correction: -2 Thermometer ID: 11517

Bot #	Sample ID	pH <2 Y/N	Initial Sample Vol ml	Final Samp Vol ml	Spiked Used		Spiketot and Conc (mg/L)	MP Number	Comments/Lot # and Vendor
					Amount Spiked	Added- Y or N			
1	ICV (External)	N	30	30	3.0 ml	Y	0.03		HG-18-138-088-HGB3, Ultra Scientific
2	ICB	N	30	30					
ccv	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
ccb	CCB	N	30	30					
3	CRI	N	30	30	2.0 ml	Y	0.003		HG-18-138-087-HGA4, Inorganic Venture
4	MP7428-MB1	N	30	30				MP7428	SW846 7470A TCLP
5	MP7428-B1	N	30	30	2.0 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
6	MP7428-S1	N	10.0	30	2.0 ml	Y	0.03		JC66933-1, HG-18-138-086-HGA3, (IV)
7	MP7428-S2	N	10.0	30	2.0 ml	Y	0.03		JC66933-1, HG-18-138-086-HGA3, (IV)
8	JC66933-1	N	10.0	30					FOAMMY/YELLOW
9	JC66933-2	Y	30	30					
10	JC66933-3	Y	30	30					
11	JC66933-4	Y	30	30					
12	JC66933-5	Y	30	30					
ccv	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
ccb	CCB	N	30	30					
13	JC66933-6	Y	30	30					
14	JC66933-7	Y	15.0	30					FOAMMY/PINK
15	JC66929-1A	Y	30	30					
16	MP7332-MB3	N	30	30				MP7332	SW846 7470A TCLP
17	MP7332-B3	N	30	30	2.0 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
18	DA5707-1	Y	1.0	30					CLOUDY/OILY/ODOR
19	JC66983-1	Y	10.0	30					FOAMMY/YELLOW
20	JC66957-3A	Y	30	30					
21	MP7429-MB1	N	30	30				MP7429	SW846 7470A
22	MP7429-B1	N	30	30	2.0 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
ccv	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
ccb	CCB	N	30	30					
23	MP7429-S1	Y	30	30	2.0 ml	Y	0.03		JC66897-15, HG-18-138-086-HGA3, (IV)
24	MP7429-S2	Y	30	30	2.0 ml	Y	0.03		JC66897-15, HG-18-138-086-HGA3, (IV)
25	JC66897-15	Y	30	30					
26	JC66897-7	Y	15.0	30					BROWN
27	JC66897-8	Y	30	30					
28	JC66897-10	Y	30	30					
29	JC66897-11	Y	5.0	30					MUDDY/BROWN
30	JC66897-12	Y	15.0	30					BROWN
31	JC66897-13	Y	30	30					
32	JC66897-14	Y	30	30					
ccv	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
ccb	CCB	N	30	30					

* 0.5 ml of con HNO3 was added @ 7:45 on 6/1.

Form HG022-03
 Revision Date: 8/24/15

ANALYST: DP
 Spike witness: SA
 QC: REVIEWER: [Signature]

DATE: 6/1/18
 DATE: 6/1/18
 DATE: _____



Mercury Hot Block Digestion Log

Product HG / EHG / HGCLP
 Matrix: (Ad) Liq / DW

MA Batch #: MA44562
 Analyst: DP
 Date: 6/1/2018
 Balance ID: B24
 Reagents: See attached sheet
 Auto pipet ID: M-72

Methods (Circle as appropriate)
 EPA 245.1 (SW846 7470A)

Required corrected Temp. Range is 90-95 C.

Hot Block # 7 Start Time: 9:00 End Time: 11:00 Tube # 45-64

Start Temp: 97C Corrected Start Temp: 94C Correction: +3 Thermometer ID: 4156488
 End Temp: 97C Corrected End Temp: 94C Correction: -3 Thermometer ID: 4156488

Bot #	Sample ID	pH <2 Y/N	Initial Sample Vol ml	Final Samp Vol ml	Spiked Used		Spikelot and Conc (mg/L)	MP Number	Comments/Lot # and Vendor
					Amount Spiked	Added Y or N			
33	JC66897-16	Y	30	30					
34	JC66897-17	Y	30	30					
35	JC66897-18	Y	30	30					
36	JC66946-1	Y	30	30					
37	JC66946-2	Y	15.0	30					FOAMMY/YELLOW
38	JC66946-3	Y	30	30					
39	JC66946-4	Y	15.0	30					FOAMMY/YELLOW
40	JC66946-5	Y	30	30					
41	JC66973-1	Y	30	30					
42	JC66970-3	Y	30	30					
ccv	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
ccb	CCB	N	30	30					
43	JC66982-1	Y	30	30					
44	JC66989-1	Y	30	30					
45	MP7430-MB1	N	30	30				MP7430	SW846 7470A
46	MP7430-B1	N	30	30	2.0 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
47	MP7430-S1	Y	30	30	2.0 ml	Y	0.03		JC66971-2,HG-18-138-086-HGA3,(IV)
48	MP7430-S2	Y	30	30	2.0 ml	Y	0.03		JC66971-2,HG-18-138-086-HGA3,(IV)
49	JC66971-2	Y	30	30					
50	JC66971-1	Y	30	30					
51	JC66971-3	Y	30	30					
52	SAMPLECONF	N	30	30					
ccv	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
ccb	CCB	N	30	30					
53	JC66971-4	Y	30	30					
54	JC66971-5	Y	30	30					
55	JC66971-6	Y	30	30					
56	JC67003-1	Y	30	30					
57	JC67003-2	Y	30	30					
58	JC67003-3	Y	30	30					
59	JC67003-4	Y	30	30					
60	JC67003-5	Y	30	30					
61	JC67003-6	Y	30	30					
62	JC67003-7	Y	30	30					
ccv	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
ccb	CCB	N	30	30					

13.4.1 13

ANALYST: DP
 Spike witness: JA
 QC: REVIEWER: _____

DATE: 6/1/18
 DATE: 6/1/18
 DATE: _____



Mercury Hot Block Digestion Log

Product HG / EHG / HGCLP
 Matrix: (Aq) Liq / DW

MA Batch #: MA44562
 Analyst: DP
 Date: 6/1/2018
 Balance ID: B24
 Reagents: See attached sheet
 Auto pipet ID: M-72

Methods (Circle as appropriate)
 EPA 245.1 SW846 7470A

Required corrected Temp. Range is 90-95 C.

Hot Block # 7 Start Time: 11:30 End Time: 13:30 Tube # 65-90

Start Temp: 97C Corrected Start Temp: 94C Correction: -3 Thermometer ID: 4156488
 End Temp: 97C Corrected End Temp: 94C Correction: -3 Thermometer ID: 4156488

Bot #	Sample ID	pH <2 Y/N	Initial Sample Vol ml	Final Samp Vol ml	Spiked Used		Spikelot and Conc (mg/L)	MP Number	Comments/Lot # and Vendor
					Amount Spiked	Added Y or N			
63	JC66957-3	Y	30	30					
64	JC66929-6	Y	30	30					
* 65	MP7442-MB1	N	30	30				MP7442	SW846 7470A TCLP
* 66	MP7442-B1	N	30	30	2.0 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
* 67	MP7442-S1	N	30	30	2.0 ml	Y	0.03		JC66949-1,HG-18-138-086-HGA3,(IV)
* 68	MP7442-S2	N	30	30	2.0 ml	Y	0.03		JC66949-1,HG-18-138-086-HGA3,(IV)
* 69	JC66949-1	N	30	30					
70	JC66943-1A	Y	30	30					
71	JC67019-4	Y	15.0	30					FOAMMY/PINK
72	JC67023-1A	Y	30	30					
ccv	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
ccb	CCB	N	30	30					
73	JC66951-1A	Y	30	30					
74	JC66951-2A	Y	30	30					
75	JC66951-3A	Y	30	30					
76	JC66951-4A	Y	30	30					
77	JC66951-5A	Y	30	30					
78	JC66951-6A	Y	30	30					
79	JC66951-7A	Y	30	30					
80	JC66951-8A	Y	30	30					
81	JC66957-1AB	Y	30	30					
82	JC66957-2AB	Y	30	30					
ccv	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
ccb	CCB	N	30	30					
83	JC66976-1A	Y	30	30					
84	TD21677-1B	Y	30	30					
* 85	MP7307-MB2	N	30	30				MP7307	SW846 7470A TCLP
* 86	MP7307-B2	N	30	30	2.0 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
87	TD21675-1B	Y	30	30					
88	TD21676-1B	Y	30	30					
89	MP7440-FMBCONF	Y	30	30				MP7440	FILTERMET
90	MP7440-FLCCONF	Y	30	30	2.0 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
91									
92									
ccv	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-086-HGA3, Inorganic Venture
ccb	CCB	N	30	30					

** 0.5 ml of con HNO3 was added @ 11:15 on 6/1.

Form HG022-03
 Revision Date: 8/24/15

ANALYST: DP
 Spike witness: JA
 QC: REVIEWER: _____

DATE: 6/1/18
 DATE: 6/1/18
 DATE: _____

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Reagent Information Log- Hg Waters

MA # MA44562

Reagents	Exp. Date	Reagent # or manufacturer lot #
<u>Conc. Sulfuric Acid</u>	<u>5/22/2018</u>	<u>Fisher -177436</u>
<u>Conc. Nitric Acid</u>	<u>5/26/2018</u>	<u>Baker - 193289</u>
<u>Sodium Chloride-Hydroxylamine Hydrochloride</u>	<u>11/30/2018</u>	<u>HG-18-136- 320 -HGCL</u>
<u>Potassium Permanganate 5%</u>	<u>11/30/2018</u>	<u>HG-18-136- 318 -HGKM2</u>
<u>Potassium Persulfate</u>	<u>11/30/2018</u>	<u>HG-18-136- 319 -HGKS</u>
<u>Stannous Chloride</u>	<u>6/2/2018</u>	<u>HG-18-138- 89 -HGS</u>
<u>STD Hg standard solution 1000 ppm</u>	<u>3/1/2019</u>	<u>Inorganic Ventures K2-HG653768</u>
<u>STD Hg standard solution 30 ppb</u>	<u>6/2/2018</u>	<u>HG-18-138- 86 -HGA3</u>
<u>STD Hg standard solution 3ppb</u>	<u>6/2/2018</u>	<u>HG-18-138- 87 -HGA4</u>
<u>ICV Hg standard solution 1000 ppm</u>	<u>6/30/2021</u>	<u>Ultra T00601</u>
<u>ICV Hg standard solution 30ppb</u>	<u>6/2/2018</u>	<u>HG-18-138- 88 -HGB3</u>
<u>Dilution Acid</u>	<u>11/22/2018</u>	<u>HG-18-138- 57 -HGD2</u>
<u>Digestion Tubes Lot</u>	<u>N/A</u>	<u>Envrionmental Express 1802043</u>
<u>ph Paper</u>	<u>11/30/2018</u>	<u>Hydrion - 232515</u>

Form:GN087A79-03
Rev. Date: 6/6/17

Accutest Aqueous Metals Digestion Form

Batch Information						
Batch ID	Start Date	Start Time	End Date	End time	QC Samp 1	QC Samp 2
MP7493	6/5/2018	16:15	6/5/2018	21:30	JC67110-4	

Temperature						
		Block ID1	Therm. ID#	Temperature	Correction	Corrected Temp
1	Start	3	158271	95	0	95
1	End	3	158271	94	0	94
2	Start					
2	End					

Methods and Equipment					
	Dig. Method	Heating Method		Auto Pipette #	Digestion Tube Lot #
	SW846 3010A	Digestion Block		M-74	1802043

Sample ID	Bottle Number	Pres (Y/N)	Initial Sample Volume	Final Volume in ML	Reagent Groups Added	Spike Groups Added	Comments
MP7493-MB1	N/A	N	50	50	AB		*
MP7493-B1	N/A	N	50	50	AB	ABCD	*
MP7493-S1	23	Y	50	50	AB	ABCD	*
MP7493-S2	23	Y	50	50	AB	ABCD	*
MP7493-SD1	23	Y	50	50	AB		*
JC67003-1	7	Y	50	50	AB		
JC67003-2	8	Y	50	50	AB		
JC67003-3	7	Y	50	50	AB		
JC67003-4	1	Y	50	50	AB		
JC67003-5	1	Y	50	50	AB		
JC67003-6	1	Y	50	50	AB		
JC67003-7	7	Y	50	50	AB		*
JC67110-1	1	Y	50	50	AB		
JC67110-2	1	Y	50	50	AB		
JC67110-3	7	Y	50	50	AB		
JC67110-4	23	Y	50	50	AB		*
JC67110-5	7	Y	50	50	AB		

Reagents Groups		
Group	Description	MLs Used
A	CONC HNO3	3
B	1:1 HCL	5
C		
D		
E		
F		
G		
H		

Spike Groups		
Group	Description	MLs Used
A	ACCUTEST 13A REV-1	0.5
B	ACCUTEST 14A REV-1	0.5
C	MINERALS 5000PPM	0.25
D	AG 20PPM	0.625
E		
F	AG 20PPM	0.625
G		
H		

Comments: *FILTERED AFTER DIGESTION

Analyst COLLEENH Approved by Wendyz Approved on 6/6/2018

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



Metals Digestion Reagents Information Log

Digestion Batch ID: MP 7493 Date: 6/15/18
 Matrix: ALL

<u>Standard/Reagent Type</u>	<u>Exp. Date</u>	<u>Standard/Reagent ID</u>
Spiking Solution - (ACCUTEST -13A Rev1)	11/17/2018	MP-015-1057
Spiking Solution - (ACCUTEST -14A Rev1)	11/17/2018	MP-015-1058
Spiking Solution - 5000 mg/l Minerals	5/11/2019	N2-MEB667268 MFG: INO. VENT.
Spiking Solution - Sulfur 1000ppm	2/8/2020	LOT: 020817 MFG: ABS. GRADE
Spiking Solution - Si 1000ppm	5/11/2019	K2-SI654310 MFG: INO. VENT
Spiking Solution - Bi 1000ppm	12/1/2018	M2-B1658289 MFG: INO. VENT
Spiking Solution - Se 20ppm	6/7/2018	MA-18-328-114
Spiking Solution - Li 1000ppm	11/14/2018	M2-LI657553 MFG: INO. VENT
Spiking Solution- Ag 20 ppm	10/6/2018	MA-18-328-94
Spiking Solution - (ACCUTEST -13B Rev1)	10/25/2018	MP-015-1053
Spiking Solution - (ACCUTEST -14B Rev1)	9/28/2018	MP-015-1045
Spiking Solution - 400ppm Minerals	11/5/2018	MP-015-1056
Spiking Solution- P		
Nitric Acid	6/4/2020	LOT: 193289 MFG: J.T. BAKER
Nitric Acid (1:1)	12/4/2018	MP-018-42-04 1:1 HNO3
Hydrochloric Acid	6/4/2020	LOT: 189306 MFG: J.T. BAKER
Hydrochloric Acid (1:1)	12/4/2018	MP-018-42-11 1:1 HCL
Hydrogen Peroxide	6/2/2020	LOT: 174462 MFG: FISHER
Soil Lab Control/Soil LC	3/21/2020	LOT: D094-540 MFG: ERA
Teflon Chips(For Soil MB and Blank Spike)	N/A	LOT: 23430173 MFG: SAINT-GOBAIN
Digestion Tubes	N/A	LOT: 1712272 MFG: ENV. EXPRESS
pH Paper	11/30/2018	LOT: 232515 MFG: HYDRION
Filter paper Q8	N/A	LOT: 9802858 MFG: FISHER
Filter paper 0.45µm	N/A	LOT: F7EA83809 MFG: FISHER

Spike witnessed By: RF

Validated By: _____

Validated On: _____

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General Chemistry

QC Data Summaries

Includes the following where applicable:

- **Method Blank and Blank Spike Summaries**
- **Duplicate Summaries**
- **Matrix Spike Summaries**
- **Instrument Runlogs/QC**

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC67003
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	GP13492/GN80929	0.010	0.0	mg/l	0.0833	0.0897	107.7	90-110%

Associated Samples:

Batch GP13492: JC67003-1, JC67003-2, JC67003-3, JC67003-7

(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Cyanide	GP13492/GN80929	JC66897-15	mg/l	0.0	0.0	0.0	0-32%

Associated Samples:

Batch GP13492: JC67003-1, JC67003-2, JC67003-3, JC67003-7

(*) Outside of QC limits

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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC67003
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	GP13492/GN80929	JC66897-15	mg/l	0.0	0.0833	0.0072	8.6N(a)	90-110%

Associated Samples:

Batch GP13492: JC67003-1, JC67003-2, JC67003-3, JC67003-7

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(a) Spike recovery indicates possible matrix interference.

