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Automated Report

Technical Report for

Arcadis

National Grid, Philly Coke, Philadelphia PA

B0036790.0001.00002

SGS Job Number: JC67110

Sampling Date: 05/31/18

Report to:

Arcadis

Lawrence.Healy@arcadis-us.com

ATTN: Lawrence Healy

Total number of pages in report: **1405**

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.

Nancy Cole
Laboratory Director

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Sample Summary

Arcadis

Job No: JC67110

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC67110-1	05/31/18	09:10	AW/IC	05/31/18	AQ	Ground Water	PCMW-08S
JC67110-2	05/31/18	10:37	AW/IC	05/31/18	AQ	Ground Water	PCMW-09S
JC67110-3	05/31/18	08:50	AW/IC	05/31/18	AQ	Ground Water	MW-102
JC67110-4	05/31/18	11:15	AW/IC	05/31/18	AQ	Ground Water	MW-103
JC67110-4D	05/31/18	11:15	AW/IC	05/31/18	AQ	Water Dup/MSD	MW-103
JC67110-4S	05/31/18	11:15	AW/IC	05/31/18	AQ	Water Matrix Spike	MW-103
JC67110-5	05/31/18	00:00	AW/IC	05/31/18	AQ	Ground Water	DUP-05312018

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Arcadis	**Job No**	JC67110
Site:	National Grid, Philly Coke, Philadelphia PA	**Report Date**	6/13/2018 5:04:03 PM

On 05/31/2018, 5 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2.1 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC67110 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:** VL8605

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67110-4MS, JC67110-4MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for 1,1,2,2-Tetrachloroethane, 1,2-Dibromo-3-chloropropane, Bromoform are outside control limits. Outside control limits due to matrix interference.
- RPD(s) for MSD for Bromomethane are outside control limits for sample JC67110-4MSD. Outside control limits due to matrix interference.
- JC67110-3 for Acetone: This compound does not meet the recommended minimum response factor specified into method 8260c.
- JC67110-4 for Dichlorodifluoromethane: Associated CCV outside of control limits high, sample was ND.
- JC67110-5 for Acetone: This compound does not meet the recommended minimum response factor specified into method 8260c.
- JC67110-3 for Bromomethane: Associated CCV outside of control limits low.
- JC67110-3 for Dichlorodifluoromethane: Associated CCV outside of control limits high, sample was ND.
- JC67110-4 for Bromomethane: Associated CCV outside of control limits low.
- JC67110-4 for Acetone: This compound does not meet the recommended minimum response factor specified into method 8260c.
- JC67110-5 for Dichlorodifluoromethane: Associated CCV outside of control limits high, sample was ND.
- JC67110-5 for Bromomethane: Associated CCV outside of control limits low.

MS Semi-volatiles By Method SW846 8270D

Matrix: AQ	Batch ID: OP12498

- 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 were used as the QC samples indicated.
- JC67110-3 for Atrazine: Associated CCV outside of control limits high, sample was ND.
- JC67110-5 for 4-Nitrophenol: Associated CCV outside of control limits high, sample was ND.
- JC67110-5 for Atrazine: Associated CCV outside of control limits high, sample was ND.
- JC67110-5 for 2-Nitroaniline: Associated CCV outside of control limits high, sample was ND.
- JC67110-5 for 1,2,4,5-Tetrachlorobenzene: Associated CCV outside of control limits high, sample was ND.
- JC67110-4 for Atrazine: Associated CCV outside of control limits high, sample was ND.
- JC67110-3 for 4-Nitrophenol: Associated CCV outside of control limits high, sample was ND.
- JC67110-3 for 2-Nitroaniline: Associated CCV outside of control limits high, sample was ND.
- JC67110-3 for 1,2,4,5-Tetrachlorobenzene: Associated CCV outside of control limits high, sample was ND.
- JC67110-4 for 1,2,4,5-Tetrachlorobenzene: Associated CCV outside of control limits high, sample was ND.
- JC67110-4 for 2-Nitroaniline: Associated CCV outside of control limits high, sample was ND.
- JC67110-4 for 4-Nitrophenol: 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.
- Sample(s) JC67110-4MS, JC67110-4MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

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 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) JC67110-1, JC67110-2, JC67110-3, JC67110-4, JC67110-5: 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.

Metals Analysis By Method SW846 7470A

Matrix: AQ	**Batch ID:** MP7513

- 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 were used as the QC samples for metals.

General Chemistry By Method EPA 335.4/LACHAT

Matrix: AQ	**Batch ID:** GP13543

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67110-4DUP, JC67110-3MS, JC67110-4MS were used as the QC samples for Cyanide.
- Matrix Spike Recovery(s) for Cyanide are outside control limits. Spike recovery indicates possible matrix interference.

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

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

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

Summary of Hits

Job Number: JC67110
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Collected: 05/31/18

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Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC67110-1	**PCMW-08S**					
Antimony		6.0	6.0		ug/l	SW846 6010C
Arsenic		34.6	3.0		ug/l	SW846 6010C
Calcium		155000	5000		ug/l	SW846 6010C
Iron		9500	100		ug/l	SW846 6010C
Lead		12.6	3.0		ug/l	SW846 6010C
Magnesium		126000	5000		ug/l	SW846 6010C
Manganese		676	15		ug/l	SW846 6010C
Potassium		17900	10000		ug/l	SW846 6010C
Sodium		16400	10000		ug/l	SW846 6010C
Zinc		57.1	20		ug/l	SW846 6010C
JC67110-2	**PCMW-09S**					
Arsenic		7.4	3.0		ug/l	SW846 6010C
Calcium		169000	5000		ug/l	SW846 6010C
Iron		6170	100		ug/l	SW846 6010C
Lead		5.3	3.0		ug/l	SW846 6010C
Magnesium		100000	5000		ug/l	SW846 6010C
Manganese		488	15		ug/l	SW846 6010C
Nickel		11.3	10		ug/l	SW846 6010C
Potassium		11800	10000		ug/l	SW846 6010C
Sodium		18300	10000		ug/l	SW846 6010C
Zinc		24.6	20		ug/l	SW846 6010C
JC67110-3	**MW-102**					
Aluminum		661	200		ug/l	SW846 6010C
Arsenic		6.7	3.0		ug/l	SW846 6010C
Barium		352	200		ug/l	SW846 6010C
Calcium		103000	5000		ug/l	SW846 6010C
Iron		3560	100		ug/l	SW846 6010C
Lead		4.8	3.0		ug/l	SW846 6010C
Magnesium		74200	5000		ug/l	SW846 6010C
Manganese		383	15		ug/l	SW846 6010C
Potassium		14900	10000		ug/l	SW846 6010C
Sodium		47600	10000		ug/l	SW846 6010C
JC67110-4	**MW-103**					
Calcium		151000	5000		ug/l	SW846 6010C
Iron		3100	100		ug/l	SW846 6010C
Lead		15.9	3.0		ug/l	SW846 6010C
Magnesium		114000	5000		ug/l	SW846 6010C

Summary of Hits

Job Number: JC67110
Account: Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Collected: 05/31/18

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Manganese		542	15		ug/l	SW846 6010C
Potassium		21500	10000		ug/l	SW846 6010C
Sodium		62100	10000		ug/l	SW846 6010C
JC67110-5	**DUP-05312018**					
bis(2-Ethylhexyl)phthalate		11.3	2.5	2.1	ug/l	SW846 8270D
Aluminum		275	200		ug/l	SW846 6010C
Arsenic		6.6	3.0		ug/l	SW846 6010C
Barium		350	200		ug/l	SW846 6010C
Calcium		103000	5000		ug/l	SW846 6010C
Iron		2900	100		ug/l	SW846 6010C
Magnesium		74900	5000		ug/l	SW846 6010C
Manganese		370	15		ug/l	SW846 6010C
Potassium		15000	10000		ug/l	SW846 6010C
Sodium		47800	10000		ug/l	SW846 6010C

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	PCMW-08S		
Lab Sample ID:	JC67110-1	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
		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 [4]
Antimony	6.0	6.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Arsenic	34.6	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Barium	< 200	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Beryllium	< 1.0	1.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Calcium	155000	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Cobalt	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Copper	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Iron	9500	100	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Lead	12.6	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [3]	SW846 3010A [4]
Magnesium	126000	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Manganese	676	15	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	06/06/18	06/06/18	DP	SW846 7470A [1]	SW846 7470A [5]
Nickel	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Potassium	17900	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Silver	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Sodium	16400	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Thallium	< 2.0	2.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [3]	SW846 3010A [4]
Vanadium	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Zinc	57.1	20	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA44592
(2) Instrument QC Batch: MA44612
(3) Instrument QC Batch: MA44616
(4) Prep QC Batch: MP7493
(5) Prep QC Batch: MP7513

RL = Reporting Limit

Report of Analysis

Client Sample ID:	PCMW-09S		
Lab Sample ID:	JC67110-2	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
		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 [4]
Antimony	< 6.0	6.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Arsenic	7.4	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Barium	< 200	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Beryllium	< 1.0	1.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Calcium	169000	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Cobalt	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Copper	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Iron	6170	100	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Lead	5.3	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [3]	SW846 3010A [4]
Magnesium	100000	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Manganese	488	15	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	06/06/18	06/06/18	DP	SW846 7470A [1]	SW846 7470A [5]
Nickel	11.3	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Potassium	11800	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Silver	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Sodium	18300	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Thallium	< 2.0	2.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [3]	SW846 3010A [4]
Vanadium	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Zinc	24.6	20	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA44592
(2) Instrument QC Batch: MA44612
(3) Instrument QC Batch: MA44616
(4) Prep QC Batch: MP7493
(5) Prep QC Batch: MP7513

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	MW-102		
Lab Sample ID:	JC67110-3	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	National Grid, Philly Coke, Philadelphia PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L301859.D	1	06/02/18 16:13	DG	n/a	n/a	VL8605
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [a]	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 [b]	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 [c]	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-102		
Lab Sample ID:	JC67110-3	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
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	109%		80-120%
17060-07-0	1,2-Dichloroethane-D4	108%		81-124%
2037-26-5	Toluene-D8	114%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

(a) This compound does not meet the recommended minimum response factor specified into method 8260c.
(b) Associated CCV outside of control limits low.
(c) Associated CCV outside of control limits high, sample was ND.

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

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

SGS LabLink@1003731 16:46 15-Jun-2018

Report of Analysis

Client Sample ID:	MW-102		
Lab Sample ID:	JC67110-3	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	National Grid, Philly Coke, Philadelphia PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P50937.D	1	06/05/18 18:55	CC	06/04/18 13:10	OP12498	E5P2426
Run #2							

	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.9	0.96	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.9	1.0	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.4	1.5	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.9	2.9	ug/l	
51-28-5	2,4-Dinitrophenol	ND	5.9	1.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	5.9	1.5	ug/l	
95-48-7	2-Methylphenol	ND	2.4	1.0	ug/l	
	3&4-Methylphenol	ND	2.4	1.0	ug/l	
88-75-5	2-Nitrophenol	ND	5.9	1.1	ug/l	
100-02-7	4-Nitrophenol [a]	ND	12	1.4	ug/l	
87-86-5	Pentachlorophenol	ND	4.7	1.6	ug/l	
108-95-2	Phenol	ND	2.4	0.46	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.9	1.7	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.9	1.6	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.9	1.1	ug/l	
83-32-9	Acenaphthene	ND	1.2	0.22	ug/l	
208-96-8	Acenaphthylene	ND	1.2	0.16	ug/l	
98-86-2	Acetophenone	ND	2.4	0.24	ug/l	
120-12-7	Anthracene	ND	1.2	0.25	ug/l	
1912-24-9	Atrazine [a]	ND	2.4	0.53	ug/l	
100-52-7	Benzaldehyde	ND	5.9	0.34	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.2	0.24	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.2	0.25	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.2	0.24	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.2	0.40	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.2	0.24	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.4	0.48	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.4	0.54	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.2	0.25	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.4	0.28	ug/l	
106-47-8	4-Chloroaniline	ND	5.9	0.40	ug/l	
86-74-8	Carbazole	ND	1.2	0.27	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW-102		
Lab Sample ID:	JC67110-3	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
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	2.4	0.76	ug/l	
218-01-9	Chrysene	ND	1.2	0.21	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.4	0.33	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.4	0.29	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	2.4	0.47	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.4	0.43	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.2	0.65	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.2	0.56	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.4	0.60	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.2	0.39	ug/l	
132-64-9	Dibenzofuran	ND	5.9	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.4	0.58	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.4	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	2.4	0.31	ug/l	
131-11-3	Dimethyl phthalate	ND	2.4	0.26	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.4	1.9	ug/l	
206-44-0	Fluoranthene	ND	1.2	0.20	ug/l	
86-73-7	Fluorene	ND	1.2	0.20	ug/l	
118-74-1	Hexachlorobenzene	ND	1.2	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.2	0.58	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	3.3	ug/l	
67-72-1	Hexachloroethane	ND	2.4	0.46	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.2	0.39	ug/l	
78-59-1	Isophorone	ND	2.4	0.33	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.2	0.25	ug/l	
88-74-4	2-Nitroaniline [a]	ND	5.9	0.33	ug/l	
99-09-2	3-Nitroaniline	ND	5.9	0.46	ug/l	
100-01-6	4-Nitroaniline	ND	5.9	0.52	ug/l	
91-20-3	Naphthalene	ND	1.2	0.27	ug/l	
98-95-3	Nitrobenzene	ND	2.4	0.76	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.4	0.57	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.9	0.26	ug/l	
85-01-8	Phenanthrene	ND	1.2	0.21	ug/l	
129-00-0	Pyrene	ND	1.2	0.26	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	2.4	0.44	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	45%		10-110%
4165-62-2	Phenol-d5	31%		10-110%

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-102		
Lab Sample ID:	JC67110-3	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
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	83%		36-151%
4165-60-0	Nitrobenzene-d5	82%		34-128%
321-60-8	2-Fluorobiphenyl	80%		38-119%
1718-51-0	Terphenyl-d14	67%		26-129%

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

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	MW-102		
Lab Sample ID:	JC67110-3	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	n/a
Project:	National Grid, Philly Coke, Philadelphia PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G56988.D	1	06/06/18 13:11	RK	06/01/18 19:40	OP12449	G6G1701
Run #2							

	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	56%		13-153%
877-09-8	Tetrachloro-m-xylene	65%		13-153%
2051-24-3	Decachlorobiphenyl	36%		10-138%
2051-24-3	Decachlorobiphenyl	41%		10-138%

ND = Not detected MDL = Method Detection Limit
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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	MW-102		
Lab Sample ID:	JC67110-3	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8082A SW846 3510C	**Percent Solids:**	n/a
Project:	National Grid, Philly Coke, Philadelphia PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX229861.D	1	06/03/18 07:32	EAL	06/01/18 19:40	OP12448	GXX6375
Run #2							

	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	73%		11-166%
877-09-8	Tetrachloro-m-xylene	79%		11-166%
2051-24-3	Decachlorobiphenyl	48%		10-150%
2051-24-3	Decachlorobiphenyl	49%		10-150%

ND = Not detected MDL = Method Detection Limit
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-102		
Lab Sample ID:	JC67110-3	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
		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	661	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Antimony	< 6.0	6.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Arsenic	6.7	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Barium	352	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Beryllium	< 1.0	1.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Calcium	103000	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Cobalt	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Copper	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Iron	3560	100	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Lead	4.8	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [3]	SW846 3010A [4]
Magnesium	74200	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Manganese	383	15	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	06/06/18	06/06/18	DP	SW846 7470A [1]	SW846 7470A [5]
Nickel	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Potassium	14900	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Silver	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Sodium	47600	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Thallium	< 2.0	2.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [3]	SW846 3010A [4]
Vanadium	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Zinc	< 20	20	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA44592
(2) Instrument QC Batch: MA44612
(3) Instrument QC Batch: MA44616
(4) Prep QC Batch: MP7493
(5) Prep QC Batch: MP7513

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-102		
Lab Sample ID:	JC67110-3	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
		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	06/07/18 10:35	BM	EPA 335.4/LACHAT

RL = Reporting Limit

SGS LabLink@1003731 16:46 15-Jun-2018

Report of Analysis

Client Sample ID:	MW-103		
Lab Sample ID:	JC67110-4	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	National Grid, Philly Coke, Philadelphia PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L301857.D	1	06/02/18 15:19	DG	n/a	n/a	VL8605
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [a]	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 [b]	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 [c]	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-103		
Lab Sample ID:	JC67110-4	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
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	112%		80-120%
17060-07-0	1,2-Dichloroethane-D4	110%		81-124%
2037-26-5	Toluene-D8	113%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

(a) This compound does not meet the recommended minimum response factor specified into method 8260c.
(b) Associated CCV outside of control limits low.
(c) Associated CCV outside of control limits high, sample was ND.

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

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

SGS LabLink@1003731 16:46 15-Jun-2018

Report of Analysis

Client Sample ID:	MW-103		
Lab Sample ID:	JC67110-4	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	National Grid, Philly Coke, Philadelphia PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P50938.D	1	06/05/18 19:21	CC	06/04/18 13:10	OP12498	E5P2426
Run #2							

	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.9	0.96	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.9	1.0	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.4	1.5	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.9	2.9	ug/l	
51-28-5	2,4-Dinitrophenol	ND	5.9	1.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	5.9	1.5	ug/l	
95-48-7	2-Methylphenol	ND	2.4	1.0	ug/l	
	3&4-Methylphenol	ND	2.4	1.0	ug/l	
88-75-5	2-Nitrophenol	ND	5.9	1.1	ug/l	
100-02-7	4-Nitrophenol [a]	ND	12	1.4	ug/l	
87-86-5	Pentachlorophenol	ND	4.7	1.6	ug/l	
108-95-2	Phenol	ND	2.4	0.46	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.9	1.7	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.9	1.6	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.9	1.1	ug/l	
83-32-9	Acenaphthene	ND	1.2	0.22	ug/l	
208-96-8	Acenaphthylene	ND	1.2	0.16	ug/l	
98-86-2	Acetophenone	ND	2.4	0.24	ug/l	
120-12-7	Anthracene	ND	1.2	0.25	ug/l	
1912-24-9	Atrazine [a]	ND	2.4	0.53	ug/l	
100-52-7	Benzaldehyde	ND	5.9	0.34	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.2	0.24	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.2	0.25	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.2	0.24	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.2	0.40	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.2	0.24	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.4	0.48	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.4	0.54	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.2	0.25	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.4	0.28	ug/l	
106-47-8	4-Chloroaniline	ND	5.9	0.40	ug/l	
86-74-8	Carbazole	ND	1.2	0.27	ug/l	

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Report of Analysis

Client Sample ID:	MW-103		
Lab Sample ID:	JC67110-4	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
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	2.4	0.76	ug/l	
218-01-9	Chrysene	ND	1.2	0.21	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.4	0.33	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.4	0.29	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	2.4	0.47	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.4	0.43	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.2	0.65	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.2	0.56	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.4	0.60	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.2	0.39	ug/l	
132-64-9	Dibenzofuran	ND	5.9	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.4	0.58	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.4	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	2.4	0.31	ug/l	
131-11-3	Dimethyl phthalate	ND	2.4	0.26	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.4	1.9	ug/l	
206-44-0	Fluoranthene	ND	1.2	0.20	ug/l	
86-73-7	Fluorene	ND	1.2	0.20	ug/l	
118-74-1	Hexachlorobenzene	ND	1.2	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.2	0.58	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	3.3	ug/l	
67-72-1	Hexachloroethane	ND	2.4	0.46	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.2	0.39	ug/l	
78-59-1	Isophorone	ND	2.4	0.33	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.2	0.25	ug/l	
88-74-4	2-Nitroaniline [a]	ND	5.9	0.33	ug/l	
99-09-2	3-Nitroaniline	ND	5.9	0.46	ug/l	
100-01-6	4-Nitroaniline	ND	5.9	0.52	ug/l	
91-20-3	Naphthalene	ND	1.2	0.27	ug/l	
98-95-3	Nitrobenzene	ND	2.4	0.76	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.4	0.57	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.9	0.26	ug/l	
85-01-8	Phenanthrene	ND	1.2	0.21	ug/l	
129-00-0	Pyrene	ND	1.2	0.26	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	2.4	0.44	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		10-110%
4165-62-2	Phenol-d5	30%		10-110%

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Report of Analysis

Client Sample ID:	MW-103		
Lab Sample ID:	JC67110-4	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
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	80%		36-151%
4165-60-0	Nitrobenzene-d5	76%		34-128%
321-60-8	2-Fluorobiphenyl	78%		38-119%
1718-51-0	Terphenyl-d14	58%		26-129%

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

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Report of Analysis

Client Sample ID:	MW-103		
Lab Sample ID:	JC67110-4	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	n/a
Project:	National Grid, Philly Coke, Philadelphia PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G56989.D	1	06/06/18 13:28	RK	06/01/18 19:40	OP12449	G6G1701
Run #2							

	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	51%		13-153%
877-09-8	Tetrachloro-m-xylene	56%		13-153%
2051-24-3	Decachlorobiphenyl	39%		10-138%
2051-24-3	Decachlorobiphenyl	43%		10-138%

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Report of Analysis

Client Sample ID:	MW-103		
Lab Sample ID:	JC67110-4	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8082A SW846 3510C	**Percent Solids:**	n/a
Project:	National Grid, Philly Coke, Philadelphia PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX229842.D	1	06/03/18 02:15	EAL	06/01/18 19:40	OP12448	GXX6375
Run #2							

	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	55%		11-166%
877-09-8	Tetrachloro-m-xylene	63%		11-166%
2051-24-3	Decachlorobiphenyl	43%		10-150%
2051-24-3	Decachlorobiphenyl	44%		10-150%

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Report of Analysis

Client Sample ID:	MW-103		
Lab Sample ID:	JC67110-4	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
		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 [4]
Antimony	< 6.0	6.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Arsenic	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Barium	< 200	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Beryllium	< 1.0	1.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Calcium	151000	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Cobalt	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Copper	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Iron	3100	100	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Lead	15.9	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [3]	SW846 3010A [4]
Magnesium	114000	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Manganese	542	15	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	06/06/18	06/06/18	DP	SW846 7470A [1]	SW846 7470A [5]
Nickel	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Potassium	21500	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Silver	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Sodium	62100	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Thallium	< 2.0	2.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [3]	SW846 3010A [4]
Vanadium	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Zinc	< 20	20	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA44592
(2) Instrument QC Batch: MA44612
(3) Instrument QC Batch: MA44616
(4) Prep QC Batch: MP7493
(5) Prep QC Batch: MP7513

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-103		
Lab Sample ID:	JC67110-4	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
		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	06/07/18 10:36	BM	EPA 335.4/LACHAT

RL = Reporting Limit

SGS LabLink@1003731 16:46 15-Jun-2018

Report of Analysis

Client Sample ID:	DUP-05312018		
Lab Sample ID:	JC67110-5	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	National Grid, Philly Coke, Philadelphia PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L301858.D	1	06/02/18 15:46	DG	n/a	n/a	VL8605
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [a]	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 [b]	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 [c]	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
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:	DUP-05312018		
Lab Sample ID:	JC67110-5	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8260C	**Percent Solids:**	n/a
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	108%		80-120%
17060-07-0	1,2-Dichloroethane-D4	106%		81-124%
2037-26-5	Toluene-D8	114%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

(a) This compound does not meet the recommended minimum response factor specified into method 8260c.
(b) Associated CCV outside of control limits low.
(c) Associated CCV outside of control limits high, sample was ND.

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

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

SGS LabLink@1003731 16:46 15-Jun-2018

Report of Analysis

Client Sample ID:	DUP-05312018		
Lab Sample ID:	JC67110-5	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	National Grid, Philly Coke, Philadelphia PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P50939.D	1	06/05/18 19:47	CC	06/04/18 13:10	OP12498	E5P2426
Run #2							

	Initial Volume	Final Volume
Run #1	800 ml	1.0 ml
Run #2		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	6.3	1.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	6.3	1.1	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.5	1.6	ug/l	
105-67-9	2,4-Dimethylphenol	ND	6.3	3.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	6.3	1.9	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	6.3	1.6	ug/l	
95-48-7	2-Methylphenol	ND	2.5	1.1	ug/l	
	3&4-Methylphenol	ND	2.5	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	6.3	1.2	ug/l	
100-02-7	4-Nitrophenol [a]	ND	13	1.4	ug/l	
87-86-5	Pentachlorophenol	ND	5.0	1.7	ug/l	
108-95-2	Phenol	ND	2.5	0.49	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	6.3	1.8	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	6.3	1.7	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	6.3	1.2	ug/l	
83-32-9	Acenaphthene	ND	1.3	0.24	ug/l	
208-96-8	Acenaphthylene	ND	1.3	0.17	ug/l	
98-86-2	Acetophenone	ND	2.5	0.26	ug/l	
120-12-7	Anthracene	ND	1.3	0.26	ug/l	
1912-24-9	Atrazine [a]	ND	2.5	0.56	ug/l	
100-52-7	Benzaldehyde	ND	6.3	0.36	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.3	0.25	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.3	0.27	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.3	0.26	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.3	0.43	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.3	0.26	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.5	0.51	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.5	0.57	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.3	0.27	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.5	0.30	ug/l	
106-47-8	4-Chloroaniline	ND	6.3	0.43	ug/l	
86-74-8	Carbazole	ND	1.3	0.29	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:	DUP-05312018		
Lab Sample ID:	JC67110-5	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
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	2.5	0.81	ug/l	
218-01-9	Chrysene	ND	1.3	0.22	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.5	0.35	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.5	0.31	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	2.5	0.50	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.5	0.46	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.3	0.69	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.3	0.60	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.5	0.63	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.3	0.41	ug/l	
132-64-9	Dibenzofuran	ND	6.3	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.5	0.62	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.5	0.29	ug/l	
84-66-2	Diethyl phthalate	ND	2.5	0.33	ug/l	
131-11-3	Dimethyl phthalate	ND	2.5	0.27	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	11.3	2.5	2.1	ug/l	
206-44-0	Fluoranthene	ND	1.3	0.21	ug/l	
86-73-7	Fluorene	ND	1.3	0.21	ug/l	
118-74-1	Hexachlorobenzene	ND	1.3	0.41	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.3	0.62	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	13	3.5	ug/l	
67-72-1	Hexachloroethane	ND	2.5	0.49	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.3	0.42	ug/l	
78-59-1	Isophorone	ND	2.5	0.35	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.3	0.26	ug/l	
88-74-4	2-Nitroaniline [a]	ND	6.3	0.35	ug/l	
99-09-2	3-Nitroaniline	ND	6.3	0.48	ug/l	
100-01-6	4-Nitroaniline	ND	6.3	0.55	ug/l	
91-20-3	Naphthalene	ND	1.3	0.29	ug/l	
98-95-3	Nitrobenzene	ND	2.5	0.80	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.5	0.60	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	6.3	0.28	ug/l	
85-01-8	Phenanthrene	ND	1.3	0.22	ug/l	
129-00-0	Pyrene	ND	1.3	0.27	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	2.5	0.46	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	39%		10-110%
4165-62-2	Phenol-d5	28%		10-110%

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

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

Report of Analysis

Client Sample ID:	DUP-05312018		
Lab Sample ID:	JC67110-5	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
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	71%		34-128%
321-60-8	2-Fluorobiphenyl	73%		38-119%
1718-51-0	Terphenyl-d14	51%		26-129%

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

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

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

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Report of Analysis

Client Sample ID:	DUP-05312018		
Lab Sample ID:	JC67110-5	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	n/a
Project:	National Grid, Philly Coke, Philadelphia PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G56992.D	1	06/06/18 14:22	RK	06/01/18 19:40	OP12449	G6G1701
Run #2							

	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	63%		13-153%
877-09-8	Tetrachloro-m-xylene	72%		13-153%
2051-24-3	Decachlorobiphenyl	40%		10-138%
2051-24-3	Decachlorobiphenyl	43%		10-138%

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

SGS LabLink@1003731 16:46 15-Jun-2018

Report of Analysis

Client Sample ID:	DUP-05312018		
Lab Sample ID:	JC67110-5	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
Method:	SW846 8082A SW846 3510C	**Percent Solids:**	n/a
Project:	National Grid, Philly Coke, Philadelphia PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX229862.D	1	06/03/18 07:48	EAL	06/01/18 19:40	OP12448	GXX6375
Run #2							

	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	72%		11-166%
877-09-8	Tetrachloro-m-xylene	76%		11-166%
2051-24-3	Decachlorobiphenyl	44%		10-150%
2051-24-3	Decachlorobiphenyl	46%		10-150%

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

Report of Analysis

Client Sample ID:	DUP-05312018		
Lab Sample ID:	JC67110-5	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
		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	275	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Antimony	< 6.0	6.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Arsenic	6.6	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Barium	350	200	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Beryllium	< 1.0	1.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Calcium	103000	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Cobalt	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Copper	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Iron	2900	100	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Lead	< 3.0	3.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [3]	SW846 3010A [4]
Magnesium	74900	5000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Manganese	370	15	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	06/06/18	06/06/18	DP	SW846 7470A [1]	SW846 7470A [5]
Nickel	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Potassium	15000	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Silver	< 10	10	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Sodium	47800	10000	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Thallium	< 2.0	2.0	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [3]	SW846 3010A [4]
Vanadium	< 50	50	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]
Zinc	< 20	20	ug/l	1	06/05/18	06/08/18	ND	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA44592
(2) Instrument QC Batch: MA44612
(3) Instrument QC Batch: MA44616
(4) Prep QC Batch: MP7493
(5) Prep QC Batch: MP7513

RL = Reporting Limit

Report of Analysis

Client Sample ID:	DUP-05312018		
Lab Sample ID:	JC67110-5	**Date Sampled:**	05/31/18
Matrix:	AQ - Ground Water	**Date Received:**	05/31/18
		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	06/07/18 10:38	BM	EPA 335.4/LACHAT

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

SGS ACCUTEST

GW

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE ___ OF ___

FED-EX Tracking #	Bottle Order Control # DK052218-49
SGS Accutest Quote #	SGS Accutest Job # JC67110

Client / Reporting Information

Company Name: Arcadis
Street Address: 824 N. Market St. Suite 820
City / State / Zip: Wilmington DE 19801
Project Contact: Carey Healy — E-mail: Lawrence.Healy@arcadis.com
Phone # / Fax #:
Sampler(s) Name(s): Adam Wissner, Jan Campbell — Phone #: 3237582269

Project Information

Project Name: Philly Coke
Street: Richmond St & Lafayette
City / State: Bridesburg PA
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

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

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	VB260TCL20	AS8270TCL20-140X	MTAL	CN	HG	P8081PESTCL	P8082PCB11					LAB USE ONLY
1	PCMW-08S		5/31/18	0910	AW	GW	1			1								X									E25
2	PCMW-09S			1037	AW	GW	1			1								X									E104
3	MW-102			0850	IC	GW	12	3	1	2		6				X	X	X	X	X	X	X					A32
4	MW-103			1115	IC	GW	9	3		6		18				X	X	X	X	X	X	X					G2273
5	DUP-05312018		5/31/18	—	—	GW	12	3	1	2		6				X	X	X	X	X	X	X					V618
6	Trip Blank			—	—	—	2	2								X											

5/31/18

Turnaround Time (Business days)

Approved By (SGS Accutest PM): / Date:

- ☐ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☐ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- ☐ Commercial "A" (Level 1)
- ☐ Commercial "B" (Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ *NJ Data of Known Quality Protocol Reporting*
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format
- ☐ Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

INITIAL ASESSMENT
LABEL VERIFICATION
Sample inventory is verified upon receipt in the Laboratory

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

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	5/31/18 1345	1	2	5/31/18 1500	2
3	5/31/18 2110	3	4		4
5		5			

Custody Seal # ☐ Intact ☐ Not intact — Preserved where applicable — On Ice — Cooler Temp: 2.1, 1.6, 1.9 C

Form:SM088-01CRev.Date:9/13/16

JC67110: Chain of Custody
Page 1 of 3

SGS Sample Receipt Summary

Job Number: JC67110 **Client:** ARCADIS U.S. **Project:** NATIONAL GRID, PHILLY COKE, PHILADELPHI

Date / Time Received: 5/31/2018 9:10:00 PM **Delivery Method:** Accutest Courier **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.1); Cooler 2: (1.6); Cooler 3: (1.9);

Cooler Temps (Corrected) °C: Cooler 1: (2.1); Cooler 2: (1.6); Cooler 3: (1.9);

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

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

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

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

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

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

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

Comments
1) Did not receive TB.
2) -4 Rec'd MS/MSD volume for all analyses but not noted on COC.

SM089-02 Rev. Date 12/1/16

5.1

5

JC67110: Chain of Custody
Page 2 of 3

Responded to by: Diane Komar Response Date: 6/1/18

As per Adam Wissner - please log in the extra MS/MSD volume, Arcadis was informed about the missing TB.

JC67110: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

Arcadis

Job No: JC67110

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

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC67110-1 Collected: 31-MAY-18 09:10 By: AW/IC Received: 31-MAY-18 By: AS PCMW-08S						
JC67110-1	SW846 7470A	06-JUN-18 11:45	DP	06-JUN-18	DP	HG
JC67110-1	SW846 6010C	08-JUN-18 03:12	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
JC67110-1	SW846 6010C	08-JUN-18 15:10	ND	05-JUN-18	CH	PB,TL
JC67110-2 Collected: 31-MAY-18 10:37 By: AW/IC Received: 31-MAY-18 By: AS PCMW-09S						
JC67110-2	SW846 7470A	06-JUN-18 11:47	DP	06-JUN-18	DP	HG
JC67110-2	SW846 6010C	08-JUN-18 03:15	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
JC67110-2	SW846 6010C	08-JUN-18 15:19	ND	05-JUN-18	CH	PB,TL
JC67110-3 Collected: 31-MAY-18 08:50 By: AW/IC Received: 31-MAY-18 By: AS MW-102						
JC67110-3	SW846 8260C	02-JUN-18 16:13	DG			V8260TCL20
JC67110-3	SW846 8082A	03-JUN-18 07:32	EAL	01-JUN-18	AF	P8082PCB11
JC67110-3	SW846 8270D	05-JUN-18 18:55	CC	04-JUN-18	JS	AB8270TCL20-14DX
JC67110-3	SW846 7470A	06-JUN-18 11:48	DP	06-JUN-18	DP	HG
JC67110-3	SW846 8081B	06-JUN-18 13:11	RK	01-JUN-18	AF	P8081PESTTCL
JC67110-3	EPA 335.4/LACHAT	07-JUN-18 10:35	BM	06-JUN-18	RP	CN
JC67110-3	SW846 6010C	08-JUN-18 03:18	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
JC67110-3	SW846 6010C	08-JUN-18 15:22	ND	05-JUN-18	CH	PB,TL
JC67110-4 Collected: 31-MAY-18 11:15 By: AW/IC Received: 31-MAY-18 By: AS MW-103						
JC67110-4	SW846 8260C	02-JUN-18 15:19	DG			V8260TCL20
JC67110-4	SW846 8082A	03-JUN-18 02:15	EAL	01-JUN-18	AF	P8082PCB11
JC67110-4	SW846 8270D	05-JUN-18 19:21	CC	04-JUN-18	JS	AB8270TCL20-14DX
JC67110-4	SW846 7470A	06-JUN-18 11:44	DP	06-JUN-18	DP	HG
JC67110-4	SW846 8081B	06-JUN-18 13:28	RK	01-JUN-18	AF	P8081PESTTCL

Internal Sample Tracking Chronicle

Arcadis

Job No: JC67110

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

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC67110-4	EPA 335.4/LACHAT	07-JUN-18 10:36	BM	06-JUN-18	RP	CN
JC67110-4	SW846 6010C	08-JUN-18 02:40	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
JC67110-4	SW846 6010C	08-JUN-18 14:37	ND	05-JUN-18	CH	PB,TL
JC67110-5 Collected: 31-MAY-18 00:00 By: AW/IC Received: 31-MAY-18 By: AS DUP-05312018						
JC67110-5	SW846 8260C	02-JUN-18 15:46	DG			V8260TCL20
JC67110-5	SW846 8082A	03-JUN-18 07:48	EAL	01-JUN-18	AF	P8082PCB11
JC67110-5	SW846 8270D	05-JUN-18 19:47	CC	04-JUN-18	JS	AB8270TCL20-14DX
JC67110-5	SW846 7470A	06-JUN-18 11:49	DP	06-JUN-18	DP	HG
JC67110-5	SW846 8081B	06-JUN-18 14:22	RK	01-JUN-18	AF	P8081PESTTCL
JC67110-5	EPA 335.4/LACHAT	07-JUN-18 10:38	BM	06-JUN-18	RP	CN
JC67110-5	SW846 6010C	08-JUN-18 03:21	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
JC67110-5	SW846 6010C	08-JUN-18 15:25	ND	05-JUN-18	CH	PB,TL

SGS Internal Chain of Custody

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Received: 05/31/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67110-1.1	Secured Storage	Todd Shoemaker	06/05/18 10:52	Retrieve from Storage
JC67110-1.1	Todd Shoemaker	Secured Staging Area	06/05/18 10:53	Return to Storage
JC67110-1.1	Secured Staging Area	Colleen Hill	06/05/18 18:29	Retrieve from Storage
JC67110-1.1	Colleen Hill	Secured Storage	06/05/18 18:38	Return to Storage
JC67110-1.1	Secured Storage	Matthew Robbins	06/05/18 18:43	Retrieve from Storage
JC67110-1.1	Matthew Robbins	Secured Staging Area	06/05/18 18:43	Return to Storage
JC67110-1.1	Secured Staging Area	Deval Patel	06/06/18 07:19	Retrieve from Storage
JC67110-1.1	Deval Patel	Secured Storage	06/06/18 09:27	Return to Storage
JC67110-1.1.1	Colleen Hill	Metals Digestion	06/05/18 18:30	Digestate from JC67110-1.1
JC67110-1.1.1	Metals Digestion	Colleen Hill	06/05/18 18:30	Digestate from JC67110-1.1
JC67110-1.1.1	Colleen Hill	Metals Digestate Storage	06/05/18 18:30	Return to Storage
JC67110-2.1	Secured Storage	Todd Shoemaker	06/05/18 10:52	Retrieve from Storage
JC67110-2.1	Todd Shoemaker	Secured Staging Area	06/05/18 10:53	Return to Storage
JC67110-2.1	Secured Staging Area	Colleen Hill	06/05/18 18:29	Retrieve from Storage
JC67110-2.1	Colleen Hill	Secured Storage	06/05/18 18:38	Return to Storage
JC67110-2.1	Secured Storage	Matthew Robbins	06/05/18 18:43	Retrieve from Storage
JC67110-2.1	Matthew Robbins	Secured Staging Area	06/05/18 18:43	Return to Storage
JC67110-2.1	Secured Staging Area	Deval Patel	06/06/18 07:19	Retrieve from Storage
JC67110-2.1	Deval Patel	Secured Storage	06/06/18 09:27	Return to Storage
JC67110-2.1.1	Colleen Hill	Metals Digestion	06/05/18 18:30	Digestate from JC67110-2.1
JC67110-2.1.1	Metals Digestion	Colleen Hill	06/05/18 18:30	Digestate from JC67110-2.1
JC67110-2.1.1	Colleen Hill	Metals Digestate Storage	06/05/18 18:30	Return to Storage
JC67110-3.2	Secured Storage	Dwayne Johnson	06/04/18 08:56	Retrieve from Storage
JC67110-3.2	Dwayne Johnson	Secured Staging Area	06/04/18 08:56	Return to Storage
JC67110-3.2	Secured Staging Area	Yaw Britwum	06/04/18 11:45	Retrieve from Storage
JC67110-3.2	Yaw Britwum		06/06/18 14:34	Depleted
JC67110-3.2.1	Yaw Britwum	Organics Prep	06/04/18 11:46	Extract from JC67110-3.2
JC67110-3.2.1	Organics Prep	Jonathan Stanley	06/04/18 17:14	Extract from JC67110-3.2
JC67110-3.2.1	Jonathan Stanley	Extract Storage	06/04/18 17:14	Return to Storage
JC67110-3.2.1	Extract Storage	Christine Change	06/05/18 15:02	Retrieve from Storage
JC67110-3.2.1	Christine Change	GCMS5P	06/05/18 15:02	Load on Instrument
JC67110-3.2.1	GCMS5P	Angela Rastelli	06/06/18 13:57	Unload from Instrument
JC67110-3.2.1	Angela Rastelli	Extract Freezer	06/06/18 13:57	Return to Storage
JC67110-3.5	Secured Storage	Todd Shoemaker	06/01/18 13:59	Retrieve from Storage
JC67110-3.5	Todd Shoemaker	Secured Staging Area	06/01/18 13:59	Return to Storage
JC67110-3.5	Secured Staging Area	Amanda Furka	06/01/18 15:26	Retrieve from Storage
JC67110-3.5	Amanda Furka		06/01/18 18:38	Depleted

SGS Internal Chain of Custody

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Received: 05/31/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67110-3.5.1	Amanda Furka	Organics Prep	06/01/18 15:27	Extract from JC67110-3.5
JC67110-3.5.1	Organics Prep	Amanda Furka	06/02/18 00:06	Extract from JC67110-3.5
JC67110-3.5.1	Amanda Furka	Extract Storage	06/02/18 00:06	Return to Storage
JC67110-3.5.1	Extract Storage	Edouard Adrian Lee	06/02/18 22:23	Retrieve from Storage
JC67110-3.5.1	Edouard Adrian Lee	GCXX	06/02/18 22:23	Load on Instrument
JC67110-3.5.1	GCXX	Tianwei Ruan	06/05/18 08:22	Unload from Instrument
JC67110-3.5.1	Tianwei Ruan	Extract Freezer	06/05/18 08:22	Return to Storage
JC67110-3.5.2	Amanda Furka	Organics Prep	06/01/18 15:28	Extract from JC67110-3.5
JC67110-3.5.2	Organics Prep	Amanda Furka	06/02/18 00:10	Extract from JC67110-3.5
JC67110-3.5.2	Amanda Furka	Extract Storage	06/02/18 00:10	Return to Storage
JC67110-3.5.2	Extract Storage	Rebecca Krug	06/06/18 10:23	Retrieve from Storage
JC67110-3.5.2	Rebecca Krug	GC6G	06/06/18 10:23	Load on Instrument
JC67110-3.7	Secured Storage	Todd Shoemaker	06/05/18 10:52	Retrieve from Storage
JC67110-3.7	Todd Shoemaker	Secured Staging Area	06/05/18 10:53	Return to Storage
JC67110-3.7	Secured Staging Area	Colleen Hill	06/05/18 18:29	Retrieve from Storage
JC67110-3.7	Colleen Hill	Secured Storage	06/05/18 18:38	Return to Storage
JC67110-3.7.1	Colleen Hill	Metals Digestion	06/05/18 18:30	Digestate from JC67110-3.7
JC67110-3.7.1	Metals Digestion	Colleen Hill	06/05/18 18:30	Digestate from JC67110-3.7
JC67110-3.7.1	Colleen Hill	Metals Digestate Storage	06/05/18 18:30	Return to Storage
JC67110-3.8	Secured Storage	Matthew Robbins	06/05/18 18:43	Retrieve from Storage
JC67110-3.8	Matthew Robbins	Secured Staging Area	06/05/18 18:43	Return to Storage
JC67110-3.8	Secured Staging Area	Deval Patel	06/06/18 07:19	Retrieve from Storage
JC67110-3.8	Deval Patel	Secured Storage	06/06/18 09:27	Return to Storage
JC67110-3.9	Secured Storage	Todd Shoemaker	06/06/18 08:15	Retrieve from Storage
JC67110-3.9	Todd Shoemaker	Secured Staging Area	06/06/18 08:15	Return to Storage
JC67110-3.9	Secured Staging Area	Rinku Patel	06/06/18 08:21	Retrieve from Storage
JC67110-3.9	Rinku Patel	Secured Storage	06/06/18 12:56	Return to Storage
JC67110-3.9	Secured Storage	Todd Shoemaker	06/08/18 08:23	Retrieve from Storage
JC67110-3.9	Todd Shoemaker	Secured Staging Area	06/08/18 08:23	Return to Storage
JC67110-3.9	Secured Staging Area	Faraja Ombwayo	06/08/18 11:13	Retrieve from Storage
JC67110-3.9	Faraja Ombwayo	Secured Storage	06/08/18 14:34	Return to Storage
JC67110-3.10	Secured Storage	Payal Rana	06/02/18 13:28	Retrieve from Storage
JC67110-3.10	Payal Rana	GCMSL	06/02/18 13:29	Load on Instrument
JC67110-3.10	GCMSL	Jessica Potts	06/07/18 08:27	Unload from Instrument
JC67110-3.10	Jessica Potts	Secured Storage	06/07/18 08:27	Return to Storage
JC67110-4.1	Secured Storage	Dwayne Johnson	06/04/18 08:56	Retrieve from Storage
JC67110-4.1	Dwayne Johnson	Secured Staging Area	06/04/18 08:56	Return to Storage

SGS Internal Chain of Custody

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Received: 05/31/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67110-4.1	Secured Staging Area	Yaw Britwum	06/04/18 11:45	Retrieve from Storage
JC67110-4.1	Yaw Britwum		06/06/18 14:34	Depleted
JC67110-4.1.1	Yaw Britwum	Organics Prep	06/04/18 11:46	Extract from JC67110-4.1
JC67110-4.1.1	Organics Prep	Jonathan Stanley	06/04/18 17:14	Extract from JC67110-4.1
JC67110-4.1.1	Jonathan Stanley	Extract Storage	06/04/18 17:14	Return to Storage
JC67110-4.1.1	Extract Storage	Christine Change	06/05/18 15:02	Retrieve from Storage
JC67110-4.1.1	Christine Change	GCMS5P	06/05/18 15:02	Load on Instrument
JC67110-4.1.1	GCMS5P	Angela Rastelli	06/06/18 13:57	Unload from Instrument
JC67110-4.1.1	Angela Rastelli	Extract Freezer	06/06/18 13:57	Return to Storage
JC67110-4.2	Secured Storage	Dwayne Johnson	06/04/18 08:56	Retrieve from Storage
JC67110-4.2	Dwayne Johnson	Secured Staging Area	06/04/18 08:56	Return to Storage
JC67110-4.2	Secured Staging Area	Yaw Britwum	06/04/18 11:45	Retrieve from Storage
JC67110-4.2	Yaw Britwum		06/06/18 14:34	Depleted
JC67110-4.2.1	Yaw Britwum	Organics Prep	06/04/18 11:46	Extract from JC67110-4.2
JC67110-4.2.1	Organics Prep	Jonathan Stanley	06/04/18 17:14	Extract from JC67110-4.2
JC67110-4.2.1	Jonathan Stanley	Extract Storage	06/04/18 17:14	Return to Storage
JC67110-4.3	Secured Storage	Dwayne Johnson	06/04/18 08:56	Retrieve from Storage
JC67110-4.3	Dwayne Johnson	Secured Staging Area	06/04/18 08:56	Return to Storage
JC67110-4.3	Secured Staging Area	Yaw Britwum	06/04/18 11:45	Retrieve from Storage
JC67110-4.3	Yaw Britwum		06/06/18 14:34	Depleted
JC67110-4.3.1	Yaw Britwum	Organics Prep	06/04/18 11:46	Extract from JC67110-4.3
JC67110-4.3.1	Organics Prep	Jonathan Stanley	06/04/18 17:14	Extract from JC67110-4.3
JC67110-4.3.1	Jonathan Stanley	Extract Storage	06/04/18 17:14	Return to Storage
JC67110-4.7	Secured Storage	Amanda Furka	06/01/18 16:13	Retrieve from Storage
JC67110-4.7	Amanda Furka		06/01/18 18:38	Depleted
JC67110-4.9	Secured Storage	Todd Shoemaker	06/01/18 13:59	Retrieve from Storage
JC67110-4.9	Todd Shoemaker	Secured Staging Area	06/01/18 13:59	Return to Storage
JC67110-4.9	Secured Staging Area	Amanda Furka	06/01/18 15:26	Retrieve from Storage
JC67110-4.9	Amanda Furka		06/01/18 18:38	Depleted
JC67110-4.9.1	Amanda Furka	Organics Prep	06/01/18 15:27	Extract from JC67110-4.9
JC67110-4.9.1	Organics Prep	Amanda Furka	06/02/18 00:06	Extract from JC67110-4.9
JC67110-4.9.1	Amanda Furka	Extract Storage	06/02/18 00:06	Return to Storage
JC67110-4.9.1	Extract Storage	Edouard Adrian Lee	06/02/18 22:23	Retrieve from Storage
JC67110-4.9.1	Edouard Adrian Lee	GCXX	06/02/18 22:23	Load on Instrument
JC67110-4.9.1	GCXX	Tianwei Ruan	06/05/18 08:22	Unload from Instrument
JC67110-4.9.1	Tianwei Ruan	Extract Freezer	06/05/18 08:22	Return to Storage

SGS Internal Chain of Custody

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Received: 05/31/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67110-4.9.2	Amanda Furka	Organics Prep	06/01/18 15:28	Extract from JC67110-4.9
JC67110-4.9.2	Organics Prep	Amanda Furka	06/02/18 00:10	Extract from JC67110-4.9
JC67110-4.9.2	Amanda Furka	Extract Storage	06/02/18 00:10	Return to Storage
JC67110-4.9.2	Extract Storage	Rebecca Krug	06/06/18 10:23	Retrieve from Storage
JC67110-4.9.2	Rebecca Krug	GC6G	06/06/18 10:23	Load on Instrument
JC67110-4.13	Secured Storage	Amanda Furka	06/01/18 16:13	Retrieve from Storage
JC67110-4.13	Amanda Furka		06/01/18 18:38	Depleted
JC67110-4.17	Secured Storage	Amanda Furka	06/01/18 16:13	Retrieve from Storage
JC67110-4.17	Amanda Furka		06/01/18 18:38	Depleted
JC67110-4.18	Secured Storage	Amanda Furka	06/01/18 16:13	Retrieve from Storage
JC67110-4.18	Amanda Furka		06/01/18 18:38	Depleted
JC67110-4.20	Secured Storage	Matthew Robbins	06/05/18 18:43	Retrieve from Storage
JC67110-4.20	Matthew Robbins	Secured Staging Area	06/05/18 18:43	Return to Storage
JC67110-4.20	Secured Staging Area	Deval Patel	06/06/18 07:19	Retrieve from Storage
JC67110-4.20	Deval Patel	Secured Storage	06/06/18 09:27	Return to Storage
JC67110-4.23	Secured Storage	Todd Shoemaker	06/05/18 10:52	Retrieve from Storage
JC67110-4.23	Todd Shoemaker	Secured Staging Area	06/05/18 10:53	Return to Storage
JC67110-4.23	Secured Staging Area	Colleen Hill	06/05/18 18:29	Retrieve from Storage
JC67110-4.23	Colleen Hill	Secured Storage	06/05/18 18:38	Return to Storage
JC67110-4.23.1	Colleen Hill	Metals Digestion	06/05/18 18:30	Digestate from JC67110-4.23
JC67110-4.23.1	Metals Digestion	Colleen Hill	06/05/18 18:30	Digestate from JC67110-4.23
JC67110-4.23.1	Colleen Hill	Metals Digestate Storage	06/05/18 18:30	Return to Storage
JC67110-4.27	Secured Storage	Todd Shoemaker	06/06/18 08:15	Retrieve from Storage
JC67110-4.27	Todd Shoemaker	Secured Staging Area	06/06/18 08:15	Return to Storage
JC67110-4.27	Secured Staging Area	Rinku Patel	06/06/18 08:21	Retrieve from Storage
JC67110-4.27	Rinku Patel	Secured Storage	06/06/18 12:56	Return to Storage
JC67110-4.27	Secured Storage	Todd Shoemaker	06/08/18 08:23	Retrieve from Storage
JC67110-4.27	Todd Shoemaker	Secured Staging Area	06/08/18 08:23	Return to Storage
JC67110-4.27	Secured Staging Area	Faraja Ombwayo	06/08/18 11:13	Retrieve from Storage
JC67110-4.27	Faraja Ombwayo	Secured Storage	06/08/18 14:34	Return to Storage
JC67110-4.29	Secured Storage	Payal Rana	06/02/18 13:28	Retrieve from Storage
JC67110-4.29	Payal Rana	GCMSL	06/02/18 13:29	Load on Instrument
JC67110-4.29	GCMSL	Jessica Potts	06/07/18 08:27	Unload from Instrument
JC67110-4.29	Jessica Potts	Secured Storage	06/07/18 08:27	Return to Storage

SGS Internal Chain of Custody

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Received: 05/31/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67110-4.31	Secured Storage	Payal Rana	06/02/18 13:28	Retrieve from Storage
JC67110-4.31	Payal Rana	GCMSL	06/02/18 13:29	Load on Instrument
JC67110-4.31	GCMSL	Jessica Potts	06/07/18 08:27	Unload from Instrument
JC67110-4.31	Jessica Potts	Secured Storage	06/07/18 08:27	Return to Storage
JC67110-4.32	Secured Storage	Payal Rana	06/02/18 13:28	Retrieve from Storage
JC67110-4.32	Payal Rana	GCMSL	06/02/18 13:29	Load on Instrument
JC67110-4.32	GCMSL	Jessica Potts	06/07/18 08:27	Unload from Instrument
JC67110-4.32	Jessica Potts	Secured Storage	06/07/18 08:27	Return to Storage
JC67110-5.1	Secured Storage	Dwayne Johnson	06/04/18 08:56	Retrieve from Storage
JC67110-5.1	Dwayne Johnson	Secured Staging Area	06/04/18 08:56	Return to Storage
JC67110-5.1	Secured Staging Area	Yaw Britwum	06/04/18 11:45	Retrieve from Storage
JC67110-5.1	Yaw Britwum		06/06/18 14:34	Depleted
JC67110-5.1.1	Yaw Britwum	Organics Prep	06/04/18 11:46	Extract from JC67110-5.1
JC67110-5.1.1	Organics Prep	Jonathan Stanley	06/04/18 17:14	Extract from JC67110-5.1
JC67110-5.1.1	Jonathan Stanley	Extract Storage	06/04/18 17:14	Return to Storage
JC67110-5.1.1	Extract Storage	Christine Change	06/05/18 15:02	Retrieve from Storage
JC67110-5.1.1	Christine Change	GCMS5P	06/05/18 15:02	Load on Instrument
JC67110-5.1.1	GCMS5P	Angela Rastelli	06/06/18 13:57	Unload from Instrument
JC67110-5.1.1	Angela Rastelli	Extract Freezer	06/06/18 13:57	Return to Storage
JC67110-5.6	Secured Storage	Todd Shoemaker	06/01/18 13:59	Retrieve from Storage
JC67110-5.6	Todd Shoemaker	Secured Staging Area	06/01/18 13:59	Return to Storage
JC67110-5.6	Secured Staging Area	Amanda Furka	06/01/18 15:26	Retrieve from Storage
JC67110-5.6	Amanda Furka		06/01/18 18:38	Depleted
JC67110-5.6.1	Amanda Furka	Organics Prep	06/01/18 15:27	Extract from JC67110-5.6
JC67110-5.6.1	Organics Prep	Amanda Furka	06/02/18 00:06	Extract from JC67110-5.6
JC67110-5.6.1	Amanda Furka	Extract Storage	06/02/18 00:06	Return to Storage
JC67110-5.6.1	Extract Storage	Edouard Adrian Lee	06/02/18 22:23	Retrieve from Storage
JC67110-5.6.1	Edouard Adrian Lee	GCXX	06/02/18 22:23	Load on Instrument
JC67110-5.6.1	GCXX	Tianwei Ruan	06/05/18 08:22	Unload from Instrument
JC67110-5.6.1	Tianwei Ruan	Extract Freezer	06/05/18 08:22	Return to Storage
JC67110-5.6.2	Amanda Furka	Organics Prep	06/01/18 15:28	Extract from JC67110-5.6
JC67110-5.6.2	Organics Prep	Amanda Furka	06/02/18 00:10	Extract from JC67110-5.6
JC67110-5.6.2	Amanda Furka	Extract Storage	06/02/18 00:10	Return to Storage
JC67110-5.6.2	Extract Storage	Rebecca Krug	06/06/18 10:23	Retrieve from Storage
JC67110-5.6.2	Rebecca Krug	GC6G	06/06/18 10:23	Load on Instrument
JC67110-5.7	Secured Storage	Todd Shoemaker	06/05/18 10:52	Retrieve from Storage
JC67110-5.7	Todd Shoemaker	Secured Staging Area	06/05/18 10:53	Return to Storage

SGS Internal Chain of Custody

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Received: 05/31/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67110-5.7	Secured Staging Area	Colleen Hill	06/05/18 18:29	Retrieve from Storage
JC67110-5.7	Colleen Hill	Secured Storage	06/05/18 18:38	Return to Storage
JC67110-5.7.1	Colleen Hill	Metals Digestion	06/05/18 18:30	Digestate from JC67110-5.7
JC67110-5.7.1	Metals Digestion	Colleen Hill	06/05/18 18:30	Digestate from JC67110-5.7
JC67110-5.7.1	Colleen Hill	Metals Digestate Storage	06/05/18 18:30	Return to Storage
JC67110-5.8	Secured Storage	Matthew Robbins	06/05/18 18:43	Retrieve from Storage
JC67110-5.8	Matthew Robbins	Secured Staging Area	06/05/18 18:43	Return to Storage
JC67110-5.8	Secured Staging Area	Deval Patel	06/06/18 07:19	Retrieve from Storage
JC67110-5.8	Deval Patel	Secured Storage	06/06/18 09:27	Return to Storage
JC67110-5.9	Secured Storage	Todd Shoemaker	06/06/18 08:15	Retrieve from Storage
JC67110-5.9	Todd Shoemaker	Secured Staging Area	06/06/18 08:15	Return to Storage
JC67110-5.9	Secured Staging Area	Rinku Patel	06/06/18 08:21	Retrieve from Storage
JC67110-5.9	Rinku Patel	Secured Storage	06/06/18 12:56	Return to Storage
JC67110-5.11	Secured Storage	Payal Rana	06/02/18 13:28	Retrieve from Storage
JC67110-5.11	Payal Rana	GCMSL	06/02/18 13:29	Load on Instrument
JC67110-5.11	GCMSL	Jessica Potts	06/07/18 08:27	Unload from Instrument
JC67110-5.11	Jessica Potts	Secured Storage	06/07/18 08:27	Return to Storage

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: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL8605-MB	L301855.D	1	06/02/18	DG	n/a	n/a	VL8605

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

JC67110-3, JC67110-4, JC67110-5

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: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL8605-MB	L301855.D	1	06/02/18	DG	n/a	n/a	VL8605

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

JC67110-3, JC67110-4, JC67110-5

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	107%	80-120%
17060-07-0	1,2-Dichloroethane-D4	109%	81-124%
2037-26-5	Toluene-D8	114%	80-120%
460-00-4	4-Bromofluorobenzene	101%	80-120%

Blank Spike Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL8605-BS	L301853.D	1	06/02/18	DG	n/a	n/a	VL8605

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

JC67110-3, JC67110-4, JC67110-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	197	99	42-150
71-43-2	Benzene	50	47.7	95	80-120
74-97-5	Bromochloromethane	50	49.4	99	84-121
75-27-4	Bromodichloromethane	50	51.9	104	83-120
75-25-2	Bromoform	50	57.2	114	76-129
74-83-9	Bromomethane	50	42.7	85	57-138
78-93-3	2-Butanone (MEK)	200	202	101	64-137
75-15-0	Carbon disulfide	50	55.8	112	64-137
56-23-5	Carbon tetrachloride	50	49.8	100	75-135
108-90-7	Chlorobenzene	50	49.3	99	84-117
75-00-3	Chloroethane	50	51.5	103	63-132
67-66-3	Chloroform	50	47.8	96	80-119
74-87-3	Chloromethane	50	53.0	106	46-136
110-82-7	Cyclohexane	50	56.7	113	64-137
96-12-8	1,2-Dibromo-3-chloropropane	50	58.9	118	72-127
124-48-1	Dibromochloromethane	50	54.8	110	80-123
106-93-4	1,2-Dibromoethane	50	52.1	104	84-117
95-50-1	1,2-Dichlorobenzene	50	52.5	105	84-119
541-73-1	1,3-Dichlorobenzene	50	53.8	108	81-117
106-46-7	1,4-Dichlorobenzene	50	52.8	106	82-117
75-71-8	Dichlorodifluoromethane	50	66.5	133	36-149
75-34-3	1,1-Dichloroethane	50	49.2	98	79-120
107-06-2	1,2-Dichloroethane	50	43.7	87	78-126
75-35-4	1,1-Dichloroethene	50	54.5	109	69-126
156-59-2	cis-1,2-Dichloroethene	50	49.0	98	80-120
156-60-5	trans-1,2-Dichloroethene	50	51.1	102	76-120
78-87-5	1,2-Dichloropropane	50	47.6	95	82-121
10061-01-5	cis-1,3-Dichloropropene	50	47.7	95	83-120
10061-02-6	trans-1,3-Dichloropropene	50	49.0	98	82-121
100-41-4	Ethylbenzene	50	48.1	96	80-120
76-13-1	Freon 113	50	54.0	108	62-182
591-78-6	2-Hexanone	200	197	99	65-132
98-82-8	Isopropylbenzene	50	48.9	98	83-120
79-20-9	Methyl Acetate	50	51.5	103	67-129
108-87-2	Methylcyclohexane	50	49.7	99	71-134
1634-04-4	Methyl Tert Butyl Ether	50	50.0	100	80-119

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL8605-BS	L301853.D	1	06/02/18	DG	n/a	n/a	VL8605

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

JC67110-3, JC67110-4, JC67110-5

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	51.3	103	77-120
100-42-5	Styrene	50	48.5	97	82-122
79-34-5	1,1,2,2-Tetrachloroethane	50	57.2	114	76-119
127-18-4	Tetrachloroethene	50	51.0	102	70-131
108-88-3	Toluene	50	50.2	100	80-120
87-61-6	1,2,3-Trichlorobenzene	50	52.6	105	76-134
120-82-1	1,2,4-Trichlorobenzene	50	53.5	107	79-132
71-55-6	1,1,1-Trichloroethane	50	49.9	100	81-128
79-00-5	1,1,2-Trichloroethane	50	51.0	102	83-118
79-01-6	Trichloroethene	50	49.3	99	80-120
75-69-4	Trichlorofluoromethane	50	53.5	107	64-136
75-01-4	Vinyl chloride	50	51.9	104	51-135
	m,p-Xylene	100	96.1	96	80-120
95-47-6	o-Xylene	50	49.0	98	80-120
1330-20-7	Xylene (total)	150	145	97	80-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	110%	80-120%
17060-07-0	1,2-Dichloroethane-D4	101%	81-124%
2037-26-5	Toluene-D8	106%	80-120%
460-00-4	4-Bromofluorobenzene	107%	80-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC67110-4MS	L301860.D	1	06/02/18	DG	n/a	n/a	VL8605
JC67110-4MSD	L301861.D	1	06/02/18	DG	n/a	n/a	VL8605
JC67110-4	L301857.D	1	06/02/18	DG	n/a	n/a	VL8605

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

JC67110-3, JC67110-4, JC67110-5

CAS No.	Compound	JC67110-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		200	206	103	200	196	98	5	34-149/17
71-43-2	Benzene	ND		50	50.6	101	50	49.6	99	2	54-136/10
74-97-5	Bromochloromethane	ND		50	54.0	108	50	51.2	102	5	79-124/11
75-27-4	Bromodichloromethane	ND		50	56.9	114	50	53.2	106	7	79-124/11
75-25-2	Bromoform	ND		50	65.4	131* [a]	50	62.4	125	5	71-130/11
74-83-9	Bromomethane	ND		50	40.1	80	50	48.9	98	20* [a]	53-142/14
78-93-3	2-Butanone (MEK)	ND		200	223	112	200	206	103	8	54-142/15
75-15-0	Carbon disulfide	ND		50	57.2	114	50	56.4	113	1	59-145/17
56-23-5	Carbon tetrachloride	ND		50	55.4	111	50	53.9	108	3	70-143/12
108-90-7	Chlorobenzene	ND		50	55.3	111	50	53.2	106	4	78-123/10
75-00-3	Chloroethane	ND		50	57.5	115	50	57.0	114	1	57-141/14
67-66-3	Chloroform	ND		50	52.8	106	50	50.3	101	5	76-123/11
74-87-3	Chloromethane	ND		50	57.4	115	50	57.1	114	1	43-141/16
110-82-7	Cyclohexane	ND		50	64.4	129	50	63.4	127	2	51-155/16
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	67.3	135* [a]	50	62.9	126	7	66-130/13
124-48-1	Dibromochloromethane	ND		50	62.3	125	50	58.4	117	6	76-125/11
106-93-4	1,2-Dibromoethane	ND		50	57.6	115	50	54.4	109	6	78-119/11
95-50-1	1,2-Dichlorobenzene	ND		50	59.5	119	50	56.0	112	6	77-123/11
541-73-1	1,3-Dichlorobenzene	ND		50	60.1	120	50	55.9	112	7	76-122/11
106-46-7	1,4-Dichlorobenzene	ND		50	58.2	116	50	55.4	111	5	76-122/11
75-71-8	Dichlorodifluoromethane	ND		50	75.3	151	50	75.9	152	1	31-159/16
75-34-3	1,1-Dichloroethane	ND		50	52.6	105	50	51.5	103	2	73-126/11
107-06-2	1,2-Dichloroethane	ND		50	47.4	95	50	45.0	90	5	72-131/11
75-35-4	1,1-Dichloroethene	ND		50	57.6	115	50	56.7	113	2	63-136/14
156-59-2	cis-1,2-Dichloroethene	ND		50	53.2	106	50	51.0	102	4	60-136/11
156-60-5	trans-1,2-Dichloroethene	ND		50	53.1	106	50	52.2	104	2	70-126/11
78-87-5	1,2-Dichloropropane	ND		50	52.6	105	50	49.8	100	5	78-124/10
10061-01-5	cis-1,3-Dichloropropene	ND		50	55.5	111	50	52.3	105	6	79-123/11
10061-02-6	trans-1,3-Dichloropropene	ND		50	54.3	109	50	51.8	104	5	77-123/11
100-41-4	Ethylbenzene	ND		50	53.6	107	50	51.6	103	4	51-140/20
76-13-1	Freon 113	ND		50	58.8	118	50	57.9	116	2	60-192/14
591-78-6	2-Hexanone	ND		200	225	113	200	215	108	5	56-139/14
98-82-8	Isopropylbenzene	ND		50	55.5	111	50	53.3	107	4	75-129/11
79-20-9	Methyl Acetate	ND		50	50.0	100	50	49.7	99	1	55-131/15
108-87-2	Methylcyclohexane	ND		50	54.0	108	50	54.1	108	0	57-155/13
1634-04-4	Methyl Tert Butyl Ether	ND		50	52.8	106	50	51.0	102	3	72-123/11

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC67110-4MS	L301860.D	1	06/02/18	DG	n/a	n/a	VL8605
JC67110-4MSD	L301861.D	1	06/02/18	DG	n/a	n/a	VL8605
JC67110-4	L301857.D	1	06/02/18	DG	n/a	n/a	VL8605

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

JC67110-3, JC67110-4, JC67110-5

CAS No.	Compound	JC67110-4 ug/l	Q	Spike 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		200	220	110	200	207	104	6	66-136/13
75-09-2	Methylene chloride	ND		50	53.2	106	50	52.1	104	2	73-125/13
100-42-5	Styrene	ND		50	54.5	109	50	52.1	104	5	75-129/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	65.3	131* [a]	50	61.1	122	7	71-122/11
127-18-4	Tetrachloroethene	ND		50	56.6	113	50	54.4	109	4	61-139/11
108-88-3	Toluene	ND		50	55.7	111	50	54.1	108	3	60-135/10
87-61-6	1,2,3-Trichlorobenzene	ND		50	58.1	116	50	54.9	110	6	70-138/13
120-82-1	1,2,4-Trichlorobenzene	ND		50	58.9	118	50	55.6	111	6	72-137/13
71-55-6	1,1,1-Trichloroethane	ND		50	55.4	111	50	53.9	108	3	74-138/12
79-00-5	1,1,2-Trichloroethane	ND		50	58.2	116	50	54.9	110	6	78-121/11
79-01-6	Trichloroethene	ND		50	53.6	107	50	52.1	104	3	62-141/10
75-69-4	Trichlorofluoromethane	ND		50	60.5	121	50	61.6	123	2	57-149/14
75-01-4	Vinyl chloride	ND		50	57.9	116	50	57.9	116	0	43-146/15
	m,p-Xylene	ND		100	108	108	100	103	103	5	50-144/20
95-47-6	o-Xylene	ND		50	55.5	111	50	52.8	106	5	63-134/10
1330-20-7	Xylene (total)	ND		150	163	109	150	156	104	4	56-139/20

CAS No.	Surrogate Recoveries	MS	MSD	JC67110-4	Limits
1868-53-7	Dibromofluoromethane	111%	108%	112%	80-120%
17060-07-0	1,2-Dichloroethane-D4	100%	100%	110%	81-124%
2037-26-5	Toluene-D8	106%	107%	113%	80-120%
460-00-4	4-Bromofluorobenzene	106%	106%	101%	80-120%

(a) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: VL8534-BFB
Lab File ID: L300307.D
Instrument ID: GCMSL
Injection Date: 04/16/18
Injection Time: 14:00

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	19875	21.3		Pass
75	30.0 - 60.0% of mass 95	46019	49.4		Pass
95	Base peak, 100% relative abundance	93168	100.0		Pass
96	5.0 - 9.0% of mass 95	6085	6.53		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	71544	76.8		Pass
175	5.0 - 9.0% of mass 174	5637	6.05	(7.88) [a]	Pass
176	95.0 - 101.0% of mass 174	70635	75.8	(98.7) [a]	Pass
177	5.0 - 9.0% of mass 176	4975	5.34	(7.04) [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
VL8534-IC8534	L300308.D	04/16/18	14:54	00:54	Initial cal 0.5
VL8534-IC8534	L300309.D	04/16/18	15:21	01:21	Initial cal 1
VL8534-IC8534	L300310.D	04/16/18	15:49	01:49	Initial cal 2
VL8534-IC8534	L300311.D	04/16/18	16:16	02:16	Initial cal 5
VL8534-IC8534	L300312.D	04/16/18	16:43	02:43	Initial cal 10
VL8534-IC8534	L300313.D	04/16/18	17:10	03:10	Initial cal 20
VL8534-ICC8534	L300314.D	04/16/18	17:37	03:37	Initial cal 50
VL8534-IC8534	L300315.D	04/16/18	18:04	04:04	Initial cal 100
VL8534-IC8534	L300316.D	04/16/18	18:31	04:31	Initial cal 200
VL8534-ICV8534	L300319.D	04/16/18	19:52	05:52	Initial cal verification 50
VL8534-ICV8534	L300320.D	04/16/18	20:20	06:20	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: VL8534-BFB2 **Injection Date:** 04/17/18
Lab File ID: L300323.D **Injection Time:** 11:23
Instrument ID: GCMSL

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	20005	21.2		Pass
75	30.0 - 60.0% of mass 95	47325	50.1		Pass
95	Base peak, 100% relative abundance	94549	100.0		Pass
96	5.0 - 9.0% of mass 95	6180	6.54		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	73965	78.2		Pass
175	5.0 - 9.0% of mass 174	5667	5.99	(7.66) [a]	Pass
176	95.0 - 101.0% of mass 174	71344	75.5	(96.5) [a]	Pass
177	5.0 - 9.0% of mass 176	5191	5.49	(7.28) [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
VL8534-ICV8534	L300324.D	04/17/18	11:51	00:28	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: VL8568-BFB
Lab File ID: L301058.D
Instrument ID: GCMSL
Injection Date: 05/09/18
Injection Time: 17:38

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	18672	19.4		Pass
75	30.0 - 60.0% of mass 95	47413	49.2		Pass
95	Base peak, 100% relative abundance	96365	100.0		Pass
96	5.0 - 9.0% of mass 95	6728	6.98		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	74595	77.4		Pass
175	5.0 - 9.0% of mass 174	5458	5.66	(7.32) [a]	Pass
176	95.0 - 101.0% of mass 174	71656	74.4	(96.1) [a]	Pass
177	5.0 - 9.0% of mass 176	4673	4.85	(6.52) [b]	Pass

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

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL8568-IC8534	L301059.D	05/09/18	18:06	00:28	Initial cal 0.5
VL8568-IC8534	L301060.D	05/09/18	18:33	00:55	Initial cal 1
VL8568-IC8534	L301061.D	05/09/18	19:00	01:22	Initial cal 2
VL8568-IC8534	L301062.D	05/09/18	19:27	01:49	Initial cal 5
VL8568-IC8534	L301063.D	05/09/18	19:54	02:16	Initial cal 10
VL8568-IC8534	L301064.D	05/09/18	20:22	02:44	Initial cal 20
VL8568-IC8534	L301065.D	05/09/18	20:49	03:11	Initial cal 50
VL8568-IC8534	L301066.D	05/09/18	21:16	03:38	Initial cal 100
VL8568-IC8534	L301067.D	05/09/18	21:43	04:05	Initial cal 200
VL8568-ICV8534	L301070.D	05/09/18	23:05	05:27	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: VL8605-BFB
Lab File ID: L301850.D
Instrument ID: GCMSL
Injection Date: 06/02/18
Injection Time: 11:52

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	15149	19.7		Pass
75	30.0 - 60.0% of mass 95	37595	48.8		Pass
95	Base peak, 100% relative abundance	77000	100.0		Pass
96	5.0 - 9.0% of mass 95	5168	6.71		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	60627	78.7		Pass
175	5.0 - 9.0% of mass 174	4586	5.96	(7.56) [a]	Pass
176	95.0 - 101.0% of mass 174	59677	77.5	(98.4) [a]	Pass
177	5.0 - 9.0% of mass 176	3884	5.04	(6.51) [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
VL8605-CC8534	L301851.D	06/02/18	12:26	00:34	Continuing cal 50
VL8605-BS	L301853.D	06/02/18	13:30	01:38	Blank Spike
VL8605-MB	L301855.D	06/02/18	14:24	02:32	Method Blank
ZZZZZZ	L301856.D	06/02/18	14:52	03:00	(unrelated sample)
JC67110-4	L301857.D	06/02/18	15:19	03:27	MW-103
JC67110-5	L301858.D	06/02/18	15:46	03:54	DUP-05312018
JC67110-3	L301859.D	06/02/18	16:13	04:21	MW-102
JC67110-4MS	L301860.D	06/02/18	16:40	04:48	Matrix Spike
JC67110-4MSD	L301861.D	06/02/18	17:08	05:16	Matrix Spike Duplicate
ZZZZZZ	L301863.D	06/02/18	18:02	06:10	(unrelated sample)
ZZZZZZ	L301864.D	06/02/18	18:29	06:37	(unrelated sample)
ZZZZZZ	L301865.D	06/02/18	18:56	07:04	(unrelated sample)
ZZZZZZ	L301866.D	06/02/18	19:24	07:32	(unrelated sample)
ZZZZZZ	L301867.D	06/02/18	19:51	07:59	(unrelated sample)
ZZZZZZ	L301868.D	06/02/18	20:19	08:27	(unrelated sample)
ZZZZZZ	L301869.D	06/02/18	20:47	08:55	(unrelated sample)

Internal Standard Area Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	VL8605-CC8534	**Injection Date:**	06/02/18
Lab File ID:	L301851.D	**Injection Time:**	12:26
Instrument ID:	GCMSL	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	212836	3.12	211623	4.34	314955	4.91	282360	7.32	113077	9.51
Upper Limit [a]	425672	3.62	423246	4.84	629910	5.41	564720	7.82	226154	10.01
Lower Limit [b]	106418	2.62	105812	3.84	157478	4.41	141180	6.82	56539	9.01

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VL8605-BS	210512	3.12	207975	4.34	309785	4.91	281176	7.31	110456	9.51
VL8605-MB	258677	3.12	259085	4.34	364180	4.91	311992	7.32	139343	9.51
ZZZZZZ	267313	3.12	258725	4.35	370591	4.92	318079	7.32	140260	9.51
JC67110-4	242219	3.12	245880	4.35	354993	4.91	312503	7.32	139258	9.51
JC67110-5	235053	3.12	239727	4.35	347504	4.92	300004	7.32	132250	9.51
JC67110-3	228894	3.12	234878	4.35	338981	4.92	292821	7.32	133203	9.51
JC67110-4MS	191765	3.12	198354	4.34	300618	4.91	271682	7.32	108672	9.51
JC67110-4MSD	189675	3.12	196211	4.34	295374	4.91	263218	7.32	106298	9.51
ZZZZZZ	248336	3.12	238096	4.34	355234	4.91	307579	7.32	136477	9.51
ZZZZZZ	241633	3.12	221009	4.34	337929	4.91	295111	7.32	134784	9.51
ZZZZZZ	259682	3.12	249417	4.35	361462	4.92	306886	7.32	139568	9.52
ZZZZZZ	245230	3.12	233966	4.35	342623	4.92	296229	7.32	134439	9.52
ZZZZZZ	248770	3.12	241884	4.35	351225	4.92	305243	7.32	136819	9.52
ZZZZZZ	238523	3.12	238632	4.34	349092	4.92	299546	7.32	133266	9.52
ZZZZZZ	241927	3.12	237659	4.35	346370	4.92	294913	7.32	130544	9.51

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

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

Surrogate Recovery Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Method: SW846 8260C **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JC67110-3	L301859.D	109	108	114	99
JC67110-4	L301857.D	112	110	113	101
JC67110-5	L301858.D	108	106	114	100
JC67110-4MS	L301860.D	111	100	106	106
JC67110-4MSD	L301861.D	108	100	107	106
VL8605-BS	L301853.D	110	101	106	107
VL8605-MB	L301855.D	107	109	114	101

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

Initial Calibration Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: VL8534-ICC8534
Lab FileID: L300314.D

Response Factor Report GCMSL

```
Method       : C:\MSDCHEM\1\METHODS\ML8534.M (RTE Integrator)
Title        : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
Last Update  : Thu May 10 07:46:11 2018
Response via : Initial Calibration

Calibration Files
10  =L300312.D   0.5 =L300308.D   5   =L300311.D   50  =L300314.D
100 =L300315.D   1   =L300309.D   200 =L300316.D   20  =L300313.D
2   =L300310.D       =
```

Compound	10	0.5	5	50	100	1	200	20	2	Avg	%RSD
1) I Tert Butyl Alcohol-d9 ----------ISTD----------											
2) 1,4-dioxane	0.097	0.096	0.100	0.092	0.097	0.091	0.097	0.090	0.093	0.095	3.41
3) ethanol	0.140	0.156	0.145	0.139	0.143	0.153		0.135	0.145	0.144	4.84
4) tertiary butyl alcohol	1.169	1.228	1.193	1.153	1.200	1.255	1.199	1.138	1.175	1.190	3.06
5) I pentafluorobenzene ----------ISTD----------											
6) chlorodifluoromethane	0.685	0.758	0.669	0.705	0.682	0.684	0.632	0.651	0.704	0.686	5.24
7) dichlorodifluoromethane	0.622	0.545	0.618	0.634	0.635	0.566	0.615	0.595	0.652	0.609	5.66
8) freon 114										0.000	-1.00
9) freon 142b										0.000	-1.00
10) chloromethane	0.653	0.697	0.660	0.692	0.699	0.665	0.669	0.631	0.679	0.672	3.35
11) 1,3-butadiene										0.000	-1.00
12) vinyl chloride	0.675	0.782	0.648	0.681	0.662	0.671	0.629	0.629	0.720	0.678	7.10
13) bromomethane	0.161		0.159	0.174	0.161	0.195		0.166	0.182	0.171	7.80
14) chloroethane	0.373	0.457	0.367	0.365	0.349	0.396		0.348	0.384	0.380	9.22
15) vinyl bromide	0.382	0.427	0.371	0.380	0.375	0.353	0.352	0.358	0.373	0.375	6.03
16) trichlorofluoromethane	0.727	0.752	0.710	0.732	0.699	0.733	0.667	0.689	0.752	0.718	4.03
17) ethyl ether	0.333	0.284	0.322	0.321	0.319	0.309	0.290	0.330	0.311	0.313	5.33
18) 2-chloropropane	0.959		0.971	0.923	0.868	1.032	0.761	0.917	1.050	0.935	9.89
19) acrolein	0.173		0.178	0.172	0.172	0.210	0.161	0.174	0.167	0.176	8.25
20) freon 113	0.316	0.322	0.316	0.306	0.297	0.343	0.281	0.310	0.330	0.313	5.84
21) 1,1-dichloroethene	0.439	0.464	0.432	0.426	0.401	0.462	0.367	0.416	0.441	0.427	7.06
22) acetone	0.079	0.102	0.087	0.081	0.080	0.083	0.074	0.083	0.084	0.084	9.53
23) acetonitrile											

```
            0.071       0.077 0.071 0.071 0.078 0.065 0.073 0.079   0.073    6.43
24)  iodomethane
            0.258       0.201 0.352 0.362       0.337 0.281 0.183   0.282   25.53
             ----- Linear regression -----  Coefficient =  0.9981
               Response Ratio = -0.00738 + 0.34471 *A

25)  iso-butyl alcohol
            0.048       0.053 0.048 0.046       0.045 0.050 0.050   0.049    5.63
26)  carbon disulfide
            1.092       1.086 1.092 1.048 1.217 0.980 1.049 1.210   1.097    7.39
27)  methylene chloride
            0.467 0.561 0.470 0.461 0.453 0.519 0.428 0.455 0.517   0.481    8.73
28)  methyl acetate
            0.148       0.151 0.144 0.147       0.136 0.146 0.136   0.144    4.08
29)  methyl tert butyl ether
            1.636 1.666 1.606 1.554 1.490 1.622 1.318 1.580 1.641   1.568    6.87
30)  trans-1,2-dichloroethene
            0.456 0.554 0.461 0.439 0.416 0.485 0.385 0.439 0.471   0.456   10.38
31)  hexane
            0.672 0.640 0.681 0.659 0.637 0.706 0.617 0.648 0.732   0.666    5.42
32)  di-isopropyl ether
            1.884 2.063 1.919 1.771 1.662 2.078 1.465 1.829 1.967   1.849   10.60
33)  ethyl tert-butyl ether
            1.777 1.829 1.788 1.695 1.640 1.818 1.489 1.719 1.775   1.726    6.23
34)  2-butanone
            0.104 0.106 0.107 0.105 0.105 0.119 0.093 0.107 0.105   0.106    6.29
35)  1,1-dichloroethane
            0.956 1.042 0.977 0.897 0.852 1.006 0.778 0.911 1.008   0.936    9.07
36)  chloroprene
            0.858 0.953 0.852 0.817 0.786 0.866 0.737 0.810 0.924   0.845    7.90
37)  acrylonitrile
            0.328 0.315 0.332 0.331 0.340 0.326 0.309 0.332 0.350   0.329    3.70
38)  vinyl acetate
            0.120       0.123 0.128 0.122 0.097 0.115 0.123 0.112   0.118    8.24
39)  ethyl acetate
            0.155       0.156 0.147 0.147       0.134 0.139 0.139   0.145    5.68
40)  2,2-dichloropropane
            0.744       0.779 0.697 0.660 0.790 0.615 0.711 0.842   0.730   10.14
41)  cis-1,2-dichloroethene
            0.501 0.567 0.508 0.478 0.456 0.577 0.421 0.494 0.527   0.503    9.88
42)  propionitrile
            0.151       0.158 0.141 0.133 0.166 0.117 0.150 0.154   0.146   10.56
43)  methyl acrylate
            0.113       0.121 0.111 0.109 0.127 0.099 0.115 0.120   0.114    7.44
44)  bromochloromethane
            0.217       0.226 0.208 0.200 0.237 0.182 0.212 0.232   0.214    8.31
45)  tetrahydrofuran
            0.123 0.122 0.121 0.120 0.119 0.121 0.111 0.123 0.116   0.120    3.12
46)  chloroform
            0.832 1.037 0.841 0.796 0.770 0.915 0.716 0.809 0.914   0.848   11.24
47)  dibromofluoromethane (s)
            0.382 0.384 0.375 0.382 0.383 0.378 0.384 0.384 0.377   0.381    0.92
48)  methacrylonitrile
            0.310 0.308 0.333 0.312 0.315 0.355 0.299 0.312 0.322   0.318    5.23
49)  1,1,1-trichloroethane
            0.684 0.761 0.673 0.667 0.658 0.745 0.634 0.639 0.733   0.688    6.79
50)  cyclohexane
            0.592 0.586 0.613 0.580 0.542 0.603 0.527 0.583 0.623   0.583    5.33
51)  1,1-dichloropropene
            0.674 0.751 0.665 0.633 0.610 0.723 0.580 0.632 0.691   0.662    8.24
```

Initial Calibration Summary

Job Number: JC67110 **Sample:** VL8534-ICC8534
Account: BBLNYS Arcadis **Lab FileID:** L300314.D
Project: National Grid, Philly Coke, Philadelphia PA

```
52)  carbon tetrachloride
           0.534 0.626 0.524 0.512 0.505 0.602 0.489 0.512 0.540   0.538    8.55
53)  isopropyl acetate
           0.139       0.152 0.145 0.144 0.156 0.135 0.149 0.151   0.146    4.84
54)  tert amyl alcohol
           0.043       0.045 0.042 0.040       0.036 0.045 0.042   0.042    7.40

55) I   1,4-difluorobenzene   ----------------ISTD--------------------
56)  1,2-dichloroethane-d4 (s)
           0.333 0.341 0.328 0.313 0.302 0.335 0.300 0.343 0.335   0.326    5.06
57)  tert-amyl methyl ether
           1.058       1.059 0.966 0.912 1.161 0.803 1.011 1.101   1.009   11.27
58)  2,2,4-trimethylpentane
           0.921 0.960 0.977 0.842 0.775 1.019 0.727 0.883 1.083   0.910   12.63
59)  epichlorohydrin
           0.069 0.081 0.072 0.069 0.067 0.069 0.061 0.071 0.071   0.070    7.61
60)  n-butyl alcohol
           0.021 0.023 0.023 0.021 0.020 0.021 0.018 0.022 0.021   0.021    7.55
61)  benzene
           1.328 1.602 1.335 1.198 1.118 1.434 0.982 1.241 1.419   1.295   14.27
62)  heptane
           0.212 0.225 0.218 0.197 0.190 0.214 0.188 0.197 0.214   0.206    6.44
63)  1,2-dichloroethane
           0.484       0.496 0.440 0.427 0.592 0.396 0.457 0.504   0.474   12.67
64)  trichloroethene
           0.324 0.367 0.326 0.314 0.304 0.345 0.287 0.311 0.329   0.323    7.26
65)  ethyl acrylate
           0.664 0.736 0.676 0.659 0.642 0.736 0.569 0.675 0.682   0.671    7.47
66)  2-nitropropane
           0.211       0.215 0.215 0.216       0.197 0.213         0.211    3.37
67)  2-chloroethyl vinyl ether
           0.278 0.284 0.285 0.263 0.244 0.281 0.206 0.277 0.290   0.268   10.07
68)  methyl methacrylate
           0.119       0.123 0.119 0.113 0.117 0.101 0.121 0.117   0.116    5.82
69)  1,2-dichloropropane
           0.366 0.398 0.370 0.341 0.324 0.391 0.292 0.355 0.385   0.358    9.57
70)  methylcyclohexane
           0.518 0.525 0.527 0.498 0.470 0.557 0.451 0.506 0.571   0.513    7.40
71)  dibromomethane
           0.202 0.229 0.200 0.191 0.189 0.214 0.175 0.198 0.204   0.200    7.70
72)  bromodichloromethane
           0.421 0.426 0.412 0.416 0.414 0.429 0.396 0.408 0.419   0.416    2.41
73)  cis-1,3-dichloropropene
           0.578 0.634 0.564 0.551 0.543 0.586 0.504 0.559 0.587   0.567    6.34
74)  4-methyl-2-pentanone
           0.223       0.234 0.208 0.195 0.252 0.167 0.225 0.232   0.217   12.20
75)  3-methyl-1-butanol
           0.019 0.021 0.020 0.018 0.017 0.021 0.016 0.019 0.019   0.019    9.07

76) I   chlorobenzene-d5      ----------------ISTD--------------------
77)  toluene-d8 (s)
           1.192 1.232 1.205 1.138 1.134 1.223 1.145 1.159 1.227   1.184    3.39
78)  toluene
           0.843       0.882 0.781 0.750 0.963 0.697 0.788 0.933   0.830   11.10
79)  trans-1,3-dichloropropene
           0.561 0.656 0.536 0.544 0.531 0.588 0.500 0.548 0.569   0.559    7.88
80)  ethyl methacrylate
           0.604 0.615 0.605 0.578 0.555 0.626 0.495 0.595 0.606   0.587    6.85
81)  1,1,2-trichloroethane
           0.293 0.303 0.294 0.277 0.269 0.312 0.250 0.282 0.292   0.286    6.52
```

Initial Calibration Summary

Job Number: JC67110 **Sample:** VL8534-ICC8534
Account: BBLNYS Arcadis **Lab FileID:** L300314.D
Project: National Grid, Philly Coke, Philadelphia PA

```
 82)  2-hexanone
            0.251 0.267 0.259 0.226 0.210 0.267 0.181 0.248 0.257   0.241   12.15
 83)  tetrachloroethene
            0.347 0.390 0.354 0.323 0.315 0.358 0.303 0.323 0.371   0.343    8.38
 84)  1,3-dichloropropane
            0.595 0.671 0.590 0.548 0.525 0.666 0.478 0.564 0.608   0.583   10.76
 85)  butyl acetate
            0.368       0.377 0.340 0.332 0.387 0.303 0.359 0.392   0.357    8.52
 86)  dibromochloromethane
            0.295 0.346 0.290 0.296 0.297 0.293 0.283 0.291 0.291   0.298    6.16
 87)  1,2-dibromoethane
            0.376 0.413 0.379 0.356 0.354 0.384 0.332 0.359 0.367   0.369    6.22
 88)  n-butyl ether
            1.655 1.828 1.667 1.513 1.408 1.709 1.227 1.563 1.696   1.585   11.45
 89)  chlorobenzene
            0.863 1.014 0.888 0.824 0.800 0.964 0.746 0.821 0.940   0.873    9.87
 90)  1,1,1,2-tetrachloroethane
            0.284 0.296 0.294 0.271 0.258 0.316 0.237 0.276 0.287   0.280    8.28
 91)  ethylbenzene
            1.591 1.753 1.618 1.399 1.286 1.728 1.115 1.464 1.750   1.523   14.71
 92)  m,p-xylene
            0.581 0.699 0.603 0.523 0.489 0.646 0.442 0.541 0.622   0.572   14.15
 93)  o-xylene
            0.591 0.643 0.604 0.532 0.505 0.626 0.460 0.557 0.607   0.570   10.64
 94)  butyl acrylate
            0.920 0.957 0.913 0.888 0.858 0.930 0.786 0.900 0.868   0.891    5.62
 95)  styrene
            0.998 1.148 1.010 0.895 0.826 1.030 0.732 0.935 1.018   0.955   12.94
 96)  bromoform
            0.197 0.192 0.191 0.214 0.220 0.217 0.213 0.204 0.189   0.204    6.05
 97)  isopropylbenzene
            1.527 1.646 1.527 1.383 1.284 1.599 1.149 1.410 1.604   1.459   11.35
 98)  cis-1,4-dichloro-2-butene
            0.183 0.206 0.190 0.198 0.198 0.184 0.186 0.194 0.186   0.192    4.08

 99) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
100)  4-bromofluorobenzene (s)
            1.071 1.048 1.061 1.110 1.133 1.048 1.139 1.101 1.056   1.085    3.34
101)  bromobenzene
            0.803 0.858 0.788 0.794 0.812 0.790 0.756 0.792 0.820   0.801    3.46
102)  1,1,2,2-tetrachloroethane
            1.148 1.133 1.162 1.166 1.207 1.126 1.153 1.140 1.130   1.152    2.16
103)  trans-1,4-dichloro-2-butene
            0.373 0.375 0.389 0.393 0.402 0.376 0.382 0.383 0.337   0.379    4.86
104)  1,2,3-trichloropropane
            0.326 0.276 0.333 0.319 0.323 0.334 0.300 0.324 0.331   0.319    5.98
105)  n-propylbenzene
            3.863 4.056 3.931 3.734 3.616 3.846 3.254 3.711 4.047   3.784    6.55
106)  2-chlorotoluene
            0.758 0.843 0.755 0.749 0.760 0.776 0.723 0.739 0.756   0.762    4.41
107)  4-chlorotoluene
            0.762 0.836 0.755 0.725 0.736 0.797 0.696 0.722 0.745   0.752    5.60
108)  4-ethyltoluene
                                                                    0.000   -1.00
109)  1,3,5-trimethylbenzene
            2.610 2.631 2.607 2.526 2.503 2.682 2.296 2.483 2.635   2.552    4.59
110)  tert-butylbenzene
            2.154 2.250 2.135 2.154 2.143 2.187 2.001 2.096 2.206   2.147    3.29
111)  1,2,4-trimethylbenzene
            2.626 2.731 2.614 2.537 2.518 2.676 2.283 2.543 2.699   2.581    5.21
```