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E060518W1.CN Date Analyzed: 06/05/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Analyst: BM Run ID: GN80929
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:57	GN80929-STD1	1		STDA
10:59	GN80929-STD2	1		STDB
11:00	GN80929-STD3	1		STDC
11:01	GN80929-STD4	1		STDD
11:03	GN80929-STD5	1		STDE
11:04	GN80929-STD6	1		STDF
11:06	GN80929-STD7	1		STDG
11:07	GN80929-ICV1	1		
11:08	GN80929-ICB1	1		
11:10	GN80929-CCV1	1		
11:11	GN80929-CCB1	1		
11:12	GP13355-MB2	1		
11:14	GP13355-B2	1		
11:15	GP13355-S1	1		back to need.
11:16	GP13355-D1	1		
11:18	JC66538-36	1		(sample used for QC only; not part of login JC67003)
11:19	ZZZZZZ	1		
11:20	ZZZZZZ	1		
11:22	ZZZZZZ	1		
11:23	ZZZZZZ	1		
11:25	ZZZZZZ	1		
11:26	GN80929-CCV2	1		
11:27	GN80929-CCB2	1		
11:29	GP13354-MB2	1		
11:30	GP13354-B2	1		
11:31	GP13354-S1	1		back to need.
11:33	GP13354-S2	1		back to need.
11:34	GP13467-MB1	1		
11:35	GP13467-B1	1		
11:37	GP13467-S1	1		
11:38	GP13467-D1	1		
11:40	ZZZZZZ	1		
11:41	JC66897-3	1		(sample used for QC only; not part of login JC67003)

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E060518W1.CN Date Analyzed: 06/05/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Analyst: BM Run ID: GN80929
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:42	GN80929-CCV3	1		
11:44	GN80929-CCB3	1		
11:45	ZZZZZZ	1		
11:46	ZZZZZZ	1		
11:48	ZZZZZZ	1		
11:49	ZZZZZZ	1		
11:50	ZZZZZZ	1		
11:52	ZZZZZZ	1		
11:53	ZZZZZZ	1		
11:55	ZZZZZZ	1		
11:56	GP13491-MB1	1		
11:57	GP13491-B1	1		
11:59	GN80929-CCV4	1		
12:00	GN80929-CCB4	1		
12:01	GP13491-S1	1		back to need.
12:03	GP13491-S2	1		
12:04	GP13491-D1	1		
12:05	JC67053-1	1		(sample used for QC only; not part of login JC67003)
12:07	JC67053-3	1		(sample used for QC only; not part of login JC67003)
12:08	ZZZZZZ	1		
12:09	ZZZZZZ	1		
12:11	ZZZZZZ	1		
12:12	ZZZZZZ	1		
12:14	ZZZZZZ	1		
12:15	GN80929-CCV5	1		
12:16	GN80929-CCB5	1		
12:18	ZZZZZZ	1		
12:19	ZZZZZZ	1		
12:20	ZZZZZZ	1		
12:22	ZZZZZZ	1		
12:23	ZZZZZZ	1		
12:24	ZZZZZZ	1		
12:26	ZZZZZZ	1		

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E060518W1.CN Date Analyzed: 06/05/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Analyst: BM Run ID: GN80929

Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:27	ZZZZZZ	1		
12:29	ZZZZZZ	1		
12:30	ZZZZZZ	1		
12:31	GN80929-CCV6	1		
12:33	GN80929-CCB6	1		
12:34	ZZZZZZ	1		
12:35	ZZZZZZ	1		
12:37	ZZZZZZ	1		
12:38	GP13469-MB1	1		
12:39	GP13469-B1	1		
12:41	GP13469-S1	1		
12:42	GP13469-S2	1		
12:44	GP13469-D1	1		
12:45	JC66947-1	1		(sample used for QC only; not part of login JC67003)
12:46	JC66947-2	1		(sample used for QC only; not part of login JC67003)
12:48	GN80929-CCV7	1		
12:49	GN80929-CCB7	1		
12:50	ZZZZZZ	1		
12:52	ZZZZZZ	1		
12:53	ZZZZZZ	1		
12:54	ZZZZZZ	1		
12:56	ZZZZZZ	1		
12:57	ZZZZZZ	1		
12:58	ZZZZZZ	1		
13:00	ZZZZZZ	1		
13:01	ZZZZZZ	1		
13:03	ZZZZZZ	1		
13:04	GN80929-CCV8	1		
13:05	GN80929-CCB8	1		
13:07	ZZZZZZ	1		
13:08	ZZZZZZ	1		
13:09	ZZZZZZ	1		
13:11	ZZZZZZ	1		

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E060518W1.CN Date Analyzed: 06/05/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Analyst: BM Run ID: GN80929
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:12	ZZZZZZ	1		
13:13	ZZZZZZ	1		
13:15	ZZZZZZ	1		
13:16	GP13499-MB1	1		
13:18	GP13499-B1	1		
13:19	GP13499-S1	1		
13:20	GN80929-CCV9	1		
13:22	GN80929-CCB9	1		
13:23	GP13499-S2	1		
13:24	GP13499-D1	1		
13:26	JC66957-1A	1		(sample used for QC only; not part of login JC67003)
13:27	ZZZZZZ	1		
13:28	JC67108-1	1		(sample used for QC only; not part of login JC67003)
13:30	ZZZZZZ	1		
13:31	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:34	ZZZZZZ	1		
13:35	ZZZZZZ	1		
13:37	GN80929-CCV10	1		
13:38	GN80929-CCB10	1		
13:39	ZZZZZZ	1		
13:41	ZZZZZZ	1		
13:42	ZZZZZZ	1		
13:43	GP13492-MB1	1		
13:45	GP13492-B1	1		
13:46	GP13492-S1	1		
13:47	GP13492-S2	1		
13:49	GP13492-D1	1		
13:50	JC67091-1	1		(sample used for QC only; not part of login JC67003)
13:52	ZZZZZZ	1		
13:53	GN80929-CCV11	1		
13:54	GN80929-CCB11	1		
13:56	ZZZZZZ	1		

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E060518W1.CN Date Analyzed: 06/05/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Analyst: BM Run ID: GN80929
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:57	ZZZZZZ	1		
13:58	ZZZZZZ	1		
14:00	ZZZZZZ	1		
14:01	ZZZZZZ	1		
14:02	JC66897-15	1		(sample used for QC only; not part of login JC67003)
14:04	ZZZZZZ	1		
14:05	ZZZZZZ	1		
14:07	ZZZZZZ	1		
14:08	JC67003-1	1		
14:09	GN80929-CCV12	1		
14:11	GN80929-CCB12	1		
14:12	JC67003-2	1		
14:13	JC67003-3	1		
14:15	JC67003-7	1		
14:16	ZZZZZZ	1		
14:17	ZZZZZZ	1		
14:19	ZZZZZZ	1		
14:20	GP13468-MB1	1		
14:22	GP13468-B1	1		
14:23	GP13468-S1	1		
14:24	GP13468-S2	1		
14:26	GN80929-CCV13	1		
14:27	GN80929-CCB13	1		
14:28	GP13468-D1	1		
14:30	JC66873-1	1		(sample used for QC only; not part of login JC67003)
14:31	ZZZZZZ	1		
14:32	JC66873-2	1		(sample used for QC only; not part of login JC67003)
14:34	ZZZZZZ	1		
14:35	ZZZZZZ	1		
14:37	ZZZZZZ	1		
14:38	ZZZZZZ	1		
14:39	ZZZZZZ	1		
14:41	ZZZZZZ	1		

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E060518W1.CN Date Analyzed: 06/05/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Analyst: BM Run ID: GN80929
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:42	GN80929-CCV14	1		
14:43	GN80929-CCB14	1		
14:45	ZZZZZZ	1		
14:46	ZZZZZZ	1		
14:47	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:50	ZZZZZZ	1		
14:52	ZZZZZZ	1		
14:53	ZZZZZZ	1		
14:54	ZZZZZZ	1		
14:56	ZZZZZZ	1		
14:57	ZZZZZZ	1		
15:31	GN80929-CCV15	1		
15:33	GN80929-CCB15	1		
15:38	ZZZZZZ	20		
15:39	ZZZZZZ	40		
15:42	GN80929-CCV16	1		
15:44	GN80929-CCB16	1		

Refer to raw data for calibration curve and standards.

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Instrument QC Summary
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E060518W1.CN Date Analyzed: 06/05/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Run ID: GN80929 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN80929-ICV1	Cyanide	0.289	0.010	0.0058	.3	96.3	90-110
GN80929-ICB1	Cyanide	-0.00725	0.010	0.0058			
GN80929-CCV1	Cyanide	0.427	0.010	0.0058	.4	106.8	90-110
GN80929-CCB1	Cyanide	0.0058 U	0.010	0.0058			
GN80929-CCV2	Cyanide	0.425	0.010	0.0058	.4	106.3	90-110
GN80929-CCB2	Cyanide	0.0058 U	0.010	0.0058			
GN80929-CCV3	Cyanide	0.426	0.010	0.0058	.4	106.5	90-110
GN80929-CCB3	Cyanide	-0.00654	0.010	0.0058			
GN80929-CCV4	Cyanide	0.426	0.010	0.0058	.4	106.5	90-110
GN80929-CCB4	Cyanide	0.0058 U	0.010	0.0058			
GN80929-CCV5	Cyanide	0.425	0.010	0.0058	.4	106.3	90-110
GN80929-CCB5	Cyanide	0.0058 U	0.010	0.0058			
GN80929-CCV6	Cyanide	0.427	0.010	0.0058	.4	106.8	90-110
GN80929-CCB6	Cyanide	-0.00760	0.010	0.0058			
GN80929-CCV7	Cyanide	0.425	0.010	0.0058	.4	106.3	90-110
GN80929-CCB7	Cyanide	-0.00756	0.010	0.0058			
GN80929-CCV8	Cyanide	0.425	0.010	0.0058	.4	106.3	90-110
GN80929-CCB8	Cyanide	-0.00617	0.010	0.0058			
GN80929-CCV9	Cyanide	0.425	0.010	0.0058	.4	106.3	90-110
GN80929-CCB9	Cyanide	0.0058 U	0.010	0.0058			
GN80929-CCV10	Cyanide	0.426	0.010	0.0058	.4	106.5	90-110
GN80929-CCB10	Cyanide	0.0058 U	0.010	0.0058			
GN80929-CCV11	Cyanide	0.426	0.010	0.0058	.4	106.5	90-110
GN80929-CCB11	Cyanide	-0.00595	0.010	0.0058			
GN80929-CCV12	Cyanide	0.430	0.010	0.0058	.4	107.5	90-110
GN80929-CCB12	Cyanide	0.0058 U	0.010	0.0058			
GN80929-CCV13	Cyanide	0.424	0.010	0.0058	.4	106.0	90-110
GN80929-CCB13	Cyanide	-0.00631	0.010	0.0058			
GN80929-CCV14	Cyanide	0.425	0.010	0.0058	.4	106.3	90-110
GN80929-CCB14	Cyanide	-0.00806	0.010	0.0058			
GN80929-CCV15	Cyanide	0.425	0.010	0.0058	.4	106.3	90-110
GN80929-CCB15	Cyanide	0.0058 U	0.010	0.0058			
GN80929-CCV16	Cyanide	0.427	0.010	0.0058	.4	106.8	90-110
GN80929-CCB16	Cyanide	0.0058 U	0.010	0.0058			

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Instrument QC Summary
Inorganics Analyses

Login Number: JC67003
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E060518W1.CN Date Analyzed: 06/05/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Run ID: GN80929 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
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(!) Outside of QC limits

General Chemistry

Raw Data

LABORATORY REVIEW SIGNATURE FORM
(To be stored with the raw data)

File ID: E060518W1.CN
Analyst: EM

Date Analyzed: 06/05/18
Run ID: GN80929

Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT

The following analyst(s) have reviewed this run and attest that, to the best of their knowledge, this documentation is complete and correct:

Analyst: EM Date 6/10/18

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

Analyst: _____ Date _____

The following supervisor or their designee has reviewed this run and attests that, to the best of their knowledge, this documentation is complete and correct:

Supervisor (or designee): [Signature] Date 6/11/18

Author: chemistry

GN80929

2060P18PW1.CN
Date: 6/5/2018

Original Run Filename: OM_6-5-2018_10-56-39AM.OMN Created: 6/5/2018 10:56:39 AM
Original Run Author's Signature: [chemistry]
Current Run Filename: OM_6-5-2018_10-56-39AM.OMN Last Modified: 6/5/2018 3:46:24 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	6/5/2018@10:57:48 AM	
STDB	1	2	0.600	6/5/2018@10:59:11 AM	
STDC	1	3	0.400	6/5/2018@11:00:33 AM	
STDD	1	4	0.100	6/5/2018@11:01:55 AM	
STDE	1	5	0.0200	6/5/2018@11:03:17 AM	
STDF	1	6	0.0100	6/5/2018@11:04:39 AM	
STDG	1	7	0.00	6/5/2018@11:06:01 AM	
ICV	1	8	0.289	6/5/2018@11:07:22 AM	
Known Conc:			0.300		
Calibration:			Table/Fig.: 1		
ICB	1	9	-7.25e-3	6/5/2018@11:08:44 AM	
Known Conc:			0.00		
CCV	1	S9	0.427	6/5/2018@11:10:05 AM	
Known Conc:			0.400		
CCB	1	S10	-4.34e-3	6/5/2018@11:11:27 AM	
Known Conc:			0.00		
GP13355-MB2	1	10	-1.78e-3	6/5/2018@11:12:49 AM	
GP13355-B2	1	11	0.0862	6/5/2018@11:14:10 AM	
GP13355-S1	1	12	-3.86e-3	6/5/2018@11:15:31 AM	
GP13355-D1	1	13	-5.28e-3	6/5/2018@11:16:52 AM	
JC66538-36	1	14	-3.88e-3	6/5/2018@11:18:13 AM	
JC66724-2	1	15	-5.12e-3	6/5/2018@11:19:34 AM	
JC66743-1	1	16	-4.38e-5	6/5/2018@11:20:56 AM	
JC66772-1	1	17	-5.59e-3	6/5/2018@11:22:19 AM	
JC66797-1	1	18	5.23e-3	6/5/2018@11:23:41 AM	
JC66799-2	1	19	-5.55e-3	6/5/2018@11:25:03 AM	
CCV	1	S9	0.425	6/5/2018@11:26:25 AM	
Known Conc:			0.400		
CCB	1	S10	-5.39e-3	6/5/2018@11:27:46 AM	
Known Conc:			0.00		
GP13354-MB2	1	20	-2.36e-3	6/5/2018@11:29:09 AM	
GP13354-B2	1	21	0.0863	6/5/2018@11:30:30 AM	
GP13354-S1	1	22	-7.13e-3	6/5/2018@11:31:52 AM	
GP13354-S2	1	23	-4.22e-3	6/5/2018@11:33:13 AM	
GP13467-MB1	1	24	-1.74e-3	6/5/2018@11:34:35 AM	
GP13467-B1	1	25	0.0883	6/5/2018@11:35:56 AM	
GP13467-S1	1	26	2.40e-3	6/5/2018@11:37:18 AM	
GP13467-D1	1	27	-3.36e-3	6/5/2018@11:38:39 AM	
JC66897-1	1	28	-7.77e-3	6/5/2018@11:40:00 AM	
JC66897-3	1	29	-4.21e-3	6/5/2018@11:41:21 AM	
CCV	1	S9	0.426	6/5/2018@11:42:42 AM	
Known Conc:			0.400		
CCB	1	S10	-6.54e-3	6/5/2018@11:44:04 AM	
Known Conc:			0.00		
JC66897-4	1	30	-7.58e-3	6/5/2018@11:45:25 AM	
JC66897-5	1	31	-3.88e-3	6/5/2018@11:46:47 AM	
JC66897-6	1	32	-3.47e-3	6/5/2018@11:48:10 AM	
JC66914-1	1	33	4.13e-3	6/5/2018@11:49:32 AM	
JC66927-1	1	34	-1.28e-3	6/5/2018@11:50:54 AM	
JC66982-1	1	35	-6.69e-3	6/5/2018@11:52:16 AM	
JC66983-1	1	36	-5.06e-3	6/5/2018@11:53:38 AM	
JC66989-2	1	37	-6.91e-3	6/5/2018@11:55:00 AM	
GP13491-MB1	1	38	-5.72e-4	6/5/2018@11:56:21 AM	
GP13491-B1	1	39	0.0880	6/5/2018@11:57:43 AM	
CCV	1	S9	0.426	6/5/2018@11:59:05 AM	
Known Conc:			0.400		
CCB	1	S10	-3.92e-3	6/5/2018@12:00:27 PM	
Known Conc:			0.00		
GP13491-S1	1	40	-1.91e-3	6/5/2018@12:01:48 PM	
GP13491-S2	1	41	0.0623	6/5/2018@12:03:09 PM	

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103.4%
back to need.