Initial Calibration Summary

Job Number: JC67110 **Sample:** VL8534-ICC8534
Account: BBLNYS Arcadis **Lab FileID:** L300314.D
Project: National Grid, Philly Coke, Philadelphia PA

```
112)  sec-butylbenzene
            3.110 3.300 3.105 3.067 3.035 3.102 2.783 2.981 3.254   3.082    4.88
113)  1,3-dichlorobenzene
            1.404 1.378 1.436 1.394 1.418 1.496 1.328 1.390 1.403   1.405    3.22
114)  p-isopropyltoluene
            2.524 2.696 2.563 2.430 2.373 2.564 2.158 2.399 2.585   2.477    6.34
115)  1,4-dichlorobenzene
            1.328 1.489 1.367 1.337 1.350 1.393 1.288 1.322 1.399   1.364    4.30
116)  1,2-dichlorobenzene
            1.330 1.465 1.349 1.324 1.316 1.408 1.235 1.309 1.327   1.340    4.82
117)  1,4-diethylbenzene
                                                                    0.000   -1.00
118)  n-butylbenzene
            1.263 1.291 1.238 1.311 1.330 1.306 1.284 1.238 1.232   1.277    2.82
119)  1,2,4,5-tetramethylbenzene
                                                                    0.000   -1.00
120)  1,2-dibromo-3-chloropropane
            0.240       0.258 0.296 0.334       0.341 0.265 0.225   0.280   16.12
121)  1,3,5-trichlorobenzene
            0.942 1.052 0.956 0.995 1.054 0.895 1.015 0.948 0.946   0.978    5.54
122)  1,2,4-trichlorobenzene
            0.828 0.944 0.837 0.926 1.004 0.831 0.972 0.861 0.810   0.890    8.07
123)  hexachlorobutadiene
            0.332 0.388 0.308 0.346 0.357 0.358 0.349 0.322 0.367   0.347    6.93
124)  naphthalene
            2.950 3.249 2.955 3.172 3.293 2.830 3.008 3.044 2.878   3.042    5.34
125)  1,2,3-trichlorobenzene
            0.801 0.870 0.795 0.871 0.925 0.767 0.894 0.807 0.829   0.840    6.26
126)  hexachloroethane
            0.375 0.373 0.370 0.436 0.466 0.355 0.474 0.394 0.357   0.400   11.62
127)  Benzyl chloride
            2.018 2.159 2.013 2.167 2.256 1.951 2.135 2.079 1.886   2.074    5.66
128)  2-ethylhexyl acrylate
            0.375             0.543 0.620       0.699 0.430         0.533   24.96
             ----- Linear regression -----  Coefficient =  0.9974
               Response Ratio = -0.02612 + 0.72089 *A

129)  2-methylnaphthalene
            1.500             1.844 2.078       1.989 1.652         1.813   13.11

130) I   chlorobenzene-d5(a)   ----------------ISTD---------------------
131)  cyclohexanone
            0.026 0.031 0.027 0.027 0.025 0.027 0.026 0.026 0.028   0.027    5.90
 ------------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           ML8534.M          Thu May 10 14:13:11 2018   1
```

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: VL8534-ICV8534
Lab FileID: L300319.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VL8534\L300319.D Vial: 13
Acq On : 16 Apr 2018 7:52 pm Operator: vidishp
Sample : icv8534-50 Inst : GCMSL
Misc : MS24791,VL8534,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\ML8534.M (RTE Integrator)
Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
Last Update : Tue Apr 17 15:11:19 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	95	0.00	3.13
2		1,4-dioxane	0.095	0.106	-11.6	109	0.00	5.35
3		ethanol	0.144	0.160	-11.1	109	0.00	2.55
4	M	tertiary butyl alcohol	1.190	1.345	-13.0	110	0.00	3.18
5	I	pentafluorobenzene	1.000	1.000	0.0	104	0.00	4.35
6		chlorodifluoromethane	0.686	0.469	31.6#	69	0.00	1.69
7		dichlorodifluoromethane	0.609	0.628	-3.1	103	0.00	1.67
8		freon 114		----------NA----------				
9		freon 142b		----------NA----------				
10		chloromethane	0.672	0.710	-5.7	107	0.00	1.83
11		1,3-butadiene		----------NA----------				
12		vinyl chloride	0.678	0.663	2.2	101	0.00	1.92
13		bromomethane	0.171	0.253	-48.0#	152	0.00	2.17
14		chloroethane	0.380	0.375	1.3	107	0.00	2.25
15		vinyl bromide	0.375	0.431	-14.9	118	0.00	2.39
16		trichlorofluoromethane	0.718	0.692	3.6	98	0.00	2.44
17		ethyl ether	0.313	0.314	-0.3	102	0.00	2.63
18		2-chloropropane	0.935	0.907	3.0	102	0.00	2.72
19		acrolein	0.176	0.244	-38.6#	148	0.00	2.73
20		freon 113	0.313	0.331	-5.8	113	0.00	2.81
21		1,1-dichloroethene	0.427	0.369	13.6	90	0.00	2.81
22		acetone	0.084	0.083	1.2	106	0.00	2.82
23		acetonitrile	0.073	0.085	-16.4	125	0.00	3.02
		----------	True	Calc.	% Drift	----------		
24		iodomethane	50.000	45.639	8.7	91	0.00	2.93
		----------	AvgRF	CCRF	% Dev	----------		
25		iso-butyl alcohol	0.049	0.051	-4.1	111	0.00	4.50
26		carbon disulfide	1.097	1.044	4.8	100	0.00	2.99
27		methylene chloride	0.481	0.451	6.2	102	0.00	3.15
28		methyl acetate	0.144	0.144	0.0	103	0.00	3.03
29		methyl tert butyl ether	1.568	1.515	3.8	102	0.00	3.32
30		trans-1,2-dichloroethene	0.456	0.403	11.6	96	0.00	3.33
31		hexane	0.666	0.554	16.8	87	0.00	3.51
32		di-isopropyl ether	1.849	1.830	1.0	108	0.00	3.62
33		ethyl tert-butyl ether	1.726	1.753	-1.6	108	0.00	3.87
34		2-butanone	0.106	0.106	0.0	106	0.00	4.00
35	M	1,1-dichloroethane	0.936	0.888	5.1	103	0.00	3.63
36		chloroprene	0.845	0.825	2.4	105	0.00	3.68
37		acrylonitrile	0.329	0.374	-13.7	118	0.00	3.30

Initial Calibration Verification

Job Number: JC67110 **Sample:** VL8534-ICV8534
Account: BBLNYS Arcadis **Lab FileID:** L300319.D
Project: National Grid, Philly Coke, Philadelphia PA

38		vinyl acetate	0.118	0.135	-14.4	110	0.00	3.60
39		ethyl acetate	0.145	0.155	-6.9	110	0.00	4.01
40		2,2-dichloropropane	0.730	0.689	5.6	103	0.00	4.03
41		cis-1,2-dichloroethene	0.503	0.493	2.0	107	0.00	4.02
42		propionitrile	0.146	0.144	1.4	107	0.00	4.05
43		methyl acrylate	0.114	0.116	-1.8	109	0.00	4.05
44		bromochloromethane	0.214	0.218	-1.9	109	0.00	4.19
45		tetrahydrofuran	0.120	0.123	-2.5	107	0.00	4.20
46		chloroform	0.848	0.820	3.3	107	0.00	4.24
47	S	dibromofluoromethane (s)	0.381	0.391	-2.6	106	0.00	4.35
48		methacrylonitrile	0.318	0.332	-4.4	111	0.00	4.15
49		1,1,1-trichloroethane	0.688	0.653	5.1	102	0.00	4.38
50		cyclohexane	0.583	0.738	-26.6	132	0.00	4.44
51		1,1-dichloropropene	0.662	0.630	4.8	104	0.00	4.49
52		carbon tetrachloride	0.538	0.510	5.2	104	0.00	4.49
53		isopropyl acetate	0.146	0.153	-4.8	110	0.00	4.61
54		tert amyl alcohol	0.042	0.045	-7.1	110	0.00	4.59
55	I	1,4-difluorobenzene	1.000	1.000	0.0	104	0.00	4.91
56	S	1,2-dichloroethane-d4 (s)	0.326	0.323	0.9	107	0.00	4.61
57		tert-amyl methyl ether	1.009	1.007	0.2	108	0.00	4.70
58		2,2,4-trimethylpentane	0.910	0.786	13.6	97	0.00	4.70
59		epichlorohydrin	0.070	0.072	-2.9	108	0.00	5.75
60		n-butyl alcohol	0.021	0.022	-4.8	109	0.00	4.98
61	M	benzene	1.295	1.225	5.4	106	0.00	4.64
62		heptane	0.206	0.207	-0.5	109	0.00	4.81
63		1,2-dichloroethane	0.474	0.463	2.3	109	0.00	4.67
64		trichloroethene	0.323	0.322	0.3	106	0.00	5.11
65		ethyl acrylate	0.671	0.707	-5.4	111	0.00	5.13
66		2-nitropropane	0.211	0.237	-12.3	114	0.00	5.66
67		2-chloroethyl vinyl ether	0.268	0.283	-5.6	111	0.00	5.69
68		methyl methacrylate	0.116	0.124	-6.9	108	0.00	5.31
69		1,2-dichloropropane	0.358	0.345	3.6	105	0.00	5.31
70		methylcyclohexane	0.513	0.436	15.0	91	0.00	5.30
71		dibromomethane	0.200	0.207	-3.5	112	0.00	5.38
72		bromodichloromethane	0.416	0.433	-4.1	108	0.00	5.49
73		cis-1,3-dichloropropene	0.567	0.591	-4.2	111	0.00	5.84
74		4-methyl-2-pentanone	0.217	0.211	2.8	105	0.00	5.94
75		3-methyl-1-butanol	0.019	0.018	5.3	107	0.00	5.96
76	I	chlorobenzene-d5	1.000	1.000	0.0	102	0.00	7.32
77	S	toluene-d8 (s)	1.184	1.146	3.2	102	0.00	6.07
78		toluene	0.830	0.832	-0.2	108	0.00	6.12
79		trans-1,3-dichloropropene	0.559	0.564	-0.9	105	0.00	6.29
80		ethyl methacrylate	0.587	0.611	-4.1	107	0.00	6.31
81		1,1,2-trichloroethane	0.286	0.298	-4.2	109	0.00	6.46
82		2-hexanone	0.241	0.238	1.2	107	0.00	6.63
83		tetrachloroethene	0.343	0.346	-0.9	109	0.00	6.56
84		1,3-dichloropropane	0.583	0.605	-3.8	112	0.00	6.61
85		butyl acetate	0.357	0.382	-7.0	114	0.00	6.71
86		dibromochloromethane	0.298	0.334	-12.1	115	0.00	6.80
87		1,2-dibromoethane	0.369	0.392	-6.2	112	0.00	6.92
88		n-butyl ether	1.585	1.608	-1.5	108	0.00	7.39
89		chlorobenzene	0.873	0.886	-1.5	109	0.00	7.34
90		1,1,1,2-tetrachloroethane	0.280	0.296	-5.7	111	0.00	7.41
91		ethylbenzene	1.523	1.499	1.6	109	0.00	7.42
92		m,p-xylene	0.572	0.563	1.6	109	0.00	7.54
93		o-xylene	0.570	0.581	-1.9	111	0.00	7.89
94		butyl acrylate	0.891	0.981	-10.1	112	0.00	7.81
95		styrene	0.955	0.976	-2.2	111	0.00	7.90

Initial Calibration Verification

Job Number: JC67110 **Sample:** VL8534-ICV8534
Account: BBLNYS Arcadis **Lab FileID:** L300319.D
Project: National Grid, Philly Coke, Philadelphia PA

96		bromoform	0.204	0.243	-19.1	115	0.00	8.08
97		isopropylbenzene	1.459	1.458	0.1	107	0.00	8.23
98		cis-1,4-dichloro-2-butene	0.192	0.205	-6.8	105	0.00	8.28
99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	99	0.00	9.51
100	S	4-bromofluorobenzene (s)	1.085	1.117	-2.9	100	0.00	8.40
101		bromobenzene	0.801	0.888	-10.9	111	0.00	8.54
102		1,1,2,2-tetrachloroethane	1.152	1.301	-12.9	111	0.00	8.51
103		trans-1,4-dichloro-2-bute	0.379	0.468	-23.5	118	0.00	8.55
104		1,2,3-trichloropropane	0.319	0.353	-10.7	110	0.00	8.57
105		n-propylbenzene	3.784	4.079	-7.8	109	0.00	8.62
106		2-chlorotoluene	0.762	0.820	-7.6	109	0.00	8.72
107		4-chlorotoluene	0.752	0.829	-10.2	114	0.00	8.84
108		4-ethyltoluene		----------NA----------				
109		1,3,5-trimethylbenzene	2.552	2.790	-9.3	110	0.00	8.79
110		tert-butylbenzene	2.147	2.568	-19.6	118	0.00	9.10
111		1,2,4-trimethylbenzene	2.581	2.798	-8.4	110	0.00	9.16
112		sec-butylbenzene	3.082	3.365	-9.2	109	0.00	9.32
113		1,3-dichlorobenzene	1.405	1.557	-10.8	111	0.00	9.44
114		p-isopropyltoluene	2.477	2.695	-8.8	110	0.00	9.46
115		1,4-dichlorobenzene	1.364	1.488	-9.1	111	0.00	9.54
116		1,2-dichlorobenzene	1.340	1.459	-8.9	110	0.00	9.89
117		1,4-diethylbenzene		----------NA----------				
118		n-butylbenzene	1.277	1.451	-13.6	110	0.00	9.86
119		1,2,4,5-tetramethylbenzen		----------NA----------				
120		1,2-dibromo-3-chloropropa	0.280	0.330	-17.9	111	0.00	10.66
121		1,3,5-trichlorobenzene	0.978	1.119	-14.4	112	0.00	10.85
122		1,2,4-trichlorobenzene	0.890	1.043	-17.2	112	0.00	11.48
123		hexachlorobutadiene	0.347	0.370	-6.6	106	0.00	11.62
124		naphthalene	3.042	3.601	-18.4	113	0.00	11.75
125		1,2,3-trichlorobenzene	0.840	0.966	-15.0	110	0.00	11.97
126		hexachloroethane	0.400	0.496	-24.0	113	0.00	10.16
127		Benzyl chloride	2.074	1.972	4.9	90	0.00	9.65
		----------	True	Calc.	% Drift	----------		
128		2-ethylhexyl acrylate	10.000	10.797	-8.0	119	0.00	11.66
		----------	AvgRF	CCRF	% Dev	----------		
129		2-methylnaphthalene	1.813	1.862	-2.7	100	0.00	12.88

(#) = Out of Range SPCC's out = 0 CCC's out = 0
L300314.D ML8534.M Tue Apr 17 15:14:42 2018 1

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: VL8534-ICV8534
Lab FileID: L300320.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\VL8534\L300320.D          Vial: 14
Acq On    : 16 Apr 2018   8:20 pm                   Operator: vidishp
Sample    : icv8534-50                              Inst    : GCMSL
Misc      : MS24791,VL8534,5,,,,1                   Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\ML8534.M (RTE Integrator)
Title        : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
Last Update  : Tue Apr 17 15:02:10 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	106	0.00	3.12
2		1,4-dioxane		----------NA----------				
3		ethanol		----------NA----------				
4	M	tertiary butyl alcohol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	126	0.00	4.35
6		chlorodifluoromethane		----------NA----------				
7		dichlorodifluoromethane		----------NA----------				
8		freon 114		----------NA----------				
9		freon 142b		----------NA----------				
10		chloromethane		----------NA----------				
11		1,3-butadiene		----------NA----------				
12		vinyl chloride		----------NA----------				
13		bromomethane		----------NA----------				
14		chloroethane		----------NA----------				
15		vinyl bromide		----------NA----------				
16		trichlorofluoromethane		----------NA----------				
17		ethyl ether		----------NA----------				
18		2-chloropropane		----------NA----------				
19		acrolein		----------NA----------				
20		freon 113		----------NA----------				
21		1,1-dichloroethene		----------NA----------				
22		acetone		----------NA----------				
23		acetonitrile	0.073	0.066	9.6	117	0.00	3.02
		----------	True	Calc.	% Drift	----------		
24		iodomethane		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
25		iso-butyl alcohol		----------NA----------				
26		carbon disulfide		----------NA----------				
27		methylene chloride		----------NA----------				
28		methyl acetate		----------NA----------				
29		methyl tert butyl ether		----------NA----------				
30		trans-1,2-dichloroethene		----------NA----------				
31		hexane		----------NA----------				
32		di-isopropyl ether		----------NA----------				
33		ethyl tert-butyl ether		----------NA----------				
34		2-butanone		----------NA----------				
35	M	1,1-dichloroethane		----------NA----------				
36		chloroprene		----------NA----------				
37		acrylonitrile		----------NA----------				

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: VL8534-ICV8534
Lab FileID: L300320.D

38		vinyl acetate		----------NA----------				
39		ethyl acetate		----------NA----------				
40		2,2-dichloropropane		----------NA----------				
41		cis-1,2-dichloroethene		----------NA----------				
42		propionitrile		----------NA----------				
43		methyl acrylate		----------NA----------				
44		bromochloromethane		----------NA----------				
45		tetrahydrofuran		----------NA----------				
46		chloroform		----------NA----------				
47	S	dibromofluoromethane (s)	0.381	0.375	1.6	123	0.00	4.35
48		methacrylonitrile		----------NA----------				
49		1,1,1-trichloroethane		----------NA----------				
50		cyclohexane		----------NA----------				
51		1,1-dichloropropene		----------NA----------				
52		carbon tetrachloride		----------NA----------				
53		isopropyl acetate		----------NA----------				
54		tert amyl alcohol		----------NA----------				
55	I	1,4-difluorobenzene	1.000	1.000	0.0	121	0.00	4.92
56	S	1,2-dichloroethane-d4 (s)	0.326	0.333	-2.1	128	0.00	4.61
57		tert-amyl methyl ether		----------NA----------				
58		2,2,4-trimethylpentane		----------NA----------				
59		epichlorohydrin		----------NA----------				
60		n-butyl alcohol		----------NA----------				
61	M	benzene		----------NA----------				
62		heptane		----------NA----------				
63		1,2-dichloroethane		----------NA----------				
64		trichloroethene		----------NA----------				
65		ethyl acrylate		----------NA----------				
66		2-nitropropane		----------NA----------				
67		2-chloroethyl vinyl ether		----------NA----------				
68		methyl methacrylate		----------NA----------				
69		1,2-dichloropropane		----------NA----------				
70		methylcyclohexane		----------NA----------				
71		dibromomethane		----------NA----------				
72		bromodichloromethane		----------NA----------				
73		cis-1,3-dichloropropene		----------NA----------				
74		4-methyl-2-pentanone		----------NA----------				
75		3-methyl-1-butanol		----------NA----------				
76	I	chlorobenzene-d5	1.000	1.000	0.0	110	0.00	7.32
77	S	toluene-d8 (s)	1.184	1.279	-8.0	124	0.00	6.07
78		toluene		----------NA----------				
79		trans-1,3-dichloropropene		----------NA----------				
80		ethyl methacrylate		----------NA----------				
81		1,1,2-trichloroethane		----------NA----------				
82		2-hexanone		----------NA----------				
83		tetrachloroethene	0.343	0.345	-0.6	118	0.00	6.56
84		1,3-dichloropropane		----------NA----------				
85		butyl acetate		----------NA----------				
86		dibromochloromethane		----------NA----------				
87		1,2-dibromoethane		----------NA----------				
88		n-butyl ether		----------NA----------				
89		chlorobenzene		----------NA----------				
90		1,1,1,2-tetrachloroethane		----------NA----------				
91		ethylbenzene		----------NA----------				
92		m,p-xylene		----------NA----------				
93		o-xylene		----------NA----------				
94		butyl acrylate		----------NA----------				
95		styrene		----------NA----------				

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: VL8534-ICV8534
Lab FileID: L300320.D

96		bromoform		----------NA----------				
97		isopropylbenzene		----------NA----------				
98		cis-1,4-dichloro-2-butene		----------NA----------				
99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	125	0.00	9.51
100	S	4-bromofluorobenzene (s)	1.085	1.045	3.7	117	0.00	8.40
101		bromobenzene		----------NA----------				
102		1,1,2,2-tetrachloroethane		----------NA----------				
103		trans-1,4-dichloro-2-bute		----------NA----------				
104		1,2,3-trichloropropane		----------NA----------				
105		n-propylbenzene		----------NA----------				
106		2-chlorotoluene		----------NA----------				
107		4-chlorotoluene		----------NA----------				
108		4-ethyltoluene		----------NA----------				
109		1,3,5-trimethylbenzene		----------NA----------				
110		tert-butylbenzene		----------NA----------				
111		1,2,4-trimethylbenzene		----------NA----------				
112		sec-butylbenzene		----------NA----------				
113		1,3-dichlorobenzene		----------NA----------				
114		p-isopropyltoluene		----------NA----------				
115		1,4-dichlorobenzene		----------NA----------				
116		1,2-dichlorobenzene		----------NA----------				
117		1,4-diethylbenzene		----------NA----------				
118		n-butylbenzene		----------NA----------				
119		1,2,4,5-tetramethylbenzen		----------NA----------				
120		1,2-dibromo-3-chloropropa		----------NA----------				
121		1,3,5-trichlorobenzene		----------NA----------				
122		1,2,4-trichlorobenzene		----------NA----------				
123		hexachlorobutadiene		----------NA----------				
124		naphthalene		----------NA----------				
125		1,2,3-trichlorobenzene		----------NA----------				
126		hexachloroethane		----------NA----------				
127		Benzyl chloride		----------NA----------				
		----------	True	Calc.	% Drift	----------		
128		2-ethylhexyl acrylate		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
129		2-methylnaphthalene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
L300314.D ML8534.M Tue Apr 17 15:05:16 2018 1

6.7.3

6

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: VL8534-ICV8534
Lab FileID: L300324.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\VL8534\L300324.D          Vial: 18
Acq On    : 17 Apr 2018  11:51 am                   Operator: vidishp
Sample    : icv8534-50                              Inst    : GCMSL
Misc      : MS24791,VL8534,5,,,,1                   Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\ML8534.M (RTE Integrator)
Title        : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
Last Update  : Tue Apr 17 15:02:10 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	105	0.00	3.13
2		1,4-dioxane		----------NA----------				
3		ethanol		----------NA----------				
4	M	tertiary butyl alcohol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	123	0.00	4.34
6		chlorodifluoromethane	0.686	0.615	10.3	107	0.00	1.69
7		dichlorodifluoromethane		----------NA----------				
8		freon 114		----------NA----------				
9		freon 142b		----------NA----------				
10		chloromethane		----------NA----------				
11		1,3-butadiene		----------NA----------				
12		vinyl chloride		----------NA----------				
13		bromomethane	0.171	0.155	9.4	110	0.00	2.17
14		chloroethane		----------NA----------				
15		vinyl bromide		----------NA----------				
16		trichlorofluoromethane		----------NA----------				
17		ethyl ether		----------NA----------				
18		2-chloropropane		----------NA----------				
19		acrolein	0.176	0.168	4.5	121	0.00	2.73
20		freon 113		----------NA----------				
21		1,1-dichloroethene		----------NA----------				
22		acetone		----------NA----------				
23		acetonitrile		----------NA----------				
		----------	True	Calc.	% Drift	----------		
24		iodomethane		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
25		iso-butyl alcohol		----------NA----------				
26		carbon disulfide		----------NA----------				
27		methylene chloride		----------NA----------				
28		methyl acetate		----------NA----------				
29		methyl tert butyl ether		----------NA----------				
30		trans-1,2-dichloroethene		----------NA----------				
31		hexane		----------NA----------				
32		di-isopropyl ether		----------NA----------				
33		ethyl tert-butyl ether		----------NA----------				
34		2-butanone		----------NA----------				
35	M	1,1-dichloroethane		----------NA----------				
36		chloroprene		----------NA----------				
37		acrylonitrile		----------NA----------				

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: VL8534-ICV8534
Lab FileID: L300324.D

38		vinyl acetate		----------NA----------				
39		ethyl acetate		----------NA----------				
40		2,2-dichloropropane		----------NA----------				
41		cis-1,2-dichloroethene		----------NA----------				
42		propionitrile		----------NA----------				
43		methyl acrylate		----------NA----------				
44		bromochloromethane		----------NA----------				
45		tetrahydrofuran		----------NA----------				
46		chloroform		----------NA----------				
47	S	dibromofluoromethane (s)	0.381	0.382	-0.3	123	0.00	4.35
48		methacrylonitrile		----------NA----------				
49		1,1,1-trichloroethane		----------NA----------				
50		cyclohexane	0.583	0.598	-2.6	127	0.00	4.44
51		1,1-dichloropropene		----------NA----------				
52		carbon tetrachloride		----------NA----------				
53		isopropyl acetate		----------NA----------				
54		tert amyl alcohol		----------NA----------				
55	I	1,4-difluorobenzene	1.000	1.000	0.0	119	0.00	4.91
56	S	1,2-dichloroethane-d4 (s)	0.326	0.331	-1.5	126	0.00	4.61
57		tert-amyl methyl ether		----------NA----------				
58		2,2,4-trimethylpentane		----------NA----------				
59		epichlorohydrin		----------NA----------				
60		n-butyl alcohol		----------NA----------				
61	M	benzene		----------NA----------				
62		heptane		----------NA----------				
63		1,2-dichloroethane		----------NA----------				
64		trichloroethene		----------NA----------				
65		ethyl acrylate		----------NA----------				
66		2-nitropropane		----------NA----------				
67		2-chloroethyl vinyl ether		----------NA----------				
68		methyl methacrylate		----------NA----------				
69		1,2-dichloropropane		----------NA----------				
70		methylcyclohexane		----------NA----------				
71		dibromomethane		----------NA----------				
72		bromodichloromethane		----------NA----------				
73		cis-1,3-dichloropropene		----------NA----------				
74		4-methyl-2-pentanone		----------NA----------				
75		3-methyl-1-butanol		----------NA----------				
76	I	chlorobenzene-d5	1.000	1.000	0.0	111	0.00	7.31
77	S	toluene-d8 (s)	1.184	1.259	-6.3	123	0.00	6.06
78		toluene		----------NA----------				
79		trans-1,3-dichloropropene		----------NA----------				
80		ethyl methacrylate		----------NA----------				
81		1,1,2-trichloroethane		----------NA----------				
82		2-hexanone		----------NA----------				
83		tetrachloroethene		----------NA----------				
84		1,3-dichloropropane		----------NA----------				
85		butyl acetate		----------NA----------				
86		dibromochloromethane		----------NA----------				
87		1,2-dibromoethane		----------NA----------				
88		n-butyl ether		----------NA----------				
89		chlorobenzene		----------NA----------				
90		1,1,1,2-tetrachloroethane		----------NA----------				
91		ethylbenzene		----------NA----------				
92		m,p-xylene		----------NA----------				
93		o-xylene		----------NA----------				
94		butyl acrylate		----------NA----------				
95		styrene		----------NA----------				

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: VL8534-ICV8534
Lab FileID: L300324.D

96		bromoform		----------NA----------				
97		isopropylbenzene		----------NA----------				
98		cis-1,4-dichloro-2-butene		----------NA----------				
99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	121	0.00	9.51
100	S	4-bromofluorobenzene (s)	1.085	1.062	2.1	116	0.00	8.40
101		bromobenzene		----------NA----------				
102		1,1,2,2-tetrachloroethane		----------NA----------				
103		trans-1,4-dichloro-2-bute		----------NA----------				
104		1,2,3-trichloropropane		----------NA----------				
105		n-propylbenzene		----------NA----------				
106		2-chlorotoluene		----------NA----------				
107		4-chlorotoluene		----------NA----------				
108		4-ethyltoluene		----------NA----------				
109		1,3,5-trimethylbenzene		----------NA----------				
110		tert-butylbenzene		----------NA----------				
111		1,2,4-trimethylbenzene		----------NA----------				
112		sec-butylbenzene		----------NA----------				
113		1,3-dichlorobenzene		----------NA----------				
114		p-isopropyltoluene		----------NA----------				
115		1,4-dichlorobenzene		----------NA----------				
116		1,2-dichlorobenzene		----------NA----------				
117		1,4-diethylbenzene		----------NA----------				
118		n-butylbenzene		----------NA----------				
119		1,2,4,5-tetramethylbenzen		----------NA----------				
120		1,2-dibromo-3-chloropropa		----------NA----------				
121		1,3,5-trichlorobenzene		----------NA----------				
122		1,2,4-trichlorobenzene		----------NA----------				
123		hexachlorobutadiene		----------NA----------				
124		naphthalene		----------NA----------				
125		1,2,3-trichlorobenzene		----------NA----------				
126		hexachloroethane		----------NA----------				
127		Benzyl chloride		----------NA----------				
		----------	True	Calc.	% Drift	----------		
128		2-ethylhexyl acrylate		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
129		2-methylnaphthalene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
L300314.D ML8534.M Tue Apr 17 15:05:18 2018 1

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: VL8568-ICV8534
Lab FileID: L301070.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\VL8568\L301070.D          Vial: 37
Acq On    :  9 May 2018  11:05 pm                   Operator: sydneys
Sample    : ICV8534-50                              Inst    : GCMSL
Misc      : MS26146,VL8568,5,,,,1                   Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\ML8534.M (RTE Integrator)
Title        : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
Last Update  : Thu May 10 07:46:11 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	125	0.00	3.12
2		1,4-dioxane		----------NA----------				
3		ethanol		----------NA----------				
4	M	tertiary butyl alcohol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	122	0.00	4.34
6		chlorodifluoromethane		----------NA----------				
7		dichlorodifluoromethane		----------NA----------				
8		freon 114		----------NA----------				
9		freon 142b		----------NA----------				
10		chloromethane		----------NA----------				
11		1,3-butadiene		----------NA----------				
12		vinyl chloride		----------NA----------				
13		bromomethane		----------NA----------				
14		chloroethane		----------NA----------				
15		vinyl bromide		----------NA----------				
16		trichlorofluoromethane		----------NA----------				
17		ethyl ether		----------NA----------				
18		2-chloropropane		----------NA----------				
19		acrolein		----------NA----------				
20		freon 113		----------NA----------				
21		1,1-dichloroethene		----------NA----------				
22		acetone		----------NA----------				
23		acetonitrile		----------NA----------				
		----------	True	Calc.	% Drift	----------		
24		iodomethane		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
25		iso-butyl alcohol		----------NA----------				
26		carbon disulfide		----------NA----------				
27		methylene chloride		----------NA----------				
28		methyl acetate		----------NA----------				
29		methyl tert butyl ether		----------NA----------				
30		trans-1,2-dichloroethene		----------NA----------				
31		hexane		----------NA----------				
32		di-isopropyl ether		----------NA----------				
33		ethyl tert-butyl ether		----------NA----------				
34		2-butanone		----------NA----------				
35	M	1,1-dichloroethane		----------NA----------				
36		chloroprene		----------NA----------				
37		acrylonitrile		----------NA----------				

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: VL8568-ICV8534
Lab FileID: L301070.D

38		vinyl acetate		----------NA----------				
39		ethyl acetate		----------NA----------				
40		2,2-dichloropropane		----------NA----------				
41		cis-1,2-dichloroethene		----------NA----------				
42		propionitrile		----------NA----------				
43		methyl acrylate		----------NA----------				
44		bromochloromethane		----------NA----------				
45		tetrahydrofuran		----------NA----------				
46		chloroform		----------NA----------				
47	S	dibromofluoromethane (s)	0.381	0.408	-7.1	130	0.00	4.35
48		methacrylonitrile		----------NA----------				
49		1,1,1-trichloroethane		----------NA----------				
50		cyclohexane		----------NA----------				
51		1,1-dichloropropene		----------NA----------				
52		carbon tetrachloride		----------NA----------				
53		isopropyl acetate		----------NA----------				
54		tert amyl alcohol		----------NA----------				
55	I	1,4-difluorobenzene	1.000	1.000	0.0	123	0.00	4.91
56	S	1,2-dichloroethane-d4 (s)	0.326	0.319	2.1	125	0.00	4.61
57		tert-amyl methyl ether		----------NA----------				
58		2,2,4-trimethylpentane		----------NA----------				
59		epichlorohydrin		----------NA----------				
60		n-butyl alcohol		----------NA----------				
61	M	benzene		----------NA----------				
62		heptane		----------NA----------				
63		1,2-dichloroethane		----------NA----------				
64		trichloroethene		----------NA----------				
65		ethyl acrylate		----------NA----------				
66		2-nitropropane		----------NA----------				
67		2-chloroethyl vinyl ether		----------NA----------				
68		methyl methacrylate		----------NA----------				
69		1,2-dichloropropane		----------NA----------				
70		methylcyclohexane		----------NA----------				
71		dibromomethane		----------NA----------				
72		bromodichloromethane		----------NA----------				
73		cis-1,3-dichloropropene		----------NA----------				
74		4-methyl-2-pentanone		----------NA----------				
75		3-methyl-1-butanol		----------NA----------				
76	I	chlorobenzene-d5	1.000	1.000	0.0	122	0.00	7.31
77	S	toluene-d8 (s)	1.184	1.188	-0.3	127	0.00	6.06
78		toluene		----------NA----------				
79		trans-1,3-dichloropropene		----------NA----------				
80		ethyl methacrylate		----------NA----------				
81		1,1,2-trichloroethane		----------NA----------				
82		2-hexanone		----------NA----------				
83		tetrachloroethene		----------NA----------				
84		1,3-dichloropropane		----------NA----------				
85		butyl acetate		----------NA----------				
86		dibromochloromethane		----------NA----------				
87		1,2-dibromoethane		----------NA----------				
88		n-butyl ether		----------NA----------				
89		chlorobenzene		----------NA----------				
90		1,1,1,2-tetrachloroethane		----------NA----------				
91		ethylbenzene		----------NA----------				
92		m,p-xylene		----------NA----------				
93		o-xylene		----------NA----------				
94		butyl acrylate		----------NA----------				
95		styrene		----------NA----------				

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: VL8568-ICV8534
Lab FileID: L301070.D

96		bromoform		----------NA----------				
97		isopropylbenzene		----------NA----------				
98		cis-1,4-dichloro-2-butene		----------NA----------				
99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	134	0.00	9.51
100	S	4-bromofluorobenzene (s)	1.085	1.027	5.3	124	0.00	8.40
101		bromobenzene		----------NA----------				
102		1,1,2,2-tetrachloroethane		----------NA----------				
103		trans-1,4-dichloro-2-bute		----------NA----------				
104		1,2,3-trichloropropane		----------NA----------				
105		n-propylbenzene		----------NA----------				
106		2-chlorotoluene		----------NA----------				
107		4-chlorotoluene		----------NA----------				
108		4-ethyltoluene		----------NA----------				
109		1,3,5-trimethylbenzene		----------NA----------				
110		tert-butylbenzene		----------NA----------				
111		1,2,4-trimethylbenzene		----------NA----------				
112		sec-butylbenzene		----------NA----------				
113		1,3-dichlorobenzene		----------NA----------				
114		p-isopropyltoluene		----------NA----------				
115		1,4-dichlorobenzene		----------NA----------				
116		1,2-dichlorobenzene		----------NA----------				
117		1,4-diethylbenzene		----------NA----------				
118		n-butylbenzene		----------NA----------				
119		1,2,4,5-tetramethylbenzen		----------NA----------				
120		1,2-dibromo-3-chloropropa		----------NA----------				
121		1,3,5-trichlorobenzene		----------NA----------				
122		1,2,4-trichlorobenzene		----------NA----------				
123		hexachlorobutadiene		----------NA----------				
124		naphthalene		----------NA----------				
125		1,2,3-trichlorobenzene		----------NA----------				
126		hexachloroethane		----------NA----------				
127		Benzyl chloride		----------NA----------				
		----------	True	Calc.	% Drift	----------		
128		2-ethylhexyl acrylate		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
129		2-methylnaphthalene		----------NA----------				
130	I	chlorobenzene-d5(a)	1.000	1.000	0.0	102	0.00	7.31
131		cyclohexanone	0.027	0.026	3.7	98	0.00	8.33

(#) = Out of Range SPCC's out = 0 CCC's out = 0
L300314.D ML8534.M Thu May 10 14:13:41 2018 1

Continuing Calibration Summary

Job Number: JC67110 **Sample:** VL8605-CC8534
Account: BBLNYS Arcadis **Lab FileID:** L301851.D
Project: National Grid, Philly Coke, Philadelphia PA

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\data\vl8605\l301851.d          Vial: 6
Acq On    :  2 Jun 2018  12:26 pm                   Operator: deving
Sample    : CC8534-50                               Inst    : GCMSL
Misc      : MS26750,VL8605,5,,,,1                   Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\ML8534.M (RTE Integrator)
Title        : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
Last Update  : Thu May 10 07:46:11 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	101	0.00	3.12
2		1,4-dioxane	0.095	0.098	-3.2	107	0.00	5.35
3		ethanol	0.144	0.144	0.0	105	0.00	2.54
4	M	tertiary butyl alcohol	1.190	1.241	-4.3	109	0.00	3.18
5	I	pentafluorobenzene	1.000	1.000	0.0	109	0.00	4.34
6		chlorodifluoromethane	0.686	0.825	-20.3#	127	0.00	1.69
7		dichlorodifluoromethane	0.609	0.787	-29.2#	135	0.00	1.68
8		freon 114		----------NA----------				
9		freon 142b		----------NA----------				
10		chloromethane	0.672	0.690	-2.7	108	0.00	1.83
11		1,3-butadiene		----------NA----------				
12		vinyl chloride	0.678	0.687	-1.3	110	0.00	1.92
13		bromomethane	0.171	0.139	18.7	87	0.00	2.16
14		chloroethane	0.380	0.375	1.3	112	0.00	2.25
15		vinyl bromide	0.375	0.374	0.3	107	0.00	2.40
16		trichlorofluoromethane	0.718	0.775	-7.9	115	0.00	2.44
17		ethyl ether	0.313	0.331	-5.8	112	0.00	2.63
18		2-chloropropane	0.935	0.929	0.6	109	0.00	2.72
19		acrolein	0.176	0.181	-2.8	115	0.00	2.73
20		freon 113	0.313	0.332	-6.1	118	0.00	2.80
21		1,1-dichloroethene	0.427	0.449	-5.2	115	0.00	2.81
22		acetone	0.084	0.080	4.8	107	0.00	2.83
23		acetonitrile	0.073	0.068	6.8	105	0.00	3.02
		----------	True	Calc.	% Drift	----------		
24		iodomethane	50.000	31.099	37.8#	64	0.00	2.92
		----------	AvgRF	CCRF	% Dev	----------		
25		iso-butyl alcohol	0.049	0.044	10.2	100	0.00	4.50
26		carbon disulfide	1.097	1.195	-8.9	119	0.00	2.98
27		methylene chloride	0.481	0.474	1.5	112	0.00	3.14
28		methyl acetate	0.144	0.141	2.1	106	0.00	3.03
29		methyl tert butyl ether	1.568	1.515	3.4	106	0.00	3.31
30		trans-1,2-dichloroethene	0.456	0.452	0.9	112	0.00	3.33
31		hexane	0.666	0.693	-4.1	114	0.00	3.51
32		di-isopropyl ether	1.849	1.679	9.2	103	0.00	3.62
33		ethyl tert-butyl ether	1.726	1.633	5.4	105	0.00	3.87
34		2-butanone	0.106	0.103	2.8	106	0.00	3.99
35	M	1,1-dichloroethane	0.936	0.883	5.7	107	0.00	3.63
36		chloroprene	0.845	0.790	6.5	105	0.00	3.68
37		acrylonitrile	0.329	0.334	-1.5	110	0.00	3.30

Continuing Calibration Summary

Job Number: JC67110 **Sample:** VL8605-CC8534
Account: BBLNYS Arcadis **Lab FileID:** L301851.D
Project: National Grid, Philly Coke, Philadelphia PA

38		vinyl acetate	0.118	0.127	-7.6	108	0.00	3.60
39		ethyl acetate	0.145	0.132	9.0	97	0.00	4.00
40		2,2-dichloropropane	0.730	0.651	10.8	101	0.00	4.03
41		cis-1,2-dichloroethene	0.503	0.481	4.4	109	0.00	4.02
42		propionitrile	0.146	0.137	6.2	105	0.00	4.04
43		methyl acrylate	0.114	0.109	4.4	107	0.00	4.04
44		bromochloromethane	0.214	0.204	4.7	106	0.00	4.19
45		tetrahydrofuran	0.120	0.121	-0.8	110	0.00	4.20
46		chloroform	0.848	0.780	8.0	107	0.00	4.24
47	S	dibromofluoromethane (s)	0.381	0.417	-9.4	119	0.00	4.35
48		methacrylonitrile	0.318	0.308	3.1	108	0.00	4.15
49		1,1,1-trichloroethane	0.688	0.663	3.6	108	0.00	4.38
50		cyclohexane	0.583	0.640	-9.8	120	0.00	4.44
51		1,1-dichloropropene	0.662	0.625	5.6	107	0.00	4.49
52		carbon tetrachloride	0.538	0.523	2.8	111	0.00	4.49
53		isopropyl acetate	0.146	0.141	3.4	106	0.00	4.61
54		tert amyl alcohol	0.042	0.041	2.4	105	0.00	4.59
55	I	1,4-difluorobenzene	1.000	1.000	0.0	110	0.00	4.91
56	S	1,2-dichloroethane-d4 (s)	0.326	0.328	-0.6	115	0.00	4.61
57		tert-amyl methyl ether	1.009	0.911	9.7	104	0.00	4.70
58		2,2,4-trimethylpentane	0.910	0.822	9.7	107	0.00	4.70
59		epichlorohydrin	0.070	0.064	8.6	102	0.00	5.75
60		n-butyl alcohol	0.021	0.020	4.8	105	0.00	4.97
61	M	benzene	1.295	1.187	8.3	109	0.00	4.64
62		heptane	0.206	0.192	6.8	107	0.00	4.81
63		1,2-dichloroethane	0.474	0.399	15.8	100	0.00	4.66
64		trichloroethene	0.323	0.311	3.7	109	0.00	5.11
65		ethyl acrylate	0.671	0.627	6.6	105	0.00	5.13
66		2-nitropropane	0.211	0.189	10.4	97	0.00	5.66
67		2-chloroethyl vinyl ether	0.268	0.251	6.3	105	0.00	5.69
68		methyl methacrylate	0.116	0.112	3.4	104	0.00	5.31
69		1,2-dichloropropane	0.358	0.328	8.4	106	0.00	5.31
70		methylcyclohexane	0.513	0.496	3.3	110	0.00	5.30
71		dibromomethane	0.200	0.185	7.5	106	0.00	5.38
72		bromodichloromethane	0.416	0.411	1.2	109	0.00	5.49
73		cis-1,3-dichloropropene	0.567	0.523	7.8	104	0.00	5.84
74		4-methyl-2-pentanone	0.217	0.199	8.3	105	0.00	5.94
75		3-methyl-1-butanol	0.019	0.017	10.5	105	0.00	5.96
76	I	chlorobenzene-d5	1.000	1.000	0.0	103	0.00	7.32
77	S	toluene-d8 (s)	1.184	1.241	-4.8	113	0.00	6.07
78		toluene	0.830	0.810	2.4	107	0.00	6.12
79		trans-1,3-dichloropropene	0.559	0.538	3.8	102	0.00	6.29
80		ethyl methacrylate	0.587	0.589	-0.3	105	0.00	6.31
81		1,1,2-trichloroethane	0.286	0.280	2.1	104	0.00	6.46
82		2-hexanone	0.241	0.232	3.7	106	0.00	6.63
83		tetrachloroethene	0.343	0.340	0.9	109	0.00	6.56
84		1,3-dichloropropane	0.583	0.552	5.3	104	0.00	6.61
85		butyl acetate	0.357	0.351	1.7	107	0.00	6.71
86		dibromochloromethane	0.298	0.317	-6.4	111	0.00	6.80
87		1,2-dibromoethane	0.369	0.371	-0.5	108	0.00	6.91
88		n-butyl ether	1.585	1.540	2.8	105	0.00	7.38
89		chlorobenzene	0.873	0.838	4.0	105	0.00	7.34
90		1,1,1,2-tetrachloroethane	0.280	0.272	2.9	104	0.00	7.41
91		ethylbenzene	1.523	1.428	6.2	105	0.00	7.42
92		m,p-xylene	0.572	0.535	6.5	106	0.00	7.54
93		o-xylene	0.570	0.549	3.7	107	0.00	7.89
94		butyl acrylate	0.891	0.901	-1.1	105	0.00	7.81
95		styrene	0.955	0.909	4.8	105	0.00	7.90

Continuing Calibration Summary

Job Number: JC67110 **Sample:** VL8605-CC8534
Account: BBLNYS Arcadis **Lab FileID:** L301851.D
Project: National Grid, Philly Coke, Philadelphia PA

96		bromoform	0.204	0.229	-12.3	111	0.00	8.08
97		isopropylbenzene	1.459	1.396	4.3	104	0.00	8.23
98		cis-1,4-dichloro-2-butene	0.192	0.143	25.5#	75	0.00	8.28
99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	100	0.00	9.51
100	S	4-bromofluorobenzene (s)	1.085	1.155	-6.5	104	0.00	8.40
101		bromobenzene	0.801	0.834	-4.1	105	0.00	8.54
102		1,1,2,2-tetrachloroethane	1.152	1.277	-10.9	109	0.00	8.51
103		trans-1,4-dichloro-2-bute	0.379	0.294	22.4#	75	0.00	8.55
104		1,2,3-trichloropropane	0.319	0.340	-6.6	106	0.00	8.57
105		n-propylbenzene	3.784	3.890	-2.8	104	0.00	8.62
106		2-chlorotoluene	0.762	0.782	-2.6	104	0.00	8.72
107		4-chlorotoluene	0.752	0.759	-0.9	104	0.00	8.83
108		4-ethyltoluene		----------NA----------				
109		1,3,5-trimethylbenzene	2.552	2.619	-2.6	103	0.00	8.79
110		tert-butylbenzene	2.147	2.229	-3.8	103	0.00	9.10
111		1,2,4-trimethylbenzene	2.581	2.641	-2.3	104	0.00	9.15
112		sec-butylbenzene	3.082	3.151	-2.2	102	0.00	9.32
113		1,3-dichlorobenzene	1.405	1.439	-2.4	103	0.00	9.44
114		p-isopropyltoluene	2.477	2.465	0.5	101	0.00	9.46
115		1,4-dichlorobenzene	1.364	1.380	-1.2	103	0.00	9.53
116		1,2-dichlorobenzene	1.340	1.358	-1.3	102	0.00	9.89
117		1,4-diethylbenzene		----------NA----------				
118		n-butylbenzene	1.277	1.342	-5.1	102	0.00	9.86
119		1,2,4,5-tetramethylbenzen		----------NA----------				
120		1,2-dibromo-3-chloropropa	0.280	0.322	-15.0	109	0.00	10.66
121		1,3,5-trichlorobenzene	0.978	1.006	-2.9	101	0.00	10.85
122		1,2,4-trichlorobenzene	0.890	0.921	-3.5	99	0.00	11.48
123		hexachlorobutadiene	0.347	0.336	3.2	97	0.00	11.62
124		naphthalene	3.042	3.176	-4.4	100	0.00	11.75
125		1,2,3-trichlorobenzene	0.840	0.844	-0.5	97	0.00	11.96
126		hexachloroethane	0.400	0.438	-9.5	100	0.00	10.16
127		Benzyl chloride	2.074	2.068	0.3	95	0.00	9.64
		----------	True	Calc.	% Drift	----------		
128		2-ethylhexyl acrylate	10.000	11.121	-11.2	123	0.00	11.66
		----------	AvgRF	CCRF	% Dev	----------		
129		2-methylnaphthalene	1.813	1.655	8.7	90	0.00	12.88
130	I	chlorobenzene-d5(a)	1.000	1.000	0.0	86	0.00	7.32
131		cyclohexanone		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
L300314.D ML8534.M Tue Jun 05 01:16:04 2018

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301859.d
Acq On : 2 Jun 2018 4:13 pm
Operator : deving
Sample : JC67110-3 Inst : GCMSL
Misc : MS26840,VL8605,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 02:10:36 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.117	65	228894	500.00	ug/L	0.00
5) pentafluorobenzene	4.346	168	234878	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.917	114	338981	50.00	ug/L	0.00
76) chlorobenzene-d5	7.317	117	292821	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	133203	50.00	ug/L	0.00
130) chlorobenzene-d5(a)	7.317	117	292821	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.352	113	97455	54.44	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.88%			
56) 1,2-dichloroethane-d4 (s)	4.609	65	118821	53.83	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 107.66%			
77) toluene-d8 (s)	6.066	98	394575	56.91	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 113.82%			
100) 4-bromofluorobenzene (s)	8.399	95	143629	49.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.36%			

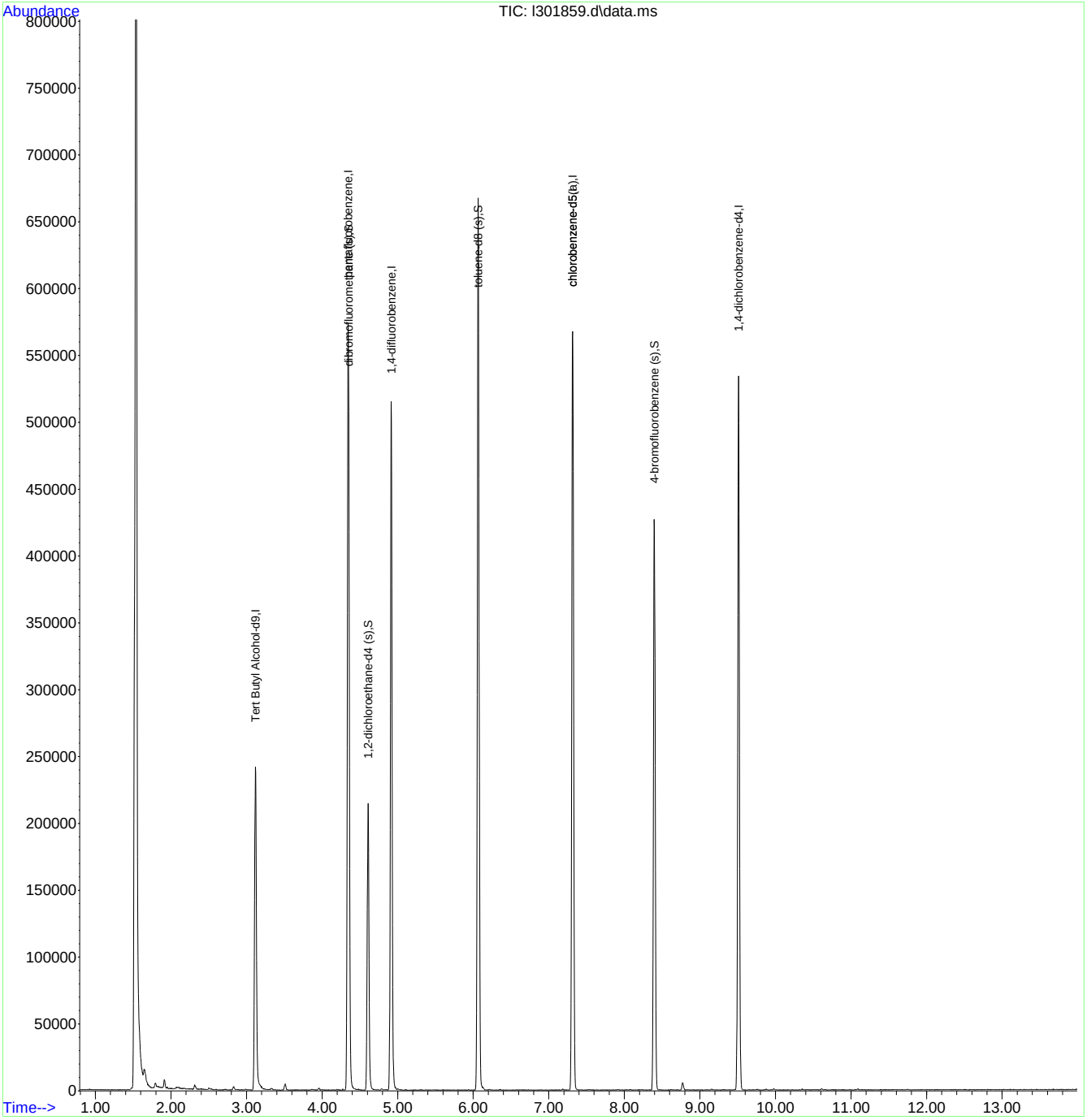
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301859.d
Acq On : 2 Jun 2018 4:13 pm
Operator : deving
Sample : JC67110-3 Inst : GCMSL
Misc : MS26840,VL8605,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 02:10:36 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301857.d
Acq On : 2 Jun 2018 3:19 pm
Operator : deving
Sample : JC67110-4 Inst : GCMSL
Misc : MS26840,VL8605,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 01:29:27 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.120	65	242219	500.00	ug/L	0.00
5) pentafluorobenzene	4.346	168	245880	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.914	114	354993	50.00	ug/L	0.00
76) chlorobenzene-d5	7.317	117	312503	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	139258	50.00	ug/L	0.00
130) chlorobenzene-d5(a)	7.317	117	312503	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.352	113	104516	55.77	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 111.54%			
56) 1,2-dichloroethane-d4 (s)	4.609	65	126980	54.93	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 109.86%			
77) toluene-d8 (s)	6.066	98	416703	56.31	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 112.62%			
100) 4-bromofluorobenzene (s)	8.396	95	152055	50.31	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.62%			

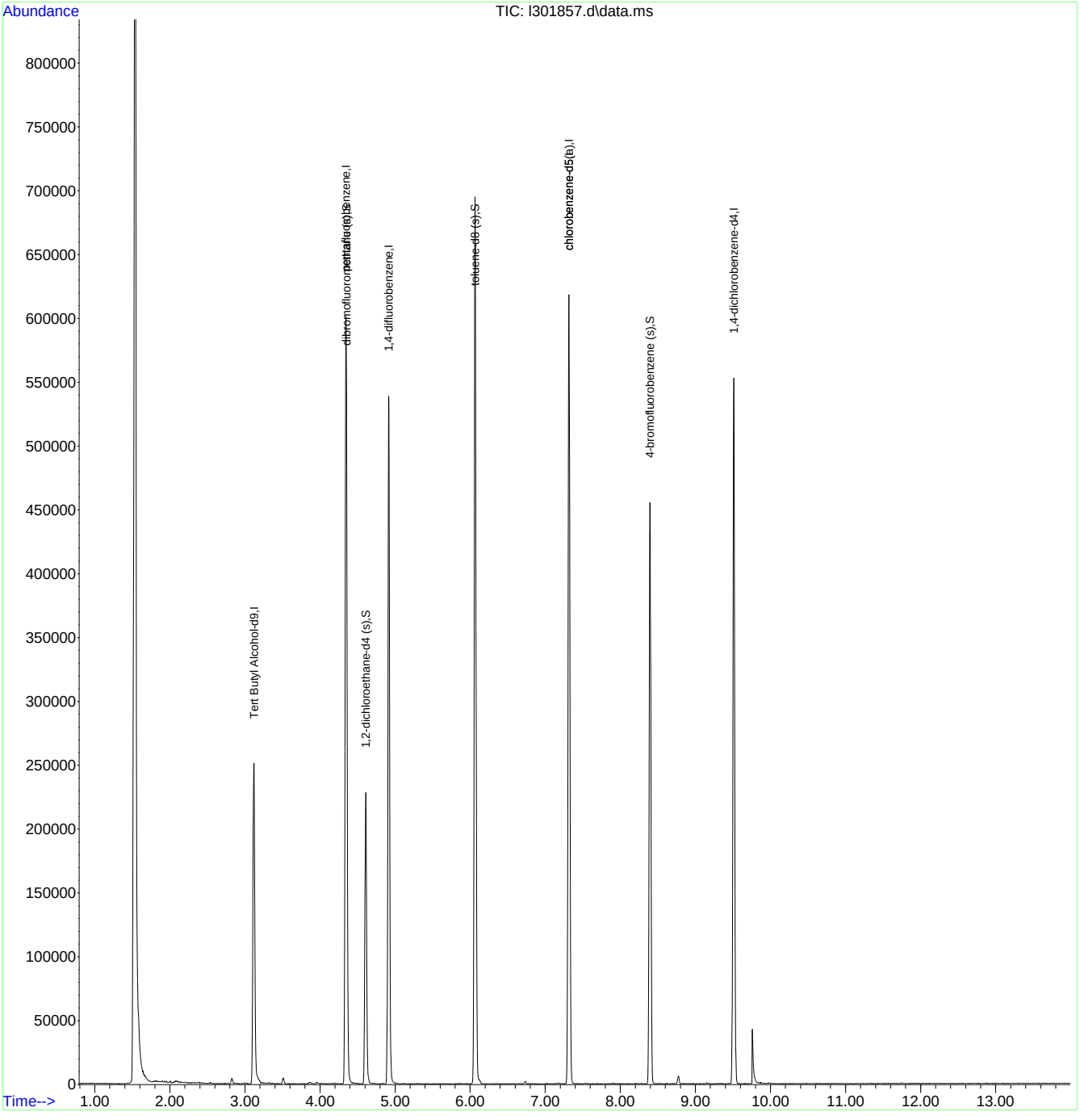
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301857.d
Acq On : 2 Jun 2018 3:19 pm
Operator : deving
Sample : JC67110-4 Inst : GCMSL
Misc : MS26840,VL8605,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 01:29:27 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301858.d
Acq On : 2 Jun 2018 3:46 pm
Operator : deving
Sample : JC67110-5 Inst : GCMSL
Misc : MS26840,VL8605,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 01:30:40 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.117	65	235053	500.00	ug/L	0.00
5) pentafluorobenzene	4.346	168	239727	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.917	114	347504	50.00	ug/L	0.00
76) chlorobenzene-d5	7.317	117	300004	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	132250	50.00	ug/L	0.00
130) chlorobenzene-d5(a)	7.317	117	300004	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.352	113	98374	53.84	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.68%			
56) 1,2-dichloroethane-d4 (s)	4.612	65	119539	52.83	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 105.66%			
77) toluene-d8 (s)	6.066	98	405802	57.12	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 114.24%			
100) 4-bromofluorobenzene (s)	8.399	95	144146	50.22	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.44%			

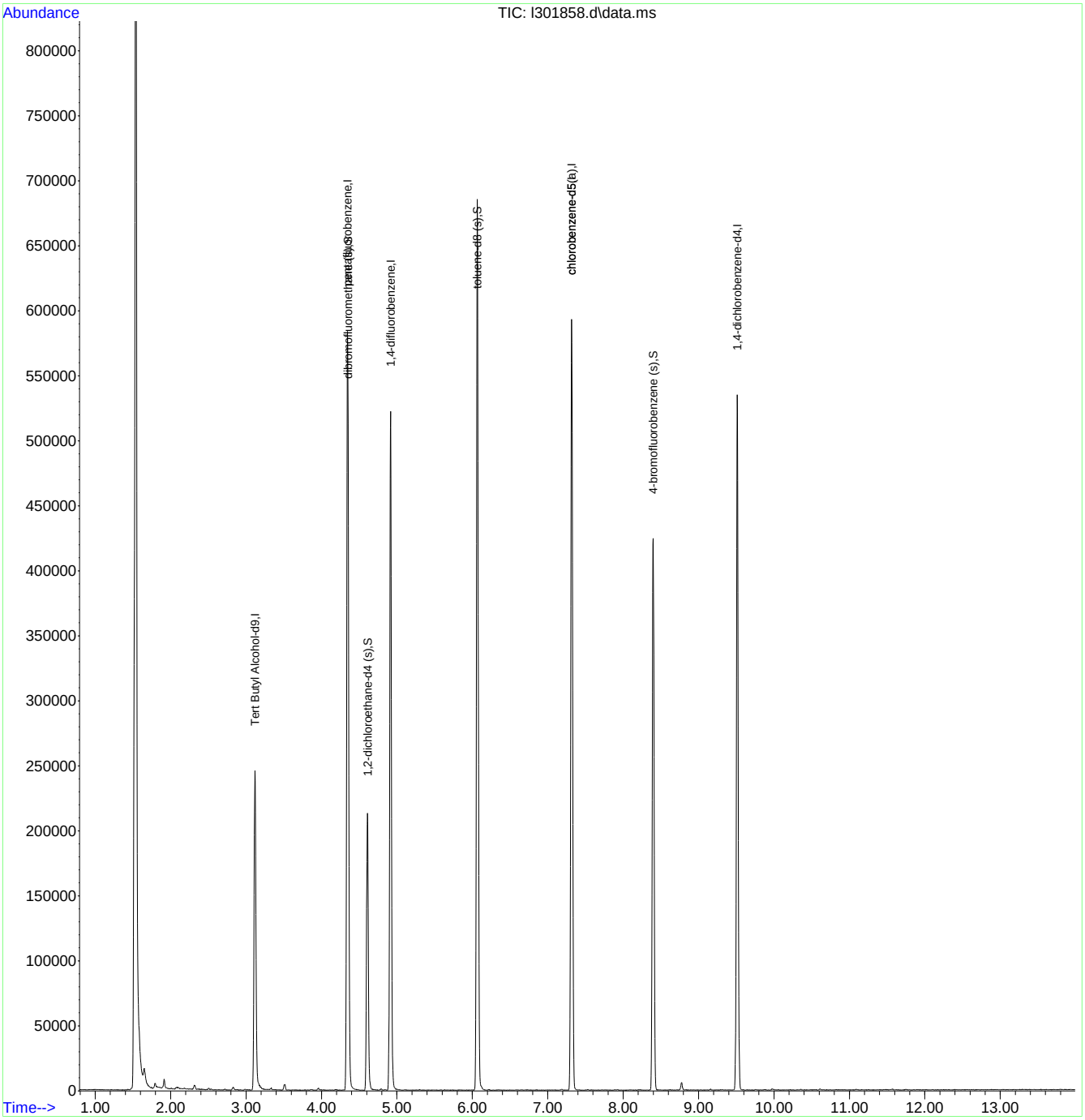
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301858.d
Acq On : 2 Jun 2018 3:46 pm
Operator : deving
Sample : JC67110-5 Inst : GCMSL
Misc : MS26840,VL8605,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 01:30:40 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301855.d
Acq On : 2 Jun 2018 2:24 pm
Operator : deving
Sample : MB Inst : GCMSL
Misc : MS26750,VL8605,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 01:24:58 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration

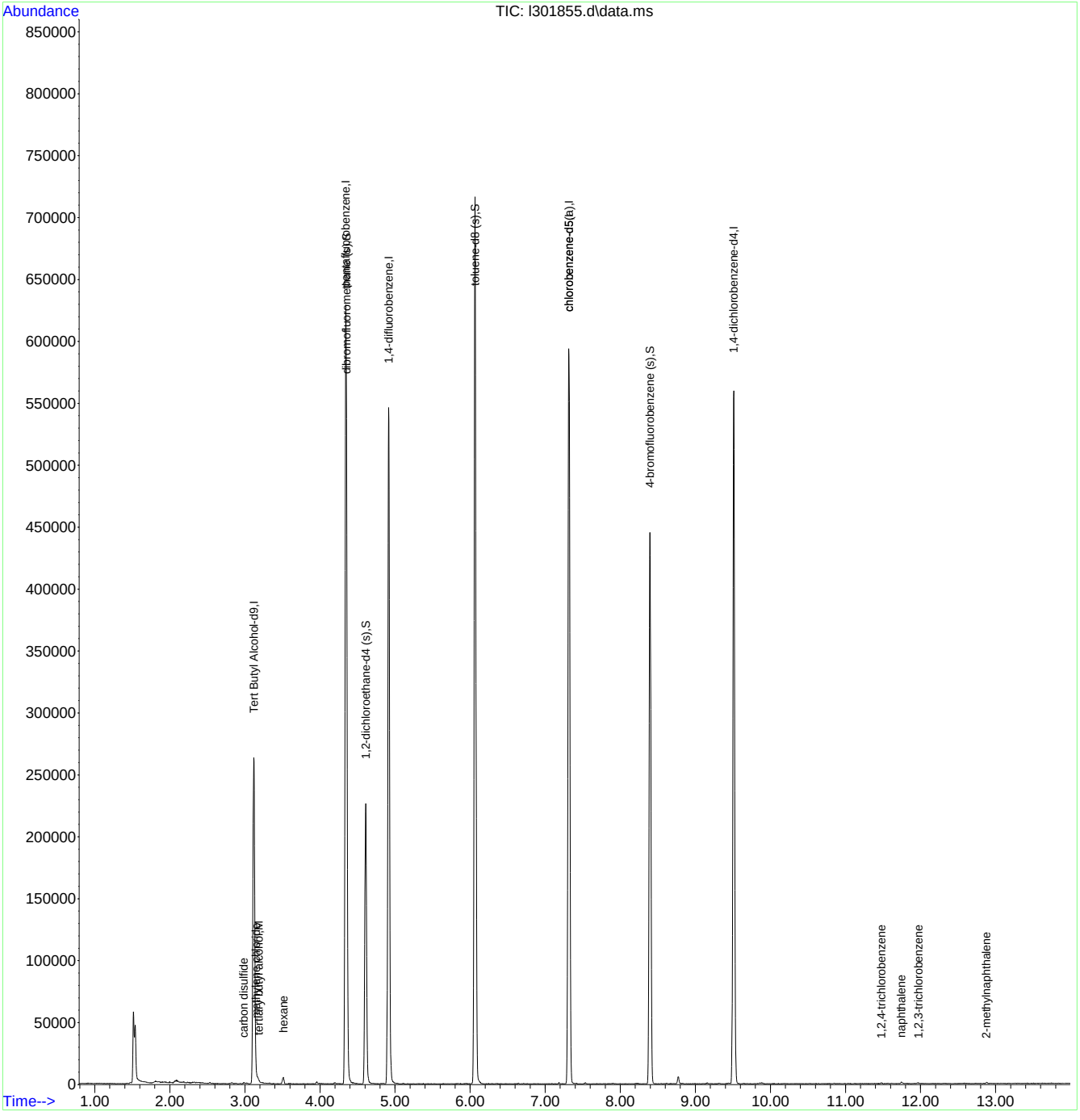
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.117	65	258677	500.00	ug/L	0.00
5) pentafluorobenzene	4.343	168	259085	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.914	114	364180	50.00	ug/L	0.00
76) chlorobenzene-d5	7.317	117	311992	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.509	152	139343	50.00	ug/L	0.00
130) chlorobenzene-d5(a)	7.317	117	311992	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.352	113	105945	53.66	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.32%			
56) 1,2-dichloroethane-d4 (s)	4.609	65	128664	54.26	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 108.52%			
77) toluene-d8 (s)	6.066	98	420814	56.96	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 113.92%			
100) 4-bromofluorobenzene (s)	8.396	95	152256	50.34	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.68%			
Target Compounds						Qvalue
4) tertiary butyl alcohol	3.181	59	1280	2.08	ug/L	93
26) carbon disulfide	2.982	76	1073	0.19	ug/L	80
27) methylene chloride	3.149	84	629	0.25	ug/L #	65
31) hexane	3.512	57	1822	0.53	ug/L	97
122) 1,2,4-trichlorobenzene	11.476	180	418	0.17	ug/L #	53
124) naphthalene	11.743	128	1381	0.16	ug/L	68
125) 1,2,3-trichlorobenzene	11.970	180	304	0.13	ug/L #	56
129) 2-methylnaphthalene	12.875	142	608	0.12	ug/L #	68

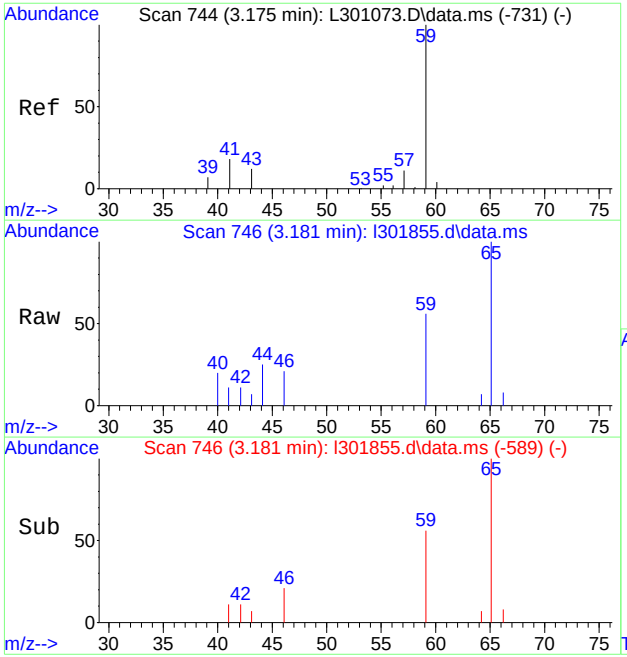
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301855.d
Acq On : 2 Jun 2018 2:24 pm
Operator : deving
Sample : MB Inst : GCMSL
Misc : MS26750,VL8605,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 01:24:58 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration

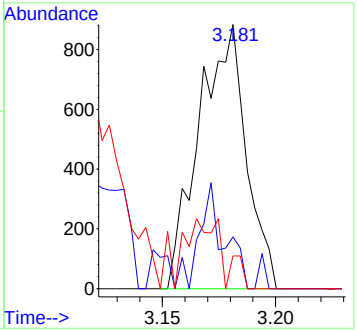


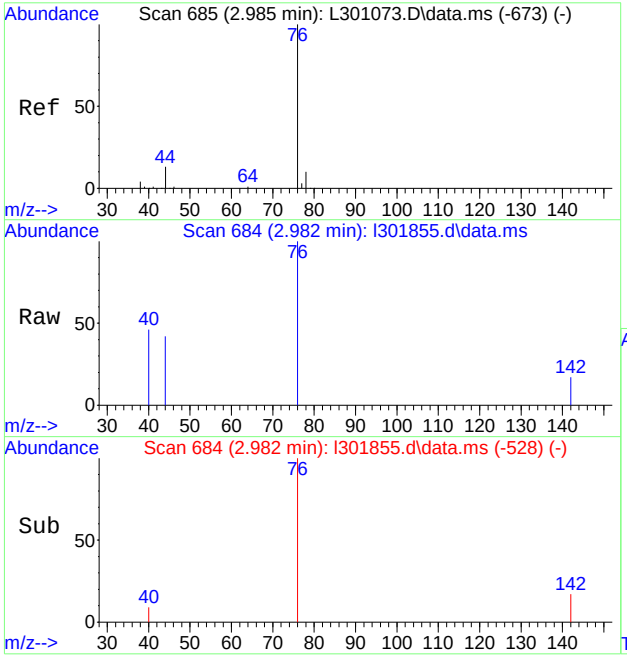


#4
tertiary butyl alcohol
Concen: 2.08 ug/L
RT: 3.181 min Scan# 746
Delta R.T. 0.003 min
Lab File: l301855.d
Acq: 2 Jun 2018 2:24 pm

Tgt Ion: 59 Resp: 1280

Ion	Ratio	Lower	Upper
59	100		
41	19.6	0.0	52.7
43	12.3	0.0	45.2

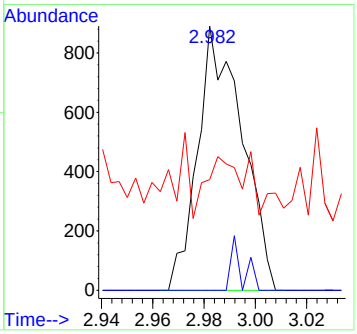


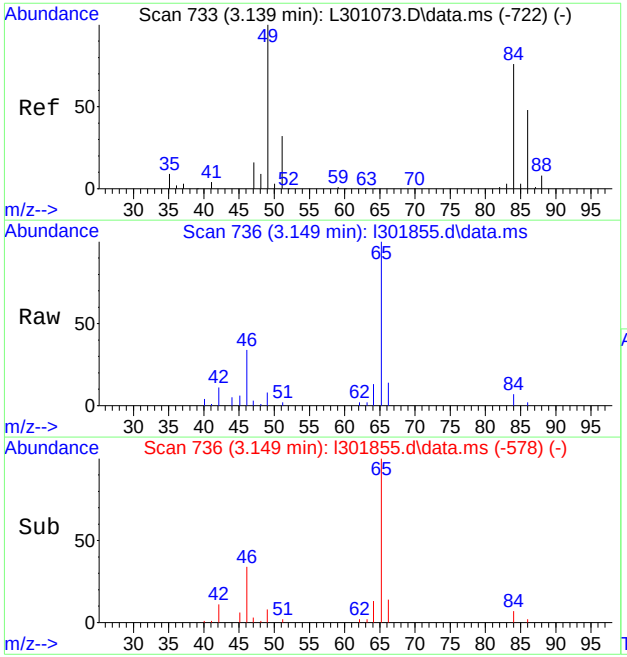


#26
carbon disulfide
Concen: 0.19 ug/L
RT: 2.982 min Scan# 684
Delta R.T. -0.000 min
Lab File: l301855.d
Acq: 2 Jun 2018 2:24 pm

Tgt Ion: 76 Resp: 1073

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.2
44	7.7	0.0	44.2

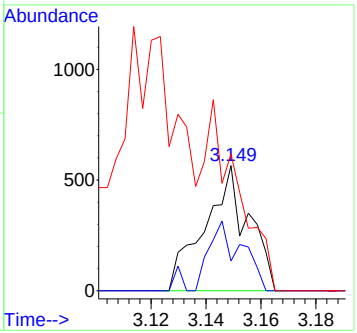


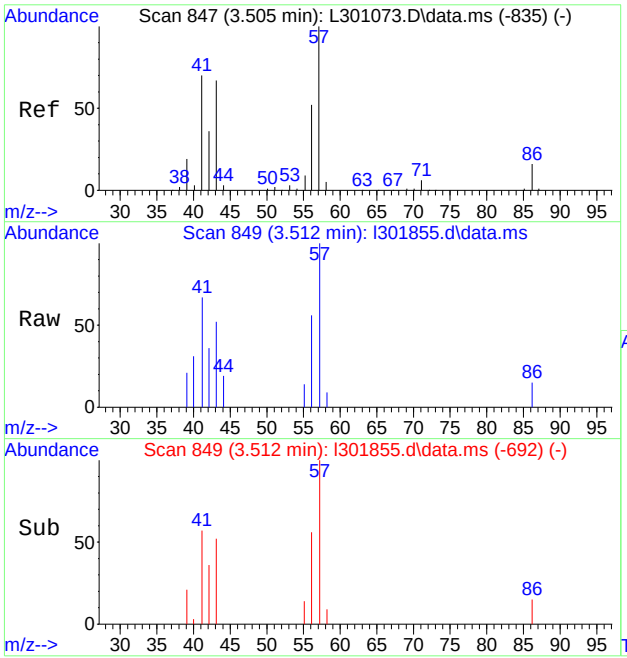


#27
methylene chloride
Concen: 0.25 ug/L
RT: 3.149 min Scan# 736
Delta R.T. 0.006 min
Lab File: l301855.d
Acq: 2 Jun 2018 2:24 pm

Tgt Ion: 84 Resp: 629

Ion	Ratio	Lower	Upper
84	100		
86	23.7	33.6	93.6#
49	109.2	113.1	173.1#

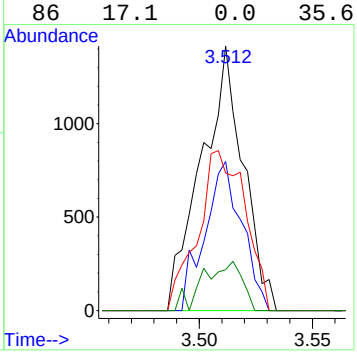


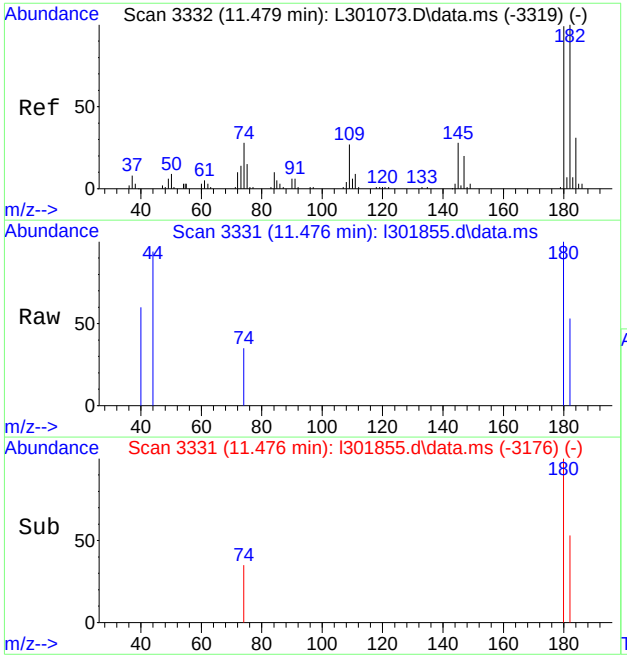


#31
hexane
Concen: 0.53 ug/L
RT: 3.512 min Scan# 849
Delta R.T. 0.003 min
Lab File: l301855.d
Acq: 2 Jun 2018 2:24 pm

Tgt Ion: 57 Resp: 1822

Ion	Ratio	Lower	Upper
57	100		
56	49.6	32.8	72.8
43	68.2	47.4	87.4
86	17.1	0.0	35.6

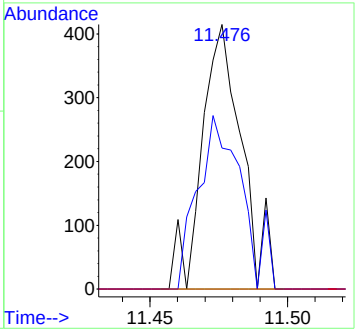


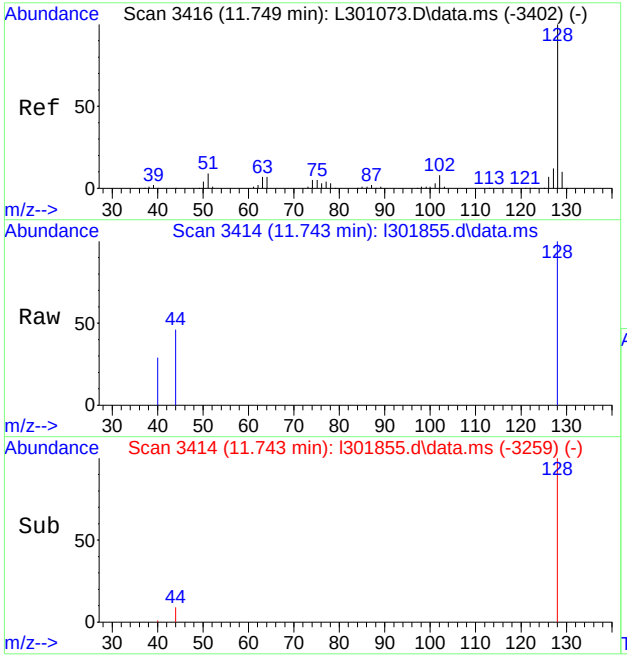


#122
1,2,4-trichlorobenzene
Concen: 0.17 ug/L
RT: 11.476 min Scan# 3331
Delta R.T. -0.003 min
Lab File: l301855.d
Acq: 2 Jun 2018 2:24 pm

Tgt Ion:180 Resp: 418

Ion	Ratio	Lower	Upper
180	100		
182	53.3	66.0	126.0#
184	0.0	1.5	61.5#

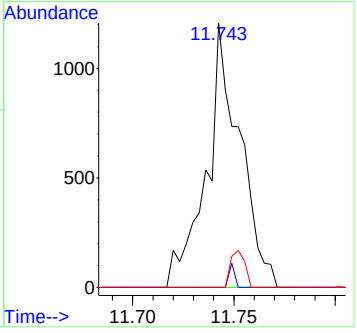


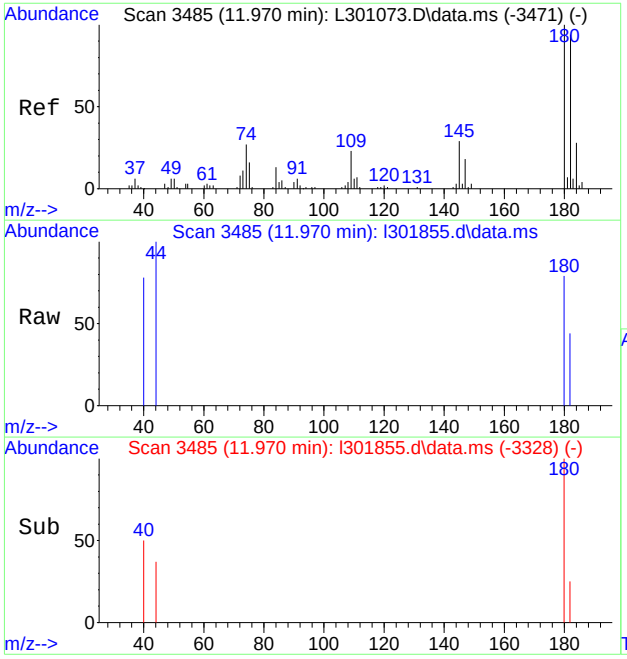


#124
naphthalene
Concen: 0.16 ug/L
RT: 11.743 min Scan# 3414
Delta R.T. -0.003 min
Lab File: l301855.d
Acq: 2 Jun 2018 2:24 pm

Tgt Ion:128 Resp: 1381

Ion	Ratio	Lower	Upper
128	100		
129	0.0	0.0	41.6
127	0.0	0.0	43.5

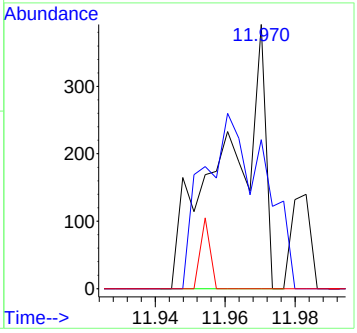


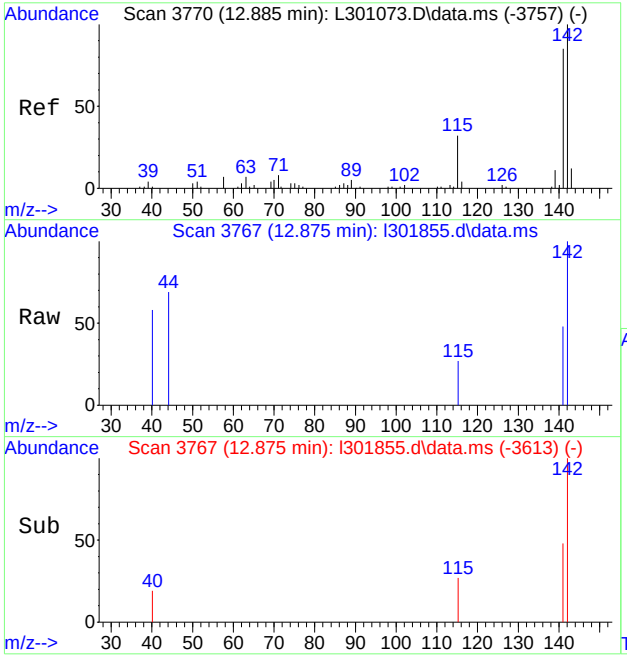


#125
1,2,3-trichlorobenzene
Concen: 0.13 ug/L
RT: 11.970 min Scan# 3485
Delta R.T. 0.003 min
Lab File: l301855.d
Acq: 2 Jun 2018 2:24 pm

Tgt Ion:180 Resp: 304

Ion	Ratio	Lower	Upper
180	100		
182	56.4	65.4	125.4#
184	0.0	0.0	60.0

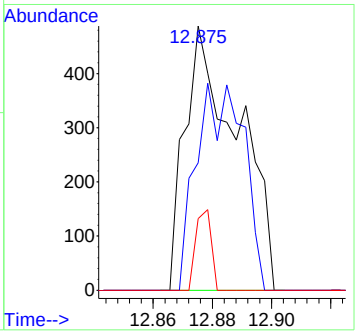




#129
2-methylnaphthalene
Concen: 0.12 ug/L
RT: 12.875 min Scan# 3767
Delta R.T. -0.007 min
Lab File: l301855.d
Acq: 2 Jun 2018 2:24 pm

Tgt Ion:142 Resp: 608

Ion	Ratio	Lower	Upper
142	100		
141	48.2	65.3	105.3#
115	27.0	12.1	52.1



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301853.d
Acq On : 2 Jun 2018 1:30 pm
Operator : deving
Sample : BS Inst : GCMSL
Misc : MS26750,VL8605,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 01:22:35 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:47:23 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.120	65	210512	500.00	ug/L	0.00
5) pentafluorobenzene	4.343	168	207975	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.914	114	309785	50.00	ug/L	0.00
76) chlorobenzene-d5	7.314	117	281176	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	110456	50.00	ug/L	0.00
130) chlorobenzene-d5(a)	7.314	117	281176	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.349	113	86889	54.82	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 109.64%						
56) 1,2-dichloroethane-d4 (s)	4.606	65	101600	50.37	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 100.74%						
77) toluene-d8 (s)	6.066	98	352579	52.96	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 105.92%						
100) 4-bromofluorobenzene (s)	8.395	95	128721	53.69	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 107.38%						
Target Compounds						Qvalue
2) 1,4-dioxane	5.347	88	52883	1326.61	ug/L	99
3) ethanol	2.539	45	317348	5223.33	ug/L	100
4) tertiary butyl alcohol	3.178	59	133166	265.80	ug/L	98
6) chlorodifluoromethane	1.692	51	179087	62.80	ug/L	99
7) dichlorodifluoromethane	1.676	85	168518	66.51	ug/L	99
10) chloromethane	1.833	50	148067	53.01	ug/L	99
12) vinyl chloride	1.920	62	146306	51.91	ug/L	99
13) bromomethane	2.164	94	30365	42.68	ug/L	97
14) chloroethane	2.250	64	81404	51.53	ug/L	96
15) vinyl bromide	2.392	106	79787	51.22	ug/L	95
16) trichlorofluoromethane	2.437	101	159629	53.46	ug/L	98
17) ethyl ether	2.626	74	72499	55.63	ug/L	99
18) 2-chloropropane	2.719	43	200468	51.54	ug/L	96
19) acrolein	2.732	56	40075	54.80	ug/L	95
20) freon 113	2.802	151	70389	54.01	ug/L	99
21) 1,1-dichloroethene	2.809	96	96870	54.48	ug/L	97
22) acetone	2.825	58	68736	197.46	ug/L	88
23) acetonitrile	3.021	40	147261	485.26	ug/L	98
24) iodomethane	2.924	142	39034	28.29	ug/L	96
25) iso-butyl alcohol	4.497	43	98588	488.15	ug/L	97
26) carbon disulfide	2.982	76	254748	55.84	ug/L	97
27) methylene chloride	3.139	84	102678	51.29	ug/L	98
28) methyl acetate	3.030	74	30796	51.45	ug/L	96
29) methyl tert butyl ether	3.309	73	326409	50.04	ug/L	96
30) trans-1,2-dichloroethene	3.325	96	96981	51.08	ug/L	98
31) hexane	3.508	57	148921	53.78	ug/L	99
32) di-isopropyl ether	3.621	45	363972	47.33	ug/L	98
33) ethyl tert-butyl ether	3.868	59	349896	48.75	ug/L	99
34) 2-butanone	3.993	72	88717	201.95	ug/L #	87
35) 1,1-dichloroethane	3.627	63	191640	49.21	ug/L	99
36) chloroprene	3.678	53	171034	48.67	ug/L	99
37) acrylonitrile	3.297	53	71773	52.41	ug/L	98
38) vinyl acetate	3.601	86	27152	55.50	ug/L	97
39) ethyl acetate	3.999	45	28395	46.94	ug/L	96
40) 2,2-dichloropropane	4.028	77	137015	45.15	ug/L	99
41) cis-1,2-dichloroethene	4.015	96	102626	49.03	ug/L	98
42) propionitrile	4.044	54	291765	480.01	ug/L	98
43) methyl acrylate	4.044	85	23779	49.98	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301853.d
Acq On : 2 Jun 2018 1:30 pm
Operator : deving
Sample : BS Inst : GCMSL
Misc : MS26750,VL8605,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 01:22:35 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:47:23 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
44)	bromochloromethane	4.185	128	43999	49.36	ug/L		96
45)	tetrahydrofuran	4.198	72	25846	51.96	ug/L		95
46)	chloroform	4.237	83	168469	47.78	ug/L		98
48)	methacrylonitrile	4.150	67	68705	51.89	ug/L		90
49)	1,1,1-trichloroethane	4.381	97	142929	49.94	ug/L		97
50)	cyclohexane	4.439	84	137470	56.67	ug/L		88
51)	1,1-dichloropropene	4.490	75	136052	49.41	ug/L		99
52)	carbon tetrachloride	4.497	117	111519	49.82	ug/L		97
53)	isopropyl acetate	4.609	87	30238	49.69	ug/L		97
54)	tert amyl alcohol	4.590	55	44022	251.79	ug/L		98
57)	tert-amyl methyl ether	4.699	73	294525	47.12	ug/L		98
58)	2,2,4-trimethylpentane	4.699	57	257657	45.72	ug/L		98
59)	epichlorohydrin	5.748	57	104066	239.87	ug/L		97
60)	n-butyl alcohol	4.975	56	318431	2430.10	ug/L		95
61)	benzene	4.638	78	382659	47.68	ug/L		98
62)	heptane	4.808	57	60949	47.72	ug/L		94
63)	1,2-dichloroethane	4.664	62	128323	43.65	ug/L		99
64)	trichloroethene	5.106	95	98667	49.29	ug/L		95
65)	ethyl acrylate	5.126	55	202576	48.73	ug/L		99
66)	2-nitropropane	5.668	41	62413	47.73	ug/L		91
67)	2-chloroethyl vinyl ether	5.690	63	402902	242.89	ug/L		99
68)	methyl methacrylate	5.305	100	35649	49.52	ug/L	#	89
69)	1,2-dichloropropane	5.309	63	105605	47.63	ug/L		100
70)	methylcyclohexane	5.296	83	157940	49.66	ug/L		99
71)	dibromomethane	5.376	93	59552	47.98	ug/L		93
72)	bromodichloromethane	5.498	83	133567	51.86	ug/L		96
73)	cis-1,3-dichloropropene	5.838	75	167596	47.68	ug/L		96
74)	4-methyl-2-pentanone	5.941	58	257054	191.29	ug/L		98
75)	3-methyl-1-butanol	5.957	70	111094	949.67	ug/L		95
78)	toluene	6.120	92	234052	50.17	ug/L		97
79)	trans-1,3-dichloropropene	6.294	75	154185	49.04	ug/L		95
80)	ethyl methacrylate	6.313	69	170463	51.67	ug/L		96
81)	1,1,2-trichloroethane	6.464	83	82003	50.99	ug/L		95
82)	2-hexanone	6.631	58	266004	196.61	ug/L		96
83)	tetrachloroethene	6.557	166	98214	50.98	ug/L		99
84)	1,3-dichloropropane	6.608	76	159830	48.76	ug/L		99
85)	butyl acetate	6.714	56	102313	50.95	ug/L		89
86)	dibromochloromethane	6.797	129	91827	54.82	ug/L		99
87)	1,2-dibromoethane	6.916	107	108149	52.13	ug/L		98
88)	n-butyl ether	7.388	57	441375	49.51	ug/L		98
89)	chlorobenzene	7.343	112	242286	49.34	ug/L		99
90)	1,1,1,2-tetrachloroethane	7.414	131	79209	50.35	ug/L		98
91)	ethylbenzene	7.420	91	411549	48.06	ug/L		100
92)	m,p-xylene	7.532	106	309047	96.12	ug/L		100
93)	o-xylene	7.888	106	157022	49.02	ug/L		99
94)	butyl acrylate	7.808	55	259230	51.73	ug/L		99
95)	styrene	7.904	104	260610	48.54	ug/L		99
96)	bromoform	8.081	173	65645	57.18	ug/L		94
97)	isopropylbenzene	8.225	105	400986	48.88	ug/L		99
98)	cis-1,4-dichloro-2-butene	8.280	88	41276	38.31	ug/L		96
101)	bromobenzene	8.543	156	97614	55.14	ug/L		97
102)	1,1,2,2-tetrachloroethane	8.508	83	145561	57.21	ug/L		98
103)	trans-1,4-dichloro-2-b...	8.546	53	34094	40.72	ug/L		86
104)	1,2,3-trichloropropane	8.572	110	39107	55.57	ug/L		99
105)	n-propylbenzene	8.620	91	447007	53.47	ug/L		99
106)	2-chlorotoluene	8.716	126	90909	54.00	ug/L		99
107)	4-chlorotoluene	8.832	126	88785	53.41	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301853.d
Acq On : 2 Jun 2018 1:30 pm
Operator : deving
Sample : BS Inst : GCMSL
Misc : MS26750,VL8605,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 01:22:35 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:47:23 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) 1,3,5-trimethylbenzene	8.790	105	303614	53.84	ug/L	99
110) tert-butylbenzene	9.098	119	256795	54.13	ug/L	98
111) 1,2,4-trimethylbenzene	9.156	105	305430	53.57	ug/L	100
112) sec-butylbenzene	9.313	105	365192	53.64	ug/L	98
113) 1,3-dichlorobenzene	9.438	146	166950	53.78	ug/L	98
114) p-isopropyltoluene	9.461	119	285060	52.09	ug/L	99
115) 1,4-dichlorobenzene	9.538	146	159021	52.78	ug/L	99
116) 1,2-dichlorobenzene	9.894	146	155421	52.49	ug/L	97
118) n-butylbenzene	9.862	92	154908	54.92	ug/L	95
120) 1,2-dibromo-3-chloropr...	10.661	157	36387	58.86	ug/L	98
121) 1,3,5-trichlorobenzene	10.847	180	116080	53.72	ug/L	99
122) 1,2,4-trichlorobenzene	11.479	180	105323	53.54	ug/L	97
123) hexachlorobutadiene	11.617	225	37901	49.38	ug/L	100
124) naphthalene	11.746	128	357857	53.25	ug/L	99
125) 1,2,3-trichlorobenzene	11.967	180	97599	52.60	ug/L	99
126) hexachloroethane	10.160	119	51216	57.96	ug/L	99
127) Benzyl chloride	9.647	91	228495	49.88	ug/L	99
128) 2-ethylhexyl acrylate	11.659	70	15025	11.25	ug/L	93
129) 2-methylnaphthalene	12.882	142	92885	23.20	ug/L	98