106.2%

103.6%
> back to need.

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106.5%

105.6%
106.5%

back to need.

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Author: chemistry

Date : 6/5/2018

GP13491-D1	1	42	-1.69e-3	6/5/2018@12:04:30 PM
JC67053-1	1	43	-2.59e-3	6/5/2018@12:05:51 PM
JC67053-3	1	44	-2.62e-4	6/5/2018@12:07:12 PM
JC67053-6	1	45	-3.28e-4	6/5/2018@12:08:33 PM
JC67053-8	1	46	1.91e-4	6/5/2018@12:09:56 PM
JC67075-1	1	47	3.76e-3	6/5/2018@12:11:18 PM
JC67075-2	1	48	0.0143	6/5/2018@12:12:40 PM
JC67077-1	1	49	-5.38e-3	6/5/2018@12:14:02 PM
CCV	1	S9	0.425	6/5/2018@12:15:24 PM
		Known Conc:	0.400	
CCB	1	S10	-4.82e-3	6/5/2018@12:16:46 PM
		Known Conc:	0.00	
JC67150-1	1	50	-2.24e-3	6/5/2018@12:18:08 PM
JC67150-3	1	51	-3.84e-3	6/5/2018@12:19:30 PM
JC67150-6	1	52	2.22e-5	6/5/2018@12:20:52 PM
JC67191-4	1	53	2.31e-4	6/5/2018@12:22:13 PM
JC67193-1	1	54	-5.68e-4	6/5/2018@12:23:35 PM
JC66951-1	1	55	-1.59e-3	6/5/2018@12:24:56 PM
JC66951-2	1	56	-1.40e-3	6/5/2018@12:26:18 PM
JC66951-3	1	57	-8.80e-4	6/5/2018@12:27:39 PM
JC66951-4	1	58	-1.80e-3	6/5/2018@12:29:00 PM
JC66951-5	1	59	-1.98e-3	6/5/2018@12:30:21 PM
CCV	1	S9	0.427	6/5/2018@12:31:42 PM
		Known Conc:	0.400	
CCB	1	S10	-7.60e-3	6/5/2018@12:33:05 PM
		Known Conc:	0.00	
JC66951-6	1	60	-4.63e-4	6/5/2018@12:34:25 PM
JC66951-7	1	61	-1.82e-3	6/5/2018@12:35:48 PM
JC66951-8	1	62	7.45e-3	6/5/2018@12:37:10 PM
GP13469-MB1	1	63	-2.43e-3	6/5/2018@12:38:32 PM
GP13469-B1	1	64	0.0867	6/5/2018@12:39:54 PM
GP13469-S1	1	65	0.0791	6/5/2018@12:41:16 PM
GP13469-S2	1	66	0.0818	6/5/2018@12:42:38 PM
GP13469-D1	1	67	-1.86e-3	6/5/2018@12:44:00 PM
JC66947-1	1	68	-1.89e-3	6/5/2018@12:45:21 PM
JC66947-2	1	69	-3.51e-3	6/5/2018@12:46:43 PM
CCV	1	S9	0.425	6/5/2018@12:48:04 PM
		Known Conc:	0.400	
CCB	1	S10	-7.56e-3	6/5/2018@12:49:27 PM
		Known Conc:	0.00	
JC66947-3	1	70	-4.80e-3	6/5/2018@12:50:48 PM
JC66947-4	1	71	-4.84e-3	6/5/2018@12:52:09 PM
JC66947-5	1	72	-3.60e-3	6/5/2018@12:53:31 PM
JC66947-6	1	73	-2.66e-3	6/5/2018@12:54:52 PM
JC66947-7	1	74	-2.99e-3	6/5/2018@12:56:13 PM
JC66947-8	1	75	-2.64e-3	6/5/2018@12:57:34 PM
JC66947-9	1	76	-6.65e-3	6/5/2018@12:58:56 PM
JC66947-10	1	77	-2.42e-3	6/5/2018@1:00:18 PM
JC66947-11	1	78	-3.85e-3	6/5/2018@1:01:40 PM
JC66947-12	1	79	-3.08e-3	6/5/2018@1:03:02 PM
CCV	1	S9	0.425	6/5/2018@1:04:24 PM
		Known Conc:	0.400	
CCB	1	S10	-6.17e-3	6/5/2018@1:05:46 PM
		Known Conc:	0.00	
JC66947-13	1	80	-3.88e-3	6/5/2018@1:07:08 PM
JC66947-14	1	81	-4.19e-4	6/5/2018@1:08:30 PM
JC66950-1	1	82	-4.76e-3	6/5/2018@1:09:51 PM
JC66950-4	1	83	-2.91e-3	6/5/2018@1:11:13 PM
JC66950-6	1	84	-4.30e-3	6/5/2018@1:12:35 PM
JC66952-1	1	85	1.26e-3	6/5/2018@1:13:56 PM
JC66953-1	1	86	-3.55e-3	6/5/2018@1:15:17 PM
GP13499-MB1	1	87	-1.84e-3	6/5/2018@1:16:39 PM
GP13499-B1	1	88	0.0897	6/5/2018@1:18:00 PM
GP13499-S1	1	89	0.0670	6/5/2018@1:19:21 PM
CCV	1	S9	0.425	6/5/2018@1:20:43 PM
		Known Conc:	0.400	
CCB	1	S10	-4.55e-3	6/5/2018@1:22:05 PM
		Known Conc:	0.00	

106.2%

106.7%

104.1%

106.2%

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107.6%

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Author: chemistry

Date : 6/5/2018

GP13499-S2	1	90	0.0851	6/5/2018@1:23:26 PM
GP13499-D1	1	91	8.00e-4	6/5/2018@1:24:48 PM
JC66957-1A	1	92	2.77e-4	6/5/2018@1:26:10 PM
JC66957-2A	1	93	5.12e-3	6/5/2018@1:27:33 PM
JC67108-1	1	94	-3.39e-4	6/5/2018@1:28:55 PM
JC67108-2	1	95	5.79e-3	6/5/2018@1:30:17 PM
JC67108-3	1	96	-6.27e-4	6/5/2018@1:31:38 PM
JC67108-4	1	97	0.197	6/5/2018@1:33:00 PM
JC67108-5	1	98	-3.52e-3	6/5/2018@1:34:22 PM
JC67108-6	1	99	1.93e-4	6/5/2018@1:35:43 PM
CCV	1	S9	0.426	6/5/2018@1:37:05 PM
		Known Conc:	0.400	
CCB	1	S10	-5.33e-3	6/5/2018@1:38:27 PM
		Known Conc:	0.00	
JC67108-7	1	100	5.97e-4	6/5/2018@1:39:48 PM
JC67108-8	1	101	-5.39e-5	6/5/2018@1:41:09 PM
JC67108-9	1	102	7.18e-3	6/5/2018@1:42:31 PM
GP13492-MB1	1	103	-1.46e-3	6/5/2018@1:43:52 PM
GP13492-B1	1	104	0.0897	6/5/2018@1:45:14 PM
GP13492-S1	1	105	7.19e-3	6/5/2018@1:46:35 PM
GP13492-S2	1	106	0.0381	6/5/2018@1:47:58 PM
GP13492-D1	1	107	-1.60e-3	6/5/2018@1:49:20 PM
JC67091-1	1	108	-5.47e-4	6/5/2018@1:50:43 PM
JC67000-1	1	109	3.59e-3	6/5/2018@1:52:04 PM
CCV	1	S9	0.426	6/5/2018@1:53:26 PM
		Known Conc:	0.400	
CCB	1	S10	-5.95e-3	6/5/2018@1:54:48 PM
		Known Conc:	0.00	
JC66897-7	1	110	-1.99e-3	6/5/2018@1:56:10 PM
JC66897-8	1	111	-5.76e-3	6/5/2018@1:57:32 PM
JC66897-10	1	112	-2.56e-3	6/5/2018@1:58:54 PM
JC66897-13	1	113	-3.54e-3	6/5/2018@2:00:15 PM
JC66897-14	1	114	-3.29e-3	6/5/2018@2:01:37 PM
JC66897-15	1	115	-3.07e-3	6/5/2018@2:02:58 PM
JC66897-16	1	116	-2.09e-3	6/5/2018@2:04:20 PM
JC66897-17	1	117	-3.55e-3	6/5/2018@2:05:42 PM
JC66897-18	1	118	-4.10e-3	6/5/2018@2:07:03 PM
JC67003-1	1	119	0.671	6/5/2018@2:08:24 PM
CCV	1	S9	0.430	6/5/2018@2:09:46 PM
		Known Conc:	0.400	
CCB	1	S10	-3.84e-3	6/5/2018@2:11:08 PM
		Known Conc:	0.00	
JC67003-2	1	120	0.197	6/5/2018@2:12:30 PM
JC67003-3	1	121	0.108	6/5/2018@2:13:52 PM
JC67003-7	1	122	2.74e-3	6/5/2018@2:15:14 PM
JC66957-3	1	123	-2.49e-4	6/5/2018@2:16:36 PM
JC67025-1	1	124	-2.38e-4	6/5/2018@2:17:58 PM
JC67089-4	1	125	-1.26e-3	6/5/2018@2:19:20 PM
GP13468-MB1	1	126	-2.36e-3	6/5/2018@2:20:42 PM
GP13468-B1	1	127	0.0835	6/5/2018@2:22:04 PM
GP13468-S1	1	128	0.149	6/5/2018@2:23:26 PM
GP13468-S2	1	129	0.0909	6/5/2018@2:24:47 PM
CCV	1	S9	0.424	6/5/2018@2:26:09 PM
		Known Conc:	0.400	
CCB	1	S10	-6.31e-3	6/5/2018@2:27:31 PM
		Known Conc:	0.00	
GP13468-D1	1	130	0.0302	6/5/2018@2:28:53 PM
JC66873-1	1	131	0.0115	6/5/2018@2:30:15 PM
JC66862-1	1	132	0.0165	6/5/2018@2:31:36 PM
JC66873-2	1	133	-2.65e-3	6/5/2018@2:32:58 PM
JC66920-1	1	134	3.16	6/5/2018@2:34:20 PM
JC66952-2	1	135	3.61e-3	6/5/2018@2:35:41 PM
JC66953-2	1	136	-2.93e-3	6/5/2018@2:37:05 PM
JC66953-3	1	137	-2.58e-3	6/5/2018@2:38:25 PM
JC66953-4	1	138	-1.13e-3	6/5/2018@2:39:48 PM
JC66953-5	1	139	-2.14e-3	6/5/2018@2:41:10 PM
CCV	1	S9	0.425	6/5/2018@2:42:31 PM
		Known Conc:	0.400	

106.5x

107.6x

106.5x

107.5x

100.2x

106x

over range, see re-run.

106.2x

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Author: chemistry

Date : 6/5/2018

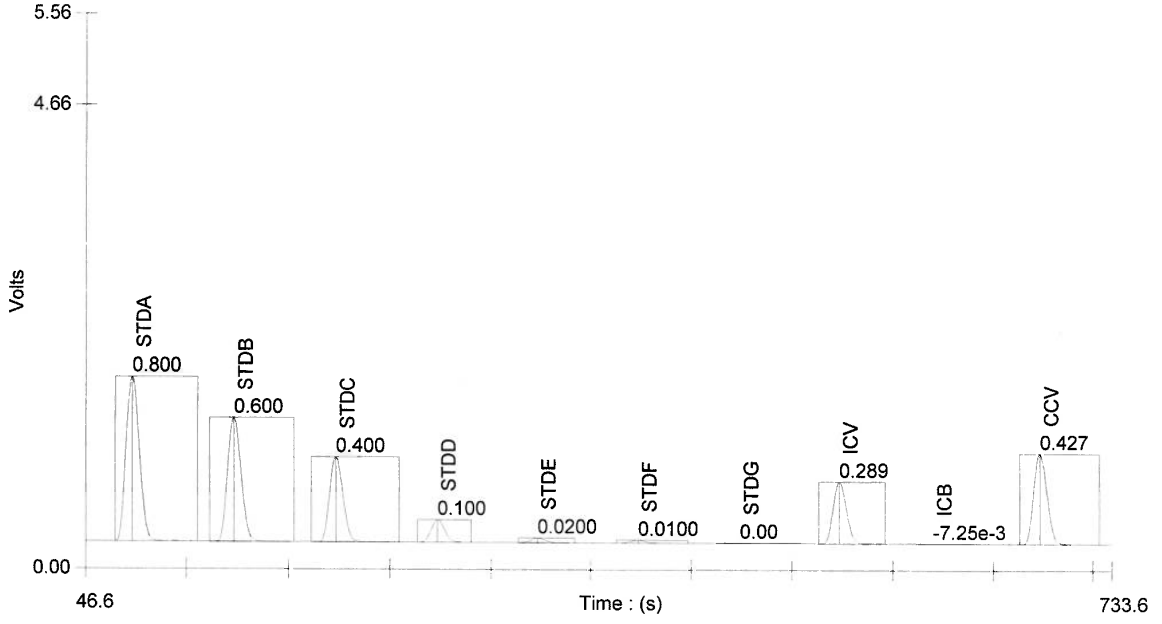
CCB	1	S10	-8.06e-3	6/5/2018@2:43:53 PM	
	Known Conc:		0.00		
JC66953-6	1	140	-2.49e-3	6/5/2018@2:45:15 PM	
JC66953-7	1	141	-1.96e-3	6/5/2018@2:46:37 PM	
JC66953-8	1	142	-2.48e-3	6/5/2018@2:47:59 PM	
JC66954-1	1	143	-2.10e-3	6/5/2018@2:49:20 PM	
JC66954-2	1	144	-1.34e-3	6/5/2018@2:50:42 PM	
JC66954-3	1	145	8.55e-4	6/5/2018@2:52:04 PM	
JC66954-4	1	146	3.39e-4	6/5/2018@2:53:26 PM	
JC66954-5	1	147	-1.05e-3	6/5/2018@2:54:47 PM	
JC66954-6	1	148	6.14e-3	6/5/2018@2:56:09 PM	
JC66929-1	1	149	1.47e-3	6/5/2018@2:57:31 PM	
CCV	1	S9	0.425	6/5/2018@2:58:53 PM	
	Known Conc:		0.400		106.2%
CCB	1	S10	-6.50e-3	6/5/2018@3:00:14 PM	
	Known Conc:		0.00		
GP13450-MB1	1	150	-6.82e-3	6/5/2018@3:01:36 PM	
GP13450-B1	1	151	0.485	6/5/2018@3:02:59 PM	24.2%
GP13450-D1	1	152	-5.14e-3	6/5/2018@3:04:21 PM	
JC66954-1	1	153	-6.07e-3	6/5/2018@3:05:43 PM	
JC66954-2	1	154	-6.75e-3	6/5/2018@3:07:05 PM	
JC66954-3	1	155	-5.89e-3	6/5/2018@3:08:27 PM	
JC66954-4	1	156	-4.54e-3	6/5/2018@3:09:49 PM	
JC66954-5	1	157	-5.08e-3	6/5/2018@3:11:11 PM	
JC66954-6	1	158	-5.80e-3	6/5/2018@3:12:33 PM	
JC66951-1	1	159	-7.81e-3	6/5/2018@3:13:55 PM	
CCV	1	S9	0.425	6/5/2018@3:15:17 PM	
	Known Conc:		0.400		106.2%
CCB	1	S10	-6.04e-3	6/5/2018@3:16:39 PM	
	Known Conc:		0.00		
JC66951-2	1	160	-6.65e-3	6/5/2018@3:18:00 PM	
JC66951-3	1	161	-6.89e-3	6/5/2018@3:19:22 PM	
JC66951-4	1	162	-5.27e-3	6/5/2018@3:20:44 PM	
JC66951-5	1	163	-7.33e-3	6/5/2018@3:22:06 PM	
JC66951-6	1	164	-7.58e-3	6/5/2018@3:23:28 PM	
JC66951-7	1	165	-6.58e-3	6/5/2018@3:24:50 PM	
JC66951-8	1	166	-6.08e-3	6/5/2018@3:26:13 PM	
JC66976-1A	1	167	-7.33e-3	6/5/2018@3:27:35 PM	
JC66948-2	1	168	-8.18e-3	6/5/2018@3:28:57 PM	
GP13511-MB1	1	169	-5.09e-3	6/5/2018@3:30:19 PM	
CCV	1	S9	0.425	6/5/2018@3:31:41 PM	
	Known Conc:		0.400		106.2%
CCB	1	S10	-3.23e-3	6/5/2018@3:33:03 PM	
	Known Conc:		0.00		
GP13511-B1	1	170	0.600	6/5/2018@3:34:25 PM	30%
GP13511-D1	1	171	-7.41e-3	6/5/2018@3:35:47 PM	
JC67120-5A	1	172	-6.23e-3	6/5/2018@3:37:09 PM	
JC66920-1	1	173	0.389	6/5/2018@3:38:31 PM	20
JC66920-1	1	174	0.202	6/5/2018@3:39:53 PM	40
CCV	1	S9	0.427	6/5/2018@3:42:56 PM	
	Known Conc:		0.400		106.7%
CCB	1	S10	-4.63e-3	6/5/2018@3:44:18 PM	
	Known Conc:		0.00		

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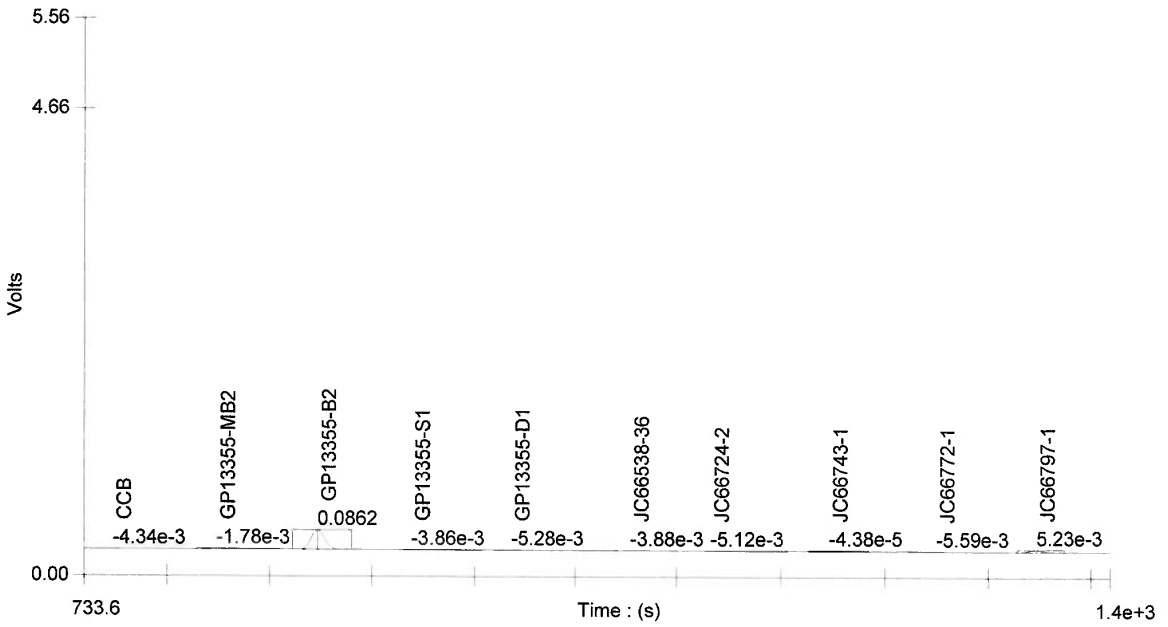
Author: chemistry