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

7.3.1

7

Quantitation Report (QT Reviewed)

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Data Path : C:\msdchem\1\data\vl8605\
Data File : l301853.d
Acq On    :  2 Jun 2018   1:30 pm
Operator  : deving
Sample    : BS                                  Inst    : GCMSL
Misc      : MS26750,VL8605,5,,,,1
ALS Vial  : 8   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 01:22:35 2018
Quant Title  : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:47:23 2018
Response via : Initial Calibration
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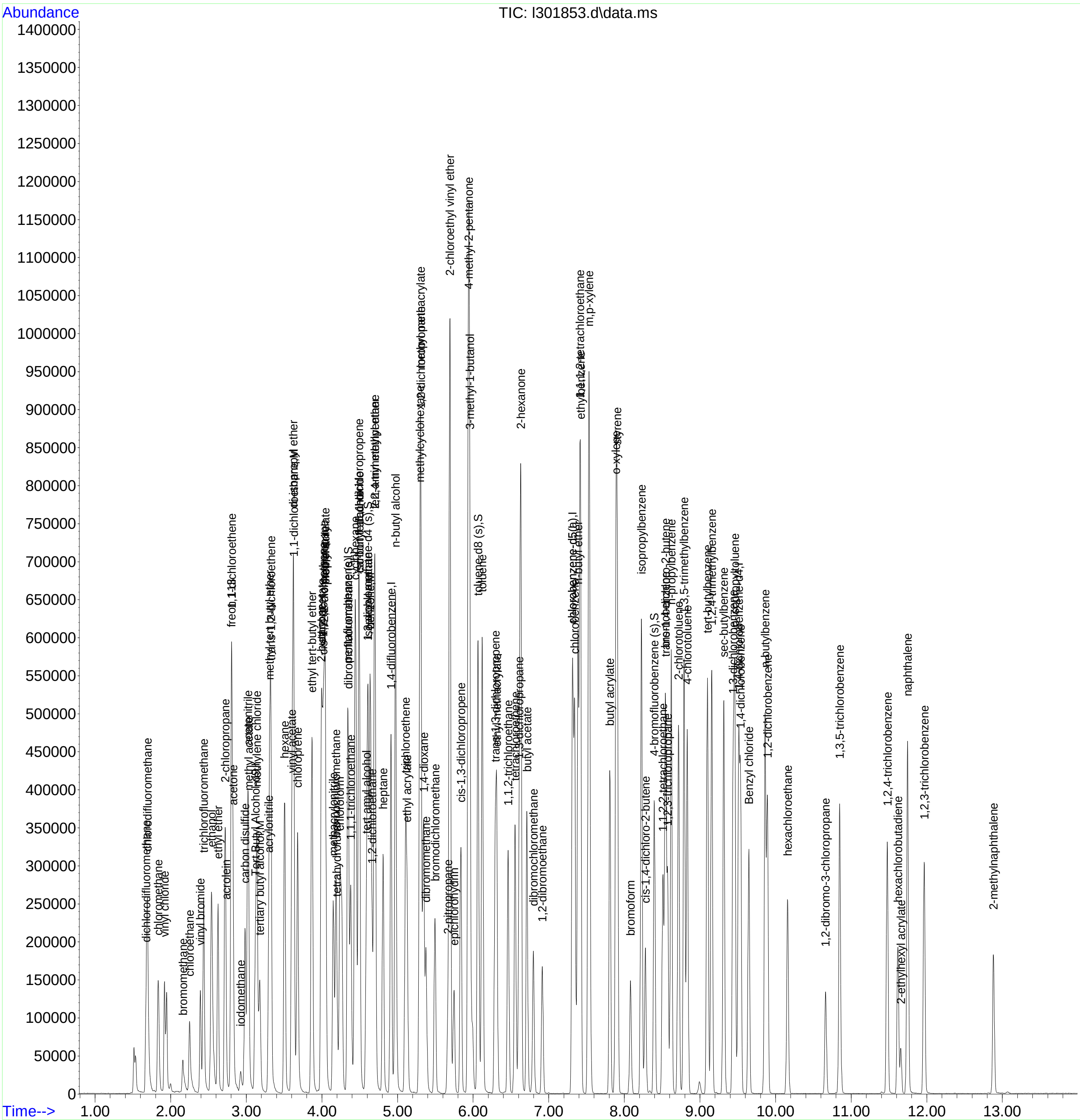


ML8534.M Tue Jun 05 02:24:21 2018 Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301860.d
Acq On : 2 Jun 2018 4:40 pm
Operator : deving
Sample : JC67110-4MS Inst : GCMSL
Misc : MS26840,VL8605,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 02:11:39 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.123	65	191765	500.00	ug/L	0.00
5) pentafluorobenzene	4.343	168	198354	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.914	114	300618	50.00	ug/L	0.00
76) chlorobenzene-d5	7.317	117	271682	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	108672	50.00	ug/L	0.00
130) chlorobenzene-d5(a)	7.317	117	271682	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.349	113	84188	55.69	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 111.38%						
56) 1,2-dichloroethane-d4 (s)	4.609	65	98080	50.10	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 100.20%						
77) toluene-d8 (s)	6.066	98	339684	52.80	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 105.60%						
100) 4-bromofluorobenzene (s)	8.399	95	124482	52.78	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 105.56%						
Target Compounds						Qvalue
2) 1,4-dioxane	5.350	88	58440	1609.33	ug/L	97
3) ethanol	2.542	45	333837	6031.89	ug/L	99
4) tertiary butyl alcohol	3.181	59	160964	352.70	ug/L	96
6) chlorodifluoromethane	1.689	51	159220	58.54	ug/L	99
7) dichlorodifluoromethane	1.679	85	182084	75.34	ug/L	97
10) chloromethane	1.833	50	152783	57.35	ug/L	99
12) vinyl chloride	1.920	62	155592	57.88	ug/L	99
13) bromomethane	2.161	94	27207	40.09	ug/L	93
14) chloroethane	2.250	64	86632	57.50	ug/L	99
15) vinyl bromide	2.392	106	84277	56.72	ug/L	94
16) trichlorofluoromethane	2.437	101	172374	60.53	ug/L	100
17) ethyl ether	2.626	74	70569	56.78	ug/L	95
18) 2-chloropropane	2.719	43	200389	54.02	ug/L	97
19) acrolein	2.732	56	37379	53.59	ug/L	98
20) freon 113	2.799	151	73052	58.77	ug/L	100
21) 1,1-dichloroethene	2.809	96	97679	57.60	ug/L	98
22) acetone	2.825	58	68553	206.49	ug/L #	85
23) acetonitrile	3.017	40	148494	513.06	ug/L	98
24) iodomethane	2.924	142	30642	23.48	ug/L	95
25) iso-butyl alcohol	4.497	43	110044	571.31	ug/L	99
26) carbon disulfide	2.985	76	248776	57.17	ug/L	97
27) methylene chloride	3.146	84	101515	53.17	ug/L	94
28) methyl acetate	3.030	74	28522	49.97	ug/L #	85
29) methyl tert butyl ether	3.313	73	328465	52.80	ug/L	97
30) trans-1,2-dichloroethene	3.329	96	96110	53.08	ug/L	95
31) hexane	3.508	57	152109	57.60	ug/L	99
32) di-isopropyl ether	3.621	45	375344	51.18	ug/L	99
33) ethyl tert-butyl ether	3.871	59	361287	52.77	ug/L	97
34) 2-butanone	3.993	72	93300	222.69	ug/L #	86
35) 1,1-dichloroethane	3.627	63	195375	52.61	ug/L	98
36) chloroprene	3.682	53	175676	52.41	ug/L	98
37) acrylonitrile	3.297	53	71921	55.07	ug/L	99
38) vinyl acetate	3.605	86	25193	54.00	ug/L #	90
39) ethyl acetate	4.003	45	28087	48.69	ug/L #	73
40) 2,2-dichloropropane	4.031	77	145651	50.32	ug/L	98
41) cis-1,2-dichloroethene	4.015	96	106201	53.20	ug/L	96
42) propionitrile	4.044	54	309047	533.11	ug/L	99
43) methyl acrylate	4.047	85	24111	53.14	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301860.d
Acq On : 2 Jun 2018 4:40 pm
Operator : deving
Sample : JC67110-4MS Inst : GCMSL
Misc : MS26840,VL8605,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 02:11:39 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) bromochloromethane	4.185	128	45912	54.01 ug/L	98
45) tetrahydrofuran	4.195	72	26153	55.13 ug/L	97
46) chloroform	4.240	83	177605	52.81 ug/L	96
48) methacrylonitrile	4.153	67	70060	55.48 ug/L	90
49) 1,1,1-trichloroethane	4.381	97	151330	55.44 ug/L	97
50) cyclohexane	4.439	84	148994	64.40 ug/L #	87
51) 1,1-dichloropropene	4.487	75	139779	53.23 ug/L	98
52) carbon tetrachloride	4.497	117	118368	55.44 ug/L	99
53) isopropyl acetate	4.609	87	31985	55.11 ug/L #	86
54) tert amyl alcohol	4.590	55	50461	302.62 ug/L	94
57) tert-amyl methyl ether	4.699	73	310263	51.16 ug/L	98
58) 2,2,4-trimethylpentane	4.702	57	274342	50.16 ug/L	96
59) epichlorohydrin	5.748	57	78423	186.28 ug/L	93
60) n-butyl alcohol	4.975	56	353151	2777.25 ug/L	94
61) benzene	4.641	78	393879	50.58 ug/L	98
62) heptane	4.811	57	62354	50.31 ug/L	95
63) 1,2-dichloroethane	4.664	62	135329	47.44 ug/L	99
64) trichloroethene	5.106	95	104042	53.56 ug/L	96
65) ethyl acrylate	5.129	55	214918	53.27 ug/L	99
66) 2-nitropropane	5.668	41	48712	38.39 ug/L	85
68) methyl methacrylate	5.309	100	39051	55.90 ug/L #	89
69) 1,2-dichloropropane	5.312	63	113164	52.59 ug/L	100
70) methylcyclohexane	5.299	83	166646	53.99 ug/L	100
71) dibromomethane	5.379	93	63879	53.03 ug/L	93
72) bromodichloromethane	5.495	83	142273	56.93 ug/L	99
73) cis-1,3-dichloropropene	5.838	75	189159	55.46 ug/L	96
74) 4-methyl-2-pentanone	5.941	58	286891	220.00 ug/L	93
75) 3-methyl-1-butanol	5.960	70	124314	1095.08 ug/L	95
78) toluene	6.124	92	251267	55.75 ug/L	100
79) trans-1,3-dichloropropene	6.294	75	165091	54.34 ug/L	95
80) ethyl methacrylate	6.313	69	185861	58.31 ug/L	96
81) 1,1,2-trichloroethane	6.464	83	90369	58.16 ug/L	94
82) 2-hexanone	6.631	58	294551	225.32 ug/L	96
83) tetrachloroethene	6.557	166	105360	56.60 ug/L	97
84) 1,3-dichloropropane	6.611	76	174487	55.09 ug/L	96
85) butyl acetate	6.714	56	107538	55.43 ug/L	92
86) dibromochloromethane	6.797	129	100795	62.28 ug/L	100
87) 1,2-dibromoethane	6.916	107	115363	57.55 ug/L	98
88) n-butyl ether	7.388	57	481725	55.93 ug/L	97
89) chlorobenzene	7.343	112	262386	55.30 ug/L	98
90) 1,1,1,2-tetrachloroethane	7.414	131	86935	57.19 ug/L	95
91) ethylbenzene	7.420	91	443509	53.60 ug/L	100
92) m,p-xylene	7.535	106	334542	107.69 ug/L	100
93) o-xylene	7.892	106	171719	55.48 ug/L	95
94) butyl acrylate	7.808	55	285056	58.88 ug/L	98
95) styrene	7.905	104	282537	54.46 ug/L	99
96) bromoform	8.081	173	72523	65.38 ug/L	95
97) isopropylbenzene	8.229	105	439967	55.50 ug/L	99
98) cis-1,4-dichloro-2-butene	8.280	88	39372	37.82 ug/L	96
101) bromobenzene	8.543	156	105806	60.75 ug/L	97
102) 1,1,2,2-tetrachloroethane	8.511	83	163417	65.28 ug/L	99
103) trans-1,4-dichloro-2-b...	8.546	53	31950	38.79 ug/L	86
104) 1,2,3-trichloropropane	8.575	110	43503	62.83 ug/L	99
105) n-propylbenzene	8.623	91	489013	59.46 ug/L	97
106) 2-chlorotoluene	8.720	126	100329	60.57 ug/L	99
107) 4-chlorotoluene	8.832	126	95916	58.65 ug/L	99
109) 1,3,5-trimethylbenzene	8.790	105	331372	59.73 ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301860.d
Acq On : 2 Jun 2018 4:40 pm
Operator : deving
Sample : JC67110-4MS Inst : GCMSL
Misc : MS26840,VL8605,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 02:11:39 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration

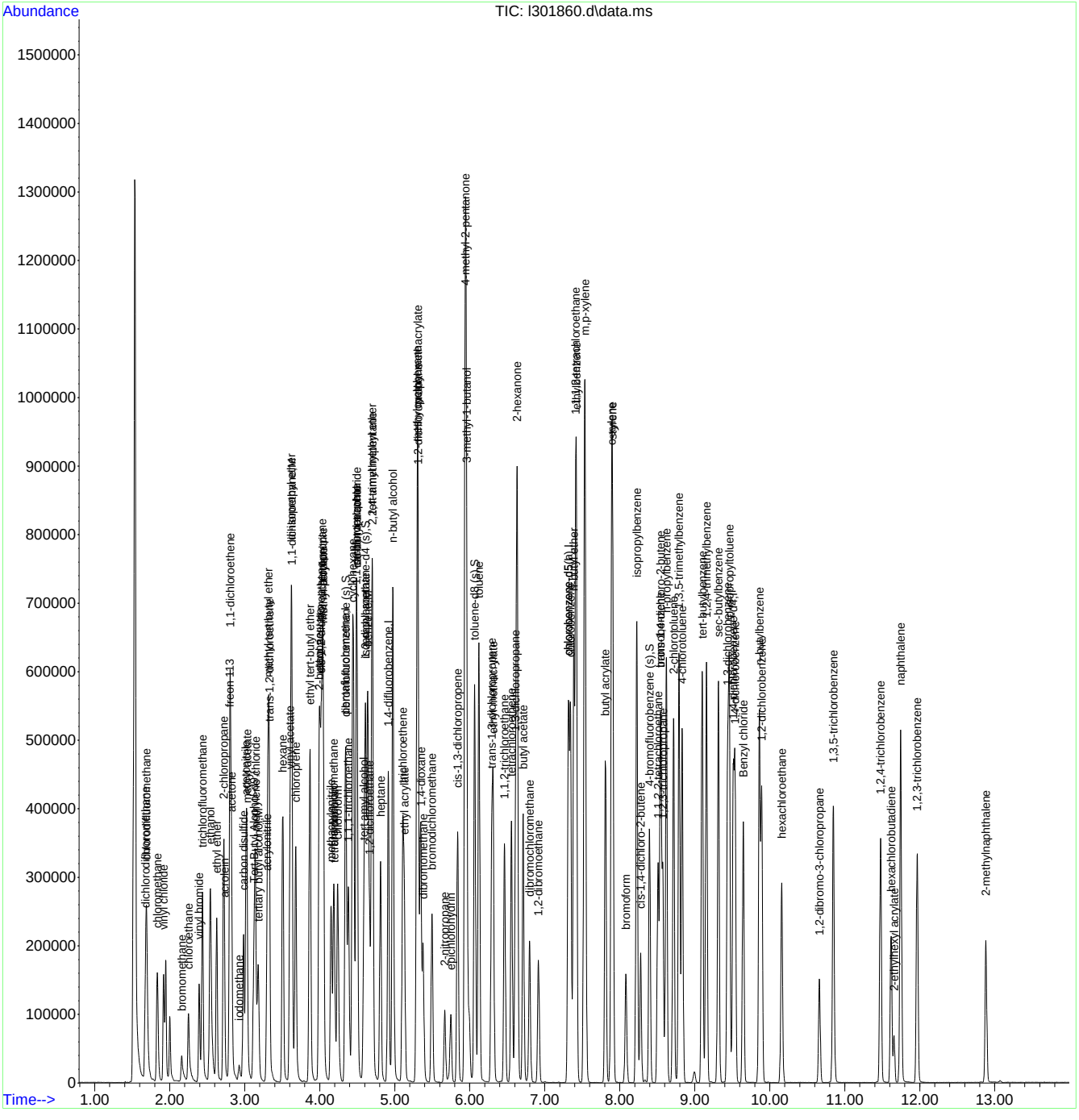
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
110) tert-butylbenzene	9.101	119	282888	60.61 ug/L	100
111) 1,2,4-trimethylbenzene	9.156	105	330448	58.91 ug/L	99
112) sec-butylbenzene	9.316	105	404894	60.45 ug/L	98
113) 1,3-dichlorobenzene	9.438	146	183505	60.09 ug/L	98
114) p-isopropyltoluene	9.461	119	314476	58.41 ug/L	98
115) 1,4-dichlorobenzene	9.538	146	172469	58.19 ug/L	99
116) 1,2-dichlorobenzene	9.891	146	173449	59.54 ug/L	97
118) n-butylbenzene	9.862	92	169674	61.14 ug/L	96
120) 1,2-dibromo-3-chloropr...	10.664	157	40912	67.26 ug/L	98
121) 1,3,5-trichlorobenzene	10.850	180	123301	58.00 ug/L	97
122) 1,2,4-trichlorobenzene	11.476	180	113956	58.88 ug/L	99
123) hexachlorobutadiene	11.617	225	42924	56.85 ug/L	97
124) naphthalene	11.746	128	394259	59.63 ug/L	100
125) 1,2,3-trichlorobenzene	11.964	180	106111	58.13 ug/L	97
126) hexachloroethane	10.160	119	57162	65.75 ug/L	98
127) Benzyl chloride	9.647	91	268058	59.47 ug/L	99
128) 2-ethylhexyl acrylate	11.659	70	17181	12.78 ug/L	97
129) 2-methylnaphthalene	12.882	142	102435	26.00 ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301860.d
Acq On : 2 Jun 2018 4:40 pm
Operator : deving
Sample : JC67110-4MS Inst : GCMSL
Misc : MS26840,VL8605,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 02:11:39 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301861.d
Acq On : 2 Jun 2018 5:08 pm
Operator : deving
Sample : JC67110-4MSD Inst : GCMSL
Misc : MS26840,VL8605,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 02:12:36 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.123	65	189675	500.00	ug/L	0.00
5) pentafluorobenzene	4.343	168	196211	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.914	114	295374	50.00	ug/L	0.00
76) chlorobenzene-d5	7.317	117	263218	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	106298	50.00	ug/L	0.00
130) chlorobenzene-d5(a)	7.317	117	263218	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.352	113	80946	54.13	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 108.26%						
56) 1,2-dichloroethane-d4 (s)	4.606	65	95705	49.76	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 99.52%						
77) toluene-d8 (s)	6.066	98	334414	53.65	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 107.30%						
100) 4-bromofluorobenzene (s)	8.399	95	121811	52.80	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 105.60%						
Target Compounds						Qvalue
2) 1,4-dioxane	5.350	88	53320	1484.51	ug/L	97
3) ethanol	2.543	45	307038	5608.81	ug/L	99
4) tertiary butyl alcohol	3.178	59	150239	332.83	ug/L	98
6) chlorodifluoromethane	1.689	51	158168	58.79	ug/L	97
7) dichlorodifluoromethane	1.676	85	181464	75.91	ug/L	98
10) chloromethane	1.833	50	150532	57.12	ug/L	100
12) vinyl chloride	1.920	62	154020	57.92	ug/L	99
13) bromomethane	2.161	94	32842	48.93	ug/L	95
14) chloroethane	2.251	64	85012	57.04	ug/L	99
15) vinyl bromide	2.395	106	83945	57.12	ug/L	94
16) trichlorofluoromethane	2.437	101	173527	61.60	ug/L	98
17) ethyl ether	2.626	74	67956	55.27	ug/L	99
18) 2-chloropropane	2.719	43	194964	53.13	ug/L	97
19) acrolein	2.732	56	37129	53.81	ug/L	99
20) freon 113	2.802	151	71227	57.93	ug/L	100
21) 1,1-dichloroethene	2.809	96	95099	56.69	ug/L	96
22) acetone	2.825	58	64320	195.85	ug/L #	85
23) acetonitrile	3.021	40	137294	479.55	ug/L	98
24) iodomethane	2.928	142	42401	32.42	ug/L	99
25) iso-butyl alcohol	4.497	43	98446	516.68	ug/L	96
26) carbon disulfide	2.985	76	242879	56.43	ug/L	96
27) methylene chloride	3.143	84	98317	52.06	ug/L	99
28) methyl acetate	3.030	74	28046	49.67	ug/L	98
29) methyl tert butyl ether	3.313	73	313527	50.95	ug/L	96
30) trans-1,2-dichloroethene	3.329	96	93580	52.25	ug/L	97
31) hexane	3.508	57	147282	56.38	ug/L	99
32) di-isopropyl ether	3.621	45	353204	48.69	ug/L	99
33) ethyl tert-butyl ether	3.868	59	340793	50.32	ug/L	99
34) 2-butanone	3.993	72	85335	205.90	ug/L #	87
35) 1,1-dichloroethane	3.627	63	189258	51.52	ug/L	100
36) chloroprene	3.682	53	167848	50.62	ug/L	99
37) acrylonitrile	3.293	53	67242	52.05	ug/L	97
38) vinyl acetate	3.602	86	24046	52.10	ug/L	96
39) ethyl acetate	4.003	45	28146	49.32	ug/L #	73
40) 2,2-dichloropropane	4.032	77	140982	49.24	ug/L	99
41) cis-1,2-dichloroethene	4.015	96	100713	51.01	ug/L	98
42) propionitrile	4.044	54	286413	499.46	ug/L	99
43) methyl acrylate	4.048	85	22332	49.75	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301861.d
Acq On : 2 Jun 2018 5:08 pm
Operator : deving
Sample : JC67110-4MSD Inst : GCMSL
Misc : MS26840,VL8605,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 02:12:36 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) bromochloromethane	4.186	128	43094	51.25	ug/L	95
45) tetrahydrofuran	4.195	72	24912	53.09	ug/L	97
46) chloroform	4.240	83	167377	50.32	ug/L	97
48) methacrylonitrile	4.150	67	65659	52.57	ug/L	94
49) 1,1,1-trichloroethane	4.381	97	145593	53.92	ug/L	97
50) cyclohexane	4.436	84	144988	63.35	ug/L #	88
51) 1,1-dichloropropene	4.490	75	135815	52.28	ug/L	98
52) carbon tetrachloride	4.494	117	113730	53.85	ug/L	99
53) isopropyl acetate	4.609	87	28790	50.15	ug/L	95
54) tert amyl alcohol	4.590	55	45661	276.83	ug/L	96
57) tert-amyl methyl ether	4.699	73	289924	48.65	ug/L	99
58) 2,2,4-trimethylpentane	4.702	57	271853	50.59	ug/L	97
59) epichlorohydrin	5.745	57	66518	160.80	ug/L	95
60) n-butyl alcohol	4.975	56	329129	2634.29	ug/L	96
61) benzene	4.638	78	379476	49.60	ug/L	99
62) heptane	4.808	57	61056	50.14	ug/L	94
63) 1,2-dichloroethane	4.664	62	126206	45.03	ug/L	99
64) trichloroethene	5.106	95	99486	52.13	ug/L	99
65) ethyl acrylate	5.129	55	198463	50.07	ug/L	100
66) 2-nitropropane	5.668	41	43666	35.02	ug/L	88
68) methyl methacrylate	5.312	100	35329	51.47	ug/L #	83
69) 1,2-dichloropropane	5.309	63	105328	49.82	ug/L	96
70) methylcyclohexane	5.296	83	164209	54.15	ug/L	94
71) dibromomethane	5.379	93	58380	49.33	ug/L	95
72) bromodichloromethane	5.498	83	130672	53.22	ug/L	99
73) cis-1,3-dichloropropene	5.838	75	175262	52.30	ug/L	94
74) 4-methyl-2-pentanone	5.941	58	264988	206.81	ug/L	94
75) 3-methyl-1-butanol	5.957	70	114958	1030.64	ug/L	97
78) toluene	6.124	92	236167	54.08	ug/L	100
79) trans-1,3-dichloropropene	6.291	75	152479	51.80	ug/L	93
80) ethyl methacrylate	6.313	69	171437	55.51	ug/L	97
81) 1,1,2-trichloroethane	6.464	83	82673	54.92	ug/L	95
82) 2-hexanone	6.631	58	272569	215.20	ug/L	95
83) tetrachloroethene	6.557	166	98129	54.41	ug/L	97
84) 1,3-dichloropropane	6.611	76	159518	51.98	ug/L	99
85) butyl acetate	6.711	56	97620	51.93	ug/L	94
86) dibromochloromethane	6.798	129	91550	58.38	ug/L	98
87) 1,2-dibromoethane	6.916	107	105559	54.35	ug/L	98
88) n-butyl ether	7.388	57	444932	53.32	ug/L	98
89) chlorobenzene	7.343	112	244658	53.22	ug/L	97
90) 1,1,1,2-tetrachloroethane	7.414	131	80059	54.36	ug/L	99
91) ethylbenzene	7.420	91	413669	51.60	ug/L	99
92) m,p-xylene	7.536	106	310442	103.14	ug/L	100
93) o-xylene	7.892	106	158315	52.80	ug/L	95
94) butyl acrylate	7.808	55	263891	56.26	ug/L	98
95) styrene	7.908	104	261735	52.07	ug/L	98
96) bromoform	8.084	173	67090	62.43	ug/L	99
97) isopropylbenzene	8.229	105	409350	53.30	ug/L	99
98) cis-1,4-dichloro-2-butene	8.280	88	37214	36.90	ug/L	94
101) bromobenzene	8.543	156	98103	57.58	ug/L	96
102) 1,1,2,2-tetrachloroethane	8.511	83	149688	61.14	ug/L	99
103) trans-1,4-dichloro-2-b...	8.550	53	30654	38.05	ug/L	88
104) 1,2,3-trichloropropane	8.575	110	39651	58.55	ug/L	97
105) n-propylbenzene	8.623	91	457984	56.93	ug/L	97
106) 2-chlorotoluene	8.716	126	91990	56.78	ug/L	94
107) 4-chlorotoluene	8.832	126	88103	55.07	ug/L	99
109) 1,3,5-trimethylbenzene	8.794	105	308131	56.78	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301861.d
Acq On : 2 Jun 2018 5:08 pm
Operator : deving
Sample : JC67110-4MSD Inst : GCMSL
Misc : MS26840,VL8605,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 02:12:36 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration

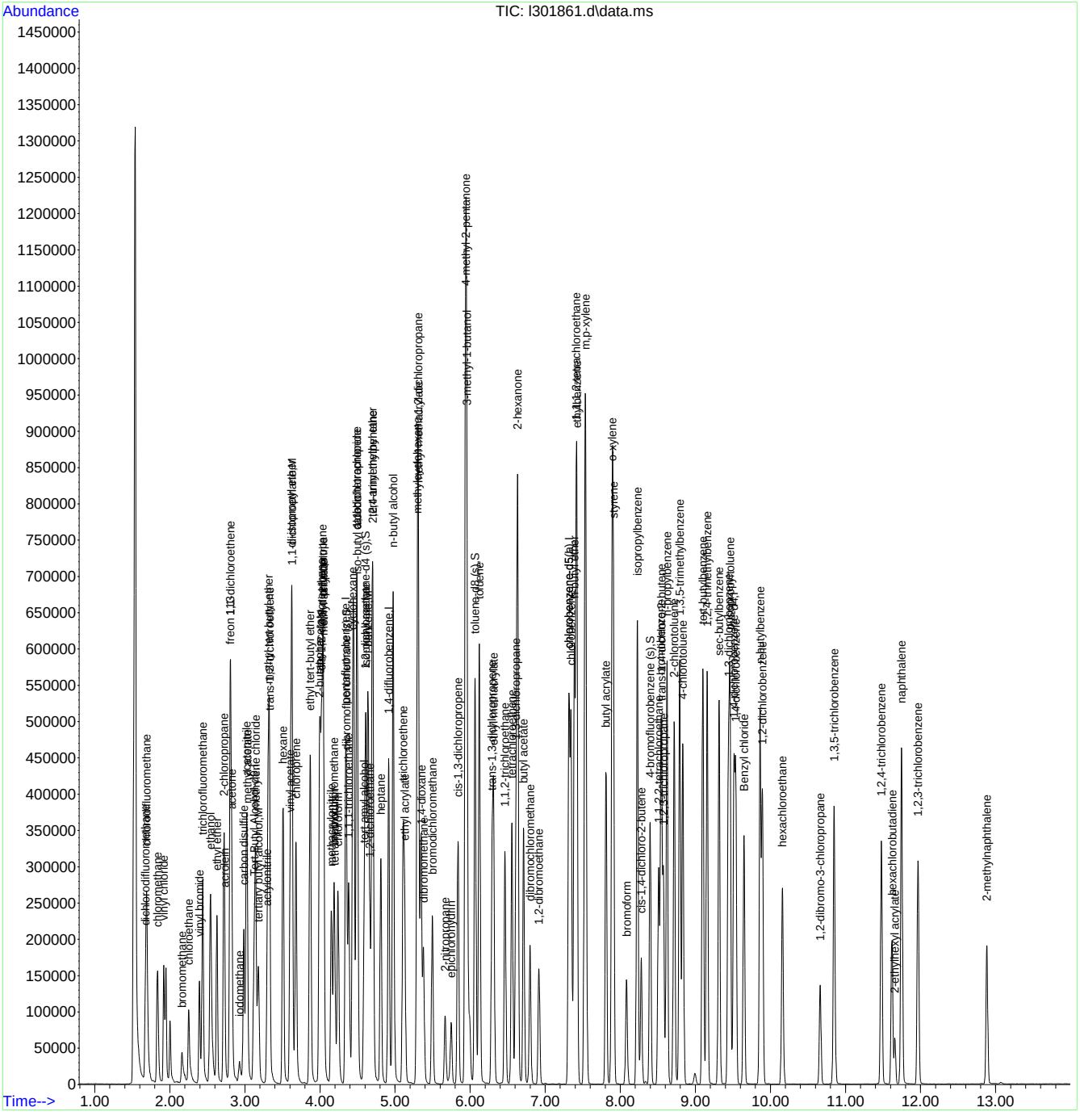
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) tert-butylbenzene	9.098	119	263821	57.79	ug/L	99
111) 1,2,4-trimethylbenzene	9.156	105	308717	56.27	ug/L	97
112) sec-butylbenzene	9.317	105	377022	57.55	ug/L	99
113) 1,3-dichlorobenzene	9.442	146	166945	55.88	ug/L	98
114) p-isopropyltoluene	9.461	119	293424	55.72	ug/L	99
115) 1,4-dichlorobenzene	9.538	146	160482	55.35	ug/L	99
116) 1,2-dichlorobenzene	9.891	146	159659	56.03	ug/L	98
118) n-butylbenzene	9.862	92	157215	57.91	ug/L	99
120) 1,2-dibromo-3-chloropr...	10.664	157	37445	62.94	ug/L	99
121) 1,3,5-trichlorobenzene	10.847	180	116046	55.80	ug/L	96
122) 1,2,4-trichlorobenzene	11.476	180	105262	55.61	ug/L	99
123) hexachlorobutadiene	11.621	225	40209	54.44	ug/L	96
124) naphthalene	11.746	128	368100	56.92	ug/L	100
125) 1,2,3-trichlorobenzene	11.964	180	98044	54.91	ug/L	99
126) hexachloroethane	10.157	119	52896	62.21	ug/L	99
127) Benzyl chloride	9.647	91	244468	55.45	ug/L	99
128) 2-ethylhexyl acrylate	11.656	70	16096	12.31	ug/L	95
129) 2-methylnaphthalene	12.882	142	97226	25.23	ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301861.d
Acq On : 2 Jun 2018 5:08 pm
Operator : deving
Sample : JC67110-4MSD Inst : GCMSL
Misc : MS26840,VL8605,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

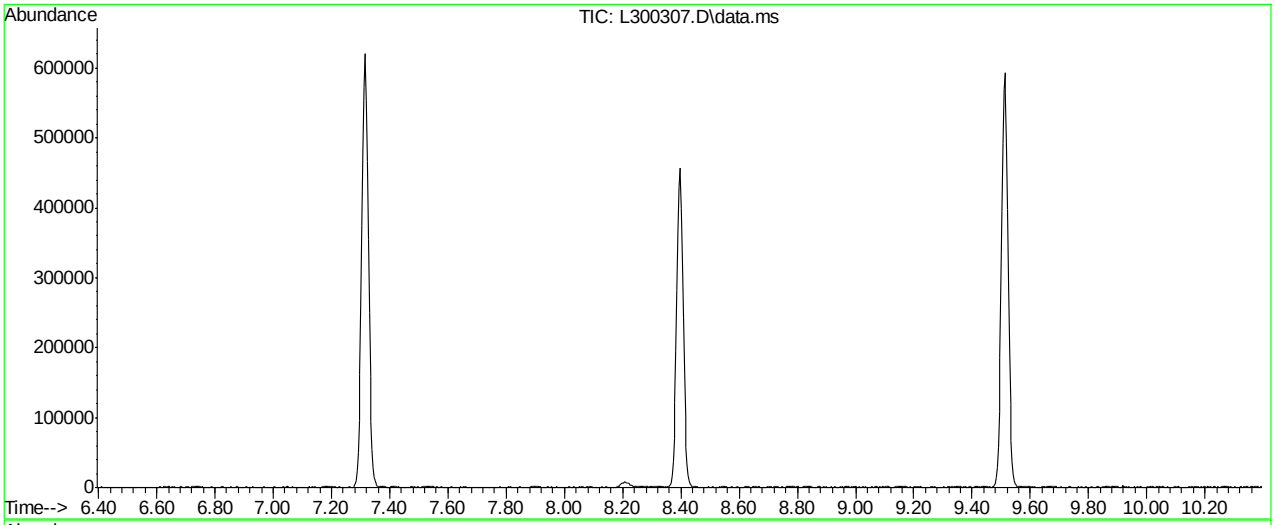
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 02:12:36 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration

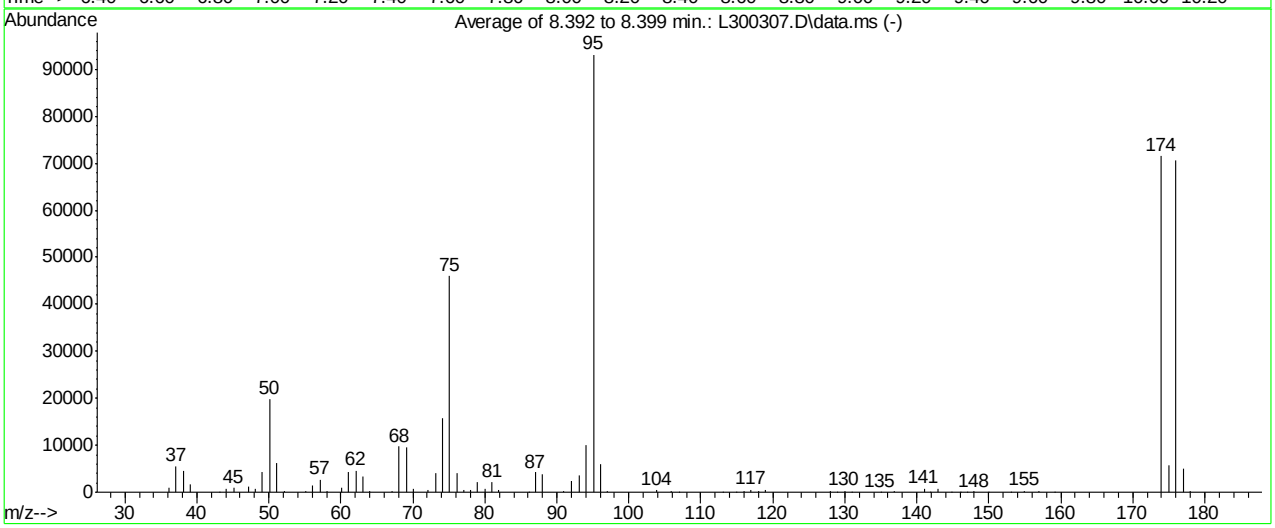


SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VL8534\L300307.D Vial: 1
Acq On : 16 Apr 2018 2:00 pm Operator: vidishp
Sample : bfb Inst : GCMSL
Misc : MS23560,VL8534,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\ML8534.M (RTE Integrator)
Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um





AutoFind: Scans 2370, 2371, 2372; Background Corrected with Scan 2357

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.3	19875	PASS
75	95	30	60	49.4	46019	PASS
95	95	100	100	100.0	93168	PASS
96	95	5	9	6.5	6085	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	76.8	71544	PASS
175	174	5	9	7.9	5637	PASS
176	174	95	101	98.7	70635	PASS
177	176	5	9	7.0	4975	PASS

L300307.D ML8534.M Tue Apr 17 15:15:46 2018 1

Average of 8.392 to 8.399 min.: L300307.D\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.15	980	51.10	6214	67.10	189	79.00	2121
37.10	5502	52.10	264	68.10	9764	80.00	644
38.10	4650	55.10	319	69.10	9440	81.00	2230
39.05	1668	56.10	1382	70.10	805	81.95	372
43.10	46	57.10	2648	72.10	473	86.10	74
44.05	662	58.05	156	73.10	4072	87.00	4246
45.10	940	60.10	940	74.10	15679	88.00	3725
47.10	1318	61.10	4264	75.10	46019	91.00	279
48.15	651	62.10	4603	76.10	4032	92.05	2290
49.10	4251	63.10	3275	77.05	516	93.10	3668
50.10	19875	64.05	334	78.05	439	94.10	10101

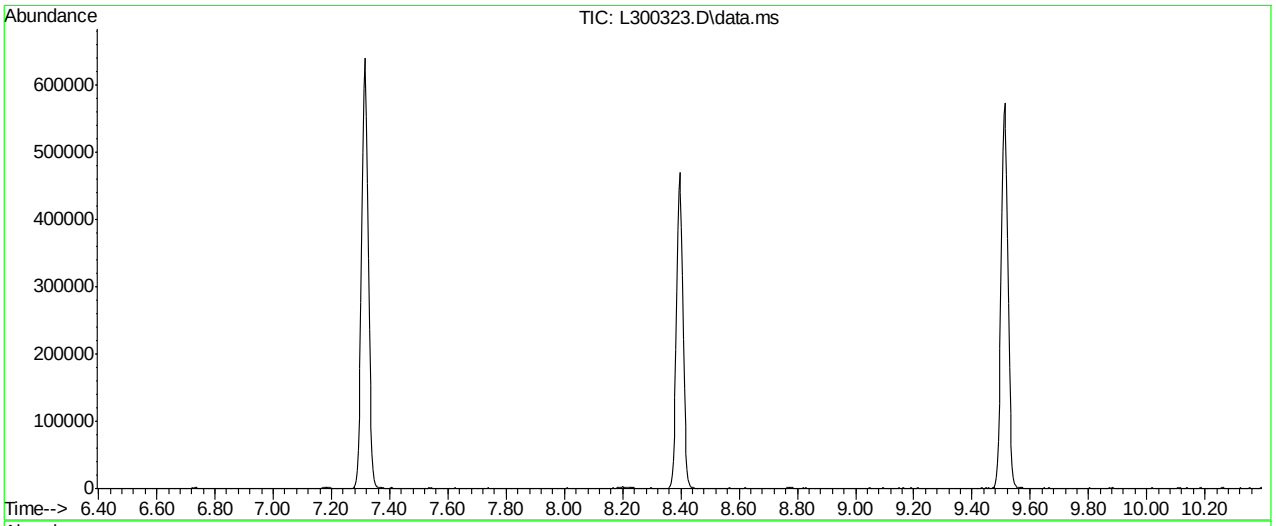
Average of 8.392 to 8.399 min.: L300307.D\data.ms
bfb
Modified:subtracted

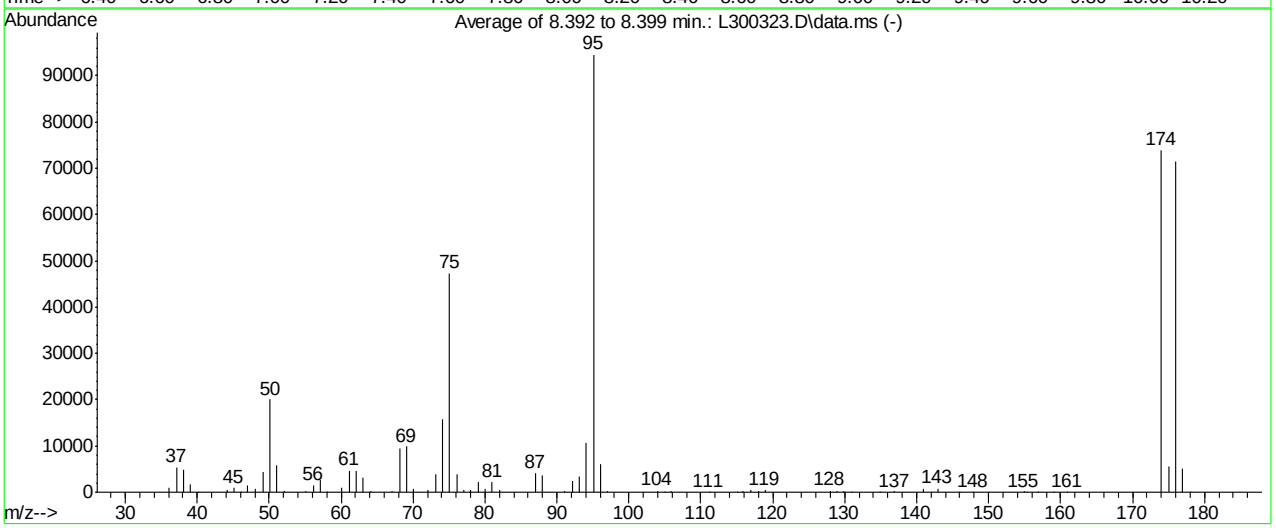
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.10	93168	118.95	395	146.05	76	177.00	4975
96.10	6085	127.95	248	147.00	35	177.95	149
97.05	235	128.95	117	147.95	185		
103.90	382	130.00	330	149.90	38		
105.95	318	130.90	37	153.00	76		
106.90	75	134.95	89	154.95	259		
113.00	50	136.90	150	156.95	140		
114.90	83	141.00	740	159.10	77		
115.95	229	141.90	48	174.00	71544		
116.95	484	143.00	706	175.00	5637		
118.00	234	144.80	40	176.00	70635		

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VL8534\L300323.D Vial: 17
Acq On : 17 Apr 2018 11:23 am Operator: vidishp
Sample : bfb2 Inst : GCMSL
Misc : MS24791,VL8534,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\ML8534.M (RTE Integrator)
Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um





AutoFind: Scans 2370, 2371, 2372; Background Corrected with Scan 2357

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.2	20005	PASS
75	95	30	60	50.1	47325	PASS
95	95	100	100	100.0	94549	PASS
96	95	5	9	6.5	6180	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	78.2	73965	PASS
175	174	5	9	7.7	5667	PASS
176	174	95	101	96.5	71344	PASS
177	176	5	9	7.3	5191	PASS

L300323.D ML8534.M Tue Apr 17 15:03:37 2018 1

Average of 8.392 to 8.399 min.: L300323.D\data.ms
bfb2
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	972	50.10	20005	64.05	251	78.05	405
37.10	5406	51.10	5871	67.10	228	79.00	2139
38.10	4751	52.05	251	68.10	9483	80.00	620
39.10	1677	55.05	291	69.10	9868	81.00	2217
40.05	13	56.10	1458	70.10	786	82.00	456
44.10	375	57.10	2580	72.05	404	87.00	4234
45.10	960	58.10	87	73.10	3936	88.00	3614
46.00	42	60.05	880	74.10	15766	91.05	326
47.05	1533	61.10	4614	75.10	47325	92.10	2479
48.05	660	62.10	4582	76.10	3916	93.05	3478
49.10	4366	63.10	3070	77.10	549	94.10	10598

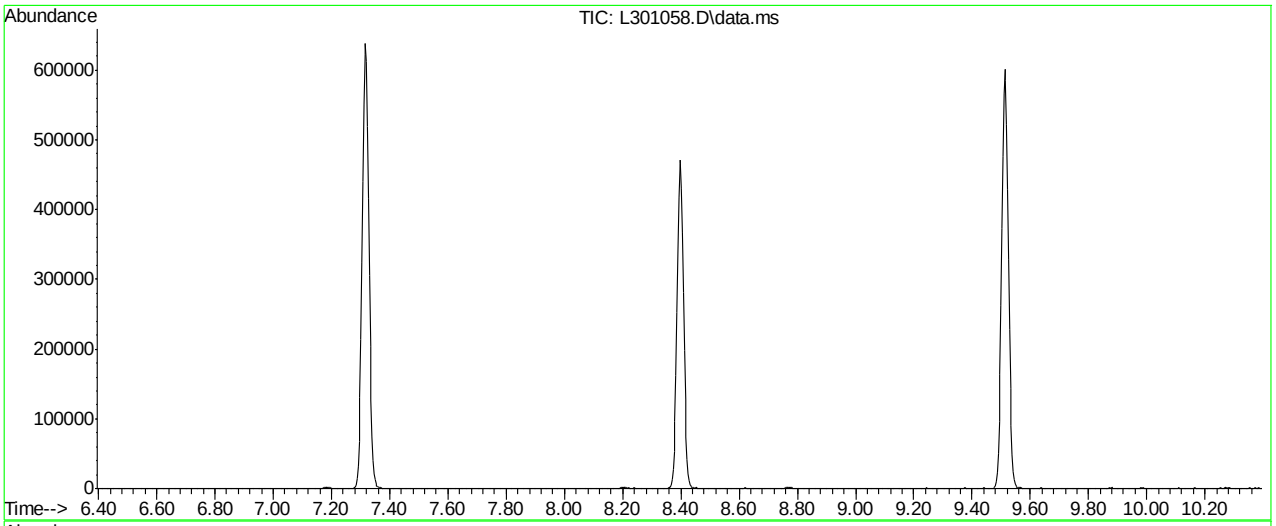
Average of 8.392 to 8.399 min.: L300323.D\data.ms
bfb2
Modified:subtracted

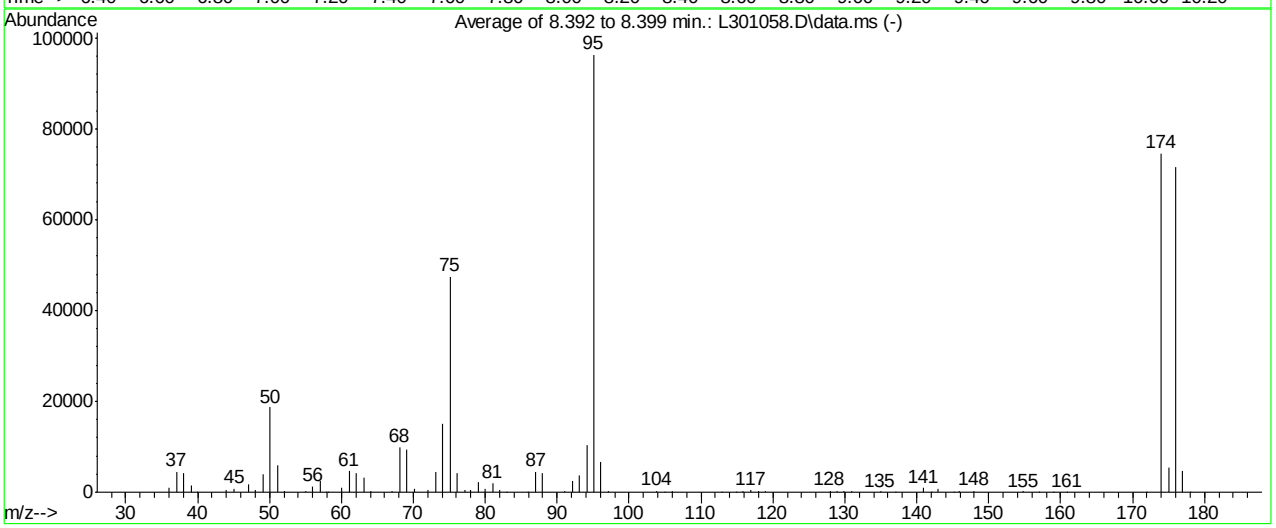
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.10	94549	118.95	457	147.85	119	178.00	106
96.10	6180	127.95	341	149.95	90		
97.05	172	128.95	182	154.95	163		
103.95	339	129.90	255	155.20	38		
105.00	43	131.00	69	156.90	74		
105.95	329	134.90	52	159.00	40		
111.10	35	136.90	180	160.90	78		
115.00	44	141.00	693	174.00	73965		
115.90	327	142.05	89	175.00	5667		
116.95	443	142.95	808	176.00	71344		
118.00	308	145.90	55	177.00	5191		

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VL8568\L301058.D Vial: 25
Acq On : 9 May 2018 5:38 pm Operator: sydneys
Sample : BFB Inst : GCMSL
Misc : MS26146,VL8568,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\ML8534.M (RTE Integrator)
Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um





AutoFind: Scans 2370, 2371, 2372; Background Corrected with Scan 2357

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.4	18672	PASS
75	95	30	60	49.2	47413	PASS
95	95	100	100	100.0	96365	PASS
96	95	5	9	7.0	6728	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	77.4	74595	PASS
175	174	5	9	7.3	5458	PASS
176	174	95	101	96.1	71656	PASS
177	176	5	9	6.5	4673	PASS

L301058.D ML8534.M Thu May 10 14:05:27 2018 1

Average of 8.392 to 8.399 min.: L301058.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	882	51.10	5892	64.05	297	78.00	426
37.10	4494	52.05	270	67.05	207	79.00	2159
38.10	4254	55.05	253	68.10	9905	80.05	669
39.10	1582	56.05	1283	69.10	9294	81.00	2085
39.95	83	57.10	2486	70.10	728	81.95	467
44.00	448	57.90	35	72.05	425	83.00	37
45.10	784	58.10	64	73.10	4330	85.95	121
47.05	1702	60.05	910	74.10	15092	87.05	4504
48.05	552	61.10	4583	75.10	47413	88.00	4219
49.10	3947	62.10	4159	76.10	4165	91.00	336
50.10	18672	63.10	3277	77.10	619	92.10	2508

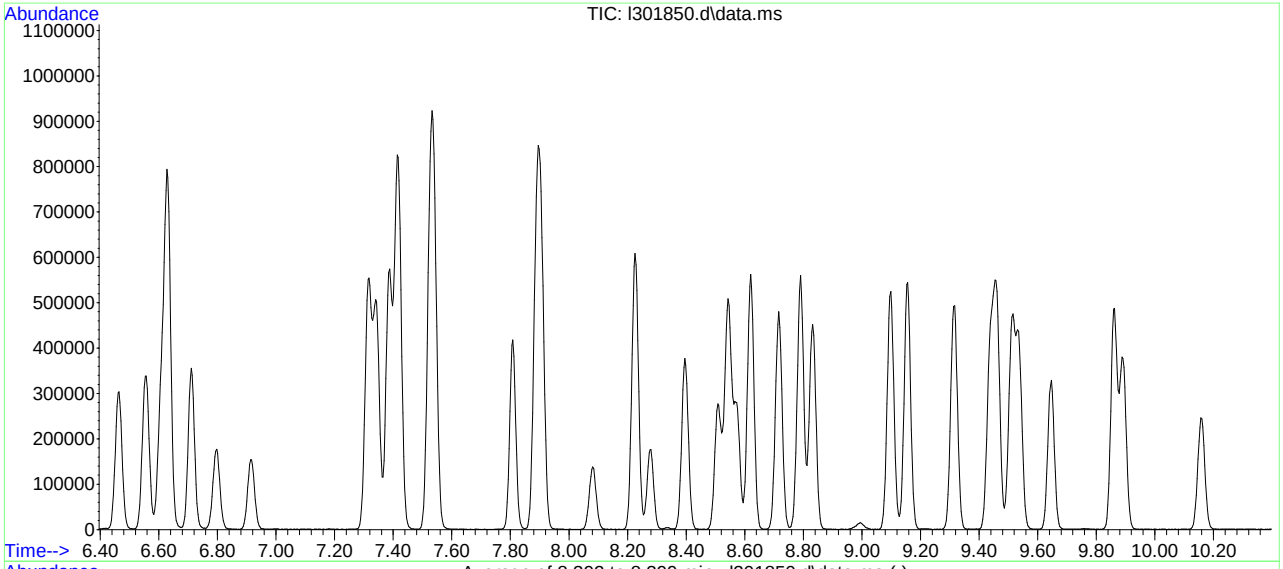
Average of 8.392 to 8.399 min.: L301058.D\data.ms
BFB
Modified:subtracted

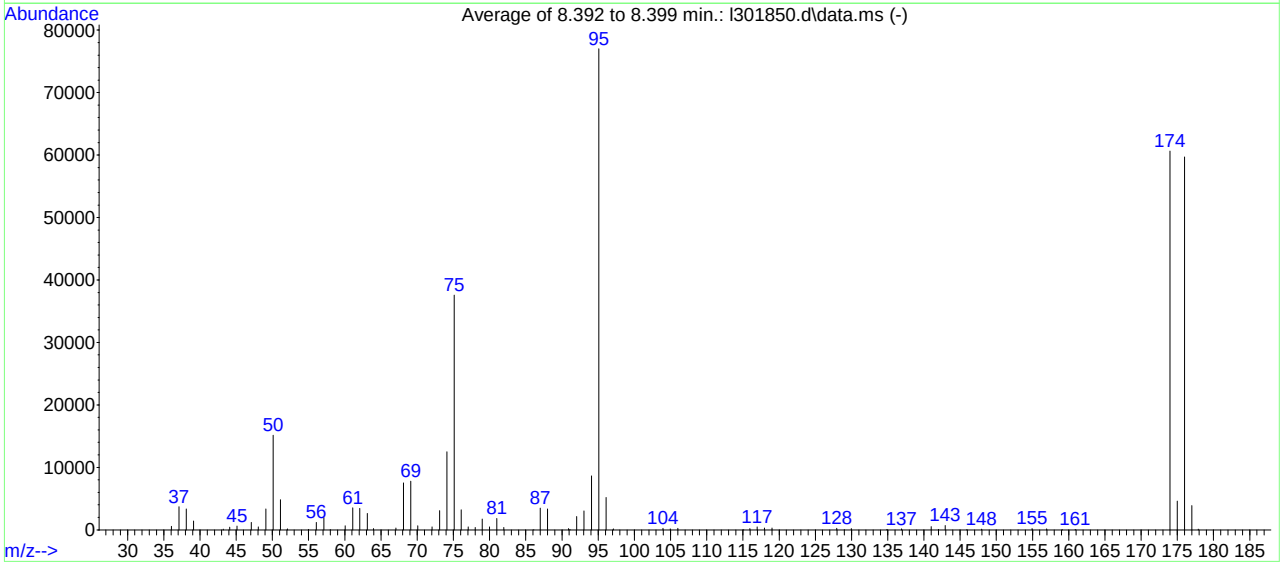
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.10	3818	116.95	451	142.95	806	176.00	71656
94.10	10487	117.95	315	145.10	35	177.00	4673
95.10	96365	118.95	370	145.95	161	178.00	114
96.10	6728	127.95	285	147.95	258		
97.10	203	128.95	196	154.80	165		
103.90	364	129.85	274	157.00	129		
104.90	116	131.00	149	158.95	83		
106.00	278	134.95	200	160.95	76		
112.90	56	137.05	77	172.00	63		
114.90	43	141.00	898	174.00	74595		
115.85	251	141.95	83	175.00	5458		

SW-846 Method 8260

Data File : C:\msdchem\1\data\vl8605\l301850.d Vial: 5
Acq On : 2 Jun 2018 11:52 am Operator: deving
Sample : bfb Inst : GCMSL
Misc : MS26750,VL8605,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\ML8534.M (RTE Integrator)
Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um





AutoFind: Scans 2370, 2371, 2372; Background Corrected with Scan 2356

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.7	15149	PASS
75	95	30	60	48.8	37595	PASS
95	95	100	100	100.0	77000	PASS
96	95	5	9	6.7	5168	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	78.7	60627	PASS
175	174	5	9	7.6	4586	PASS
176	174	95	101	98.4	59677	PASS
177	176	5	9	6.5	3884	PASS

l301850.d ML8534.M Tue Jun 05 01:04:35 2018

Average of 8.392 to 8.399 min.: l301850.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	564	51.10	4828	67.05	292	79.00	1734
37.10	3722	52.10	172	68.10	7501	80.00	475
38.10	3344	55.00	76	69.10	7769	81.00	1829
39.10	1418	56.05	1196	70.10	669	81.95	400
43.20	93	57.10	1967	72.05	481	86.10	46
44.10	413	58.00	38	73.10	3081	87.00	3494
45.10	599	60.05	636	74.10	12482	88.00	3324
47.10	1209	61.10	3546	75.10	37595	90.90	190
48.05	470	62.05	3433	76.10	3228	91.10	90
49.10	3338	63.10	2620	77.05	486	92.05	2121
50.10	15149	63.95	225	78.00	370	93.05	3049

Average of 8.392 to 8.399 min.: l301850.d\data.ms
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
94.10	8635	119.00	314	154.95	194		
95.10	77000	127.95	270	156.95	141		
96.10	5168	129.00	38	159.10	39		
97.10	173	129.95	213	160.90	77		
103.95	263	134.90	56	174.00	60627		
104.95	147	136.90	173	175.00	4586		
106.00	246	141.00	521	176.00	59677		
115.10	40	142.00	67	177.00	3884		
115.95	194	142.95	692	177.90	108		
116.95	467	145.90	35				
117.95	287	147.95	123				

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300308.D
Acq On : 16 Apr 2018 2:54 pm
Operator : vidishp
Sample : ic8534-0.5
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 17 14:52:13 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.117	65	254654	500.00	ug/L	0.00
5) pentafluorobenzene	4.343	168	239649	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.914	114	338903	50.00	ug/L	0.00
76) chlorobenzene-d5	7.317	117	307914	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	144433	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.352	113	92138	50.30	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.60%						
56) 1,2-dichloroethane-d4 (s)	4.609	65	115548	54.39	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 108.78%						
77) toluene-d8 (s)	6.066	98	379439	54.14	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 108.28%						
100) 4-bromofluorobenzene (s)	8.399	95	151364	47.21	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 94.42%						
Target Compounds						Qvalue
2) 1,4-dioxane	5.354	88	609	12.93	ug/L	66
3) ethanol	2.533	45	3960	56.10	ug/L	96
4) tertiary butyl alcohol	3.178	59	1563	2.66	ug/L	74
6) chlorodifluoromethane	1.689	51	1816	0.54	ug/L	90
7) dichlorodifluoromethane	1.679	85	1307	0.43	ug/L	84
10) chloromethane	1.833	50	1671	0.50	ug/L	74
12) vinyl chloride	1.917	62	1874	0.57	ug/L	90
14) chloroethane	2.257	64	1094	0.63	ug/L #	66
15) vinyl bromide	2.398	106	1023	0.56	ug/L #	80
16) trichlorofluoromethane	2.446	101	1801	0.51	ug/L	98
17) ethyl ether	2.632	74	681	0.44	ug/L #	82
20) freon 113	2.799	151	771	0.53	ug/L #	83
21) 1,1-dichloroethene	2.818	96	1112	0.54	ug/L #	68
22) acetone	2.825	58	982	2.53	ug/L #	65
27) methylene chloride	3.143	84	1344	0.61	ug/L	84
29) methyl tert butyl ether	3.313	73	3992	0.54	ug/L	90
30) trans-1,2-dichloroethene	3.329	96	1328	0.63	ug/L	84
31) hexane	3.512	57	1533	0.49	ug/L	88
32) di-isopropyl ether	3.624	45	4945	0.58	ug/L	85
33) ethyl tert-butyl ether	3.871	59	4384	0.54	ug/L	92
34) 2-butanone	3.996	72	1014	2.02	ug/L #	64
35) 1,1-dichloroethane	3.627	63	2498	0.58	ug/L	79
36) chloroprene	3.685	53	2284	0.58	ug/L	93
37) acrylonitrile	3.303	53	755	0.48	ug/L	90
41) cis-1,2-dichloroethene	4.022	96	1358	0.59	ug/L	84
45) tetrahydrofuran	4.198	72	293	0.51	ug/L #	1
46) chloroform	4.246	83	2484	0.65	ug/L	86
48) methacrylonitrile	4.160	67	737	0.49	ug/L #	69
49) 1,1,1-trichloroethane	4.384	97	1823	0.57	ug/L	95
50) cyclohexane	4.439	84	1405	0.51	ug/L #	87
51) 1,1-dichloropropene	4.494	75	1799	0.59	ug/L	90
52) carbon tetrachloride	4.494	117	1500	0.61	ug/L #	69

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300308.D
Acq On : 16 Apr 2018 2:54 pm
Operator : vidishp
Sample : ic8534-0.5
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 17 14:52:13 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
58) 2,2,4-trimethylpentane	4.705	57	3252	0.57	ug/L		95
59) epichlorohydrin	5.755	57	1376	2.94	ug/L		86
60) n-butyl alcohol	4.972	56	3916	27.97	ug/L		90
61) benzene	4.641	78	5429	0.67	ug/L		92
62) heptane	4.811	57	763	0.57	ug/L	#	70
64) trichloroethene	5.113	95	1245	0.58	ug/L		87
65) ethyl acrylate	5.126	55	2495	0.56	ug/L	#	80
67) 2-chloroethyl vinyl ether	5.694	63	4818	2.70	ug/L		90
69) 1,2-dichloropropane	5.312	63	1348	0.58	ug/L		82
70) methylcyclohexane	5.299	83	1779	0.53	ug/L		96
71) dibromomethane	5.376	93	777	0.60	ug/L	#	80
72) bromodichloromethane	5.501	83	1444	0.51	ug/L		91
73) cis-1,3-dichloropropene	5.835	75	2150	0.58	ug/L		91
75) 3-methyl-1-butanol	5.950	70	1390	11.48	ug/L		95
79) trans-1,3-dichloropropene	6.297	75	2020	0.60	ug/L		98
80) ethyl methacrylate	6.313	69	1895	0.53	ug/L		96
81) 1,1,2-trichloroethane	6.464	83	932	0.55	ug/L		89
82) 2-hexanone	6.637	58	3289	2.36	ug/L		91
83) tetrachloroethene	6.560	166	1200	0.60	ug/L		89
84) 1,3-dichloropropane	6.615	76	2067	0.61	ug/L		79
86) dibromochloromethane	6.798	129	1064	0.58	ug/L		74
87) 1,2-dibromoethane	6.910	107	1272	0.58	ug/L		85
88) n-butyl ether	7.388	57	5630	0.60	ug/L		96
89) chlorobenzene	7.346	112	3122	0.62	ug/L		99
90) 1,1,1,2-tetrachloroethane	7.410	131	911	0.55	ug/L		89
91) ethylbenzene	7.420	91	5397	0.63	ug/L		94
92) m,p-xylene	7.532	106	4303	1.34	ug/L		89
93) o-xylene	7.895	106	1979	0.60	ug/L		98
94) butyl acrylate	7.808	55	2946	0.54	ug/L		92
95) styrene	7.905	104	3535	0.64	ug/L		94
96) bromoform	8.084	173	591	0.45	ug/L		89
97) isopropylbenzene	8.229	105	5068	0.60	ug/L		99
98) cis-1,4-dichloro-2-butene	8.280	88	634	0.52	ug/L	#	72
101) bromobenzene	8.540	156	1239	0.54	ug/L		94
102) 1,1,2,2-tetrachloroethane	8.511	83	1637	0.49	ug/L		100
103) trans-1,4-dichloro-2-b...	8.550	53	542	0.48	ug/L	#	55
104) 1,2,3-trichloropropane	8.572	110	398	0.43	ug/L		80
105) n-propylbenzene	8.623	91	5858	0.54	ug/L		91
106) 2-chlorotoluene	8.716	126	1217	0.56	ug/L		97
107) 4-chlorotoluene	8.835	126	1207	0.58	ug/L		87
109) 1,3,5-trimethylbenzene	8.797	105	3800	0.52	ug/L		98
110) tert-butylbenzene	9.095	119	3250	0.52	ug/L		84
111) 1,2,4-trimethylbenzene	9.156	105	3945	0.54	ug/L		98
112) sec-butylbenzene	9.316	105	4767	0.54	ug/L		97
113) 1,3-dichlorobenzene	9.442	146	1990	0.49	ug/L		99
114) p-isopropyltoluene	9.458	119	3894	0.55	ug/L		98
115) 1,4-dichlorobenzene	9.541	146	2151	0.56	ug/L		94
116) 1,2-dichlorobenzene	9.888	146	2116	0.55	ug/L		72
118) n-butylbenzene	9.862	92	1864	0.49	ug/L		92
121) 1,3,5-trichlorobenzene	10.854	180	1520	0.53	ug/L		79

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300308.D
Acq On : 16 Apr 2018 2:54 pm
Operator : vidishp
Sample : ic8534-0.5
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 17 14:52:13 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
122) 1,2,4-trichlorobenzene	11.473	180	1364	0.51	ug/L	82
123) hexachlorobutadiene	11.624	225	560	0.56	ug/L #	61
124) naphthalene	11.742	128	4692	0.51	ug/L	89
125) 1,2,3-trichlorobenzene	11.964	180	1257	0.50	ug/L	92
126) hexachloroethane	10.160	119	539	0.43	ug/L	97
127) Benzyl chloride	9.650	91	3118	0.50	ug/L	94

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

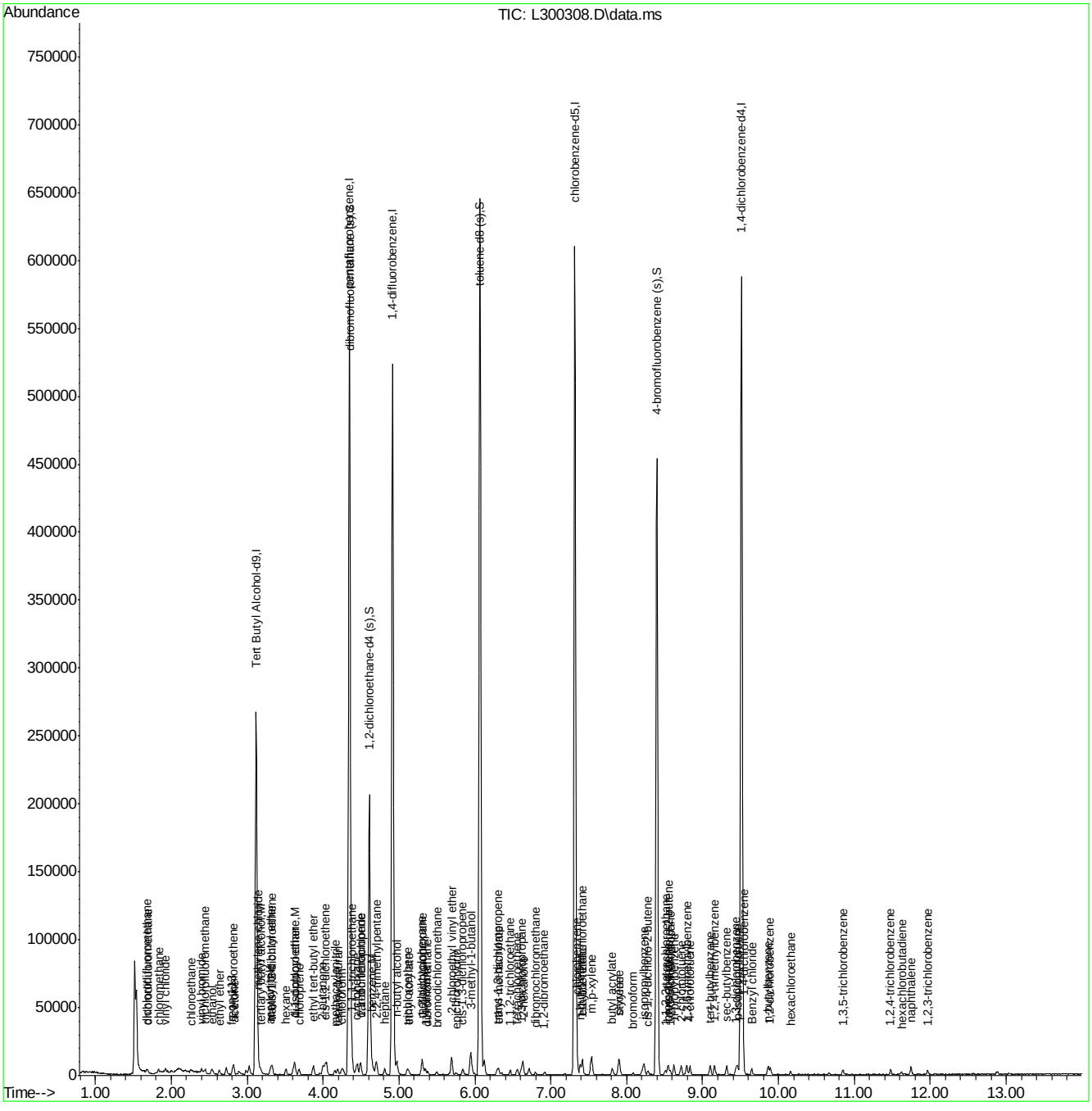
7.6.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300308.D
Acq On : 16 Apr 2018 2:54 pm
Operator : vidishp
Sample : ic8534-0.5
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 17 14:52:13 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration



ML8534.M Wed Apr 18 08:09:35 2018 1

Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300309.D
Acq On : 16 Apr 2018 3:21 pm
Operator : vidishp
Sample : ic8534-1
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 17 14:54:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.120	65	248041	500.00	ug/L	0.00
5) pentafluorobenzene	4.346	168	234531	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.917	114	329376	50.00	ug/L	0.00
76) chlorobenzene-d5	7.317	117	302724	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	142084	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.356	113	88688	49.47	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 98.94%						
56) 1,2-dichloroethane-d4 (s)	4.609	65	110400	53.47	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 106.94%						
77) toluene-d8 (s)	6.066	98	370159	53.72	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 107.44%						
100) 4-bromofluorobenzene (s)	8.399	95	148905	47.22	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 94.44%						
Target Compounds						Qvalue
2) 1,4-dioxane	5.354	88	1125	24.52	ug/L	86
3) ethanol	2.533	45	7574	110.16	ug/L	94
4) tertiary butyl alcohol	3.178	59	3113	5.44	ug/L	97
6) chlorodifluoromethane	1.689	51	3210	0.97	ug/L	96
7) dichlorodifluoromethane	1.673	85	2657	0.89	ug/L	85
10) chloromethane	1.837	50	3117	0.96	ug/L	98
12) vinyl chloride	1.917	62	3149	0.99	ug/L	93
13) bromomethane	2.177	94	914	1.12	ug/L	85
14) chloroethane	2.260	64	1858	1.08	ug/L	89
15) vinyl bromide	2.401	106	1654	0.93	ug/L	91
16) trichlorofluoromethane	2.446	101	3436	1.00	ug/L	98
17) ethyl ether	2.632	74	1449	0.96	ug/L #	78
18) 2-chloropropane	2.722	43	4839	1.12	ug/L	94
19) acrolein	2.735	56	983	1.22	ug/L	90
20) freon 113	2.806	151	1611	1.12	ug/L #	80
21) 1,1-dichloroethene	2.812	96	2166	1.08	ug/L	85
22) acetone	2.825	58	1550	4.08	ug/L	96
23) acetonitrile	3.021	40	3663	11.04	ug/L	98
26) carbon disulfide	2.985	76	5710	1.11	ug/L	92
27) methylene chloride	3.149	84	2436	1.13	ug/L	84
29) methyl tert butyl ether	3.316	73	7606	1.04	ug/L	95
30) trans-1,2-dichloroethene	3.329	96	2277	1.10	ug/L #	69
31) hexane	3.508	57	3310	1.07	ug/L	93
32) di-isopropyl ether	3.627	45	9745	1.17	ug/L	86
33) ethyl tert-butyl ether	3.871	59	8527	1.07	ug/L	89
34) 2-butanone	3.993	72	2238	4.56	ug/L #	72
35) 1,1-dichloroethane	3.634	63	4719	1.12	ug/L	91
36) chloroprene	3.682	53	4062	1.06	ug/L	92
37) acrylonitrile	3.293	53	1529	0.98	ug/L	95
38) vinyl acetate	3.605	86	454	0.76	ug/L #	68
40) 2,2-dichloropropane	4.035	77	3706	1.13	ug/L	99
41) cis-1,2-dichloroethene	4.022	96	2707	1.21	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300309.D
Acq On : 16 Apr 2018 3:21 pm
Operator : vidishp
Sample : ic8534-1
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 17 14:54:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) propionitrile	4.044	54	7764	11.73	ug/L		85
43) methyl acrylate	4.044	85	595	1.14	ug/L	#	89
44) bromochloromethane	4.189	128	1112	1.14	ug/L		89
45) tetrahydrofuran	4.195	72	568	1.01	ug/L	#	62
46) chloroform	4.240	83	4294	1.15	ug/L		94
48) methacrylonitrile	4.157	67	1665	1.14	ug/L	#	78
49) 1,1,1-trichloroethane	4.384	97	3494	1.12	ug/L		77
50) cyclohexane	4.442	84	2828	1.04	ug/L	#	87
51) 1,1-dichloropropene	4.497	75	3389	1.14	ug/L		86
52) carbon tetrachloride	4.497	117	2825	1.18	ug/L		82
53) isopropyl acetate	4.612	87	731	1.08	ug/L	#	18
57) tert-amyl methyl ether	4.702	73	7651	1.20	ug/L		96
58) 2,2,4-trimethylpentane	4.702	57	6713	1.21	ug/L		96
59) epichlorohydrin	5.748	57	2287	5.03	ug/L		95
60) n-butyl alcohol	4.972	56	7070	51.96	ug/L		97
61) benzene	4.641	78	9444	1.20	ug/L		93
62) heptane	4.814	57	1411	1.09	ug/L		88
63) 1,2-dichloroethane	4.664	62	3902	1.35	ug/L		94
64) trichloroethene	5.110	95	2275	1.10	ug/L		96
65) ethyl acrylate	5.132	55	4849	1.12	ug/L		88
67) 2-chloroethyl vinyl ether	5.690	63	9262	5.35	ug/L		96
68) methyl methacrylate	5.315	100	772	0.99	ug/L	#	78
69) 1,2-dichloropropane	5.315	63	2576	1.15	ug/L		83
70) methylcyclohexane	5.299	83	3666	1.12	ug/L		88
71) dibromomethane	5.382	93	1410	1.12	ug/L	#	84
72) bromodichloromethane	5.501	83	2829	1.03	ug/L		89
73) cis-1,3-dichloropropene	5.841	75	3858	1.06	ug/L		85
74) 4-methyl-2-pentanone	5.941	58	6641	4.86	ug/L	#	86
75) 3-methyl-1-butanol	5.957	70	2781	23.64	ug/L		94
78) toluene	6.124	92	5830	1.23	ug/L		98
79) trans-1,3-dichloropropene	6.294	75	3559	1.08	ug/L		95
80) ethyl methacrylate	6.313	69	3793	1.08	ug/L		93
81) 1,1,2-trichloroethane	6.464	83	1892	1.13	ug/L		76
82) 2-hexanone	6.634	58	6457	4.72	ug/L		96
83) tetrachloroethene	6.563	166	2169	1.11	ug/L		85
84) 1,3-dichloropropane	6.608	76	4034	1.22	ug/L		92
85) butyl acetate	6.714	56	2341	1.14	ug/L		91
86) dibromochloromethane	6.798	129	1771	0.99	ug/L		85
87) 1,2-dibromoethane	6.913	107	2325	1.08	ug/L		92
88) n-butyl ether	7.388	57	10348	1.13	ug/L		96
89) chlorobenzene	7.343	112	5834	1.17	ug/L		92
90) 1,1,1,2-tetrachloroethane	7.410	131	1914	1.17	ug/L		85
91) ethylbenzene	7.420	91	10465	1.24	ug/L		97
92) m,p-xylene	7.536	106	7825	2.47	ug/L		92
93) o-xylene	7.895	106	3793	1.18	ug/L		87
94) butyl acrylate	7.815	55	5630	1.05	ug/L		91
95) styrene	7.911	104	6237	1.15	ug/L		93
96) bromoform	8.087	173	1314	1.01	ug/L		80
97) isopropylbenzene	8.229	105	9679	1.16	ug/L		97
98) cis-1,4-dichloro-2-butene	8.277	88	1111	0.93	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300309.D
Acq On : 16 Apr 2018 3:21 pm
Operator : vidishp
Sample : ic8534-1
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 17 14:54:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

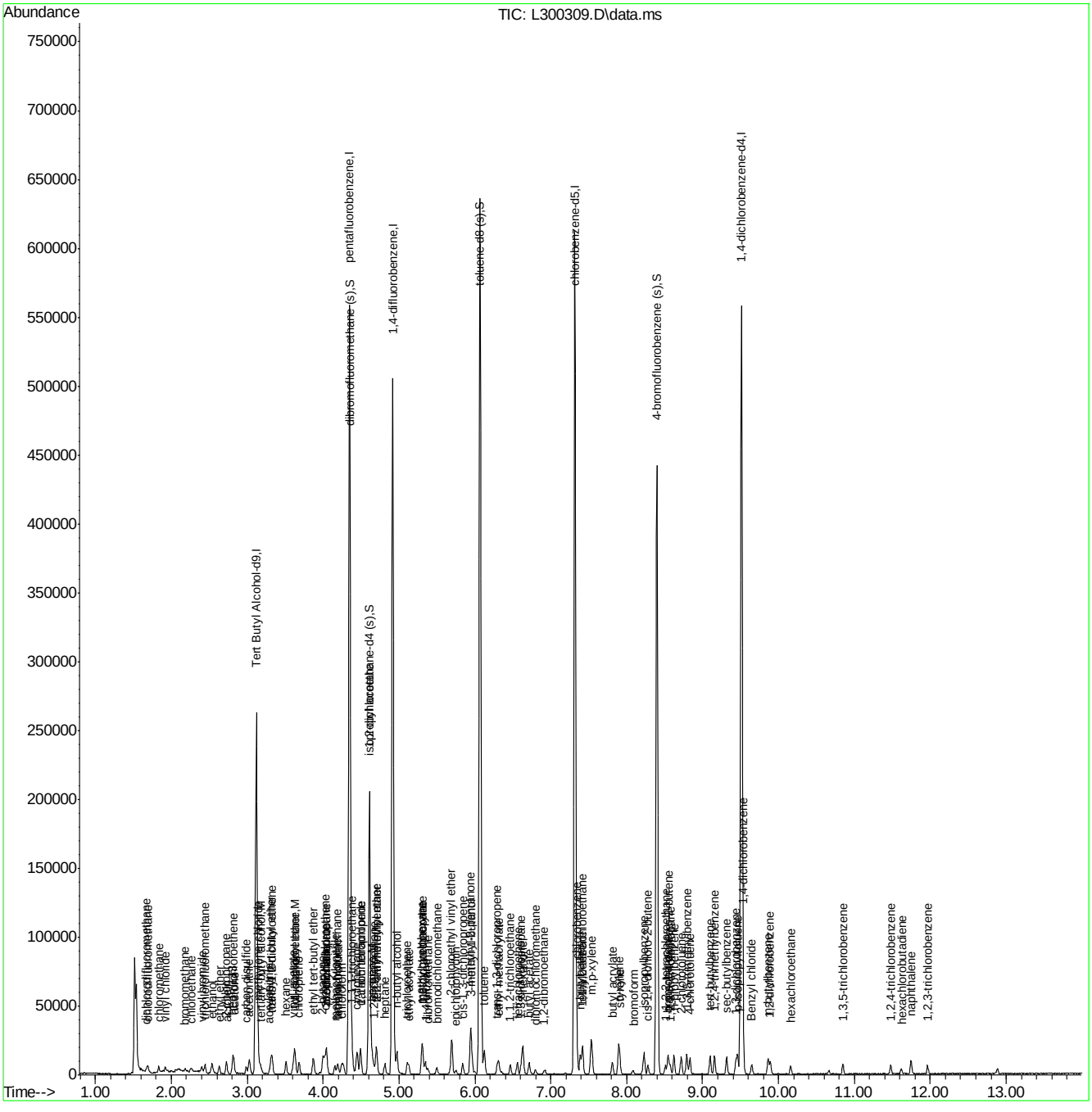
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
101) bromobenzene	8.546	156	2244	0.99 ug/L #	79
102) 1,1,2,2-tetrachloroethane	8.511	83	3201	0.97 ug/L	94
103) trans-1,4-dichloro-2-b...	8.550	53	1069	0.96 ug/L #	74
104) 1,2,3-trichloropropane	8.578	110	950	1.05 ug/L	86
105) n-propylbenzene	8.627	91	10929	1.03 ug/L	87
106) 2-chlorotoluene	8.716	126	2205	1.04 ug/L	94
107) 4-chlorotoluene	8.835	126	2264	1.10 ug/L #	61
109) 1,3,5-trimethylbenzene	8.790	105	7621	1.06 ug/L	87
110) tert-butylbenzene	9.098	119	6216	1.02 ug/L	97
111) 1,2,4-trimethylbenzene	9.153	105	7604	1.05 ug/L	94
112) sec-butylbenzene	9.316	105	8814	1.01 ug/L	94
113) 1,3-dichlorobenzene	9.442	146	4250	1.07 ug/L	96
114) p-isopropyltoluene	9.461	119	7285	1.06 ug/L	95
115) 1,4-dichlorobenzene	9.535	146	3958	1.04 ug/L	90
116) 1,2-dichlorobenzene	9.888	146	4001	1.06 ug/L	90
118) n-butylbenzene	9.862	92	3712	1.00 ug/L	90
121) 1,3,5-trichlorobenzene	10.854	180	2544	0.90 ug/L	95
122) 1,2,4-trichlorobenzene	11.476	180	2362	0.90 ug/L	91
123) hexachlorobutadiene	11.621	225	1017	1.04 ug/L	72
124) naphthalene	11.742	128	8042	0.89 ug/L	89
125) 1,2,3-trichlorobenzene	11.964	180	2179	0.88 ug/L	86
126) hexachloroethane	10.157	119	1008	0.81 ug/L	88
127) Benzyl chloride	9.647	91	5544	0.90 ug/L	91

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300309.D
Acq On : 16 Apr 2018 3:21 pm
Operator : vidishp
Sample : ic8534-1
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 17 14:54:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300310.D
Acq On : 16 Apr 2018 3:49 pm
Operator : vidishp
Sample : ic8534-2
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 17 14:56:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.117	65	245421	500.00	ug/L	0.00
5) pentafluorobenzene	4.343	168	231018	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.914	114	329485	50.00	ug/L	0.00
76) chlorobenzene-d5	7.317	117	299764	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	139435	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.352	113	87055	49.30	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 98.60%						
56) 1,2-dichloroethane-d4 (s)	4.606	65	110268	53.38	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 106.76%						
77) toluene-d8 (s)	6.066	98	367881	53.92	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 107.84%						
100) 4-bromofluorobenzene (s)	8.396	95	147192	47.56	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 95.12%						
Target Compounds						Qvalue
2) 1,4-dioxane	5.347	88	2278	50.19	ug/L	92
3) ethanol	2.533	45	14199	208.72	ug/L	100
4) tertiary butyl alcohol	3.178	59	5766	10.19	ug/L	98
6) chlorodifluoromethane	1.689	51	6507	2.00	ug/L	92
7) dichlorodifluoromethane	1.670	85	6027	2.06	ug/L	94
10) chloromethane	1.830	50	6272	1.96	ug/L	99
12) vinyl chloride	1.923	62	6652	2.11	ug/L	93
13) bromomethane	2.177	94	1681	2.10	ug/L #	71
14) chloroethane	2.260	64	3552	2.11	ug/L	83
15) vinyl bromide	2.401	106	3443	1.96	ug/L	95
16) trichlorofluoromethane	2.440	101	6951	2.05	ug/L	99
17) ethyl ether	2.629	74	2874	1.94	ug/L	95
18) 2-chloropropane	2.722	43	9703	2.28	ug/L	98
19) acrolein	2.732	56	1543	1.95	ug/L	80
20) freon 113	2.809	151	3046	2.16	ug/L	93
21) 1,1-dichloroethene	2.812	96	4071	2.07	ug/L	87
22) acetone	2.822	58	3103	8.28	ug/L	92
23) acetonitrile	3.024	40	7261	22.21	ug/L	92
24) iodomethane	2.928	142	1695	1.04	ug/L	91
25) iso-butyl alcohol	4.490	43	4634	20.90	ug/L	88
26) carbon disulfide	2.989	76	11184	2.22	ug/L	95
27) methylene chloride	3.146	84	4781	2.25	ug/L	84
28) methyl acetate	3.030	74	1256	1.88	ug/L	90
29) methyl tert butyl ether	3.316	73	15164	2.11	ug/L	91
30) trans-1,2-dichloroethene	3.329	96	4352	2.14	ug/L	90
31) hexane	3.512	57	6760	2.22	ug/L	95
32) di-isopropyl ether	3.624	45	18177	2.22	ug/L	96
33) ethyl tert-butyl ether	3.868	59	16406	2.09	ug/L	91
34) 2-butanone	3.993	72	3866	8.00	ug/L #	81
35) 1,1-dichloroethane	3.627	63	9311	2.25	ug/L	93
36) chloroprene	3.682	53	8536	2.26	ug/L	88
37) acrylonitrile	3.297	53	3236	2.12	ug/L	78

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300310.D
Acq On : 16 Apr 2018 3:49 pm
Operator : vidishp
Sample : ic8534-2
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 17 14:56:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
38) vinyl acetate	3.601	86	1038	1.76	ug/L	#	75
39) ethyl acetate	3.993	45	1287	1.89	ug/L	#	36
40) 2,2-dichloropropane	4.031	77	7779	2.41	ug/L		99
41) cis-1,2-dichloroethene	4.022	96	4874	2.21	ug/L		87
42) propionitrile	4.044	54	14196	21.77	ug/L		95
43) methyl acrylate	4.054	85	1105	2.15	ug/L	#	92
44) bromochloromethane	4.189	128	2141	2.23	ug/L	#	75
45) tetrahydrofuran	4.198	72	1076	1.95	ug/L	#	73
46) chloroform	4.240	83	8447	2.30	ug/L		91
48) methacrylonitrile	4.153	67	2972	2.06	ug/L		91
49) 1,1,1-trichloroethane	4.384	97	6773	2.20	ug/L		84
50) cyclohexane	4.439	84	5758	2.15	ug/L		93
51) 1,1-dichloropropene	4.494	75	6384	2.18	ug/L		86
52) carbon tetrachloride	4.497	117	4988	2.11	ug/L		90
53) isopropyl acetate	4.606	87	1396	2.09	ug/L	#	62
54) tert amyl alcohol	4.580	55	1952	9.98	ug/L	#	92
57) tert-amyl methyl ether	4.699	73	14508	2.28	ug/L		99
58) 2,2,4-trimethylpentane	4.705	57	14267	2.57	ug/L		94
59) epichlorohydrin	5.745	57	4669	10.26	ug/L		95
60) n-butyl alcohol	4.972	56	13697	100.63	ug/L		89
61) benzene	4.638	78	18706	2.37	ug/L		96
62) heptane	4.808	57	2820	2.17	ug/L		90
63) 1,2-dichloroethane	4.660	62	6648	2.29	ug/L		99
64) trichloroethene	5.110	95	4337	2.10	ug/L		98
65) ethyl acrylate	5.129	55	8986	2.07	ug/L		97
67) 2-chloroethyl vinyl ether	5.694	63	19122	11.04	ug/L		91
68) methyl methacrylate	5.309	100	1540	1.97	ug/L	#	87
69) 1,2-dichloropropane	5.309	63	5068	2.26	ug/L		97
70) methylcyclohexane	5.299	83	7520	2.29	ug/L		97
71) dibromomethane	5.379	93	2685	2.13	ug/L		90
72) bromodichloromethane	5.495	83	5522	2.01	ug/L		98
73) cis-1,3-dichloropropene	5.838	75	7742	2.13	ug/L		97
74) 4-methyl-2-pentanone	5.938	58	12206	8.93	ug/L		90
75) 3-methyl-1-butanol	5.960	70	4936	41.94	ug/L		94
78) toluene	6.124	92	11183	2.39	ug/L		95
79) trans-1,3-dichloropropene	6.294	75	6822	2.09	ug/L		95
80) ethyl methacrylate	6.313	69	7263	2.10	ug/L		92
81) 1,1,2-trichloroethane	6.461	83	3501	2.11	ug/L		94
82) 2-hexanone	6.631	58	12325	9.10	ug/L		98
83) tetrachloroethene	6.554	166	4451	2.30	ug/L		93
84) 1,3-dichloropropane	6.608	76	7296	2.22	ug/L		96
85) butyl acetate	6.711	56	4696	2.30	ug/L	#	83
86) dibromochloromethane	6.797	129	3487	1.97	ug/L		94
87) 1,2-dibromoethane	6.916	107	4405	2.07	ug/L		91
88) n-butyl ether	7.385	57	20337	2.24	ug/L		97
89) chlorobenzene	7.343	112	11266	2.28	ug/L		96
90) 1,1,1,2-tetrachloroethane	7.410	131	3438	2.12	ug/L		80
91) ethylbenzene	7.420	91	20984	2.50	ug/L		97
92) m,p-xylene	7.536	106	14928	4.76	ug/L		98
93) o-xylene	7.889	106	7284	2.28	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300310.D
Acq On : 16 Apr 2018 3:49 pm
Operator : vidishp
Sample : ic8534-2
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 17 14:56:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