Date : 6/5/2018

Channel 1 - Set: 1 / 21



Channel 1 - Set: 2 / 21

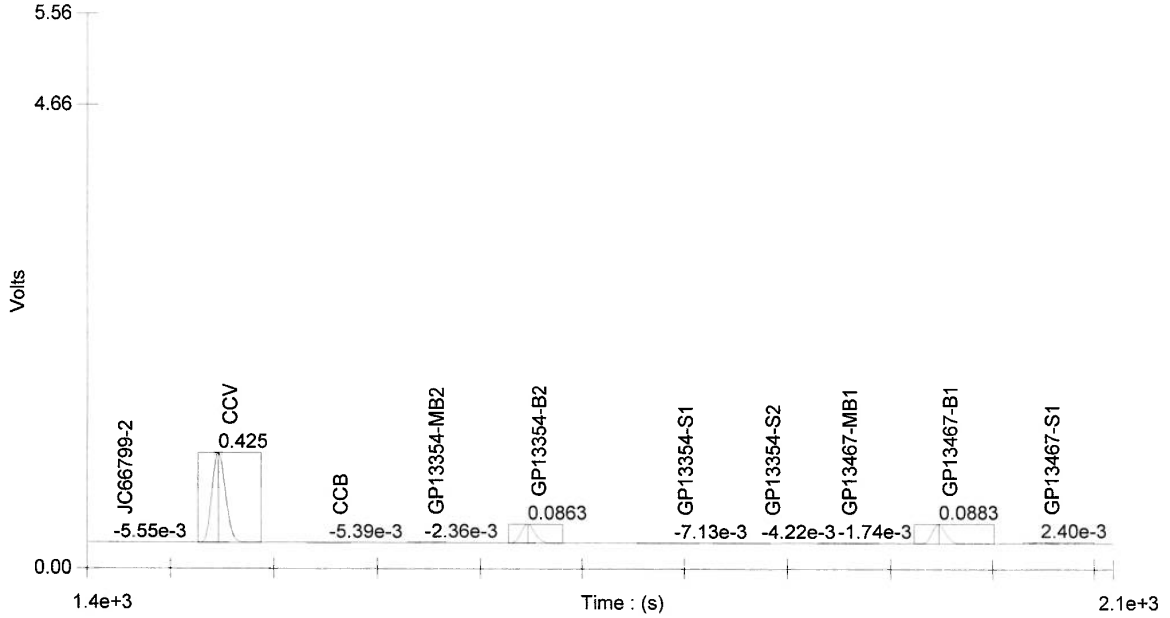


15.1 15

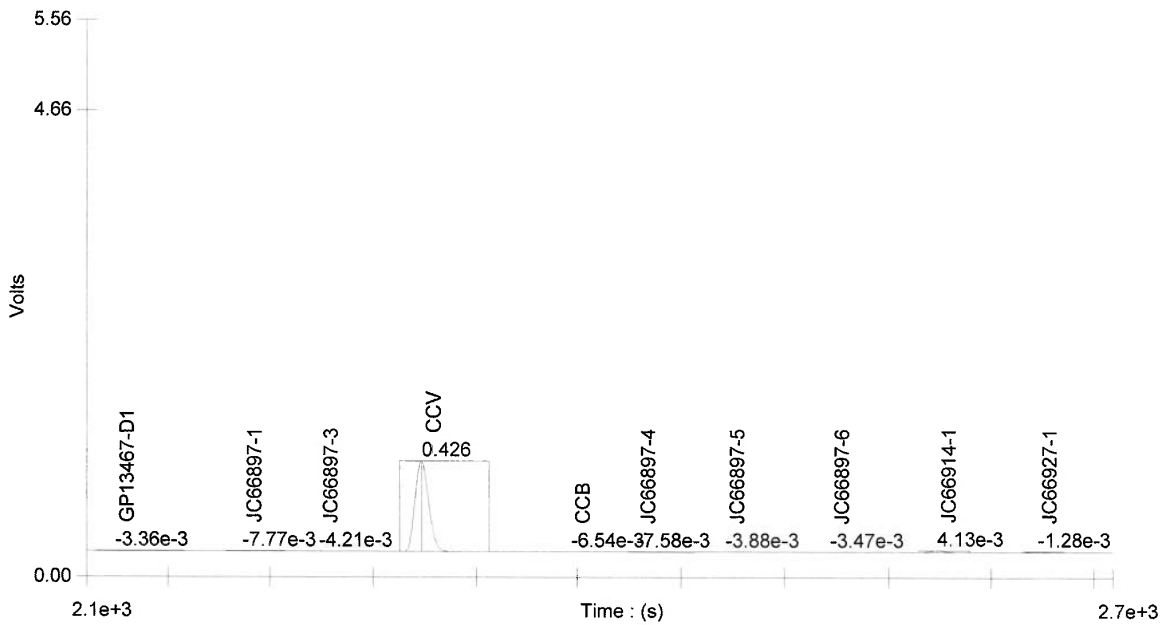
Author: chemistry

Date : 6/5/2018

Channel 1 - Set: 3 / 21



Channel 1 - Set: 4 / 21

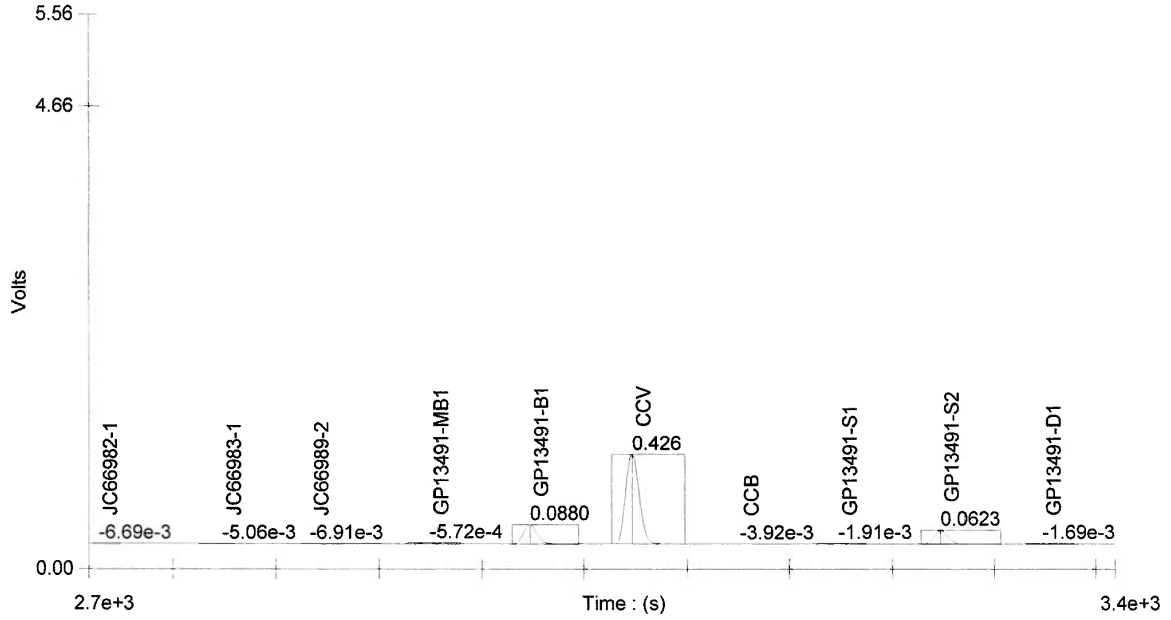


15.1
15

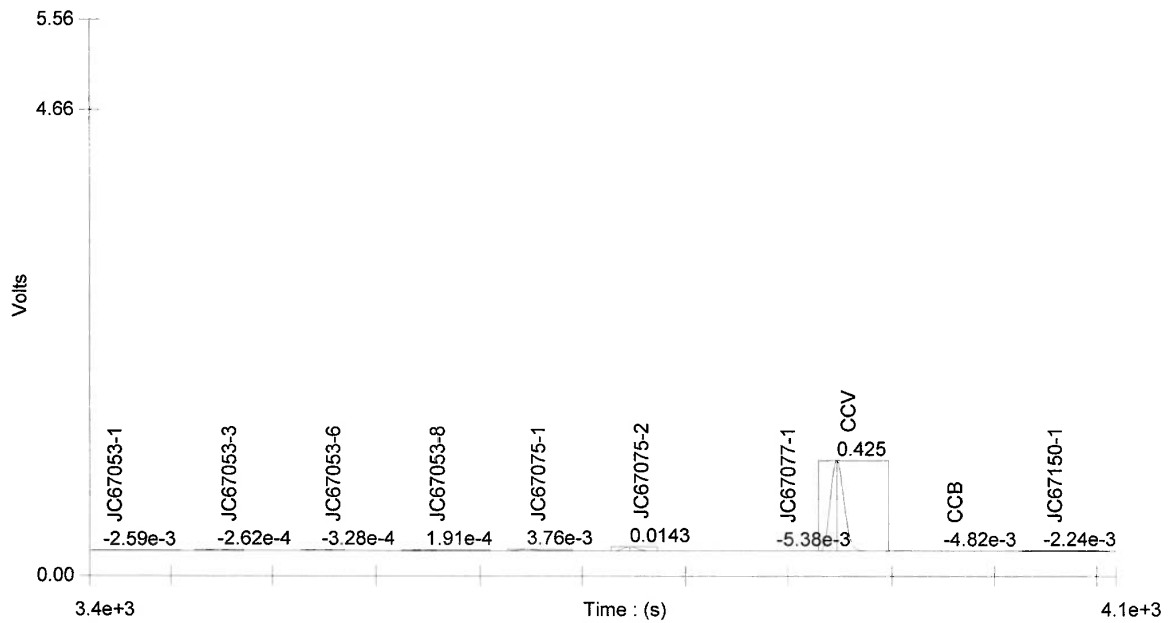
Author: chemistry

Date : 6/5/2018

Channel 1 - Set: 5 / 21



Channel 1 - Set: 6 / 21

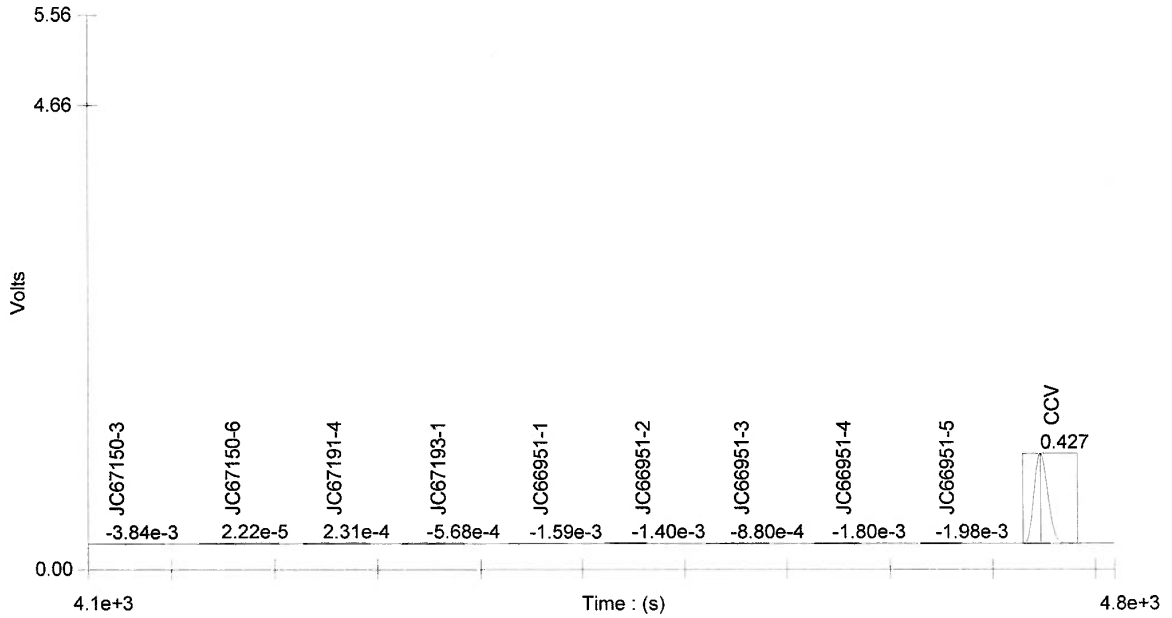


15.1
15

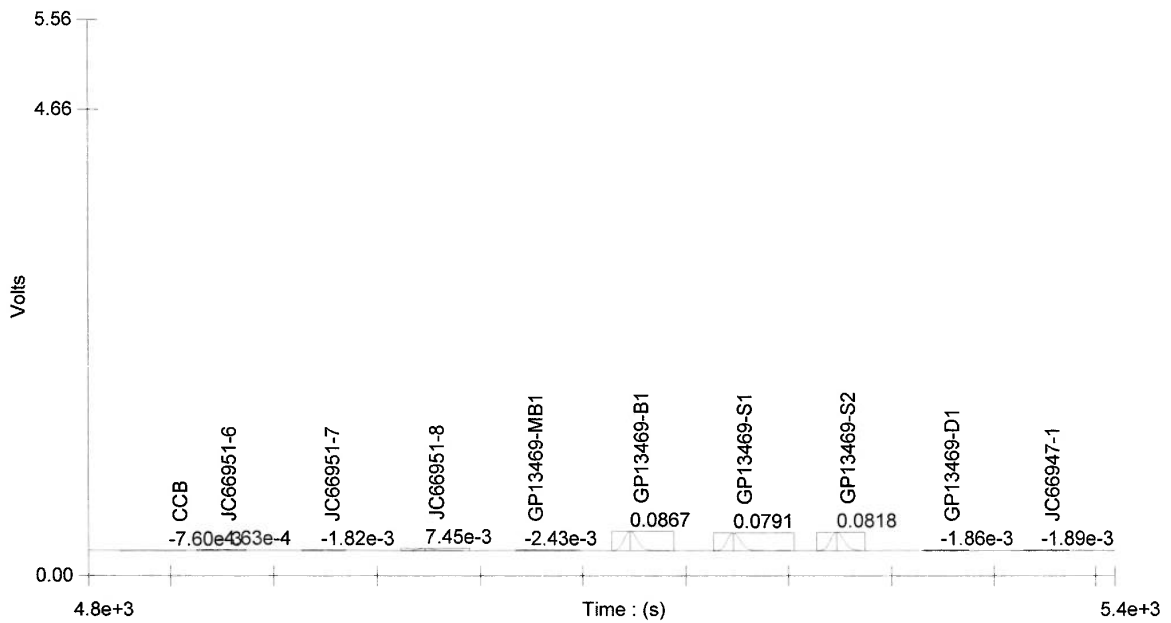
Author: chemistry

Date : 6/5/2018

Channel 1 - Set: 7 / 21



Channel 1 - Set: 8 / 21



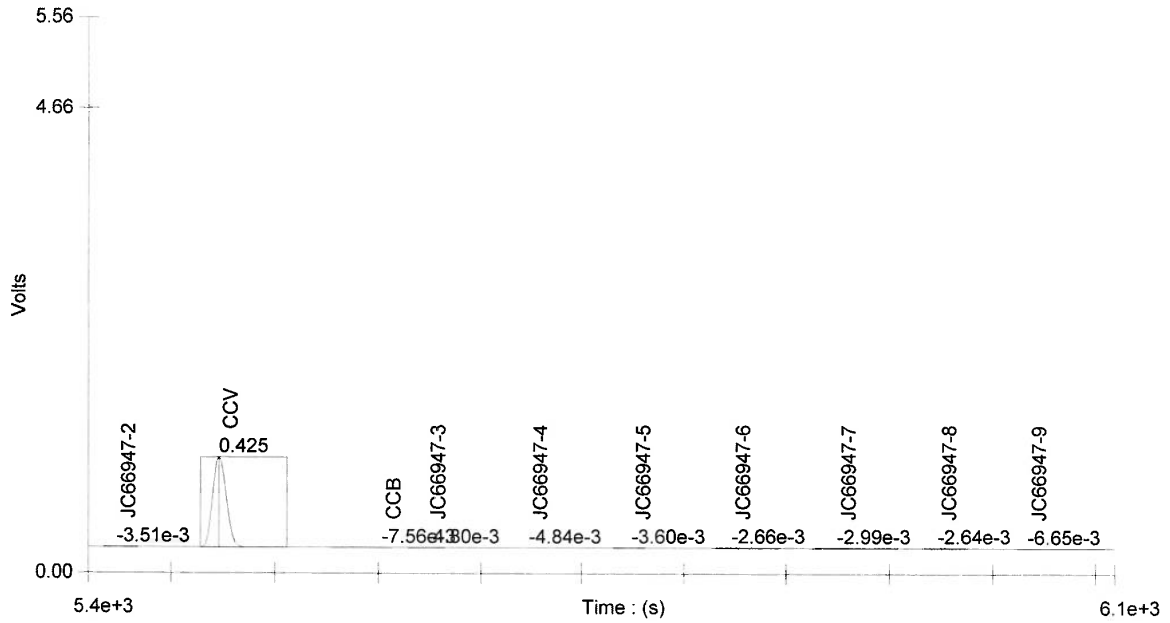
- 8 -

15.1
15

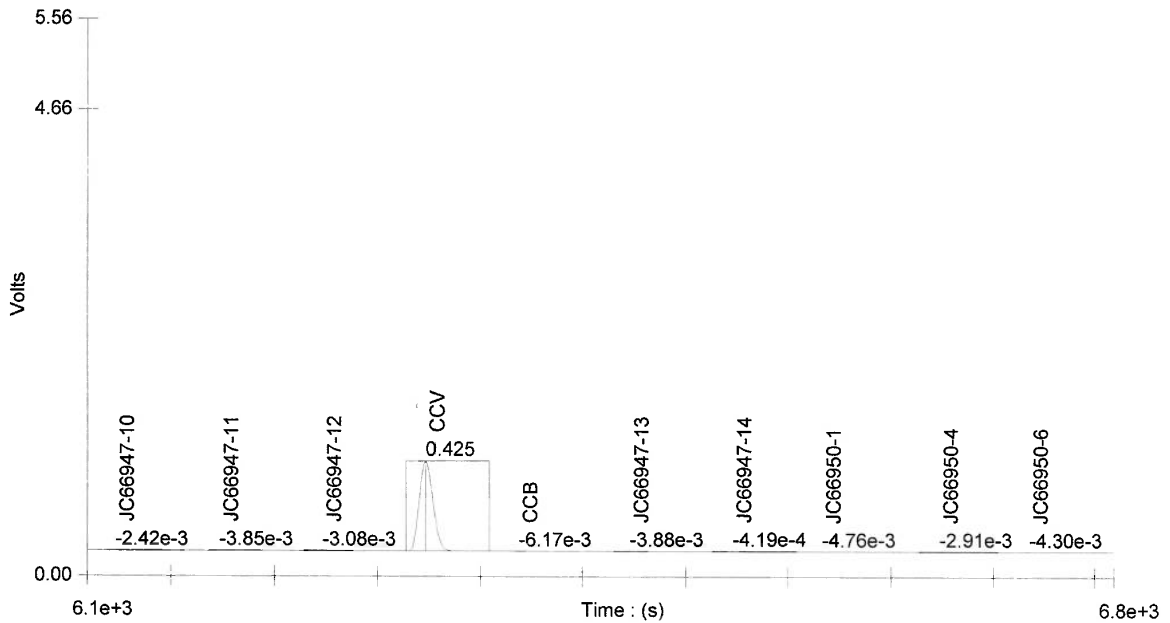
Author: chemistry

Date : 6/5/2018

Channel 1 - Set: 9 / 21



Channel 1 - Set: 10 / 21

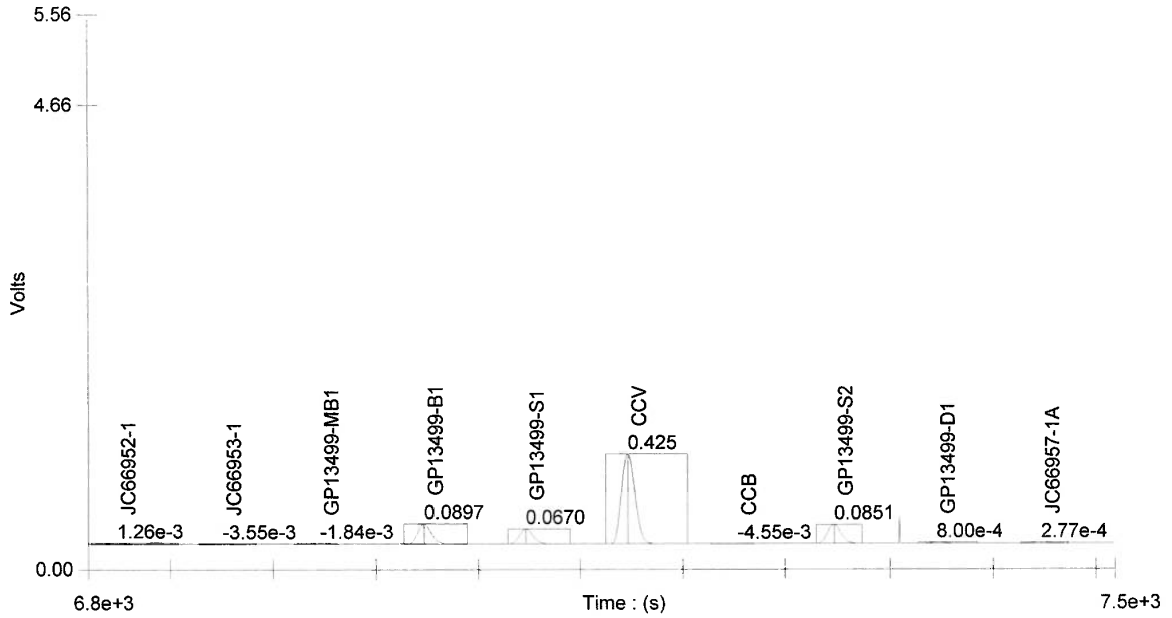


15.1
15

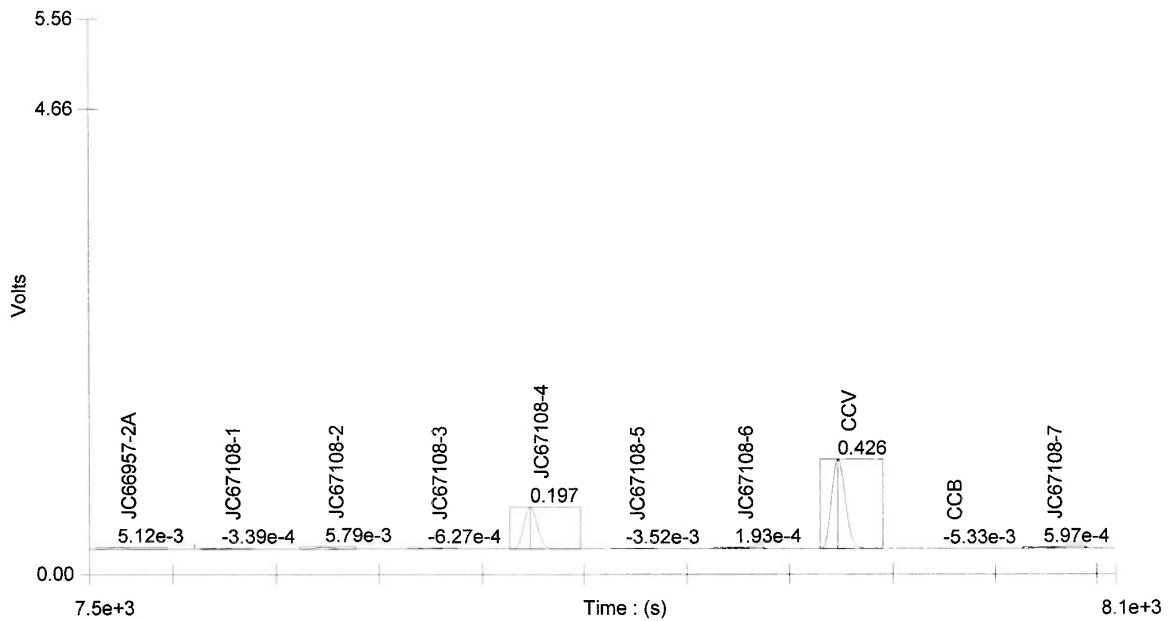
Author: chemistry

Date : 6/5/2018

Channel 1 - Set: 11 / 21



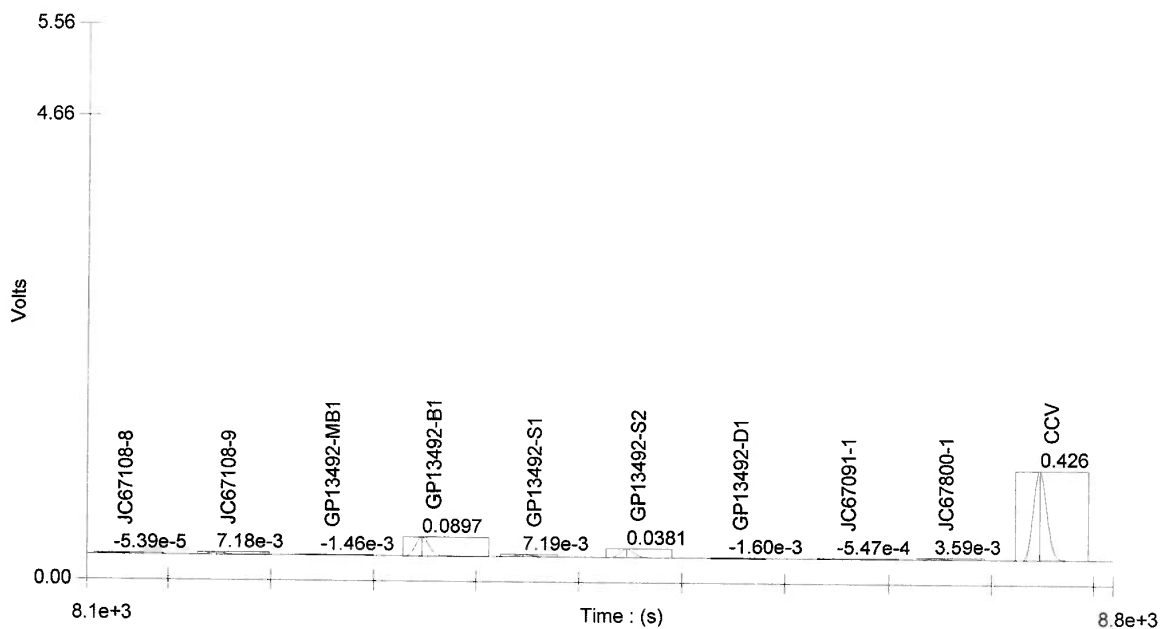
Channel 1 - Set: 12 / 21



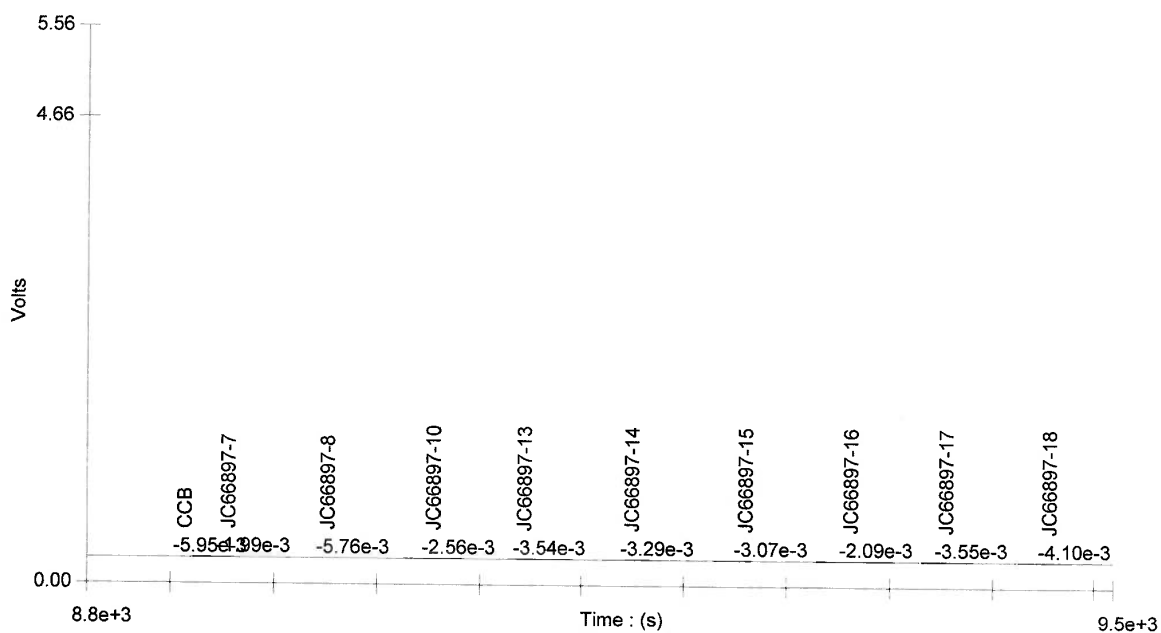
Author: chemistry

Date : 6/5/2018

Channel 1 - Set: 13 / 21



Channel 1 - Set: 14 / 21

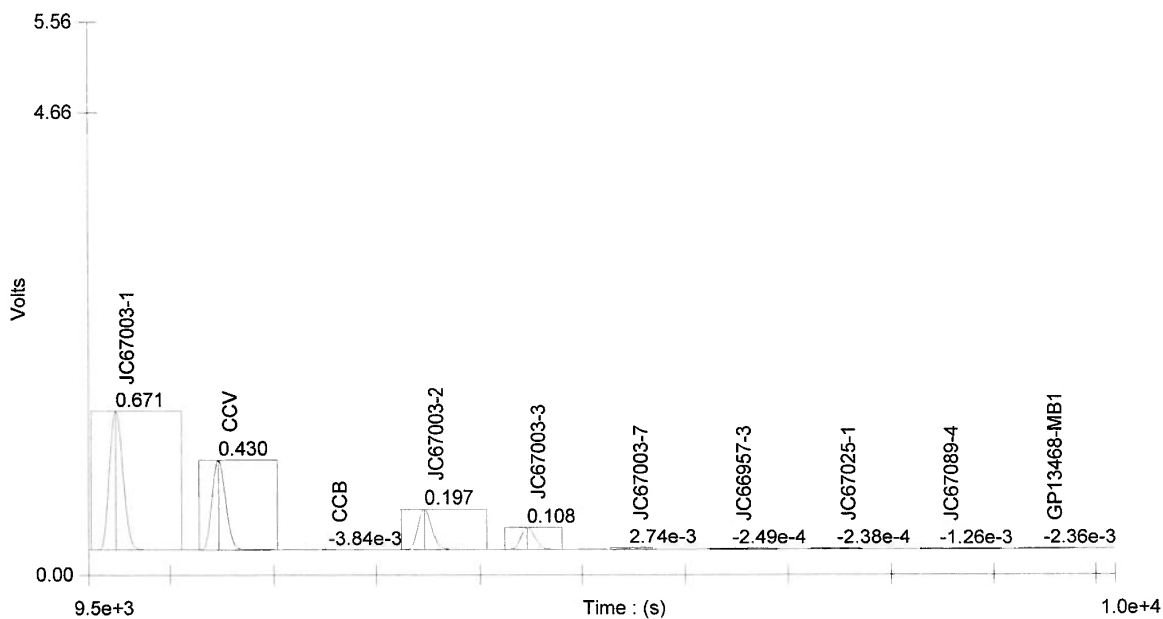


15.1
15

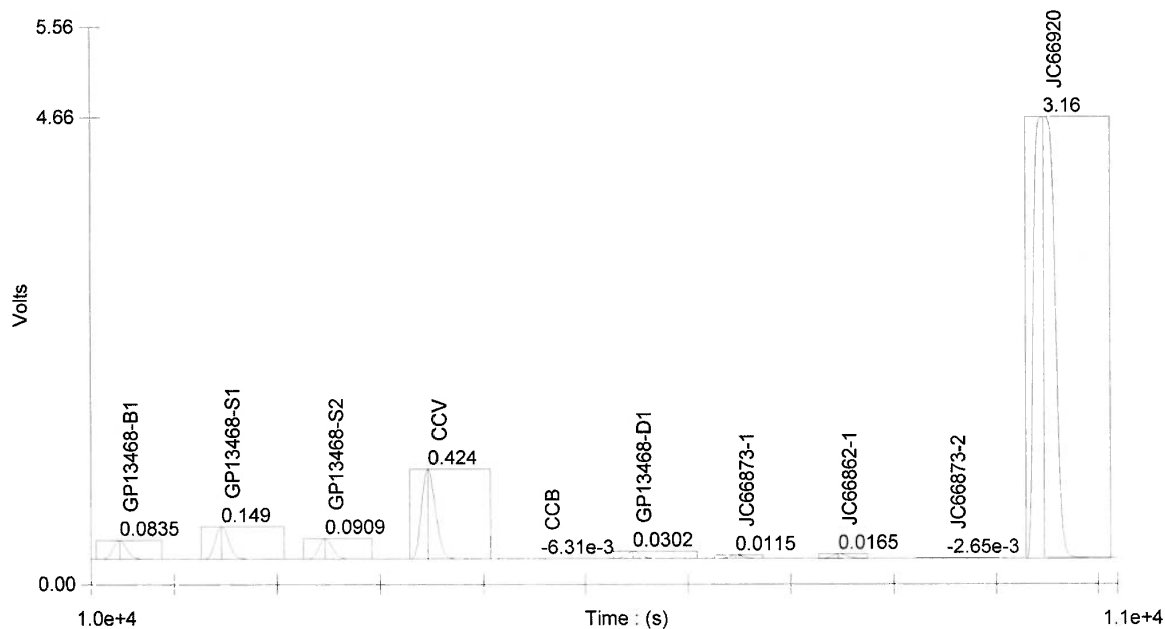
Author: chemistry

Date : 6/5/2018

Channel 1 - Set: 15 / 21



Channel 1 - Set: 16 / 21

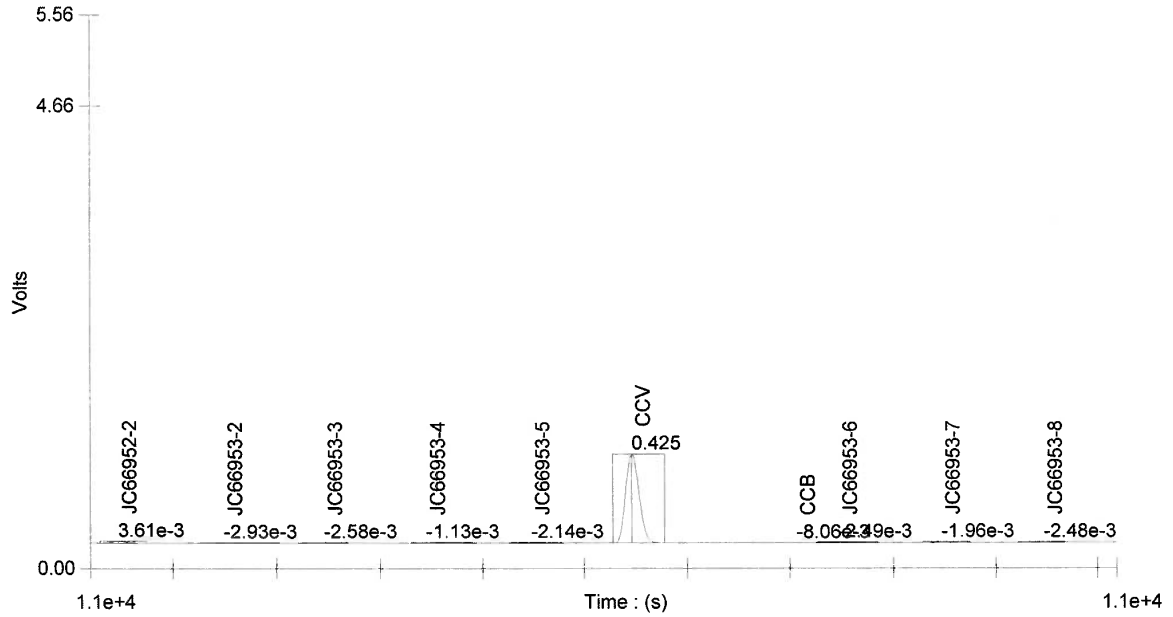


15.1
15

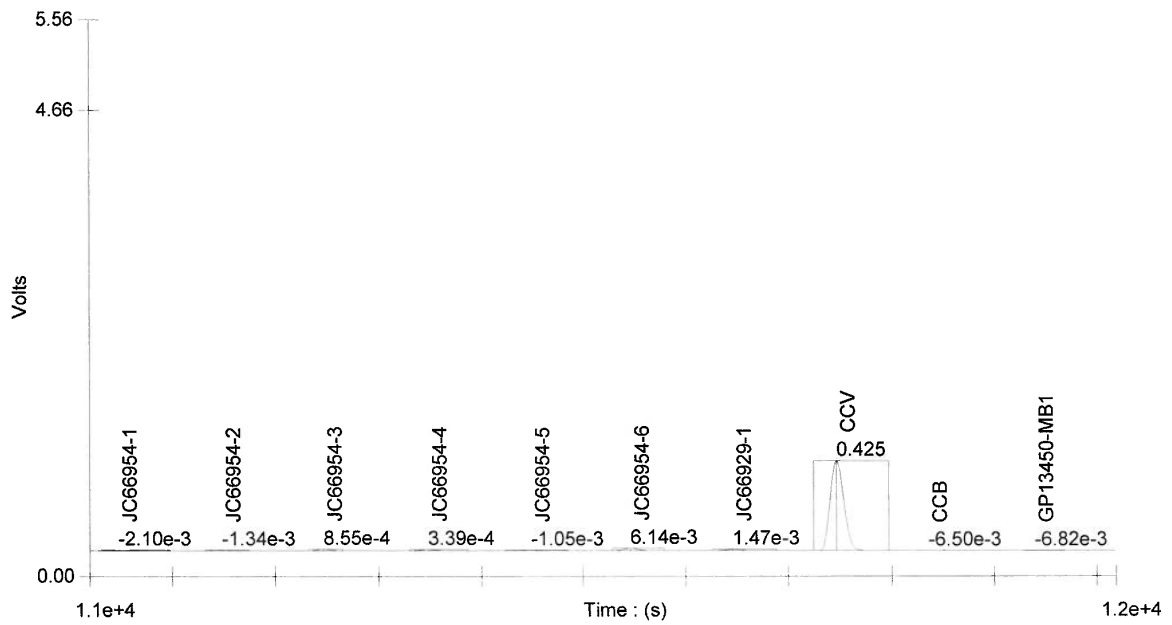
Author: chemistry

Date : 6/5/2018

Channel 1 - Set: 17 / 21



Channel 1 - Set: 18 / 21

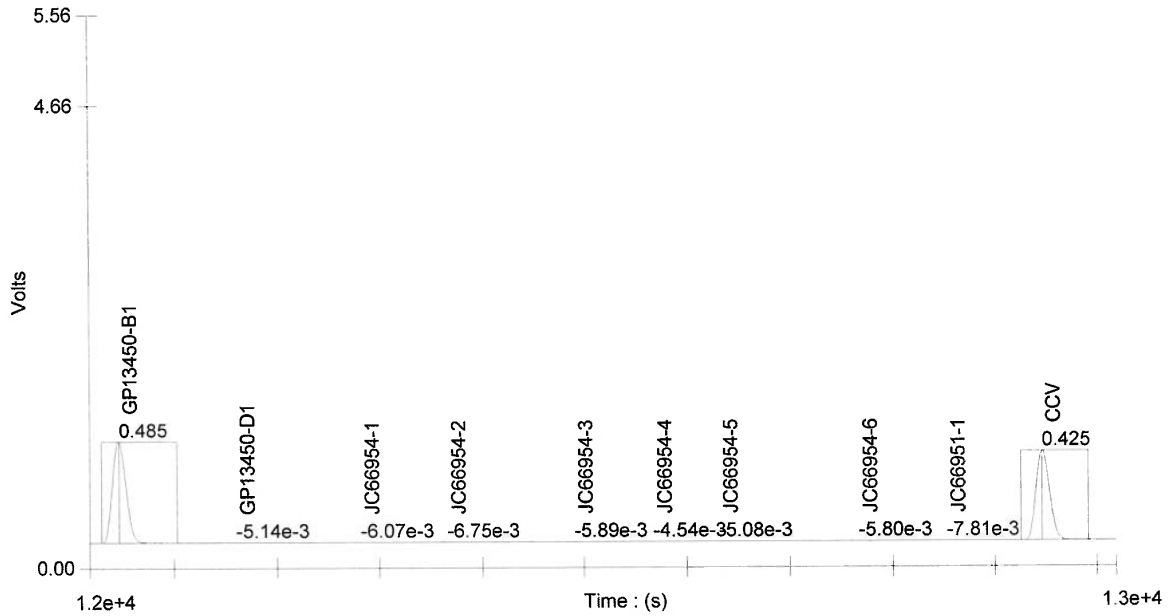


15.1
15

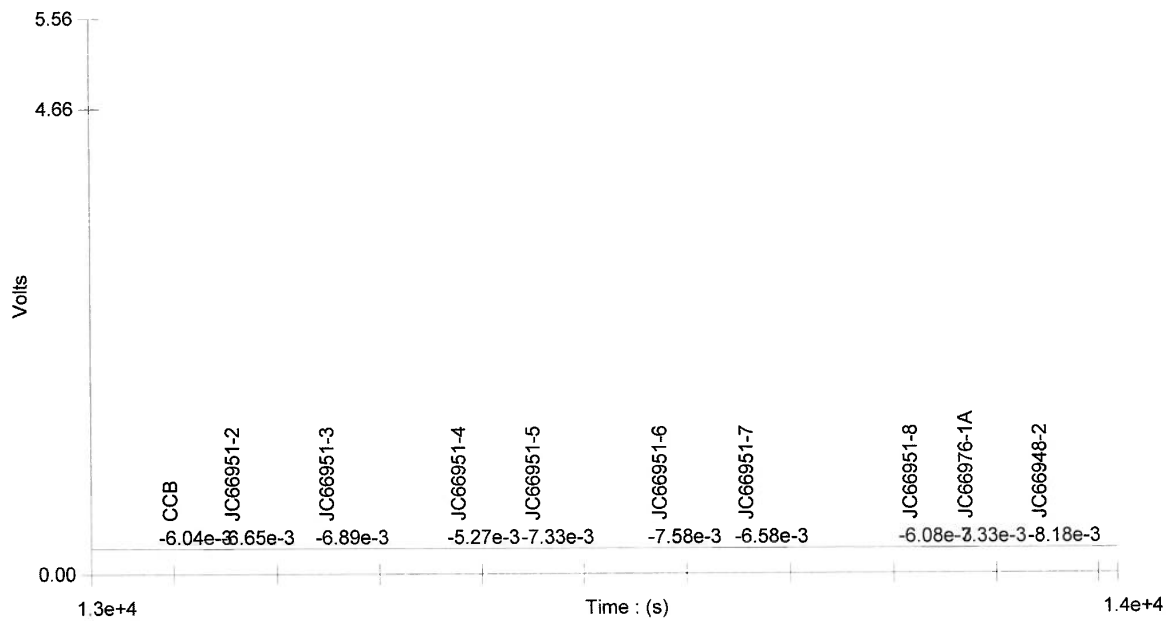
Author: chemistry

Date : 6/5/2018