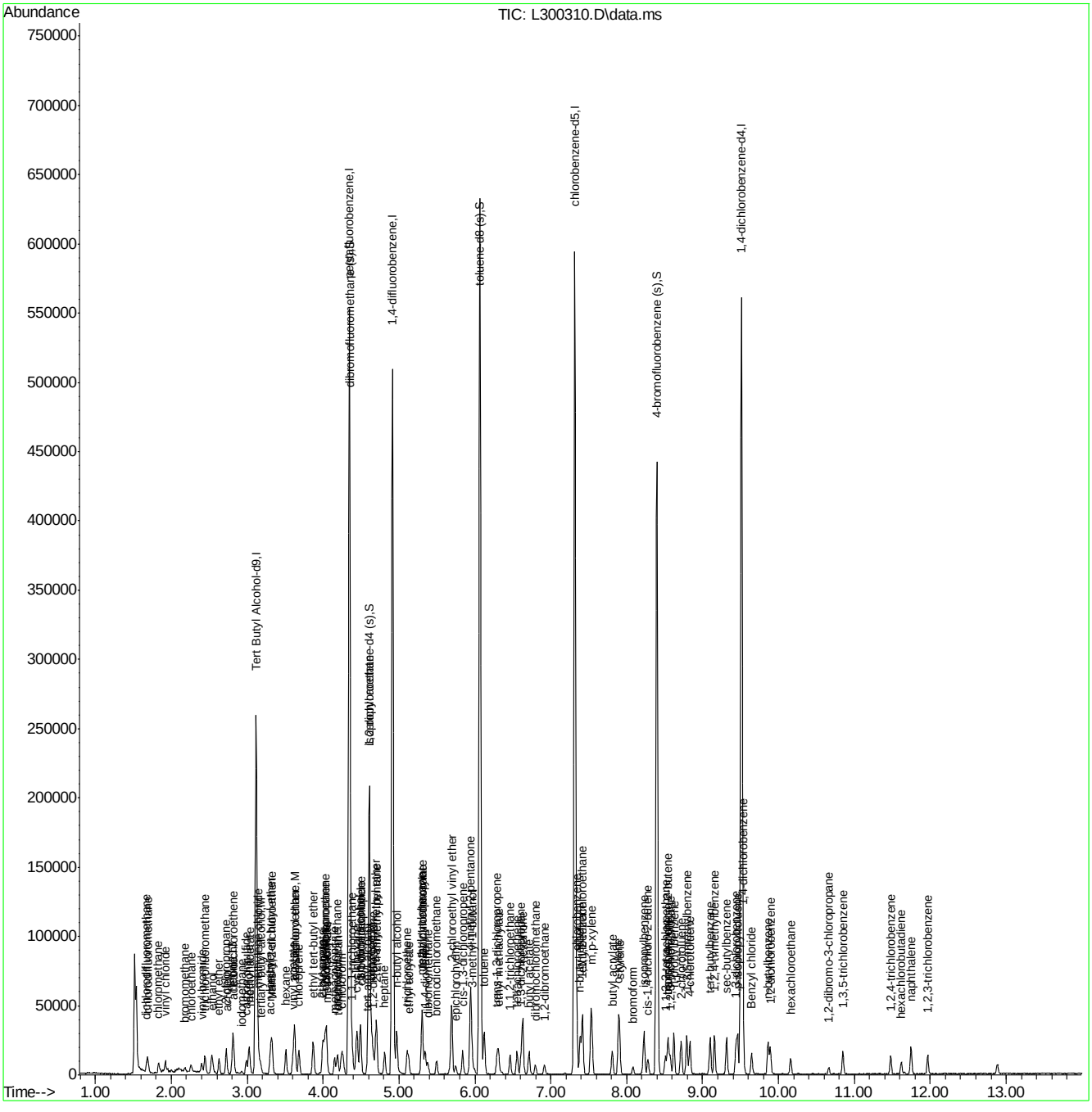
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
94) butyl acrylate	7.811	55	10408	1.96	ug/L		95
95) styrene	7.908	104	12208	2.28	ug/L		95
96) bromoform	8.084	173	2264	1.76	ug/L		87
97) isopropylbenzene	8.225	105	19237	2.32	ug/L		100
98) cis-1,4-dichloro-2-butene	8.280	88	2225	1.88	ug/L		92
101) bromobenzene	8.546	156	4572	2.06	ug/L	#	82
102) 1,1,2,2-tetrachloroethane	8.511	83	6305	1.94	ug/L		97
103) trans-1,4-dichloro-2-b...	8.546	53	1878	1.71	ug/L		99
104) 1,2,3-trichloropropane	8.572	110	1846	2.07	ug/L		94
105) n-propylbenzene	8.620	91	22574	2.17	ug/L		96
106) 2-chlorotoluene	8.720	126	4219	2.02	ug/L		91
107) 4-chlorotoluene	8.835	126	4157	2.06	ug/L		97
109) 1,3,5-trimethylbenzene	8.793	105	14697	2.09	ug/L		95
110) tert-butylbenzene	9.098	119	12303	2.05	ug/L		94
111) 1,2,4-trimethylbenzene	9.156	105	15053	2.13	ug/L		93
112) sec-butylbenzene	9.316	105	18147	2.12	ug/L		93
113) 1,3-dichlorobenzene	9.442	146	7827	2.01	ug/L		95
114) p-isopropyltoluene	9.461	119	14419	2.13	ug/L		95
115) 1,4-dichlorobenzene	9.535	146	7803	2.09	ug/L		90
116) 1,2-dichlorobenzene	9.891	146	7401	2.00	ug/L		97
118) n-butylbenzene	9.865	92	6871	1.88	ug/L		93
120) 1,2-dibromo-3-chloropr...	10.661	157	1255	1.52	ug/L		80
121) 1,3,5-trichlorobenzene	10.847	180	5277	1.90	ug/L		89
122) 1,2,4-trichlorobenzene	11.479	180	4517	1.75	ug/L		97
123) hexachlorobutadiene	11.614	225	2047	2.12	ug/L		83
124) naphthalene	11.746	128	16053	1.81	ug/L		98
125) 1,2,3-trichlorobenzene	11.964	180	4622	1.90	ug/L		79
126) hexachloroethane	10.157	119	1993	1.64	ug/L		96
127) Benzyl chloride	9.647	91	10521	1.74	ug/L		99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300310.D
Acq On : 16 Apr 2018 3:49 pm
Operator : vidishp
Sample : ic8534-2
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 17 14:56:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration



ML8534.M Wed Apr 18 08:09:39 2018 1

Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300311.D
Acq On : 16 Apr 2018 4:16 pm
Operator : vidishp
Sample : ic8534-5
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 17 14:58:15 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.117	65	242571	500.00	ug/L	0.00
5) pentafluorobenzene	4.346	168	225335	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.917	114	321777	50.00	ug/L	0.00
76) chlorobenzene-d5	7.317	117	295049	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	133608	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.352	113	84473	49.05	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 98.10%						
56) 1,2-dichloroethane-d4 (s)	4.609	65	105652	52.38	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 104.76%						
77) toluene-d8 (s)	6.066	98	355388	52.92	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 105.84%						
100) 4-bromofluorobenzene (s)	8.396	95	141821	47.82	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 95.64%						
Target Compounds						Qvalue
2) 1,4-dioxane	5.350	88	6040	134.64	ug/L	100
3) ethanol	2.533	45	35259	524.39	ug/L	96
4) tertiary butyl alcohol	3.175	59	14472	25.88	ug/L	98
6) chlorodifluoromethane	1.689	51	15064	4.74	ug/L	98
7) dichlorodifluoromethane	1.673	85	13916	4.87	ug/L	95
10) chloromethane	1.833	50	14880	4.77	ug/L	99
12) vinyl chloride	1.920	62	14601	4.76	ug/L	98
13) bromomethane	2.177	94	3587	4.58	ug/L	80
14) chloroethane	2.257	64	8266	5.02	ug/L	97
15) vinyl bromide	2.398	106	8364	4.89	ug/L	96
16) trichlorofluoromethane	2.443	101	16002	4.85	ug/L	95
17) ethyl ether	2.632	74	7254	5.01	ug/L	90
18) 2-chloropropane	2.725	43	21885	5.26	ug/L	99
19) acrolein	2.732	56	4015	5.19	ug/L	91
20) freon 113	2.809	151	7129	5.17	ug/L	98
21) 1,1-dichloroethene	2.812	96	9727	5.07	ug/L	95
22) acetone	2.825	58	7853	21.49	ug/L	91
23) acetonitrile	3.024	40	17290	54.22	ug/L	98
24) iodomethane	2.928	142	4533	2.86	ug/L	97
25) iso-butyl alcohol	4.493	43	11894	55.00	ug/L	98
26) carbon disulfide	2.985	76	24470	4.97	ug/L	99
27) methylene chloride	3.143	84	10588	5.10	ug/L	96
28) methyl acetate	3.033	74	3405	5.23	ug/L #	84
29) methyl tert butyl ether	3.316	73	36189	5.17	ug/L	97
30) trans-1,2-dichloroethene	3.332	96	10395	5.25	ug/L	95
31) hexane	3.512	57	15352	5.17	ug/L	98
32) di-isopropyl ether	3.621	45	43241	5.42	ug/L	91
33) ethyl tert-butyl ether	3.871	59	40292	5.27	ug/L	99
34) 2-butanone	3.993	72	9668	20.50	ug/L	99
35) 1,1-dichloroethane	3.634	63	22008	5.45	ug/L	98
36) chloroprene	3.685	53	19200	5.21	ug/L	94
37) acrylonitrile	3.293	53	7488	5.02	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300311.D
Acq On : 16 Apr 2018 4:16 pm
Operator : vidishp
Sample : ic8534-5
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 17 14:58:15 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
38) vinyl acetate	3.601	86	2772	4.81	ug/L		99
39) ethyl acetate	4.003	45	3509	5.29	ug/L		94
40) 2,2-dichloropropane	4.031	77	17544	5.58	ug/L		93
41) cis-1,2-dichloroethene	4.019	96	11437	5.31	ug/L		95
42) propionitrile	4.044	54	35596	55.97	ug/L		91
43) methyl acrylate	4.044	85	2736	5.47	ug/L	#	95
44) bromochloromethane	4.189	128	5086	5.43	ug/L		98
45) tetrahydrofuran	4.201	72	2734	5.07	ug/L		87
46) chloroform	4.240	83	18952	5.28	ug/L		98
48) methacrylonitrile	4.153	67	7495	5.34	ug/L		96
49) 1,1,1-trichloroethane	4.384	97	15154	5.04	ug/L		97
50) cyclohexane	4.442	84	13804	5.28	ug/L		98
51) 1,1-dichloropropene	4.490	75	14994	5.26	ug/L		97
52) carbon tetrachloride	4.493	117	11813	5.12	ug/L		97
53) isopropyl acetate	4.609	87	3422	5.25	ug/L	#	86
54) tert amyl alcohol	4.590	55	5085	26.64	ug/L		97
57) tert-amyl methyl ether	4.702	73	34072	5.48	ug/L		98
58) 2,2,4-trimethylpentane	4.705	57	31437	5.80	ug/L		97
59) epichlorohydrin	5.745	57	11527	25.94	ug/L		99
60) n-butyl alcohol	4.972	56	36464	274.31	ug/L		96
61) benzene	4.638	78	42971	5.57	ug/L		98
62) heptane	4.811	57	7010	5.53	ug/L		98
63) 1,2-dichloroethane	4.664	62	15957	5.64	ug/L		99
64) trichloroethene	5.106	95	10492	5.19	ug/L		98
65) ethyl acrylate	5.129	55	21738	5.13	ug/L		100
66) 2-nitropropane	5.665	41	6903	5.00	ug/L		88
67) 2-chloroethyl vinyl ether	5.694	63	45893	27.12	ug/L		98
68) methyl methacrylate	5.305	100	3959	5.18	ug/L		91
69) 1,2-dichloropropane	5.309	63	11893	5.42	ug/L		85
70) methylcyclohexane	5.302	83	16946	5.29	ug/L		93
71) dibromomethane	5.379	93	6439	5.23	ug/L		80
72) bromodichloromethane	5.495	83	13248	4.95	ug/L		96
73) cis-1,3-dichloropropene	5.835	75	18154	5.12	ug/L		95
74) 4-methyl-2-pentanone	5.941	58	30156	22.58	ug/L	#	82
75) 3-methyl-1-butanol	5.954	70	12958	112.75	ug/L		97
78) toluene	6.124	92	26014	5.65	ug/L		97
79) trans-1,3-dichloropropene	6.290	75	15816	4.92	ug/L		99
80) ethyl methacrylate	6.313	69	17838	5.23	ug/L		93
81) 1,1,2-trichloroethane	6.461	83	8679	5.30	ug/L		96
82) 2-hexanone	6.634	58	30566	22.92	ug/L		94
83) tetrachloroethene	6.557	166	10456	5.49	ug/L		94
84) 1,3-dichloropropane	6.608	76	17396	5.38	ug/L		98
85) butyl acetate	6.711	56	11126	5.54	ug/L		86
86) dibromochloromethane	6.801	129	8544	4.89	ug/L		97
87) 1,2-dibromoethane	6.919	107	11186	5.33	ug/L		94
88) n-butyl ether	7.388	57	49194	5.51	ug/L		98
89) chlorobenzene	7.340	112	26188	5.38	ug/L		96
90) 1,1,1,2-tetrachloroethane	7.417	131	8682	5.44	ug/L		91
91) ethylbenzene	7.420	91	47742	5.78	ug/L		98
92) m,p-xylene	7.532	106	35557	11.53	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300311.D
Acq On : 16 Apr 2018 4:16 pm
Operator : vidishp
Sample : ic8534-5
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 17 14:58:15 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

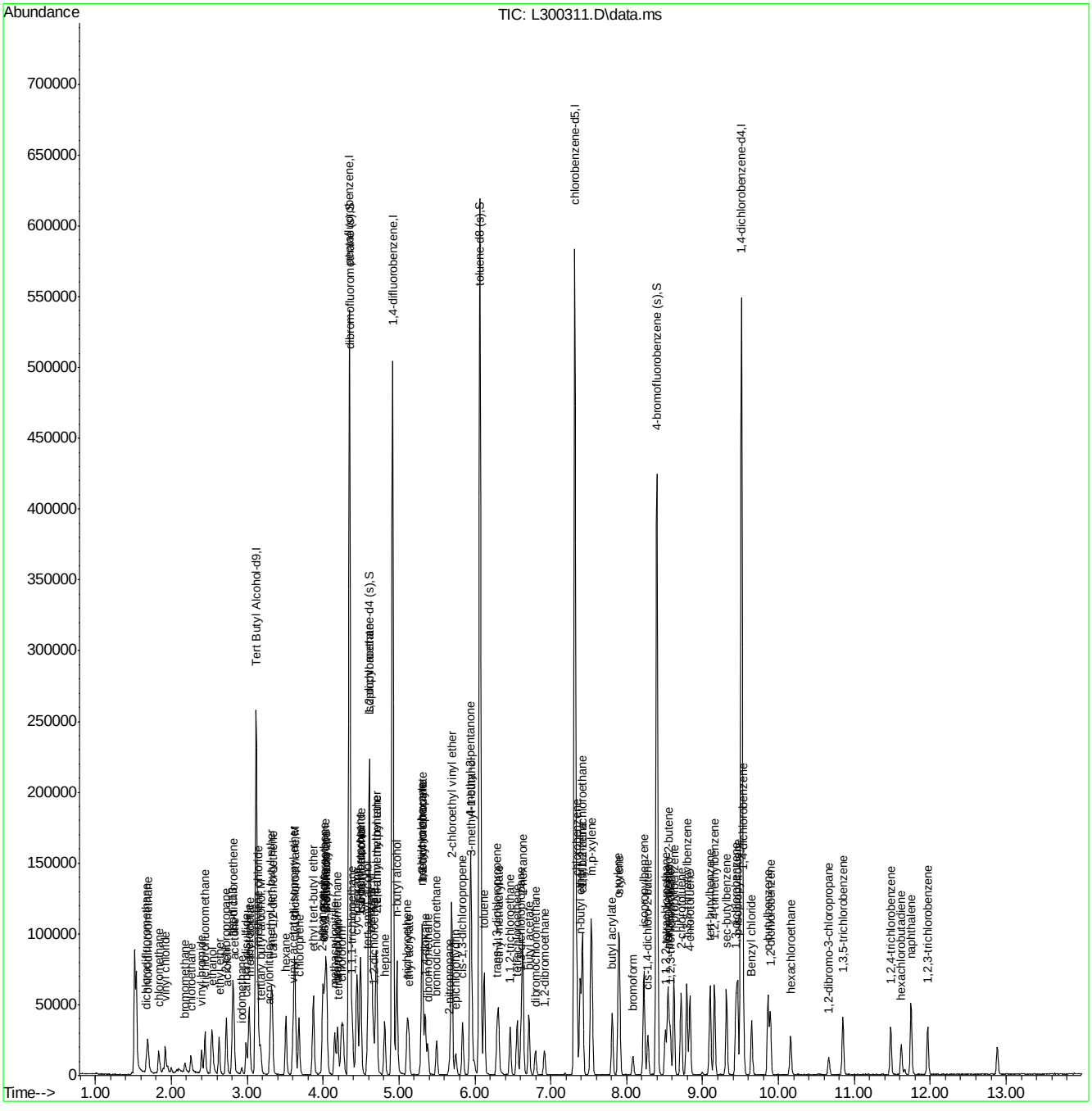
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
93) o-xylene	7.892	106	17826	5.68	ug/L		94
94) butyl acrylate	7.808	55	26949	5.14	ug/L		94
95) styrene	7.905	104	29812	5.65	ug/L		98
96) bromoform	8.084	173	5627	4.45	ug/L		93
97) isopropylbenzene	8.229	105	45055	5.52	ug/L		99
98) cis-1,4-dichloro-2-butene	8.280	88	5606	4.81	ug/L		95
101) bromobenzene	8.546	156	10528	4.96	ug/L		97
102) 1,1,2,2-tetrachloroethane	8.511	83	15527	4.98	ug/L		84
103) trans-1,4-dichloro-2-b...	8.550	53	5194	4.95	ug/L	#	76
104) 1,2,3-trichloropropane	8.575	110	4453	5.22	ug/L		88
105) n-propylbenzene	8.623	91	52527	5.26	ug/L		97
106) 2-chlorotoluene	8.716	126	10092	5.04	ug/L		94
107) 4-chlorotoluene	8.832	126	10085	5.21	ug/L		96
109) 1,3,5-trimethylbenzene	8.793	105	34833	5.16	ug/L		94
110) tert-butylbenzene	9.098	119	28519	4.95	ug/L		99
111) 1,2,4-trimethylbenzene	9.156	105	34919	5.15	ug/L		99
112) sec-butylbenzene	9.320	105	41480	5.06	ug/L		96
113) 1,3-dichlorobenzene	9.442	146	19183	5.15	ug/L		96
114) p-isopropyltoluene	9.461	119	34250	5.28	ug/L		95
115) 1,4-dichlorobenzene	9.535	146	18269	5.11	ug/L		97
116) 1,2-dichlorobenzene	9.894	146	18019	5.09	ug/L		94
118) n-butylbenzene	9.862	92	16537	4.72	ug/L		97
120) 1,2-dibromo-3-chloropr...	10.661	157	3443	4.35	ug/L		95
121) 1,3,5-trichlorobenzene	10.847	180	12772	4.80	ug/L		96
122) 1,2,4-trichlorobenzene	11.482	180	11186	4.52	ug/L		93
123) hexachlorobutadiene	11.617	225	4121	4.46	ug/L		95
124) naphthalene	11.746	128	39482	4.66	ug/L		99
125) 1,2,3-trichlorobenzene	11.964	180	10626	4.56	ug/L		93
126) hexachloroethane	10.157	119	4940	4.24	ug/L		97
127) Benzyl chloride	9.647	91	26900	4.64	ug/L		99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300311.D
Acq On : 16 Apr 2018 4:16 pm
Operator : vidishp
Sample : ic8534-5
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 17 14:58:15 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300312.D
Acq On : 16 Apr 2018 4:43 pm
Operator : vidishp
Sample : ic8534-10
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 17 14:58:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.117	65	230503	500.00	ug/L	0.00
5) pentafluorobenzene	4.343	168	218657	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.914	114	313800	50.00	ug/L	0.00
76) chlorobenzene-d5	7.314	117	288642	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.515	152	129896	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.352	113	83594	50.02	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.04%						
56) 1,2-dichloroethane-d4 (s)	4.606	65	104411	53.08	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 106.16%						
77) toluene-d8 (s)	6.066	98	344044	52.37	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 104.74%						
100) 4-bromofluorobenzene (s)	8.399	95	139079	48.24	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 96.48%						
Target Compounds						Qvalue
2) 1,4-dioxane	5.344	88	11158	261.74	ug/L	99
3) ethanol	2.536	45	64734	1013.16	ug/L	97
4) tertiary butyl alcohol	3.175	59	26944	50.71	ug/L	95
6) chlorodifluoromethane	1.689	51	29966	9.71	ug/L	98
7) dichlorodifluoromethane	1.673	85	27192	9.80	ug/L	94
10) chloromethane	1.833	50	28544	9.43	ug/L	99
12) vinyl chloride	1.920	62	29538	9.92	ug/L	97
13) bromomethane	2.177	94	7030	9.26	ug/L	97
14) chloroethane	2.257	64	16298	10.21	ug/L	98
15) vinyl bromide	2.398	106	16700	10.06	ug/L	97
16) trichlorofluoromethane	2.443	101	31811	9.93	ug/L	98
17) ethyl ether	2.629	74	14546	10.36	ug/L	95
18) 2-chloropropane	2.725	43	41943	10.39	ug/L	98
19) acrolein	2.735	56	7564	10.08	ug/L	90
20) freon 113	2.806	151	13806	10.32	ug/L	99
21) 1,1-dichloroethene	2.812	96	19206	10.31	ug/L	96
22) acetone	2.825	58	13903	39.21	ug/L	95
23) acetonitrile	3.021	40	30935	99.97	ug/L	99
24) iodomethane	2.928	142	11276	7.33	ug/L	95
25) iso-butyl alcohol	4.490	43	21134	100.71	ug/L	97
26) carbon disulfide	2.985	76	47761	10.00	ug/L	99
27) methylene chloride	3.143	84	20440	10.15	ug/L	94
28) methyl acetate	3.033	74	6453	10.22	ug/L	96
29) methyl tert butyl ether	3.313	73	71548	10.53	ug/L	96
30) trans-1,2-dichloroethene	3.329	96	19958	10.39	ug/L	99
31) hexane	3.508	57	29375	10.19	ug/L	99
32) di-isopropyl ether	3.624	45	82398	10.64	ug/L	90
33) ethyl tert-butyl ether	3.868	59	77729	10.49	ug/L	95
34) 2-butanone	3.993	72	18258	39.90	ug/L	93
35) 1,1-dichloroethane	3.630	63	41794	10.66	ug/L	95
36) chloroprene	3.682	53	37527	10.50	ug/L	96
37) acrylonitrile	3.293	53	14335	9.90	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300312.D
Acq On : 16 Apr 2018 4:43 pm
Operator : vidishp
Sample : ic8534-10
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 17 14:58:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
38) vinyl acetate	3.605	86	5259	9.40	ug/L	#	88
39) ethyl acetate	4.003	45	6783	10.54	ug/L	#	83
40) 2,2-dichloropropane	4.031	77	32534	10.67	ug/L		95
41) cis-1,2-dichloroethene	4.019	96	21897	10.48	ug/L		92
42) propionitrile	4.041	54	65932	106.84	ug/L		97
43) methyl acrylate	4.044	85	4947	10.18	ug/L	#	94
44) bromochloromethane	4.185	128	9491	10.43	ug/L		98
45) tetrahydrofuran	4.195	72	5370	10.27	ug/L		100
46) chloroform	4.240	83	36374	10.45	ug/L		96
48) methacrylonitrile	4.150	67	13552	9.94	ug/L		94
49) 1,1,1-trichloroethane	4.384	97	29897	10.24	ug/L		95
50) cyclohexane	4.439	84	25873	10.20	ug/L		97
51) 1,1-dichloropropene	4.490	75	29496	10.66	ug/L		97
52) carbon tetrachloride	4.493	117	23353	10.44	ug/L		96
53) isopropyl acetate	4.612	87	6071	9.60	ug/L		96
54) tert amyl alcohol	4.587	55	9452	51.03	ug/L		97
57) tert-amyl methyl ether	4.699	73	66370	10.95	ug/L		99
58) 2,2,4-trimethylpentane	4.702	57	57826	10.94	ug/L		99
59) epichlorohydrin	5.745	57	21708	50.09	ug/L		91
60) n-butyl alcohol	4.972	56	67083	517.47	ug/L		97
61) benzene	4.638	78	83332	11.08	ug/L		99
62) heptane	4.808	57	13291	10.75	ug/L		93
63) 1,2-dichloroethane	4.664	62	30346	11.00	ug/L		99
64) trichloroethene	5.106	95	20320	10.31	ug/L		94
65) ethyl acrylate	5.129	55	41675	10.08	ug/L		99
66) 2-nitropropane	5.668	41	13255	9.84	ug/L		98
67) 2-chloroethyl vinyl ether	5.694	63	87355	52.94	ug/L		100
68) methyl methacrylate	5.305	100	7462	10.02	ug/L		95
69) 1,2-dichloropropane	5.309	63	22943	10.72	ug/L		96
70) methylcyclohexane	5.296	83	32479	10.40	ug/L		99
71) dibromomethane	5.376	93	12704	10.58	ug/L		91
72) bromodichloromethane	5.498	83	26420	10.12	ug/L		100
73) cis-1,3-dichloropropene	5.838	75	36258	10.48	ug/L		97
74) 4-methyl-2-pentanone	5.937	58	55927	42.94	ug/L	#	89
75) 3-methyl-1-butanol	5.954	70	24024	214.35	ug/L		99
78) toluene	6.124	92	48687	10.80	ug/L		95
79) trans-1,3-dichloropropene	6.290	75	32389	10.31	ug/L		91
80) ethyl methacrylate	6.313	69	34887	10.45	ug/L		98
81) 1,1,2-trichloroethane	6.461	83	16932	10.58	ug/L		92
82) 2-hexanone	6.631	58	57867	44.36	ug/L		96
83) tetrachloroethene	6.557	166	20018	10.74	ug/L		97
84) 1,3-dichloropropane	6.608	76	34361	10.87	ug/L		99
85) butyl acetate	6.714	56	21238	10.82	ug/L		96
86) dibromochloromethane	6.797	129	17041	9.98	ug/L		93
87) 1,2-dibromoethane	6.913	107	21720	10.58	ug/L		98
88) n-butyl ether	7.385	57	95538	10.94	ug/L		99
89) chlorobenzene	7.343	112	49821	10.47	ug/L		94
90) 1,1,1,2-tetrachloroethane	7.414	131	16404	10.50	ug/L		88
91) ethylbenzene	7.417	91	91874	11.37	ug/L		96
92) m,p-xylene	7.532	106	67104	22.23	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300312.D
Acq On : 16 Apr 2018 4:43 pm
Operator : vidishp
Sample : ic8534-10
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 17 14:58:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

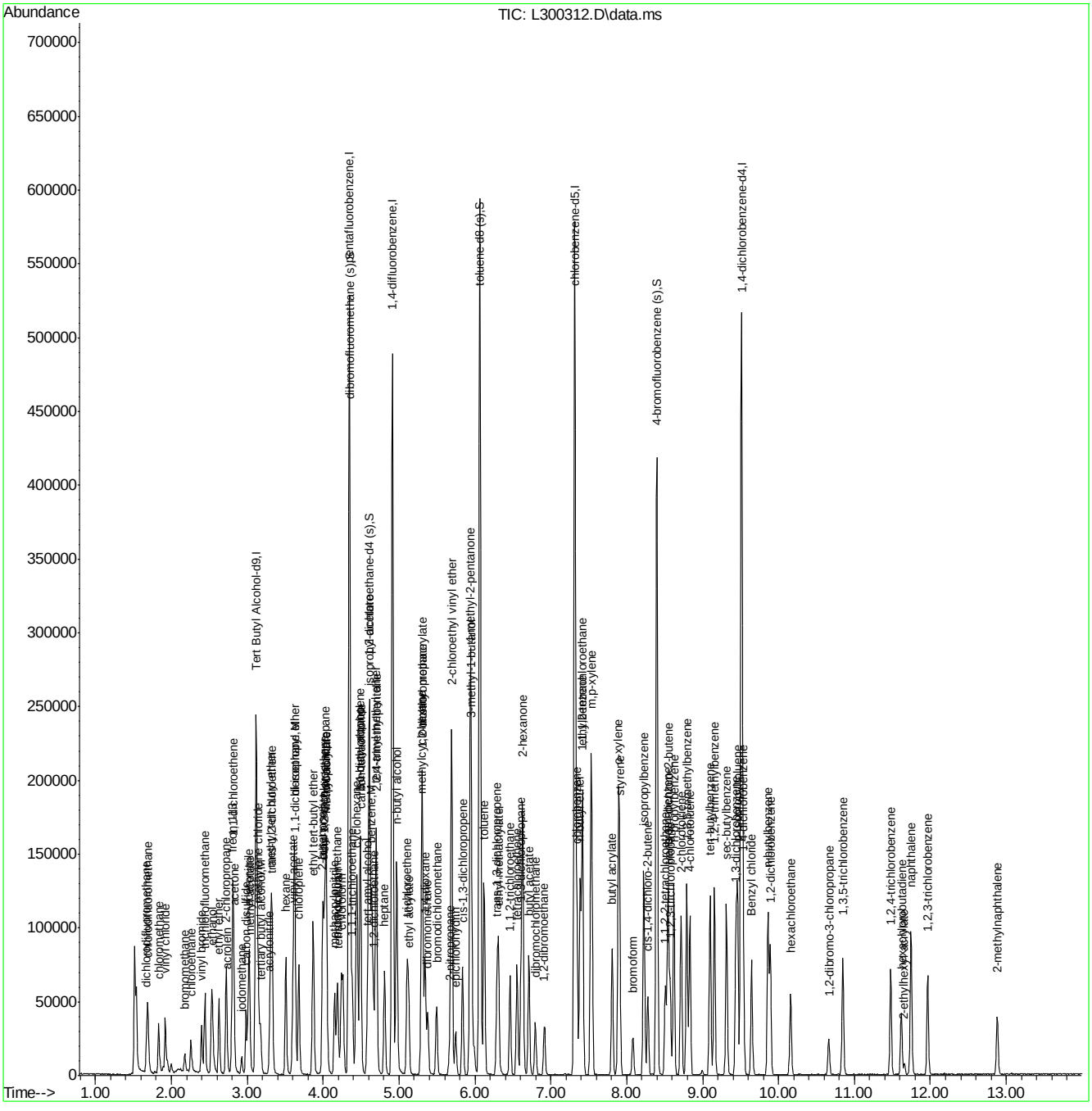
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
93) o-xylene	7.892	106	34140	11.12 ug/L	91
94) butyl acrylate	7.808	55	53123	10.37 ug/L	98
95) styrene	7.908	104	57631	11.15 ug/L	98
96) bromoform	8.081	173	11396	9.21 ug/L	97
97) isopropylbenzene	8.225	105	88146	11.04 ug/L	99
98) cis-1,4-dichloro-2-butene	8.280	88	10591	9.29 ug/L	98
101) bromobenzene	8.543	156	20874	10.12 ug/L	99
102) 1,1,2,2-tetrachloroethane	8.508	83	29818	9.85 ug/L	98
103) trans-1,4-dichloro-2-b...	8.550	53	9695	9.50 ug/L	91
104) 1,2,3-trichloropropane	8.575	110	8458	10.19 ug/L	98
105) n-propylbenzene	8.623	91	100360	10.34 ug/L	99
106) 2-chlorotoluene	8.720	126	19688	10.12 ug/L	98
107) 4-chlorotoluene	8.832	126	19791	10.51 ug/L	97
109) 1,3,5-trimethylbenzene	8.790	105	67793	10.33 ug/L	96
110) tert-butylbenzene	9.101	119	55951	10.00 ug/L	96
111) 1,2,4-trimethylbenzene	9.156	105	68218	10.35 ug/L	98
112) sec-butylbenzene	9.313	105	80799	10.14 ug/L	98
113) 1,3-dichlorobenzene	9.438	146	36477	10.07 ug/L	99
114) p-isopropyltoluene	9.461	119	65574	10.39 ug/L	98
115) 1,4-dichlorobenzene	9.538	146	34497	9.93 ug/L	97
116) 1,2-dichlorobenzene	9.894	146	34544	10.05 ug/L	97
118) n-butylbenzene	9.862	92	32803	9.63 ug/L	95
120) 1,2-dibromo-3-chloropr...	10.667	157	6236	8.11 ug/L	90
121) 1,3,5-trichlorobenzene	10.850	180	24470	9.47 ug/L	98
122) 1,2,4-trichlorobenzene	11.479	180	21522	8.94 ug/L	97
123) hexachlorobutadiene	11.620	225	8613	9.60 ug/L	91
124) naphthalene	11.746	128	76641	9.30 ug/L	99
125) 1,2,3-trichlorobenzene	11.967	180	20805	9.19 ug/L	94
126) hexachloroethane	10.160	119	9752	8.61 ug/L	99
127) Benzyl chloride	9.647	91	52417	9.31 ug/L	98
128) 2-ethylhexyl acrylate	11.656	70	1946	1.38 ug/L	94
129) 2-methylnaphthalene	12.882	142	19484	4.07 ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300312.D
Acq On : 16 Apr 2018 4:43 pm
Operator : vidishp
Sample : ic8534-10
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 17 14:58:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300313.D
Acq On : 16 Apr 2018 5:10 pm
Operator : vidishp
Sample : ic8534-20
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 17 14:59:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.117	65	240728	500.00	ug/L	0.00
5) pentafluorobenzene	4.343	168	211994	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.914	114	307313	50.00	ug/L	0.00
76) chlorobenzene-d5	7.314	117	290135	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	125581	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.352	113	81449	50.27	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.54%						
56) 1,2-dichloroethane-d4 (s)	4.606	65	105530	54.78	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 109.56%						
77) toluene-d8 (s)	6.063	98	336391	50.94	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 101.88%						
100) 4-bromofluorobenzene (s)	8.399	95	138208	49.58	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 99.16%						
Target Compounds						Qvalue
2) 1,4-dioxane	5.350	88	21727	488.02	ug/L	100
3) ethanol	2.533	45	129624	1942.58	ug/L	100
4) tertiary butyl alcohol	3.175	59	54801	98.76	ug/L	96
6) chlorodifluoromethane	1.689	51	55186	18.45	ug/L	98
7) dichlorodifluoromethane	1.676	85	50427	18.75	ug/L	97
10) chloromethane	1.833	50	53507	18.24	ug/L	96
12) vinyl chloride	1.920	62	53379	18.49	ug/L	98
13) bromomethane	2.170	94	14107	19.16	ug/L	97
14) chloroethane	2.257	64	29469	19.04	ug/L	96
15) vinyl bromide	2.398	106	30369	18.86	ug/L	97
16) trichlorofluoromethane	2.440	101	58405	18.81	ug/L	96
17) ethyl ether	2.626	74	28009	20.58	ug/L	96
18) 2-chloropropane	2.719	43	77772	19.87	ug/L	99
19) acrolein	2.732	56	14744	20.27	ug/L	94
20) freon 113	2.803	151	26300	20.28	ug/L	97
21) 1,1-dichloroethene	2.812	96	35274	19.53	ug/L	97
22) acetone	2.825	58	28242	82.16	ug/L	99
23) acetonitrile	3.021	40	61646	205.48	ug/L	98
24) iodomethane	2.925	142	23868	16.00	ug/L	95
25) iso-butyl alcohol	4.490	43	42513	208.96	ug/L	96
26) carbon disulfide	2.985	76	88982	19.21	ug/L	100
27) methylene chloride	3.143	84	38552	19.74	ug/L	99
28) methyl acetate	3.030	74	12339	20.16	ug/L #	72
29) methyl tert butyl ether	3.313	73	134020	20.35	ug/L	98
30) trans-1,2-dichloroethene	3.329	96	37255	20.00	ug/L	97
31) hexane	3.509	57	54917	19.64	ug/L	99
32) di-isopropyl ether	3.621	45	155109	20.66	ug/L	99
33) ethyl tert-butyl ether	3.868	59	145751	20.28	ug/L	99
34) 2-butanone	3.993	72	36239	81.68	ug/L	94
35) 1,1-dichloroethane	3.627	63	77241	20.31	ug/L	98
36) chloroprene	3.682	53	68702	19.82	ug/L	98
37) acrylonitrile	3.297	53	28143	20.05	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300313.D
Acq On : 16 Apr 2018 5:10 pm
Operator : vidishp
Sample : ic8534-20
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 17 14:59:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) vinyl acetate	3.602	86	10400	19.18 ug/L #	79
39) ethyl acetate	3.999	45	11825	18.96 ug/L	87
40) 2,2-dichloropropane	4.032	77	60294	20.40 ug/L	98
41) cis-1,2-dichloroethene	4.019	96	41902	20.68 ug/L	96
42) propionitrile	4.041	54	127558	213.19 ug/L	94
43) methyl acrylate	4.048	85	9761	20.73 ug/L #	93
44) bromochloromethane	4.182	128	18015	20.43 ug/L	98
45) tetrahydrofuran	4.195	72	10392	20.49 ug/L	100
46) chloroform	4.240	83	68595	20.33 ug/L	96
48) methacrylonitrile	4.150	67	26472	20.03 ug/L	97
49) 1,1,1-trichloroethane	4.381	97	54180	19.15 ug/L	98
50) cyclohexane	4.439	84	49402	20.09 ug/L	99
51) 1,1-dichloropropene	4.487	75	53593	19.98 ug/L	99
52) carbon tetrachloride	4.494	117	43376	20.00 ug/L	97
53) isopropyl acetate	4.609	87	12636	20.60 ug/L	95
54) tert amyl alcohol	4.587	55	19027	105.96 ug/L	95
57) tert-amyl methyl ether	4.699	73	124296	20.94 ug/L	99
58) 2,2,4-trimethylpentane	4.699	57	108526	20.97 ug/L	97
59) epichlorohydrin	5.745	57	43746	103.08 ug/L	97
60) n-butyl alcohol	4.969	56	137593	1083.79 ug/L	96
61) benzene	4.638	78	152532	20.71 ug/L	98
62) heptane	4.808	57	24259	20.03 ug/L	97
63) 1,2-dichloroethane	4.661	62	56194	20.80 ug/L	98
64) trichloroethene	5.107	95	38229	19.81 ug/L	95
65) ethyl acrylate	5.126	55	82983	20.49 ug/L	100
66) 2-nitropropane	5.665	41	26229	19.88 ug/L	92
67) 2-chloroethyl vinyl ether	5.691	63	170084	105.26 ug/L	98
68) methyl methacrylate	5.306	100	14873	20.38 ug/L	95
69) 1,2-dichloropropane	5.309	63	43689	20.84 ug/L	98
70) methylcyclohexane	5.296	83	62151	20.32 ug/L	98
71) dibromomethane	5.373	93	24344	20.70 ug/L	91
72) bromodichloromethane	5.495	83	50098	19.59 ug/L	99
73) cis-1,3-dichloropropene	5.838	75	68694	20.28 ug/L	98
74) 4-methyl-2-pentanone	5.938	58	110570	86.69 ug/L	94
75) 3-methyl-1-butanol	5.954	70	47803	435.52 ug/L	98
78) toluene	6.121	92	91420	20.18 ug/L	97
79) trans-1,3-dichloropropene	6.287	75	63540	20.12 ug/L	96
80) ethyl methacrylate	6.310	69	69049	20.58 ug/L	98
81) 1,1,2-trichloroethane	6.461	83	32766	20.37 ug/L	97
82) 2-hexanone	6.628	58	115193	87.86 ug/L	96
83) tetrachloroethene	6.557	166	37438	19.98 ug/L	95
84) 1,3-dichloropropane	6.605	76	65446	20.60 ug/L	99
85) butyl acetate	6.708	56	41619	21.09 ug/L	96
86) dibromochloromethane	6.798	129	33798	19.69 ug/L	99
87) 1,2-dibromoethane	6.916	107	41669	20.20 ug/L	99
88) n-butyl ether	7.385	57	181335	20.66 ug/L	99
89) chlorobenzene	7.340	112	95231	19.91 ug/L	100
90) 1,1,1,2-tetrachloroethane	7.411	131	31983	20.38 ug/L	97
91) ethylbenzene	7.417	91	169911	20.92 ug/L	96
92) m,p-xylene	7.532	106	125597	41.40 ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300313.D
Acq On : 16 Apr 2018 5:10 pm
Operator : vidishp
Sample : ic8534-20
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 17 14:59:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

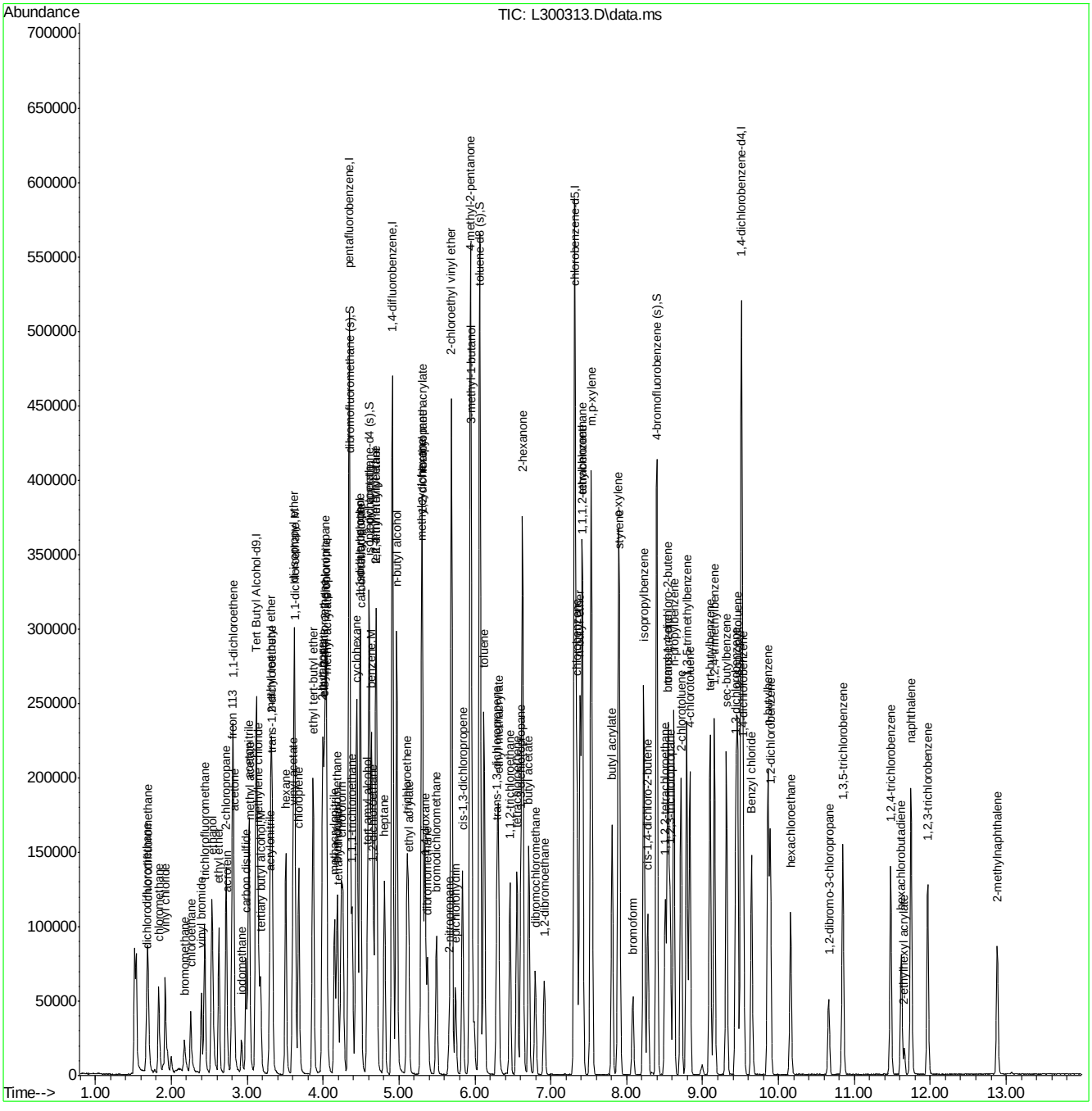
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
93) o-xylene	7.892	106	64649	20.95 ug/L	97
94) butyl acrylate	7.808	55	104448	20.28 ug/L	98
95) styrene	7.905	104	108555	20.90 ug/L	98
96) bromoform	8.078	173	23629	18.99 ug/L	97
97) isopropylbenzene	8.226	105	163631	20.39 ug/L	99
98) cis-1,4-dichloro-2-butene	8.277	88	22537	19.66 ug/L	95
101) bromobenzene	8.540	156	39759	19.94 ug/L	98
102) 1,1,2,2-tetrachloroethane	8.508	83	57250	19.55 ug/L	96
103) trans-1,4-dichloro-2-b...	8.547	53	19244	19.50 ug/L	96
104) 1,2,3-trichloropropane	8.572	110	16295	20.32 ug/L	94
105) n-propylbenzene	8.620	91	186393	19.87 ug/L	100
106) 2-chlorotoluene	8.720	126	37136	19.75 ug/L	98
107) 4-chlorotoluene	8.832	126	36261	19.92 ug/L	98
109) 1,3,5-trimethylbenzene	8.790	105	124724	19.66 ug/L	100
110) tert-butylbenzene	9.098	119	105303	19.46 ug/L	97
111) 1,2,4-trimethylbenzene	9.153	105	127734	20.05 ug/L	97
112) sec-butylbenzene	9.313	105	149747	19.44 ug/L	98
113) 1,3-dichlorobenzene	9.439	146	69840	19.94 ug/L	98
114) p-isopropyltoluene	9.461	119	120531	19.75 ug/L	97
115) 1,4-dichlorobenzene	9.538	146	66408	19.78 ug/L	99
116) 1,2-dichlorobenzene	9.891	146	65760	19.78 ug/L	99
118) n-butylbenzene	9.862	92	62164	18.88 ug/L	98
120) 1,2-dibromo-3-chloropr...	10.664	157	13328	17.93 ug/L	95
121) 1,3,5-trichlorobenzene	10.847	180	47615	19.05 ug/L	98
122) 1,2,4-trichlorobenzene	11.479	180	43231	18.58 ug/L	96
123) hexachlorobutadiene	11.617	225	16173	18.64 ug/L	97
124) naphthalene	11.746	128	152929	19.20 ug/L	99
125) 1,2,3-trichlorobenzene	11.967	180	40540	18.53 ug/L	98
126) hexachloroethane	10.161	119	19773	18.07 ug/L	99
127) Benzyl chloride	9.644	91	104410	19.18 ug/L	99
128) 2-ethylhexyl acrylate	11.656	70	4323	3.17 ug/L	93
129) 2-methylnaphthalene	12.882	142	41500	8.96 ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300313.D
Acq On : 16 Apr 2018 5:10 pm
Operator : vidishp
Sample : ic8534-20
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 17 14:59:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300314.D
Acq On : 16 Apr 2018 5:37 pm
Operator : vidishp
Sample : icc8534-50
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 17 14:59:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.123	65	210614	500.00	ug/L	0.00
5) pentafluorobenzene	4.343	168	194746	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.914	114	286372	50.00	ug/L	0.00
76) chlorobenzene-d5	7.314	117	273240	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	113363	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.353	113	74425	50.00	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.00%						
56) 1,2-dichloroethane-d4 (s)	4.606	65	89763	50.00	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 100.00%						
77) toluene-d8 (s)	6.066	98	310975	50.00	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.00%						
100) 4-bromofluorobenzene (s)	8.396	95	125811	50.00	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.00%						
Target Compounds						Qvalue
2) 1,4-dioxane	5.350	88	48689	1250.00	ug/L	100
3) ethanol	2.543	45	291902	5000.00	ug/L	100
4) tertiary butyl alcohol	3.178	59	121374	250.00	ug/L	100
6) chlorodifluoromethane	1.689	51	137366	50.00	ug/L	100
7) dichlorodifluoromethane	1.673	85	123526	50.00	ug/L	100
10) chloromethane	1.833	50	134740	50.00	ug/L	100
12) vinyl chloride	1.920	62	132579	50.00	ug/L	100
13) bromomethane	2.164	94	33817	50.00	ug/L	100
14) chloroethane	2.251	64	71108	50.00	ug/L	100
15) vinyl bromide	2.392	106	73944	50.00	ug/L	100
16) trichlorofluoromethane	2.437	101	142609	50.00	ug/L	100
17) ethyl ether	2.626	74	62526	50.00	ug/L	100
18) 2-chloropropane	2.719	43	179742	50.00	ug/L	100
19) acrolein	2.732	56	33406	50.00	ug/L	100
20) freon 113	2.803	151	59562	50.00	ug/L	100
21) 1,1-dichloroethene	2.809	96	82955	50.00	ug/L	100
22) acetone	2.825	58	63154	200.00	ug/L	100
23) acetonitrile	3.021	40	137801	500.00	ug/L	100
24) iodomethane	2.925	142	68537	50.00	ug/L	100
25) iso-butyl alcohol	4.497	43	92668	495.83	ug/L	100
26) carbon disulfide	2.982	76	212716	50.00	ug/L	100
27) methylene chloride	3.143	84	89712	50.00	ug/L	100
28) methyl acetate	3.030	74	28118	50.00	ug/L	100
29) methyl tert butyl ether	3.313	73	302558	50.00	ug/L	100
30) trans-1,2-dichloroethene	3.326	96	85571	50.00	ug/L	100
31) hexane	3.509	57	128428	50.00	ug/L	100
32) di-isopropyl ether	3.621	45	344892	50.00	ug/L	100
33) ethyl tert-butyl ether	3.868	59	330097	50.00	ug/L	100
34) 2-butanone	3.993	72	81515	200.00	ug/L	100
35) 1,1-dichloroethane	3.627	63	174647	50.00	ug/L	100
36) chloroprene	3.679	53	159180	50.00	ug/L	100
37) acrylonitrile	3.297	53	64466	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300314.D
Acq On : 16 Apr 2018 5:37 pm
Operator : vidishp
Sample : icc8534-50
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 17 14:59:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) vinyl acetate	3.602	86	24912	50.00	ug/L	100
39) ethyl acetate	4.000	45	28651	50.00	ug/L	100
40) 2,2-dichloropropane	4.028	77	135782	50.00	ug/L	100
41) cis-1,2-dichloroethene	4.016	96	93073	50.00	ug/L	100
42) propionitrile	4.044	54	274820	500.00	ug/L	100
43) methyl acrylate	4.044	85	21631	50.00	ug/L	100
44) bromochloromethane	4.182	128	40508	50.00	ug/L	100
45) tetrahydrofuran	4.195	72	23290	50.00	ug/L	100
46) chloroform	4.237	83	154970	50.00	ug/L	100
48) methacrylonitrile	4.150	67	60699	50.00	ug/L	100
49) 1,1,1-trichloroethane	4.381	97	129966	50.00	ug/L	100
50) cyclohexane	4.439	84	112953	50.00	ug/L	100
51) 1,1-dichloropropene	4.487	75	123216	50.00	ug/L	100
52) carbon tetrachloride	4.494	117	99638	50.00	ug/L	100
53) isopropyl acetate	4.609	87	28175	50.00	ug/L	100
54) tert amyl alcohol	4.587	55	41240	250.00	ug/L	100
57) tert-amyl methyl ether	4.699	73	276560	50.00	ug/L	100
58) 2,2,4-trimethylpentane	4.699	57	241154	50.00	ug/L	100
59) epichlorohydrin	5.748	57	98868	250.00	ug/L	100
60) n-butyl alcohol	4.975	56	295762	2500.00	ug/L	100
61) benzene	4.638	78	343210	50.00	ug/L	100
62) heptane	4.808	57	56428	50.00	ug/L	100
63) 1,2-dichloroethane	4.664	62	125885	50.00	ug/L	100
64) trichloroethene	5.107	95	89925	50.00	ug/L	100
65) ethyl acrylate	5.126	55	188734	50.00	ug/L	100
66) 2-nitropropane	5.665	41	61488	50.00	ug/L	100
67) 2-chloroethyl vinyl ether	5.691	63	376444	250.00	ug/L	100
68) methyl methacrylate	5.306	100	33996	50.00	ug/L	100
69) 1,2-dichloropropane	5.309	63	97665	50.00	ug/L	100
70) methylcyclohexane	5.296	83	142529	50.00	ug/L	100
71) dibromomethane	5.376	93	54802	50.00	ug/L	100
72) bromodichloromethane	5.495	83	119174	50.00	ug/L	100
73) cis-1,3-dichloropropene	5.835	75	157806	50.00	ug/L	100
74) 4-methyl-2-pentanone	5.938	58	237713	200.00	ug/L	100
75) 3-methyl-1-butanol	5.957	70	102282	1000.00	ug/L	100
78) toluene	6.121	92	213326	50.00	ug/L	100
79) trans-1,3-dichloropropene	6.291	75	148713	50.00	ug/L	100
80) ethyl methacrylate	6.310	69	157991	50.00	ug/L	100
81) 1,1,2-trichloroethane	6.464	83	75761	50.00	ug/L	100
82) 2-hexanone	6.631	58	246958	200.00	ug/L	100
83) tetrachloroethene	6.557	166	88219	50.00	ug/L	100
84) 1,3-dichloropropane	6.608	76	149625	50.00	ug/L	100
85) butyl acetate	6.711	56	92911	50.00	ug/L	100
86) dibromochloromethane	6.798	129	80824	50.00	ug/L	100
87) 1,2-dibromoethane	6.916	107	97141	50.00	ug/L	100
88) n-butyl ether	7.385	57	413353	50.00	ug/L	100
89) chlorobenzene	7.343	112	225186	50.00	ug/L	100
90) 1,1,1,2-tetrachloroethane	7.411	131	73914	50.00	ug/L	100
91) ethylbenzene	7.417	91	382368	50.00	ug/L	100
92) m,p-xylene	7.533	106	285695	100.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300314.D
Acq On : 16 Apr 2018 5:37 pm
Operator : vidishp
Sample : icc8534-50
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 17 14:59:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

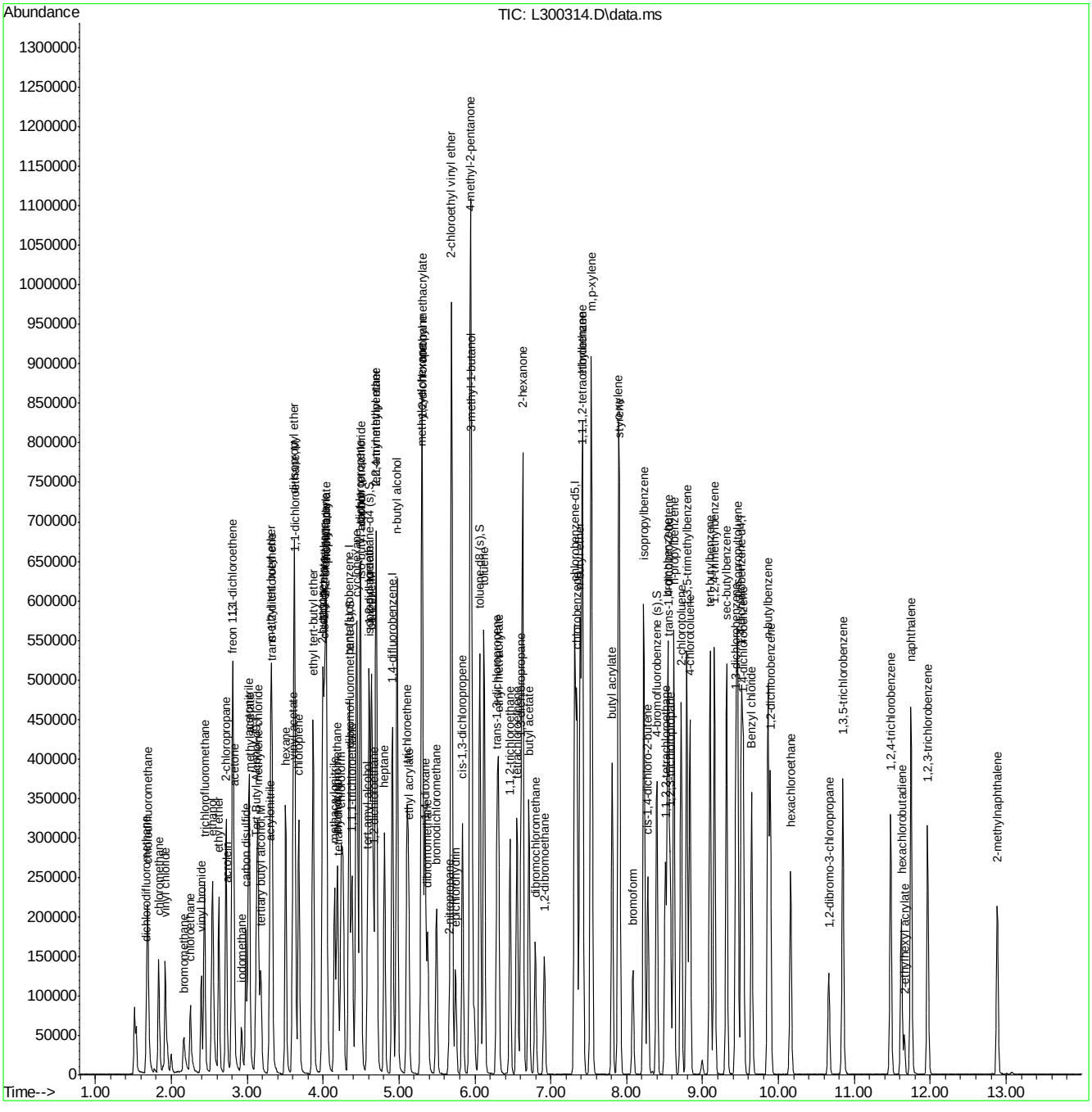
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
93) o-xylene	7.892	106	145313	50.00 ug/L	100
94) butyl acrylate	7.808	55	242544	50.00 ug/L	100
95) styrene	7.905	104	244538	50.00 ug/L	100
96) bromoform	8.081	173	58577	50.00 ug/L	100
97) isopropylbenzene	8.226	105	377807	50.00 ug/L	100
98) cis-1,4-dichloro-2-butene	8.280	88	53977	50.00 ug/L	100
101) bromobenzene	8.543	156	90010	50.00 ug/L	100
102) 1,1,2,2-tetrachloroethane	8.511	83	132161	50.00 ug/L	100
103) trans-1,4-dichloro-2-b...	8.550	53	44552	50.00 ug/L	100
104) 1,2,3-trichloropropane	8.572	110	36203	50.00 ug/L	100
105) n-propylbenzene	8.620	91	423331	50.00 ug/L	100
106) 2-chlorotoluene	8.720	126	84877	50.00 ug/L	100
107) 4-chlorotoluene	8.832	126	82169	50.00 ug/L	100
109) 1,3,5-trimethylbenzene	8.794	105	286358	50.00 ug/L	100
110) tert-butylbenzene	9.098	119	244237	50.00 ug/L	100
111) 1,2,4-trimethylbenzene	9.156	105	287585	50.00 ug/L	100
112) sec-butylbenzene	9.317	105	347647	50.00 ug/L	100
113) 1,3-dichlorobenzene	9.439	146	158054	50.00 ug/L	100
114) p-isopropyltoluene	9.461	119	275450	50.00 ug/L	100
115) 1,4-dichlorobenzene	9.538	146	151562	50.00 ug/L	100
116) 1,2-dichlorobenzene	9.894	146	150060	50.00 ug/L	100
118) n-butylbenzene	9.862	92	148651	50.00 ug/L	100
120) 1,2-dibromo-3-chloropr...	10.664	157	33552	50.00 ug/L	100
121) 1,3,5-trichlorobenzene	10.847	180	112800	50.00 ug/L	100
122) 1,2,4-trichlorobenzene	11.479	180	105019	50.00 ug/L	100
123) hexachlorobutadiene	11.621	225	39169	50.00 ug/L	100
124) naphthalene	11.746	128	359559	50.00 ug/L	100
125) 1,2,3-trichlorobenzene	11.967	180	98765	50.00 ug/L	100
126) hexachloroethane	10.161	119	49400	50.00 ug/L	100
127) Benzyl chloride	9.647	91	245689	50.00 ug/L	100
128) 2-ethylhexyl acrylate	11.662	70	12300	10.00 ug/L	100
129) 2-methylnaphthalene	12.882	142	104547	25.00 ug/L	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300314.D
Acq On : 16 Apr 2018 5:37 pm
Operator : vidishp
Sample : icc8534-50
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 17 14:59:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300315.D
Acq On : 16 Apr 2018 6:04 pm
Operator : vidishp
Sample : ic8534-100
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 17 14:59:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.136	65	189284	500.00	ug/L	0.01
5) pentafluorobenzene	4.343	168	185566	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.914	114	276806	50.00	ug/L	0.00
76) chlorobenzene-d5	7.314	117	264951	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.516	152	104265	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.349	113	71021	50.07	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.14%						
56) 1,2-dichloroethane-d4 (s)	4.609	65	83547	48.15	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 96.30%						
77) toluene-d8 (s)	6.066	98	300554	49.84	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 99.68%						
100) 4-bromofluorobenzene (s)	8.396	95	118183	51.07	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 102.14%						
Target Compounds						Qvalue
2) 1,4-dioxane	5.354	88	91415	2611.38	ug/L	99
3) ethanol	2.555	45	539963	10291.30	ug/L	98
4) tertiary butyl alcohol	3.191	59	227143	520.58	ug/L	98
6) chlorodifluoromethane	1.689	51	253280	96.75	ug/L	98
7) dichlorodifluoromethane	1.679	85	235689	100.12	ug/L	98
10) chloromethane	1.837	50	259283	100.98	ug/L	98
12) vinyl chloride	1.923	62	245832	97.30	ug/L	100
13) bromomethane	2.158	94	59638	92.54	ug/L	98
14) chloroethane	2.244	64	129633	95.66	ug/L	97
15) vinyl bromide	2.389	106	139318	98.87	ug/L	95
16) trichlorofluoromethane	2.434	101	259585	95.52	ug/L	98
17) ethyl ether	2.626	74	118553	99.49	ug/L	95
18) 2-chloropropane	2.719	43	322051	94.02	ug/L	100
19) acrolein	2.732	56	63839	100.28	ug/L	96
20) freon 113	2.799	151	110111	97.01	ug/L	98
21) 1,1-dichloroethene	2.806	96	148679	94.05	ug/L	100
22) acetone	2.825	58	118332	393.28	ug/L	95
23) acetonitrile	3.024	40	265231	1009.98	ug/L	96
24) iodomethane	2.925	142	134187	102.74	ug/L	98
25) iso-butyl alcohol	4.507	43	172059	966.16	ug/L	97
26) carbon disulfide	2.982	76	388830	95.92	ug/L	99
27) methylene chloride	3.143	84	168220	98.39	ug/L	100
28) methyl acetate	3.030	74	54544	101.79	ug/L #	88
29) methyl tert butyl ether	3.313	73	553117	95.93	ug/L	99
30) trans-1,2-dichloroethene	3.326	96	154416	94.69	ug/L	99
31) hexane	3.505	57	236484	96.62	ug/L	98
32) di-isopropyl ether	3.621	45	616757	93.84	ug/L	97
33) ethyl tert-butyl ether	3.868	59	608676	96.76	ug/L	99
34) 2-butanone	3.996	72	155377	400.08	ug/L	93
35) 1,1-dichloroethane	3.627	63	316264	95.02	ug/L	99
36) chloroprene	3.679	53	291894	96.22	ug/L	99
37) acrylonitrile	3.297	53	126051	102.60	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300315.D
Acq On : 16 Apr 2018 6:04 pm
Operator : vidishp
Sample : ic8534-100
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 17 14:59:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
38) vinyl acetate	3.602	86	45450	95.73	ug/L		98
39) ethyl acetate	4.003	45	54657	100.10	ug/L	#	61
40) 2,2-dichloropropane	4.032	77	244837	94.62	ug/L		99
41) cis-1,2-dichloroethene	4.016	96	169104	95.34	ug/L		98
42) propionitrile	4.048	54	492151	939.70	ug/L		95
43) methyl acrylate	4.048	85	40315	97.80	ug/L		96
44) bromochloromethane	4.186	128	74202	96.12	ug/L		97
45) tetrahydrofuran	4.195	72	44111	99.38	ug/L		99
46) chloroform	4.240	83	285673	96.73	ug/L		98
48) methacrylonitrile	4.150	67	117047	101.19	ug/L		97
49) 1,1,1-trichloroethane	4.381	97	244259	98.62	ug/L		99
50) cyclohexane	4.439	84	201159	93.45	ug/L		99
51) 1,1-dichloropropene	4.487	75	226230	96.34	ug/L		98
52) carbon tetrachloride	4.494	117	187297	98.64	ug/L		99
53) isopropyl acetate	4.609	87	53609	99.84	ug/L		99
54) tert amyl alcohol	4.600	55	74866	476.30	ug/L		94
57) tert-amyl methyl ether	4.699	73	504874	94.43	ug/L		99
58) 2,2,4-trimethylpentane	4.699	57	429057	92.03	ug/L		97
59) epichlorohydrin	5.752	57	185247	484.61	ug/L		92
60) n-butyl alcohol	4.985	56	555853	4860.85	ug/L		99
61) benzene	4.638	78	618950	93.29	ug/L		99
62) heptane	4.808	57	105073	96.32	ug/L		96
63) 1,2-dichloroethane	4.664	62	236464	97.17	ug/L		100
64) trichloroethene	5.107	95	168555	96.96	ug/L		97
65) ethyl acrylate	5.129	55	355579	97.46	ug/L		100
66) 2-nitropropane	5.668	41	119390	100.44	ug/L		93
67) 2-chloroethyl vinyl ether	5.694	63	676502	464.80	ug/L		97
68) methyl methacrylate	5.309	100	62382	94.92	ug/L	#	92
69) 1,2-dichloropropane	5.309	63	179284	94.96	ug/L		98
70) methylcyclohexane	5.296	83	260004	94.36	ug/L		98
71) dibromomethane	5.376	93	104807	98.93	ug/L		97
72) bromodichloromethane	5.495	83	229099	99.44	ug/L		100
73) cis-1,3-dichloropropene	5.838	75	300496	98.50	ug/L		100
74) 4-methyl-2-pentanone	5.941	58	431955	375.99	ug/L		91
75) 3-methyl-1-butanol	5.963	70	192494	1947.03	ug/L		99
78) toluene	6.121	92	397530	96.09	ug/L		99
79) trans-1,3-dichloropropene	6.291	75	281297	97.54	ug/L		97
80) ethyl methacrylate	6.313	69	294157	96.01	ug/L		98
81) 1,1,2-trichloroethane	6.464	83	142627	97.07	ug/L		95
82) 2-hexanone	6.634	58	444664	371.38	ug/L		95
83) tetrachloroethene	6.557	166	166903	97.56	ug/L		98
84) 1,3-dichloropropane	6.612	76	278463	95.96	ug/L		99
85) butyl acetate	6.711	56	175896	97.62	ug/L		97
86) dibromochloromethane	6.798	129	157282	100.34	ug/L		97
87) 1,2-dibromoethane	6.916	107	187516	99.54	ug/L		98
88) n-butyl ether	7.385	57	746293	93.10	ug/L		98
89) chlorobenzene	7.343	112	424052	97.10	ug/L		99
90) 1,1,1,2-tetrachloroethane	7.411	131	136751	95.40	ug/L		99
91) ethylbenzene	7.417	91	681292	91.88	ug/L		100
92) m,p-xylene	7.536	106	517945	186.96	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300315.D
Acq On : 16 Apr 2018 6:04 pm
Operator : vidishp
Sample : ic8534-100
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 17 14:59:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) o-xylene	7.892	106	267606	94.96	ug/L	95
94) butyl acrylate	7.808	55	454663	96.66	ug/L	100
95) styrene	7.908	104	437557	92.27	ug/L	100
96) bromoform	8.084	173	116606	102.65	ug/L	96
97) isopropylbenzene	8.229	105	680575	92.89	ug/L	97
98) cis-1,4-dichloro-2-butene	8.277	88	104931	100.24	ug/L	99
101) bromobenzene	8.543	156	169287	102.24	ug/L	98
102) 1,1,2,2-tetrachloroethane	8.511	83	251710	103.54	ug/L	98
103) trans-1,4-dichloro-2-b...	8.550	53	83925	102.41	ug/L	95
104) 1,2,3-trichloropropane	8.575	110	67378	101.18	ug/L	98
105) n-propylbenzene	8.620	91	753968	96.82	ug/L	97
106) 2-chlorotoluene	8.720	126	158543	101.55	ug/L	95
107) 4-chlorotoluene	8.832	126	153392	101.48	ug/L	96
109) 1,3,5-trimethylbenzene	8.794	105	521944	99.09	ug/L	100
110) tert-butylbenzene	9.098	119	446855	99.46	ug/L	99
111) 1,2,4-trimethylbenzene	9.156	105	525035	99.25	ug/L	98
112) sec-butylbenzene	9.317	105	632812	98.96	ug/L	99
113) 1,3-dichlorobenzene	9.439	146	295618	101.68	ug/L	99
114) p-isopropyltoluene	9.464	119	494886	97.67	ug/L	98
115) 1,4-dichlorobenzene	9.538	146	281601	101.01	ug/L	98
116) 1,2-dichlorobenzene	9.894	146	274502	99.45	ug/L	96
118) n-butylbenzene	9.862	92	277318	101.42	ug/L	99
120) 1,2-dibromo-3-chloropr...	10.664	157	69738	112.99	ug/L	99
121) 1,3,5-trichlorobenzene	10.847	180	219706	105.89	ug/L	98
122) 1,2,4-trichlorobenzene	11.479	180	209368	108.38	ug/L	98
123) hexachlorobutadiene	11.617	225	74504	103.40	ug/L	97
124) naphthalene	11.749	128	686609	103.81	ug/L	99
125) 1,2,3-trichlorobenzene	11.964	180	192811	106.13	ug/L	100
126) hexachloroethane	10.161	119	97235	107.00	ug/L	99
127) Benzyl chloride	9.647	91	470495	104.11	ug/L	100
128) 2-ethylhexyl acrylate	11.659	70	25868	22.87	ug/L	91
129) 2-methylnaphthalene	12.882	142	216670	56.33	ug/L	98

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

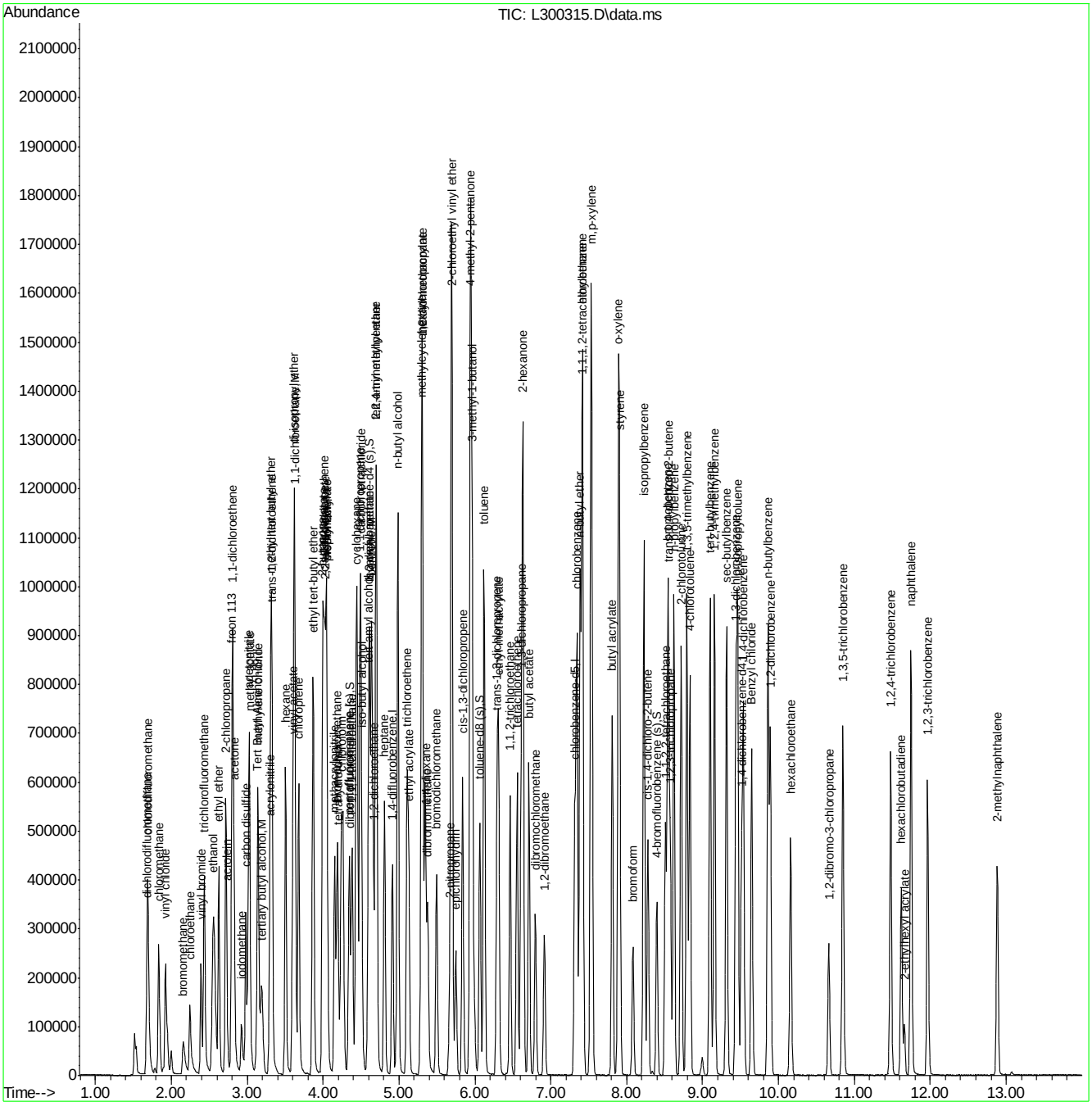
7.6.8

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300315.D
Acq On : 16 Apr 2018 6:04 pm
Operator : vidishp
Sample : ic8534-100
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 17 14:59:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300316.D
Acq On : 16 Apr 2018 6:31 pm
Operator : vidishp
Sample : ic8534-200
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 17 15:02:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.168	65	171279	500.00	ug/L	0.05
5) pentafluorobenzene	4.343	168	180411	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.914	114	274561	50.00	ug/L	0.00
76) chlorobenzene-d5	7.314	117	259705	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	100298	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.352	113	69246	50.22	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.44%						
56) 1,2-dichloroethane-d4 (s)	4.606	65	82279	47.80	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 95.60%						
77) toluene-d8 (s)	6.066	98	297389	50.31	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.62%						
100) 4-bromofluorobenzene (s)	8.396	95	114254	51.32	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 102.64%						
Target Compounds						Qvalue
2) 1,4-dioxane	5.363	88	166512	5256.63	ug/L	98
4) tertiary butyl alcohol	3.220	59	410807	1040.48	ug/L	98
6) chlorodifluoromethane	1.689	51	456005	179.17	ug/L	98
7) dichlorodifluoromethane	1.695	85	443986	193.99	ug/L	96
10) chloromethane	1.833	50	482430	193.25	ug/L	98
12) vinyl chloride	1.926	62	453980	184.82	ug/L	100
15) vinyl bromide	2.382	106	254265	185.59	ug/L	97
16) trichlorofluoromethane	2.427	101	480996	182.04	ug/L	99
17) ethyl ether	2.626	74	209541	180.88	ug/L #	74
18) 2-chloropropane	2.716	43	548931	164.83	ug/L	98
19) acrolein	2.732	56	116505	188.23	ug/L	99
20) freon 113	2.796	151	202425	183.43	ug/L	99
21) 1,1-dichloroethene	2.802	96	265174	172.53	ug/L	98
22) acetone	2.828	58	212259	725.61	ug/L	92
23) acetonitrile	3.024	40	466167	1825.85	ug/L	97
24) iodomethane	2.921	142	243505	191.76	ug/L	99
25) iso-butyl alcohol	4.526	43	321428	1856.48	ug/L	96
26) carbon disulfide	2.979	76	706959	179.38	ug/L	96
27) methylene chloride	3.139	84	309034	185.92	ug/L	99
28) methyl acetate	3.030	74	97987	188.09	ug/L	94
29) methyl tert butyl ether	3.313	73	951049	169.66	ug/L	97
30) trans-1,2-dichloroethene	3.325	96	277767	175.20	ug/L	98
31) hexane	3.505	57	445396	187.18	ug/L	99
32) di-isopropyl ether	3.621	45	1057143	165.43	ug/L	94
33) ethyl tert-butyl ether	3.868	59	1074584	175.70	ug/L	96
34) 2-butanone	3.996	72	268672	711.57	ug/L #	85
35) 1,1-dichloroethane	3.627	63	561095	173.40	ug/L	97
36) chloroprene	3.678	53	531837	180.33	ug/L	100
37) acrylonitrile	3.297	53	223029	186.73	ug/L	98
38) vinyl acetate	3.601	86	83308	180.49	ug/L #	85
39) ethyl acetate	4.003	45	96715	182.19	ug/L #	52
40) 2,2-dichloropropane	4.028	77	443566	176.32	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300316.D
Acq On : 16 Apr 2018 6:31 pm
Operator : vidishp
Sample : ic8534-200
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 17 15:02:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) cis-1,2-dichloroethene	4.015	96	304047	176.32	ug/L	96
42) propionitrile	4.054	54	844386	1658.32	ug/L	100
43) methyl acrylate	4.048	85	71640	178.75	ug/L #	93
44) bromochloromethane	4.185	128	131668	175.43	ug/L	98
45) tetrahydrofuran	4.198	72	80301	186.09	ug/L	98
46) chloroform	4.237	83	516659	179.94	ug/L	96
48) methacrylonitrile	4.153	67	215613	191.72	ug/L	96
49) 1,1,1-trichloroethane	4.381	97	457253	189.89	ug/L	99
50) cyclohexane	4.436	84	380622	181.87	ug/L	98
51) 1,1-dichloropropene	4.487	75	418265	183.21	ug/L	98
52) carbon tetrachloride	4.494	117	353187	191.32	ug/L	99
53) isopropyl acetate	4.612	87	97128	186.06	ug/L #	92
54) tert amyl alcohol	4.615	55	130058	851.07	ug/L #	92
57) tert-amyl methyl ether	4.699	73	881358	166.20	ug/L	94
58) 2,2,4-trimethylpentane	4.699	57	798951	172.78	ug/L	97
59) epichlorohydrin	5.751	57	333588	879.80	ug/L	98
60) n-butyl alcohol	5.001	56	978570	8627.43	ug/L	99
61) benzene	4.638	78	1077931	163.79	ug/L	96
62) heptane	4.808	57	206553	190.90	ug/L	96
63) 1,2-dichloroethane	4.664	62	434619	180.05	ug/L	100
64) trichloroethene	5.106	95	314789	182.56	ug/L	94
65) ethyl acrylate	5.129	55	624670	172.61	ug/L	98
66) 2-nitropropane	5.668	41	216229	183.39	ug/L	95
67) 2-chloroethyl vinyl ether	5.694	63	1132138	784.21	ug/L	94
68) methyl methacrylate	5.309	100	111200	170.58	ug/L #	87
69) 1,2-dichloropropane	5.309	63	320756	171.28	ug/L	96
70) methylcyclohexane	5.293	83	495435	181.28	ug/L	98
71) dibromomethane	5.376	93	191919	182.63	ug/L	96
72) bromodichloromethane	5.495	83	435146	190.42	ug/L	100
73) cis-1,3-dichloropropene	5.838	75	553066	182.77	ug/L	98
74) 4-methyl-2-pentanone	5.944	58	733839	643.98	ug/L #	83
75) 3-methyl-1-butanol	5.973	70	343232	3500.10	ug/L	99
78) toluene	6.120	92	723973	178.53	ug/L	94
79) trans-1,3-dichloropropene	6.291	75	519148	183.64	ug/L	97
80) ethyl methacrylate	6.313	69	514346	171.26	ug/L	97
81) 1,1,2-trichloroethane	6.464	83	260028	180.55	ug/L	94
82) 2-hexanone	6.634	58	752969	641.58	ug/L	93
83) tetrachloroethene	6.557	166	314280	187.41	ug/L	99
84) 1,3-dichloropropane	6.611	76	496911	174.71	ug/L	97
85) butyl acetate	6.714	56	314367	177.99	ug/L	93
86) dibromochloromethane	6.798	129	294264	191.53	ug/L	99
87) 1,2-dibromoethane	6.916	107	344751	186.70	ug/L	100
88) n-butyl ether	7.388	57	1274724	162.23	ug/L	94
89) chlorobenzene	7.343	112	774943	181.03	ug/L	98
90) 1,1,1,2-tetrachloroethane	7.414	131	245803	174.94	ug/L	96
91) ethylbenzene	7.420	91	1158677	159.41	ug/L	95
92) m,p-xylene	7.536	106	917953	338.05	ug/L	89
93) o-xylene	7.892	106	478235	173.13	ug/L	90
94) butyl acrylate	7.812	55	815994	176.98	ug/L	96
95) styrene	7.908	104	760612	163.63	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300316.D
Acq On : 16 Apr 2018 6:31 pm
Operator : vidishp
Sample : ic8534-200
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 17 15:02:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration

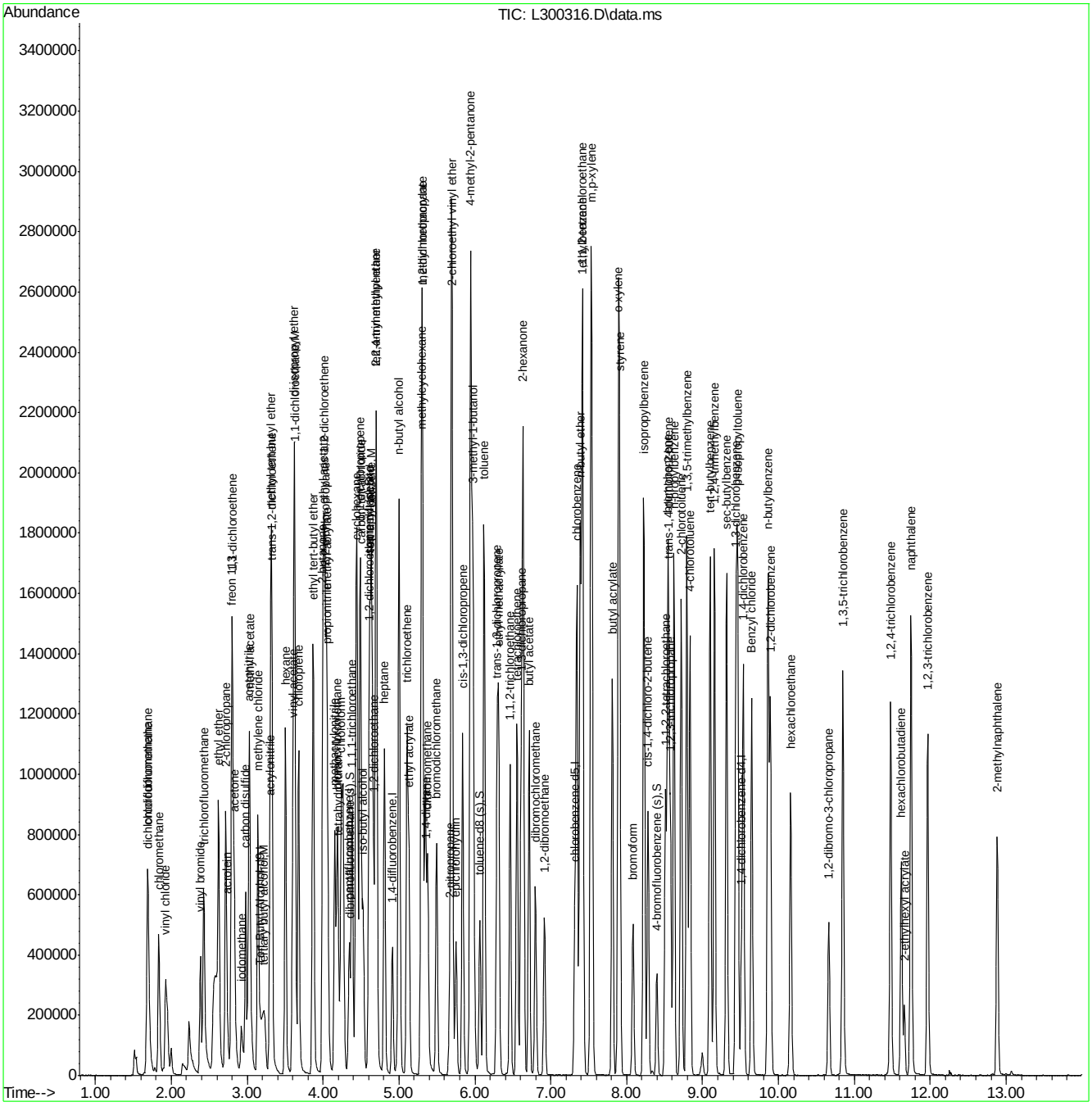
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
96)	bromoform	8.084	173	221621	199.03	ug/L	96
97)	isopropylbenzene	8.226	105	1194076	166.26	ug/L	94
98)	cis-1,4-dichloro-2-butene	8.280	88	193397	188.48	ug/L	99
101)	bromobenzene	8.543	156	303399	190.49	ug/L	97
102)	1,1,2,2-tetrachloroethane	8.511	83	462401	197.73	ug/L	99
103)	trans-1,4-dichloro-2-b...	8.553	53	153337	194.50	ug/L	98
104)	1,2,3-trichloropropane	8.575	110	120508	188.11	ug/L	100
105)	n-propylbenzene	8.623	91	1305501	174.28	ug/L	93
106)	2-chlorotoluene	8.716	126	289895	193.02	ug/L	97
107)	4-chlorotoluene	8.835	126	279172	192.01	ug/L	90
109)	1,3,5-trimethylbenzene	8.793	105	920960	181.75	ug/L	98
110)	tert-butylbenzene	9.098	119	802688	185.73	ug/L	96
111)	1,2,4-trimethylbenzene	9.156	105	916066	180.02	ug/L	96
112)	sec-butylbenzene	9.317	105	1116449	181.49	ug/L	95
113)	1,3-dichlorobenzene	9.442	146	532702	190.47	ug/L	97
114)	p-isopropyltoluene	9.461	119	865889	177.65	ug/L	94
115)	1,4-dichlorobenzene	9.538	146	516656	192.65	ug/L	96
116)	1,2-dichlorobenzene	9.891	146	495548	186.63	ug/L	96
118)	n-butylbenzene	9.862	92	515208	195.87	ug/L	94
120)	1,2-dibromo-3-chloropr...	10.661	157	136629	230.13	ug/L	97
121)	1,3,5-trichlorobenzene	10.847	180	407340	204.08	ug/L	99
122)	1,2,4-trichlorobenzene	11.479	180	389868	209.80	ug/L	99
123)	hexachlorobutadiene	11.617	225	140162	202.23	ug/L	98
124)	naphthalene	11.746	128	1206888	189.69	ug/L	97
125)	1,2,3-trichlorobenzene	11.964	180	358786	205.30	ug/L	99
126)	hexachloroethane	10.160	119	190084	217.45	ug/L	99
127)	Benzyl chloride	9.647	91	856596	197.03	ug/L	98
128)	2-ethylhexyl acrylate	11.659	70	56082	51.53	ug/L	95
129)	2-methylnaphthalene	12.882	142	398893	107.81	ug/L	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300316.D
Acq On : 16 Apr 2018 6:31 pm
Operator : vidishp
Sample : ic8534-200
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 17 15:02:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 09:43:35 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300319.D
Acq On : 16 Apr 2018 7:52 pm
Operator : vidishp
Sample : icv8534-50
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 17 15:14:30 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 15:11:19 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.130	65	199340	500.00	ug/L	0.00
5) pentafluorobenzene	4.346	168	202780	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.914	114	296513	50.00	ug/L	0.00
76) chlorobenzene-d5	7.317	117	277608	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	112687	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.352	113	79227	51.27	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 102.54%						
56) 1,2-dichloroethane-d4 (s)	4.609	65	95834	49.64	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 99.28%						
77) toluene-d8 (s)	6.066	98	318012	48.38	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 96.76%						
100) 4-bromofluorobenzene (s)	8.396	95	125891	51.47	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 102.94%						
Target Compounds						Qvalue
2) 1,4-dioxane	5.354	88	52982	1403.58	ug/L	98
3) ethanol	2.546	45	319411	5551.93	ug/L	100
4) tertiary butyl alcohol	3.184	59	134030	282.52	ug/L	98
6) chlorodifluoromethane	1.689	51	95027	34.18	ug/L	96
7) dichlorodifluoromethane	1.673	85	127384	51.56	ug/L	97
10) chloromethane	1.833	50	143951	52.86	ug/L	97
12) vinyl chloride	1.920	62	134497	48.94	ug/L	98
13) bromomethane	2.167	94	51316	73.97	ug/L	97
14) chloroethane	2.254	64	76064	49.38	ug/L	96
15) vinyl bromide	2.395	106	87298	57.47	ug/L	95
16) trichlorofluoromethane	2.440	101	140321	48.20	ug/L	98
17) ethyl ether	2.629	74	63670	50.11	ug/L	99
18) 2-chloropropane	2.722	43	183987	48.52	ug/L	100
19) acrolein	2.732	56	49385	69.26	ug/L	97
20) freon 113	2.806	151	67170	52.86	ug/L	100
21) 1,1-dichloroethene	2.812	96	74736	43.11	ug/L	96
22) acetone	2.825	58	67176	197.92	ug/L	99
23) acetonitrile	3.024	40	172417	582.72	ug/L	98
24) iodomethane	2.928	142	62307	45.64	ug/L	95
25) iso-butyl alcohol	4.500	43	102648	521.28	ug/L	98
26) carbon disulfide	2.985	76	211679	47.59	ug/L	99
27) methylene chloride	3.146	84	91549	46.90	ug/L	97
28) methyl acetate	3.033	74	29102	49.87	ug/L	96
29) methyl tert butyl ether	3.316	73	614228	96.58	ug/L	98
30) trans-1,2-dichloroethene	3.329	96	81811	44.20	ug/L	99
31) hexane	3.508	57	112306	41.60	ug/L	99
32) di-isopropyl ether	3.624	45	371054	49.49	ug/L	97
33) ethyl tert-butyl ether	3.871	59	355526	50.80	ug/L	99
34) 2-butanone	3.996	72	86380	201.67	ug/L #	89
35) 1,1-dichloroethane	3.630	63	180132	47.44	ug/L	99
36) chloroprene	3.682	53	167317	48.83	ug/L	98
37) acrylonitrile	3.300	53	75849	56.81	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300319.D
Acq On : 16 Apr 2018 7:52 pm
Operator : vidishp
Sample : icv8534-50
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 17 15:14:30 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 15:11:19 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
38) vinyl acetate	3.605	86	27436	57.52	ug/L	#	89
39) ethyl acetate	4.006	45	31480	53.38	ug/L	#	59
40) 2,2-dichloropropane	4.031	77	139640	47.19	ug/L		99
41) cis-1,2-dichloroethene	4.019	96	100047	49.03	ug/L		99
42) propionitrile	4.047	54	292973	494.35	ug/L		96
43) methyl acrylate	4.047	85	23542	50.75	ug/L		99
44) bromochloromethane	4.189	128	44157	50.81	ug/L		96
45) tetrahydrofuran	4.202	72	25015	51.58	ug/L		99
46) chloroform	4.240	83	166212	48.35	ug/L		98
48) methacrylonitrile	4.153	67	67280	52.12	ug/L		96
49) 1,1,1-trichloroethane	4.384	97	132424	47.45	ug/L		99
50) cyclohexane	4.442	84	149557	63.23	ug/L	#	86
51) 1,1-dichloropropene	4.490	75	127810	47.61	ug/L		99
52) carbon tetrachloride	4.494	117	103372	47.36	ug/L		97
53) isopropyl acetate	4.609	87	31015	52.28	ug/L		95
54) tert amyl alcohol	4.593	55	45375	266.18	ug/L		99
57) tert-amyl methyl ether	4.699	73	298715	49.93	ug/L		100
58) 2,2,4-trimethylpentane	4.702	57	232963	43.19	ug/L		98
59) epichlorohydrin	5.751	57	106325	256.05	ug/L		94
60) n-butyl alcohol	4.978	56	322566	2571.84	ug/L		100
61) benzene	4.641	78	363294	47.30	ug/L		99
62) heptane	4.811	57	61458	50.28	ug/L		97
63) 1,2-dichloroethane	4.667	62	137187	48.76	ug/L		98
64) trichloroethene	5.106	95	95464	49.83	ug/L		96
65) ethyl acrylate	5.129	55	209702	52.70	ug/L		100
66) 2-nitropropane	5.665	41	70280	56.15	ug/L		89
67) 2-chloroethyl vinyl ether	5.694	63	419302	264.10	ug/L		100
68) methyl methacrylate	5.309	100	36714	53.28	ug/L	#	90
69) 1,2-dichloropropane	5.312	63	102392	48.25	ug/L		97
70) methylcyclohexane	5.299	83	129166	42.43	ug/L		99
71) dibromomethane	5.379	93	61357	51.64	ug/L		96
72) bromodichloromethane	5.495	83	128325	52.06	ug/L		99
73) cis-1,3-dichloropropene	5.838	75	175344	52.12	ug/L		98
74) 4-methyl-2-pentanone	5.941	58	249870	194.27	ug/L		99
75) 3-methyl-1-butanol	5.960	70	109088	974.26	ug/L		95
78) toluene	6.124	92	230842	50.12	ug/L		100
79) trans-1,3-dichloropropene	6.294	75	156693	50.47	ug/L		99
80) ethyl methacrylate	6.313	69	169719	52.11	ug/L		100
81) 1,1,2-trichloroethane	6.464	83	82683	52.08	ug/L		96
82) 2-hexanone	6.631	58	264006	197.64	ug/L		100
83) tetrachloroethene	6.557	166	96099	50.52	ug/L		99
84) 1,3-dichloropropane	6.611	76	167970	51.90	ug/L		99
85) butyl acetate	6.714	56	106184	53.56	ug/L		97
86) dibromochloromethane	6.801	129	92843	56.14	ug/L		98
87) 1,2-dibromoethane	6.916	107	108932	53.18	ug/L		99
88) n-butyl ether	7.388	57	446487	50.73	ug/L		99
89) chlorobenzene	7.343	112	245959	50.73	ug/L		99
90) 1,1,1,2-tetrachloroethane	7.414	131	82146	52.88	ug/L		95
91) ethylbenzene	7.420	91	416235	49.23	ug/L		99
92) m,p-xylene	7.536	106	312749	98.52	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300319.D
Acq On : 16 Apr 2018 7:52 pm
Operator : vidishp
Sample : icv8534-50
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 17 15:14:30 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 15:11:19 2018
Response via : Initial Calibration