Channel 1 - Set: 19 / 21



Channel 1 - Set: 20 / 21



15.1 15

Author: chemistry

Date : 6/5/2018

Channel 1 - Set: 21 / 21

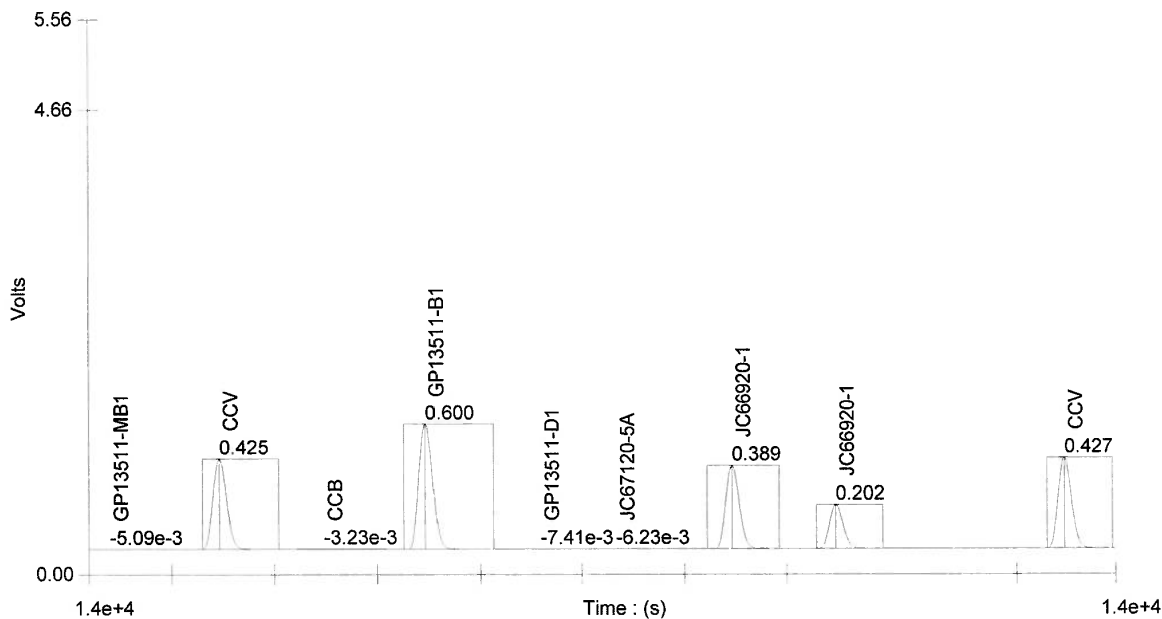
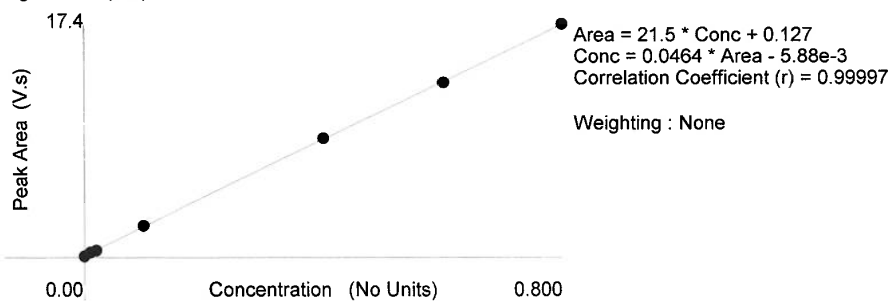


Table : 1 (CN)

	Known Conc. ()	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc ()	Detection Date	Detection Time
1	0.800	1	17.4	1.68	0.0	-0.1	0.801	6/5/2018	10:57:48 AM
2	0.600	1	13.0	1.25	0.0	0.6	0.597	6/5/2018	10:59:11 AM
3	0.400	1	8.81	0.856	0.0	-0.8	0.403	6/5/2018	11:00:33 AM
4	0.100	1	2.35	0.230	0.0	-2.9	0.103	6/5/2018	11:01:55 AM
5	0.0200	1	0.506	0.0481	0.0	9.3	0.0176	6/5/2018	11:03:17 AM
6	0.0100	1	0.357	0.0311	0.0	-4.4	0.0107	6/5/2018	11:04:39 AM
7	0.00	1	0.0888	7.10e-3			-1.76e-3	6/5/2018	11:06:01 AM

Figure : 1 (CN)





Batch ID: _____
 Autopipette ID: 41
 Balance ID: 027

GN80929

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	7.2	-	✓		6	12.0	14:28	14:58	6/1/18	GP -MB1	0.10 ml of 5.0 mg/l (c)		MLC
1		SC66873-1 S1				0.31						GP -B1	0.10 ml of 5.0 mg/l		
1		SC66873-2 S2				0.31						GP -S1	0.10 ml of 5.0 mg/l		
1		SC66873-1 D1				0.39						GP -S2	0.10 ml of 5.0 mg/l		
1		SC66873-1				0.32						GP -D1			
1		SC66862-1				0.30									
1		SC66873-2				0.31									
2		SC66920-1				0.39									
2		SC66952-2				0.38									
5		SC66953-2				0.35									
5		3				0.35									
5		4				0.45									
5		5				0.28									
5		6				0.37									
5		7				0.26									
5		8				0.32									
4		SC66954-1				0.30									
4		2				0.44									
4		3				0.43									
4		4				0.44									
4		5				0.32									
4		6				0.34									
2		SC66929-1				0.33									

(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.