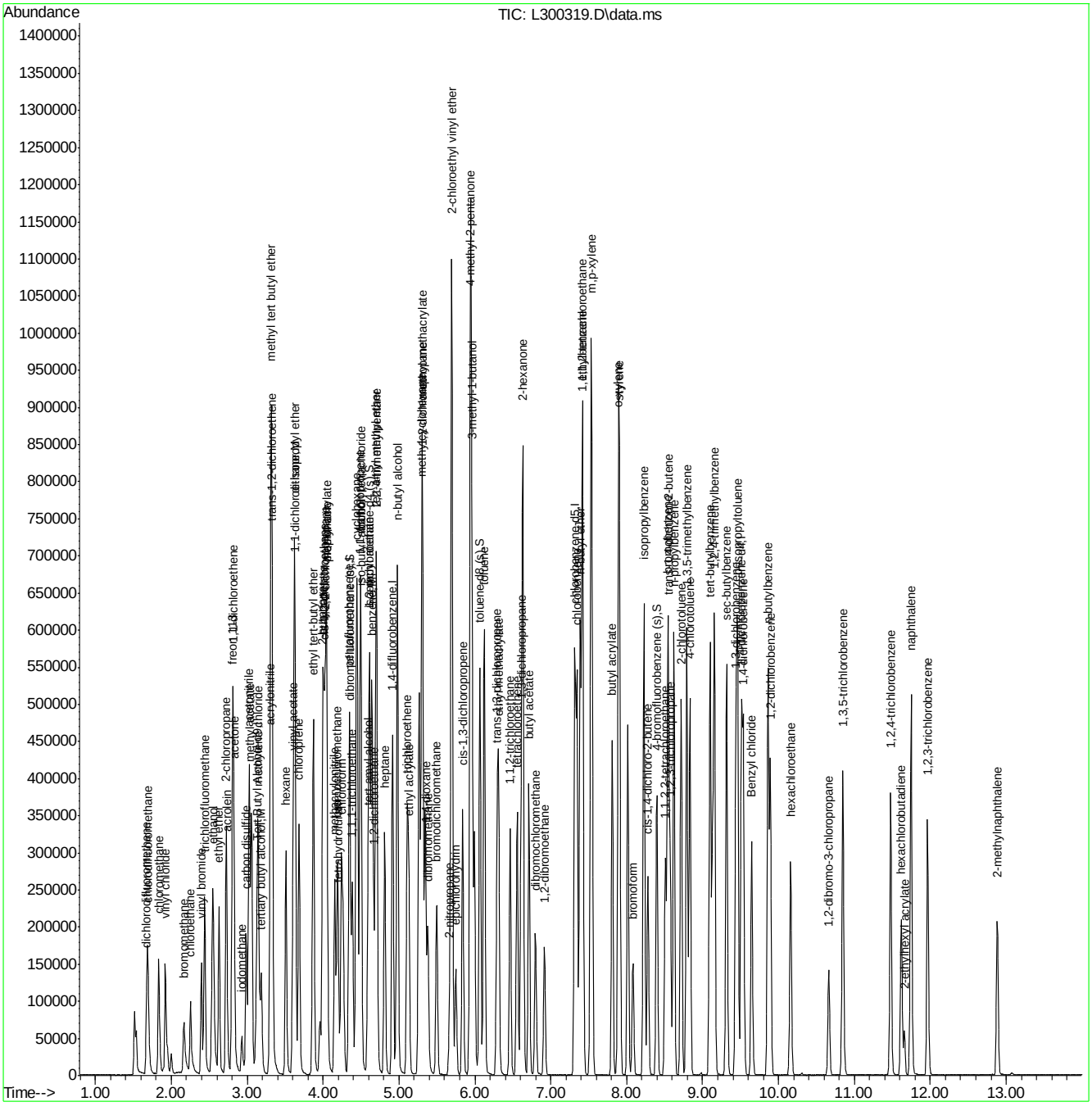
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
93) o-xylene	7.892	106	161305	51.00 ug/L	98
94) butyl acrylate	7.808	55	272365	55.05 ug/L	99
95) styrene	7.905	104	270814	51.08 ug/L	98
96) bromoform	8.081	173	67583	59.63 ug/L	96
97) isopropylbenzene	8.229	105	404628	49.96 ug/L	99
98) cis-1,4-dichloro-2-butene	8.277	88	56803	53.40 ug/L	95
101) bromobenzene	8.543	156	100080	55.41 ug/L	95
102) 1,1,2,2-tetrachloroethane	8.508	83	146611	56.48 ug/L	97
103) trans-1,4-dichloro-2-b...	8.550	53	52748	61.76 ug/L	96
104) 1,2,3-trichloropropane	8.572	110	39760	55.38 ug/L	97
105) n-propylbenzene	8.620	91	459654	53.89 ug/L	98
106) 2-chlorotoluene	8.720	126	92411	53.80 ug/L	97
107) 4-chlorotoluene	8.835	126	93419	55.08 ug/L	99
109) 1,3,5-trimethylbenzene	8.793	105	314395	54.65 ug/L	98
110) tert-butylbenzene	9.098	119	289401	59.80 ug/L	98
111) 1,2,4-trimethylbenzene	9.156	105	315244	54.20 ug/L	99
112) sec-butylbenzene	9.317	105	379194	54.60 ug/L	99
113) 1,3-dichlorobenzene	9.438	146	175493	55.41 ug/L	98
114) p-isopropyltoluene	9.461	119	303686	54.40 ug/L	99
115) 1,4-dichlorobenzene	9.538	146	167633	54.54 ug/L	98
116) 1,2-dichlorobenzene	9.894	146	164365	54.41 ug/L	99
118) n-butylbenzene	9.862	92	163524	56.82 ug/L	97
120) 1,2-dibromo-3-chloropr...	10.661	157	37139	58.88 ug/L	95
121) 1,3,5-trichlorobenzene	10.847	180	126129	57.21 ug/L	98
122) 1,2,4-trichlorobenzene	11.479	180	117499	58.55 ug/L	99
123) hexachlorobutadiene	11.617	225	41705	53.26 ug/L	97
124) naphthalene	11.749	128	405801	59.19 ug/L	100
125) 1,2,3-trichlorobenzene	11.967	180	108830	57.49 ug/L	98
126) hexachloroethane	10.160	119	55878	61.99 ug/L	99
127) Benzyl chloride	9.647	91	222175	47.54 ug/L	99
128) 2-ethylhexyl acrylate	11.662	70	14599	10.80 ug/L	94
129) 2-methylnaphthalene	12.882	142	104886	25.67 ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300319.D
Acq On : 16 Apr 2018 7:52 pm
Operator : vidishp
Sample : icv8534-50
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 17 15:14:30 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 15:11:19 2018
Response via : Initial Calibration



ML8534.M Wed Apr 18 08:09:53 2018 1 Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300320.D
Acq On : 16 Apr 2018 8:20 pm
Operator : vidishp
Sample : icv8534-50
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 17 15:03:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 15:02:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.120	65	223309	500.00	ug/L	0.00
5) pentafluorobenzene	4.346	168	244878	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.917	114	345421	50.00	ug/L	0.00
76) chlorobenzene-d5	7.317	117	301252	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	141259	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.352	113	91784	49.18	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 98.36%						
56) 1,2-dichloroethane-d4 (s)	4.609	65	115159	51.20	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 102.40%						
77) toluene-d8 (s)	6.066	98	385240	54.00	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 108.00%						
100) 4-bromofluorobenzene (s)	8.399	95	147559	48.13	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 96.26%						
Target Compounds						Qvalue
23) acetonitrile	3.021	40	161433	451.80	ug/L	99
83) tetrachloroethene	6.557	166	104029	50.40	ug/L	99

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

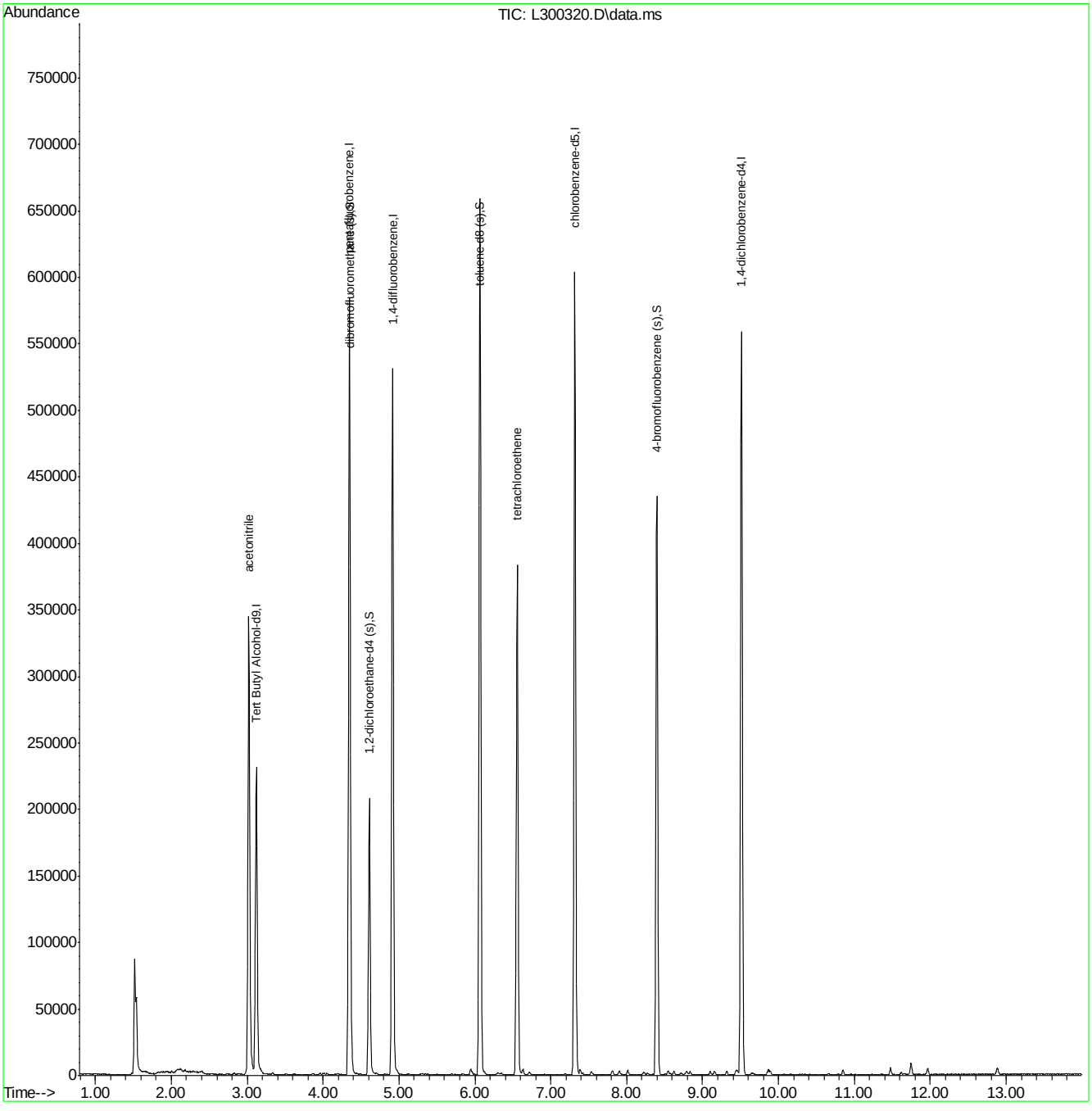
7.6.11

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300320.D
Acq On : 16 Apr 2018 8:20 pm
Operator : vidishp
Sample : icv8534-50
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 17 15:03:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 15:02:10 2018
Response via : Initial Calibration



ML8534.M Wed Apr 18 08:09:55 2018 1

Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300324.D
Acq On : 17 Apr 2018 11:51 am
Operator : vidishp
Sample : icv8534-50
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 17 15:04:45 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 15:02:10 2018
Response via : Initial Calibration

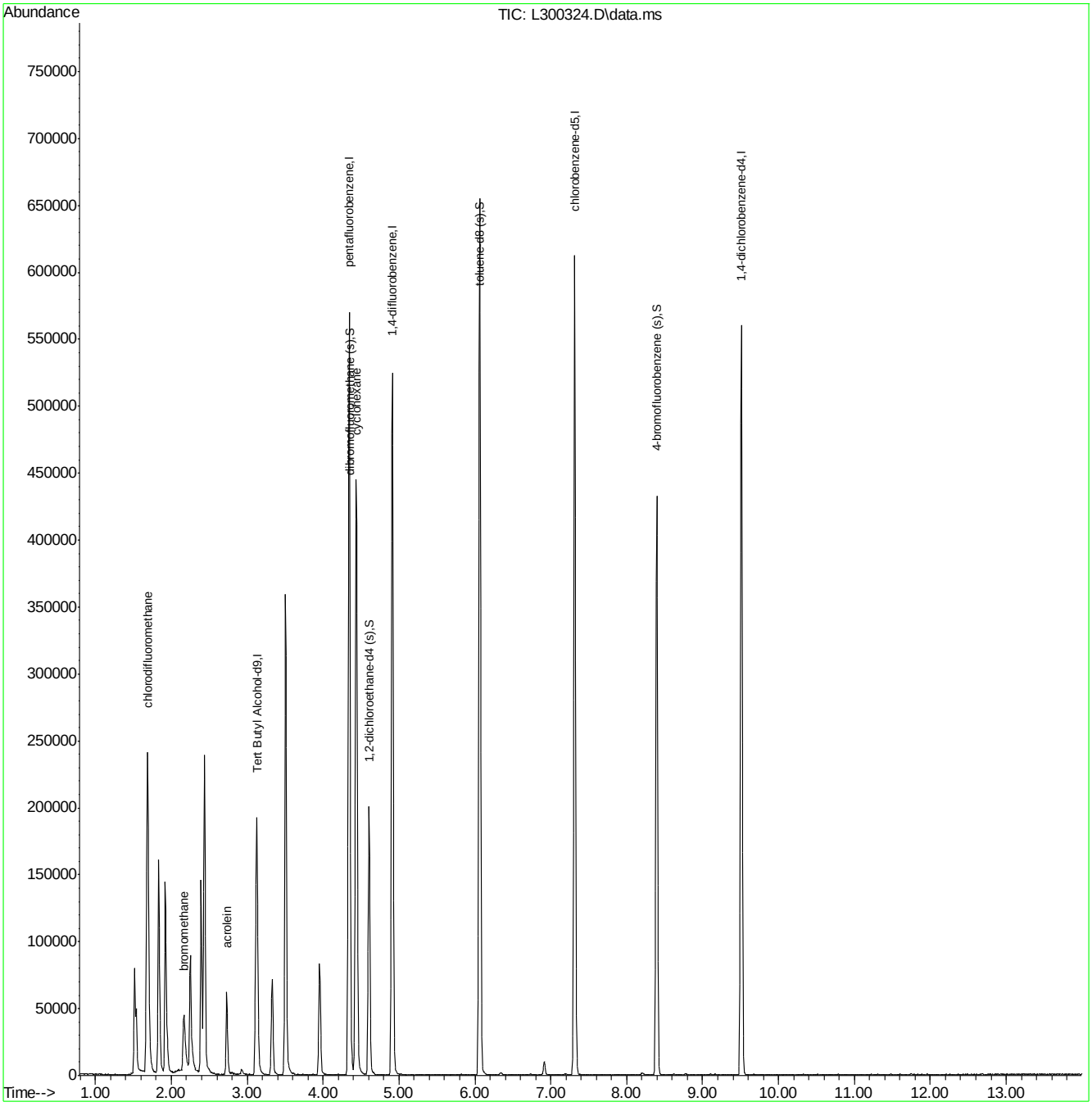
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.127	65	220326	500.00	ug/L	0.00
5) pentafluorobenzene	4.343	168	239279	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.914	114	341155	50.00	ug/L	0.00
76) chlorobenzene-d5	7.314	117	304521	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	137061	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.352	113	91363	50.10	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 100.20%						
56) 1,2-dichloroethane-d4 (s)	4.606	65	112987	50.86	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124 Recovery = 101.72%						
77) toluene-d8 (s)	6.063	98	383411	53.17	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 106.34%						
100) 4-bromofluorobenzene (s)	8.396	95	145572	48.94	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120 Recovery = 97.88%						
Target Compounds						Qvalue
6) chlorodifluoromethane	1.689	51	147038	44.81	ug/L	99
13) bromomethane	2.167	94	37178	45.42	ug/L	98
19) acrolein	2.732	56	40276	47.87	ug/L	99
50) cyclohexane	4.436	84	143016	51.25	ug/L #	40

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8534\
Data File : L300324.D
Acq On : 17 Apr 2018 11:51 am
Operator : vidishp
Sample : icv8534-50
Misc : MS24791,VL8534,5,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 17 15:04:45 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Tue Apr 17 15:02:10 2018
Response via : Initial Calibration



ML8534.M Wed Apr 18 08:09:57 2018 1

Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8568\
Data File : L301070.D
Acq On : 9 May 2018 11:05 pm
Operator : sydneys
Sample : ICV8534-50
Misc : MS26146,VL8568,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Time: May 10 14:12:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.117	65	263808	500.00	ug/L	0.00
5) pentafluorobenzene	4.343	168	236639	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.914	114	352080	50.00	ug/L	0.00
76) chlorobenzene-d5	7.314	117	332554	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	152308	50.00	ug/L	0.00
130) chlorobenzene-d5(a)	7.314	117	332554	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.352	113	96483	53.50	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.00%			
56) 1,2-dichloroethane-d4 (s)	4.609	65	112347	49.00	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 98.00%			
77) toluene-d8 (s)	6.063	98	395083	50.17	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.34%			
100) 4-bromofluorobenzene (s)	8.396	95	156367	47.30	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.60%			
Target Compounds						Qvalue
131) cyclohexanone	8.328	55	85661	477.76	ug/L	98

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

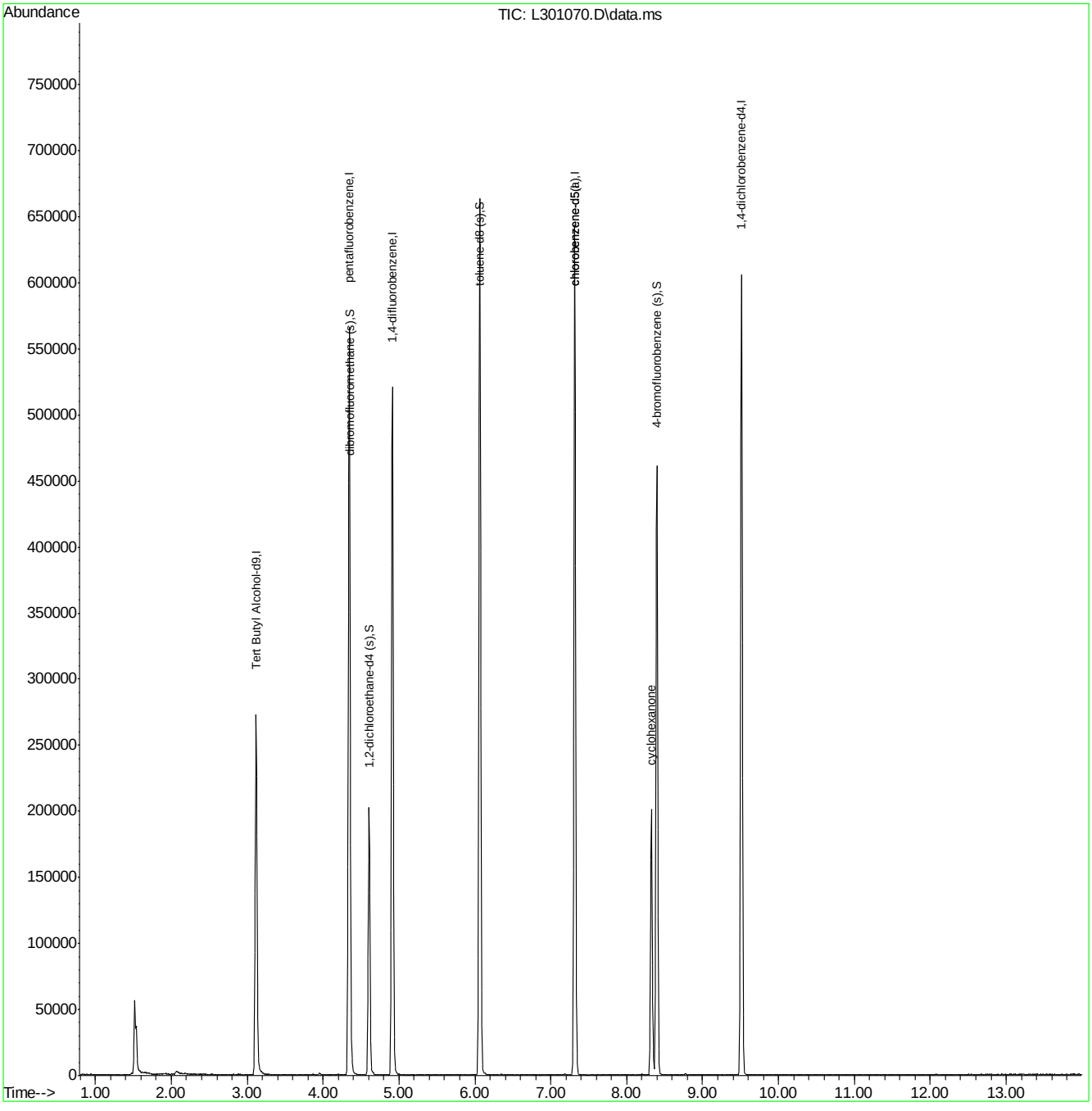
7.6.13

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL8568\
Data File : L301070.D
Acq On : 9 May 2018 11:05 pm
Operator : sydneys
Sample : ICV8534-50
Misc : MS26146,VL8568,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Time: May 10 14:12:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:46:11 2018
Response via : Initial Calibration



ML8534.M Fri May 11 08:09:50 2018 1

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301851.d
Acq On : 2 Jun 2018 12:26 pm
Operator : deving
Sample : CC8534-50 Inst : GCMSL
Misc : MS26750,VL8605,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 01:14:09 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:47:23 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	3.123	65	212836	500.00	ug/L	0.00
5) pentafluorobenzene	4.343	168	211623	50.00	ug/L	0.00
55) 1,4-difluorobenzene	4.914	114	314955	50.00	ug/L	0.00
76) chlorobenzene-d5	7.317	117	282360	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	9.512	152	113077	50.00	ug/L	0.00
130) chlorobenzene-d5(a)	7.317	117	282360	50.00	ug/L	0.00
System Monitoring Compounds						
47) dibromofluoromethane (s)	4.352	113	88278	54.73	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.46%			
56) 1,2-dichloroethane-d4 (s)	4.606	65	103383	50.41	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.82%			
77) toluene-d8 (s)	6.066	98	350537	52.43	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.86%			
100) 4-bromofluorobenzene (s)	8.396	95	130649	53.23	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.46%			
Target Compounds						Qvalue
2) 1,4-dioxane	5.347	88	51991	1289.99	ug/L	100
3) ethanol	2.539	45	305695	4976.59	ug/L	98
4) tertiary butyl alcohol	3.178	59	132033	260.66	ug/L	96
6) chlorodifluoromethane	1.689	51	174648	60.19	ug/L	99
7) dichlorodifluoromethane	1.676	85	166576	64.61	ug/L	97
10) chloromethane	1.833	50	145991	51.37	ug/L	97
12) vinyl chloride	1.920	62	145399	50.70	ug/L	99
13) bromomethane	2.161	94	29452	40.68	ug/L	94
14) chloroethane	2.251	64	79434	49.41	ug/L	97
15) vinyl bromide	2.395	106	79203	49.97	ug/L	99
16) trichlorofluoromethane	2.437	101	163994	53.97	ug/L	96
17) ethyl ether	2.626	74	70116	52.87	ug/L	95
18) 2-chloropropane	2.719	43	196627	49.68	ug/L	96
19) acrolein	2.732	56	38378	51.57	ug/L	99
20) freon 113	2.799	151	70215	52.94	ug/L	99
21) 1,1-dichloroethene	2.809	96	95107	52.57	ug/L	99
22) acetone	2.825	58	67632	190.94	ug/L	90
23) acetonitrile	3.018	40	144431	467.73	ug/L	96
24) iodomethane	2.925	142	43810	31.10	ug/L	95
25) iso-butyl alcohol	4.497	43	93122	453.14	ug/L	98
26) carbon disulfide	2.982	76	252805	54.46	ug/L	97
27) methylene chloride	3.143	84	100216	49.20	ug/L	95
28) methyl acetate	3.034	74	29908	49.11	ug/L	93
29) methyl tert butyl ether	3.313	73	320577	48.30	ug/L	97
30) trans-1,2-dichloroethene	3.326	96	95716	49.55	ug/L	96
31) hexane	3.509	57	146684	52.06	ug/L	99
32) di-isopropyl ether	3.621	45	355393	45.42	ug/L	99
33) ethyl tert-butyl ether	3.868	59	345560	47.31	ug/L	98
34) 2-butanone	3.993	72	86794	194.17	ug/L	93
35) 1,1-dichloroethane	3.627	63	186869	47.16	ug/L	99
36) chloroprene	3.679	53	167105	46.73	ug/L	98
37) acrylonitrile	3.297	53	70627	50.69	ug/L	97
38) vinyl acetate	3.602	86	26914	54.07	ug/L #	87
39) ethyl acetate	3.999	45	27881	45.30	ug/L	96
40) 2,2-dichloropropane	4.032	77	137813	44.63	ug/L	96
41) cis-1,2-dichloroethene	4.019	96	101776	47.79	ug/L	99
42) propionitrile	4.044	54	289110	467.44	ug/L	99
43) methyl acrylate	4.044	85	23068	47.65	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301851.d
Acq On : 2 Jun 2018 12:26 pm
Operator : deving
Sample : CC8534-50 Inst : GCMSL
Misc : MS26750,VL8605,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 01:14:09 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:47:23 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
44)	bromochloromethane	4.186	128	43092	47.51	ug/L		98
45)	tetrahydrofuran	4.195	72	25553	50.49	ug/L		96
46)	chloroform	4.240	83	165144	46.03	ug/L		98
48)	methacrylonitrile	4.154	67	65280	48.46	ug/L		91
49)	1,1,1-trichloroethane	4.381	97	140266	48.16	ug/L		96
50)	cyclohexane	4.439	84	135411	54.86	ug/L		90
51)	1,1-dichloropropene	4.487	75	132204	47.19	ug/L		98
52)	carbon tetrachloride	4.494	117	110678	48.59	ug/L		99
53)	isopropyl acetate	4.612	87	29784	48.10	ug/L	#	81
54)	tert amyl alcohol	4.587	55	43462	244.31	ug/L		96
57)	tert-amyl methyl ether	4.699	73	286991	45.17	ug/L		97
58)	2,2,4-trimethylpentane	4.702	57	258872	45.18	ug/L		96
59)	epichlorohydrin	5.748	57	101146	229.31	ug/L		95
60)	n-butyl alcohol	4.975	56	309362	2322.14	ug/L		96
61)	benzene	4.638	78	373819	45.82	ug/L		99
62)	heptane	4.808	57	60324	46.46	ug/L		93
63)	1,2-dichloroethane	4.664	62	125766	42.08	ug/L		99
64)	trichloroethene	5.107	95	98096	48.20	ug/L		98
65)	ethyl acrylate	5.126	55	197356	46.69	ug/L		99
66)	2-nitropropane	5.665	41	59415	44.69	ug/L		98
67)	2-chloroethyl vinyl ether	5.691	63	394993	234.22	ug/L		100
68)	methyl methacrylate	5.306	100	35385	48.34	ug/L		93
69)	1,2-dichloropropane	5.309	63	103213	45.79	ug/L		100
70)	methylcyclohexane	5.299	83	156161	48.29	ug/L		95
71)	dibromomethane	5.376	93	58302	46.20	ug/L		98
72)	bromodichloromethane	5.495	83	129556	49.48	ug/L		99
73)	cis-1,3-dichloropropene	5.838	75	164709	46.09	ug/L		95
74)	4-methyl-2-pentanone	5.941	58	250669	183.47	ug/L		95
75)	3-methyl-1-butanol	5.957	70	106942	899.17	ug/L		97
78)	toluene	6.124	92	228769	48.84	ug/L		99
79)	trans-1,3-dichloropropene	6.291	75	151934	48.12	ug/L		92
80)	ethyl methacrylate	6.313	69	166195	50.16	ug/L		94
81)	1,1,2-trichloroethane	6.461	83	79124	49.00	ug/L		98
82)	2-hexanone	6.631	58	262536	193.23	ug/L		98
83)	tetrachloroethene	6.557	166	95915	49.58	ug/L		97
84)	1,3-dichloropropane	6.612	76	155848	47.34	ug/L		99
85)	butyl acetate	6.711	56	99189	49.19	ug/L		94
86)	dibromochloromethane	6.798	129	89421	53.16	ug/L		99
87)	1,2-dibromoethane	6.913	107	104678	50.25	ug/L		99
88)	n-butyl ether	7.385	57	434965	48.59	ug/L		99
89)	chlorobenzene	7.343	112	236696	48.00	ug/L		98
90)	1,1,1,2-tetrachloroethane	7.411	131	76934	48.70	ug/L		97
91)	ethylbenzene	7.417	91	403204	46.89	ug/L		100
92)	m,p-xylene	7.536	106	302382	93.65	ug/L		97
93)	o-xylene	7.892	106	155041	48.20	ug/L		94
94)	butyl acrylate	7.808	55	254378	50.55	ug/L		98
95)	styrene	7.905	104	256635	47.60	ug/L		99
96)	bromoform	8.081	173	64796	56.21	ug/L		96
97)	isopropylbenzene	8.226	105	394177	47.85	ug/L		99
98)	cis-1,4-dichloro-2-butene	8.280	88	40256	37.21	ug/L		98
101)	bromobenzene	8.540	156	94358	52.06	ug/L		97
102)	1,1,2,2-tetrachloroethane	8.511	83	144434	55.45	ug/L		97
103)	trans-1,4-dichloro-2-b...	8.550	53	33286	38.84	ug/L		84
104)	1,2,3-trichloropropane	8.572	110	38473	53.40	ug/L		96
105)	n-propylbenzene	8.620	91	439919	51.40	ug/L		97
106)	2-chlorotoluene	8.717	126	88441	51.31	ug/L		95
107)	4-chlorotoluene	8.832	126	85864	50.45	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301851.d
Acq On : 2 Jun 2018 12:26 pm
Operator : deving
Sample : CC8534-50 Inst : GCMSL
Misc : MS26750,VL8605,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 01:14:09 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:47:23 2018
Response via : Initial Calibration

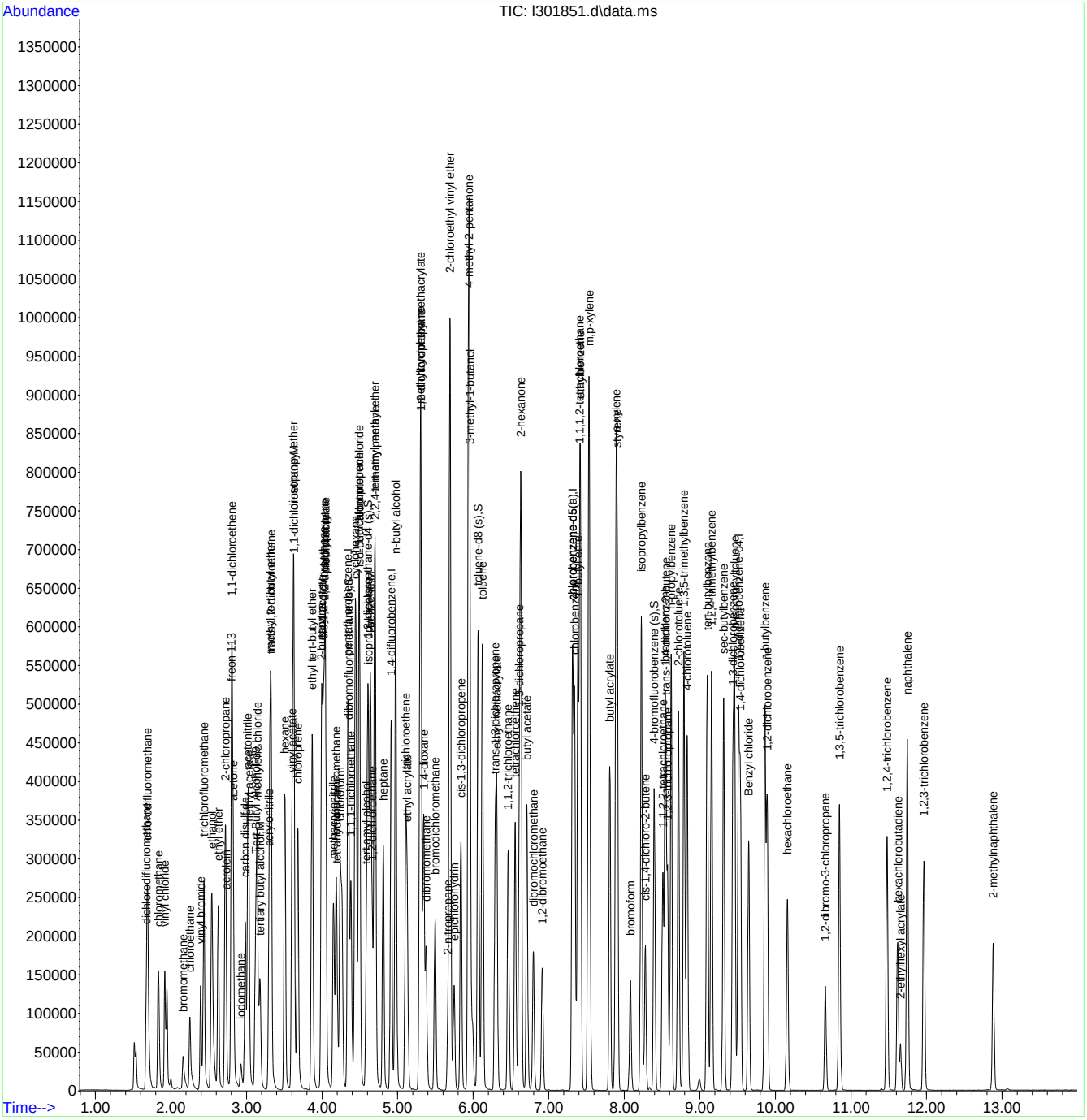
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
109) 1,3,5-trimethylbenzene	8.790	105	296146	51.30 ug/L	99
110) tert-butylbenzene	9.098	119	252034	51.90 ug/L	98
111) 1,2,4-trimethylbenzene	9.153	105	298627	51.17 ug/L	98
112) sec-butylbenzene	9.317	105	356253	51.12 ug/L	99
113) 1,3-dichlorobenzene	9.439	146	162703	51.20 ug/L	99
114) p-isopropyltoluene	9.461	119	278695	49.75 ug/L	99
115) 1,4-dichlorobenzene	9.535	146	156065	50.60 ug/L	100
116) 1,2-dichlorobenzene	9.891	146	153613	50.68 ug/L	96
118) n-butylbenzene	9.862	92	151762	52.55 ug/L	100
120) 1,2-dibromo-3-chloropr...	10.661	157	36420	57.54 ug/L	96
121) 1,3,5-trichlorobenzene	10.847	180	113804	51.44 ug/L	98
122) 1,2,4-trichlorobenzene	11.476	180	104151	51.72 ug/L	97
123) hexachlorobutadiene	11.621	225	37996	48.36 ug/L	97
124) naphthalene	11.746	128	359172	52.21 ug/L	99
125) 1,2,3-trichlorobenzene	11.964	180	95493	50.27 ug/L	98
126) hexachloroethane	10.157	119	49520	54.74 ug/L	98
127) Benzyl chloride	9.644	91	233811	49.85 ug/L	100
128) 2-ethylhexyl acrylate	11.656	70	15177	11.12 ug/L	97
129) 2-methylnaphthalene	12.882	142	93574	22.83 ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\vl8605\
Data File : l301851.d
Acq On : 2 Jun 2018 12:26 pm
Operator : deving
Sample : CC8534-50 Inst : GCMSL
Misc : MS26750,VL8605,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML8534.M
Quant Results File: ML8534.RES
Quant Time: Jun 05 01:14:09 2018
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu May 10 07:47:23 2018
Response via : Initial Calibration



GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	Rxi624(60mx0.25mmx1.4um)
Standards	ABK V018-2615-120.3	C V018-2615-131.1	E V018-2615-121.23	Ext E V018-2615-133.2	Method	V8260C
Concentration	100ppm-10000ppm	100 ppm	100 ppm	100 ppm	Init Calib Date	4/16/2018
Internal Surrogate	V018-2615-130					
Concentration	50/500ppm					
Standards	Ext ABK V018-2615-114.8	Ext C V018-2615-127.9	Ext E V018-2615-115.6	Ext PA V018-2615-128.2	Analysis Date	4/16/2018
Concentration	100-10,000 ppm	100 ppm	100 ppm	100/1000 ppm	Sequence loaded by	Robert Szot
Standards	Ext Chlorodifluoromethane	V018-2615-132.1			Data processed by	Robert Szot
Concentration	100 ppm				Batch ID	VL8534
					Matrix	AQ
Initial Calibration Method	ML8534				Approved By:	JESSICA
pH Paper Lot#	216315				Approved Date:	4/23/2018 5:07:35 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
L	300307	BFB		NA			5			1	ok	
L	300308	IC8534-0.5		NA		8260 initial cal.	5			2	ok	2.5 uL ABK, C, E / 500 mL DI H2O
L	300309	IC8534-1		NA		8260 initial cal.	5			3	ok	5 uL ABK, C, E / 500 mL DI H2O
L	300310	IC8534-2		NA		8260 initial cal.	5			4	ok	10 uL ABK, C, E / 500 mL DI H2O
L	300311	IC8534-5		NA		8260 initial cal.	5			5	ok	10 uL ABK, C, E / 200 mL DI H2O
L	300312	IC8534-10		NA		8260 initial cal.	5			6	ok	20 uL ABK, C, E / 200 mL DI H2O
L	300313	IC8534-20		NA		8260 initial cal.	5			7	ok	40 uL ABK, C, E / 200 mL DI H2O
L	300314	ICC8534-50		NA		8260 initial cal.	5			8	ok	100 uL ABK, C, E / 200 mL DI H2O
L	300315	IC8534-100		NA		8260 initial cal.	5			9	ok	200 uL ABK, C, E / 200 mL DI H2O
L	300316	IC8534-200		NA		8260 initial cal.	5			10	ok	400 uL ABK, C, E / 200 mL DI H2O
L	300317	IB		NA			5			11	ok	
L	300318	IB		NA			5			12	ok	

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Rev Date: 12/18/2017

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
L	300319	ICV8534-50		NA		8260 initial cal.	5			13	ok	100 uL Ext ABK, Ext C, Ext E / 200 mL DI H2O
L	300320	ICV8534-50		NA		8260 initial cal.	5			14	ok	100 uL Ext PA / 200 mL DI H2O
L	300321	IB		NA			5			15	ok	
L	300322	IB		NA			5			16	ok	
L	300323	BFB2		NA			5			17	ok	
L	300324	ICV8534-50		NA		8260 initial cal.	5			18	ok	25 uL Ext E (-113.2), Ext C, Ext Chlorodifluoromethane / 50 mL DI H2O

GCMS Volatile Run Log

Standard / Reagents	Lot #					
STANDARDS	Cyclohexanone V018-2623-08-1	Ext Cyclohexanone V018-2623-09-1			Column	RXI624(60mx.25mmx1.4um)
Standard Concentrations	1000 ppm	1000ppm			Method	V8260C
INTERNAL/SURROGATE	V018-2615-149				Init Calib Date	4/3/18
Int/Surr Concentration	50/500 PPM					
					Analysis Date	5/9/2019
					Sequence loaded by	Robert Szot
					Data processed by	roberts
					Batch ID	VL8568
Rough Reviewed by					Matrix	AQ
Initial Calibration Method	ML8534				Approved By:	OWENM
pH Paper Lot#	216315				Approved Date:	5/21/2018 1:46:09 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
L	301057	IB		NA			5			1	ok	
L	301058	BFB		NA			5			2	ok	
L	301059	IC8534-0.5		NA		8260 initial cal.	5			3	ok	2.5 uL Cyclohexanone / 500 mL DI H2O
L	301060	IC8534-1		NA		8260 initial cal.	5			4	ok	5 uL Cyclohexanone / 500 mL DI H2O
L	301061	IC8534-2		NA		8260 initial cal.	5			5	ok	2 uL Cyclohexanone / 100 mL DI H2O
L	301062	IC8534-5		NA		8260 initial cal.	5			6	ok	5 uL Cyclohexanone / 100 mL DI H2O
L	301063	IC8534-10		NA		8260 initial cal.	5			7	ok	10 uL Cyclohexanone / 100 mL DI H2O
L	301064	IC8534-20		NA		8260 initial cal.	5			8	ok	20 uL Cyclohexanone / 100 mL DI H2O
L	301065	IC8534-50		NA		8260 initial cal.	5			9	ok	25 uL Cyclohexanone / 50 mL DI H2O
L	301066	IC8534-100		NA		8260 initial cal.	5			12	ok	50 uL Cyclohexanone / 50 mL DI H2O
L	301067	IC8534-200		NA		8260 initial cal.	5			10	ok	100 uL Cyclohexanone / 50 mL DI H2O

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Rev Date: 12/18/2017

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
L	301068	IB		NA			5			11		
L	301069	IB		NA			5			13		
L	301070	ICV8534-50		NA		8260 initial cal.	5			14	ok	25 uL Ext Cyclohexanone / 50 mL DI H2O
L	301071	IB		NA			5			15		

GCMS Volatile Run Log

Standard / Reagents	Lot #				Column	RXI-624(30mx.25mmx1.4um)
Standards	ABK V018-2623-40.3	C V018-2623-38.1	E V018-2623-34.16		Method	V8260C
Standard Concentrations	100-10,000 ppm	100 ppm	100 ppm		Init Calib Date	5/30/2018
					Rough Reviewed	Bridget Kelly
Internal Surrogate	V018-2623-17				Analysis Date	6/2/2018
Internal Surrogate Concentration	250/2500 ppm				Sequence loaded by	Payal Rana
					Data processed by	michellc
					Batch ID	VL8605
					Matrix	AQ
Initial Calibration Method	ML8534				Approved By:	JESSICA
pH Paper Lot#	216315				Approved Date:	6/6/2018 5:56:38 PM

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
L	301846	IB		NA			5			1	ok	
L	301847	BFB/CC8534-20		NA			5			2	NG	BFB failed
L	301848	BFB/CC8534-20		NA			5			3	NG	BFB failed
L	301849	IB		NA			5			4	ok	
L	301850	BFB/CC8534-50		NA			5			5	ok/ok	11:52AM (# 7 high, #13 low) 50uL ABK,C,E/100mL DI H2O
L	301851	CC8534-50		NA			5			6	ok	50uL ABK,C,E/100mL DI H2O
L	301852	CC8534-2		NA			5			7	ok	(for # 13) 2uL ABK,C,E/100mL DI H2O
L	301853	BS		NA			5			8	ok	50uL ABK,C,E/100mL DI H2O
L	301854	IB		NA			5			9	ok	
L	301855	MB		NA			5			10	ok	
L	301856	JC66896-4	1	NA	MS26840	V8260PATCL20	5		1	11	ok	

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Rev Date: 12/18/2017

Data File		Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
L	301857	JC67110-4	29	NA	MS26840	V8260TCL20	5		1	12	ok	
L	301858	JC67110-5	11	NA	MS26840	V8260TCL20	5		1	13	ok	
L	301859	JC67110-3	10	NA	MS26840	V8260TCL20	5		1	14	ok	
L	301860	JC67110-4MS	31	NA	MS26840	V8260TCL20	5		1	15	ok	20uL ABK,C,E/40mL Sample
L	301861	JC67110-4MSD	32	NA	MS26840	V8260TCL20	5		1	16	ok	20uL ABK,C,E/40mL Sample
L	301862	IB		NA			5			17	ok	
L	301863	JC66896-10	19	NA	MS26840	V8260PATCL20	5		1	18	ok	
L	301864	JC66896-8	14	NA	MS26840	V8260PATCL20	5		1	19	ok/dl	
L	301865	JC66896-8	14	10X	MS26840	V8260PATCL20	5/50		1	20	ok	+
L	301866	JC66896-9	19	4X	MS26840	V8260PATCL20	12.5/50		1	21	rr	o/d rr 1x
L	301867	JC66896-5	14	10X	MS26840	V8260PATCL20	5/50		1	22	rr	o/d rr 4x
L	301868	JC66896-6	14	100X	MS26840	V8260PATCL20	0.5/50		1	23	rr	o/d rr 25x
L	301869	JC66896-7	14	50X	MS26840	V8260PATCL20	1/50		1	24	rr	o/d rr 10x 8:47pm

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: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12498-MB	2M104766A.D	1	06/05/18	CC	06/04/18	OP12498	E2M4654

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC67110-3, JC67110-4, JC67110-5

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: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12498-MB	2M104766A.D	1	06/05/18	CC	06/04/18	OP12498	E2M4654

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC67110-3, JC67110-4, JC67110-5

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	ND	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	40%	10-110%

Method Blank Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12498-MB	2M104766A.D	1	06/05/18	CC	06/04/18	OP12498	E2M4654

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC67110-3, JC67110-4, JC67110-5

CAS No.	Surrogate Recoveries		Limits
4165-62-2	Phenol-d5	29%	10-110%
118-79-6	2,4,6-Tribromophenol	86%	36-151%
4165-60-0	Nitrobenzene-d5	86%	34-128%
321-60-8	2-Fluorobiphenyl	72%	38-119%
1718-51-0	Terphenyl-d14	74%	26-129%

Method Blank Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12498-MB	5P50928.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC67110-3, JC67110-4, JC67110-5

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: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12498-MB	5P50928.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC67110-3, JC67110-4, JC67110-5

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	ND	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	41%	10-110%

Method Blank Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12498-MB	5P50928.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC67110-3, JC67110-4, JC67110-5

CAS No.	Surrogate Recoveries		Limits
4165-62-2	Phenol-d5	28%	10-110%
118-79-6	2,4,6-Tribromophenol	70%	36-151%
4165-60-0	Nitrobenzene-d5	74%	34-128%
321-60-8	2-Fluorobiphenyl	71%	38-119%
1718-51-0	Terphenyl-d14	64%	26-129%

Method Blank Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12498-MB	M146681.D	1	06/06/18	JB	06/04/18	OP12498	EM6235

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC67110-3, JC67110-4, JC67110-5

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: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12498-MB	M146681.D	1	06/06/18	JB	06/04/18	OP12498	EM6235

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC67110-3, JC67110-4, JC67110-5

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	ND	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	35%	10-110%

Method Blank Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12498-MB	M146681.D	1	06/06/18	JB	06/04/18	OP12498	EM6235

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC67110-3, JC67110-4, JC67110-5

CAS No.	Surrogate Recoveries		Limits
4165-62-2	Phenol-d5	24%	10-110%
118-79-6	2,4,6-Tribromophenol	83%	36-151%
4165-60-0	Nitrobenzene-d5	75%	34-128%
321-60-8	2-Fluorobiphenyl	71%	38-119%
1718-51-0	Terphenyl-d14	76%	26-129%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Internal standard added for SIM test	6.32	4.3	ug/l	J
	Internal standard added for SIM test	8.54	4.2	ug/l	J
	unknown phthalate	17.01	4.6	ug/l	J
	Total TIC, Semi-Volatile		4.6	ug/l	J

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12498-BS	5P50929.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426
OP12498-BSD	5P50930.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC67110-3, JC67110-4, JC67110-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	50	30.4	61	33.7	67	10	39-106/27
59-50-7	4-Chloro-3-methyl phenol	50	40.5	81	42.0	84	4	45-118/23
120-83-2	2,4-Dichlorophenol	50	37.0	74	40.2	80	8	43-115/26
105-67-9	2,4-Dimethylphenol	50	40.6	81	43.2	86	6	38-125/23
51-28-5	2,4-Dinitrophenol	100	76.4	76	86.9	87	13	35-137/22
534-52-1	4,6-Dinitro-o-cresol	50	43.9	88	46.6	93	6	45-134/23
95-48-7	2-Methylphenol	50	27.6	55	29.5	59	7	34-106/24
	3&4-Methylphenol	50	27.3	55	29.5	59	8	31-110/25
88-75-5	2-Nitrophenol	50	35.6	71	40.0	80	12	41-118/28
100-02-7	4-Nitrophenol	50	29.5	59	31.3	63	6	10-113/31
87-86-5	Pentachlorophenol	50	50.3	101	54.4	109	8	21-134/25
108-95-2	Phenol	50	15.3	31	17.0	34	11	10-110/27
58-90-2	2,3,4,6-Tetrachlorophenol	50	42.7	85	46.7	93	9	41-129/41
95-95-4	2,4,5-Trichlorophenol	50	40.6	81	45.6	91	12	45-117/26
88-06-2	2,4,6-Trichlorophenol	50	42.9	86	47.5	95	10	47-125/35
83-32-9	Acenaphthene	50	43.7	87	46.5	93	6	40-114/22
208-96-8	Acenaphthylene	50	41.0	82	44.3	89	8	40-109/22
98-86-2	Acetophenone	50	32.0	64	35.1	70	9	43-112/21
120-12-7	Anthracene	50	42.7	85	44.7	89	5	50-113/20
1912-24-9	Atrazine	50	53.6	107	54.5	109	2	46-141/23
100-52-7	Benzaldehyde	50	35.5	71	41.2	82	15	27-116/29
56-55-3	Benzo(a)anthracene	50	43.7	87	46.6	93	6	55-110/22
50-32-8	Benzo(a)pyrene	50	36.5	73	39.3	79	7	52-112/24
205-99-2	Benzo(b)fluoranthene	50	36.0	72	40.3	81	11	53-114/22
191-24-2	Benzo(g,h,i)perylene	50	39.3	79	44.0	88	11	46-115/28
207-08-9	Benzo(k)fluoranthene	50	37.6	75	38.7	77	3	55-115/23
101-55-3	4-Bromophenyl phenyl ether	50	40.7	81	41.8	84	3	47-122/25
85-68-7	Butyl benzyl phthalate	50	43.3	87	47.1	94	8	50-124/22
92-52-4	1,1'-Biphenyl	50	38.6	77	41.6	83	7	42-114/22
91-58-7	2-Chloronaphthalene	50	39.0	78	43.2	86	10	33-112/26
106-47-8	4-Chloroaniline	50	23.1	46	24.7	49	7	17-87/39
86-74-8	Carbazole	50	41.8	84	44.8	90	7	54-118/21
105-60-2	Caprolactam	50	11.5	23	12.2	24	6	10-110/23
218-01-9	Chrysene	50	41.8	84	44.8	90	7	52-107/21
111-91-1	bis(2-Chloroethoxy)methane	50	38.7	77	42.4	85	9	38-116/24
111-44-4	bis(2-Chloroethyl)ether	50	33.4	67	37.5	75	12	38-118/23

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12498-BS	5P50929.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426
OP12498-BSD	5P50930.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC67110-3, JC67110-4, JC67110-5

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	46.7	93	52.0	104	11	29-108/23
7005-72-3	4-Chlorophenyl phenyl ether	50	41.9	84	45.6	91	8	40-122/21
121-14-2	2,4-Dinitrotoluene	50	41.6	83	45.8	92	10	54-129/21
606-20-2	2,6-Dinitrotoluene	50	43.5	87	47.4	95	9	53-131/21
91-94-1	3,3'-Dichlorobenzidine	100	59.2	59	64.7	65	9	28-91/44
53-70-3	Dibenzo(a,h)anthracene	50	37.1	74	39.6	79	7	51-117/25
132-64-9	Dibenzofuran	50	42.9	86	46.6	93	8	46-118/16
84-74-2	Di-n-butyl phthalate	50	42.7	85	45.8	92	7	54-124/23
117-84-0	Di-n-octyl phthalate	50	40.6	81	43.3	87	6	41-137/22
84-66-2	Diethyl phthalate	50	45.3	91	50.7	101	11	49-122/20
131-11-3	Dimethyl phthalate	50	44.7	89	48.7	97	9	51-118/20
117-81-7	bis(2-Ethylhexyl)phthalate	50	43.6	87	46.3	93	6	47-128/36
206-44-0	Fluoranthene	50	43.2	86	45.6	91	5	54-118/23
86-73-7	Fluorene	50	43.9	88	48.0	96	9	45-116/20
118-74-1	Hexachlorobenzene	50	41.5	83	44.0	88	6	45-124/23
87-68-3	Hexachlorobutadiene	50	36.0	72	40.8	82	13	10-120/35
77-47-4	Hexachlorocyclopentadiene	100	60.9	61	70.4	70	14	10-110/43
67-72-1	Hexachloroethane	50	28.9	58	34.9	70	19	11-110/38
193-39-5	Indeno(1,2,3-cd)pyrene	50	37.2	74	41.6	83	11	45-123/30
78-59-1	Isophorone	50	38.0	76	39.8	80	5	43-115/20
91-57-6	2-Methylnaphthalene	50	34.9	70	37.5	75	7	37-111/21
88-74-4	2-Nitroaniline	50	49.5	99	55.2	110	11	40-144/18
99-09-2	3-Nitroaniline	50	31.6	63	34.1	68	8	31-104/42
100-01-6	4-Nitroaniline	50	37.2	74	42.7	85	14	48-119/20
91-20-3	Naphthalene	50	34.5	69	37.9	76	9	29-110/23
98-95-3	Nitrobenzene	50	37.2	74	41.3	83	10	35-118/21
621-64-7	N-Nitroso-di-n-propylamine	50	33.3	67	37.0	74	11	38-116/22
86-30-6	N-Nitrosodiphenylamine	50	38.4	77	41.8	84	8	49-114/22
85-01-8	Phenanthrene	50	42.0	84	44.5	89	6	49-116/21
129-00-0	Pyrene	50	43.9	88	47.1	94	7	51-116/21
95-94-3	1,2,4,5-Tetrachlorobenzene	50	44.4	89	48.3	97	8	21-124/32

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	43%	47%	10-110%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12498-BS	5P50929.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426
OP12498-BSD	5P50930.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC67110-3, JC67110-4, JC67110-5

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
4165-62-2	Phenol-d5	31%	33%	10-110%
118-79-6	2,4,6-Tribromophenol	76%	81%	36-151%
4165-60-0	Nitrobenzene-d5	78%	86%	34-128%
321-60-8	2-Fluorobiphenyl	77%	84%	38-119%
1718-51-0	Terphenyl-d14	76%	81%	26-129%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12498-MS	5P50935.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426
OP12498-MSD	5P50936.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426
JC67110-4	5P50938.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC67110-3, JC67110-4, JC67110-5

CAS No.	Compound	JC67110-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	ND		55.6	39.0	70	55.6	40.7	73	4	36-113/33
59-50-7	4-Chloro-3-methyl phenol	ND		55.6	50.8	91	55.6	49.5	89	3	40-126/29
120-83-2	2,4-Dichlorophenol	ND		55.6	47.6	86	55.6	46.2	83	3	40-119/30
105-67-9	2,4-Dimethylphenol	ND		55.6	54.4	98	55.6	52.3	94	4	34-134/30
51-28-5	2,4-Dinitrophenol	ND		111	30.7	28	111	33.4	30	8	22-157/34
534-52-1	4,6-Dinitro-o-cresol	ND		55.6	19.7	35	55.6	21.9	39	11	26-151/37
95-48-7	2-Methylphenol	ND		55.6	35.9	65	55.6	36.6	66	2	31-119/32
	3&4-Methylphenol	ND		55.6	36.7	66	55.6	36.2	65	1	29-118/31
88-75-5	2-Nitrophenol	ND		55.6	45.1	81	55.6	45.3	82	0	38-123/34
100-02-7	4-Nitrophenol	ND		55.6	37.1	67	55.6	41.0	74	10	10-161/36
87-86-5	Pentachlorophenol	ND		55.6	62.2	112	55.6	68.1	123	9	22-149/36
108-95-2	Phenol	ND		55.6	17.5	32	55.6	21.1	38	19	10-110/35
58-90-2	2,3,4,6-Tetrachlorophenol	ND		55.6	51.5	93	55.6	57.0	103	10	43-131/36
95-95-4	2,4,5-Trichlorophenol	ND		55.6	50.5	91	55.6	53.6	96	6	45-118/30
88-06-2	2,4,6-Trichlorophenol	ND		55.6	53.8	97	55.6	55.5	100	3	48-126/31
83-32-9	Acenaphthene	ND		55.6	52.6	95	55.6	55.1	99	5	44-119/28
208-96-8	Acenaphthylene	ND		55.6	50.2	90	55.6	52.6	95	5	40-115/28
98-86-2	Acetophenone	ND		55.6	41.3	74	55.6	43.6	78	5	34-127/32
120-12-7	Anthracene	ND		55.6	50.0	90	55.6	51.9	93	4	44-120/30
1912-24-9	Atrazine	ND		55.6	60.0	108	55.6	63.5	114	6	31-149/30
100-52-7	Benzaldehyde	ND		55.6	41.8	75	55.6	44.6	80	6	11-132/37
56-55-3	Benzo(a)anthracene	ND		55.6	47.0	85	55.6	49.8	90	6	48-116/30
50-32-8	Benzo(a)pyrene	ND		55.6	40.1	72	55.6	41.5	75	3	43-120/31
205-99-2	Benzo(b)fluoranthene	ND		55.6	39.5	71	55.6	40.8	73	3	42-123/31
191-24-2	Benzo(g,h,i)perylene	ND		55.6	43.2	78	55.6	45.5	82	5	39-121/32
207-08-9	Benzo(k)fluoranthene	ND		55.6	41.4	75	55.6	44.4	80	7	44-123/31
101-55-3	4-Bromophenyl phenyl ether	ND		55.6	47.7	86	55.6	48.9	88	2	47-127/31
85-68-7	Butyl benzyl phthalate	ND		55.6	49.4	89	55.6	52.4	94	6	41-135/32
92-52-4	1,1'-Biphenyl	ND		55.6	48.8	88	55.6	49.0	88	0	39-124/29
91-58-7	2-Chloronaphthalene	ND		55.6	50.4	91	55.6	51.1	92	1	37-120/30
106-47-8	4-Chloroaniline	ND		55.6	22.2	40	55.6	29.3	53	28	10-110/49
86-74-8	Carbazole	ND		55.6	49.2	89	55.6	52.1	94	6	46-127/29
105-60-2	Caprolactam	ND		55.6	13.7	25	55.6	14.1	25	3	10-110/37
218-01-9	Chrysene	ND		55.6	47.0	85	55.6	49.8	90	6	45-113/30
111-91-1	bis(2-Chloroethoxy)methane	ND		55.6	48.7	88	55.6	49.1	88	1	33-122/29
111-44-4	bis(2-Chloroethyl)ether	ND		55.6	41.5	75	55.6	45.9	83	10	29-132/36

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12498-MS	5P50935.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426
OP12498-MSD	5P50936.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426
JC67110-4	5P50938.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC67110-3, JC67110-4, JC67110-5

CAS No.	Compound	JC67110-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-60-1	2,2'-Oxybis(1-chloropropane)	ND		55.6	61.5	111	55.6	64.1	115	4	27-115/34
7005-72-3	4-Chlorophenyl phenyl ether	ND		55.6	51.5	93	55.6	54.1	97	5	43-125/30
121-14-2	2,4-Dinitrotoluene	ND		55.6	48.9	88	55.6	53.4	96	9	49-135/31
606-20-2	2,6-Dinitrotoluene	ND		55.6	50.7	91	55.6	53.9	97	6	50-135/32
91-94-1	3,3'-Dichlorobenzidine	ND		111	52.7	47	111	60.5	54	14	2-115/43
53-70-3	Dibenzo(a,h)anthracene	ND		55.6	40.6	73	55.6	43.0	77	6	44-121/32
132-64-9	Dibenzofuran	ND		55.6	51.8	93	55.6	55.3	100	7	43-123/29
84-74-2	Di-n-butyl phthalate	ND		55.6	48.1	87	55.6	51.5	93	7	46-133/30
117-84-0	Di-n-octyl phthalate	ND		55.6	45.0	81	55.6	47.3	85	5	31-147/32
84-66-2	Diethyl phthalate	ND		55.6	55.6	100	55.6	58.7	106	5	46-126/30
131-11-3	Dimethyl phthalate	ND		55.6	52.2	94	55.6	57.8	104	10	49-120/29
117-81-7	bis(2-Ethylhexyl)phthalate	ND		55.6	49.1	88	55.6	49.4	89	1	35-140/35
206-44-0	Fluoranthene	ND		55.6	49.6	89	55.6	51.5	93	4	48-122/30
86-73-7	Fluorene	ND		55.6	52.6	95	55.6	55.2	99	5	45-121/30
118-74-1	Hexachlorobenzene	ND		55.6	47.1	85	55.6	49.4	89	5	42-129/32
87-68-3	Hexachlorobutadiene	ND		55.6	44.8	81	55.6	46.7	84	4	10-129/36
77-47-4	Hexachlorocyclopentadiene	ND		111	56.9	51	111	58.2	52	2	10-111/40
67-72-1	Hexachloroethane	ND		55.6	38.4	69	55.6	40.4	73	5	12-116/37
193-39-5	Indeno(1,2,3-cd)pyrene	ND		55.6	41.7	75	55.6	44.4	80	6	39-129/33
78-59-1	Isophorone	ND		55.6	47.7	86	55.6	47.9	86	0	37-122/29
91-57-6	2-Methylnaphthalene	ND		55.6	44.2	80	55.6	45.1	81	2	33-118/31
88-74-4	2-Nitroaniline	ND		55.6	59.1	106	55.6	67.9	122	14	32-156/31
99-09-2	3-Nitroaniline	ND		55.6	35.8	64	55.6	42.6	77	17	11-114/41
100-01-6	4-Nitroaniline	ND		55.6	40.9	74	55.6	44.5	80	8	31-125/30
91-20-3	Naphthalene	ND		55.6	45.2	81	55.6	44.2	80	2	24-119/33
98-95-3	Nitrobenzene	ND		55.6	46.6	84	55.6	47.5	86	2	28-130/32
621-64-7	N-Nitroso-di-n-propylamine	ND		55.6	42.6	77	55.6	45.3	82	6	29-128/31
86-30-6	N-Nitrosodiphenylamine	ND		55.6	47.7	86	55.6	49.2	89	3	40-128/31
85-01-8	Phenanthrene	ND		55.6	51.0	92	55.6	53.0	95	4	41-128/30
129-00-0	Pyrene	ND		55.6	48.5	87	55.6	51.3	92	6	47-122/30
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		55.6	59.3	107	55.6	59.4	107	0	23-134/31

CAS No.	Surrogate Recoveries	MS	MSD	JC67110-4	Limits
367-12-4	2-Fluorophenol	49%	52%	40%	10-110%

* = Outside of Control Limits.

8.3.1

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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12498-MS	5P50935.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426
OP12498-MSD	5P50936.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426
JC67110-4	5P50938.D	1	06/05/18	CC	06/04/18	OP12498	E5P2426

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC67110-3, JC67110-4, JC67110-5

CAS No.	Surrogate Recoveries	MS	MSD	JC67110-4	Limits
4165-62-2	Phenol-d5	35%	37%	30%	10-110%
118-79-6	2,4,6-Tribromophenol	86%	90%	80%	36-151%
4165-60-0	Nitrobenzene-d5	91%	90%	76%	34-128%
321-60-8	2-Fluorobiphenyl	87%	90%	78%	38-119%
1718-51-0	Terphenyl-d14	66%	65%	58%	26-129%

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E2M4618-DFTPP
Lab File ID: 2M103893.D
Instrument ID: GCMS2M
Injection Date: 05/09/18
Injection Time: 10:22

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	176008	35.4		Pass
68	Less than 2.0% of mass 69	2989	0.60	(1.53) [a]	Pass
69	Mass 69 relative abundance	194999	39.2		Pass
70	Less than 2.0% of mass 69	895	0.18	(0.46) [a]	Pass
127	40.0 - 60.0% of mass 198	246965	49.6		Pass
197	Less than 1.0% of mass 198	4345	0.87		Pass
198	Base peak, 100% relative abundance	497856	100.0		Pass
199	5.0 - 9.0% of mass 198	32775	6.58		Pass
275	10.0 - 30.0% of mass 198	122106	24.5		Pass
365	1.0 - 100.0% of mass 198	14865	2.99		Pass
441	Present, but less than mass 443	46565	9.35	(78.6) [b]	Pass
442	40.0 - 100.0% of mass 198	323541	65.0		Pass
443	17.0 - 23.0% of mass 442	59280	11.9	(18.3) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2M4618-IC4618	2M103895.D	05/09/18	11:56	01:34	Initial cal 100
E2M4618-IC4618	2M103896.D	05/09/18	12:22	02:00	Initial cal 80
E2M4618-ICC4618	2M103897.D	05/09/18	12:47	02:25	Initial cal 50
E2M4618-IC4618	2M103898.D	05/09/18	13:13	02:51	Initial cal 25
E2M4618-IC4618	2M103899.D	05/09/18	13:38	03:16	Initial cal 10
E2M4618-IC4618	2M103900.D	05/09/18	14:04	03:42	Initial cal 5
E2M4618-IC4618	2M103901.D	05/09/18	14:29	04:07	Initial cal 2
E2M4618-IC4618	2M103902.D	05/09/18	14:55	04:33	Initial cal 1

Instrument Performance Check (DFTPP)

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E2M4619-DFTPP
Lab File ID: 2M103903.D
Instrument ID: GCMS2M
Injection Date: 05/09/18
Injection Time: 18:30

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	205172	37.4		Pass
68	Less than 2.0% of mass 69	3087	0.56	(1.34) [a]	Pass
69	Mass 69 relative abundance	230153	42.0		Pass
70	Less than 2.0% of mass 69	1679	0.31	(0.73) [a]	Pass
127	40.0 - 60.0% of mass 198	288469	52.6		Pass
197	Less than 1.0% of mass 198	4778	0.87		Pass
198	Base peak, 100% relative abundance	548117	100.0		Pass
199	5.0 - 9.0% of mass 198	37624	6.86		Pass
275	10.0 - 30.0% of mass 198	131669	24.0		Pass
365	1.0 - 100.0% of mass 198	14986	2.73		Pass
441	Present, but less than mass 443	45789	8.35	(75.2) [b]	Pass
442	40.0 - 100.0% of mass 198	314570	57.4		Pass
443	17.0 - 23.0% of mass 442	60857	11.1	(19.3) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2M4619-IC4619	2M103904.D	05/09/18	18:59	00:29	Initial cal 100
E2M4619-IC4619	2M103905.D	05/09/18	19:25	00:55	Initial cal 80
E2M4619-ICC4619	2M103906.D	05/09/18	19:50	01:20	Initial cal 50
E2M4619-IC4619	2M103907.D	05/09/18	20:16	01:46	Initial cal 25
E2M4619-IC4619	2M103908.D	05/09/18	20:41	02:11	Initial cal 10
E2M4619-IC4619	2M103909.D	05/09/18	21:06	02:36	Initial cal 5
E2M4619-IC4619	2M103910.D	05/09/18	21:32	03:02	Initial cal 2
E2M4619-IC4619	2M103911.D	05/09/18	21:57	03:27	Initial cal 1
E2M4619-ICV4618	2M103912.D	05/09/18	22:23	03:53	Initial cal verification 50
E2M4619-ICV4618	2M103913.D	05/09/18	22:48	04:18	Initial cal verification 50
E2M4619-ICV4619	2M103915A.D	05/09/18	23:38	05:08	Initial cal verification 50
E2M4619-ICV4618	2M103915.D	05/09/18	23:38	05:08	Initial cal verification 50
E2M4619-ICV4618	2M103916.D	05/10/18	00:04	05:34	Initial cal verification 50
E2M4619-ICV4619	2M103916A.D	05/10/18	00:04	05:34	Initial cal verification 50
E2M4619-ICV4618	2M103917.D	05/10/18	00:29	05:59	Initial cal verification 50
E2M4619-ICV4619	2M103918.D	05/10/18	02:14	07:44	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E2M4620-DFTPP
Lab File ID: 2M103920.D
Instrument ID: GCMS2M
Injection Date: 05/11/18
Injection Time: 13:43

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	130877	34.6		Pass
68	Less than 2.0% of mass 69	2584	0.68	(1.71) [a]	Pass
69	Mass 69 relative abundance	151216	40.0		Pass
70	Less than 2.0% of mass 69	823	0.22	(0.54) [a]	Pass
127	40.0 - 60.0% of mass 198	189864	50.2		Pass
197	Less than 1.0% of mass 198	3129	0.83		Pass
198	Base peak, 100% relative abundance	378218	100.0		Pass
199	5.0 - 9.0% of mass 198	24697	6.53		Pass
275	10.0 - 30.0% of mass 198	90376	23.9		Pass
365	1.0 - 100.0% of mass 198	11279	2.98		Pass
441	Present, but less than mass 443	34077	9.01	(76.5) [b]	Pass
442	40.0 - 100.0% of mass 198	230490	60.9		Pass
443	17.0 - 23.0% of mass 442	44552	11.8	(19.3) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2M4620-ICV4619	2M103921A.D	05/11/18	13:55	00:12	Initial cal verification 50
E2M4620-ICV4618	2M103921.D	05/11/18	13:55	00:12	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E2M4654-DFTPP
Lab File ID: 2M104764.D
Instrument ID: GCMS2M
Injection Date: 06/05/18
Injection Time: 11:58

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	150672	39.1		Pass
68	Less than 2.0% of mass 69	3509	0.91	(1.91) [a]	Pass
69	Mass 69 relative abundance	183946	47.7		Pass
70	Less than 2.0% of mass 69	1066	0.28	(0.58) [a]	Pass
127	40.0 - 60.0% of mass 198	210730	54.6		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	385728	100.0		Pass
199	5.0 - 9.0% of mass 198	27283	7.07		Pass
275	10.0 - 30.0% of mass 198	106072	27.5		Pass
365	1.0 - 100.0% of mass 198	18633	4.83		Pass
441	Present, but less than mass 443	41223	10.7	(84.0) [b]	Pass
442	40.0 - 100.0% of mass 198	249373	64.6		Pass
443	17.0 - 23.0% of mass 442	49085	12.7	(19.7) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2M4654-CC4618	2M104765.D	06/05/18	12:10	00:12	Continuing cal 50
OP12498-MB	2M104766A.D	06/05/18	13:26	01:28	Method Blank
ZZZZZZ	2M104769.D	06/05/18	14:45	02:47	(unrelated sample)
ZZZZZZ	2M104770.D	06/05/18	15:11	03:13	(unrelated sample)
ZZZZZZ	2M104771.D	06/05/18	15:37	03:39	(unrelated sample)
ZZZZZZ	2M104772.D	06/05/18	16:03	04:05	(unrelated sample)
ZZZZZZ	2M104773.D	06/05/18	16:29	04:31	(unrelated sample)
ZZZZZZ	2M104774.D	06/05/18	16:55	04:57	(unrelated sample)
ZZZZZZ	2M104775.D	06/05/18	17:21	05:23	(unrelated sample)
ZZZZZZ	2M104776.D	06/05/18	18:13	06:15	(unrelated sample)
ZZZZZZ	2M104778.D	06/05/18	19:05	07:07	(unrelated sample)
ZZZZZZ	2M104779.D	06/05/18	19:30	07:32	(unrelated sample)
ZZZZZZ	2M104780.D	06/05/18	19:56	07:58	(unrelated sample)
ZZZZZZ	2M104781.D	06/05/18	20:22	08:24	(unrelated sample)
ZZZZZZ	2M104782.D	06/05/18	20:48	08:50	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E5P2386-DFTPP
Lab File ID: 5P49973.D
Instrument ID: GCMS5P
Injection Date: 05/07/18
Injection Time: 14:10

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	36416	33.0		Pass
68	Less than 2.0% of mass 69	126	0.11	(0.33) [a]	Pass
69	Mass 69 relative abundance	38752	35.1		Pass
70	Less than 2.0% of mass 69	91	0.08	(0.23) [a]	Pass
127	40.0 - 60.0% of mass 198	55101	50.0		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	110309	100.0		Pass
199	5.0 - 9.0% of mass 198	7675	6.96		Pass
275	10.0 - 30.0% of mass 198	23723	21.5		Pass
365	1.0 - 100.0% of mass 198	3177	2.88		Pass
441	Present, but less than mass 443	14045	12.7	(77.0) [b]	Pass
442	40.0 - 100.0% of mass 198	89720	81.3		Pass
443	17.0 - 23.0% of mass 442	18237	16.5	(20.3) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E5P2386-IC2386	5P49974.D	05/07/18	14:23	00:13	Initial cal 100
E5P2386-IC2386	5P49975.D	05/07/18	14:48	00:38	Initial cal 80
E5P2386-ICC2386	5P49976.D	05/07/18	15:13	01:03	Initial cal 50
E5P2386-IC2386	5P49977.D	05/07/18	15:38	01:28	Initial cal 25
E5P2386-IC2386	5P49978.D	05/07/18	16:03	01:53	Initial cal 10
E5P2386-IC2386	5P49979.D	05/07/18	16:28	02:18	Initial cal 5
E5P2386-IC2386	5P49980.D	05/07/18	16:52	02:42	Initial cal 2
E5P2386-IC2386	5P49981.D	05/07/18	17:18	03:08	Initial cal 1
E5P2386-ICV2385	5P49982.D	05/07/18	17:43	03:33	Initial cal verification 50
E5P2386-ICV2385	5P49983.D	05/07/18	18:08	03:58	Initial cal verification 50
E5P2386-ICV2385	5P49984.D	05/07/18	18:33	04:23	Initial cal verification 50
E5P2386-ICV2386	5P49984A.D	05/07/18	18:33	04:23	Initial cal verification 50
E5P2386-ICV2385	5P49985.D	05/07/18	18:58	04:48	Initial cal verification 50
E5P2386-ICV2386	5P49985A.D	05/07/18	18:58	04:48	Initial cal verification 50
E5P2386-ICV2385	5P49986.D	05/07/18	19:23	05:13	Initial cal verification 50
E5P2386-ICV2386	5P49986A.D	05/07/18	19:23	05:13	Initial cal verification 50
E5P2386-ICV2385	5P49987.D	05/07/18	19:48	05:38	Initial cal verification 50
E5P2386-ICV2386	5P49988.D	05/07/18	20:13	06:03	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E5P2399-DFTPP
Lab File ID: 5P50254.D
Instrument ID: GCMS5P
Injection Date: 05/15/18
Injection Time: 01:18

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	44822	37.9		Pass
68	Less than 2.0% of mass 69	350	0.30	(0.87) [a]	Pass
69	Mass 69 relative abundance	40115	33.9		Pass
70	Less than 2.0% of mass 69	290	0.25	(0.72) [a]	Pass
127	40.0 - 60.0% of mass 198	49878	42.2		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	118293	100.0		Pass
199	5.0 - 9.0% of mass 198	7599	6.42		Pass
275	10.0 - 30.0% of mass 198	31845	26.9		Pass
365	1.0 - 100.0% of mass 198	5186	4.38		Pass
441	Present, but less than mass 443	3600	3.04	(20.6) [b]	Pass
442	40.0 - 100.0% of mass 198	87840	74.3		Pass
443	17.0 - 23.0% of mass 442	17509	14.8	(19.9) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E5P2399-IC2399	5P50255.D	05/15/18	01:38	00:20	Initial cal 100
E5P2399-IC2399	5P50256.D	05/15/18	02:03	00:45	Initial cal 80
E5P2399-ICC2399	5P50257.D	05/15/18	02:28	01:10	Initial cal 50
E5P2399-IC2399	5P50258.D	05/15/18	02:53	01:35	Initial cal 25
E5P2399-IC2399	5P50259.D	05/15/18	03:18	02:00	Initial cal 10
E5P2399-IC2399	5P50260.D	05/15/18	03:43	02:25	Initial cal 5
E5P2399-IC2399	5P50261.D	05/15/18	04:08	02:50	Initial cal 2
E5P2399-IC2399	5P50262.D	05/15/18	04:33	03:15	Initial cal 1
E5P2399-ICV2399	5P50263.D	05/15/18	04:58	03:40	Initial cal verification 50
E5P2399-ICV2399	5P50264.D	05/15/18	05:23	04:05	Initial cal verification 50
E5P2399-ICV2399	5P50265.D	05/15/18	05:47	04:29	Initial cal verification 50
E5P2399-ICV2399	5P50266.D	05/15/18	06:12	04:54	Initial cal verification 50
E5P2399-ICV2399	5P50268.D	05/15/18	10:30	09:12	Initial cal verification 50
E5P2399-ICV2399	5P50269.D	05/15/18	10:55	09:37	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: E5P2426-DFTPP
Lab File ID: 5P50925.D
Instrument ID: GCMS5P
Injection Date: 06/05/18
Injection Time: 12:24

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	68364	57.0		Pass
68	Less than 2.0% of mass 69	247	0.21	(0.50) [a]	Pass
69	Mass 69 relative abundance	49709	41.4		Pass
70	Less than 2.0% of mass 69	527	0.44	(1.06) [a]	Pass
127	40.0 - 60.0% of mass 198	55429	46.2		Pass
197	Less than 1.0% of mass 198	368	0.31		Pass
198	Base peak, 100% relative abundance	120008	100.0		Pass
199	5.0 - 9.0% of mass 198	8342	6.95		Pass
275	10.0 - 30.0% of mass 198	32160	26.8		Pass
365	1.0 - 100.0% of mass 198	4856	4.05		Pass
441	Present, but less than mass 443	1696	1.41	(11.6) [b]	Pass
442	40.0 - 100.0% of mass 198	76000	63.3		Pass
443	17.0 - 23.0% of mass 442	14595	12.2	(19.2) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E5P2426-CC2399	5P50926.D	06/05/18	12:38	00:14	Continuing cal 25
E5P2426-CC2386	5P50927.D	06/05/18	13:09	00:45	Continuing cal 25
OP12498-MB	5P50928.D	06/05/18	13:44	01:20	Method Blank
OP12498-BS	5P50929.D	06/05/18	14:09	01:45	Blank Spike
OP12498-BSD	5P50930.D	06/05/18	14:35	02:11	Blank Spike Duplicate
OP12498-BS13	5P50931.D	06/05/18	15:01	02:37	Blank Spike
ZZZZZZ	5P50932.D	06/05/18	15:27	03:03	(unrelated sample)
ZZZZZZ	5P50933.D	06/05/18	15:53	03:29	(unrelated sample)
ZZZZZZ	5P50934.D	06/05/18	16:19	03:55	(unrelated sample)
OP12509-MB	5P50950.D	06/05/18	16:45	04:21	Method Blank
ZZZZZZ	5P50951.D	06/05/18	17:11	04:47	(unrelated sample)
OP12498-MS	5P50935.D	06/05/18	18:03	05:39	Matrix Spike
OP12498-MSD	5P50936.D	06/05/18	18:29	06:05	Matrix Spike Duplicate
JC67110-3	5P50937.D	06/05/18	18:55	06:31	MW-102
JC67110-4	5P50938.D	06/05/18	19:21	06:57	MW-103
JC67110-5	5P50939.D	06/05/18	19:47	07:23	DUP-05312018
ZZZZZZ	5P50940.D	06/05/18	20:13	07:49	(unrelated sample)
ZZZZZZ	5P50941.D	06/05/18	20:39	08:15	(unrelated sample)
ZZZZZZ	5P50942.D	06/05/18	21:05	08:41	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample:	E5P2426-DFTPP	**Injection Date:**	06/05/18
Lab File ID:	5P50925.D	**Injection Time:**	12:24
Instrument ID:	GCMS5P		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	5P50943.D	06/05/18	21:31	09:07	(unrelated sample)
ZZZZZZ	5P50944.D	06/05/18	21:57	09:33	(unrelated sample)
ZZZZZZ	5P50945.D	06/05/18	22:23	09:59	(unrelated sample)
ZZZZZZ	5P50946.D	06/05/18	22:49	10:25	(unrelated sample)
ZZZZZZ	5P50947.D	06/05/18	23:15	10:51	(unrelated sample)
ZZZZZZ	5P50948.D	06/05/18	23:41	11:17	(unrelated sample)
ZZZZZZ	5P50949.D	06/06/18	00:06	11:42	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: EM6169-DFTPP
Lab File ID: M145288.D
Instrument ID: GCMSM
Injection Date: 04/17/18
Injection Time: 10:55

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	54344	32.2		Pass
68	Less than 2.0% of mass 69	349	0.21	(0.51) [a]	Pass
69	Mass 69 relative abundance	68186	40.4		Pass
70	Less than 2.0% of mass 69	378	0.22	(0.55) [a]	Pass
127	40.0 - 60.0% of mass 198	89104	52.9		Pass
197	Less than 1.0% of mass 198	462	0.27		Pass
198	Base peak, 100% relative abundance	168576	100.0		Pass
199	5.0 - 9.0% of mass 198	11591	6.88		Pass
275	10.0 - 30.0% of mass 198	39557	23.5		Pass
365	1.0 - 100.0% of mass 198	4960	2.94		Pass
441	Present, but less than mass 443	18883	11.2	(73.4) [b]	Pass
442	40.0 - 100.0% of mass 198	132344	78.5		Pass
443	17.0 - 23.0% of mass 442	25736	15.3	(19.4) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EM6169-IC6169	M145289.D	04/17/18	11:39	00:44	Initial cal 100
EM6169-IC6169	M145290.D	04/17/18	12:08	01:13	Initial cal 80
EM6169-ICC6169	M145291.D	04/17/18	12:37	01:42	Initial cal 50
EM6169-IC6169	M145292.D	04/17/18	13:07	02:12	Initial cal 25
EM6169-IC6169	M145293.D	04/17/18	13:36	02:41	Initial cal 10
EM6169-IC6169	M145294.D	04/17/18	14:06	03:11	Initial cal 5
EM6169-IC6169	M145295.D	04/17/18	14:35	03:40	Initial cal 2
EM6169-IC6169	M145296.D	04/17/18	15:04	04:09	Initial cal 1
EM6169-ICV6169	M145297.D	04/17/18	15:34	04:39	Initial cal verification 50
EM6169-ICV6169	M145298.D	04/17/18	16:03	05:08	Initial cal verification 50
EM6169-ICV6169	M145299.D	04/17/18	16:32	05:37	Initial cal verification 50
EM6169-ICV6169	M145300.D	04/17/18	17:02	06:07	Initial cal verification 50
EM6169-ICV6169	M145301.D	04/17/18	17:31	06:36	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: EM6221-DFTPP
Lab File ID: M146343.D
Instrument ID: GCMSM
Injection Date: 05/24/18
Injection Time: 12:16

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	39329	47.8		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	53674	65.3		Pass
70	Less than 2.0% of mass 69	438	0.53	(0.82) [a]	Pass
127	40.0 - 60.0% of mass 198	42219	51.4		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	82203	100.0		Pass
199	5.0 - 9.0% of mass 198	5335	6.49		Pass
275	10.0 - 30.0% of mass 198	22367	27.2		Pass
365	1.0 - 100.0% of mass 198	3804	4.63		Pass
441	Present, but less than mass 443	10238	12.5	(71.9) [b]	Pass
442	40.0 - 100.0% of mass 198	76720	93.3		Pass
443	17.0 - 23.0% of mass 442	14231	17.3	(18.5) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EM6221-IC6221	M146345.D	05/24/18	12:57	00:41	Initial cal 2
EM6221-IC6221	M146346.D	05/24/18	13:27	01:11	Initial cal 1
EM6221-IC6221	M146347.D	05/24/18	13:57	01:41	Initial cal 100
EM6221-IC6221	M146348.D	05/24/18	14:26	02:10	Initial cal 80
EM6221-ICC6221	M146349.D	05/24/18	14:56	02:40	Initial cal 50
EM6221-IC6221	M146350.D	05/24/18	15:26	03:10	Initial cal 25
EM6221-IC6221	M146351.D	05/24/18	15:56	03:40	Initial cal 10
EM6221-IC6221	M146352.D	05/24/18	16:26	04:10	Initial cal 5
EM6221-ICV6221	M146353.D	05/24/18	16:56	04:40	Initial cal verification 50
EM6221-ICV6221	M146354.D	05/24/18	17:26	05:10	Initial cal verification 50
EM6221-ICV6221	M146355.D	05/24/18	17:56	05:40	Initial cal verification 50
EM6221-ICV6221	M146356.D	05/24/18	18:26	06:10	Initial cal verification 50
EM6221-ICV6221	M146357.D	05/24/18	18:56	06:40	Initial cal verification 50
EM6221-ICV6221	M146358.D	05/24/18	19:26	07:10	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: EM6235-DFTPP
Lab File ID: M146677.D
Instrument ID: GCMSM
Injection Date: 06/06/18
Injection Time: 09:01

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	39210	37.1		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	70330	66.6		Pass
70	Less than 2.0% of mass 69	230	0.22	(0.33) [a]	Pass
127	40.0 - 60.0% of mass 198	57232	54.2		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	105568	100.0		Pass
199	5.0 - 9.0% of mass 198	7088	6.71		Pass
275	10.0 - 30.0% of mass 198	27756	26.3		Pass
365	1.0 - 100.0% of mass 198	5487	5.20		Pass
441	Present, but less than mass 443	10275	9.73	(69.7) [b]	Pass
442	40.0 - 100.0% of mass 198	72818	69.0		Pass
443	17.0 - 23.0% of mass 442	14739	14.0	(20.2) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EM6235-CC6221	M146678.D	06/06/18	09:13	00:12	Continuing cal 50
EM6235-CC6169	M146679.D	06/06/18	09:43	00:42	Continuing cal 50
OP12498-MB	M146681.D	06/06/18	10:43	01:42	Method Blank
ZZZZZZ	M146682.D	06/06/18	11:12	02:11	(unrelated sample)
ZZZZZZ	M146683A.D	06/06/18	11:42	02:41	(unrelated sample)
ZZZZZZ	M146684.D	06/06/18	12:12	03:11	(unrelated sample)
JC67069-3	M146687.D	06/06/18	13:41	04:40	(used for QC only; not part of job JC67110)
ZZZZZZ	M146688.D	06/06/18	14:11	05:10	(unrelated sample)
ZZZZZZ	M146689.D	06/06/18	14:41	05:40	(unrelated sample)
ZZZZZZ	M146690.D	06/06/18	15:11	06:10	(unrelated sample)
ZZZZZZ	M146691.D	06/06/18	15:41	06:40	(unrelated sample)
ZZZZZZ	M146692.D	06/06/18	16:11	07:10	(unrelated sample)
ZZZZZZ	M146693.D	06/06/18	16:41	07:40	(unrelated sample)
ZZZZZZ	M146694.D	06/06/18	17:11	08:10	(unrelated sample)
ZZZZZZ	M146695.D	06/06/18	17:41	08:40	(unrelated sample)

Internal Standard Area Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	E2M4654-CC4618	**Injection Date:**	06/05/18
Lab File ID:	2M104765.D	**Injection Time:**	12:10
Instrument ID:	GCMS2M	**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	370846	4.50	1452702	5.56	781753	7.58	1534474	9.73	1594208	13.90	1579901	16.00
Upper Limit [a]	741692	5.00	2905404	6.06	1563506	8.08	3068948	10.23	3188416	14.40	3159802	16.50
Lower Limit [b]	185423	4.00	726351	5.06	390877	7.08	767237	9.23	797104	13.40	789951	15.50

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP12498-MB	359732	4.49	1361687	5.55	711956	7.58	1412247	9.72	1397233	13.89	1510272	16.00
ZZZZZZ	338215	4.49	1274938	5.55	678006	7.57	1301048	9.72	1280880	13.89	1339099	15.99
ZZZZZZ	329209	4.49	1266427	5.55	648616	7.57	1199188	9.72	1264060	13.89	1318934	15.99
ZZZZZZ	334679	4.49	1294239	5.55	677197	7.57	1318333	9.72	1360145	13.89	1401458	15.99
ZZZZZZ	339742	4.49	1287373	5.55	669514	7.57	1306314	9.72	1336529	13.88	1389291	15.99
ZZZZZZ	340741	4.49	1310300	5.56	682956	7.57	1332969	9.72	1340356	13.89	1394724	15.99
ZZZZZZ	387478	4.49	1402835	5.55	690924	7.57	1251324	9.72	1186508	13.89	1295063	16.00
ZZZZZZ	374591	4.49	1316779	5.55	639805	7.57	1177308	9.72	1144239	13.89	1286364	16.00
ZZZZZZ	336276	4.49	1322240	5.55	670754	7.57	1327193	9.73	1421847	13.91	1597493	16.13
ZZZZZZ	329811	4.50	1215398	5.56	616651	7.58	1189247	9.73	1185500	13.89	1304108	16.00
ZZZZZZ	333727	4.50	1244629	5.56	646894	7.58	1224733	9.73	1214346	13.89	1329508	16.00
ZZZZZZ	346429	4.50	1316763	5.56	664181	7.58	1304453	9.73	1285651	13.89	1362960	16.00
ZZZZZZ	367546	4.50	1404065	5.56	713455	7.58	1375653	9.73	1361168	13.89	1414890	16.00
ZZZZZZ	311399	4.50	1181501	5.56	622103	7.58	1179013	9.73	1169312	13.89	1232602	16.00

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

Internal Standard Area Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	E5P2426-CC2399	**Injection Date:**	06/05/18
Lab File ID:	5P50926.D	**Injection Time:**	12:38
Instrument ID:	GCMS5P	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	101897	4.42	406565	5.62	224348	7.31	445779	8.79	461293	12.21	496133	14.23
Upper Limit [a]	203794	4.92	813130	6.12	448696	7.81	891558	9.29	922586	12.71	992266	14.73
Lower Limit [b]	50949	3.92	203283	5.12	112174	6.81	222890	8.29	230647	11.71	248067	13.73

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP12498-MB	111758	4.42	461100	5.61	251527	7.31	487732	8.79	518374	12.21	549802	14.23
OP12498-BS	104409	4.42	394573	5.61	214142	7.31	408217	8.79	394522	12.21	450185	14.23
OP12498-BSD	113640	4.42	428874	5.62	224886	7.32	447222	8.79	422304	12.21	483503	14.23
OP12498-BS13	127480	4.41	494479	5.61	270684	7.31	515434	8.78	526139	12.21	568924	14.23
ZZZZZZ	107641	4.41	416499	5.61	237047	7.31	478355	8.78	518890	12.21	552421	14.22
ZZZZZZ	117590	4.42	449981	5.61	244648	7.31	495418	8.78	541218	12.21	574924	14.22
ZZZZZZ	90110	4.44	330104	5.63	198874	7.32	381867	8.79	443995	12.21	466841	14.23
OP12509-MB	113823	4.42	443211	5.61	229453	7.31	442046	8.78	419422	12.21	465072	14.23
ZZZZZZ	115182	4.42	448276	5.61	227631	7.31	423995	8.79	421156	12.21	472179	14.24
OP12498-MS	98369	4.42	371390	5.62	200963	7.32	392189	8.79	395256	12.22	448726	14.23
OP12498-MSD	90228	4.42	362415	5.62	192179	7.32	385261	8.79	389959	12.22	439741	14.23
JC67110-3	104448	4.42	419054	5.61	225460	7.32	429215	8.78	446689	12.21	474898	14.23
JC67110-4	113778	4.42	450616	5.61	240694	7.32	457965	8.79	483918	12.21	515756	14.23
JC67110-5	103045	4.42	413282	5.61	226450	7.31	420167	8.78	445761	12.21	468791	14.23
ZZZZZZ	95314	4.42	360345	5.62	190149	7.32	388970	8.79	420934	12.21	459192	14.23
ZZZZZZ	100917	4.42	401604	5.61	224604	7.31	427542	8.78	450787	12.21	477293	14.23
ZZZZZZ	103539	4.41	409935	5.61	213221	7.31	425427	8.78	436989	12.21	477550	14.22
ZZZZZZ	109671	4.42	430629	5.61	226876	7.31	447811	8.78	482616	12.21	504729	14.23
ZZZZZZ	101146	4.41	390855	5.61	207337	7.31	424487	8.78	445893	12.21	471260	14.23
ZZZZZZ	109795	4.42	425680	5.61	229571	7.31	448854	8.78	483340	12.21	503544	14.22
ZZZZZZ	118019	4.41	457234	5.61	247509	7.31	477837	8.78	506935	12.21	541249	14.23
ZZZZZZ	108220	4.41	420718	5.61	228500	7.31	448979	8.78	474929	12.21	506093	14.22
ZZZZZZ	115004	4.41	441703	5.61	238067	7.31	463551	8.78	496239	12.21	528746	14.22
ZZZZZZ	91376	4.42	346151	5.62	207257	7.31	407610	8.78	429383	12.21	468128	14.22

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

Internal Standard Area Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	EM6235-CC6221	**Injection Date:**	06/06/18
Lab File ID:	M146678.D	**Injection Time:**	09:13
Instrument ID:	GCMSM	**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	90323	4.40	354859	5.47	214914	7.69	488805	10.25	485275	15.40	410076	18.01
Upper Limit [a]	180646	4.90	709718	5.97	429828	8.19	977610	10.75	970550	15.90	820152	18.51
Lower Limit [b]	45162	3.90	177430	4.97	107457	7.19	244403	9.75	242638	14.90	205038	17.51

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP12498-MB	105704	4.41	405347	5.46	222409	7.69	480340	10.25	479779	15.39	488065	18.01
ZZZZZZ	101801	4.41	365817	5.46	206499	7.69	426547	10.25	436918	15.39	442870	18.00
ZZZZZZ	92562	4.41	348179	5.46	192701	7.69	413394	10.25	438637	15.39	436952	18.01
ZZZZZZ	127161	4.41	252870	5.47	169656	7.69	364608	10.25	245844	15.39	229848	18.01
JC67069-3	76804	4.41	338906	5.48	170992	7.69	356884	10.25	271965	15.39	222621	18.01
ZZZZZZ	88961	4.41	337363	5.46	186284	7.69	395775	10.25	366061	15.39	324632	18.01
ZZZZZZ	82677	4.41	309614	5.46	167857	7.69	343918	10.25	304026	15.39	273840	18.01
ZZZZZZ	90423	4.40	316064	5.47	175573	7.69	334788	10.25	251564	15.39	211570	18.01
ZZZZZZ	86186	4.40	330752	5.47	182164	7.69	347904	10.25	166852[c]	15.39	148891[c]	18.01
ZZZZZZ	91345	4.40	337754	5.47	179465	7.69	363456	10.25	297853	15.39	240966	18.01
ZZZZZZ	84291	4.41	308268	5.46	172026	7.69	344854	10.25	286897	15.39	222775	18.00
ZZZZZZ	84708	4.40	310131	5.47	166148	7.69	327972	10.25	321855	15.39	272640	18.01
ZZZZZZ	75334	4.41	279334	5.46	160087	7.69	323438	10.25	285050	15.39	245772	18.00

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Outside control limits due to matrix interference, confirmed by reanalysis.

Surrogate Recovery Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Method: SW846 8270D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
JC67110-3	5P50937.D	45	31	83	82	80	67
JC67110-4	5P50938.D	40	30	80	76	78	58
JC67110-5	5P50939.D	39	28	74	71	73	51
OP12498-BS	5P50929.D	43	31	76	78	77	76
OP12498-BSD	5P50930.D	47	33	81	86	84	81
OP12498-MB	2M104766A.D	40	29	86	86	72	74
OP12498-MB	5P50928.D	41	28	70	74	71	64
OP12498-MB	M146681.D	35	24	83	75	71	76
OP12498-MS	5P50935.D	49	35	86	91	87	66
OP12498-MSD	5P50936.D	52	37	90	90	90	65

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%

Initial Calibration Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E2M4618-ICC4618
Lab FileID: 2M103897.D

Response Factor Report MS2M

Method : C:\MSDCHEM\1\METHODS\M2M4618.M (RTE Integrator)
Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
Last Update : Fri May 11 12:53:20 2018
Response via : Initial Calibration

Calibration Files
2 =2m103901.D 5 =2m103900.D 25 =2m103898.D 80 =2m103896.D
100 =2m103895.D 50 =2m103897.D 1 =2m103902.D 10 =2m103899.D

Compound	2	5	25	80	100	50	1	10	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	ISTD									
2) 1,4-Dioxane	0.629	0.598	0.596	0.576	0.591	0.598	0.637	0.615	0.605	3.36
3) Pyridine	1.526	1.559	1.597	1.500	1.499	1.488	1.575	1.674	1.552	4.06
4) N-Nitrosodim	0.914	0.887	0.926	0.908	0.919	0.926	0.933	0.953	0.921	2.09
5) 2-Fluorophen	1.326	1.258	1.311	1.293	1.319	1.322	1.241	1.356	1.303	2.90
6) Indene	2.170	2.166	2.226	2.234	2.233	2.285	2.221	2.299	2.229	2.12
7) Cumene	3.250	3.242	3.325	3.249	3.272	3.374	3.448	3.387	3.318	2.34
8) Phenol-d5	1.620	1.595	1.625	1.627	1.667	1.663	1.622	1.662	1.635	1.57
9) Phenol	1.883	1.787	1.854	1.867	1.899	1.894	1.877	1.959	1.877	2.56
10) Aniline	2.130	2.106	2.037	1.920	1.913	1.981	2.225	2.172	2.061	5.66
11) bis(2-Chloro	1.278	1.274	1.290	1.271	1.281	1.299	1.342	1.346	1.298	2.32
12) 2-Chlorophen	1.403	1.415	1.401	1.397	1.408	1.417	1.356	1.473	1.409	2.30
13) Decane	1.512	1.436	1.429	1.366	1.348	1.426	1.587	1.500	1.450	5.45
14) 1,3-Dichloro	1.585	1.573	1.574	1.545	1.547	1.589	1.621	1.666	1.588	2.51
15) 1,4-Dichloro	1.577	1.595	1.609	1.567	1.567	1.616	1.654	1.677	1.608	2.52
16) Benzyl alcoh	0.854	0.828	0.856	0.885	0.890	0.885	0.927	0.875	0.875	3.37
17) 1,2-Dichloro	1.482	1.435	1.491	1.464	1.456	1.508	1.624	1.553	1.502	4.07
18) Acetophenone	1.832	1.819	1.885	1.847	1.819	1.898	1.873	1.932	1.863	2.19
19) 2-Methylphen	1.240	1.193	1.215	1.239	1.227	1.253	1.221	1.264	1.231	1.83
20) 2,2'-oxybis(	1.624	1.552	1.558	1.504	1.488	1.552	1.685	1.624	1.573	4.22
21) 3&4-Methylph	1.268	1.252	1.293	1.334	1.322	1.328	1.233	1.315	1.293	2.93
22) n-Nitroso-di	0.963	0.956	0.999	0.994	0.980	1.024	1.032	1.034	0.998	3.05
23) Hexachloroet	0.505	0.502	0.510	0.506	0.503	0.516	0.535	0.554	0.516	3.60
24) I Naphthalene-d8	ISTD									
25) Nitrobenzene	0.369	0.357	0.366	0.366	0.360	0.367	0.357	0.382	0.366	2.19
26) Nitrobenzene	0.367	0.366	0.363	0.360	0.355	0.364	0.364	0.379	0.365	1.87
27) Quinoline	0.672	0.671	0.677	0.684	0.676	0.675	0.681	0.699	0.679	1.35
28) Isophorone	0.641	0.636	0.636	0.640	0.631	0.639	0.659	0.664	0.643	1.84
29) 2-Nitropheno	0.188	0.189	0.196	0.199	0.197	0.197	0.188	0.202	0.195	2.86
30) 2,4-Dimethyl	0.309	0.303	0.309	0.319	0.316	0.311	0.303	0.323	0.312	2.35
31) Benzoic acid	0.182	0.204	0.242	0.266	0.268	0.258		0.234	0.236	13.79
32) bis(2-Chloro	0.370	0.369	0.372	0.366	0.360	0.366	0.381	0.390	0.372	2.50
33) 2,4-Dichloro	0.297	0.290	0.289	0.291	0.290	0.290	0.293	0.294	0.292	0.90
34) 2,6-Dichloro	0.277	0.277	0.287	0.286	0.283	0.286	0.294	0.294	0.286	2.27
35) 1,3,5-Trichl	0.361	0.345	0.342	0.333	0.330	0.338	0.361	0.359	0.346	3.64
36) 1,2,4-Trichl	0.320	0.324	0.314	0.312	0.307	0.317	0.342	0.331	0.321	3.54
37) 1,2,3-Trichl	0.318	0.319	0.318	0.307	0.299	0.310	0.350	0.328	0.319	4.78
38) Naphthalene	1.046	1.023	1.024	1.016	1.003	1.021	1.081	1.070	1.036	2.66
39) 4-Chloroanil	0.438	0.445	0.439	0.440	0.427	0.435	0.445	0.456	0.441	1.96
40) 2,3-Dichloro	0.359	0.362	0.360	0.370	0.366	0.365	0.359	0.378	0.365	1.77
41) Caprolactam	0.140	0.148	0.150	0.155	0.152	0.152	0.145	0.157	0.150	3.58
42) Hexachlorobu	0.175	0.164	0.167	0.164	0.161	0.165	0.171	0.174	0.168	3.00
43) 4-Chloro-3-m	0.279	0.273	0.280	0.286	0.287	0.282	0.268	0.289	0.281	2.58
44) 2-Methylnaph	0.597	0.595	0.596	0.600	0.599	0.601	0.622	0.616	0.603	1.69
45) 1-Methylnaph	0.625	0.625	0.623	0.627	0.625	0.626	0.630	0.651	0.629	1.43

```
46) Dimethylnaph 0.626 0.636 0.638 0.647 0.645 0.641 0.655 0.666 0.644   1.89

47) I   Acenaphthene-d10      ----------------ISTD---------------------
48) Hexachlorocy 0.301 0.323 0.357 0.369 0.369 0.370 0.273 0.358 0.340  10.84
49) 2,4,6-Trichl 0.394 0.365 0.395 0.393 0.389 0.395 0.388 0.407 0.391   3.01
50) 2,4,5-Trichl 0.392 0.405 0.417 0.411 0.406 0.417 0.406 0.432 0.411   2.82
51) 2-Fluorobiph 1.434 1.477 1.454 1.421 1.415 1.462 1.477 1.549 1.461   2.93
52) 2-Chloronaph 1.255 1.234 1.209 1.182 1.168 1.213 1.265 1.275 1.225   3.18
53) Biphenyl     1.673 1.612 1.627 1.628 1.617 1.652 1.639 1.718 1.646   2.14
54) 2-Nitroanili 0.323 0.319 0.344 0.345 0.348 0.349 0.328 0.350 0.338   3.77
55) Dimethylphth 1.338 1.307 1.309 1.306 1.295 1.311 1.384 1.382 1.329   2.68
56) Acenaphthyle 1.936 1.916 1.954 1.922 1.919 1.973 1.978 2.042 1.955   2.17
57) 2,6-Dinitrot 0.273 0.290 0.310 0.311 0.309 0.307 0.266 0.311 0.297   6.24
58) 3-Nitroanili 0.309 0.327 0.356 0.364 0.358 0.367 0.318 0.361 0.345   6.66
59) Acenaphthene 1.268 1.268 1.277 1.267 1.261 1.283 1.306 1.334 1.283   1.95
60) 2,4-Dinitrop 0.076 0.110 0.156 0.187 0.190 0.178 0.069 0.134 0.137  35.30
            ---- Quadratic regression ----  Coefficient =  0.9997
              Response Ratio = -0.01252 + 0.16728 *A + 0.00532 *A^2

61) 4-Nitropheno 0.125 0.142 0.161 0.160 0.164 0.162 0.123 0.155 0.149  11.15
62) Dibenzofuran 1.712 1.715 1.724 1.715 1.695 1.733 1.727 1.783 1.725   1.50
63) 2,4-Dinitrot 0.367 0.362 0.416 0.431 0.430 0.428 0.331 0.407 0.396   9.61
64) 2,3,4,6-Tetr 0.327 0.333 0.344 0.348 0.349 0.347 0.317 0.350 0.339   3.56
65) Diethylphtha 1.280 1.279 1.319 1.325 1.322 1.331 1.301 1.364 1.315   2.14
66) Fluorene     1.405 1.379 1.394 1.398 1.399 1.411 1.367 1.432 1.398   1.41
67) 4-Chlorophen 0.643 0.628 0.641 0.619 0.608 0.625 0.658 0.661 0.635   2.93
68) 4-Nitroanili 0.317 0.345 0.345 0.353 0.350 0.358 0.306 0.369 0.343   6.15

69) I   Phenanthrene-d10      ----------------ISTD---------------------
70) 4,6-Dinitro- 0.093 0.099 0.135 0.149 0.148 0.145 0.083 0.123 0.122  21.91
            ---- Quadratic regression ----  Coefficient =  0.9990
              Response Ratio = -0.00195 + 0.13467 *A + 0.00646 *A^2

71) n-Nitrosodip 0.576 0.580 0.599 0.581 0.582 0.585 0.572 0.597 0.584   1.63
72) 1,2-Diphenyl 0.747 0.768 0.786 0.768 0.768 0.774 0.782 0.797 0.774   1.95
73) 2,4,6-Tribro 0.117 0.116 0.127 0.123 0.123 0.122 0.122 0.119 0.121   3.07
74) 4-Bromopheny 0.217 0.219 0.221 0.216 0.215 0.219 0.226 0.229 0.220   2.18
75) Hexachlorobe 0.247 0.248 0.252 0.243 0.239 0.247 0.275 0.262 0.252   4.55
76) Pentachlorop 0.136 0.147 0.162 0.167 0.169 0.166 0.122 0.157 0.153  11.07
77) Phenanthrene 1.168 1.124 1.141 1.120 1.104 1.125 1.185 1.165 1.141   2.49
78) Anthracene   1.136 1.145 1.158 1.133 1.127 1.151 1.139 1.184 1.147   1.57
79) Carbazole    1.042 1.037 1.091 1.081 1.077 1.076 1.060 1.102 1.071   2.13
80) Di-n-butylph 1.233 1.257 1.331 1.351 1.346 1.344 1.264 1.344 1.309   3.72
81) Fluoranthene 1.150 1.117 1.184 1.191 1.182 1.189 1.166 1.190 1.171   2.22
82) Octadecane   0.505 0.499 0.531 0.527 0.524 0.522 0.510 0.537 0.519   2.56

83) I   Chrysene-d12          ----------------ISTD---------------------
84) Pyrene       1.338 1.361 1.344 1.313 1.258 1.342 1.318 1.413 1.336   3.30
85) Terphenyl-d1 0.862 0.876 0.880 0.875 0.844 0.883 0.861 0.936 0.877   3.08
86) Butylbenzylp 0.622 0.595 0.615 0.624 0.606 0.628 0.611 0.635 0.617   2.09
87) Benzo[a]anth 1.221 1.194 1.176 1.181 1.156 1.184 1.337 1.233 1.210   4.68
88) 3,3'-Dichlor 0.416 0.432 0.454 0.452 0.436 0.454 0.402 0.466 0.439   4.99
89) Chrysene     1.170 1.145 1.148 1.130 1.093 1.136 1.188 1.190 1.150   2.81
90) bis(2-Ethylh 0.816 0.833 0.850 0.876 0.848 0.876 0.828 0.879 0.851   2.87

91) I   Perylene-d12          ----------------ISTD---------------------
92) Di-n-octylph 1.353 1.387 1.463 1.495 1.469 1.495 1.396 1.499 1.445   3.96
93) Benzo[b]fluo 1.181 1.196 1.248 1.232 1.213 1.266 1.170 1.288 1.224   3.39
94) Benzo[k]fluo 1.120 1.165 1.124 1.119 1.079 1.123 1.166 1.198 1.137   3.26
95) Benzo[a]pyre 1.028 1.053 1.070 1.069 1.041 1.089 1.014 1.126 1.061   3.36
```

Initial Calibration Summary

Job Number: JC67110 **Sample:** E2M4618-ICC4618
Account: BBLNYS Arcadis **Lab FileID:** 2M103897.D
Project: National Grid, Philly Coke, Philadelphia PA

```
 96) Indeno[1,2,3 1.020 1.014 1.080 1.067 1.073 1.064 1.057 1.077 1.056   2.42
 97) Dibenz(a,h)a 0.927 0.941 0.966 0.961 0.944 0.977 0.929 0.999 0.956   2.60
 98) Dibenz[a,h]a 1.050 1.081 1.107 1.086 1.060 1.106 1.062 1.132 1.086   2.59
 99) 7,12-Dimethy 0.505 0.517 0.538 0.549 0.532 0.553 0.517 0.554 0.533   3.51
100) Benzo[g,h,i] 0.991 1.023 1.039 1.008 0.998 1.027 0.993 1.064 1.018   2.51
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          M2M4618.M         Fri May 11 15:20:21 2018
```

8.7.1

8

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E2M4619-ICV4618
Lab FileID: 2M103912.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M4619\2m103912.D         Vial: 10
Acq On    :  9 May 2018  10:23 pm                     Operator: sufiyana
Sample    : icv4618-50                                Inst    : MS2M
Misc      : op10486,e2m4619,1000,,,1,1                Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M2M4618.M (RTE Integrator)
Title        : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
Last Update  : Fri May 11 12:53:20 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	137	0.00	4.66
5	S	2-Fluorophenol	1.303	1.284	1.5	133	0.00	3.67
8	S	Phenol-d5	1.635	1.564	4.3	129	0.00	4.39
24	I	Naphthalene-d8	1.000	1.000	0.0	129	0.00	5.76
25	S	Nitrobenzene-d5	0.366	0.370	-1.1	130	0.00	5.10
47	I	Acenaphthene-d10	1.000	1.000	0.0	131	0.00	7.82
51	S	2-Fluorobiphenyl	1.461	1.365	6.6	123	0.00	6.95
69	I	Phenanthrene-d10	1.000	1.000	0.0	119	0.00	9.98
73	S	2,4,6-Tribromophenol	0.121	0.118	2.5	115	0.00	8.94
83	I	Chrysene-d12	1.000	1.000	0.0	109	-0.01	14.15
85	S	Terphenyl-d14	0.877	0.971	-10.7	119	0.00	12.54

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 2m103906a.D M2M4618.M        Fri May 11 15:09:36 2018
```

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E2M4619-ICV4618
Lab FileID: 2M103913.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M4619\2m103913.D          Vial: 11
Acq On    :  9 May 2018  10:48 pm                     Operator: sufiyana
Sample    : icv4618-50                                Inst    : MS2M
Misc      : op10486,e2m4619,1000,,,1,1                Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M2M4618.M (RTE Integrator)
Title        : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
Last Update  : Fri May 11 12:53:20 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	135	0.00	4.66
9	t	Phenol	1.877	1.676	10.7	119	0.00	4.40
12	t	2-Chlorophenol	1.409	1.407	0.1	134	0.00	4.51
19	t	2-Methylphenol	1.231	1.174	4.6	126	0.00	4.86
21	t	3&4-Methylphenol	1.293	1.256	2.9	128	0.00	4.98
24	I	Naphthalene-d8	1.000	1.000	0.0	128	0.00	5.76
29	t	2-Nitrophenol	0.195	0.195	0.0	126	0.00	5.40
30	t	2,4-Dimethylphenol	0.312	0.299	4.2	123	0.00	5.43
31	t	Benzoic acid	0.236	0.229	3.0	113	0.00	5.55
33	t	2,4-Dichlorophenol	0.292	0.290	0.7	128	0.00	5.62
34	t	2,6-Dichlorophenol	0.286	0.288	-0.7	128	0.00	5.84
43	t	4-Chloro-3-methylphenol	0.281	0.276	1.8	125	-0.01	6.33
47	I	Acenaphthene-d10	1.000	1.000	0.0	116	0.00	7.82
49	t	2,4,6-Trichlorophenol	0.391	0.419	-7.2	124	0.00	6.85
50	t	2,4,5-Trichlorophenol	0.411	0.437	-6.3	122	-0.01	6.88
		----------	True	Calc.	% Drift		----------	
60	t	2,4-Dinitrophenol	50.000	45.968	8.1	111	-0.01	7.91
		----------	AvgRF	CCRF	% Dev		----------	
61	t	4-Nitrophenol	0.149	0.149	0.0	107	0.00	8.02
64		2,3,4,6-Tetrachlorophenol	0.339	0.346	-2.1	116	0.00	8.29
69	I	Phenanthrene-d10	1.000	1.000	0.0	116	0.00	9.98
		----------	True	Calc.	% Drift		----------	
70	t	4,6-Dinitro-2-methylpheno	50.000	48.080	3.8	108	0.00	8.68
		----------	AvgRF	CCRF	% Dev		----------	
76	t	Pentachlorophenol	0.153	0.179	-17.0	131	-0.01	9.71

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m103906a.D M2M4618.M Fri May 11 15:09:38 2018

8.7.3

8

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E2M4619-ICV4618
Lab FileID: 2M103915.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E2M4619\2m103915.D Vial: 13
Acq On : 9 May 2018 11:38 pm Operator: sufiyana
Sample : icv4618-50 Inst : MS2M
Misc : op10486,e2m4619,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2M4618.M (RTE Integrator)
Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
Last Update : Fri May 11 12:53:20 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	138	0.00	4.66
4	t	N-Nitrosodimethylamine	0.921	0.735	20.2	109	0.02	2.50
11	t	bis(2-Chloroethyl)ether	1.298	1.311	-1.0	139	0.00	4.46
14	t	1,3-Dichlorobenzene	1.588	1.518	4.4	132	0.00	4.63
15	t	1,4-Dichlorobenzene	1.608	1.533	4.7	131	0.00	4.68
17	t	1,2-Dichlorobenzene	1.502	1.446	3.7	132	0.00	4.80
20	t	2,2'-oxybis(1-Chloropropa	1.573	1.647	-4.7	146	0.00	4.88
22	t	n-Nitroso-di-n-propylamin	0.998	0.915	8.3	123	0.00	4.98
23	t	Hexachloroethane	0.516	0.493	4.5	132	0.00	5.08
24	I	Naphthalene-d8	1.000	1.000	0.0	131	0.00	5.76
26	t	Nitrobenzene	0.365	0.337	7.7	122	0.00	5.12
28	t	Isophorone	0.643	0.623	3.1	128	-0.01	5.32
32	t	bis(2-Chloroethoxy)methan	0.372	0.379	-1.9	136	0.00	5.52
36	t	1,2,4-Trichlorobenzene	0.321	0.311	3.1	129	0.00	5.70
38	t	Naphthalene	1.036	1.004	3.1	129	0.00	5.78
42	t	Hexachlorobutadiene	0.168	0.169	-0.6	134	0.00	5.91
47	I	Acenaphthene-d10	1.000	1.000	0.0	129	0.00	7.82
48	t	Hexachlorocyclopentadiene	0.340	0.320	5.9	115	0.00	6.71
52	t	2-Chloronaphthalene	1.225	1.166	4.8	124	0.00	7.09
55	t	Dimethylphthalate	1.329	1.259	5.3	124	0.00	7.48
56	t	Acenaphthylene	1.955	1.831	6.3	120	0.00	7.62
57	t	2,6-Dinitrotoluene	0.297	0.275	7.4	116	0.00	7.55
59	t	Acenaphthene	1.283	1.229	4.2	124	0.00	7.86
63	t	2,4-Dinitrotoluene	0.396	0.338	14.6	102	0.00	8.10
65	t	Diethylphthalate	1.315	1.243	5.5	120	-0.01	8.47
66	t	Fluorene	1.398	1.320	5.6	121	0.00	8.59
67	t	4-Chlorophenyl-phenylethe	0.635	0.594	6.5	123	0.00	8.61
69	I	Phenanthrene-d10	1.000	1.000	0.0	122	0.00	9.98
71	t	n-Nitrosodiphenylamine	0.584	0.544	6.8	113	0.00	8.79
72	t	1,2-Diphenylhydrazine	0.774	0.775	-0.1	122	0.00	8.84
74	t	4-Bromophenyl-phenylether	0.220	0.215	2.3	120	0.00	9.33
75	t	Hexachlorobenzene	0.252	0.241	4.4	119	0.00	9.41
77	t	Phenanthrene	1.141	1.104	3.2	120	0.00	10.02
78	t	Anthracene	1.147	1.097	4.4	116	0.00	10.10
80	t	Di-n-butylphthalate	1.309	1.269	3.1	115	0.00	11.00
81	t	Fluoranthene	1.171	1.091	6.8	112	0.00	11.87
83	I	Chrysene-d12	1.000	1.000	0.0	109	0.00	14.16
84	t	Pyrene	1.336	1.336	0.0	108	0.00	12.22

Initial Calibration Verification

Job Number: JC67110 **Sample:** E2M4619-ICV4618
Account: BBLNYS Arcadis **Lab FileID:** 2M103915.D
Project: National Grid, Philly Coke, Philadelphia PA

86	t	Butylbenzylphthalate	0.617	0.615	0.3	107	0.00	13.38
87	t	Benzo[a]anthracene	1.210	1.122	7.3	103	0.00	14.14
89	t	Chrysene	1.150	1.068	7.1	102	0.00	14.20
90	t	bis(2-Ethylhexyl)phthalat	0.851	0.843	0.9	105	0.00	14.35
91	I	Perylene-d12	1.000	1.000	0.0	102	0.00	16.27
92	t	Di-n-octylphthalate	1.445	1.507	-4.3	103	0.00	15.33
93	t	Benzo[b]fluoranthene	1.224	1.103	9.9	89	0.00	15.75
94	t	Benzo[k]fluoranthene	1.137	1.114	2.0	101	-0.01	15.78
95	t	Benzo[a]pyrene	1.061	1.024	3.5	96	0.00	16.19
96	t	Indeno[1,2,3-cd]pyrene	1.056	1.006	4.7	96	-0.01	17.78
98	t	Dibenz[a,h]anthracene	1.086	1.010	7.0	93	-0.01	17.82
100	t	Benzo[g,h,i]perylene	1.018	1.026	-0.8	102	-0.01	18.21

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m103906a.D M2M4618.M Fri May 11 15:09:40 2018

8.7.4

8

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E2M4619-ICV4618
Lab FileID: 2M103916.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M4619\2m103916.D        Vial: 14
Acq On    : 10 May 2018  12:04 am                   Operator: sufiyana
Sample    : icv4618-50                              Inst    : MS2M
Misc      : op10486,e2m4619,1000,,,1,1              Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M2M4618.M (RTE Integrator)
Title        : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
Last Update  : Fri May 11 12:53:20 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	125	0.00	4.66
2	t	1,4-Dioxane	0.605	0.545	9.9	114	0.02	2.21
6	t	Indene	2.229	2.368	-6.2	130	0.00	4.87
7	t	Cumene	3.318	3.144	5.2	117	0.00	4.07
13	t	Decane	1.450	1.334	8.0	117	0.00	4.55
18	t	Acetophenone	1.863	1.748	6.2	115	0.00	4.98
24	I	Naphthalene-d8	1.000	1.000	0.0	121	0.00	5.76
27	t	Quinoline	0.679	0.660	2.8	119	-0.02	6.11
40	t	2,3-Dichloroaniline	0.365	0.303	17.0	101	0.00	6.84
41	t	Caprolactam	0.150	0.130	13.3	104	-0.03	6.16
45	t	1-Methylnaphthalene	0.629	0.558	11.3	108	0.00	6.62
46	t	Dimethylnaphthalene	0.644	0.603	6.4	114	0.00	7.27
47	I	Acenaphthene-d10	1.000	1.000	0.0	109	0.00	7.82
53	t	Biphenyl	1.646	1.721	-4.6	114	0.00	7.07
69	I	Phenanthrene-d10	1.000	1.000	0.0	111	0.00	9.98
82	t	Octadecane	0.519	0.524	-1.0	111	0.00	9.95

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m103906a.D M2M4618.M Fri May 11 15:09:44 2018

8.7.5

8

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E2M4619-ICV4618
Lab FileID: 2M103917.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M4619\2m103917.D         Vial: 15
Acq On    : 10 May 2018  12:29 am                    Operator: sufiyana
Sample    : icv4618-50                               Inst    : MS2M
Misc      : op10486,e2m4619,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M2M4618.M (RTE Integrator)
Title        : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
Last Update  : Fri May 11 12:53:20 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.
83 I	Chrysene-d12	1.000	1.000	0.0	106	-0.01	14.15
88 t	3,3'-Dichlorobenzidine	0.439	0.447	-1.8	105	0.00	14.15

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m103906a.D M2M4618.M Fri May 11 15:09:48 2018

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E2M4620-ICV4618
Lab FileID: 2M103921.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M4620\2m103921.D         Vial: 2
Acq On    : 11 May 2018   1:55 pm                    Operator: christc2
Sample    : icv4618-50                               Inst    : MS2M
Misc      : op10486,e2m4620,1000,,,1,1               Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M2M4618.M (RTE Integrator)
Title        : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
Last Update  : Fri May 11 12:53:20 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	110	0.00	4.67
3	t	Pyridine	1.552	1.520	2.1	112	0.10	2.61
10		Aniline	2.061	2.201	-6.8	122	0.00	4.42
16	t	Benzyl alcohol	0.875	0.939	-7.3	117	0.00	4.78
24	I	Naphthalene-d8	1.000	1.000	0.0	112	0.00	5.76
39	t	4-Chloroaniline	0.441	0.407	7.7	105	0.00	5.83
44	t	2-Methylnaphthalene	0.603	0.585	3.0	109	0.00	6.52
47	I	Acenaphthene-d10	1.000	1.000	0.0	114	0.00	7.82
54	t	2-Nitroaniline	0.338	0.323	4.4	105	0.00	7.22
58	t	3-Nitroaniline	0.345	0.342	0.9	106	0.00	7.77
62	t	Dibenzofuran	1.725	1.699	1.5	112	0.00	8.10
68	t	4-Nitroaniline	0.343	0.311	9.3	99	-0.01	8.63
69	I	Phenanthrene-d10	1.000	1.000	0.0	112	0.00	9.99
79	t	Carbazole	1.071	1.031	3.7	107	0.00	10.37

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 2m103906a.D M2M4618.M        Fri May 11 15:19:12 2018
```

8.7.7

8

Continuing Calibration Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E2M4654-CC4618
Lab FileID: 2M104765.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M4654\2m104765.D          Vial: 2
Acq On    :  5 Jun 2018  12:10 pm                     Operator: christc2
Sample    : cc4618-50                                 Inst    : MS2M
Misc      : op10486,e2m4654,1000,,,1,1                Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\M2M4618.M (RTE Integrator)
Title        : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
Last Update  : Mon Jun 04 09:10:13 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	61	-0.03	4.50
2	t	1,4-Dioxane	0.605	0.637	-5.3	65	-0.02	1.98
3	t	Pyridine	1.552	1.584	-2.1	65	-0.02	2.33
4	t	N-Nitrosodimethylamine	0.921	0.953	-3.5	62	-0.02	2.29
5	S	2-Fluorophenol	1.303	1.353	-3.8	62	-0.03	3.56
6	t	Indene	2.229	2.424	-8.7	64	-0.03	4.69
7	t	Cumene	3.318	3.870	-16.6	70	-0.02	3.90
8	S	Phenol-d5	1.635	1.817	-11.1	66	-0.03	4.29
9	t	Phenol	1.877	1.932	-2.9	62	-0.03	4.30
10		Aniline	2.061	1.876	9.0	57	-0.03	4.26
11	t	bis(2-Chloroethyl)ether	1.298	1.431	-10.2	67	-0.03	4.30
12	t	2-Chlorophenol	1.409	1.474	-4.6	63	-0.03	4.36
13	t	Decane	1.450	1.457	-0.5	62	-0.03	4.38
14	t	1,3-Dichlorobenzene	1.588	1.699	-7.0	65	-0.03	4.46
15	t	1,4-Dichlorobenzene	1.608	1.712	-6.5	64	-0.03	4.51
16	t	Benzyl alcohol	0.875	0.962	-9.9	66	-0.03	4.62
17	t	1,2-Dichlorobenzene	1.502	1.635	-8.9	66	-0.03	4.63
18	t	Acetophenone	1.863	2.252	-20.9#	72	-0.03	4.81
19	t	2-Methylphenol	1.231	1.311	-6.5	63	-0.03	4.73
20	t	2,2'-oxybis(1-Chloropropa	1.573	1.530	2.7	60	-0.03	4.71
21	t	3&4-Methylphenol	1.293	1.400	-8.3	64	-0.03	4.86
22	t	n-Nitroso-di-n-propylamin	0.998	1.233	-23.5#	73	-0.03	4.81
23	t	Hexachloroethane	0.516	0.648	-25.6#	76	-0.03	4.89
24	I	Naphthalene-d8	1.000	1.000	0.0	61	-0.03	5.56
25	S	Nitrobenzene-d5	0.366	0.472	-29.0#	78	-0.03	4.93
26	t	Nitrobenzene	0.365	0.458	-25.5#	77	-0.03	4.95
27	t	Quinoline	0.679	0.731	-7.7	66	-0.02	5.92
28	t	Isophorone	0.643	0.804	-25.0#	77	-0.03	5.15
29	t	2-Nitrophenol	0.195	0.214	-9.7	66	-0.03	5.22
30	t	2,4-Dimethylphenol	0.312	0.408	-30.8#	80	-0.03	5.28
31	t	Benzoic acid	0.236	0.334	-41.5#	79	-0.03	5.42
32	t	bis(2-Chloroethoxy)methan	0.372	0.399	-7.3	66	-0.03	5.33
33	t	2,4-Dichlorophenol	0.292	0.327	-12.0	69	-0.03	5.46
34	t	2,6-Dichlorophenol	0.286	0.324	-13.3	69	-0.03	5.65
35		1,3,5-Trichlorobenzene	0.346	0.386	-11.6	69	-0.03	5.23
36	t	1,2,4-Trichlorobenzene	0.321	0.357	-11.2	68	-0.03	5.51
37		1,2,3-Trichlorobenzene	0.319	0.355	-11.3	70	-0.03	5.72
38	t	Naphthalene	1.036	1.094	-5.6	65	-0.03	5.58
39	t	4-Chloroaniline	0.441	0.412	6.6	58	-0.03	5.64
40	t	2,3-Dichloroaniline	0.365	0.403	-10.4	67	-0.03	6.63
41	t	Caprolactam	0.150	0.176	-17.3	71	-0.03	6.00

Continuing Calibration Summary

Job Number: JC67110 **Sample:** E2M4654-CC4618
Account: BBLNYS Arcadis **Lab FileID:** 2M104765.D
Project: National Grid, Philly Coke, Philadelphia PA

42	t	Hexachlorobutadiene	0.168	0.240	-42.9#	88	-0.03	5.70
43	t	4-Chloro-3-methylphenol	0.281	0.372	-32.4#	80	-0.04	6.19
44	t	2-Methylnaphthalene	0.603	0.662	-9.8	67	-0.03	6.30
45	t	1-Methylnaphthalene	0.629	0.695	-10.5	67	-0.04	6.40
46	t	Dimethylnaphthalene	0.644	0.711	-10.4	67	-0.03	7.04
47	I	Acenaphthene-d10	1.000	1.000	0.0	62	-0.04	7.58
48	t	Hexachlorocyclopentadiene	0.340	0.420	-23.5#	70	-0.03	6.48
49	t	2,4,6-Trichlorophenol	0.391	0.453	-15.9	71	-0.03	6.65
50	t	2,4,5-Trichlorophenol	0.411	0.488	-18.7	72	-0.04	6.71
51	S	2-Fluorobiphenyl	1.461	1.638	-12.1	69	-0.03	6.73
52	t	2-Chloronaphthalene	1.225	1.338	-9.2	68	-0.03	6.87
53	t	Biphenyl	1.646	1.809	-9.9	68	-0.03	6.85
54	t	2-Nitroaniline	0.338	0.504	-49.1#	89	-0.03	7.02
55	t	Dimethylphthalate	1.329	1.600	-20.4#	75	-0.03	7.25
56	t	Acenaphthylene	1.955	2.180	-11.5	68	-0.03	7.39
57	t	2,6-Dinitrotoluene	0.297	0.374	-25.9#	75	-0.03	7.33
58	t	3-Nitroaniline	0.345	0.391	-13.3	66	-0.04	7.56
59	t	Acenaphthene	1.283	1.437	-12.0	69	-0.04	7.62
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	100.000	108.049	-8.0	67	-0.03	7.72
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.149	0.265	-77.9#	101	-0.04	7.90
62	t	Dibenzofuran	1.725	1.971	-14.3	70	-0.04	7.86
63	t	2,4-Dinitrotoluene	0.396	0.519	-31.1#	75	-0.03	7.89
64		2,3,4,6-Tetrachlorophenol	0.339	0.413	-21.8#	74	-0.04	8.07
65	t	Diethylphthalate	1.315	1.677	-27.5#	78	-0.04	8.24
66	t	Fluorene	1.398	1.609	-15.1	70	-0.04	8.34
67	t	4-Chlorophenyl-phenylethe	0.635	0.752	-18.4	74	-0.04	8.37
68	t	4-Nitroaniline	0.343	0.374	-9.0	65	-0.04	8.42
69	I	Phenanthrene-d10	1.000	1.000	0.0	70	-0.04	9.73
		----------	True	Calc.	% Drift	----------		
70	t	4,6-Dinitro-2-methylpheno	50.000	54.688	-9.4	75	-0.03	8.48
		----------	AvgRF	CCRF	% Dev	----------		
71	t	n-Nitrosodiphenylamine	0.584	0.588	-0.7	71	-0.04	8.55
72	t	1,2-Diphenylhydrazine	0.774	0.889	-14.9	81	-0.04	8.60
73	S	2,4,6-Tribromophenol	0.121	0.145	-19.8	84	-0.04	8.71
74	t	4-Bromophenyl-phenylether	0.220	0.241	-9.5	77	-0.04	9.08
75	t	Hexachlorobenzene	0.252	0.294	-16.7	83	-0.04	9.17
76	t	Pentachlorophenol	0.153	0.149	2.6	63	-0.04	9.50
77	t	Phenanthrene	1.141	1.137	0.4	71	-0.04	9.77
78	t	Anthracene	1.147	1.172	-2.2	72	-0.04	9.84
79	t	Carbazole	1.071	1.097	-2.4	72	-0.04	10.13
80	t	Di-n-butylphthalate	1.309	1.446	-10.5	76	-0.05	10.75
81	t	Fluoranthene	1.171	1.250	-6.7	74	-0.04	11.62
82	t	Octadecane	0.519	0.538	-3.7	73	-0.04	9.69
83	I	Chrysene-d12	1.000	1.000	0.0	79	-0.05	13.90
84	t	Pyrene	1.336	1.258	5.8	74	-0.05	11.96
85	S	Terphenyl-d14	0.877	0.879	-0.2	78	-0.05	12.28
86	t	Butylbenzylphthalate	0.617	0.638	-3.4	80	-0.05	13.11
87	t	Benzo[a]anthracene	1.210	1.218	-0.7	81	-0.05	13.88
88	t	3,3'-Dichlorobenzidine	0.439	0.459	-4.6	79	-0.05	13.89
89	t	Chrysene	1.150	1.159	-0.8	80	-0.05	13.94
90	t	bis(2-Ethylhexyl)phthalat	0.851	0.912	-7.2	82	-0.05	14.07

8.7.8

8

Continuing Calibration Summary

Job Number: JC67110 **Sample:** E2M4654-CC4618
Account: BBLNYS Arcadis **Lab FileID:** 2M104765.D
Project: National Grid, Philly Coke, Philadelphia PA

91	I	Perylene-d12	1.000	1.000	0.0	77	-0.05	16.00
92	t	Di-n-octylphthalate	1.445	1.605	-11.1	83	-0.05	15.06
93	t	Benzo[b]fluoranthene	1.224	1.317	-7.6	81	-0.05	15.49
94	t	Benzo[k]fluoranthene	1.137	1.176	-3.4	81	-0.06	15.53
95	t	Benzo[a]pyrene	1.061	1.119	-5.5	80	-0.05	15.93
96	t	Indeno[1,2,3-cd]pyrene	1.056	1.143	-8.2	83	-0.07	17.45
97	t	Dibenz(a,h)acridine	0.956	0.989	-3.5	78	-0.06	17.13
98	t	Dibenz[a,h]anthracene	1.086	1.129	-4.0	79	-0.07	17.48
99	t	7,12-Dimethylbenz(a)anthr	0.533	0.576	-8.1	81	-0.06	15.48
100	t	Benzo[g,h,i]perylene	1.018	1.061	-4.2	80	-0.07	17.85

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m104669.D M2M4618.M Tue Jun 05 13:40:28 2018

8.7.8

8

Initial Calibration Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E5P2386-ICC2386
Lab FileID: 5P49976.D

```
                          Response Factor Report  MS5P

  Method       : C:\MSDCHEM\1\METHODS\M5P2386.M (RTE Integrator)
  Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
  Last Update  : Tue May 08 10:22:08 2018
  Response via : Initial Calibration

  Calibration Files
  2   =5p49980 .D  5   =5p49979.D  25  =5p49977.D  80  =5p49975.D
  100 =5p49974 .D  50  =5p49976.D  1   =5p49981.D  10  =5p49978.D

   Compound          2     5     25    80    100   50    1     10    Avg %RSD
  ---------------------------------------------------------------------------

101)     1,4-Dichlorobenzene-d ----------------ISTD---------------------
102) Benzaldehyde 1.161 0.970 0.866 0.790 0.766 0.840 0.911 0.962 0.908  13.88

103)     Acenaphthene-d10a     ----------------ISTD---------------------
104) 1,2,4,5-Tetr 0.589 0.603 0.553 0.525 0.510 0.545 0.621 0.591 0.567   7.00

105)     Chrysene-d12a         ----------------ISTD---------------------
106) Benzidine          0.458 0.417 0.418 0.360 0.421       0.513 0.431  11.82
107) 1-chloroocta 0.290 0.329 0.335 0.327 0.320 0.338 0.327 0.333 0.325   4.70

108)     Phenanthrene-d10a     ----------------ISTD---------------------
109) o-terphenyl  0.524 0.516 0.502 0.481 0.460 0.508 0.493 0.523 0.501   4.43
110) Atrazine     0.085 0.096 0.094 0.096 0.095 0.096 0.075 0.093 0.091   8.28
111) Pentachloron 0.038 0.033 0.042 0.043 0.042 0.044       0.039 0.040#  9.38

112) I   Naphthalene-d8a       ----------------ISTD---------------------
113) Hydroquinone 0.219 0.197 0.271 0.290 0.295 0.300       0.248 0.260  15.44
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M5P2385.M         Wed May 09 15:51:19 2018   RPT1
```

8.7.9

8

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E5P2386-ICV2386
Lab FileID: 5P49984A.D

```
                    Evaluate Continuing Calibration Report

  Data File : C:\msdchem\1\DATA\E5P2386\5p49984a.D         Vial: 12
  Acq On    :  7 May 2018   6:33 pm                    Operator: johnb1
  Sample    : icv2386-50                               Inst    : MS5P
  Misc      : op6115,e5p2386,1000,,,1,1                Multiplr: 1.00
  MS Integration Params: lscint.p

  Method       : C:\MSDCHEM\1\METHODS\M5P2385.M (RTE Integrator)
  Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
  Last Update  : Tue May 08 10:22:08 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.
  ---------------------------------------------------------------------------
108     Phenanthrene-d10a          1.000   1.000      0.0  127   0.00    9.12
111     Pentachloronitrobenzene    0.040   0.045#   -12.5  130   0.00    8.93
 ---------------------------------------------------------------------------
 ---------------------------------------------------------------------------

    (#) = Out of Range              SPCC's out = 0  CCC's out = 0
     5p49976a.D M5P2385.M        Tue May 08 10:46:06 2018   RPT1
```

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E5P2386-ICV2386
Lab FileID: 5P49985A.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E5P2386\5p49985a.D        Vial: 13
Acq On    :  7 May 2018   6:58 pm                   Operator: johnb1
Sample    : icv2386-50                              Inst    : MS5P
Misc      : op6115,e5p2386,1000,,,1,1               Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P2385.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Tue May 08 10:22:08 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	117	0.00	7.60
104	1,2,4,5-Tetrachlorobenzen	0.567	0.609	-7.4	130	0.00	6.75
105	Chrysene-d12a	1.000	1.000	0.0	93	0.01	12.63
106	Benzidine	0.431	0.363	15.8	97	0.00	10.79

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 5p49976a.D M5P2385.M        Tue May 08 10:46:10 2018   RPT1
```

8.7.11

8

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E5P2386-ICV2386
Lab FileID: 5P49986A.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E5P2386\5p49986a.D        Vial: 14
Acq On    :  7 May 2018   7:23 pm                   Operator: johnb1
Sample    : icv2386-50                              Inst    : MS5P
Misc      : op6115,e5p2386,1000,,,1,1               Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P2385.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Tue May 08 10:22:08 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-d4b	1.000	1.000	0.0	124	0.00	4.69
102	Benzaldehyde	0.908	0.894	1.5	132	0.00	4.29
108	Phenanthrene-d10a	1.000	1.000	0.0	112	0.00	9.12
110	Atrazine	0.091	0.106	-16.5	125	0.00	8.82

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p49976a.D M5P2385.M Tue May 08 10:46:14 2018 RPT1

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E5P2386-ICV2386
Lab FileID: 5P49988.D

```
                    Evaluate Continuing Calibration Report

  Data File : C:\msdchem\1\DATA\E5P2386\5p49988.D          Vial: 16
  Acq On    :  7 May 2018   8:13 pm                    Operator: johnb1
  Sample    : icv2386-50                               Inst    : MS5P
  Misc      : op6115,e5p2386,1000,,,1,1                Multiplr: 1.00
  MS Integration Params: lscint.p

  Method       : C:\MSDCHEM\1\METHODS\M5P2385.M (RTE Integrator)
  Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
  Last Update  : Tue May 08 10:22:08 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.
  ---------------------------------------------------------------------------
112 I   Naphthalene-d8a            1.000   1.000      0.0  129   0.00    5.89
113     Hydroquinone               0.260   0.294    -13.1  126   0.00    6.30
 ---------------------------------------------------------------------------
 ---------------------------------------------------------------------------

    (#) = Out of Range              SPCC's out = 0  CCC's out = 0
     5p49976a.D M5P2385.M        Tue May 08 10:46:18 2018   RPT1
```

8.7.13

8

Initial Calibration Summary

Job Number: JC67110 **Sample:** E5P2399-ICC2399
Account: BBLNYS Arcadis **Lab FileID:** 5P50257.D
Project: National Grid, Philly Coke, Philadelphia PA

Response Factor Report MS5P

Method : C:\MSDCHEM\1\METHODS\M5P2399.M (RTE Integrator)
Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update : Tue May 15 10:21:09 2018
Response via : Initial Calibration

Calibration Files
2 =5p50261.D 5 =5p50260.D 25 =5p50258.D 80 =5p50256.D
100 =5p50255.D 50 =5p50257.D 1 =5p50262.D 10 =5p50259.D

Compound	2	5	25	80	100	50	1	10	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	----------ISTD----------									
2) 1,4-Dioxane	0.683	0.610	0.633	0.620	0.649	0.641	0.690	0.642	0.646	4.35
3) Pyridine	1.541	1.359	1.557	1.491	1.490	1.646	1.594	1.610	1.536	5.87
4) N-Nitrosodim	0.891	0.796	0.884	0.878	0.890	0.945	0.847	0.872	0.875	4.84
5) 2-Fluorophen	1.400	1.315	1.403	1.405	1.444	1.509	1.334	1.419	1.404	4.32
6) Indene	2.575	2.298	2.317	2.150	2.114	2.310	2.435	2.436	2.329	6.55
7) Cumene	3.799	3.507	3.715	3.482	3.381	3.693	3.667	3.814	3.632	4.35
8) Phenol-d5	1.744	1.745	1.825	1.763	1.767	1.943	1.753	1.824	1.796	3.79
9) Phenol	2.074	1.975	2.030	1.828	1.815	2.022	2.003	2.145	1.987	5.73
10) Aniline	2.370	2.249	2.066	1.809	1.754	1.963	2.372	2.290	2.109	11.73
11) bis(2-Chloro	1.346	1.258	1.291	1.166	1.163	1.270	1.387	1.372	1.282	6.69
12) 2-Chlorophen	1.654	1.499	1.522	1.406	1.388	1.497	1.636	1.595	1.525	6.48
13) Decane	2.139	2.047	1.929	1.668	1.606	1.834	2.193	2.065	1.935	11.17
14) 1,3-Dichloro	1.771	1.715	1.652	1.504	1.484	1.638	1.837	1.797	1.675	7.81
15) 1,4-Dichloro	1.711	1.654	1.638	1.478	1.432	1.621	1.723	1.648	1.613	6.48
16) Benzyl alcoh	0.987	0.921	1.005	0.958	0.961	1.014	0.836	1.028	0.964	6.43
17) 1,2-Dichloro	1.664	1.565	1.544	1.402	1.370	1.537	1.760	1.626	1.558	8.29
18) Acetophenone	2.301	2.301	2.140	1.988	1.985	2.200	2.333	2.268	2.189	6.37
19) 2-Methylphen	1.462	1.404	1.316	1.201	1.199	1.291	1.593	1.387	1.357	9.86
20) 2,2'-oxybis(	2.533	2.398	2.334	2.010	1.950	2.247	2.507	2.611	2.324	10.41
21) 3&4-Methylph	1.484	1.434	1.391	1.274	1.263	1.385	1.369	1.551	1.394	6.98
22) n-Nitroso-di	1.076	1.015	1.008	0.894	0.879	0.997	1.248	1.107	1.028	11.56
23) Hexachloroet	0.748	0.712	0.687	0.634	0.617	0.671	0.743	0.722	0.692	7.00
24) I Naphthalene-d8	----------ISTD----------									
25) Nitrobenzene	0.383	0.416	0.400	0.374	0.381	0.388	0.404	0.416	0.395	4.08
26) Nitrobenzene	0.390	0.389	0.396	0.352	0.356	0.376	0.438	0.416	0.389	7.44
27) Quinoline	0.778	0.775	0.779	0.718	0.718	0.753	0.768	0.803	0.761	3.97
28) Isophorone	0.707	0.730	0.716	0.664	0.668	0.699	0.777	0.746	0.713	5.33
29) 2-Nitropheno	0.189	0.217	0.215	0.203	0.200	0.212	0.213	0.218	0.208	4.86
30) 2,4-Dimethyl	0.349	0.343	0.351	0.346	0.344	0.362	0.353	0.387	0.354	4.12
31) Benzoic acid	0.273	0.279	0.314	0.323	0.328	0.326	0.253	0.309	0.301	9.44
32) bis(2-Chloro	0.389	0.378	0.366	0.344	0.343	0.359	0.392	0.385	0.369	5.27
33) 2,4-Dichloro	0.344	0.342	0.340	0.310	0.306	0.334	0.344	0.359	0.335	5.37
34) 2,6-Dichloro	0.335	0.337	0.326	0.289	0.287	0.308	0.350	0.343	0.322	7.60
35) 1,3,5-Trichl	0.437	0.418	0.402	0.360	0.341	0.381	0.456	0.421	0.402	9.72
36) 1,2,4-Trichl	0.387	0.405	0.388	0.350	0.347	0.373	0.406	0.416	0.384	6.71
37) 1,2,3-Trichl	0.393	0.399	0.370	0.321	0.316	0.343	0.393	0.397	0.367	9.58
38) Naphthalene	1.063	1.044	1.004	0.933	0.927	0.982	1.088	1.054	1.012	5.97
39) 4-Chloroanil	0.411	0.475	0.457	0.409	0.411	0.442	0.467	0.485	0.445	6.99
40) 2,3-Dichloro	0.444	0.452	0.423	0.383	0.374	0.403	0.454	0.456	0.424	7.80
41) Caprolactam	0.219	0.245	0.237	0.221	0.230	0.232	0.292	0.253	0.241	9.82
42) Hexachlorobu	0.200	0.232	0.236	0.215	0.208	0.219	0.272	0.244	0.228	9.98
43) 4-Chloro-3-m	0.345	0.348	0.355	0.330	0.331	0.347	0.358	0.369	0.348	3.80
44) 2-Methylnaph	0.647	0.662	0.630	0.564	0.560	0.605	0.686	0.680	0.629	7.81
45) 1-Methylnaph	0.695	0.672	0.642	0.597	0.575	0.625	0.736	0.705	0.656	8.49

Initial Calibration Summary

Job Number: JC67110 **Sample:** E5P2399-ICC2399
Account: BBLNYS Arcadis **Lab FileID:** 5P50257.D
Project: National Grid, Philly Coke, Philadelphia PA

```
46) Dimethylnaph 0.729 0.746 0.694 0.612 0.611 0.656 0.798 0.735 0.698   9.60

47) I   Acenaphthene-d10      ----------------ISTD---------------------
48) Hexachlorocy 0.428 0.420 0.432 0.409 0.395 0.424 0.398 0.468 0.422   5.47
49) 2,4,6-Trichl 0.384 0.432 0.413 0.378 0.360 0.394 0.387 0.459 0.401   7.96
50) 2,4,5-Trichl 0.476 0.454 0.447 0.419 0.402 0.427 0.447 0.484 0.444   6.24
51) 2-Fluorobiph 1.508 1.469 1.389 1.258 1.241 1.322 1.555 1.551 1.411   9.03
52) 2-Chloronaph 1.232 1.267 1.200 1.040 1.019 1.098 1.282 1.311 1.181   9.61
53) Biphenyl     1.660 1.695 1.589 1.481 1.446 1.539 1.805 1.742 1.620   7.86
54) 2-Nitroanili 0.361 0.383 0.407 0.378 0.370 0.383 0.355 0.420 0.382   5.75
55) Dimethylphth 1.407 1.419 1.395 1.323 1.308 1.362 1.468 1.546 1.403   5.53
56) Acenaphthyle 1.940 1.867 1.817 1.661 1.597 1.709 1.786 1.962 1.792   7.29
57) 2,6-Dinitrot 0.337 0.316 0.316 0.304 0.304 0.324 0.295 0.353 0.319   6.00
58) 3-Nitroanili 0.344 0.375 0.361 0.357 0.356 0.366 0.352 0.400 0.364   4.73
59) Acenaphthene 1.322 1.261 1.214 1.135 1.089 1.180 1.338 1.327 1.233   7.64
60) 2,4-Dinitrop 0.119 0.145 0.198 0.200 0.199 0.202 0.117 0.185 0.171  22.06
         ----- Quadratic regression -----                Coefficient =  0.9999
              Response Ratio = -0.01000 + 0.20886 *A + -0.00155 *A^2

61) 4-Nitropheno 0.198 0.176 0.205 0.209 0.208 0.206 0.218 0.213 0.204   6.27
62) Dibenzofuran 1.880 1.779 1.667 1.499 1.446 1.593 1.835 1.849 1.693   9.89
63) 2,4-Dinitrot 0.401 0.436 0.441 0.413 0.386 0.416 0.462 0.469 0.428   6.78
64) 2,3,4,6-Tetr 0.451 0.425 0.419 0.408 0.412 0.427 0.424 0.457 0.428   4.10
65) Diethylphtha 1.358 1.370 1.354 1.264 1.228 1.295 1.222 1.431 1.315   5.69
66) Fluorene     1.510 1.445 1.382 1.239 1.178 1.310 1.455 1.503 1.378   8.99
67) 4-Chlorophen 0.785 0.747 0.677 0.624 0.601 0.655 0.772 0.787 0.706  10.69
68) 4-Nitroanili 0.370 0.359 0.364 0.329 0.317 0.346 0.346 0.402 0.354   7.36

69) I   Phenanthrene-d10      ----------------ISTD---------------------
70) 4,6-Dinitro- 0.113 0.137 0.162 0.160 0.157 0.160 0.134 0.159 0.148  12.16
71) n-Nitrosodip 0.574 0.544 0.535 0.505 0.482 0.510 0.575 0.580 0.538   6.84
72) 1,2-Diphenyl 0.710 0.722 0.700 0.637 0.607 0.651 0.735 0.750 0.689   7.45
73) 2,4,6-Tribro 0.171 0.175 0.182 0.172 0.168 0.174 0.175 0.200 0.177   5.78
74) 4-Bromopheny 0.272 0.274 0.278 0.262 0.252 0.274 0.294 0.301 0.276   5.73
75) Hexachlorobe 0.342 0.338 0.316 0.292 0.281 0.306 0.333 0.329 0.317   7.09
76) Pentachlorop 0.148 0.166 0.188 0.185 0.177 0.191 0.121 0.191 0.171  14.56
77) Phenanthrene 1.134 1.092 1.094 1.009 0.954 1.032 1.182 1.179 1.084   7.53
78) Anthracene   1.187 1.121 1.124 1.027 0.967 1.058 1.183 1.233 1.113   8.09
79) Carbazole    1.044 1.089 1.055 0.978 0.937 1.010 1.062 1.126 1.038   5.86
80) Di-n-butylph 1.207 1.250 1.296 1.220 1.172 1.259 1.225 1.339 1.246   4.24
81) Fluoranthene 1.352 1.298 1.382 1.288 1.212 1.324 1.376 1.429 1.333   5.06
82) Octadecane   0.582 0.625 0.600 0.533 0.498 0.561 0.660 0.637 0.587   9.30

83) I   Chrysene-d12          ----------------ISTD---------------------
84) Pyrene       1.377 1.368 1.394 1.344 1.294 1.369 1.347 1.419 1.364   2.73
85) Terphenyl-d1 1.022 1.007 1.020 0.997 0.974 1.013 0.976 1.056 1.008   2.64
86) Butylbenzylp 0.503 0.549 0.573 0.583 0.584 0.587 0.515 0.572 0.558   5.86
87) Benzo[a]anth 1.294 1.268 1.286 1.211 1.182 1.238 1.354 1.338 1.271   4.66
88) 3,3'-Dichlor 0.540 0.540 0.572 0.538 0.515 0.562 0.528 0.586 0.548   4.32
89) Chrysene     1.199 1.212 1.186 1.141 1.122 1.174 1.231 1.217 1.185   3.20
90) bis(2-Ethylh 0.676 0.703 0.742 0.729 0.717 0.745 0.667 0.762 0.718   4.72

91) I   Perylene-d12          ----------------ISTD---------------------
92) Di-n-octylph 1.188 1.214 1.252 1.189 1.143 1.203 1.176 1.295 1.208   3.91
93) Benzo[b]fluo 1.394 1.283 1.292 1.170 1.149 1.210 1.362 1.387 1.281   7.56
94) Benzo[k]fluo 1.208 1.246 1.136 1.020 0.906 1.053 1.242 1.248 1.133  11.29
95) Benzo[a]pyre 1.186 1.210 1.154 1.059 1.037 1.094 1.254 1.208 1.150   6.82
96) Indeno[1,2,3 1.157 1.161 1.162 1.105 1.086 1.116 1.190 1.218 1.150   3.87
97) Dibenz(a,h)a 1.075 1.054 1.051 1.003 0.961 1.017 1.070 1.096 1.041   4.23
98) Dibenz[a,h]a 1.174 1.215 1.157 1.069 1.024 1.090 1.254 1.239 1.153   7.30
```

Initial Calibration Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E5P2399-ICC2399
Lab FileID: 5P50257.D

```
 99) 7,12-Dimethy 0.532 0.516 0.555 0.518 0.485 0.530 0.524 0.584 0.530   5.55
100) Benzo[g,h,i] 1.146 1.107 1.105 1.050 1.004 1.073 1.154 1.182 1.102   5.34

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

          M5P2399.M         Tue May 15 10:38:55 2018   RPT1
```

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E5P2399-ICV2399
Lab FileID: 5P50263.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E5P2399\5p50263.D          Vial: 10
Acq On    : 15 May 2018   4:58 am                    Operator: georges
Sample    : icv2399-50                               Inst    : MS5P
Misc      : op6115,e5p2399,1000,,,1,1                Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P2399.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Tue May 15 10:21:09 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	137	0.00	4.63
5	S	2-Fluorophenol	1.404	1.307	6.9	119	0.00	3.47
8	S	Phenol-d5	1.796	1.675	6.7	118	0.00	4.31
24	I	Naphthalene-d8	1.000	1.000	0.0	126	0.00	5.84
25	S	Nitrobenzene-d5	0.395	0.400	-1.3	130	0.00	5.15
47	I	Acenaphthene-d10	1.000	1.000	0.0	127	0.00	7.54
51	S	2-Fluorobiphenyl	1.411	1.320	6.4	127	0.00	6.89
69	I	Phenanthrene-d10	1.000	1.000	0.0	121	0.00	9.04
73	S	2,4,6-Tribromophenol	0.177	0.175	1.1	122	0.00	8.31
83	I	Chrysene-d12	1.000	1.000	0.0	128	-0.01	12.54
85	S	Terphenyl-d14	1.008	0.936	7.1	118	0.00	11.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p50257a.D M5P2399.M Tue May 15 10:31:08 2018 RPT1

8.7.15
8

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E5P2399-ICV2399
Lab FileID: 5P50264.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E5P2399\5p50264.D          Vial: 11
Acq On    : 15 May 2018   5:23 am                    Operator: georges
Sample    : icv2399-50                               Inst    : MS5P
Misc      : op6115,e5p2399,1000,,,1,1                Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P2399.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Tue May 15 10:21:09 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	124	0.00	4.63
9	t	Phenol	1.987	1.831	7.9	112	0.01	4.33
12	t	2-Chlorophenol	1.525	1.492	2.2	123	0.00	4.45
19	t	2-Methylphenol	1.357	1.343	1.0	129	0.00	4.88
21	t	3&4-Methylphenol	1.394	1.459	-4.7	130	0.00	5.02
24	I	Naphthalene-d8	1.000	1.000	0.0	114	0.00	5.84
29	t	2-Nitrophenol	0.208	0.216	-3.8	116	0.00	5.47
30	t	2,4-Dimethylphenol	0.354	0.351	0.8	110	0.00	5.53
31	t	Benzoic acid	0.301	0.300	0.3	105	0.02	5.65
33	t	2,4-Dichlorophenol	0.335	0.325	3.0	111	0.00	5.71
34	t	2,6-Dichlorophenol	0.322	0.322	0.0	119	0.00	5.92
43	t	4-Chloro-3-methylphenol	0.348	0.341	2.0	112	0.01	6.40
47	I	Acenaphthene-d10	1.000	1.000	0.0	108	0.00	7.54
49	t	2,4,6-Trichlorophenol	0.401	0.433	-8.0	119	0.00	6.81
50	t	2,4,5-Trichlorophenol	0.444	0.437	1.6	111	0.00	6.84
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	49.487	1.0	103	0.00	7.60
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.204	0.202	1.0	106	0.02	7.69
64		2,3,4,6-Tetrachlorophenol	0.428	0.411	4.0	104	0.00	7.87
69	I	Phenanthrene-d10	1.000	1.000	0.0	109	0.00	9.05
70	t	4,6-Dinitro-2-methylpheno	0.148	0.164	-10.8	112	0.00	8.13
76	t	Pentachlorophenol	0.171	0.211	-23.4	120	0.00	8.85

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p50257a.D M5P2399.M Tue May 15 10:31:10 2018 RPT1

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E5P2399-ICV2399
Lab FileID: 5P50265.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E5P2399\5p50265.D          Vial: 12
Acq On    : 15 May 2018   5:47 am                    Operator: georges
Sample    : icv2399-50                               Inst    : MS5P
Misc      : op6115,e5p2399,1000,,,1,1                Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P2399.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Tue May 15 10:21:09 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	105	0.00	4.63
3	t	Pyridine	1.536	1.540	-0.3	99	0.06	2.40
10		Aniline	2.109	2.284	-8.3	123	0.00	4.34
16	t	Benzyl alcohol	0.964	0.991	-2.8	103	0.00	4.77
24	I	Naphthalene-d8	1.000	1.000	0.0	107	0.00	5.84
39	t	4-Chloroaniline	0.445	0.415	6.7	100	0.00	5.91
44	t	2-Methylnaphthalene	0.629	0.565	10.2	100	0.00	6.53
47	I	Acenaphthene-d10	1.000	1.000	0.0	101	0.00	7.54
54	t	2-Nitroaniline	0.382	0.396	-3.7	104	0.00	7.10
58	t	3-Nitroaniline	0.364	0.369	-1.4	102	0.00	7.50
62	t	Dibenzofuran	1.693	1.668	1.5	105	0.00	7.74
68	t	4-Nitroaniline	0.354	0.354	0.0	103	0.00	8.10
69	I	Phenanthrene-d10	1.000	1.000	0.0	104	0.00	9.04
79	t	Carbazole	1.038	0.983	5.3	101	0.00	9.32

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 5p50257a.D M5P2399.M        Tue May 15 10:31:12 2018   RPT1
```

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E5P2399-ICV2399
Lab FileID: 5P50266.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2399\5p50266.D Vial: 13
Acq On : 15 May 2018 6:12 am Operator: georges
Sample : icv2399-50 Inst : MS5P
Misc : op6115,e5p2399,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2399.M (RTE Integrator)
Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update : Tue May 15 10:21:09 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	107	0.00	4.63
4	t	N-Nitrosodimethylamine	0.875	0.733	16.2	83	-0.02	2.29
11	t	bis(2-Chloroethyl)ether	1.282	1.363	-6.3	114	0.00	4.39
14	t	1,3-Dichlorobenzene	1.675	1.684	-0.5	110	0.00	4.59
15	t	1,4-Dichlorobenzene	1.613	1.608	0.3	106	0.00	4.65
17	t	1,2-Dichlorobenzene	1.558	1.600	-2.7	111	0.00	4.79
20	t	2,2'-oxybis(1-Chloropropa	2.324	2.608	-12.2	124	0.00	4.90
22	t	n-Nitroso-di-n-propylamin	1.028	0.985	4.2	105	0.00	5.01
23	t	Hexachloroethane	0.692	0.675	2.5	107	0.00	5.11
24	I	Naphthalene-d8	1.000	1.000	0.0	101	0.00	5.84
26	t	Nitrobenzene	0.389	0.373	4.1	101	0.00	5.17
28	t	Isophorone	0.713	0.693	2.8	100	0.00	5.40
32	t	bis(2-Chloroethoxy)methan	0.369	0.407	-10.3	115	0.00	5.61
36	t	1,2,4-Trichlorobenzene	0.384	0.386	-0.5	105	0.00	5.78
38	t	Naphthalene	1.012	1.011	0.1	104	0.00	5.86
42	t	Hexachlorobutadiene	0.228	0.236	-3.5	109	0.00	5.99
47	I	Acenaphthene-d10	1.000	1.000	0.0	90	0.00	7.54
48	t	Hexachlorocyclopentadiene	0.422	0.483	-14.5	97	0.00	6.69
52	t	2-Chloronaphthalene	1.181	1.387	-17.4	113	0.00	7.00
55	t	Dimethylphthalate	1.403	1.521	-8.4	100	0.00	7.29
56	t	Acenaphthylene	1.792	1.900	-6.0	100	0.00	7.40
57	t	2,6-Dinitrotoluene	0.319	0.336	-5.3	93	0.00	7.34
59	t	Acenaphthene	1.233	1.292	-4.8	98	0.00	7.57
63	t	2,4-Dinitrotoluene	0.428	0.448	-4.7	97	0.00	7.73
65	t	Diethylphthalate	1.315	1.433	-9.0	99	0.00	7.98
66	t	Fluorene	1.378	1.404	-1.9	96	0.00	8.07
67	t	4-Chlorophenyl-phenylethe	0.706	0.725	-2.7	99	0.00	8.09
69	I	Phenanthrene-d10	1.000	1.000	0.0	96	0.00	9.05
71	t	n-Nitrosodiphenylamine	0.538	0.461	14.3	87	0.00	8.20
72	t	1,2-Diphenylhydrazine	0.689	0.671	2.6	99	0.00	8.23
74	t	4-Bromophenyl-phenylether	0.276	0.266	3.6	93	0.00	8.57
75	t	Hexachlorobenzene	0.317	0.303	4.4	95	0.00	8.64
77	t	Phenanthrene	1.084	1.072	1.1	99	0.00	9.07
78	t	Anthracene	1.113	1.058	4.9	96	0.00	9.13
80	t	Di-n-butylphthalate	1.246	1.209	3.0	92	0.00	9.76
81	t	Fluoranthene	1.333	1.265	5.1	91	0.00	10.52
83	I	Chrysene-d12	1.000	1.000	0.0	87	0.00	12.54
84	t	Pyrene	1.364	1.382	-1.3	88	-0.01	10.81

Initial Calibration Verification

Job Number: JC67110 **Sample:** E5P2399-ICV2399
Account: BBLNYS Arcadis **Lab FileID:** 5P50266.D
Project: National Grid, Philly Coke, Philadelphia PA

86	t	Butylbenzylphthalate	0.558	0.610	-9.3	90	0.00	11.79
87	t	Benzo[a]anthracene	1.271	1.279	-0.6	90	0.00	12.52
89	t	Chrysene	1.185	1.187	-0.2	88	0.00	12.58
90	t	bis(2-Ethylhexyl)phthalat	0.718	0.761	-6.0	89	0.00	12.68
91	I	Perylene-d12	1.000	1.000	0.0	87	0.00	14.57
92	t	Di-n-octylphthalate	1.208	1.227	-1.6	89	-0.01	13.64
93	t	Benzo[b]fluoranthene	1.281	1.239	3.3	89	0.00	14.06
94	t	Benzo[k]fluoranthene	1.133	1.076	5.0	89	-0.01	14.10
95	t	Benzo[a]pyrene	1.150	1.127	2.0	90	0.00	14.49
96	t	Indeno[1,2,3-cd]pyrene	1.150	1.161	-1.0	90	-0.01	16.04
98	t	Dibenz[a,h]anthracene	1.153	1.121	2.8	89	-0.03	16.08
100	t	Benzo[g,h,i]perylene	1.102	1.148	-4.2	93	-0.04	16.46

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p50257a.D M5P2399.M Tue May 15 10:31:14 2018 RPT1

8.7.18

8

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E5P2399-ICV2399
Lab FileID: 5P50268.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E5P2399\5p50268.D          Vial: 15
Acq On    : 15 May 2018  10:30 am                    Operator: georges
Sample    : icv2399-50                               Inst    : MS5P
Misc      : op6115,e5p2399,1000,,,1,1                Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P2399.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Tue May 15 10:21:09 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	0.00	4.63
2	t	1,4-Dioxane	0.646	0.615	4.8	112	-0.01	2.05
6	t	Indene	2.329	2.493	-7.0	126	0.00	4.87
7	t	Cumene	3.632	3.483	4.1	110	0.00	3.92
13	t	Decane	1.935	1.768	8.6	113	0.00	4.50
18	t	Acetophenone	2.189	2.040	6.8	109	0.00	5.01
24	I	Naphthalene-d8	1.000	1.000	0.0	118	0.00	5.84
27	t	Quinoline	0.761	0.691	9.2	108	0.00	6.18
40	t	2,3-Dichloroaniline	0.424	0.329	22.4	96	0.00	6.80
41	t	Caprolactam	0.241	0.187	22.4	95	0.00	6.24
45	t	1-Methylnaphthalene	0.656	0.512	22.0	97	0.00	6.62
46	t	Dimethylnaphthalene	0.698	0.589	15.6	106	0.01	7.14
47	I	Acenaphthene-d10	1.000	1.000	0.0	104	0.00	7.54
53	t	Biphenyl	1.620	1.562	3.6	106	0.00	6.98
69	I	Phenanthrene-d10	1.000	1.000	0.0	104	0.00	9.05
82	t	Octadecane	0.587	0.553	5.8	102	0.00	8.97
91	I	Perylene-d12	1.000	1.000	0.0	102	0.00	14.57
99	t	7,12-Dimethylbenz(a)anthr	0.530	0.512	3.4	98	-0.01	14.06

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 5p50257a.D M5P2399.M        Tue May 15 10:52:53 2018   RPT1
```

8.7.19

8

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E5P2399-ICV2399
Lab FileID: 5P50269.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E5P2399\5p50269.D          Vial: 16
Acq On    : 15 May 2018  10:55 am                    Operator: georges
Sample    : icv2399-50                               Inst    : MS5P
Misc      : op6115,e5p2399,1000,,,1,1                Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P2399.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Tue May 15 10:21:09 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.
83 I	Chrysene-d12	1.000	1.000	0.0	117	-0.01	12.54
88 t	3,3'-Dichlorobenzidine	0.548	0.541	1.3	113	0.00	12.52

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p50257a.D M5P2399.M Tue May 15 11:14:11 2018 RPT1

Continuing Calibration Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E5P2426-CC2399
Lab FileID: 5P50926.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\data\da...eel\e5p2426\5p50926.d Vial: 2
Acq On    :  5 Jun 2018  12:38 pm                    Operator: christc2
Sample    : cc2399-25                                Inst    : MS5P
Misc      : op6115,e5p2426,1000,,,1,1                Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P2399.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Tue May 29 23:08:46 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	84	0.00	4.42
2	t	1,4-Dioxane	0.646	0.680	-5.3	90	-0.14	1.83
3	t	Pyridine	1.536	1.521	1.0	82	-0.12	2.12
4	t	N-Nitrosodimethylamine	0.875	0.901	-3.0	85	-0.12	2.09
5	S	2-Fluorophenol	1.404	1.372	2.3	82	-0.03	3.28
6	t	Indene	2.329	2.425	-4.1	87	0.00	4.66
7	t	Cumene	3.632	4.082	-12.4	92	-0.05	3.70
8	S	Phenol-d5	1.796	1.832	-2.0	84	0.02	4.13
9	t	Phenol	1.987	2.006	-1.0	83	0.03	4.15
10		Aniline	2.109	2.171	-2.9	88	-0.01	4.12
11	t	bis(2-Chloroethyl)ether	1.282	1.254	2.2	81	0.00	4.19
12	t	2-Chlorophenol	1.525	1.509	1.0	83	0.00	4.24
13	t	Decane	1.935	2.844	-47.0#	123	0.00	4.29
14	t	1,3-Dichlorobenzene	1.675	1.732	-3.4	88	0.00	4.37
15	t	1,4-Dichlorobenzene	1.613	1.688	-4.6	86	0.00	4.43
16	t	Benzyl alcohol	0.964	0.983	-2.0	82	0.02	4.56
17	t	1,2-Dichlorobenzene	1.558	1.672	-7.3	90	0.00	4.58
18	t	Acetophenone	2.189	2.298	-5.0	90	0.02	4.79
19	t	2-Methylphenol	1.357	1.365	-0.6	87	0.05	4.69
20	t	2,2'-oxybis(1-Chloropropa	2.324	2.722	-17.1	97	0.01	4.68
21	t	3&4-Methylphenol	1.394	1.445	-3.7	87	0.05	4.84
22	t	n-Nitroso-di-n-propylamin	1.028	1.120	-8.9	93	0.00	4.80
23	t	Hexachloroethane	0.692	0.755	-9.1	92	0.01	4.89
24	I	Naphthalene-d8	1.000	1.000	0.0	84	0.00	5.62
25	S	Nitrobenzene-d5	0.395	0.461	-16.7	96	-0.03	4.93
26	t	Nitrobenzene	0.389	0.427	-9.8	90	-0.03	4.95
27	t	Quinoline	0.761	0.763	-0.3	82	0.01	5.96
28	t	Isophorone	0.713	0.756	-6.0	88	-0.01	5.18
29	t	2-Nitrophenol	0.208	0.216	-3.8	84	-0.01	5.26
30	t	2,4-Dimethylphenol	0.354	0.367	-3.7	88	0.01	5.33
31	t	Benzoic acid	0.301	0.338	-12.3	90	0.03	5.45
32	t	bis(2-Chloroethoxy)methan	0.369	0.376	-1.9	86	0.00	5.40
33	t	2,4-Dichlorophenol	0.335	0.342	-2.1	84	0.02	5.50
34	t	2,6-Dichlorophenol	0.322	0.320	0.6	82	0.01	5.71
35		1,3,5-Trichlorobenzene	0.402	0.426	-6.0	89	-0.01	5.27
36	t	1,2,4-Trichlorobenzene	0.384	0.409	-6.5	88	0.00	5.56
37		1,2,3-Trichlorobenzene	0.367	0.393	-7.1	89	0.00	5.78
38	t	Naphthalene	1.012	1.046	-3.4	87	0.00	5.63
39	t	4-Chloroaniline	0.445	0.457	-2.7	84	0.01	5.70
40	t	2,3-Dichloroaniline	0.424	0.434	-2.4	86	0.05	6.58
41	t	Caprolactam	0.241	0.289	-19.9	102	0.02	6.03

Continuing Calibration Summary

Job Number: JC67110 **Sample:** E5P2426-CC2399
Account: BBLNYS Arcadis **Lab FileID:** 5P50926.D
Project: National Grid, Philly Coke, Philadelphia PA

42	t	Hexachlorobutadiene	0.228	0.270	-18.4	96	0.00	5.77
43	t	4-Chloro-3-methylphenol	0.348	0.391	-12.4	92	0.06	6.20
44	t	2-Methylnaphthalene	0.629	0.638	-1.4	85	0.03	6.31
45	t	1-Methylnaphthalene	0.656	0.666	-1.5	87	0.03	6.40
46	t	Dimethylnaphthalene	0.698	0.724	-3.7	87	0.05	6.91
47	I	Acenaphthene-d10	1.000	1.000	0.0	77	0.00	7.31
48	t	Hexachlorocyclopentadiene	0.422	0.481	-14.0	86	-0.02	6.47
49	t	2,4,6-Trichlorophenol	0.401	0.453	-13.0	85	0.00	6.59
50	t	2,4,5-Trichlorophenol	0.444	0.511	-15.1	89	0.01	6.64
51	S	2-Fluorobiphenyl	1.411	1.550	-9.9	86	0.00	6.67
52	t	2-Chloronaphthalene	1.181	1.316	-11.4	85	-0.02	6.77
53	t	Biphenyl	1.620	1.774	-9.5	86	-0.01	6.76
54	t	2-Nitroaniline	0.382	0.530	-38.7#	101	0.00	6.88
55	t	Dimethylphthalate	1.403	1.558	-11.0	86	0.00	7.07
56	t	Acenaphthylene	1.792	1.959	-9.3	83	0.00	7.17
57	t	2,6-Dinitrotoluene	0.319	0.339	-6.3	83	0.00	7.12
58	t	3-Nitroaniline	0.364	0.400	-9.9	86	0.02	7.29
59	t	Acenaphthene	1.233	1.412	-14.5	90	0.00	7.34
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	46.827	6.3	72	0.02	7.39
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.204	0.277	-35.8#	104	0.07	7.50
62	t	Dibenzofuran	1.693	1.938	-14.5	90	0.01	7.51
63	t	2,4-Dinitrotoluene	0.428	0.473	-10.5	83	0.02	7.51
64		2,3,4,6-Tetrachlorophenol	0.428	0.499	-16.6	92	0.03	7.65
65	t	Diethylphthalate	1.315	1.554	-18.2	89	0.03	7.76
66	t	Fluorene	1.378	1.583	-14.9	89	0.02	7.84
67	t	4-Chlorophenyl-phenylethe	0.706	0.786	-11.3	90	0.03	7.86
68	t	4-Nitroaniline	0.354	0.363	-2.5	77	0.04	7.88
69	I	Phenanthrene-d10	1.000	1.000	0.0	84	0.00	8.79
70	t	4,6-Dinitro-2-methylpheno	0.148	0.158	-6.8	82	0.02	7.91
71	t	n-Nitrosodiphenylamine	0.538	0.575	-6.9	90	0.00	7.97
72	t	1,2-Diphenylhydrazine	0.689	0.786	-14.1	94	0.00	8.01
73	S	2,4,6-Tribromophenol	0.177	0.173	2.3	80	0.07	8.09
74	t	4-Bromophenyl-phenylether	0.276	0.279	-1.1	84	0.00	8.33
75	t	Hexachlorobenzene	0.317	0.325	-2.5	86	0.00	8.39
76	t	Pentachlorophenol	0.171	0.196	-14.6	87	0.01	8.61
77	t	Phenanthrene	1.084	1.133	-4.5	87	0.00	8.81
78	t	Anthracene	1.113	1.188	-6.7	89	0.00	8.87
79	t	Carbazole	1.038	1.065	-2.6	85	0.00	9.06
80	t	Di-n-butylphthalate	1.246	1.333	-7.0	86	0.00	9.49
81	t	Fluoranthene	1.333	1.465	-9.9	89	0.00	10.22
82	t	Octadecane	0.587	0.723	-23.2#	101	0.01	8.72
83	I	Chrysene-d12	1.000	1.000	0.0	85	0.00	12.21
84	t	Pyrene	1.364	1.435	-5.2	88	-0.03	10.51
85	S	Terphenyl-d14	1.008	0.953	5.5	80	-0.02	10.76
86	t	Butylbenzylphthalate	0.558	0.606	-8.6	90	0.00	11.48
87	t	Benzo[a]anthracene	1.271	1.302	-2.4	86	0.00	12.20
88	t	3,3'-Dichlorobenzidine	0.548	0.506	7.7	75	0.00	12.20
89	t	Chrysene	1.185	1.193	-0.7	86	0.00	12.25
90	t	bis(2-Ethylhexyl)phthalat	0.718	0.733	-2.1	84	0.02	12.37
91	I	Perylene-d12	1.000	1.000	0.0	84	0.00	14.23
92	t	Di-n-octylphthalate	1.208	1.236	-2.3	83	-0.01	13.32
93	t	Benzo[b]fluoranthene	1.281	1.158	9.6	75	-0.01	13.72

Continuing Calibration Summary

Job Number: JC67110 **Sample:** E5P2426-CC2399
Account: BBLNYS Arcadis **Lab FileID:** 5P50926.D
Project: National Grid, Philly Coke, Philadelphia PA

94	t	Benzo[k]fluoranthene	1.133	1.070	5.6	79	-0.01	13.76
95	t	Benzo[a]pyrene	1.150	1.067	7.2	78	0.00	14.15
96	t	Indeno[1,2,3-cd]pyrene	1.150	1.089	5.3	79	0.00	15.61
97	t	Dibenz(a,h)acridine	1.041	0.983	5.6	79	-0.06	15.31
98	t	Dibenz[a,h]anthracene	1.153	1.057	8.3	77	-0.09	15.64
99	t	7,12-Dimethylbenz(a)anthr	0.530	0.486	8.3	74	-0.02	13.73
100	t	Benzo[g,h,i]perylene	1.102	1.017	7.7	78	-0.14	15.98

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p50258a.D M5P2399.M Tue Jun 05 21:00:35 2018

8.7.21

8

Continuing Calibration Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: E5P2426-CC2386
Lab FileID: 5P50927.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\data\da...eel\e5p2426\5p50927.d Vial: 3
Acq On    :  5 Jun 2018   1:09 pm                    Operator: christc2
Sample    : cc2386-25                                Inst    : MS5P
Misc      : op6115,e5p2426,1000,,,1,1                Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P2399.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Tue May 29 23:08:46 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-d4b	1.000	1.000	0.0	79	0.00	4.41
102		Benzaldehyde	0.908	0.937	-3.2	86	-0.03	4.01
103		Acenaphthene-d10a	1.000	1.000	0.0	90	0.00	7.31
104		1,2,4,5-Tetrachlorobenzen	0.567	0.688	-21.3#	112	-0.02	6.47
105		Chrysene-d12a	1.000	1.000	0.0	122	0.00	12.21
106		Benzidine	0.431	0.521	-20.9#	152	-0.02	10.43
107	s	1-chlorooctadecane	0.325	0.390	-20.0	141	-0.02	10.14
108		Phenanthrene-d10a	1.000	1.000	0.0	99	0.00	8.79
109	s	o-terphenyl	0.501	0.629	-25.5#	124	0.00	9.23
110		Atrazine	0.091	0.114	-25.3#	119	0.02	8.52
111		Pentachloronitrobenzene	0.040	0.053	-32.5#	125	0.00	8.61
112	I	Naphthalene-d8a	1.000	1.000	0.0	82	0.00	5.61
113		Hydroquinone	0.260	0.358	-37.7#	109	0.08	6.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p50258a.D M5P2399.M Tue Jun 05 21:00:39 2018

Initial Calibration Summary

Job Number: JC67110 **Sample:** EM6169-ICC6169
Account: BBLNYS Arcadis **Lab FileID:** M145291.D
Project: National Grid, Philly Coke, Philadelphia PA

```
                          Response Factor Report  Instrument #1

  Method       : C:\MSDCHEM\1\METHODS\MM6169.M (RTE Integrator)
  Title        : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
  Last Update  : Tue Apr 17 17:19:02 2018
  Response via : Initial Calibration

  Calibration Files
  2   =M145295.D  5   =M145294.D  100 =M145289.D  50  =M145291.D
  1   =M145296.D  10  =M145293.D  80  =M145290.D  25  =M145292.D

   Compound          2     5     100   50    1     10    80    25    Avg %RSD
  ---------------------------------------------------------------------------
101) I   1,4-Dichlorobenzene-d ----------------ISTD---------------------
102) Benzaldehyde 1.324 1.294 0.907 1.038 1.291 1.171 0.983 1.156 1.145  13.63

103) I   Acenaphthene-d10     ----------------ISTD---------------------
104) 1,2,4,5-Tetr 0.715 0.765 0.581 0.607 0.682 0.685 0.614 0.672 0.665   9.24
105) Atrazine     0.134 0.180 0.207 0.213 0.120 0.183 0.212 0.215 0.183  20.31
             ---- Linear regression ----  Coefficient =  0.9995
               Response Ratio = -0.00230 + 0.21095 *A


106) I   Chrysene-d12a         ----------------ISTD---------------------
107) Benzidine    0.266 0.505       0.585 0.160 0.590 0.545 0.698 0.478  40.36
             ---- Quadratic regression ----  Coefficient =  0.9982
               Response Ratio = -0.01964 + 0.73236 *A + -0.09033 *A^2

108) 1-chloroocta 0.196 0.231 0.244 0.253       0.237 0.252 0.271 0.241   9.70

109) I   Phenanthrene-d10a     ----------------ISTD---------------------
110) o-terphenyl  0.548 0.624 0.515 0.552 0.506 0.582 0.529 0.573 0.554   7.03
111) Pentachloron       0.023 0.041 0.040       0.030 0.041 0.039 0.036# 20.56
             ---- Linear regression ----  Coefficient =  0.9999
               Response Ratio = -0.00254 + 0.04234 *A


112) I   Naphthalene-d8a       ----------------ISTD---------------------
113) Hydroquinone       0.230 0.372 0.374       0.299 0.358 0.354 0.331  17.09
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MM6168.M          Wed Apr 18 15:32:44 2018   MSM
```

8.7.23

8

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: EM6169-ICV6169
Lab FileID: M145297.D

```
                    Evaluate Continuing Calibration Report

  Data File : C:\msdchem\1\DATA\EM6168\M145297.D          Vial: 24
  Acq On    : 17 Apr 2018   3:34 pm                   Operator: chriss2
  Sample    : icv6169-50                              Inst    : Instrument #1
  Misc      : op10492,em6169,1000,,,1,1               Multiplr: 1.00
  MS Integration Params: RTEINT.P

  Method       : C:\MSDCHEM\1\METHODS\MM6168.M (RTE Integrator)
  Title        : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
  Last Update  : Tue Apr 17 17:19:02 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.
  ---------------------------------------------------------------------------
112 I   Naphthalene-d8a            1.000   1.000      0.0   97   0.00    5.79
113     Hydroquinone               0.331   0.350     -5.7   91   0.00    6.23
 ---------------------------------------------------------------------------
 ---------------------------------------------------------------------------

    (#) = Out of Range              SPCC's out = 0  CCC's out = 0
     M145291a.D MM6168.M         Wed Apr 18 02:32:32 2018   MSM
```

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: EM6169-ICV6169
Lab FileID: M145298.D

Evaluate Continuing Calibration Report

```
  Data File : C:\msdchem\1\DATA\EM6168\M145298.D          Vial: 12
  Acq On    : 17 Apr 2018   4:03 pm                   Operator: chriss2
  Sample    : icv6169-50                              Inst    : Instrument #1
  Misc      : op10492,em6169,1000,,,1,1               Multiplr: 1.00
  MS Integration Params: RTEINT.P

  Method       : C:\MSDCHEM\1\METHODS\MM6168.M (RTE Integrator)
  Title        : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
  Last Update  : Tue Apr 17 17:19:02 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   Phenanthrene-d10a          1.000   1.000      0.0  105   0.00   10.70

            ----------------------- True    Calc.   % Drift  ------------
111     Pentachloronitrobenzene   50.000  51.100     -2.2  107   0.00   10.42
 ---------------------------------------------------------------------------
 ---------------------------------------------------------------------------

    (#) = Out of Range              SPCC's out = 0  CCC's out = 0
     M145291a.D MM6168.M         Wed Apr 18 02:32:34 2018   MSM
```

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: EM6169-ICV6169
Lab FileID: M145299.D

Evaluate Continuing Calibration Report

```
  Data File : C:\msdchem\1\DATA\EM6168\M145299.D          Vial: 13
  Acq On    : 17 Apr 2018   4:32 pm                   Operator: chriss2
  Sample    : icv6169-50                              Inst    : Instrument #1
  Misc      : op10492,em6169,1000,,,1,1               Multiplr: 1.00
  MS Integration Params: RTEINT.P

  Method       : C:\MSDCHEM\1\METHODS\MM6168.M (RTE Integrator)
  Title        : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
  Last Update  : Tue Apr 17 17:19:02 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 I	Acenaphthene-d10a	1.000	1.000	0.0	96	0.00	8.11
104 I	1,2,4,5-Tetrachlorobenzen	0.665	0.655	1.5	104	0.00	6.83

(#) = Out of Range SPCC's out = 0 CCC's out = 0
M145291a.D MM6168.M Wed Apr 18 02:32:36 2018 MSM

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: EM6169-ICV6169
Lab FileID: M145300.D

Evaluate Continuing Calibration Report

```
  Data File : C:\msdchem\1\DATA\EM6168\M145300.D          Vial: 14
  Acq On    : 17 Apr 2018   5:02 pm                   Operator: chriss2
  Sample    : icv6169-50                              Inst    : Instrument #1
  Misc      : op10492,em6169,1000,,,1,1               Multiplr: 1.00
  MS Integration Params: RTEINT.P

  Method       : C:\MSDCHEM\1\METHODS\MM6168.M (RTE Integrator)
  Title        : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
  Last Update  : Tue Apr 17 17:19:02 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	I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	94	0.00	4.65
102	t	Benzaldehyde	1.145	0.949	17.1	86	0.00	4.32
103	I	Acenaphthene-d10a	1.000	1.000	0.0	93	0.00	8.11
			True	Calc.	% Drift			
105	t	Atrazine	50.000	50.874	-1.7	93	0.00	10.31

```
    (#) = Out of Range              SPCC's out = 0  CCC's out = 0
     M145291a.D MM6168.M         Wed Apr 18 02:32:38 2018   MSM
```

8.7.27

8

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: EM6169-ICV6169
Lab FileID: M145301.D

```
                    Evaluate Continuing Calibration Report

  Data File : C:\msdchem\1\DATA\EM6168\M145301.D          Vial: 15
  Acq On    : 17 Apr 2018   5:31 pm                   Operator: chriss2
  Sample    : icv6169-50                              Inst    : Instrument #1
  Misc      : op10492,em6169,1000,,,1,1               Multiplr: 1.00
  MS Integration Params: RTEINT.P

  Method       : C:\MSDCHEM\1\METHODS\MM6168.M (RTE Integrator)
  Title        : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
  Last Update  : Tue Apr 17 17:19:02 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.
  ---------------------------------------------------------------------------
106 I   Chrysene-d12a              1.000   1.000      0.0  117   0.00   15.85

            ----------------------- True    Calc.   % Drift  ------------
107 t   Benzidine                 50.000  61.819    -23.6  144   0.00   13.38
 ---------------------------------------------------------------------------
 ---------------------------------------------------------------------------