QC Reviewer: _____

Form: GN0012-05

Rev. Date: 06/8/13

Date: _____



Reagent Information Log - CN - Distillation

GP Numbers: GP 13468

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE12-53020-CN	6/5/2018
Magnesium Chloride Solution	GNE12-53020-CN	6/5/2018
Sulfamic Acid	A0369642	7/27/2019
Sulfuric Acid	172416	8/18/2022
Sodium Hydroxide 1.25N/0.25N	GNE1-53542-CN	7/24/2018
Cadmium Carbonate, Powder	MKBF5367V	3/14/2022
Filter Paper	170199	NA
Micro Distillation Tubes/Membranes	Environmental Express 812020-8131	NA
0.95 NaOH	gne5-54766-cn	11/23/2018
Cyanide Stock Solution A- Spiking/standards	GNE5-54740-CN	11/21/2018
Cyanide Stock Solution B- Externals	GNE2-53657-CN	8/5/2018
Lead Acetate Test Paper	12/8/2016	12/8/2021
pH paper - Range 12.5 to 14	210114B	4/15/2019
pH paper - Range 1 to 12	216315	6/15/2018
Benzalrthodanine	GNE1-53541-CN	7/24/2018

Form: GN087A28-02

Rev. Date: 01/18/18

Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error

15.1
15



CYANIDE DISTILLATION LOG (WATERS- MICRO DISTILLATION)

Method: EPA 335.4 or SW-846 9012 M (Circle Method)

Batch ID: _____
 Autopipette ID: 34
 Balance ID: NIA

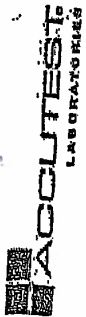
GP 13469
 GP 13467
 GP 13354
 GP 13355
 GP 13468

Block #	Sample ID	pH	S2	Add (e)	Initial Volume (ml)	Final Volume (ml)	Temp. in Deg. C (b)	Start Time	End Time	Date	QC ID	Spike Amounts and Comments	Spike Lot	Analy
1	Calibration Curve 12			✓	6	6	120C	13:05	13:35	6/1/18				
	0.00 ppm										GP	0.10 ml of 5.0 mg/l (c)		
	0.01 ppm										GP	0.10 ml of 5.0 mg/l		
	0.02 ppm										GP	0.10 ml of 5.0 mg/l		
	0.10 ppm										GP	0.10 ml of 5.0 mg/l		
	0.40 ppm										GP	0.10 ml of 5.0 mg/l		
	0.60 ppm										GP	0.10 ml of 5.0 mg/l		
	0.80 ppm										GP	0.10 ml of 5.0 mg/l		
												0.0 ml of 5 ppm calstd T		MC
												0.2 ml of "		
												0.4 ml of "		
												0.6 ml of "		
												0.8 ml of "		
												1.0 ml of "		
												1.2 ml of "		

- (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.

QC Reviewer: _____ Date: _____

Form: GN0012-04
 Rev. Date: 03/09/13



Batch ID: GN80929
 Autopipette ID: 41
 Balance ID: N/A

CYANIDE DISTILLATION LOG (WATERS-MICRO DISTILLATION)

Method: EPA 335.4 or SW-846 9012.M (Circle Method)

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	Analysis
2		GP1335	212	-	✓	6	6	120	13:05	13:35	6/1/18	GP -MB1	0.10 ml of 5.0 mg/l (c)		MB
		3C66538-36 S1										GP -B1	0.10 ml of 5.0 mg/l		
		6/1/18 M										GP -S1	0.10 ml of 5.0 mg/l		
		3C66538-36 D1										GP -S2	0.10 ml of 5.0 mg/l		
8		3C66724-2										GP -D1			
1		3C66743-1													
6		3C66772-1													
11		3C66797-1													
2		3C66799-2													
8															

(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.

QC Reviewer: _____
 Form: GN0012-04
 Rev. Date: 03/09/13

Date: _____



Reagent Information Log - CN - Distillation

GP Numbers: Op 13355

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE12-53020-CN	6/5/2018
Magnesium Chloride Solution	GNE12-53020-CN	6/5/2018
Sulfamic Acid	A0369642	7/27/2019
Sulfuric Acid	172416	8/18/2022
Sodium Hydroxide 1.25N/0.25N	GNE1-53542-CN	7/24/2018
Cadmium Carbonate, Powder	MKBF5367V	3/14/2022
Filter Paper	170199	NA
Micro Distillation Tubes/Membranes	Environmental Express 812020-8131	NA
0.95 NaOH	gne5-54766-cn	11/23/2018
Cyanide Stock Solution A- Spiking/standards	GNE5-54740-CN	11/21/2018
Cyanide Stock Solution B- Externals	GNE2-53657-CN	8/5/2018
Lead Acetate Test Paper	12/8/2016	12/8/2021
pH paper - Range 12.5 to 14	210114B	4/15/2019
pH paper - Range 1 to 12	216315	6/15/2018
Benzalrthodanine	GNE1-53541-CN	7/24/2018

Form: GN087A28-02

Rev. Date: 01/18/18

Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error



GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN
 GN or GP Number: GP 13353

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
Standards Stock	GENE4-54219-CN	5/29/18	1000	1.000	41	.25 N NaOH	200	5.00	10/2/18	fo	5/2/18
Undistilled ICV Int.	GENE2-53657-CN	5/14/18	992	2.00	41	.25 N NaOH	100	20.00	8/5/18	bm	
Undistilled CCV Int.	GENE4-54219-CN	5/7/18	1000	2.00	41	.25 N NaOH	100	20.00	10/2/18	bm	
Standard Description	Intermediate or Stock used to prepare standard		Intermediate or Stock concentration in mg/l	Intermediate or Stock volume used in ml	Autopipet ID	Diluent (b)	Final Volume in ml	Final Conc. Of Standard (mg/l)		Analyst	Date
A	5.0 ppm CN STD		5.0	16.00	A	.25 N NaOH	100	0.80	6/5/18	fo	5/29/18
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	6/5/18	fo	5/29/18
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	6/5/18	fo	5/29/18
D	5.0 ppm CN STD		5.0	2.00	41	.25 N NaOH	100	0.10	6/5/18	fo	5/29/18
E	5.0 ppm CN STD		5.0	0.40	41	.25 N NaOH	100	0.02	6/5/18	fo	5/29/18
F	5.0 ppm CN STD		5.0	0.20	41	.25 N NaOH	100	0.01	6/5/18	fo	5/29/18
Undistilled ICV	ICV Int.		20.0	1.50	41	.25 N NaOH	100	0.30			
Undistilled CCV	CCV Int.		20.0	2.00	41	.25 N NaOH	100	0.40			

(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 maximum of 28 days before analysis.
 If Class A glass pipets are used, enter an A. For balances or autopipets, enter the appropriate Accutest ID number.
 Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error



Reagent Information Log - CN - Distillation

GP Numbers: Op 13354

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE12-53020-CN	6/5/2018
Magnesium Chloride Solution	GNE12-53020-CN	6/5/2018
Sulfamic Acid	A0369642	7/27/2019
Sulfuric Acid	172416	8/18/2022
Sodium Hydroxide 1.25N/0.25N	GNE1-53542-CN	7/24/2018
Cadmium Carbonate, Powder	MKBF5367V	3/14/2022
Filter Paper	170199	NA
Micro Distillation Tubes/Membranes	Environmental Express 812020-8131	NA
0.95 NaOH	gne5-54766-cn	11/23/2018
Cyanide Stock Solution A- Spiking/standards	GNE5-54740-CN	11/21/2018
Cyanide Stock Solution B- Externals	GNE2-53657-CN	8/5/2018
Lead Acetate Test Paper	12/8/2016	12/8/2021
pH paper - Range 12.5 to 14	210114B	4/15/2019
pH paper - Range 1 to 12	216315	6/15/2018
Benzalrthodanine	GNE1-53541-CN	7/24/2018

Form: GN087A28-02

Rev. Date: 01/18/18

Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error

Batch ID: 34
 Autopipette ID: 34
 Balance ID: N/A

GP 13469
 GP 13467
 GP 13354
 GP 13355
 GP 13468

ACCUTEST
CYANIDE DISTILLATION LOG (WATERS- MICRO DISTILLATION)
 Method: EPA 335.4 or SW-846 9012 M (Circle Method)

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	Analyte
	1	Calibration Curve 12		-	✓	6	6	120C	13:05	13:35	6/1/18	GP -MB1			
		0.00 ppm										GP -B1	0.10 ml of 5.0 mg/l (c)		
		0.01 ppm										GP -S1	0.10 ml of 5.0 mg/l		
		0.02 ppm										GP -S2	0.10 ml of 5.0 mg/l		
		0.10 ppm										GP -D1			
		0.40 ppm													
		0.60 ppm													
		0.80 ppm													
													0.0 ml of 5 ppm Cu std		MC
													0.2 ml of "		
													0.4 ml of "		
													0.2 ml of "		
													0.2 ml of "		
													0.2 ml of "		
													0.2 ml of "		
													0.2 ml of "		
													16.0 ml of "		

(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: GN0012-04
 Rev. Date: 03/09/13



CYANIDE DISTILLATION LOG (WATERS- MICRO DISTILLATION)

Method: EPA 335.4 or SW-846 9012 M (Circle Method)

Batch ID: _____
 Autopipette ID: 41
 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	Analys
1		0413467	2/2	-	✓	6	6	12.0	13:05	13:35	6/1/18	GP -MB1			MB
		JC66997-3S1											0.10 ml of 5.0 mg/l (c)		
		JC66997-3D1											0.10 ml of 5.0 mg/l		
10		JC66997-1											0.10 ml of 5.0 mg/l		
7		JC66997-3QC													
9		4													
10		5													
9		6													
10		JC66997-1													
9		JC66997-1													
10		JC66997-1													
15		JC66997-1													
11		JC66997-2													

(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: _____
 Form: GN0012-04
 Rev. Date: 03/09/13
 Date: _____



ACCUTEST.

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: 6013467

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
Standards Stock	GENE4-54219-CN	5/29/18	1000	1.000	41	.25 N NaOH	200	5.00	10/2/18	fo	5/2/18
Undistilled ICV Int.	GENE2-53657-CN	5/14/18	992	2.00	41	.25 N NaOH	100	20.00	8/5/18	bm	
Undistilled CCV Int.	GENE4-54219-CN	5/7/18	1000	2.00	41	.25 N NaOH	100	20.00	10/2/18	bm	
Standard Description	Intermediate or Stock used to prepare standard		Intermediate or Stock concentration in mg/l	Intermediate or Stock volume used in ml	Autopipet ID	Diluent (b)	Final Volume in ml	Final Conc. Of Standard (mg/l)		Analyst	Date
A	5.0 ppm CN STD		5.0	16.00	A	.25 N NaOH	100	0.80	6/5/18	fo	5/29/18
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	6/5/18	fo	5/29/18
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	6/5/18	fo	5/29/18
D	5.0 ppm CN STD		5.0	2.00	41	.25 N NaOH	100	0.10	6/5/18	fo	5/29/18
E	5.0 ppm CN STD		5.0	0.40	41	.25 N NaOH	100	0.02	6/5/18	fo	5/29/18
F	5.0 ppm CN STD		5.0	0.20	41	.25 N NaOH	100	0.01	6/5/18	fo	5/29/18
Undistilled ICV	ICV Int.		20.0	1.50	41	.25 N NaOH	100	0.30			
Undistilled CCV	CCV Int.		20.0	2.00	41	.25 N NaOH	100	0.40			

(a) Concentration will change with standardization concentration.

(b) Diluent reagent reference number: SEE ATTACHED

(c) Standards must be made fresh (daily) before distillation. After distillation, they may be held under refrigeration for a maximum of 28 days before analysis.

Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error

Expiration Date: SEE ATTACHED

SEE ATTACHED

SEE ATTACHED



Reagent Information Log - CN - Distillation

GP Numbers: 4013467

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE12-53020-CN	6/5/2018
Magnesium Chloride Solution	GNE12-53020-CN	6/5/2018
Sulfamic Acid	A0369642	7/27/2019
Sulfuric Acid	172416	8/18/2022
Sodium Hydroxide 1.25N/0.25N	GNE1-53542-CN	7/24/2018
Cadmium Carbonate, Powder	MKBF5367V	3/14/2022
Filter Paper	170199	NA
Micro Distillation Tubes/Membranes	Environmental Express 812020-8131	NA
0.95 NaOH	gne5-54766-cn	11/23/2018
Cyanide Stock Solution A- Spiking/standards	GNE5-54740-CN	11/21/2018
Cyanide Stock Solution B- External	GNE2-53657-CN	8/5/2018
Lead Acetate Test Paper	12/8/2016	12/8/2021
pH paper - Range 12.5 to 14	210114B	4/15/2019
pH paper - Range 1 to 12	216315	6/15/2018
Benzalrhodanine	GNE1-53541-CN	7/24/2018

Form: GN087A28-02

Rev. Date: 01/18/18

Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error

15.1 15



CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION)

Method: SW8469012B M

Batch ID: _____
 Autopipette ID: 41
 Balance ID: 827

GP13441

Bottle #	Block #	Sample ID	pH	S2-	Add	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
4		MB1	12.05	-	✓	0.25	6	12.0	10:56	11:26	6/1/18	GP -MB1	0.10 ml of 5.0 mg/l (c)		FO
		B1				0.25							0.10 ml of 5.0 mg/l	✓	
		SC67053-1 S1				0.30							0.10 ml of 5.0 mg/l	✓	
		SC67053-3 S2				0.39							0.10 ml of 5.0 mg/l	✓	
		SC67053-1 D1				0.32									
		MA SC67053-1				0.29									
		AL (P) -83				0.37									
		-6				0.45									
		-8				0.32									
		SC67075-1				0.33									
		-2				0.34									
		SC67077-1				0.36									
		SC67150-1				0.31									
		-3				0.33									
		-6				0.45									
		SC67191-4				0.31									
		SC67193-1				0.43									
		SC67151-1				0.35									
		-2				0.35									
		-3				0.31									
		-4				0.29									
		-5				0.36									
		-6				0.33									
		-7				0.35									
		-8				0.36									

- (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: _____
 Form: GN0012-05
 Rev. Date: 06/8/13

Date: _____



Reagent Information Log - CN - Distillation

GP Numbers:

GP 13491

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE12-53020-CN	6/5/2018
Magnesium Chloride Solution	GNE12-53020-CN	6/5/2018
Sulfamic Acid	A0369642	7/27/2019
Sulfuric Acid	172416	8/18/2022
Sodium Hydroxide 1.25N/0.25N	GNE1-53542-CN	7/24/2018
Cadmium Carbonate, Powder	MKBF5367V	3/14/2022
Filter Paper	170199	NA
Micro Distillation Tubes/Membranes	Environmental Express 812020-8131	NA
0.95 NaOH	gne5-54766-cn	11/23/2018
Cyanide Stock Solution A- Spiking/standards	GNE5-54740-CN	11/21/2018
Cyanide Stock Solution B- Externals	GNE2-53657-CN	8/5/2018
Lead Acetate Test Paper	12/8/2016	12/8/2021
pH paper - Range 12.5 to 14	210114B	4/15/2019
pH paper - Range 1 to 12	216315	6/15/2018
Benzalrthodanine	GNE1-53541-CN	7/24/2018

Form: GN087A28-02

Rev. Date: 01/18/18

Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error



GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP13491

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
Standards Stock	GENE4-54219-CN	6/4/18	1000	1.000	41	.25 N NaOH	200	5.00	10/2/18	fo	5/2/18
Undistilled ICV Int.	GENE2-53657-CN	5/14/18	992	2.00	41	.25 N NaOH	100	20.00	8/5/18	bm	
Undistilled CCV Int.	GENE4-54219-CN	5/7/18	1000	2.00	41	.25 N NaOH	100	20.00	10/2/18	bm	
Standard Description	Intermediate or Stock used to prepare standard	Intermediate or Stock concentration in mg/l	Intermediate or Stock volume used in ml	Autopipet ID	Diluent (b)	Final Volume in ml	Final Conc. Of Standard (mg/l)	Analyst	Date		
A	5.0 ppm CN STD	5.0	16.00	A	.25 N NaOH	100	0.80	fo	6/4/18		
B	5.0 ppm CN STD	5.0	12.00	A	.25 N NaOH	100	0.60	fo	6/4/18		
C	5.0 ppm CN STD	5.0	8.00	A	.25 N NaOH	100	0.40	fo	6/4/18		
D	5.0 ppm CN STD	5.0	2.00	41	.25 N NaOH	100	0.10	fo	6/4/18		
E	5.0 ppm CN STD	5.0	0.40	41	.25 N NaOH	100	0.02	fo	6/4/18		
F	5.0 ppm CN STD	5.0	0.20	41	.25 N NaOH	100	0.01	fo	6/4/18		
Undistilled ICV	ICV Int.	20.0	1.50	41	.25 N NaOH	100	0.30				
Undistilled CCV	CCV Int.	20.0	2.00	41	.25 N NaOH	100	0.40				

(a) Concentration will change with standardization concentration.