    (#) = Out of Range              SPCC's out = 0  CCC's out = 0
     M145291a.D MM6168.M         Wed Apr 18 02:15:55 2018   MSM
```

Initial Calibration Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: EM6221-ICC6221
Lab FileID: M146349.D

Response Factor Report Instrument #1

Method : D:\MM6221.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Fri May 25 18:08:20 2018
Response via : Initial Calibration

Calibration Files
2 =M146345.D 5 =M146352.D 100 =M146347.D 50 =M146349.D
1 =M146346.D 10 =M146351.D 80 =M146348.D 25 =M146350.D

Compound	2	5	100	50	1	10	80	25	Avg	%RSD
1) I 1,4-Dichlorobenzene-d					ISTD					
2) 1,4-Dioxane	0.409	0.673	0.689	0.772	0.738	0.708	0.728	0.733	0.681	16.78
3) Pyridine	1.711	1.535	1.845	1.961	1.330	1.566	1.851	1.893	1.711	12.69
4) N-Nitrosodim	0.899	0.916	1.131	1.110	0.784	0.990	1.090	1.013	0.992	12.10
5) 2-Fluorophen	1.056	1.260	1.651	1.614		1.441	1.619	1.534	1.453	15.23
6) Indene	2.260	2.316	2.381	2.401	2.478	2.368	2.342	2.364	2.364	2.69
7) Cumene	3.897	4.379	4.294	4.323	4.308	4.247	4.156	4.259	4.233	3.55
8) Phenol-d5	1.756	1.846	2.106	2.087	1.358	2.034	2.060	2.019	1.908	13.32
9) Phenol	1.971	2.221	2.242	2.268	2.419	2.367	2.181	2.317	2.248	6.07
10) Aniline	2.358	2.388	2.320	2.281	2.309	2.545	2.252	2.373	2.353	3.82
11) bis(2-Chloro	1.311	1.482	1.312	1.352	1.171	1.465	1.332	1.400	1.353	7.31
12) 2-Chlorophen	1.483	1.359	1.438	1.454	1.151	1.518	1.408	1.435	1.406	8.05
13) Decane	1.575	1.398	1.260	1.240	1.524	1.345	1.201	1.276	1.352	10.12
14) 1,3-Dichloro	1.573	1.548	1.560	1.533	1.531	1.677	1.523	1.568	1.564	3.13
15) 1,4-Dichloro	1.549	1.482	1.527	1.523	1.612	1.611	1.480	1.500	1.536	3.42
16) Benzyl alcoh	0.869	0.867	0.986	0.963		0.906	0.958	0.943	0.927	5.10
17) 1,2-Dichloro	1.529	1.516	1.479	1.454	1.449	1.558	1.401	1.477	1.483	3.37
18) Acetophenone	2.171	2.088	2.264	2.203	2.120	2.314	2.226	2.188	2.197	3.34
19) 2-Methylphen	1.227	1.269	1.298	1.242	1.105	1.444	1.256	1.294	1.267	7.40
20) 2,2'-oxybis(	0.407	0.437	0.379	0.381	0.406	0.421	0.367	0.405	0.400	5.84
21) 3&4-Methylph	1.346	1.328	1.368	1.343	1.197	1.361	1.353	1.336	1.329	4.14
22) n-Nitroso-di	1.311	1.292	1.281	1.276	0.975	1.449	1.258	1.282	1.265	10.43
23) Hexachloroet	0.584	0.603	0.591	0.597	0.587	0.630	0.570	0.583	0.593	2.98
24) I Naphthalene-d8					ISTD					
25) Nitrobenzene	0.472	0.534	0.505	0.520	0.475	0.564	0.497	0.532	0.512	6.13
26) Nitrobenzene	0.569	0.524	0.485	0.502	0.529	0.549	0.478	0.515	0.519	5.93
27) Quinoline	0.694	0.740	0.768	0.782	0.617	0.778	0.768	0.780	0.741	7.84
28) Isophorone	0.794	0.892	0.865	0.877	0.721	0.963	0.850	0.888	0.856	8.42
29) 2-Nitropheno	0.185	0.203	0.212	0.219	0.143	0.218	0.216	0.211	0.201	12.79
30) 2,4-Dimethyl	0.369	0.351	0.423	0.410	0.301	0.425	0.405	0.417	0.388	11.33
31) Benzoic acid		0.237	0.347	0.345		0.318	0.349	0.332	0.321	13.36
32) bis(2-Chloro	0.387	0.444	0.405	0.406	0.432	0.433	0.393	0.421	0.415	4.91
33) 2,4-Dichloro	0.275	0.281	0.289	0.295	0.279	0.317	0.289	0.292	0.290	4.53
34) 2,6-Dichloro	0.274	0.266	0.282	0.281	0.223	0.288	0.275	0.281	0.271	7.62
35) 1,3,5-Trichl	0.384	0.392	0.354	0.358	0.375	0.389	0.346	0.368	0.371	4.60
36) 1,2,4-Trichl	0.356	0.350	0.345	0.345	0.395	0.362	0.332	0.354	0.355	5.19
37) 1,2,3-Trichl	0.363	0.353	0.323	0.328	0.383	0.362	0.310	0.334	0.345	7.15
38) Naphthalene	1.001	1.054	1.034	1.046	1.124	1.101	1.019	1.042	1.052	3.89
39) 4-Chloroanil	0.432	0.426	0.439	0.448	0.413	0.492	0.436	0.443	0.441	5.26
40) 2,3-Dichloro	0.379	0.382	0.398	0.399	0.417	0.401	0.381	0.382	0.392	3.45
41) Caprolactam	0.117	0.162	0.167	0.160	0.156	0.164	0.160	0.164	0.156	10.29
42) Hexachlorobu	0.214	0.235	0.215	0.218	0.218	0.225	0.211	0.223	0.220	3.40
43) 4-Chloro-3-m	0.341	0.375	0.418	0.428	0.286	0.417	0.406	0.423	0.387	13.01
44) 2-Methylnaph	0.616	0.650	0.651	0.666	0.638	0.698	0.635	0.672	0.653	3.90
45) 1-Methylnaph	0.787	0.795	0.768	0.772	0.702	0.830	0.755	0.768	0.772	4.73

Initial Calibration Summary

Job Number: JC67110 **Sample:** EM6221-ICC6221
Account: BBLNYS Arcadis **Lab FileID:** M146349.D
Project: National Grid, Philly Coke, Philadelphia PA

```
46) Dimethylnaph 0.675 0.671 0.677 0.673 0.677 0.730 0.656 0.676 0.679   3.20

47) I   Acenaphthene-d10      ----------------ISTD---------------------
48) Hexachlorocy 0.152 0.225 0.383 0.377 0.095 0.290 0.377 0.336 0.279  39.73
         ----- Quadratic regression -----                Coefficient =  0.9996
              Response Ratio = -0.02900 + 0.36947 *A + 0.00393 *A^2

49) 2,4,6-Trichl 0.366 0.417 0.381 0.407 0.396 0.454 0.384 0.401 0.401   6.72
50) 2,4,5-Trichl 0.393 0.444 0.417 0.451 0.359 0.438 0.430 0.425 0.420   7.22
51) 2-Fluorobiph 1.555 1.532 1.348 1.439 1.616 1.539 1.376 1.456 1.483   6.28
52) 2-Chloronaph 1.256 1.221 1.090 1.143 1.244 1.256 1.121 1.183 1.189   5.46
53) Biphenyl     1.694 1.631 1.616 1.689 1.714 1.696 1.642 1.684 1.671   2.13
54) 2-Nitroanili 0.354 0.484 0.537 0.524 0.332 0.572 0.515 0.506 0.478  18.27
55) Dimethylphth 1.470 1.469 1.461 1.521 1.237 1.581 1.488 1.523 1.469   6.92
56) Acenaphthyle 1.831 1.920 1.876 2.014 1.788 2.096 1.919 2.015 1.932   5.35
57) 2,6-Dinitrot 0.213 0.297 0.313 0.325 0.132 0.337 0.319 0.331 0.284  25.67
         ----- Quadratic regression -----                Coefficient =  1.0000
              Response Ratio = -0.00490 + 0.34533 *A + -0.01199 *A^2

58) 3-Nitroanili 0.238 0.377 0.387 0.400       0.379 0.393 0.373 0.364  15.48
59) Acenaphthene 1.286 1.225 1.225 1.290 1.302 1.330 1.237 1.256 1.269   3.07
60) 2,4-Dinitrop 0.042 0.102 0.218 0.197       0.132 0.212 0.181 0.155  42.20
         ----- Quadratic regression -----                Coefficient =  0.9999
              Response Ratio = -0.02189 + 0.18929 *A + 0.00669 *A^2

61) 4-Nitropheno 0.120 0.136 0.289 0.295       0.266 0.294 0.292 0.242  32.43
         ----- Quadratic regression -----                Coefficient =  0.9998
              Response Ratio = -0.01530 + 0.32136 *A + -0.01022 *A^2

62) Dibenzofuran 1.654 1.877 1.771 1.838 1.698 1.899 1.804 1.810 1.794   4.69
63) 2,4-Dinitrot 0.260 0.438 0.412 0.448 0.184 0.462 0.427 0.453 0.386  26.99
         ----- Quadratic regression -----                Coefficient =  1.0000
              Response Ratio = -0.00845 + 0.49200 *A + -0.03048 *A^2

64) 2,3,4,6-Tetr 0.286 0.356 0.410 0.422 0.237 0.438 0.414 0.386 0.368  19.47
65) Diethylphtha 1.521 1.545 1.540 1.613 1.255 1.670 1.563 1.615 1.540   8.13
66) Fluorene     1.284 1.464 1.411 1.501 1.403 1.561 1.442 1.474 1.443   5.67
67) 4-Chlorophen 0.755 0.767 0.664 0.701 0.732 0.767 0.666 0.730 0.723   5.77
68) 4-Nitroanili 0.197 0.354 0.366 0.370 0.342 0.368 0.371 0.375 0.343  17.43

69) I   Phenanthrene-d10      ----------------ISTD---------------------
70) 4,6-Dinitro- 0.062 0.089 0.138 0.142       0.120 0.142 0.135 0.118  26.29
         ----- Quadratic regression -----                Coefficient =  0.9998
              Response Ratio = -0.00730 + 0.15406 *A + -0.00509 *A^2

71) n-Nitrosodip 0.495 0.523 0.478 0.530 0.460 0.551 0.498 0.526 0.508   5.95
72) 1,2-Diphenyl 0.832 0.990 0.819 0.907 0.631 1.002 0.848 0.935 0.870  13.65
73) 2,4,6-Tribro 0.096 0.122 0.123 0.138 0.084 0.141 0.126 0.140 0.121  17.26
74) 4-Bromopheny 0.228 0.244 0.227 0.247 0.204 0.261 0.235 0.245 0.236   7.27
75) Hexachlorobe 0.295 0.292 0.245 0.266 0.312 0.301 0.245 0.275 0.279   9.14
76) Pentachlorop 0.081 0.122 0.166 0.168 0.055 0.152 0.162 0.154 0.133  32.25
         ----- Quadratic regression -----                Coefficient =  0.9996
              Response Ratio = -0.00837 + 0.16611 *A + 0.00019 *A^2

77) Phenanthrene 1.158 1.063 0.942 1.009 1.128 1.113 0.981 1.065 1.057   7.14
78) Anthracene   1.015 1.098 0.993 1.064 0.869 1.150 1.031 1.100 1.040   8.27
79) Carbazole    0.855 1.003 0.965 1.024 0.851 1.063 0.990 1.030 0.973   8.17
80) Di-n-butylph 1.069 1.260 1.288 1.381 0.743 1.316 1.334 1.381 1.222  17.78
81) Fluoranthene 1.165 1.318 1.222 1.326 0.990 1.368 1.266 1.343 1.249   9.97
82) Octadecane   0.392 0.425 0.407 0.429 0.382 0.465 0.412 0.423 0.417   6.09
```

Initial Calibration Summary

Job Number: JC67110 **Sample:** EM6221-ICC6221
Account: BBLNYS Arcadis **Lab FileID:** M146349.D
Project: National Grid, Philly Coke, Philadelphia PA

```
 83) I   Chrysene-d12          ----------------ISTD---------------------
 84) Pyrene       1.186 1.229 1.230 1.270 1.054 1.326 1.258 1.277 1.229   6.66
 85) Terphenyl-d1 0.859 0.893 0.909 0.944 0.881 0.959 0.940 0.915 0.913   3.74
 86) Butylbenzylp 0.351 0.515 0.597 0.609       0.548 0.619 0.582 0.546  17.08
 87) Benzo[a]anth 1.052 1.094 1.192 1.231 1.076 1.219 1.239 1.197 1.162   6.50
 88) 3,3'-Dichlor 0.303 0.380 0.425 0.438       0.428 0.435 0.429 0.405  12.17
 89) Chrysene     1.067 1.106 1.045 1.069 1.136 1.132 1.059 1.094 1.088   3.13
 90) bis(2-Ethylh 0.450 0.594 0.770 0.767       0.684 0.789 0.739 0.685  18.00

 91) I   Perylene-d12          ----------------ISTD---------------------
 92) Di-n-octylph 0.879 1.012 1.325 1.342       1.097 1.368 1.266 1.184  16.01
 93) Benzo[b]fluo 1.498 1.183 1.241 1.247 0.991 1.341 1.236 1.245 1.248  11.39
 94) Benzo[k]fluo 1.469 1.207 1.040 1.107 0.998 1.163 1.061 1.182 1.154  12.74
 95) Benzo[a]pyre 1.020 0.995 1.083 1.119 0.782 1.098 1.104 1.109 1.039  10.88
 96) Indeno[1,2,3 0.939 0.890 0.957 0.998 0.782 0.982 1.004 1.024 0.947   8.32
 97) Dibenz(a,h)a 0.833 0.780 0.933 0.962 0.678 0.893 0.954 0.956 0.874  11.72
 98) Dibenz[a,h]a 1.037 0.984 0.937 0.994 0.835 1.053 0.967 1.033 0.980   7.19
 99) 7,12-Dimethy 0.601 0.401 0.560 0.560 0.269 0.565 0.555 0.573 0.510  22.52
          ----- Quadratic regression -----                Coefficient =  0.9998
               Response Ratio = -0.00574 + 0.56978 *A + -0.00378 *A^2

100) Benzo[g,h,i] 1.132 0.918 0.898 0.963 0.807 1.009 0.935 0.990 0.956   9.87
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MM6221.M          Fri May 25 18:10:52 2018   RPT1
```

8.7.29

8

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: EM6221-ICV6221
Lab FileID: M146353.D

Evaluate Continuing Calibration Report

```
Data File : D:\EM6221\M146353.D                          Vial: 11
Acq On    : 24 May 2018   4:56 pm                    Operator: seanb1
Sample    : icv6221-50                               Inst    : Instrument #1
Misc      : op10492,em6221,1000,,,1,1                Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : D:\MM6221.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update  : Thu May 24 19:56:16 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	124	0.00	4.48
5	S	2-Fluorophenol	1.453	1.514	-4.2	117	0.00	3.51
8	S	Phenol-d5	1.908	1.821	4.6	108	0.00	4.24
24	I	Naphthalene-d8	1.000	1.000	0.0	123	0.00	5.56
25	S	Nitrobenzene-d5	0.512	0.532	-3.9	126	0.00	4.92
47	I	Acenaphthene-d10	1.000	1.000	0.0	124	0.00	7.82
51	S	2-Fluorobiphenyl	1.483	1.393	6.1	120	0.00	6.84
69	I	Phenanthrene-d10	1.000	1.000	0.0	107	0.00	10.40
73	S	2,4,6-Tribromophenol	0.121	0.141	-16.5	110	-0.01	9.15
83	I	Chrysene-d12	1.000	1.000	0.0	111	-0.02	15.54
85	S	Terphenyl-d14	0.913	0.958	-4.9	112	0.00	13.56

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 M146349a.D MM6221.M         Fri May 25 12:51:09 2018   RPT1
```

8.7.30

8

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: EM6221-ICV6221
Lab FileID: M146354.D

Evaluate Continuing Calibration Report

Data File : D:\EM6221\M146354.D Vial: 12
Acq On : 24 May 2018 5:26 pm Operator: seanb1
Sample : icv6221-50 Inst : Instrument #1
Misc : op10492,em6221,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : D:\MM6221.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Thu May 24 19:56:16 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	115	0.00	4.48
9	t	Phenol	2.248	2.031	9.7	103	0.00	4.25
12	t	2-Chlorophenol	1.406	1.458	-3.7	115	0.00	4.34
19	t	2-Methylphenol	1.267	1.304	-2.9	120	0.00	4.69
21	t	3&4-Methylphenol	1.329	1.385	-4.2	118	0.00	4.82
24	I	Naphthalene-d8	1.000	1.000	0.0	102	0.00	5.56
29	t	2-Nitrophenol	0.201	0.211	-5.0	98	0.00	5.21
30	t	2,4-Dimethylphenol	0.388	0.431	-11.1	107	0.00	5.26
31	t	Benzoic acid	0.321	0.333	-3.7	98	-0.03	5.40
33	t	2,4-Dichlorophenol	0.290	0.291	-0.3	100	0.00	5.44
34	t	2,6-Dichlorophenol	0.271	0.300	-10.7	108	0.00	5.66
43	t	4-Chloro-3-methylphenol	0.387	0.397	-2.6	94	-0.02	6.21
47	I	Acenaphthene-d10	1.000	1.000	0.0	97	0.00	7.82
49	t	2,4,6-Trichlorophenol	0.401	0.457	-14.0	109	-0.01	6.74
50	t	2,4,5-Trichlorophenol	0.420	0.455	-8.3	98	-0.02	6.79
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	47.339	5.3	90	-0.02	7.98
61	t	4-Nitrophenol	50.000	49.739	0.5	97	-0.02	8.16
		----------	AvgRF	CCRF	% Dev	----------		
64	t	2,3,4,6-Tetrachlorophenol	0.368	0.422	-14.7	97	-0.01	8.39
69	I	Phenanthrene-d10	1.000	1.000	0.0	90	0.00	10.40
		----------	True	Calc.	% Drift	----------		
70	t	4,6-Dinitro-2-methylpheno	50.000	53.862	-7.7	97	-0.02	8.89
76	t	Pentachlorophenol	50.000	62.015	-24.0	117	-0.01	10.10

(#) = Out of Range SPCC's out = 0 CCC's out = 0
M146349a.D MM6221.M Fri May 25 12:51:14 2018 RPT1

8.7.31
8

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: EM6221-ICV6221
Lab FileID: M146355.D

Evaluate Continuing Calibration Report

Data File : D:\EM6221\M146355.D Vial: 13
Acq On : 24 May 2018 5:56 pm Operator: seanb1
Sample : icv6221-50 Inst : Instrument #1
Misc : op10492,em6221,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : D:\MM6221.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Fri May 25 18:08:20 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	148	0.00	4.48
4	t	N-Nitrosodimethylamine	0.992	0.758	23.6	101	0.02	2.29
11	t	bis(2-Chloroethyl)ether	1.353	1.497	-10.6	163	0.00	4.29
14	t	1,3-Dichlorobenzene	1.564	1.618	-3.5	156	0.00	4.44
15	t	1,4-Dichlorobenzene	1.536	1.468	4.4	142	0.00	4.49
17	t	1,2-Dichlorobenzene	1.483	1.415	4.6	144	0.00	4.61
20	t	2,2'-oxybis(1-Chloropropa	0.400	0.406	-1.5	157	0.00	4.70
22	t	n-Nitroso-di-n-propylamin	1.265	1.091	13.8	126	0.00	4.80
23	t	Hexachloroethane	0.593	0.551	7.1	136	0.00	4.87
24	I	Naphthalene-d8	1.000	1.000	0.0	132	0.00	5.57
26	t	Nitrobenzene	0.519	0.471	9.2	123	0.00	4.93
28	t	Isophorone	0.856	0.827	3.4	124	-0.01	5.13
32	t	bis(2-Chloroethoxy)methan	0.415	0.442	-6.5	143	0.00	5.33
36	t	1,2,4-Trichlorobenzene	0.355	0.360	-1.4	137	0.00	5.51
38	t	Naphthalene	1.052	1.023	2.8	129	0.00	5.59
42	t	Hexachlorobutadiene	0.220	0.222	-0.9	134	0.00	5.72
47	I	Acenaphthene-d10	1.000	1.000	0.0	112	0.00	7.82
		----------	True	Calc.	% Drift	----------		
48	t	Hexachlorocyclopentadiene	50.000	54.116	-8.2	126	0.00	6.57
		----------	AvgRF	CCRF	% Dev	----------		
52	t	2-Chloronaphthalene	1.189	1.402	-17.9	137	0.00	7.00
55	t	Dimethylphthalate	1.469	1.641	-11.7	121	0.00	7.45
56	t	Acenaphthylene	1.932	2.106	-9.0	117	0.00	7.60
		----------	True	Calc.	% Drift	----------		
57	t	2,6-Dinitrotoluene	50.000	50.498	-1.0	113	0.00	7.54
		----------	AvgRF	CCRF	% Dev	----------		
59	t	Acenaphthene	1.269	1.341	-5.7	116	0.00	7.87
		----------	True	Calc.	% Drift	----------		
63	t	2,4-Dinitrotoluene	50.000	49.509	1.0	111	-0.01	8.19
		----------	AvgRF	CCRF	% Dev	----------		
65	t	Diethylphthalate	1.540	1.689	-9.7	117	-0.01	8.62
66	t	Fluorene	1.443	1.501	-4.0	112	0.00	8.73
67	t	4-Chlorophenyl-phenylethe	0.723	0.675	6.6	108	0.00	8.76

Initial Calibration Verification

Job Number: JC67110 **Sample:** EM6221-ICV6221
Account: BBLNYS Arcadis **Lab FileID:** M146355.D
Project: National Grid, Philly Coke, Philadelphia PA

69	I	Phenanthrene-d10	1.000	1.000	0.0	105	0.00	10.40
71	t	n-Nitrosodiphenylamine	0.508	0.505	0.6	100	-0.01	8.98
72	t	1,2-Diphenylhydrazine	0.870	0.948	-9.0	109	0.00	9.04
74	t	4-Bromophenyl-phenylether	0.236	0.241	-2.1	102	0.00	9.63
75	t	Hexachlorobenzene	0.279	0.249	10.8	98	0.00	9.72
77	t	Phenanthrene	1.057	1.116	-5.6	116	0.00	10.44
78	t	Anthracene	1.040	1.087	-4.5	107	0.00	10.54
80	t	Di-n-butylphthalate	1.222	1.397	-14.3	106	0.00	11.70
81	t	Fluoranthene	1.249	1.250	-0.1	99	0.00	12.72
83	I	Chrysene-d12	1.000	1.000	0.0	88	-0.01	15.55
84	t	Pyrene	1.229	1.365	-11.1	95	0.00	13.14
86	t	Butylbenzylphthalate	0.546	0.698	-27.8	101	0.00	14.63
87	t	Benzo[a]anthracene	1.162	1.289	-10.9	93	0.00	15.53
88	t	3,3'-Dichlorobenzidine	0.405	0.487	-20.2	98	-0.01	15.57
89	t	Chrysene	1.088	1.088	0.0	90	-0.01	15.60
90	t	bis(2-Ethylhexyl)phthalat	0.685	0.846	-23.5	97	0.00	15.85
91	I	Perylene-d12	1.000	1.000	0.0	84	0.00	18.16
92	t	Di-n-octylphthalate	1.184	1.509	-27.4	94	0.00	17.07
93	t	Benzo[b]fluoranthene	1.248	1.255	-0.6	84	0.00	17.53
94	t	Benzo[k]fluoranthene	1.154	1.201	-4.1	91	0.00	17.58
95	t	Benzo[a]pyrene	1.039	1.175	-13.1	88	0.00	18.07
96	t	Indeno[1,2,3-cd]pyrene	0.947	1.050	-10.9	88	0.00	19.82
98	t	Dibenz[a,h]anthracene	0.980	1.026	-4.7	86	0.00	19.87
100	t	Benzo[g,h,i]perylene	0.956	1.091	-14.1	95	0.00	20.24

(#) = Out of Range SPCC's out = 0 CCC's out = 0
M146349a.D MM6221.M Fri May 25 18:10:42 2018 RPT1

8.7.32

8

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: EM6221-ICV6221
Lab FileID: M146356.D

Evaluate Continuing Calibration Report

```
Data File : D:\EM6221\M146356.D                          Vial: 14
Acq On    : 24 May 2018   6:26 pm                   Operator: seanb1
Sample    : icv6221-50                              Inst    : Instrument #1
Misc      : op10492,em6221,1000,,,1,1               Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : D:\MM6221.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update  : Thu May 24 19:56:16 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	113	0.00	4.48
2	t	1,4-Dioxane	0.681	0.679	0.3	100	0.02	1.98
6	t	Indene	2.364	2.601	-10.0	123	0.00	4.68
7	t	Cumene	4.233	4.169	1.5	109	0.00	3.89
13	t	Decane	1.352	1.255	7.2	115	0.00	4.37
18	t	Acetophenone	2.197	2.085	5.1	107	0.00	4.79
24	I	Naphthalene-d8	1.000	1.000	0.0	118	0.00	5.56
27	t	Quinoline	0.741	0.707	4.6	106	-0.03	5.94
40	t	2,3-Dichloroaniline	0.392	0.298	24.0	88	0.00	6.73
41	t	Caprolactam	0.156	0.133	14.7	98	-0.05	6.02
45	t	1-Methylnaphthalene	0.772	0.639	17.2	97	0.00	6.48
46	t	Dimethylnaphthalene	0.679	0.582	14.3	102	-0.01	7.20
47	I	Acenaphthene-d10	1.000	1.000	0.0	100	0.00	7.82
53	t	Biphenyl	1.671	1.672	-0.1	99	-0.01	6.97
69	I	Phenanthrene-d10	1.000	1.000	0.0	98	0.00	10.40
82	t	Octadecane	0.417	0.425	-1.9	97	0.00	10.42
91	I	Perylene-d12	1.000	1.000	0.0	93	0.00	18.16
		----------	True	Calc.	% Drift		----------	
99	t	7,12-Dimethylbenz(a)anthr	50.000	41.075	17.8	76	0.00	17.52

(#) = Out of Range SPCC's out = 0 CCC's out = 0
M146349a.D MM6221.M Fri May 25 12:51:18 2018 RPT1

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: EM6221-ICV6221
Lab FileID: M146357.D

Evaluate Continuing Calibration Report

```
Data File : D:\EM6221\M146357.D                          Vial: 15
Acq On    : 24 May 2018   6:56 pm                   Operator: seanb1
Sample    : icv6221-50                              Inst    : Instrument #1
Misc      : op10492,em6221,1000,,,1,1               Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : D:\MM6221.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update  : Thu May 24 19:56:16 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	103	0.00	4.49
3	t	Pyridine	1.711	1.655	3.3	87	0.09	2.40
10	t	Aniline	2.353	2.554	-8.5	115	0.00	4.25
16	t	Benzyl alcohol	0.927	0.923	0.4	98	0.00	4.60
24	I	Naphthalene-d8	1.000	1.000	0.0	110	0.00	5.56
39	t	4-Chloroaniline	0.441	0.399	9.5	98	0.00	5.65
44	t	2-Methylnaphthalene	0.653	0.584	10.6	97	0.00	6.36
47	I	Acenaphthene-d10	1.000	1.000	0.0	98	0.00	7.82
54	t	2-Nitroaniline	0.478	0.550	-15.1	103	-0.01	7.16
58	t	3-Nitroaniline	0.364	0.376	-3.3	92	-0.01	7.79
62	t	Dibenzofuran	1.794	1.789	0.3	96	0.00	8.15
68	t	4-Nitroaniline	0.343	0.374	-9.0	100	-0.03	8.81
69	I	Phenanthrene-d10	1.000	1.000	0.0	95	0.00	10.40
79	t	Carbazole	0.973	0.999	-2.7	93	0.00	10.89

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 M146349a.D MM6221.M         Fri May 25 12:51:20 2018   RPT1
```

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: EM6221-ICV6221
Lab FileID: M146358.D

Evaluate Continuing Calibration Report

```
Data File : D:\EM6221\M146358.D                          Vial: 16
Acq On    : 24 May 2018   7:26 pm                    Operator: seanb1
Sample    : icv6221-50                               Inst    : Instrument #1
Misc      : op10492,em6221,1000,,,1,1                Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : D:\MM6221.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update  : Thu May 24 19:56:16 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.
83 I	Chrysene-d12	1.000	1.000	0.0	113	-0.02	15.54
88 t	3,3'-Dichlorobenzidine	0.405	0.416	-2.7	108	-0.01	15.57

(#) = Out of Range SPCC's out = 0 CCC's out = 0
M146349a.D MM6221.M Fri May 25 12:51:22 2018 RPT1

Continuing Calibration Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: EM6235-CC6221
Lab FileID: M146678.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\EM6235\M146678.D Vial: 2
Acq On : 6 Jun 2018 9:13 am Operator: johnb1
Sample : cc6221-50 Inst : Instrument #1
Misc : op10492,em6235,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MM6221.M (RTE Integrator)
Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update : Thu Jun 14 15:50:09 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	84	-0.07	4.40
2	t	1,4-Dioxane	0.681	0.629	7.6	69	-0.10	1.86
3	t	Pyridine	1.711	1.555	9.1	67	-0.09	2.21
4	t	N-Nitrosodimethylamine	0.992	0.927	6.6	71	-0.10	2.17
5	S	2-Fluorophenol	1.453	1.521	-4.7	80	-0.06	3.44
6	t	Indene	2.364	2.428	-2.7	85	-0.07	4.60
7	t	Cumene	4.233	4.838	-14.3	95	-0.08	3.80
8	S	Phenol-d5	1.908	2.154	-12.9	87	-0.03	4.18
9	t	Phenol	2.248	2.380	-5.9	89	-0.06	4.19
10	t	Aniline	2.353	2.535	-7.7	94	-0.07	4.17
11	t	bis(2-Chloroethyl)ether	1.353	1.405	-3.8	88	-0.07	4.22
12	t	2-Chlorophenol	1.406	1.449	-3.1	84	-0.06	4.26
13	t	Decane	1.352	0.903	33.2#	62	-0.07	4.29
14	t	1,3-Dichlorobenzene	1.564	1.672	-6.9	92	-0.07	4.36
15	t	1,4-Dichlorobenzene	1.536	1.636	-6.5	91	-0.07	4.42
16	t	Benzyl alcohol	0.927	0.961	-3.7	84	-0.07	4.53
17	t	1,2-Dichlorobenzene	1.483	1.649	-11.2	96	-0.07	4.53
18	t	Acetophenone	2.197	2.515	-14.5	96	-0.07	4.72
19	t	2-Methylphenol	1.267	1.360	-7.3	93	-0.06	4.63
20	t	2,2'-oxybis(1-Chloropropa	0.400	0.406	-1.5	90	-0.07	4.62
21	t	3&4-Methylphenol	1.329	1.390	-4.6	87	-0.06	4.75
22	t	n-Nitroso-di-n-propylamin	1.265	1.497	-18.3	99	-0.07	4.72
23	t	Hexachloroethane	0.593	0.663	-11.8	94	-0.08	4.79
24	I	Naphthalene-d8	1.000	1.000	0.0	87	-0.10	5.47
25	S	Nitrobenzene-d5	0.512	0.602	-17.6	100	-0.09	4.84
26	t	Nitrobenzene	0.519	0.568	-9.4	98	-0.09	4.85
27	t	Quinoline	0.741	0.756	-2.0	84	-0.12	5.85
28	t	Isophorone	0.856	0.993	-16.0	98	-0.10	5.05
29	t	2-Nitrophenol	0.201	0.237	-17.9	94	-0.09	5.12
30	t	2,4-Dimethylphenol	0.388	0.498	-28.4#	105	-0.08	5.18
31	t	Benzoic acid	0.321	0.374	-16.5	94	-0.10	5.33
32	t	bis(2-Chloroethoxy)methan	0.415	0.411	1.0	88	-0.09	5.24
33	t	2,4-Dichlorophenol	0.290	0.334	-15.2	98	-0.09	5.36
34	t	2,6-Dichlorophenol	0.271	0.330	-21.8#	102	-0.10	5.57
35	t	1,3,5-Trichlorobenzene	0.371	0.408	-10.0	99	-0.09	5.13
36	t	1,2,4-Trichlorobenzene	0.355	0.383	-7.9	96	-0.10	5.42
37	t	1,2,3-Trichlorobenzene	0.345	0.358	-3.8	95	-0.10	5.64
38	t	Naphthalene	1.052	1.044	0.8	87	-0.10	5.49
39	t	4-Chloroaniline	0.441	0.448	-1.6	87	-0.10	5.56
40	t	2,3-Dichloroaniline	0.392	0.451	-15.1	98	-0.11	6.61
41	t	Caprolactam	0.156	0.136	12.8	74	-0.11	5.96

Continuing Calibration Summary

Job Number: JC67110 **Sample:** EM6235-CC6221
Account: BBLNYS Arcadis **Lab FileID:** M146678.D
Project: National Grid, Philly Coke, Philadelphia PA

42	t	Hexachlorobutadiene	0.220	0.251	-14.1	100	-0.10	5.62
43	t	4-Chloro-3-methylphenol	0.387	0.486	-25.6#	99	-0.10	6.13
44	t	2-Methylnaphthalene	0.653	0.690	-5.7	90	-0.11	6.25
45	t	1-Methylnaphthalene	0.772	0.803	-4.0	90	-0.11	6.37
46	t	Dimethylnaphthalene	0.679	0.746	-9.9	96	-0.13	7.08
47	I	Acenaphthene-d10	1.000	1.000	0.0	92	-0.13	7.69
		----------	True	Calc.	% Drift		----------	
48	t	Hexachlorocyclopentadiene	100.000	104.964	-5.0	94	-0.11	6.45
		----------	AvgRF	CCRF	% Dev		----------	
49	t	2,4,6-Trichlorophenol	0.401	0.464	-15.7	105	-0.11	6.64
50	t	2,4,5-Trichlorophenol	0.420	0.509	-21.2#	104	-0.10	6.70
51	S	2-Fluorobiphenyl	1.483	1.547	-4.3	99	-0.11	6.73
52	t	2-Chloronaphthalene	1.189	1.237	-4.0	100	-0.12	6.88
53	t	Biphenyl	1.671	1.749	-4.7	95	-0.12	6.86
54	t	2-Nitroaniline	0.478	0.623	-30.3#	109	-0.12	7.05
55	t	Dimethylphthalate	1.469	1.677	-14.2	101	-0.12	7.33
56	t	Acenaphthylene	1.932	2.045	-5.8	93	-0.13	7.47
		----------	True	Calc.	% Drift		----------	
57	t	2,6-Dinitrotoluene	50.000	53.960	-7.9	99	-0.12	7.42
		----------	AvgRF	CCRF	% Dev		----------	
58	t	3-Nitroaniline	0.364	0.378	-3.8	87	-0.12	7.68
59	t	Acenaphthene	1.269	1.339	-5.5	95	-0.13	7.74
		----------	True	Calc.	% Drift		----------	
60	t	2,4-Dinitrophenol	100.000	82.355	17.6	74	-0.12	7.86
61	t	4-Nitrophenol	50.000	56.643	-13.3	104	-0.10	8.07
		----------	AvgRF	CCRF	% Dev		----------	
62	t	Dibenzofuran	1.794	2.035	-13.4	102	-0.13	8.02
		----------	True	Calc.	% Drift		----------	
63	t	2,4-Dinitrotoluene	50.000	57.648	-15.3	105	-0.13	8.07
		----------	AvgRF	CCRF	% Dev		----------	
64	t	2,3,4,6-Tetrachlorophenol	0.368	0.447	-21.5#	97	-0.13	8.27
65	t	Diethylphthalate	1.540	1.819	-18.1	104	-0.13	8.49
66	t	Fluorene	1.443	1.634	-13.2	100	-0.14	8.59
67	t	4-Chlorophenyl-phenylethe	0.723	0.812	-12.3	106	-0.14	8.62
68	t	4-Nitroaniline	0.343	0.342	0.3	85	-0.14	8.70
69	I	Phenanthrene-d10	1.000	1.000	0.0	100	-0.15	10.25
		----------	True	Calc.	% Drift		----------	
70	t	4,6-Dinitro-2-methylpheno	50.000	45.540	8.9	91	-0.14	8.77
		----------	AvgRF	CCRF	% Dev		----------	
71	t	n-Nitrosodiphenylamine	0.508	0.518	-2.0	98	-0.14	8.85
72	t	1,2-Diphenylhydrazine	0.870	0.937	-7.7	103	-0.14	8.90
73	S	2,4,6-Tribromophenol	0.121	0.128	-5.8	93	-0.14	9.02
74	t	4-Bromophenyl-phenylether	0.236	0.247	-4.7	100	-0.14	9.48
75	t	Hexachlorobenzene	0.279	0.277	0.7	104	-0.14	9.57
		----------	True	Calc.	% Drift		----------	
76	t	Pentachlorophenol	100.000	102.121	-2.1	99	-0.13	9.97

Continuing Calibration Summary

Job Number: JC67110 **Sample:** EM6235-CC6221
Account: BBLNYS Arcadis **Lab FileID:** M146678.D
Project: National Grid, Philly Coke, Philadelphia PA

			AvgRF	CCRF	% Dev			
77	t	Phenanthrene	1.057	1.005	4.9	100	-0.15	10.30
78	t	Anthracene	1.040	1.045	-0.5	98	-0.15	10.39
79	t	Carbazole	0.973	1.021	-4.9	100	-0.14	10.75
80	t	Di-n-butylphthalate	1.222	1.457	-19.2	105	-0.14	11.56
81	t	Fluoranthene	1.249	1.386	-11.0	105	-0.15	12.57
82	t	Octadecane	0.417	0.340	18.5	79	-0.13	10.28
83	I	Chrysene-d12	1.000	1.000	0.0	97	-0.15	15.40
84	t	Pyrene	1.229	1.387	-12.9	106	-0.15	12.99
85	S	Terphenyl-d14	0.913	0.992	-8.7	102	-0.14	13.42
86	t	Butylbenzylphthalate	0.546	0.659	-20.7#	105	-0.14	14.48
87	t	Benzo[a]anthracene	1.162	1.252	-7.7	99	-0.14	15.38
88	t	3,3'-Dichlorobenzidine	0.405	0.452	-11.6	100	-0.14	15.42
89	t	Chrysene	1.088	1.096	-0.7	100	-0.15	15.45
90	t	bis(2-Ethylhexyl)phthalat	0.685	0.855	-24.8#	108	-0.13	15.71
91	I	Perylene-d12	1.000	1.000	0.0	80	-0.15	18.01
92	t	Di-n-octylphthalate	1.184	1.725	-45.7#	103	-0.13	16.93
93	t	Benzo[b]fluoranthene	1.248	1.411	-13.1	91	-0.13	17.38
94	t	Benzo[k]fluoranthene	1.154	1.173	-1.6	85	-0.13	17.43
95	t	Benzo[a]pyrene	1.039	1.210	-16.5	87	-0.14	17.92
96	t	Indeno[1,2,3-cd]pyrene	0.947	0.892	5.8	72	-0.15	19.67
97	t	Dibenz(a,h)acridine	0.874	0.853	2.4	71	-0.14	19.35
98	t	Dibenz[a,h]anthracene	0.980	0.906	7.6	73	-0.15	19.71
			True	Calc.	% Drift			
99	t	7,12-Dimethylbenz(a)anthr	50.000	61.135	-22.3#	98	-0.13	17.38
			AvgRF	CCRF	% Dev			
100	t	Benzo[g,h,i]perylene	0.956	0.868	9.2	72	-0.16	20.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
M146349a.D MM6221.M Thu Jun 14 17:11:49 2018 MSM

8.7.36

8

Continuing Calibration Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: EM6235-CC6169
Lab FileID: M146679.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\EM6235\M146679.D          Vial: 3
Acq On    :  6 Jun 2018   9:43 am                   Operator: johnb1
Sample    : cc6169-50                               Inst    : Instrument #1
Misc      : op10492,em6235,1000,,,1,1               Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MM6221.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
Last Update  : Wed Jun 06 08:45:57 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	I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	53	0.00	4.41
102	t	Benzaldehyde	1.145	0.835	27.1#	42#	-0.02	4.08
103	I	Acenaphthene-d10a	1.000	1.000	0.0	60	-0.13	7.69
104	I	1,2,4,5-Tetrachlorobenzen	0.665	0.667	-0.3	66	-0.13	6.46
			True	Calc.	% Drift			
105	t	Atrazine	50.000	59.882	-19.8	70	-0.06	9.89
			AvgRF	CCRF	% Dev			
106	I	Chrysene-d12a	1.000	1.000	0.0	73	-0.17	15.39
			True	Calc.	% Drift			
107	t	Benzidine	50.000	24.531	50.9#	40	-0.18	12.95
			AvgRF	CCRF	% Dev			
108	s	1-chlorooctadecane	0.241	0.215	10.8	62	-0.22	12.60
109	I	Phenanthrene-d10a	1.000	1.000	0.0	64	-0.15	10.25
110	s	o-terphenyl	0.554	0.632	-14.1	73	-0.14	11.06
			True	Calc.	% Drift			
111		Pentachloronitrobenzene	50.000	65.102	-30.2#	84	-0.15	9.98
			AvgRF	CCRF	% Dev			
112	I	Naphthalene-d8a	1.000	1.000	0.0	50	-0.10	5.46
113		Hydroquinone	0.331	0.364	-10.0	49#	-0.01	5.97

(#) = Out of Range SPCC's out = 0 CCC's out = 0
M146349a.D MM6221.M Wed Jun 06 15:19:04 2018 MSM

8.7.37

8

MS Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50937.d
Acq On : 5 Jun 2018 6:55 pm
Operator : christc2
Sample : jc67110-3 Inst : MS5P
Misc : op12498,e5p2426,850,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 22:40:40 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.415	152	104448	40.00	ppm	0.00
24) Naphthalene-d8	5.612	136	419054	40.00	ppm	0.00
47) Acenaphthene-d10	7.316	164	225460	40.00	ppm	0.00
69) Phenanthrene-d10	8.785	188	429215	40.00	ppm	0.00
83) Chrysene-d12	12.215	240	446689	40.00	ppm	0.00
91) Perylene-d12	14.229	264	474898	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.415	152	104448	40.00	ppm	0.00
103) Acenaphthene-d10a	7.316	164	225460	40.00	ppm	0.00
105) Chrysene-d12a	12.215	240	446299	40.00	ppm	0.00
108) Phenanthrene-d10a	8.785	188	429215	40.00	ppm	0.00
112) Naphthalene-d8a	5.612	136	419054	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.288	112	82633	22.55	ppm	-0.02
Spiked Amount 50.000			Recovery = 45.10%			
8) Phenol-d5	4.143	99	72605	15.49	ppm	0.03
Spiked Amount 50.000			Recovery = 30.98%			
25) Nitrobenzene-d5	4.933	82	170174	41.10	ppm	-0.03
Spiked Amount 50.000			Recovery = 82.20%			
51) 2-Fluorobiphenyl	6.669	172	319468	40.15	ppm	0.00
Spiked Amount 50.000			Recovery = 80.30%			
73) 2,4,6-Tribromophenol	8.085	330	78780	41.49	ppm	0.07
Spiked Amount 50.000			Recovery = 82.98%			
85) Terphenyl-d14	10.756	244	377187	33.51	ppm	-0.02
Spiked Amount 50.000			Recovery = 67.02%			
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			

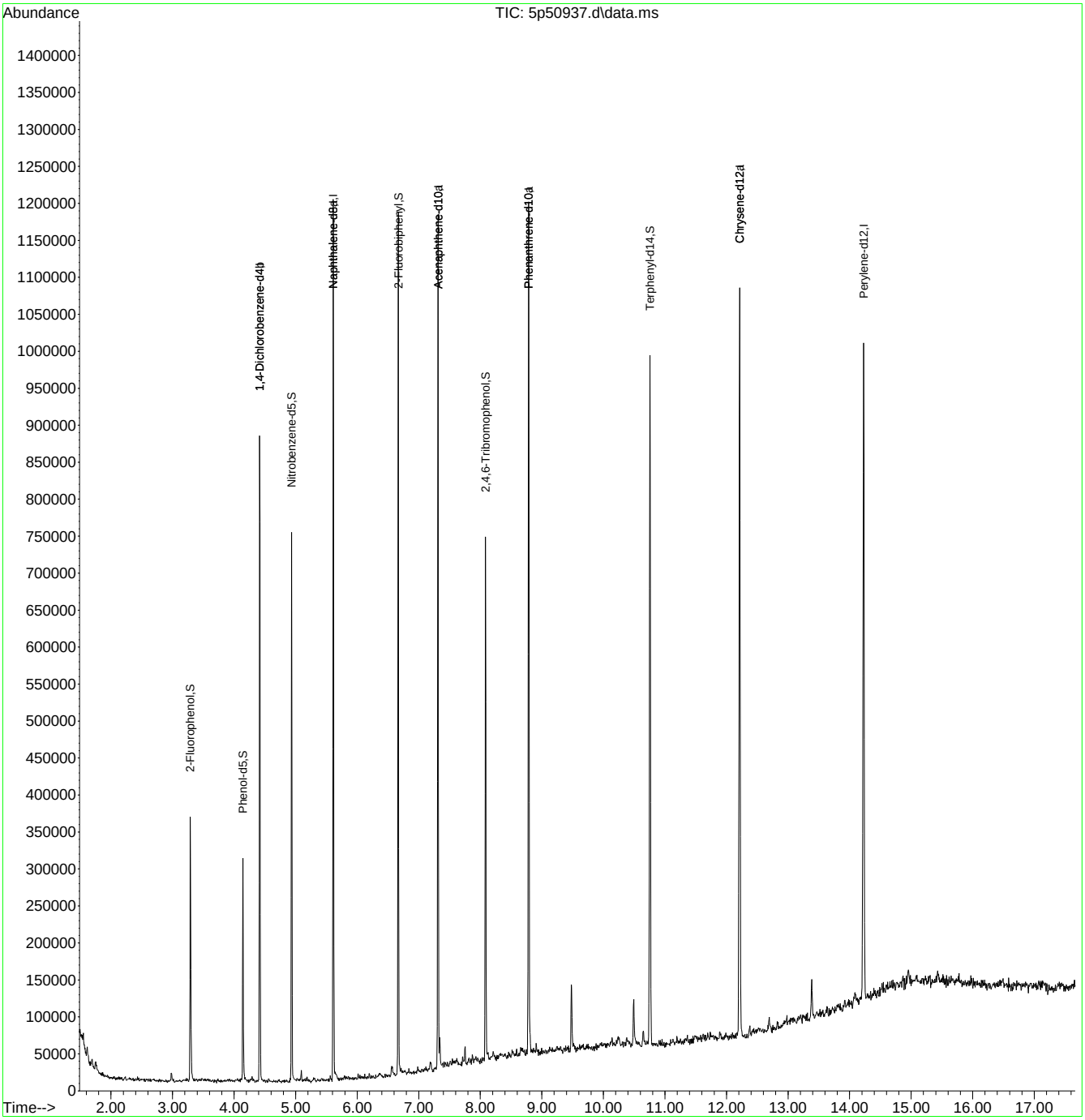
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50937.d
Acq On : 5 Jun 2018 6:55 pm
Operator : christc2
Sample : jc67110-3 Inst : MS5P
Misc : op12498,e5p2426,850,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 22:40:40 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\svoa\completed\06-06-18\aimeel\e5p2426\
Data File : 5p50938.d
Acq On : 5 Jun 2018 7:21 pm
Operator : christc2
Sample : jc67110-4
Misc : op12498,e5p2426,850,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 07 13:01:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.420	152	113778	40.00	ppm	0.00
24) Naphthalene-d8	5.611	136	450616	40.00	ppm	0.00
47) Acenaphthene-d10	7.316	164	240694	40.00	ppm	0.00
69) Phenanthrene-d10	8.790	188	457965	40.00	ppm	0.00
83) Chrysene-d12	12.214	240	483918	40.00	ppm	0.00
91) Perylene-d12	14.229	264	515756	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.420	152	113778	40.00	ppm	0.00
103) Acenaphthene-d10a	7.316	164	240694	40.00	ppm	0.00
105) Chrysene-d12a	12.214	240	484265	40.00	ppm	0.00
108) Phenanthrene-d10a	8.790	188	457965	40.00	ppm	0.00
112) Naphthalene-d8a	5.611	136	450616	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.293	112	80505	20.16	ppm	-0.02
Spiked Amount 50.000			Recovery = 40.32%			
8) Phenol-d5	4.142	99	77545	15.18	ppm	0.03
Spiked Amount 50.000			Recovery = 30.36%			
25) Nitrobenzene-d5	4.933	82	170087	38.20	ppm	-0.03
Spiked Amount 50.000			Recovery = 76.40%			
51) 2-Fluorobiphenyl	6.669	172	330665	38.93	ppm	0.00
Spiked Amount 50.000			Recovery = 77.86%			
73) 2,4,6-Tribromophenol	8.085	330	81514	40.23	ppm	0.07
Spiked Amount 50.000			Recovery = 80.46%			
85) Terphenyl-d14	10.756	244	353987	29.03	ppm	-0.02
Spiked Amount 50.000			Recovery = 58.06%			
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			

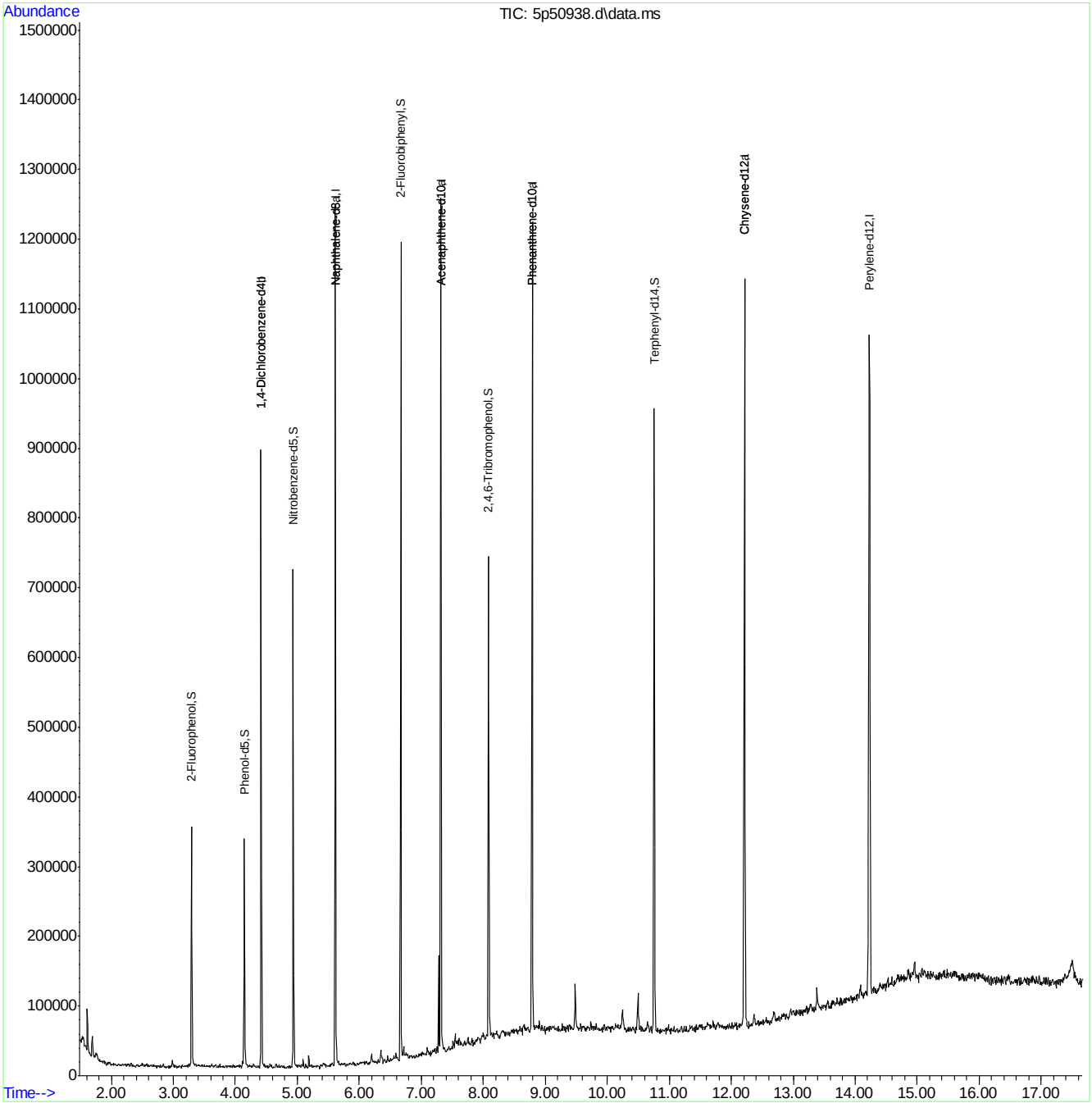
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : Z:\svoa\completed\06-06-18\aimeel\e5p2426\
Data File : 5p50938.d
Acq On : 5 Jun 2018 7:21 pm
Operator : christc2
Sample : jc67110-4
Misc : op12498,e5p2426,850,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 07 13:01:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration



M5P2399.M Thu Jun 07 13:03:35 2018 MANAGER

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50939.d
Acq On : 5 Jun 2018 7:47 pm
Operator : christc2
Sample : jc67110-5 Inst : MS5P
Misc : op12498,e5p2426,800,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 22:43:17 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

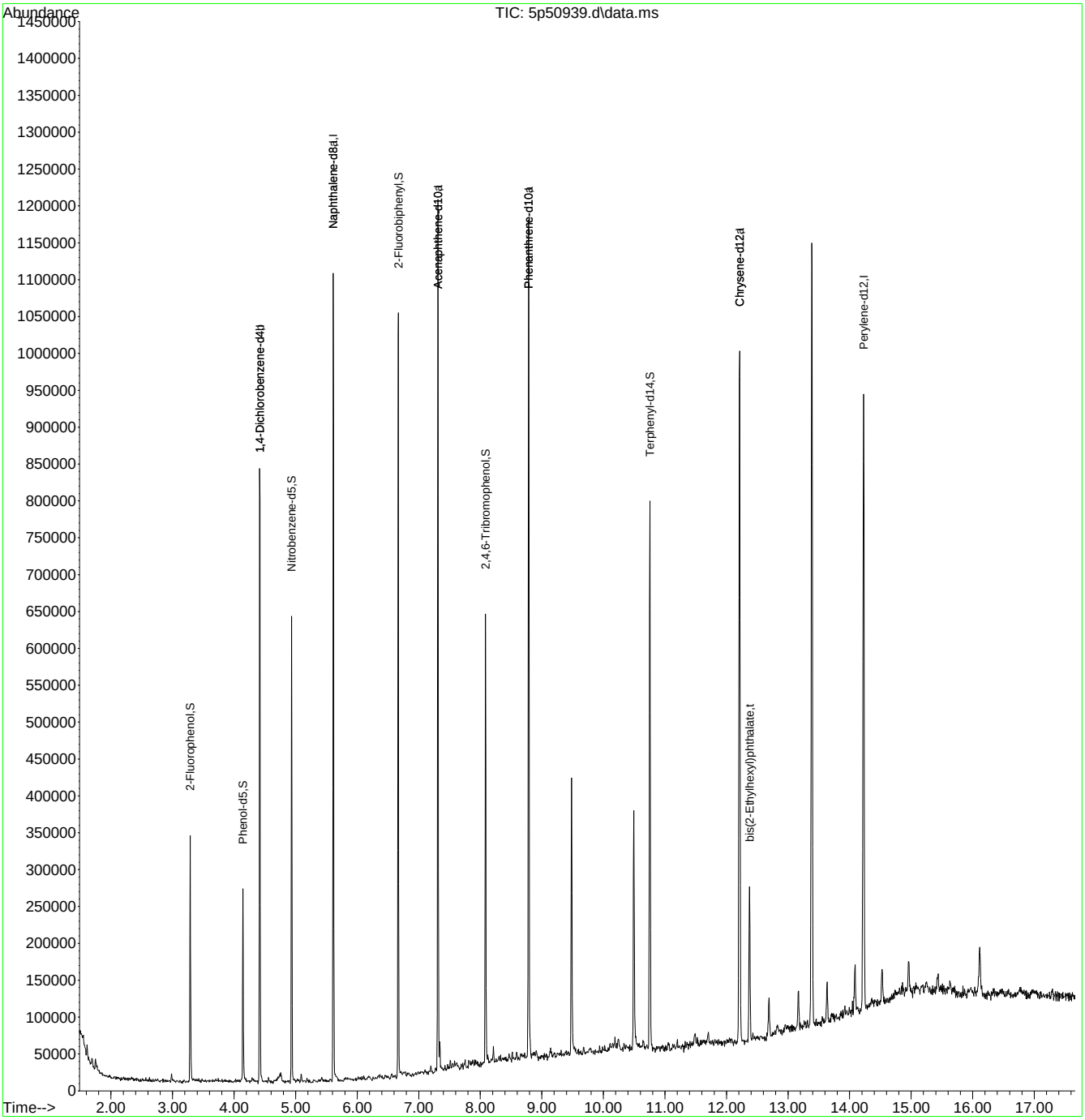
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.420	152	103045	40.00	ppm	0.00
24) Naphthalene-d8	5.611	136	413282	40.00	ppm	0.00
47) Acenaphthene-d10	7.310	164	226450	40.00	ppm	0.00
69) Phenanthrene-d10	8.785	188	420167	40.00	ppm	0.00
83) Chrysene-d12	12.214	240	445761	40.00	ppm	0.00
91) Perylene-d12	14.229	264	468791	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.420	152	103045	40.00	ppm	0.00
103) Acenaphthene-d10a	7.310	164	226450	40.00	ppm	0.00
105) Chrysene-d12a	12.214	240	444756	40.00	ppm	0.00
108) Phenanthrene-d10a	8.785	188	420167	40.00	ppm	0.00
112) Naphthalene-d8a	5.611	136	413282	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.288	112	69986	19.36	ppm	-0.02
Spiked Amount 50.000			Recovery = 38.72%			
8) Phenol-d5	4.142	99	64169	13.87	ppm	0.03
Spiked Amount 50.000			Recovery = 27.74%			
25) Nitrobenzene-d5	4.933	82	145730	35.69	ppm	-0.03
Spiked Amount 50.000			Recovery = 71.38%			
51) 2-Fluorobiphenyl	6.669	172	291449	36.47	ppm	0.00
Spiked Amount 50.000			Recovery = 72.94%			
73) 2,4,6-Tribromophenol	8.085	330	68642	36.93	ppm	0.07
Spiked Amount 50.000			Recovery = 73.86%			
85) Terphenyl-d14	10.756	244	286218	25.48	ppm	-0.02
Spiked Amount 50.000			Recovery = 50.96%			
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
90) bis(2-Ethylhexyl)phtha...	12.375	149	72629	9.08	ppm	99

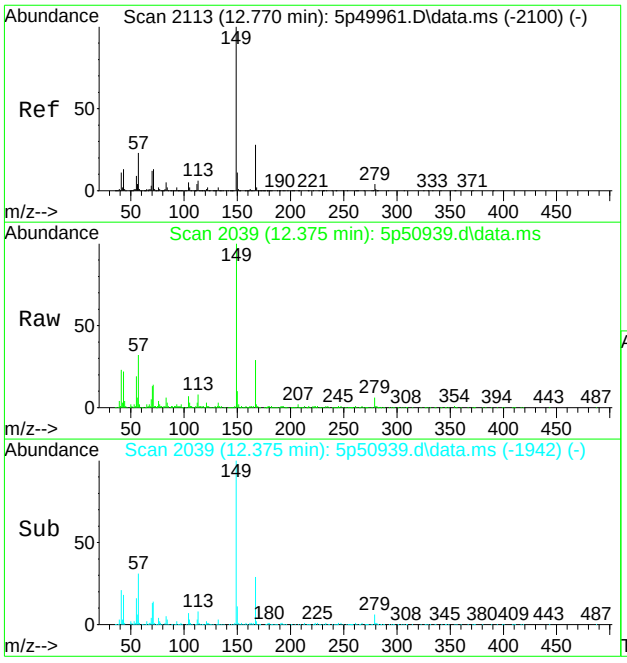
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50939.d
Acq On : 5 Jun 2018 7:47 pm
Operator : christc2
Sample : jc67110-5 Inst : MS5P
Misc : op12498,e5p2426,800,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 22:43:17 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

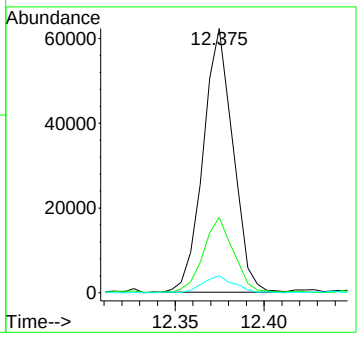




#90
bis(2-Ethylhexyl)phthalate
Concen: 9.08 ppm
RT: 12.375 min Scan# 2039
Delta R.T. 0.021 min
Lab File: 5p50939.d
Acq: 5 Jun 2018 7:47 pm

Tgt Ion:149 Resp: 72629

Ion	Ratio	Lower	Upper
149	100		
167	28.3	0.0	58.3
279	6.4	0.0	34.2



9.1.3

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4654\
Data File : 2m104766a.D
Acq On : 5 Jun 2018 1:26 pm
Operator : christc2
Sample : op12498-mb
Misc : op12498,e2m4654,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 05 16:03:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Mon Jun 04 09:10:13 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.493	152	359732	40.00	ppm	-0.03
24) Naphthalene-d8	5.552	136	1361687	40.00	ppm	-0.04
47) Acenaphthene-d10	7.579	164	711956	40.00	ppm	-0.04
69) Phenanthrene-d10	9.724	188	1412247	40.00	ppm	-0.05
83) Chrysene-d12	13.885	240	1397233	40.00	ppm	-0.06
91) Perylene-d12	15.998	264	1510272	40.00	ppm	-0.06
101) 1,4-Dichlorobenzene-d4a	4.493	152	359732	40.00	ppm	-0.03
103) Acenaphthene-d10a	7.579	164	711956	40.00	ppm	-0.04
105) Chrysene-d12a	13.885	240	1397233	40.00	ppm	-0.06
108) Phenanthrene-d10a	9.724	188	1412247	40.00	ppm	-0.05
112) Naphthalene-d8a	5.552	136	1361687	40.00	ppm	-0.04
114) Chrysene-d12b	13.885	240	1397233	40.00	ppm	-0.06
System Monitoring Compounds						
5) 2-Fluorophenol	3.552	112	233725	19.94	ppm	-0.03
Spiked Amount 50.000			Recovery	=	39.88%	
8) Phenol-d5	4.290	99	212881	14.48	ppm	-0.03
Spiked Amount 50.000			Recovery	=	28.96%	
25) Nitrobenzene-d5	4.926	82	532396	42.78	ppm	-0.03
Spiked Amount 50.000			Recovery	=	85.56%	
51) 2-Fluorobiphenyl	6.724	172	933653	35.90	ppm	-0.04
Spiked Amount 50.000			Recovery	=	71.80%	
73) 2,4,6-Tribromophenol	8.703	330	183983	43.06	ppm	-0.04
Spiked Amount 50.000			Recovery	=	86.12%	
85) Terphenyl-d14	12.270	244	1130590	36.90	ppm	-0.05
Spiked Amount 50.000			Recovery	=	73.80%	
107) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	

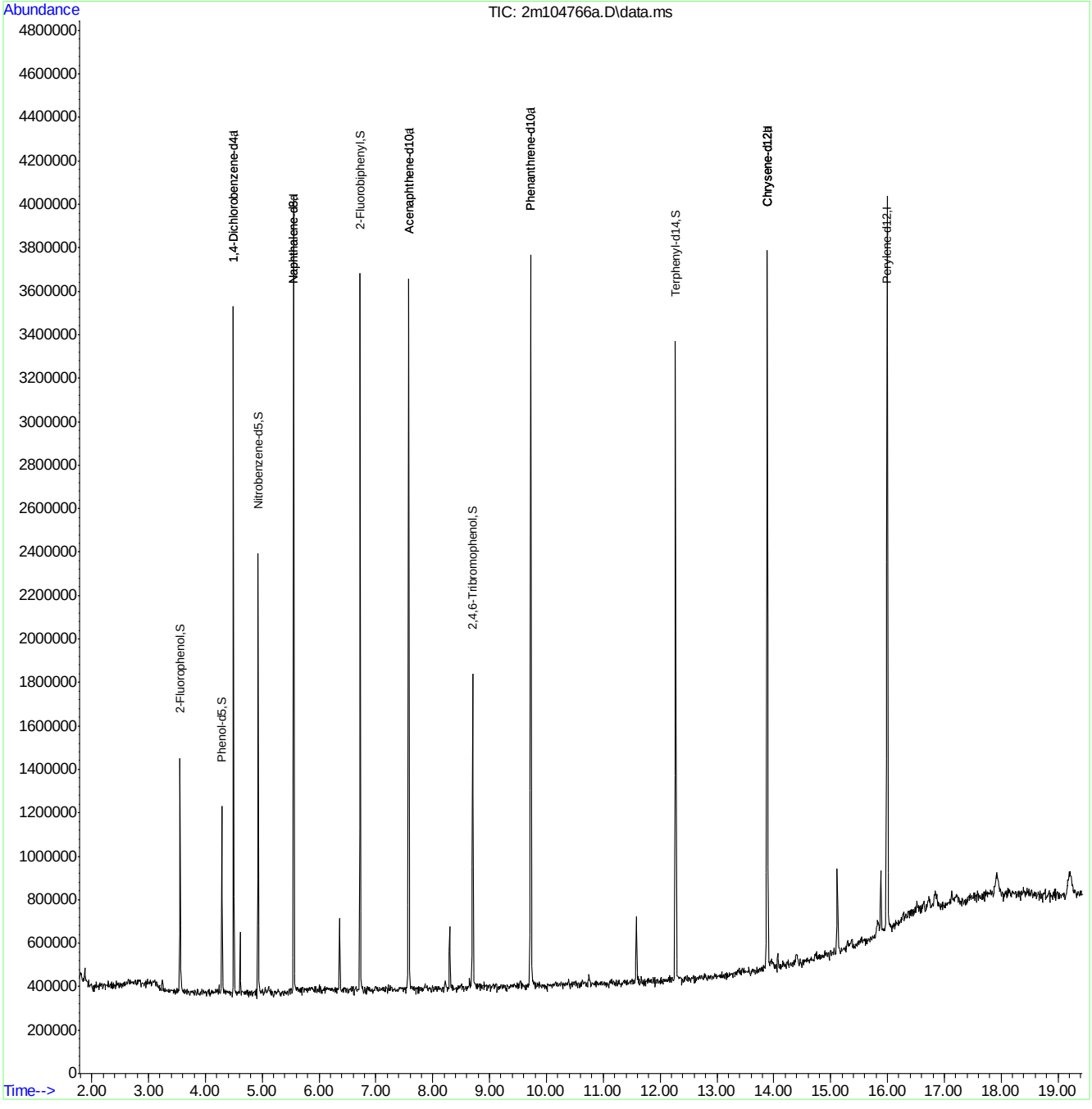
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4654\
Data File : 2m104766a.D
Acq On : 5 Jun 2018 1:26 pm
Operator : christc2
Sample : op12498-mb
Misc : op12498,e2m4654,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 05 16:03:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Mon Jun 04 09:10:13 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50928.d
Acq On : 5 Jun 2018 1:44 pm
Operator : christc2
Sample : op12498-mb Inst : MS5P
Misc : op12498,e5p2426,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 21:16:31 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.415	152	111758	40.00	ppm	0.00
24) Naphthalene-d8	5.612	136	461100	40.00	ppm	0.00
47) Acenaphthene-d10	7.311	164	251527	40.00	ppm	0.00
69) Phenanthrene-d10	8.785	188	487732	40.00	ppm	0.00
83) Chrysene-d12	12.215	240	518374	40.00	ppm	0.00
91) Perylene-d12	14.229	264	549802	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.415	152	111758	40.00	ppm	0.00
103) Acenaphthene-d10a	7.311	164	251527	40.00	ppm	0.00
105) Chrysene-d12a	12.215	240	518280	40.00	ppm	0.00
108) Phenanthrene-d10a	8.785	188	487732	40.00	ppm	0.00
112) Naphthalene-d8a	5.612	136	461100	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.282	112	79684	20.32	ppm	-0.03
Spiked Amount 50.000			Recovery = 40.64%			
8) Phenol-d5	4.137	99	69401	13.83	ppm	0.03
Spiked Amount 50.000			Recovery = 27.66%			
25) Nitrobenzene-d5	4.933	82	168648	37.02	ppm	-0.03
Spiked Amount 50.000			Recovery = 74.04%			
51) 2-Fluorobiphenyl	6.664	172	314917	35.48	ppm	-0.01
Spiked Amount 50.000			Recovery = 70.96%			
73) 2,4,6-Tribromophenol	8.085	330	75126	34.81	ppm	0.07
Spiked Amount 50.000			Recovery = 69.62%			
85) Terphenyl-d14	10.756	244	417317	31.94	ppm	-0.02
Spiked Amount 50.000			Recovery = 63.88%			
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			

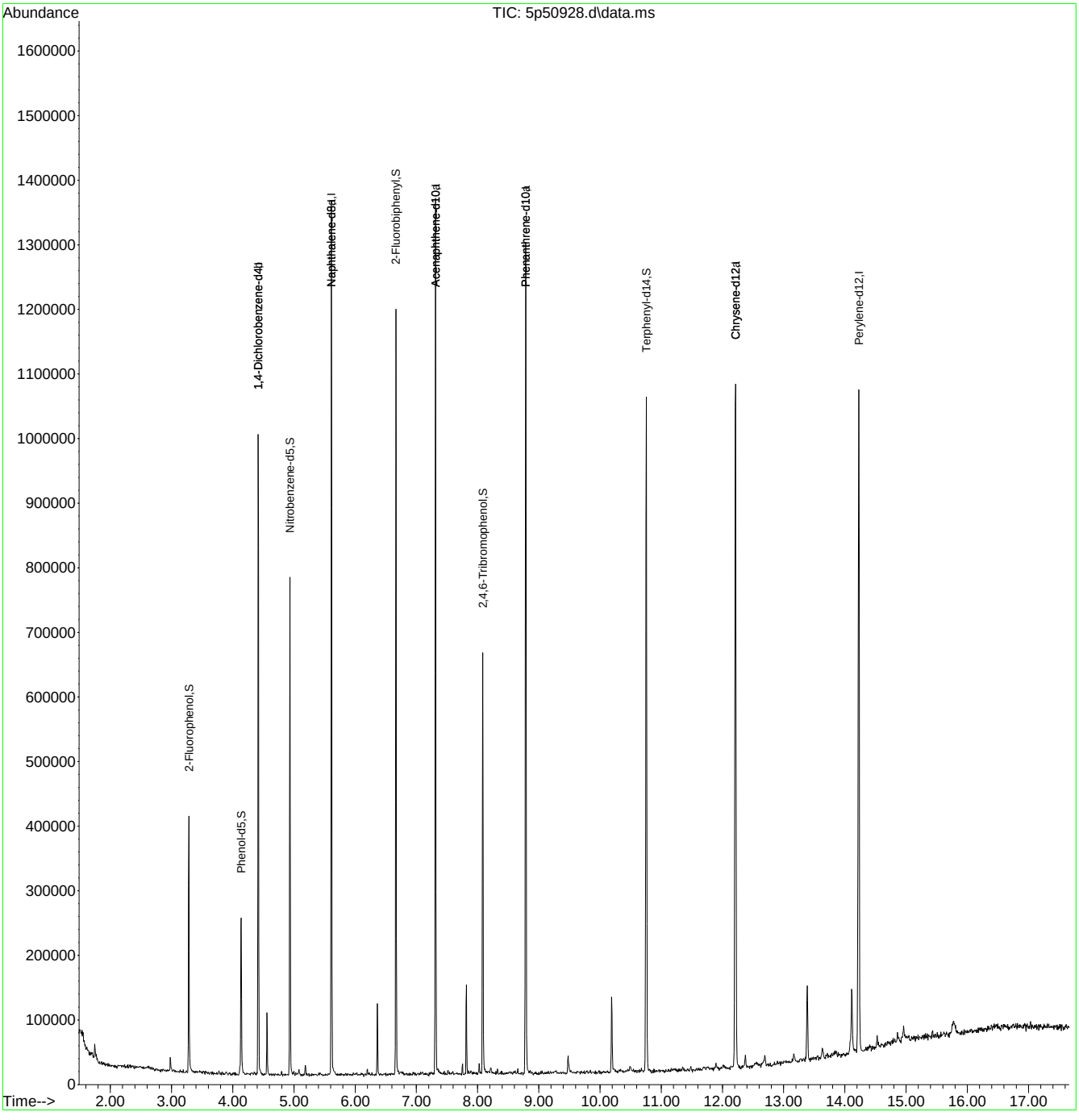
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50928.d
Acq On : 5 Jun 2018 1:44 pm
Operator : christc2
Sample : op12498-mb Inst : MS5P
Misc : op12498,e5p2426,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 21:16:31 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration



M5P2399.M Tue Jun 05 23:01:31 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6235\
Data File : M146681.D
Acq On : 6 Jun 2018 10:43 am
Operator : johnb1
Sample : op12498-mb
Misc : op12498,em6235,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 06 16:26:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Wed Jun 06 08:45:57 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.406	152	105704	40.00	ppm	-0.08
24) Naphthalene-d8	5.464	136	405347	40.00	ppm	-0.10
47) Acenaphthene-d10	7.686	164	222409	40.00	ppm	-0.14
69) Phenanthrene-d10	10.249	188	480340	40.00	ppm	-0.15
83) Chrysene-d12	15.387	240	479779	40.00	ppm	-0.17
91) Perylene-d12	18.010	264	488065	40.00	ppm	-0.16
101) 1,4-Dichlorobenzene-d4a	4.406	152	105704	40.00	ppm	0.00
103) Acenaphthene-d10a	7.686	164	222409	40.00	ppm	-0.14
106) Chrysene-d12a	15.387	240	479779	40.00	ppm	-0.17
109) Phenanthrene-d10a	10.249	188	480340	40.00	ppm	-0.15
112) Naphthalene-d8a	5.464	136	405347	40.00	ppm	-0.10
114) Chrysene-d12b	15.387	240	479779	40.00	ppm	-0.17
System Monitoring Compounds						
5) 2-Fluorophenol	3.445	112	68001	17.70	ppm	-0.07
Spiked Amount 50.000			Recovery = 35.40%			
8) Phenol-d5	4.187	99	61483	12.19	ppm	-0.03
Spiked Amount 50.000			Recovery = 24.38%			
25) Nitrobenzene-d5	4.833	82	195342	37.62	ppm	-0.09
Spiked Amount 50.000			Recovery = 75.24%			
51) 2-Fluorobiphenyl	6.724	172	292500	35.48	ppm	-0.12
Spiked Amount 50.000			Recovery = 70.96%			
73) 2,4,6-Tribromophenol	9.016	330	60093	41.30	ppm	-0.15
Spiked Amount 50.000			Recovery = 82.60%			
85) Terphenyl-d14	13.411	244	413305	37.76	ppm	-0.16
Spiked Amount 50.000			Recovery = 75.52%			
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
90) bis(2-Ethylhexyl)phtha...	15.708	149	5216	0.64	ppm	70

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

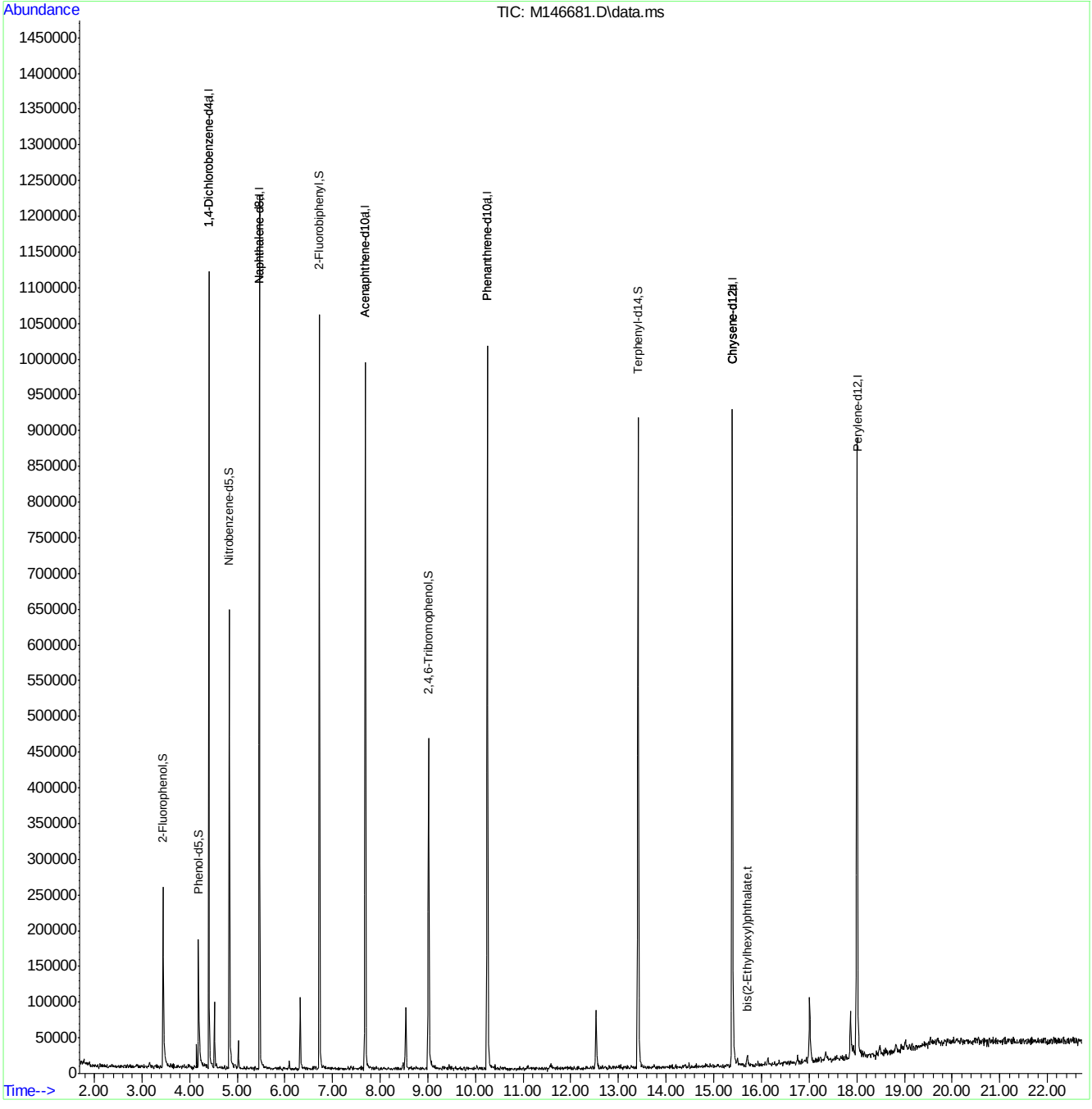
9.2.3

9

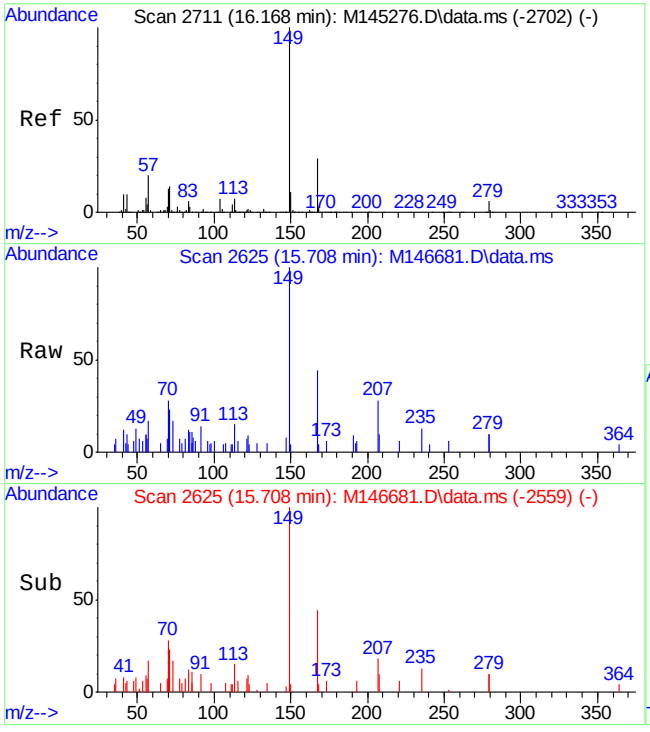
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6235\
Data File : M146681.D
Acq On : 6 Jun 2018 10:43 am
Operator : johnb1
Sample : op12498-mb
Misc : op12498,em6235,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 06 16:26:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Wed Jun 06 08:45:57 2018
Response via : Initial Calibration



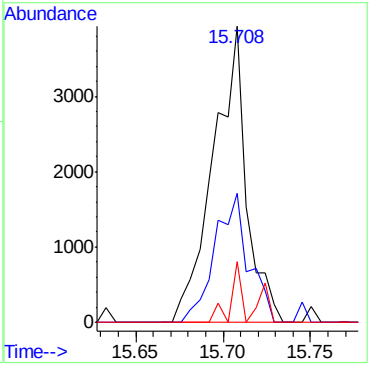
MM6221.M Wed Jun 06 16:28:18 2018 MSM



#90
bis(2-Ethylhexyl)phthalate
Concen: 0.64 ppm
RT: 15.708 min Scan# 2625
Delta R.T. -0.149 min
Lab File: M146681.D
Acq: 6 Jun 2018 10:43 am

Tgt Ion:149 Resp: 5216

Ion	Ratio	Lower	Upper
149	100		
167	43.5	0.0	58.7
279	20.4	0.0	37.2



9.2.3

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50929.d
Acq On : 5 Jun 2018 2:09 pm
Operator : christc2
Sample : op12498-bs Inst : MS5P
Misc : op12498,e5p2426,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 21:20:57 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue Jun 05 21:19:57 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.420	152	104409	40.00	ppm	0.00
24) Naphthalene-d8	5.612	136	394573	40.00	ppm	0.00
47) Acenaphthene-d10	7.310	164	214142	40.00	ppm	0.00
69) Phenanthrene-d10	8.790	188	408217	40.00	ppm	0.00
83) Chrysene-d12	12.215	240	394522	40.00	ppm	0.00
91) Perylene-d12	14.229	264	450185	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.420	152	104409	40.00	ppm	0.00
103) Acenaphthene-d10a	7.310	164	214142	40.00	ppm	0.00
105) Chrysene-d12a	12.215	240	394289	40.00	ppm	0.00
108) Phenanthrene-d10a	8.790	188	408217	40.00	ppm	0.00
112) Naphthalene-d8a	5.612	136	394573	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.282	112	79612	21.73	ppm	-0.03
Spiked Amount 50.000			Recovery = 43.46%			
8) Phenol-d5	4.132	99	72890	15.55	ppm	0.02
Spiked Amount 50.000			Recovery = 31.10%			
25) Nitrobenzene-d5	4.933	82	152469	39.11	ppm	-0.03
Spiked Amount 50.000			Recovery = 78.22%			
51) 2-Fluorobiphenyl	6.669	172	290300	38.42	ppm	0.00
Spiked Amount 50.000			Recovery = 76.84%			
73) 2,4,6-Tribromophenol	8.085	330	68971	38.19	ppm	0.07
Spiked Amount 50.000			Recovery = 76.38%			
85) Terphenyl-d14	10.756	244	376091	37.83	ppm	-0.02
Spiked Amount 50.000			Recovery = 75.66%			
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.851	88	25256	14.98	ppm	98
3) Pyridine	2.134	79	54174	13.51	ppm	100
4) N-Nitrosodimethylamine	2.096	74	38216	16.73	ppm #	21
6) Indene	4.655	116	205194	33.75	ppm	97
7) Cumene	3.699	105	273365	28.83	ppm	93
9) Phenol	4.148	94	79531	15.34	ppm	73
10) Aniline	4.121	93	121710	22.11	ppm	71
11) bis(2-Chloroethyl)ether	4.185	93	111751	33.40	ppm	94
12) 2-Chlorophenol	4.239	128	120911	30.38	ppm	88
13) Decane	4.287	43	162411	32.15	ppm	81
14) 1,3-Dichlorobenzene	4.367	146	128471	29.39	ppm	96
15) 1,4-Dichlorobenzene	4.431	146	128009	30.40	ppm	97
16) Benzyl alcohol	4.565	108	73804	29.34	ppm	88
17) 1,2-Dichlorobenzene	4.575	146	126903	31.20	ppm	92
18) Acetophenone	4.794	105	182627	31.96	ppm	97
19) 2-Methylphenol	4.693	108	97922	27.65	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.682	45	283366	46.72	ppm	89
21) 3&4-Methylphenol	4.837	108	99185	27.26	ppm	96
22) n-Nitroso-di-n-propyla...	4.805	70	89254	33.26	ppm #	64
23) Hexachloroethane	4.885	201	52231	28.92	ppm	93
26) Nitrobenzene	4.955	77	142885	37.21	ppm	84
27) Quinoline	5.959	129	265351	35.33	ppm	95
28) Isophorone	5.179	82	267659	38.04	ppm	82
29) 2-Nitrophenol	5.259	139	73086	35.56	ppm	77
30) 2,4-Dimethylphenol	5.329	107	141988	40.63	ppm	91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50929.d
Acq On : 5 Jun 2018 2:09 pm
Operator : christc2
Sample : op12498-bs Inst : MS5P
Misc : op12498,e5p2426,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 21:20:57 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue Jun 05 21:19:57 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
31) Benzoic acid	5.446	105	71529	24.13	ppm		84
32) bis(2-Chloroethoxy)met...	5.398	93	141132	38.73	ppm		97
33) 2,4-Dichlorophenol	5.505	162	122068	36.97	ppm		96
34) 2,6-Dichlorophenol	5.708	162	116466	36.69	ppm		94
36) 1,2,4-Trichlorobenzene	5.564	180	124779	32.94	ppm		96
38) Naphthalene	5.633	128	343990	34.45	ppm		98
39) 4-Chloroaniline	5.702	127	101372	23.11	ppm		87
40) 2,3-Dichloroaniline	6.584	161	139020	33.27	ppm		95
41) Caprolactam	6.028	55	27237	11.46	ppm		85
42) Hexachlorobutadiene	5.767	225	81094	36.00	ppm		98
43) 4-Chloro-3-methylphenol	6.205	107	139012	40.49	ppm		80
44) 2-Methylnaphthalene	6.306	141	216534	34.89	ppm		96
45) 1-Methylnaphthalene	6.397	141	206662	31.94	ppm		95
46) Dimethylnaphthalene	6.910	156	241381	35.08	ppm		97
48) Hexachlorocyclopentadiene	6.466	237	137479	60.92	ppm		95
49) 2,4,6-Trichlorophenol	6.595	196	92172	42.94	ppm		89
50) 2,4,5-Trichlorophenol	6.637	196	96568	40.59	ppm		94
52) 2-Chloronaphthalene	6.776	162	246867	39.05	ppm		98
53) Biphenyl	6.760	154	334698	38.60	ppm		99
54) 2-Nitroaniline	6.888	65	101358	49.53	ppm	#	69
55) Dimethylphthalate	7.070	163	336042	44.72	ppm		98
56) Acenaphthylene	7.172	152	393044	40.96	ppm		97
57) 2,6-Dinitrotoluene	7.123	165	74203	43.49	ppm		77
58) 3-Nitroaniline	7.289	138	61473	31.56	ppm		83
59) Acenaphthene	7.343	153	288234	43.66	ppm		95
60) 2,4-Dinitrophenol	7.391	184	82037	76.36	ppm	#	40
61) 4-Nitrophenol	7.508	109	32258	29.52	ppm	#	1
62) Dibenzofuran	7.513	168	389204	42.93	ppm		94
63) 2,4-Dinitrotoluene	7.519	165	95283	41.57	ppm		73
64) 2,3,4,6-Tetrachlorophenol	7.652	232	97860	42.72	ppm		92
65) Diethylphthalate	7.759	149	319185	45.33	ppm		97
66) Fluorene	7.845	166	323489	43.86	ppm		96
67) 4-Chlorophenyl-phenyle...	7.855	204	158257	41.88	ppm		94
68) 4-Nitroaniline	7.887	138	70543	37.20	ppm	#	59
70) 4,6-Dinitro-2-methylph...	7.914	198	66196	43.90	ppm		87
71) n-Nitrosodiphenylamine	7.978	169	210710	38.36	ppm		98
72) 1,2-Diphenylhydrazine	8.010	77	314825	44.77	ppm		97
74) 4-Bromophenyl-phenylether	8.331	248	114675	40.73	ppm		91
75) Hexachlorobenzene	8.395	284	134350	41.51	ppm		92
76) Pentachlorophenol	8.609	266	87700	50.26	ppm		97
77) Phenanthrene	8.812	178	465194	42.03	ppm		96
78) Anthracene	8.870	178	484483	42.67	ppm		89
79) Carbazole	9.063	167	442411	41.78	ppm		100
80) Di-n-butylphthalate	9.490	149	543349	42.73	ppm		98
81) Fluoranthene	10.217	202	588216	43.25	ppm		97
82) Octadecane	8.721	57	246213	41.09	ppm		84
84) Pyrene	10.505	202	590956	43.93	ppm		99
86) Butylbenzylphthalate	11.483	149	238622	43.34	ppm		89
87) Benzo[a]anthracene	12.199	228	547869	43.69	ppm		99
88) 3,3'-Dichlorobenzidine	12.209	252	319659	59.15	ppm		96
89) Chrysene	12.252	228	488421	41.78	ppm		98
90) bis(2-Ethylhexyl)phtha...	12.375	149	308468	43.57	ppm		96
92) Di-n-octylphthalate	13.320	149	551455	40.58	ppm		92
93) Benzo[b]fluoranthene	13.727	252	518274	35.95	ppm		97
94) Benzo[k]fluoranthene	13.764	252	479016	37.58	ppm		96
95) Benzo[a]pyrene	14.149	252	472064	36.47	ppm		95
96) Indeno[1,2,3-cd]pyrene	15.607	276	480996	37.18	ppm		77

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50929.d
Acq On : 5 Jun 2018 2:09 pm
Operator : christc2
Sample : op12498-bs Inst : MS5P
Misc : op12498,e5p2426,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 21:20:57 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue Jun 05 21:19:57 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
98)	Dibenz[a,h]anthracene	15.644	278	480909	37.07	ppm		89
99)	7,12-Dimethylbenz(a)an...	13.727	256	175638	29.42	ppm		92
100)	Benzo[g,h,i]perylene	15.986	276	487936	39.32	ppm		88
102)	Benzaldehyde	4.020	105	84074	35.47	ppm	#	83
104)	1,2,4,5-Tetrachloroben...	6.472	216	134847	44.42	ppm		97
106)	Benzidine	10.420	184	89012	20.94	ppm		97
110)	Atrazine	8.523	215	49908	53.64	ppm		88
111)	Pentachloronitrobenzene	8.619	295	22408	54.72	ppm		87

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

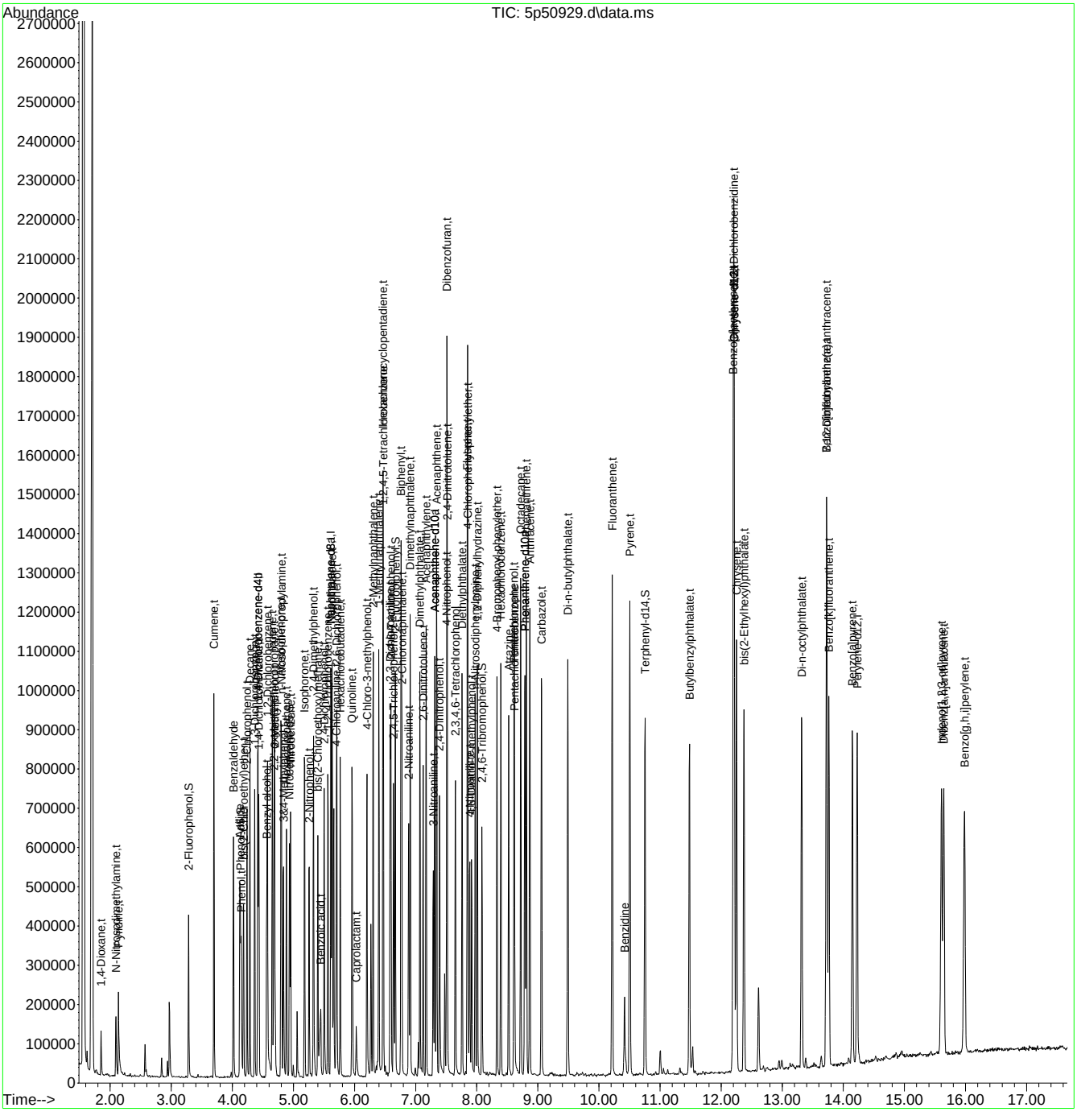
9.3.1

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50929.d
Acq On : 5 Jun 2018 2:09 pm
Operator : christc2
Sample : op12498-bs Inst : MS5P
Misc : op12498,e5p2426,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 21:20:57 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue Jun 05 21:19:57 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\svoa\completed\06-06-18\aimeel\e5p2426\
Data File : 5p50930.d
Acq On : 5 Jun 2018 2:35 pm
Operator : christc2
Sample : op12498-bsd
Misc : op12498,e5p2426,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 07 13:00:16 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.420	152	113640	40.00	ppm	0.00
24) Naphthalene-d8	5.617	136	428874	40.00	ppm	0.00
47) Acenaphthene-d10	7.316	164	224886	40.00	ppm	0.00
69) Phenanthrene-d10	8.790	188	447222	40.00	ppm	0.00
83) Chrysene-d12	12.215	240	422304	40.00	ppm	0.00
91) Perylene-d12	14.229	264	483503	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.420	152	113640	40.00	ppm	0.00
103) Acenaphthene-d10a	7.316	164	224886	40.00	ppm	0.00
105) Chrysene-d12a	12.215	240	422304	40.00	ppm	0.00
108) Phenanthrene-d10a	8.790	188	447222	40.00	ppm	0.00
112) Naphthalene-d8a	5.617	136	428874	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.282	112	93293	23.40	ppm	-0.03
Spiked Amount 50.000			Recovery = 46.80%			
8) Phenol-d5	4.132	99	83749	16.42	ppm	0.02
Spiked Amount 50.000			Recovery = 32.84%			
25) Nitrobenzene-d5	4.939	82	181809	42.91	ppm	-0.02
Spiked Amount 50.000			Recovery = 85.82%			
51) 2-Fluorobiphenyl	6.669	172	334328	42.13	ppm	0.00
Spiked Amount 50.000			Recovery = 84.26%			
73) 2,4,6-Tribromophenol	8.091	330	80567	40.72	ppm	0.08
Spiked Amount 50.000			Recovery = 81.44%			
85) Terphenyl-d14	10.756	244	430061	40.41	ppm	-0.02
Spiked Amount 50.000			Recovery = 80.82%			
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.851	88	28822	15.71	ppm	86
3) Pyridine	2.129	79	81333	18.64	ppm #	45
4) N-Nitrosodimethylamine	2.097	74	47385	19.06	ppm #	40
6) Indene	4.655	116	244150	36.89	ppm	98
7) Cumene	3.699	105	335127	32.48	ppm	93
9) Phenol	4.148	94	96046	17.02	ppm	84
10) Aniline	4.121	93	158825	26.50	ppm	67
11) bis(2-Chloroethyl)ether	4.185	93	136455	37.47	ppm	95
12) 2-Chlorophenol	4.239	128	145975	33.70	ppm	86
13) Decane	4.287	43	202830	36.89	ppm	83
14) 1,3-Dichlorobenzene	4.367	146	159686	33.56	ppm	97
15) 1,4-Dichlorobenzene	4.436	146	156151	34.07	ppm	96
16) Benzyl alcohol	4.565	108	83644	30.55	ppm	73
17) 1,2-Dichlorobenzene	4.575	146	153313	34.63	ppm	97
18) Acetophenone	4.794	105	218403	35.11	ppm	95
19) 2-Methylphenol	4.693	108	113829	29.53	ppm	96
20) 2,2'-oxybis(1-Chloropr...	4.682	45	343106	51.97	ppm	89
21) 3&4-Methylphenol	4.837	108	116909	29.52	ppm	99

Quantitation Report (QT Reviewed)

Data Path : Z:\svoa\completed\06-06-18\aimeel\e5p2426\
Data File : 5p50930.d
Acq On : 5 Jun 2018 2:35 pm
Operator : christc2
Sample : op12498-bsd
Misc : op12498,e5p2426,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 07 13:00:16 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	4.805	70	108194	37.04	ppm	#	60
23) Hexachloroethane	4.885	201	68606	34.90	ppm		98
26) Nitrobenzene	4.955	77	172301	41.28	ppm		84
27) Quinoline	5.959	129	308315	37.76	ppm		94
28) Isophorone	5.184	82	304579	39.82	ppm		87
29) 2-Nitrophenol	5.259	139	89407	40.02	ppm		78
30) 2,4-Dimethylphenol	5.329	107	164072	43.19	ppm		87
31) Benzoic acid	5.451	105	75877	23.55	ppm		87
32) bis(2-Chloroethoxy)met...	5.398	93	167846	42.38	ppm		97
33) 2,4-Dichlorophenol	5.505	162	144350	40.22	ppm		97
34) 2,6-Dichlorophenol	5.713	162	132868	38.51	ppm		97
36) 1,2,4-Trichlorobenzene	5.564	180	150244	36.49	ppm		98
38) Naphthalene	5.633	128	410771	37.85	ppm		96
39) 4-Chloroaniline	5.703	127	117743	24.69	ppm		89
40) 2,3-Dichloroaniline	6.584	161	156525	34.47	ppm		92
41) Caprolactam	6.028	55	31500	12.19	ppm		82
42) Hexachlorobutadiene	5.767	225	99992	40.84	ppm		98
43) 4-Chloro-3-methylphenol	6.205	107	156713	41.99	ppm		82
44) 2-Methylnaphthalene	6.306	141	253051	37.51	ppm		96
45) 1-Methylnaphthalene	6.397	141	240506	34.20	ppm		94
46) Dimethylnaphthalene	6.910	156	266882	35.68	ppm		98
48) Hexachlorocyclopentadiene	6.466	237	166799	70.38	ppm		98
49) 2,4,6-Trichlorophenol	6.595	196	106953	47.45	ppm		84
50) 2,4,5-Trichlorophenol	6.637	196	114007	45.63	ppm		90
52) 2-Chloronaphthalene	6.776	162	286664	43.17	ppm		98
53) Biphenyl	6.760	154	378361	41.55	ppm		99
54) 2-Nitroaniline	6.888	65	118651	55.21	ppm	#	71
55) Dimethylphthalate	7.070	163	383948	48.66	ppm		98
56) Acenaphthylene	7.172	152	446747	44.34	ppm		99
57) 2,6-Dinitrotoluene	7.124	165	84848	47.36	ppm		74
58) 3-Nitroaniline	7.289	138	69752	34.09	ppm		77
59) Acenaphthene	7.343	153	322598	46.53	ppm		98
60) 2,4-Dinitrophenol	7.396	184	98207	86.95	ppm	#	72
61) 4-Nitrophenol	7.503	109	35900	31.28	ppm	#	84
62) Dibenzofuran	7.514	168	443369	46.57	ppm		93
63) 2,4-Dinitrotoluene	7.519	165	110328	45.83	ppm		68
64) 2,3,4,6-Tetrachlorophenol	7.652	232	112357	46.71	ppm		91
65) Diethylphthalate	7.759	149	374524	50.65	ppm		97
66) Fluorene	7.850	166	372030	48.03	ppm		98
67) 4-Chlorophenyl-phenyle...	7.855	204	180868	45.57	ppm		96
68) 4-Nitroaniline	7.888	138	85025	42.70	ppm	#	66
70) 4,6-Dinitro-2-methylph...	7.920	198	76943	46.58	ppm		94
71) n-Nitrosodiphenylamine	7.978	169	251794	41.85	ppm		96
72) 1,2-Diphenylhydrazine	8.010	77	365112	47.40	ppm		97
74) 4-Bromophenyl-phenylether	8.331	248	128920	41.80	ppm		92
75) Hexachlorobenzene	8.395	284	156005	44.00	ppm		93
76) Pentachlorophenol	8.609	266	104071	54.44	ppm		96
77) Phenanthrene	8.812	178	539739	44.52	ppm		99
78) Anthracene	8.870	178	555529	44.66	ppm		89
79) Carbazole	9.057	167	519501	44.78	ppm		98

Quantitation Report (QT Reviewed)

Data Path : Z:\svoa\completed\06-06-18\aimeel\e5p2426\
Data File : 5p50930.d
Acq On : 5 Jun 2018 2:35 pm
Operator : christc2
Sample : op12498-bsd
Misc : op12498,e5p2426,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 07 13:00:16 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

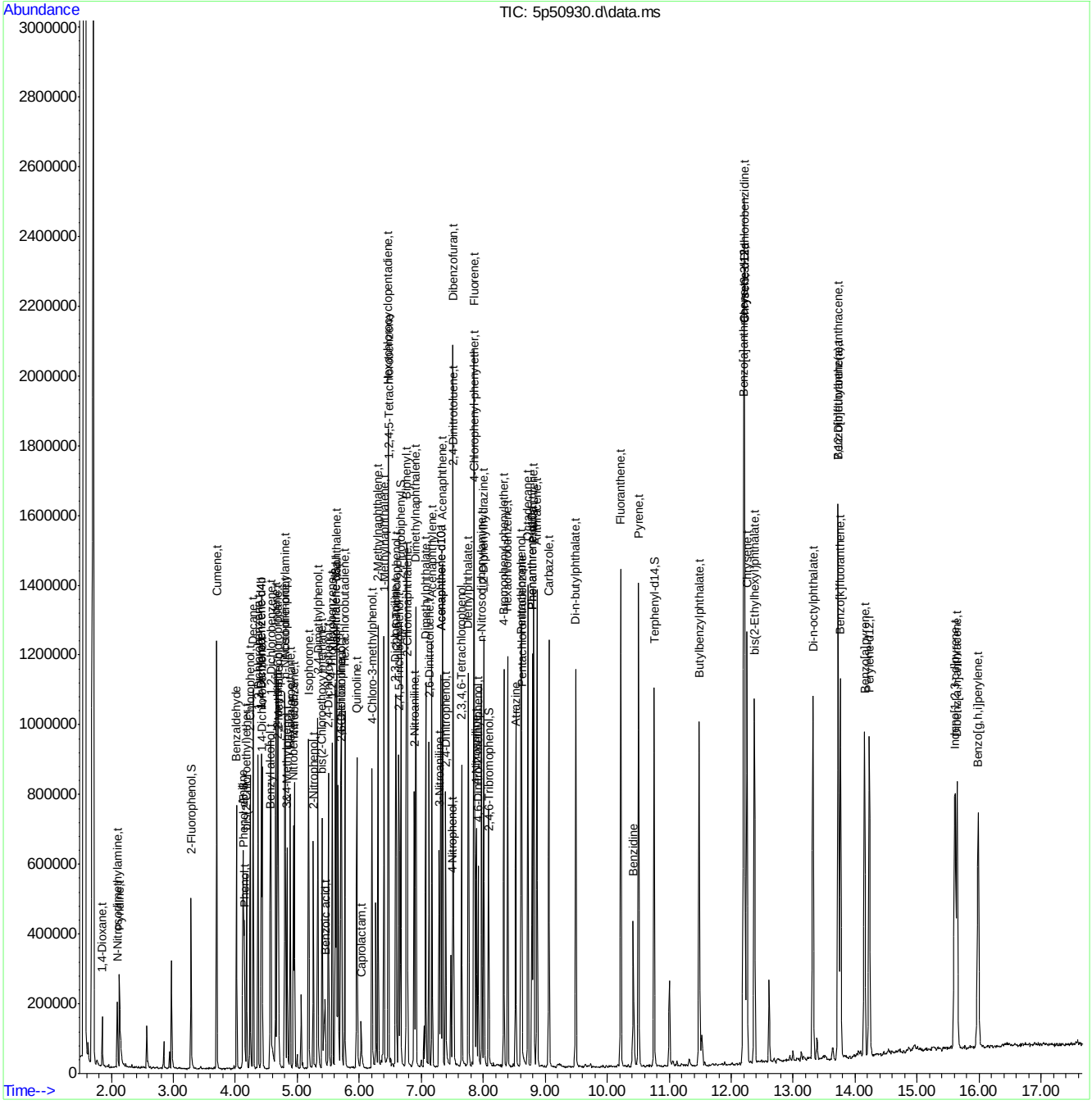
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
80) Di-n-butylphthalate	9.490	149	638471	45.83	ppm		98
81) Fluoranthene	10.217	202	678793	45.56	ppm		96
82) Octadecane	8.721	57	281788	42.92	ppm		85
84) Pyrene	10.505	202	678312	47.11	ppm		99
86) Butylbenzylphthalate	11.483	149	277351	47.06	ppm		83
87) Benzo[a]anthracene	12.199	228	625908	46.63	ppm		98
88) 3,3'-Dichlorobenzidine	12.209	252	374173	64.69	ppm		98
89) Chrysene	12.252	228	560068	44.76	ppm		98
90) bis(2-Ethylhexyl)phtha...	12.375	149	351067	46.33	ppm		97
92) Di-n-octylphthalate	13.321	149	631543	43.27	ppm		91
93) Benzo[b]fluoranthene	13.727	252	623293	40.26	ppm		97
94) Benzo[k]fluoranthene	13.764	252	530069	38.72	ppm		95
95) Benzo[a]pyrene	14.154	252	546604	39.32	ppm		96
96) Indeno[1,2,3-cd]pyrene	15.612	276	578576	41.64	ppm		75
98) Dibenz[a,h]anthracene	15.644	278	551146	39.56	ppm		90
99) 7,12-Dimethylbenz(a)an...	13.727	256	189656	29.58	ppm		91
100) Benzo[g,h,i]perylene	15.986	276	586880	44.04	ppm		85
102) Benzaldehyde	4.020	105	106226	41.17	ppm	#	85
104) 1,2,4,5-Tetrachloroben...	6.472	216	154036	48.32	ppm		98
106) Benzidine	10.420	184	196671	43.20	ppm		99
110) Atrazine	8.529	215	55555	54.50	ppm		96
111) Pentachloronitrobenzene	8.619	295	27049	60.30	ppm		90

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

Quantitation Report (QT Reviewed)

Data Path : Z:\svoa\completed\06-06-18\aimeel\e5p2426\
Data File : 5p50930.d
Acq On : 5 Jun 2018 2:35 pm
Operator : christc2
Sample : op12498-bsd
Misc : op12498,e5p2426,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 07 13:00:16 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50935.d
Acq On : 5 Jun 2018 6:03 pm
Operator : christc2
Sample : op12498-ms Inst : MS5P
Misc : op12498,e5p2426,900,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 22:36:52 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.420	152	98369	40.00	ppm	0.00
24) Naphthalene-d8	5.617	136	371390	40.00	ppm	0.00
47) Acenaphthene-d10	7.316	164	200963	40.00	ppm	0.00
69) Phenanthrene-d10	8.790	188	392189	40.00	ppm	0.00
83) Chrysene-d12	12.220	240	395256	40.00	ppm	0.00
91) Perylene-d12	14.234	264	448726	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.420	152	98369	40.00	ppm	0.00
103) Acenaphthene-d10a	7.316	164	200963	40.00	ppm	0.00
105) Chrysene-d12a	12.220	240	394482	40.00	ppm	0.00
108) Phenanthrene-d10a	8.790	188	392189	40.00	ppm	0.00
112) Naphthalene-d8a	5.617	136	371390	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.293	112	84692	24.54	ppm	-0.02
Spiked Amount 50.000			Recovery = 49.08%			
8) Phenol-d5	4.143	99	76987	17.43	ppm	0.03
Spiked Amount 50.000			Recovery = 34.86%			
25) Nitrobenzene-d5	4.939	82	166241	45.30	ppm	-0.02
Spiked Amount 50.000			Recovery = 90.60%			
51) 2-Fluorobiphenyl	6.669	172	307109	43.31	ppm	0.00
Spiked Amount 50.000			Recovery = 86.62%			
73) 2,4,6-Tribromophenol	8.090	330	74326	42.83	ppm	0.08
Spiked Amount 50.000			Recovery = 85.66%			
85) Terphenyl-d14	10.756	244	328367	32.96	ppm	-0.02
Spiked Amount 50.000			Recovery = 65.92%			
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.851	88	25466	16.03	ppm #	72
3) Pyridine	2.134	79	69851	18.49	ppm #	43
4) N-Nitrosodimethylamine	2.091	74	41792	19.42	ppm #	17
6) Indene	4.655	116	226072	39.46	ppm	97
7) Cumene	3.699	105	300248	33.61	ppm	93
9) Phenol	4.153	94	76821	15.72	ppm	89
10) Aniline	4.127	93	101246	19.52	ppm	66
11) bis(2-Chloroethyl)ether	4.185	93	117626	37.32	ppm	90
12) 2-Chlorophenol	4.244	128	131712	35.13	ppm	88
13) Decane	4.287	43	175507	36.88	ppm	81
14) 1,3-Dichlorobenzene	4.367	146	142653	34.63	ppm	98
15) 1,4-Dichlorobenzene	4.436	146	137505	34.66	ppm	99
16) Benzyl alcohol	4.565	108	82594	34.85	ppm	75
17) 1,2-Dichlorobenzene	4.575	146	136756	35.68	ppm	93
18) Acetophenone	4.800	105	200043	37.15	ppm	92
19) 2-Methylphenol	4.698	108	107670	32.27	ppm	94
20) 2,2'-oxybis(1-Chloropr...	4.682	45	316096	55.31	ppm	86
21) 3&4-Methylphenol	4.842	108	113306	33.05	ppm	99
22) n-Nitroso-di-n-propyla...	4.810	70	96998	38.36	ppm #	68
23) Hexachloroethane	4.885	201	58745	34.53	ppm	96
26) Nitrobenzene	4.955	77	151518	41.92	ppm	82
27) Quinoline	5.959	129	266654	37.71	ppm	93
28) Isophorone	5.184	82	284384	42.94	ppm	84
29) 2-Nitrophenol	5.259	139	78587	40.62	ppm	71
30) 2,4-Dimethylphenol	5.334	107	160971	48.93	ppm	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50935.d
Acq On : 5 Jun 2018 6:03 pm
Operator : christc2
Sample : op12498-ms Inst : MS5P
Misc : op12498,e5p2426,900,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 22:36:52 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
31) Benzoic acid	5.462	105	79043	28.32	ppm		86
32) bis(2-Chloroethoxy)met...	5.398	93	150297	43.82	ppm		96
33) 2,4-Dichlorophenol	5.505	162	133240	42.87	ppm		95
34) 2,6-Dichlorophenol	5.713	162	129171	43.23	ppm		98
36) 1,2,4-Trichlorobenzene	5.569	180	140740	39.47	ppm		97
38) Naphthalene	5.633	128	382489	40.70	ppm		97
39) 4-Chloroaniline	5.702	127	82605	20.01	ppm		89
40) 2,3-Dichloroaniline	6.584	161	144049	36.63	ppm		95
41) Caprolactam	6.039	55	27660	12.36	ppm		81
42) Hexachlorobutadiene	5.767	225	85405	40.28	ppm		99
43) 4-Chloro-3-methylphenol	6.210	107	147873	45.76	ppm	#	30
44) 2-Methylnaphthalene	6.306	141	232565	39.81	ppm		95
45) 1-Methylnaphthalene	6.397	141	225633	37.05	ppm		92
46) Dimethylnaphthalene	6.915	156	252749	39.02	ppm		98
48) Hexachlorocyclopentadiene	6.466	237	108428	51.19	ppm		98
49) 2,4,6-Trichlorophenol	6.600	196	97490	48.40	ppm		88
50) 2,4,5-Trichlorophenol	6.643	196	101388	45.41	ppm		91
52) 2-Chloronaphthalene	6.776	162	269238	45.38	ppm		98
53) Biphenyl	6.760	154	357178	43.90	ppm		99
54) 2-Nitroaniline	6.888	65	102178	53.21	ppm	#	62
55) Dimethylphthalate	7.075	163	331362	46.99	ppm		99
56) Acenaphthylene	7.177	152	406493	45.14	ppm		97
57) 2,6-Dinitrotoluene	7.129	165	73059	45.63	ppm		87
58) 3-Nitroaniline	7.289	138	58928	32.23	ppm		80
59) Acenaphthene	7.348	153	293049	47.30	ppm		94
60) 2,4-Dinitrophenol	7.396	184	26810	27.61	ppm	#	58
61) 4-Nitrophenol	7.513	109	34214	33.36	ppm	#	1
62) Dibenzofuran	7.513	168	396337	46.58	ppm		85
63) 2,4-Dinitrotoluene	7.519	165	94671	44.01	ppm		55
64) 2,3,4,6-Tetrachlorophenol	7.652	232	99570	46.32	ppm		97
65) Diethylphthalate	7.765	149	330569	50.03	ppm		95
66) Fluorene	7.850	166	327975	47.38	ppm		97
67) 4-Chlorophenyl-phenyle...	7.855	204	164294	46.32	ppm		97
68) 4-Nitroaniline	7.887	138	65482	36.80	ppm	#	63
70) 4,6-Dinitro-2-methylph...	7.920	198	25723	17.76	ppm		89
71) n-Nitrosodiphenylamine	7.978	169	226704	42.96	ppm		96
72) 1,2-Diphenylhydrazine	8.010	77	322777	47.78	ppm		97
74) 4-Bromophenyl-phenylether	8.336	248	116065	42.91	ppm		87
75) Hexachlorobenzene	8.395	284	131766	42.37	ppm		95
76) Pentachlorophenol	8.614	266	93900	56.01	ppm		98
77) Phenanthrene	8.817	178	488325	45.93	ppm		99
78) Anthracene	8.870	178	490593	44.97	ppm		90
79) Carbazole	9.063	167	450319	44.26	ppm		99
80) Di-n-butylphthalate	9.495	149	529234	43.32	ppm		98
81) Fluoranthene	10.222	202	583613	44.66	ppm		96
82) Octadecane	8.721	57	212414	36.90	ppm		84
84) Pyrene	10.511	202	587977	43.63	ppm		99
86) Butylbenzylphthalate	11.483	149	245000	44.42	ppm		86
87) Benzo[a]anthracene	12.204	228	531841	42.33	ppm		99
88) 3,3'-Dichlorobenzidine	12.209	252	256800	47.43	ppm		95
89) Chrysene	12.257	228	495929	42.34	ppm		98
90) bis(2-Ethylhexyl)phtha...	12.375	149	313276	44.17	ppm		97
92) Di-n-octylphthalate	13.321	149	548118	40.46	ppm		90
93) Benzo[b]fluoranthene	13.732	252	510646	35.54	ppm		97
94) Benzo[k]fluoranthene	13.769	252	473115	37.24	ppm		97
95) Benzo[a]pyrene	14.154	252	465165	36.05	ppm		96
96) Indeno[1,2,3-cd]pyrene	15.612	276	484544	37.57	ppm		76

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50935.d
Acq On : 5 Jun 2018 6:03 pm
Operator : christc2
Sample : op12498-ms Inst : MS5P
Misc : op12498,e5p2426,900,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 22:36:52 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
98)	Dibenz[a,h]anthracene	15.650	278	472340	36.53	ppm		92
99)	7,12-Dimethylbenz(a)an...	13.732	256	134515	22.61	ppm		92
100)	Benzo[g,h,i]perylene	15.992	276	480325	38.84	ppm		87
102)	Benzaldehyde	4.020	105	84092	37.65	ppm	#	82
104)	1,2,4,5-Tetrachloroben...	6.472	216	152126	53.40	ppm		98
110)	Atrazine	8.534	215	48302	54.03	ppm		92
111)	Pentachloronitrobenzene	8.619	295	20991	53.36	ppm		81

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

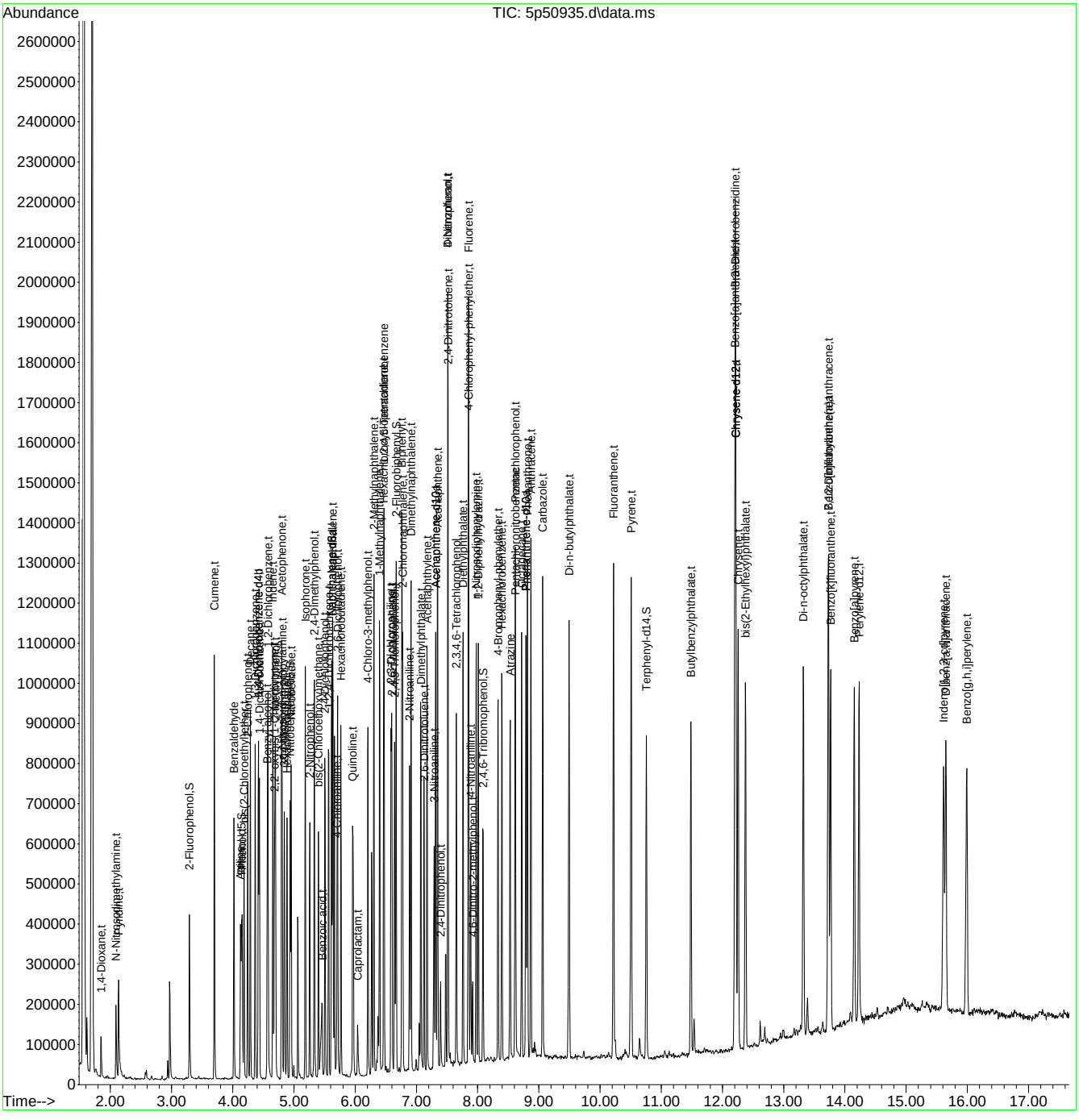
9.4.1

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50935.d
Acq On : 5 Jun 2018 6:03 pm
Operator : christc2
Sample : op12498-ms Inst : MS5P
Misc : op12498,e5p2426,900,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 22:36:52 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50936.d
Acq On : 5 Jun 2018 6:29 pm
Operator : christc2
Sample : op12498-msd Inst : MS5P
Misc : op12498,e5p2426,900,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 22:38:29 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.420	152	90228	40.00	ppm	0.00
24) Naphthalene-d8	5.617	136	362415	40.00	ppm	0.00
47) Acenaphthene-d10	7.316	164	192179	40.00	ppm	0.00
69) Phenanthrene-d10	8.790	188	385261	40.00	ppm	0.00
83) Chrysene-d12	12.220	240	389959	40.00	ppm	0.00
91) Perylene-d12	14.234	264	439741	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.420	152	90228	40.00	ppm	0.00
103) Acenaphthene-d10a	7.316	164	192179	40.00	ppm	0.00
105) Chrysene-d12a	12.220	240	389959	40.00	ppm	0.00
108) Phenanthrene-d10a	8.790	188	385261	40.00	ppm	0.00
112) Naphthalene-d8a	5.617	136	362415	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.293	112	81654	25.79	ppm	-0.02
Spiked Amount 50.000			Recovery = 51.58%			
8) Phenol-d5	4.142	99	75693	18.69	ppm	0.03
Spiked Amount 50.000			Recovery = 37.38%			
25) Nitrobenzene-d5	4.938	82	161509	45.10	ppm	-0.02
Spiked Amount 50.000			Recovery = 90.20%			
51) 2-Fluorobiphenyl	6.669	172	303676	44.78	ppm	0.00
Spiked Amount 50.000			Recovery = 89.56%			
73) 2,4,6-Tribromophenol	8.090	330	76494	44.88	ppm	0.08
Spiked Amount 50.000			Recovery = 89.76%			
85) Terphenyl-d14	10.756	244	320636	32.63	ppm	-0.02
Spiked Amount 50.000			Recovery = 65.26%			
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.845	88	23090	15.85	ppm	74
3) Pyridine	2.134	79	56008	16.17	ppm #	55
4) N-Nitrosodimethylamine	2.091	74	39025	19.77	ppm #	23
6) Indene	4.655	116	218228	41.53	ppm	94
7) Cumene	3.699	105	298787	36.47	ppm	92
9) Phenol	4.153	94	84915	18.95	ppm	79
10) Aniline	4.126	93	108176	22.74	ppm	62
11) bis(2-Chloroethyl)ether	4.185	93	119546	41.35	ppm	94
12) 2-Chlorophenol	4.244	128	125866	36.60	ppm	88
13) Decane	4.287	43	162370	37.20	ppm	83
14) 1,3-Dichlorobenzene	4.367	146	137173	36.31	ppm	99
15) 1,4-Dichlorobenzene	4.436	146	138047	37.94	ppm	99
16) Benzyl alcohol	4.564	108	73632	33.87	ppm #	66
17) 1,2-Dichlorobenzene	4.575	146	134156	38.16	ppm	96
18) Acetophenone	4.800	105	193804	39.24	ppm	90
19) 2-Methylphenol	4.698	108	100790	32.93	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.682	45	302180	57.65	ppm	85
21) 3&4-Methylphenol	4.842	108	102428	32.58	ppm	92
22) n-Nitroso-di-n-propyla...	4.810	70	94621	40.80	ppm #	66
23) Hexachloroethane	4.885	201	56766	36.37	ppm	98
26) Nitrobenzene	4.954	77	150672	42.72	ppm	81
27) Quinoline	5.959	129	253428	36.73	ppm	94
28) Isophorone	5.184	82	278709	43.12	ppm	85
29) 2-Nitrophenol	5.259	139	76965	40.77	ppm	66
30) 2,4-Dimethylphenol	5.334	107	151078	47.06	ppm	85

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50936.d
Acq On : 5 Jun 2018 6:29 pm
Operator : christc2
Sample : op12498-msd Inst : MS5P
Misc : op12498,e5p2426,900,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 22:38:29 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
31) Benzoic acid	5.462	105	76055	27.93	ppm		86
32) bis(2-Chloroethoxy)met...	5.403	93	147823	44.17	ppm		96
33) 2,4-Dichlorophenol	5.510	162	126034	41.56	ppm		97
34) 2,6-Dichlorophenol	5.713	162	124597	42.73	ppm		95
36) 1,2,4-Trichlorobenzene	5.569	180	136389	39.20	ppm		96
38) Naphthalene	5.638	128	364705	39.77	ppm		99
39) 4-Chloroaniline	5.708	127	106332	26.39	ppm		90
40) 2,3-Dichloroaniline	6.584	161	151515	39.48	ppm		93
41) Caprolactam	6.039	55	27624	12.65	ppm		84
42) Hexachlorobutadiene	5.766	225	86968	42.04	ppm		97
43) 4-Chloro-3-methylphenol	6.210	107	140408	44.52	ppm		83
44) 2-Methylnaphthalene	6.306	141	231197	40.56	ppm		94
45) 1-Methylnaphthalene	6.397	141	209233	35.21	ppm		93
46) Dimethylnaphthalene	6.915	156	248554	39.32	ppm		97
48) Hexachlorocyclopentadiene	6.466	237	106042	52.36	ppm		96
49) 2,4,6-Trichlorophenol	6.600	196	96262	49.98	ppm		83
50) 2,4,5-Trichlorophenol	6.643	196	103103	48.28	ppm		96
52) 2-Chloronaphthalene	6.776	162	260943	45.99	ppm		95
53) Biphenyl	6.760	154	343036	44.09	ppm		99
54) 2-Nitroaniline	6.888	65	112265	61.13	ppm	#	61
55) Dimethylphthalate	7.075	163	350605	52.00	ppm		98
56) Acenaphthylene	7.177	152	407329	47.30	ppm		99
57) 2,6-Dinitrotoluene	7.129	165	74334	48.55	ppm		80
58) 3-Nitroaniline	7.289	138	67009	38.33	ppm		74
59) Acenaphthene	7.348	153	294000	49.62	ppm		95
60) 2,4-Dinitrophenol	7.396	184	28109	30.10	ppm	#	67
61) 4-Nitrophenol	7.513	109	36220	36.93	ppm	#	1
62) Dibenzofuran	7.513	168	405140	49.79	ppm		88
63) 2,4-Dinitrotoluene	7.519	165	98861	48.06	ppm	#	48
64) 2,3,4,6-Tetrachlorophenol	7.652	232	105521	51.33	ppm		97
65) Diethylphthalate	7.764	149	334003	52.86	ppm		95
66) Fluorene	7.850	166	328568	49.64	ppm		97
67) 4-Chlorophenyl-phenyle...	7.855	204	165044	48.66	ppm		97
68) 4-Nitroaniline	7.887	138	68105	40.02	ppm	#	62
70) 4,6-Dinitro-2-methylph...	7.919	198	28038	19.70	ppm		95
71) n-Nitrosodiphenylamine	7.978	169	229329	44.24	ppm		99
72) 1,2-Diphenylhydrazine	8.010	77	324238	48.86	ppm		98
74) 4-Bromophenyl-phenylether	8.336	248	116925	44.00	ppm		86
75) Hexachlorobenzene	8.395	284	135842	44.47	ppm		92
76) Pentachlorophenol	8.614	266	100980	61.32	ppm		98
77) Phenanthrene	8.817	178	498433	47.72	ppm		99
78) Anthracene	8.870	178	500832	46.74	ppm		91
79) Carbazole	9.063	167	468910	46.92	ppm		100
80) Di-n-butylphthalate	9.495	149	556418	46.36	ppm		98
81) Fluoranthene	10.222	202	594908	46.35	ppm		97
82) Octadecane	8.721	57	206234	36.47	ppm		85
84) Pyrene	10.510	202	613919	46.17	ppm		99
86) Butylbenzylphthalate	11.488	149	256635	47.16	ppm		90
87) Benzo[a]anthracene	12.204	228	555875	44.85	ppm		99
88) 3,3'-Dichlorobenzidine	12.215	252	290832	54.45	ppm		95
89) Chrysene	12.257	228	517486	44.78	ppm		97
90) bis(2-Ethylhexyl)phtha...	12.375	149	311270	44.48	ppm		99
92) Di-n-octylphthalate	13.320	149	564787	42.54	ppm		91
93) Benzo[b]fluoranthene	13.732	252	517056	36.72	ppm		96
94) Benzo[k]fluoranthene	13.769	252	497463	39.95	ppm		94
95) Benzo[a]pyrene	14.154	252	472423	37.36	ppm		96
96) Indeno[1,2,3-cd]pyrene	15.612	276	505498	40.00	ppm		77

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50936.d
Acq On : 5 Jun 2018 6:29 pm
Operator : christc2
Sample : op12498-msd Inst : MS5P
Misc : op12498,e5p2426,900,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 22:38:29 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
98)	Dibenz[a,h]anthracene	15.650	278	490741	38.73	ppm		91
99)	7,12-Dimethylbenz(a)an...	13.732	256	130891	22.45	ppm		84
100)	Benzo[g,h,i]perylene	15.992	276	496858	40.99	ppm		86
102)	Benzaldehyde	4.020	105	82263	40.16	ppm	#	80
104)	1,2,4,5-Tetrachloroben...	6.472	216	145617	53.45	ppm		100
110)	Atrazine	8.534	215	50175	57.14	ppm		94
111)	Pentachloronitrobenzene	8.619	295	22320	57.76	ppm		89

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

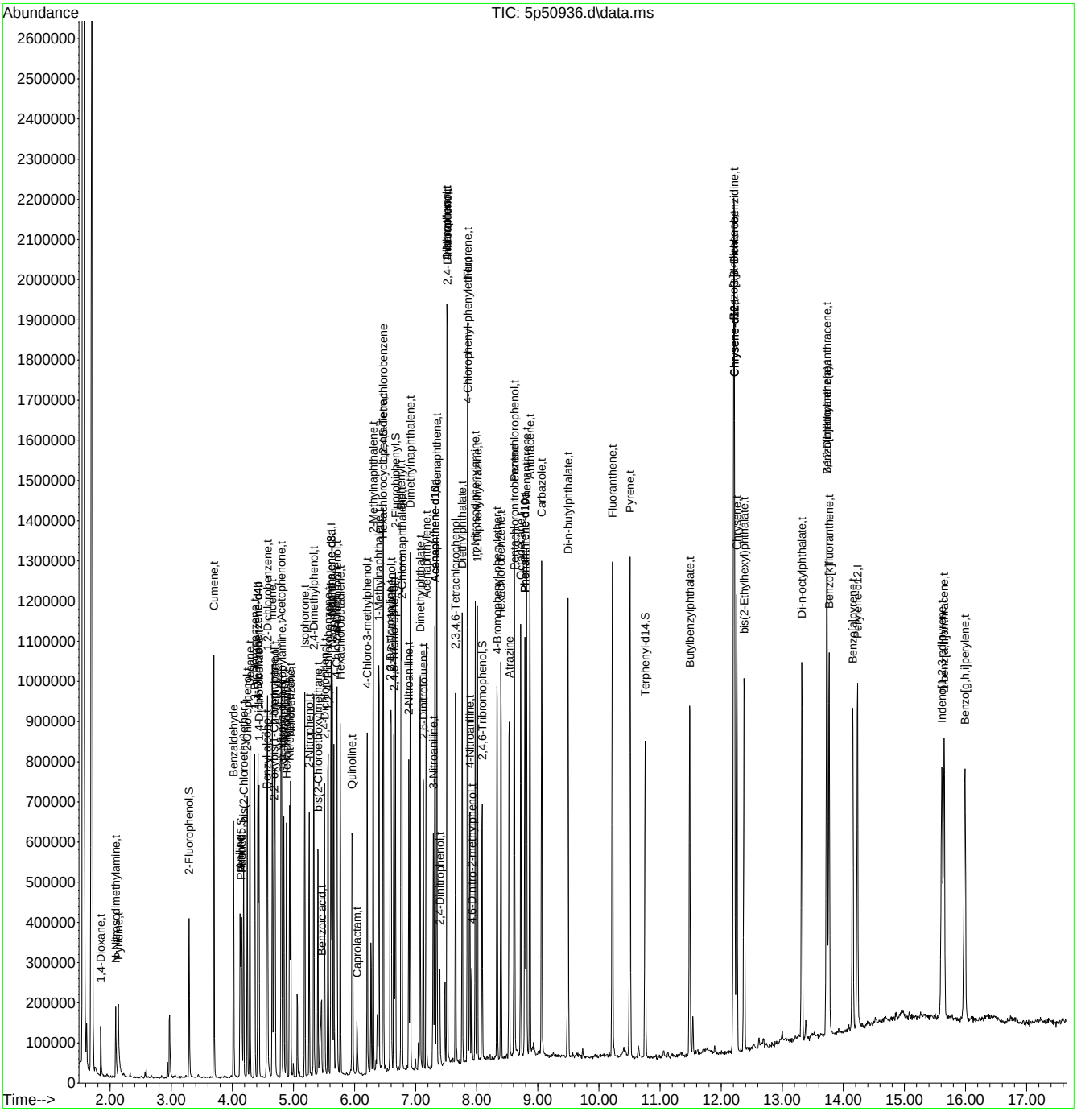
9.4.2

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50936.d
Acq On : 5 Jun 2018 6:29 pm
Operator : christc2
Sample : op12498-msd Inst : MS5P
Misc : op12498,e5p2426,900,,,1,1
ALS Vial : 12 Sample Multiplier: 1

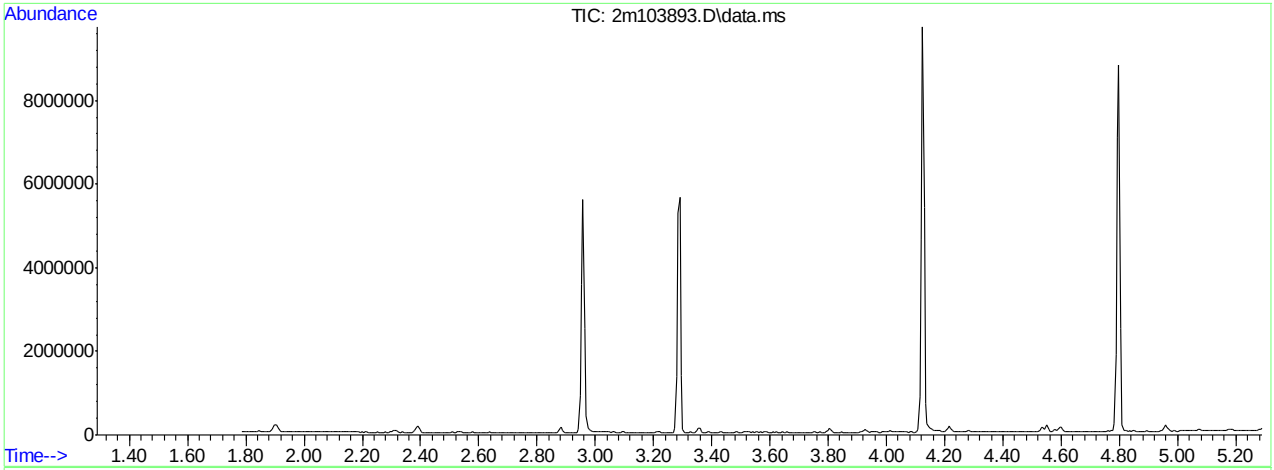
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 22:38:29 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

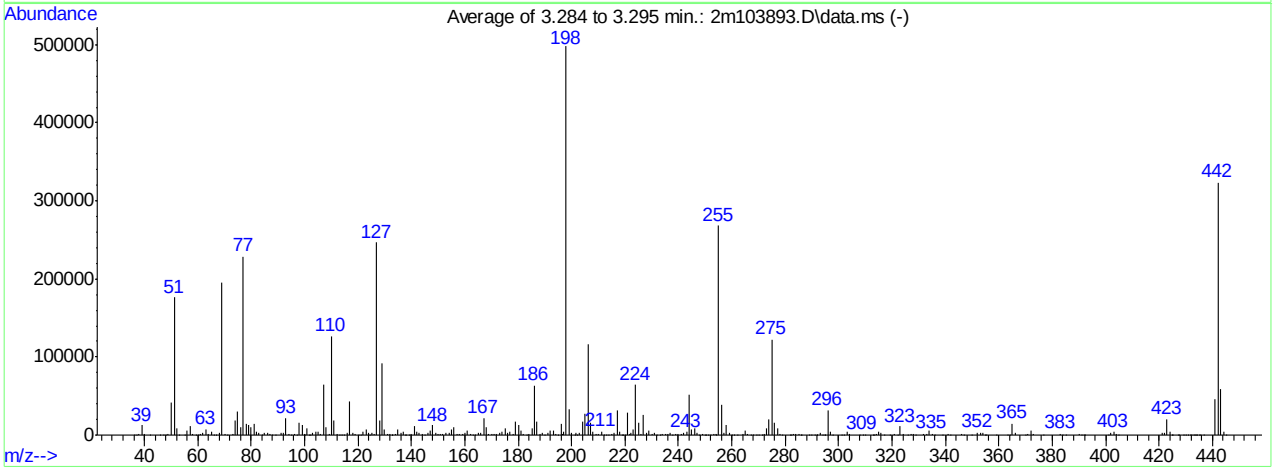


DFTPP

Data File : C:\msdchem\1\DATA\E2M4618\2m103893.D Vial: 1
Acq On : 9 May 2018 10:22 am Operator: christc2
Sample : dftpp Inst : MS2M
Misc : op10486,e2m4618,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\DFTPP2M.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um





AutoFind: Scans 281, 282, 283; Background Corrected with Scan 275

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	35.4	176008	PASS
68	69	0.00	2	1.5	2989	PASS
69	198	0.00	100	39.2	194999	PASS
70	69	0.00	2	0.5	895	PASS
127	198	40	60	49.6	246965	PASS
197	198	0.00	1	0.9	4345	PASS
198	198	100	100	100.0	497856	PASS
199	198	5	9	6.6	32775	PASS
275	198	10	30	24.5	122106	PASS
365	198	1	100	3.0	14865	PASS
441	443	0.10	100	78.6	46565	PASS
442	198	40	100	65.0	323541	PASS
443	442	17	23	18.3	59280	PASS

2m103893.D DFTPP2M.M Fri May 11 15:03:00 2018

Average of 3.284 to 3.295 min.: 2m103893.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	289	51.10	176008	63.00	7570	74.95	29585
36.95	326	52.10	8656	64.00	1083	76.10	10433
38.00	1892	52.95	116	64.95	4070	77.05	228936
39.05	12315	55.05	716	66.00	550	78.05	14389
39.95	882	56.00	5190	66.90	314	79.00	12361
42.05	653	57.05	11685	68.00	2989	80.00	9832
46.00	100	58.00	855	69.00	194999	81.00	14434
46.90	173	59.10	268	70.00	895	82.00	4187
48.00	276	60.00	418	71.00	47	83.00	3194
48.95	956	60.95	1937	73.00	1781	83.95	325
50.05	41455	62.00	2248	74.00	18297	85.00	2336

Average of 3.284 to 3.295 min.: 2m103893.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
85.95	3527	97.95	15408	107.00	65098	118.00	3183
87.00	1953	99.00	12912	108.00	10133	118.95	876
88.00	477	99.95	1125	109.05	1913	120.05	757
89.15	535	100.20	145	110.00	127101	120.90	239
91.00	3024	101.00	8376	111.00	18847	122.00	3767
92.00	3579	101.85	417	112.00	1663	123.00	6751
93.00	22004	102.20	185	113.00	687	123.95	2732
94.00	1586	103.00	3114	114.00	209	124.20	189
94.95	138	104.00	4853	114.90	377	125.00	2684
96.05	886	105.00	4650	116.00	3370	126.15	1825
96.95	239	106.00	1817	116.95	42559	127.00	246965

Average of 3.284 to 3.295 min.: 2m103893.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
128.00	18724	137.70	363	148.00	12510	159.00	1614
129.00	91554	137.95	659	149.00	2430	160.00	3369
130.00	7759	139.00	397	150.10	872	161.00	5219
131.05	1485	140.05	946	151.00	1249	162.00	1787
132.00	906	141.00	11194	151.75	1060	162.95	692
132.60	184	142.00	3702	153.00	3399	163.95	668
132.95	119	143.00	2768	154.05	2840	164.95	3582
134.00	1953	144.00	907	155.00	6850	166.00	3223
134.95	7055	145.00	664	156.00	9831	167.00	21686
136.00	2967	146.00	2353	156.95	1986	168.00	10098
137.05	3855	147.00	6398	158.00	1864	169.00	1689

Average of 3.284 to 3.295 min.: 2m103893.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.00	866	181.00	5326	192.00	5403	201.55	2556
170.95	873	182.00	929	193.00	6160	202.10	508
172.00	2189	182.95	747	194.05	1404	203.00	3473
173.05	3008	184.05	979	195.00	680	204.00	16704
174.05	4783	185.05	8288	196.00	14647	205.05	27117
175.00	8386	186.00	63824	196.70	1672	206.10	115776
176.00	3240	187.00	17328	197.05	4345	207.00	15349
177.00	4495	188.00	1906	198.00	497856	208.00	3694
178.05	1537	189.00	3634	199.00	32775	208.95	1198
179.00	16972	189.95	591	200.05	2857	210.20	2025
180.00	12324	191.00	2208	201.30	200	211.10	4625

Average of 3.284 to 3.295 min.: 2m103893.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
211.90	105	221.70	1935	231.95	446	243.00	4057
213.10	163	222.00	2403	233.10	520	244.05	52338
213.80	113	222.95	6637	234.00	1595	245.05	6832
215.05	1167	224.00	64154	235.00	2084	246.00	9291

216.00	2582	225.00	16217	235.95	1430	246.95	2308
217.00	31249	226.05	1712	237.00	2531	247.95	623
218.00	3969	227.00	25815	237.90	229	248.95	2161
219.00	220	228.00	3381	238.90	1083	249.80	267
219.20	252	229.00	5528	239.90	975	250.10	260
220.05	504	230.05	869	241.00	1469	250.95	343
221.00	29418	231.00	2636	242.00	3620	251.95	638

Average of 3.284 to 3.295 min.: 2m103893.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
253.05	1417	263.95	859	275.00	122106	286.10	134
254.00	2013	265.00	5749	276.00	15881	288.95	433
254.20	270	265.95	990	277.00	8761	289.95	391
255.00	267906	266.90	47	277.95	1622	291.10	160
256.00	38678	267.90	305	278.90	190	291.80	202
257.00	3529	269.20	112	281.80	136	292.00	218
258.00	13546	269.95	385	282.00	203	293.00	2370
259.00	2316	271.10	575	283.00	1377	294.05	635
260.00	107	271.95	830	284.00	911	294.70	254
261.00	516	273.00	8417	285.05	1806	295.00	332
261.90	132	274.00	19847	285.80	145	296.00	32202

Average of 3.284 to 3.295 min.: 2m103893.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
297.00	4069	314.05	1753	327.90	1187	346.95	336
297.90	321	315.00	4540	329.00	143	350.00	122
300.95	443	316.00	2478	331.95	858	352.00	3146
301.85	436	316.90	317	333.00	1124	353.00	2418
303.00	3725	319.10	124	334.00	6434	354.00	3144
304.00	996	321.00	1302	335.05	1811	354.90	255
308.00	459	322.05	476	336.00	117	355.05	329
309.00	460	323.00	10860	339.00	115	358.90	114
310.00	447	324.00	1912	341.10	1687	363.20	101
312.80	104	325.90	113	341.95	299	363.95	211
313.10	184	327.00	2180	346.00	2189	365.00	14865

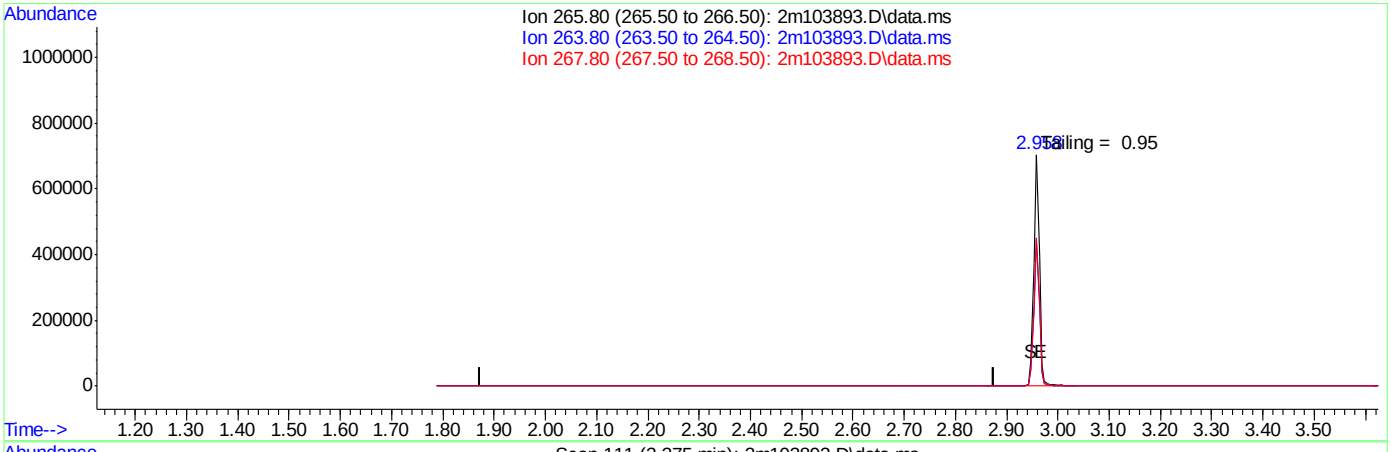
Average of 3.284 to 3.295 min.: 2m103893.D\data.ms
dftpp
Modified:subtracted

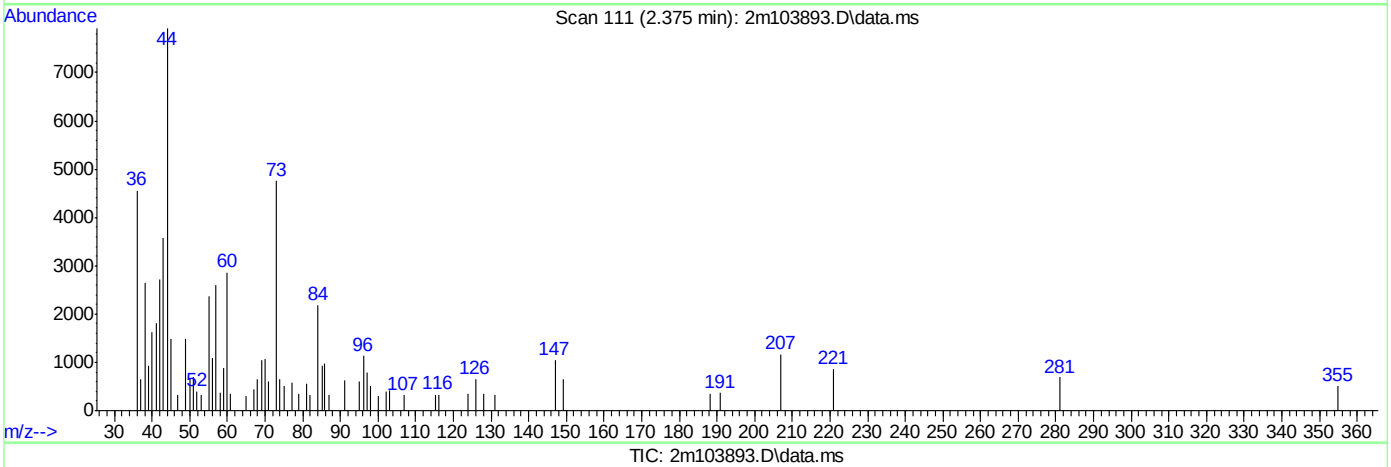
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
366.00	2212	391.80	110	424.90	106	433.70	166
370.05	334	392.05	557	425.10	212	434.10	137
371.00	914	400.95	370	426.90	127	434.90	132
372.00	5628	402.00	2518	427.30	104	435.60	123
373.05	1726	403.00	3830	429.00	343	436.70	155
376.80	108	404.05	1076	429.90	104	441.10	46565
383.00	1798	404.90	109	430.90	142	442.10	323541
383.95	372	421.00	3104	431.80	155	443.10	59280
384.90	147	422.05	2529	432.10	117	444.10	4941
390.05	1031	423.05	20304	432.90	296	444.95	226
390.95	752	424.05	3862	433.40	161		

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103893.D
Acq On : 9 May 2018 10:22 am
Operator : christc2
Sample : dftpp
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 09 10:27:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2M.M
Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Sun Jan 28 15:07:48 2018
Response via : Initial Calibration





TIC: 2m103893.D\data.ms

(1) Pentachlorophenol (t)

2.375min (-2.375) 0.00ppb

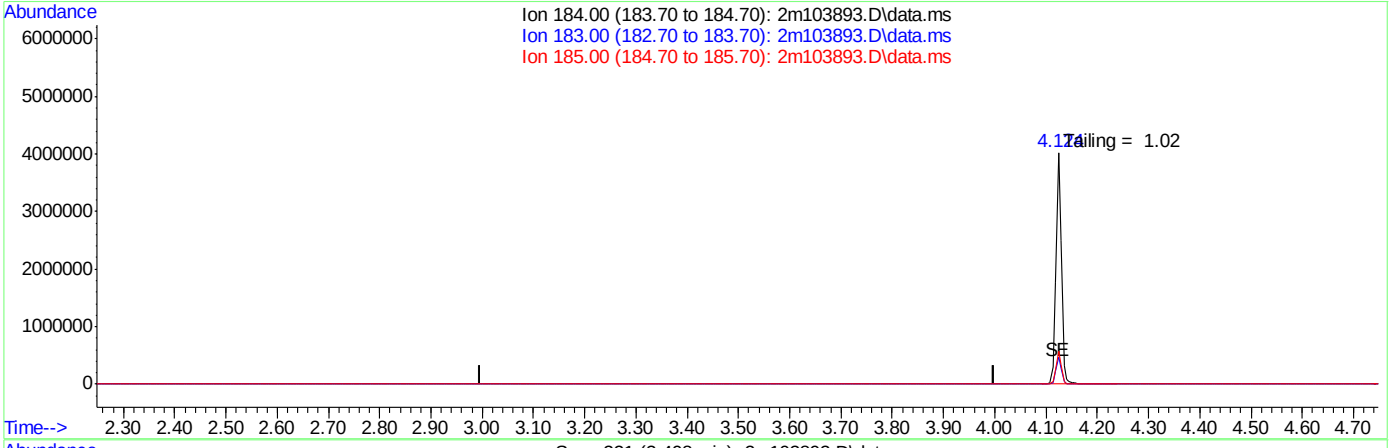
response 0

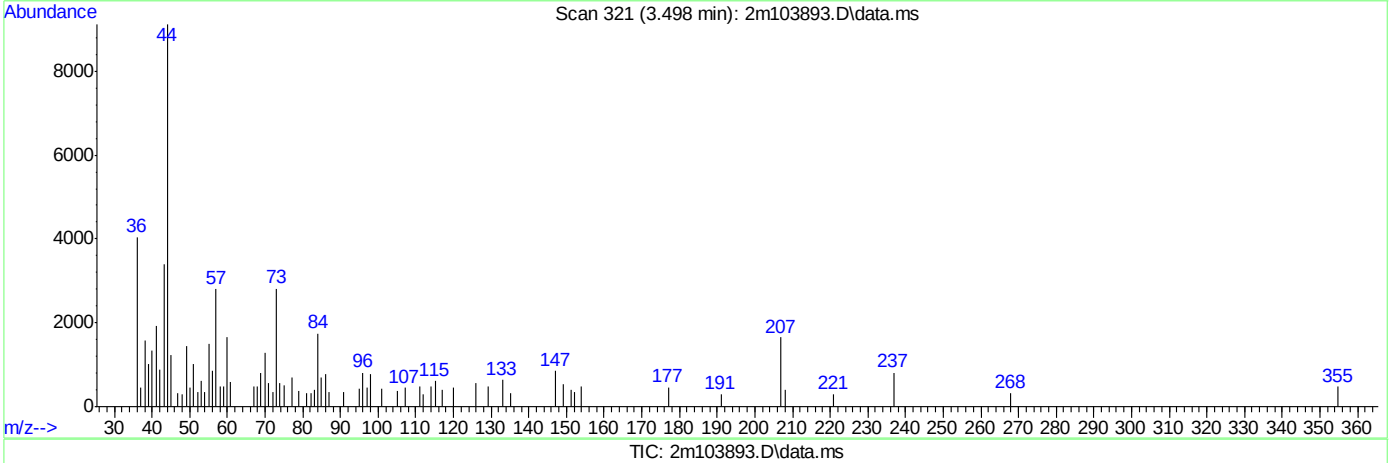
Ion	Exp%	Act%
265.80	100	0.00
263.80	61.00	0.00#
267.80	65.30	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103893.D
Acq On    :  9 May 2018  10:22 am
Operator  : christc2
Sample    : dftpp
Misc      : op10486,e2m4618,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: May 09 10:27:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2M.M
Quant Title  : Semi Volatile  GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Sun Jan 28 15:07:48 2018
Response via : Initial Calibration
```