(b) Diluent reagent reference number: SEE ATTACHED

(c) Standards must be made fresh (daily) before distillation. After distillation, they may be held under refrigeration for a maximum of 28 days before analysis.

*If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the appropriate Accutest ID number.

Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error

Expiration Date: SEE ATTACHED

Form: GN193-02

Rev. Date: 1/6/2014



Batch ID: _____
 Autopipette ID: 41
 Balance ID: 627

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		M01	7.12	-	✓		6	12.0	15:45	16:15	6/1/18	GP -MB1			MCS
1		366947-1 S1				0.30						GP -B1	0.10 ml of 5.0 mg/l (c)		
1		366947-2 S2				0.33						GP -S1	0.10 ml of 5.0 mg/l		
1		366947-1 D1				0.27						GP -S2	0.10 ml of 5.0 mg/l		
1		366947-101				0.29						GP -D1			
1		202				0.28									
1		3				0.45									
1		4				0.43									
1		5				0.28									
1		6				0.43									
1		7				0.28									
1		8				0.34									
1		9				0.38									
1		10				0.50									
1		11				0.34									
1		12				0.27									
1		13				0.27									
1		14				0.35									
1		366950-1				0.36									
1		4				0.43									
1		6				0.44									
3		366952-1				0.37									
2		366953-1				0.28									

- (a) Check if sulfamic acid was added.
- (b) Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.
- (c) If the calibration curve is not distilled, then in addition to the blank spike, the analyst must also prepare two distilled standards using 0.12 ml of 1.0 mg/l for one and 0.15 ml of 20.0 mg/l for the other.

Comments: _____

QC Reviewer: _____ Date: _____
 Form: GN0012-05
 Rev. Date: 06/8/13



Reagent Information Log - CN - Distillation

GP Numbers:

Op 13469

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE12-53020-CN	6/5/2018
Magnesium Chloride Solution	GNE12-53020-CN	6/5/2018
Sulfamic Acid	A0369642	7/27/2019
Sulfuric Acid	172416	8/18/2022
Sodium Hydroxide 1.25N/0.25N	GNE1-53542-CN	7/24/2018
Cadmium Carbonate, Powder	MKBF5367V	3/14/2022
Filter Paper	170199	NA
Micro Distillation Tubes/Membranes	Environmental Express 812020-8131	NA
0.95 NaOH	gne5-54766-cn	11/23/2018
Cyanide Stock Solution A- Spiking/standards	GNE5-54740-CN	11/21/2018
Cyanide Stock Solution B- External	GNE2-53657-CN	8/5/2018
Lead Acetate Test Paper	12/8/2016	12/8/2021
pH paper - Range 12.5 to 14	210114B	4/15/2019
pH paper - Range 1 to 12	216315	6/15/2018
Benzalrthodanine	GNE1-53541-CN	7/24/2018

Form: GN087A28-02

Rev. Date: 01/18/18

Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error



ACCUTEST

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: 6p13469

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
Standards Stock	GENE4-54219-CN	5/29/18	1000	1.000	41	.25 N NaOH	200	5.00	10/2/18	fo	5/2/18
Undistilled ICV Int.	GENE2-53657-CN	5/14/18	992	2.00	41	.25 N NaOH	100	20.00	8/5/18	bm	
Undistilled CCV Int.	GENE4-54219-CN	5/7/18	1000	2.00	41	.25 N NaOH	100	20.00	10/2/18	bm	
Standard Description	Intermediate or Stock used to prepare standard		Intermediate or Stock concentration in mg/l	Intermediate or Stock volume used in ml	Autopipet ID	Diluent (b)	Final Volume in ml	Final Conc. Of Standard (mg/l)		Analyst	Date
A	5.0 ppm CN STD		5.0	16.00	A	.25 N NaOH	100	0.80	6/5/18	fo	5/29/18
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	6/5/18	fo	5/29/18
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	6/5/18	fo	5/29/18
D	5.0 ppm CN STD		5.0	2.00	41	.25 N NaOH	100	0.10	6/5/18	fo	5/29/18
E	5.0 ppm CN STD		5.0	0.40	41	.25 N NaOH	100	0.02	6/5/18	fo	5/29/18
F	5.0 ppm CN STD		5.0	0.20	41	.25 N NaOH	100	0.01	6/5/18	fo	5/29/18
Undistilled ICV	ICV Int.		20.0	1.50	41	.25 N NaOH	100	0.30			
Undistilled CCV	CCV Int.		20.0	2.00	41	.25 N NaOH	100	0.40			

(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 maximum of 28 days before analysis.

Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error

Form: GN193-02

Rev. Date: 1/6/2014



Batch ID: _____
 Autopipette ID: 34
 Balance ID: N/A

GP 13469
 GP 13467
 GP 13354
 GP 13355
 GP 13468

ACCUTEST.
CYANIDE DISTILLATION LOG (WATERS- MICRO DISTILLATION)
 Method: EPA 335.4 or SW-846 9012 M (Circle Method)

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	Analyt
1		Calibration Curve 12			✓	6	6	120C	13:05	13:35	6/1/18	GP -MB1			
		0.00 ppm										GP -B1	0.10 ml of 5.0 mg/l (c)		
		0.01 ppm										GP -S1	0.10 ml of 5.0 mg/l		
		0.02 ppm										GP -S2	0.10 ml of 5.0 mg/l		
		0.10 ppm										GP -D1			
		0.40 ppm													
		0.60 ppm													
		0.80 ppm													
													5 ppm Calstd	100 ML	MC
													0.0 ml of		
													0.2 ml of		
													0.4 ml of		
													0.6 ml of		
													0.8 ml of		
													1.0 ml of		
													1.6 ml of		

(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.

QC Reviewer: _____ Date: _____
 Form: GN0012-04
 Rev. Date: 03/09/13



CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION)

Method: SW8469012B M

Batch ID: _____
 Autopipette ID: 41
 Balance ID: B27

GP B444

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	1	MB	12.9	-	✓	0.25	6	12.0	1:36	3:06	6/1/18	GP -MB1	0.10 ml of 5.0 mg/l (c)	✓	SO
1	1	166957-1A-S				0.25						GP	0.10 ml of 5.0 mg/l	✓	
2	2	1667108-1-S				0.32						GP	0.10 ml of 5.0 mg/l	✓	
1	1	166957-1A-D1				0.40						GP	0.10 ml of 5.0 mg/l	✓	
1	1	166957-1A				0.38						GP			
1	1	166957-1A				0.33						GP			
2	2	1667108-1				0.30									
2	2					0.36									
2	2					0.49									
2	2					0.44									
2	2					0.35									
2	2					0.35									
2	2					0.39									
2	2					0.29									
2	2					0.31									
		HC													

- (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: GND012-05
 Rev. Date: 06/8/13



Reagent Information Log - CN - Distillation

GP Numbers: GP13499

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE12-53020-CN	6/5/2018
Magnesium Chloride Solution	GNE12-53020-CN	6/5/2018
Sulfamic Acid	A0369642	7/27/2019
Sulfuric Acid	172416	8/18/2022
Sodium Hydroxide 1.25N/0.25N	GNE1-53542-CN	7/24/2018
Cadmium Carbonate, Powder	MKBF5367V	3/14/2022
Filter Paper	170199	NA
Micro Distillation Tubes/Membranes	Environmental Express 812020-8131	NA
0.95 NaOH	gne5-54766-cn	11/23/2018
Cyanide Stock Solution A- Spiking/standards	GNE5-54740-CN	11/21/2018
Cyanide Stock Solution B- External	GNE2-53657-CN	8/5/2018
Lead Acetate Test Paper	12/8/2016	12/8/2021
pH paper - Range 12.5 to 14	210114B	4/15/2019
pH paper - Range 1 to 12	216315	6/15/2018
Benzalrthodanine	GNE1-53541-CN	7/24/2018

Form: GN087A28-02

Rev. Date: 01/18/18

Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error

15.1 15



ACCUTEST

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN
 GN or GP Number: GP3499

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
Standards Stock	GNE4-54219-CN	6/4/18	1000	1.000	41	.25 N NaOH	200	5.00	10/2/18	fo	5/2/18
Undistilled ICV Int.	GNE2-53657-CN	5/14/18	992	2.00	41	.25 N NaOH	100	20.00	8/5/18	bm	
Undistilled CCV Int.	GNE4-54219-CN	5/7/18	1000	2.00	41	.25 N NaOH	100	20.00	10/2/18	bm	
Standard Description	Intermediate or Stock used to prepare standard		Intermediate or Stock concentration in mg/l	Intermediate or Stock volume used in ml	Autopipet ID	Diluent (b)	Final Volume in ml	Final Conc. Of Standard (mg/l)		Analyst	Date
A	5.0 ppm CN STD		5.0	16.00	A	.25 N NaOH	100	0.80	6/11/18	fo	6/4/18
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	6/11/18	fo	6/4/18
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	6/11/18	fo	6/4/18
D	5.0 ppm CN STD		5.0	2.00	41	.25 N NaOH	100	0.10	6/11/18	fo	6/4/18
E	5.0 ppm CN STD		5.0	0.40	41	.25 N NaOH	100	0.02	6/11/18	fo	6/4/18
F	5.0 ppm CN STD		5.0	0.20	41	.25 N NaOH	100	0.01	6/11/18	fo	6/4/18
Undistilled ICV	ICV Int.		20.0	1.50	41	.25 N NaOH	100	0.30			
Undistilled CCV	CCV Int.		20.0	2.00	41	.25 N NaOH	100	0.40			

(a) Concentration will change with standardization concentration.

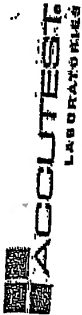
(b) Diluent reagent reference number: SEE ATTACHED

(c) Standards must be made fresh (daily) before distillation. After distillation, they may be held under refrigeration for a maximum of 28 days before analysis.

*If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the appropriate Accutest ID number.

Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error

Expiration Date: SEE ATTACHED



CYANIDE DISTILLATION LOG (WATERS- MICRO DISTILLATION)

Method: EPA 335.4 or SW-846 9012 M (Circle Method)

Batch ID: _____

Autopipette ID: A1

Balance ID: H/A

GPB3492

Bottle #	Block #	Sample ID	pH	S2	Add (a)	Initial Volume (ml)	Final Volume (mg)	Temp. in Deg. C (b)	Start Time	End Time	Date	QC ID	Spike Amounts and Comments	Spike Lot	Analysis
	4	MB	12	-	✓	0	0	20	12:20	12:50	6/1/18	GP -MB1			
25		SC66847-5 B											0.10 ml of 5.0 mg/l (c)	✓	
9		SC67041-5 B											0.10 ml of 5.0 mg/l	✓	
25		SC66847-5 D1											0.10 ml of 5.0 mg/l	✓	
9		SC67041-1													
9		SC67800-1													
9		SC66847-7													
10		-8													
9		-10													
9		-12													
10		-14													
25		-15													
10		-16													
9		-17													
9		-18													
9		SC67003-1													
9		-7													
9		-3													
9		-7													
13		SC66847-3													
11		SC67003-1													
1		SC67089-A													

- (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.

QC Reviewer: _____
 Form: GN0012-04
 Rev. Date: 03/09/13

Date: _____



Reagent Information Log - CN - Distillation

 GP Numbers: GP13492

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE12-53020-CN	6/5/2018
Magnesium Chloride Solution	GNE12-53020-CN	6/5/2018
Sulfamic Acid	A0369642	7/27/2019
Sulfuric Acid	172416	8/18/2022
Sodium Hydroxide 1.25N/0.25N	GNE1-53542-CN	7/24/2018
Cadmium Carbonate, Powder	MKBF5367V	3/14/2022
Filter Paper	170199	NA
Micro Distillation Tubes/Membranes	Environmental Express 812020-8131	NA
0.95 NaOH	gne5-54766-cn	11/23/2018
Cyanide Stock Solution A- Spiking/standards	GNE5-54740-CN	11/21/2018
Cyanide Stock Solution B- External	GNE2-53657-CN	8/5/2018
Lead Acetate Test Paper	12/8/2016	12/8/2021
pH paper - Range 12.5 to 14	210114B	4/15/2019
pH paper - Range 1 to 12	216315	6/15/2018
Benzalrthodanine	GNE1-53541-CN	7/24/2018

Form: GN087A28-02

Rev. Date: 01/18/18

Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error



GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP13492

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
Standards Stock	GNE4-54219-CN	6/4/18	1000	1.000	41	.25 N NaOH	200	5.00	10/2/18	fo	5/2/18
Undistilled ICV Int.	GNE2-53657-CN	5/14/18	992	2.00	41	.25 N NaOH	100	20.00	8/5/18	bm	
Undistilled CCV Int.	GNE4-54219-CN	5/7/18	1000	2.00	41	.25 N NaOH	100	20.00	10/2/18	bm	
Standard Description	Intermediate or Stock used to prepare standard		Intermediate or Stock concentration in mg/l	Intermediate or Stock volume used in ml	Autopipet ID	Diluent (b)	Final Volume in ml	Final Conc. Of Standard (mg/l)		Analyst	Date
A	5.0 ppm CN STD		5.0	16.00	A	.25 N NaOH	100	0.80	6/11/18	fo	6/4/18
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	6/11/18	fo	6/4/18
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	6/11/18	fo	6/4/18
D	5.0 ppm CN STD		5.0	2.00	41	.25 N NaOH	100	0.10	6/11/18	fo	6/4/18
E	5.0 ppm CN STD		5.0	0.40	41	.25 N NaOH	100	0.02	6/11/18	fo	6/4/18
F	5.0 ppm CN STD		5.0	0.20	41	.25 N NaOH	100	0.01	6/11/18	fo	6/4/18
Undistilled ICV	ICV Int.		20.0	1.50	41	.25 N NaOH	100	0.30			
Undistilled CCV	CCV Int.		20.0	2.00	41	.25 N NaOH	100	0.40			

(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 maximum of 28 days before analysis.

*If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the appropriate Accutest ID number.

Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error

Form: GN193-02

Rev. Date: 1/6/2014





GN80929

Reagent Information Log - CN Lachat Autoanalyzer

GN Number: _____

<u>Reagent</u>	<u>Reagent # or Manufacturer/Lot</u>	<u>Expiration date</u>
Pyridine-Bartitric Acid Reagent	GNE5-5433-CN	11/1/2018
Chloramine-T	GNE6-54888-CN	6/12/2018
Phosphate Buffer Solution, 1.0 M	GNE6-54887-CN	12/5/2018
0.25 N Sodium Hydroxide Carrier Solution	gne4-54306-cn GNE12-53078-CN	10/9/2018 6/11/2018

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

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