TIC: 2m103893.D\data.ms

(2) Benzidine (t)

3.498min (-3.498) 0.00ppb

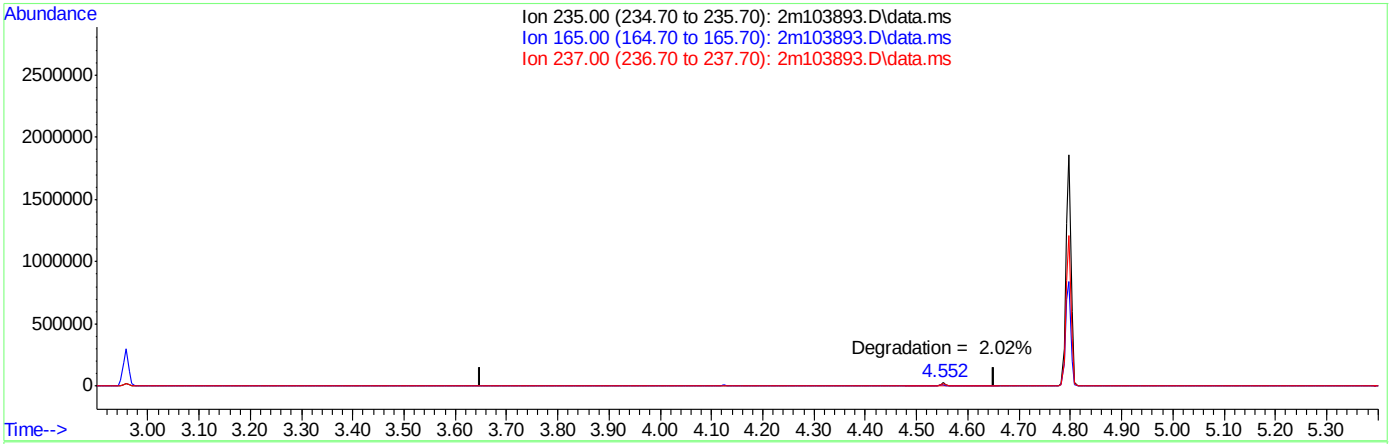
response 0

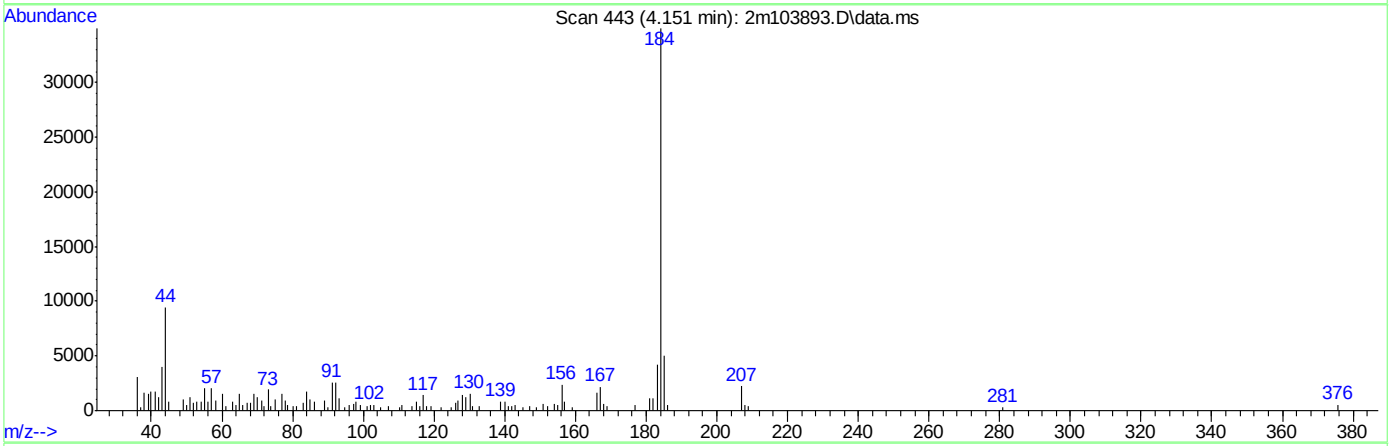
Ion	Exp%	Act%
184.00	100	0.00
183.00	10.60	0.00
185.00	13.50	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103893.D
Acq On    :  9 May 2018  10:22 am
Operator  : christc2
Sample    : dftpp
Misc      : op10486,e2m4618,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: May 09 10:27:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2M.M
Quant Title  : Semi Volatile  GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Sun Jan 28 15:07:48 2018
Response via : Initial Calibration
```





TIC: 2m103893.D\data.ms

(3) PP-DDT (t)

4.151min (-4.151) 0.00ppb

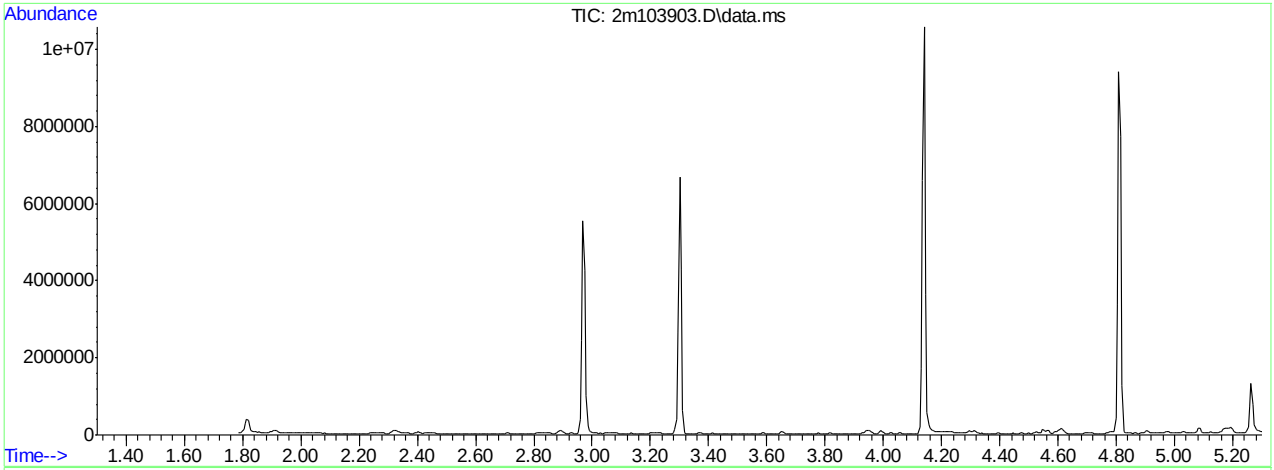
response 0

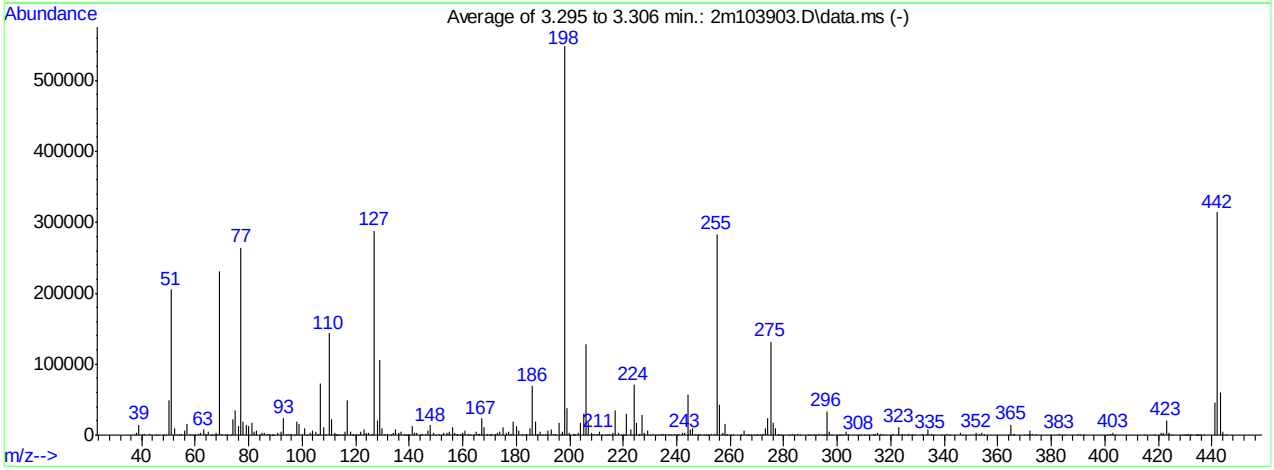
Ion	Exp%	Act%
235.00	100	0.00
165.00	52.20	0.00#
237.00	60.60	0.00#
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\E2M4619\2m103903.D Vial: 1
Acq On : 9 May 2018 6:30 pm Operator: sufiyana
Sample : dftpp Inst : MS2M
Misc : op10486,e2m4619,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\DFTPP2M.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um





AutoFind: Scans 283, 284, 285; Background Corrected with Scan 278

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	37.4	205172	PASS
68	69	0.00	2	1.3	3087	PASS
69	198	0.00	100	42.0	230153	PASS
70	69	0.00	2	0.7	1679	PASS
127	198	40	60	52.6	288469	PASS
197	198	0.00	1	0.9	4778	PASS
198	198	100	100	100.0	548117	PASS
199	198	5	9	6.9	37624	PASS
275	198	10	30	24.0	131669	PASS
365	198	1	100	2.7	14986	PASS
441	443	0.10	100	75.2	45789	PASS
442	198	40	100	57.4	314570	PASS
443	442	17	23	19.3	60857	PASS

2m103903.D DFTPP2M.M Fri May 11 15:04:50 2018

Average of 3.295 to 3.306 min.: 2m103903.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.05	692	51.05	205172	62.05	2899	71.00	735
38.10	2470	52.10	9471	63.05	7829	72.05	489
39.05	14420	53.00	313	64.00	1073	73.05	409
39.95	778	54.10	255	65.00	4749	74.00	21935
41.05	1086	55.00	1529	65.90	240	75.00	35517
43.10	970	56.00	5913	66.10	265	76.05	12846
45.05	159	57.00	15867	66.95	495	77.05	264549
45.90	101	58.00	952	68.00	3087	78.05	18949
48.00	111	58.95	254	68.20	673	79.00	15068
48.90	833	59.90	415	69.00	230153	80.00	11974
50.10	48578	61.00	2170	70.00	1679	81.00	18086

Average of 3.295 to 3.306 min.: 2m103903.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
82.00	5266	93.00	24066	104.00	5800	113.00	474
83.00	5649	94.00	1979	105.00	5591	113.20	187
84.00	693	95.05	1475	105.90	425	113.85	373
85.00	3654	96.05	2068	106.10	1580	115.00	618
85.95	3892	97.05	417	106.95	73487	116.00	4176
87.00	2271	98.00	18771	108.00	11891	117.00	49010
88.05	974	99.00	16026	109.00	2353	118.00	4056
88.80	353	100.00	1327	110.00	143517	118.80	150
89.00	145	101.00	9766	111.00	21409	118.95	415
91.00	3310	101.90	619	112.05	2819	120.05	1013
92.00	4303	102.95	3396	112.80	192	121.00	565

Average of 3.295 to 3.306 min.: 2m103903.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
122.00	4682	132.95	431	143.00	2722	153.00	4000
123.00	7797	134.00	3154	143.90	118	154.00	3366
124.00	3212	135.00	8498	144.10	697	154.90	1396
124.95	4013	136.00	3434	145.00	967	155.05	5555
126.05	1840	137.00	4243	146.00	1855	156.00	10955
127.00	288469	138.05	1038	146.95	5660	157.05	2500
128.00	21119	138.80	171	148.00	14155	157.80	433
129.00	106541	139.05	347	149.00	3013	158.00	1879
130.00	9461	140.05	1129	149.95	828	158.95	1814
131.05	1516	141.00	12420	151.10	1727	160.00	3797
131.95	1150	141.95	3832	151.90	248	161.00	5688

Average of 3.295 to 3.306 min.: 2m103903.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
161.90	500	170.60	322	181.00	6248	192.00	6041
162.05	1514	170.95	1050	182.00	973	193.05	7272
163.00	599	171.95	2344	182.90	732	194.05	1537
164.05	785	173.00	3355	184.00	2064	194.90	1219
164.90	4110	174.00	5523	185.05	8877	196.00	17282
165.90	1733	175.00	10482	186.00	68861	196.80	1293
166.10	1647	176.10	3035	187.00	19378	197.05	4778
167.00	23234	176.95	4456	188.05	2322	198.00	548117
168.00	10881	178.00	1609	189.00	4187	199.00	37624
169.00	2152	179.00	18748	189.90	741	199.95	2815
169.95	737	180.00	12940	191.05	1993	201.30	594

Average of 3.295 to 3.306 min.: 2m103903.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
201.50	2389	211.05	4622	221.00	30058	231.95	646
202.00	205	212.10	382	223.00	7293	232.85	643
202.95	3728	213.05	424	224.05	70701	233.95	1461
204.00	18020	214.00	170	225.00	16697	234.95	2043

205.05	30905	215.00	1206	225.90	306	235.95	1498
206.05	128066	216.05	2693	226.05	1427	237.00	1876
207.00	17564	217.00	34093	227.00	28585	238.00	411
208.00	4006	218.00	3848	228.00	3771	238.95	1185
209.00	1253	219.00	203	229.00	5774	240.05	818
210.05	989	219.80	265	229.85	651	240.90	1706
210.40	1148	220.10	528	231.00	2378	242.05	3519

Average of 3.295 to 3.306 min.: 2m103903.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
243.05	3875	252.95	1495	265.00	5783	274.00	23265
244.00	56834	254.10	2278	265.90	697	275.00	131669
245.05	7342	255.00	283333	266.80	299	276.00	16998
246.00	9741	256.00	43066	267.00	110	277.00	10098
246.95	2069	257.00	3557	267.75	275	277.70	152
247.90	506	258.00	16407	269.10	114	277.95	1705
248.95	2408	259.00	2411	269.90	182	278.95	551
250.05	514	259.95	444	270.10	166	281.90	112
251.00	592	261.00	370	270.95	703	283.05	1396
251.70	396	263.80	414	272.05	969	284.00	840
251.90	233	264.00	212	273.00	8950	285.05	1972

Average of 3.295 to 3.306 min.: 2m103903.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
285.90	210	297.95	302	314.00	1380	327.95	1128
289.00	330	300.90	256	315.00	3826	329.00	283
290.05	490	301.10	238	316.05	2003	331.95	929
291.00	180	302.05	637	317.05	385	333.05	800
291.95	567	303.05	4160	321.05	1139	334.00	7539
293.00	2372	304.10	1167	322.00	730	335.05	1925
293.90	741	307.90	397	323.05	11281	336.10	100
294.80	413	308.90	131	324.00	2228	339.00	146
295.10	197	310.00	340	325.05	348	340.95	1334
296.00	33640	311.10	137	326.30	110	342.00	340
297.00	4948	313.10	342	326.90	2199	346.00	2740

Average of 3.295 to 3.306 min.: 2m103903.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
346.90	366	372.05	6614	403.00	3364	429.70	157
352.00	3714	373.00	1315	403.95	830	430.00	153
353.00	2234	374.10	157	414.90	265	430.50	129
354.05	3402	382.95	1686	418.50	106	431.10	109
354.95	677	383.95	460	421.00	2485	431.80	170
364.20	168	385.00	110	422.00	2905	432.20	122
365.00	14986	389.95	965	423.00	21376	433.80	242
365.80	225	390.95	528	423.90	352	434.50	231
366.00	2232	392.05	362	424.05	3171	434.80	114
369.90	206	400.90	417	425.00	435	435.00	152
371.00	842	402.00	2044	429.10	119	435.50	112

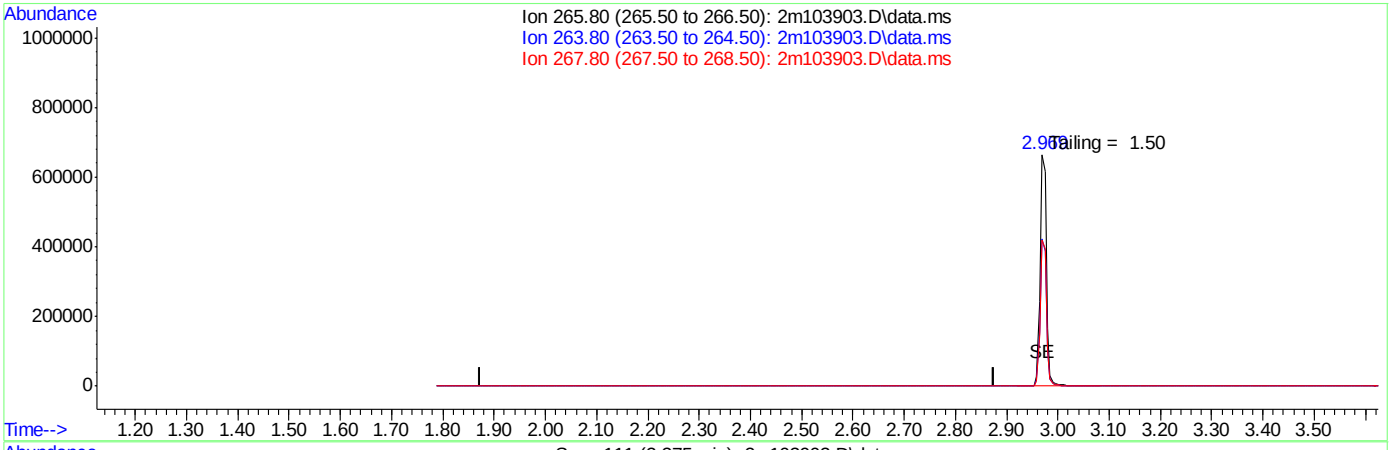
Average of 3.295 to 3.306 min.: 2m103903.D\data.ms
dftpp
Modified:subtracted

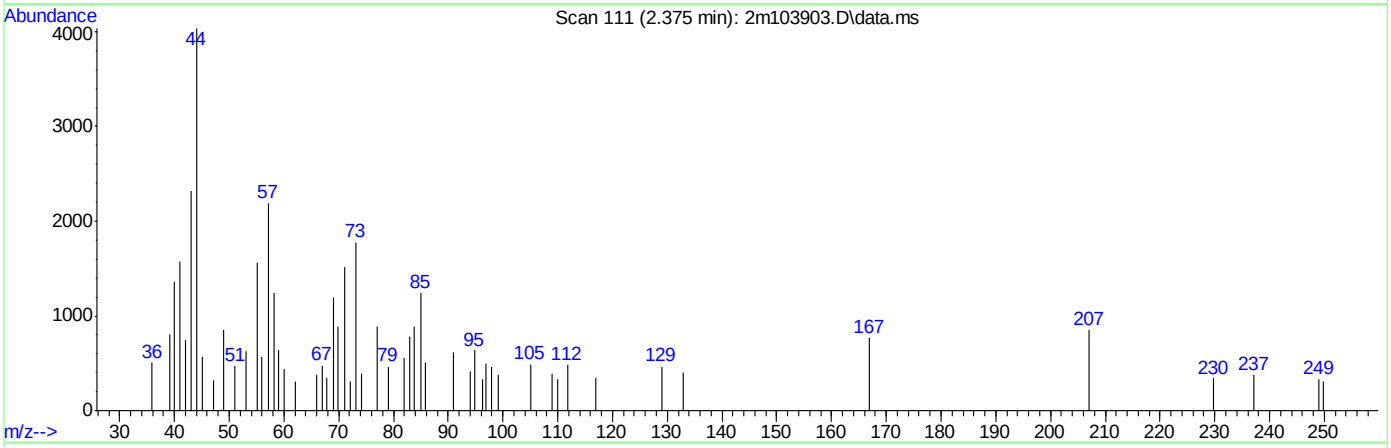
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
437.00	136						
441.10	45789						
442.10	314570						
443.10	60857						
444.05	5040						
445.10	199						

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E2M4619\
Data File : 2m103903.D
Acq On    :  9 May 2018   6:30 pm
Operator  : sufiyana
Sample    : dftpp
Misc      : op10486,e2m4619,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: May 09 18:35:58 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2M.M
Quant Title  : Semi Volatile  GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Sun Jan 28 15:07:48 2018
Response via : Initial Calibration
```





TIC: 2m103903.D\data.ms

(1) Pentachlorophenol (t)

2.375min (-2.375) 0.00ppb

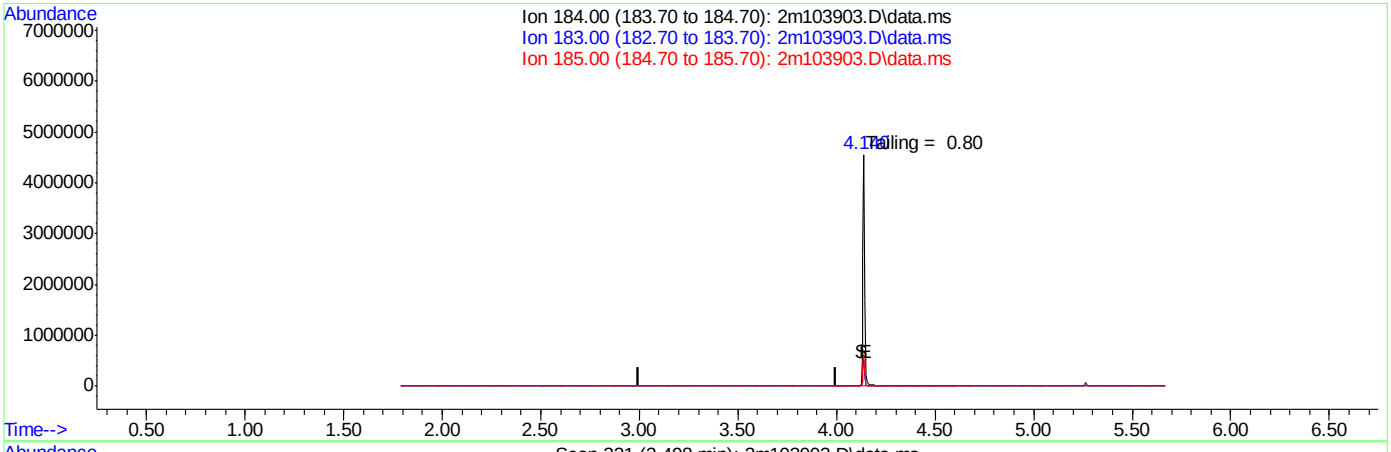
response 0

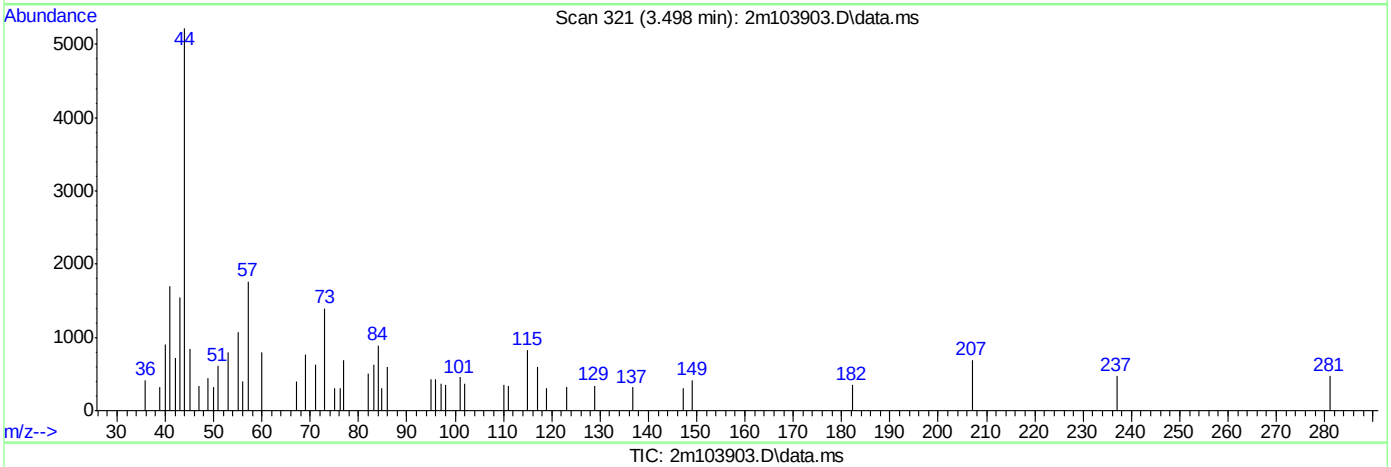
Ion	Exp%	Act%
265.80	100	0.00
263.80	61.00	0.00#
267.80	65.30	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E2M4619\
Data File : 2m103903.D
Acq On : 9 May 2018 6:30 pm
Operator : sufiyana
Sample : dftpp
Misc : op10486,e2m4619,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 09 18:35:58 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2M.M
Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Sun Jan 28 15:07:48 2018
Response via : Initial Calibration





TIC: 2m103903.D\data.ms

(2) Benzidine (t)

3.498min 0.00ppb d

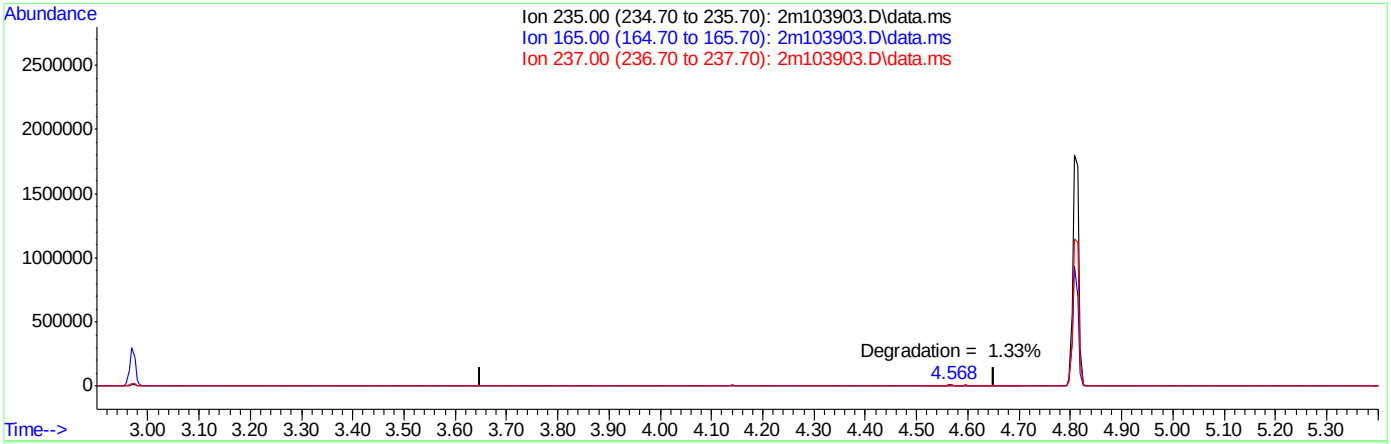
response 0

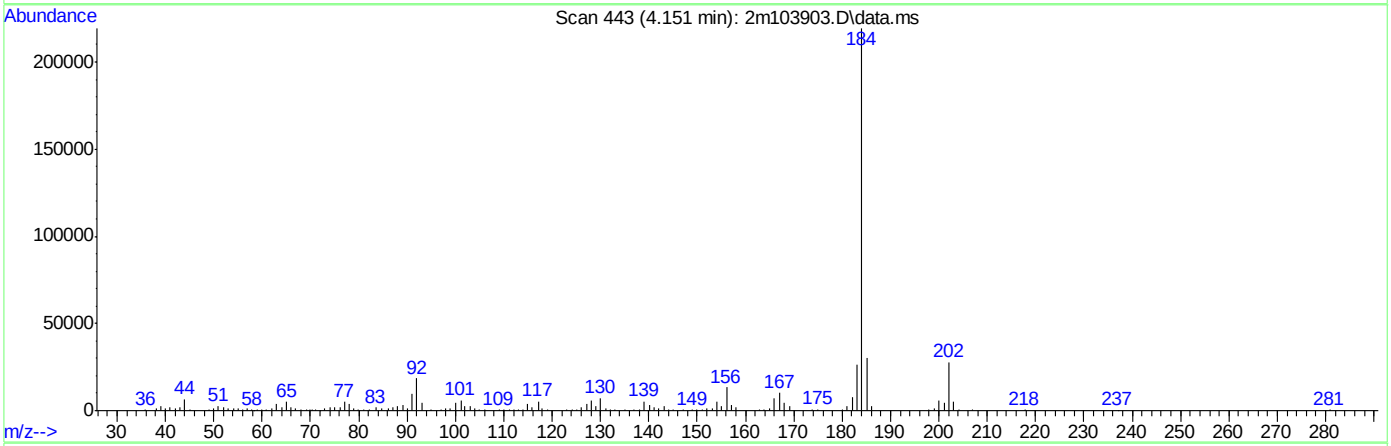
Ion	Exp%	Act%
184.00	100	0.00
183.00	10.60	0.00
185.00	13.50	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E2M4619\
Data File : 2m103903.D
Acq On : 9 May 2018 6:30 pm
Operator : sufiyana
Sample : dftpp
Misc : op10486,e2m4619,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 09 18:35:58 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2M.M
Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Sun Jan 28 15:07:48 2018
Response via : Initial Calibration





TIC: 2m103903.D\data.ms

(3) PP-DDT (t)

4.151min (-4.151) 0.00ppb

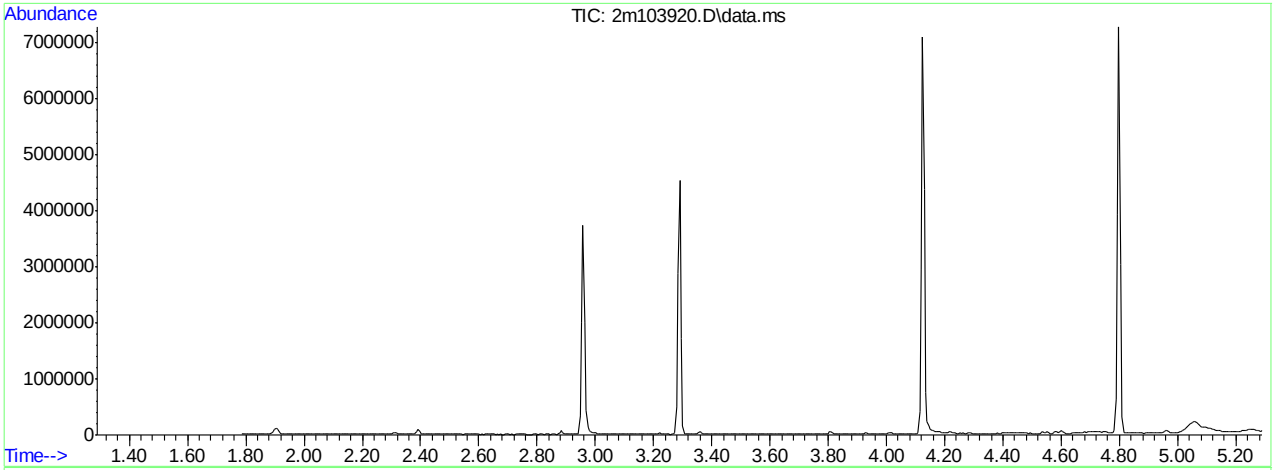
response 0

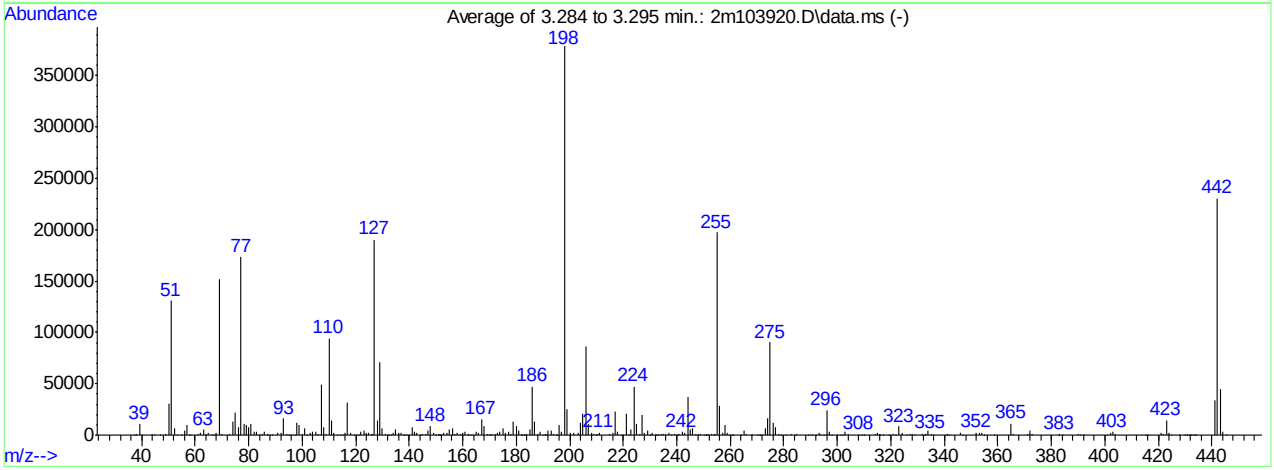
Ion	Exp%	Act%
235.00	100	0.00
165.00	52.20	0.00#
237.00	60.60	0.00#
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\E2M4620\2m103920.D Vial: 1
Acq On : 11 May 2018 1:43 pm Operator: christc2
Sample : dftpp Inst : MS2M
Misc : op10486,e2m4620,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\DFTPP2M.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um





AutoFind: Scans 281, 282, 283; Background Corrected with Scan 276

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	34.6	130877	PASS
68	69	0.00	2	1.7	2584	PASS
69	198	0.00	100	40.0	151216	PASS
70	69	0.00	2	0.5	823	PASS
127	198	40	60	50.2	189864	PASS
197	198	0.00	1	0.8	3129	PASS
198	198	100	100	100.0	378218	PASS
199	198	5	9	6.5	24697	PASS
275	198	10	30	23.9	90376	PASS
365	198	1	100	3.0	11279	PASS
441	443	0.10	100	76.5	34077	PASS
442	198	40	100	60.9	230490	PASS
443	442	17	23	19.3	44552	PASS

2m103920.D DFTPP2M.M Fri May 11 15:17:27 2018

Average of 3.284 to 3.295 min.: 2m103920.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.05	383	53.00	395	66.10	115	79.00	9396
38.00	1614	55.00	54	66.90	133	80.00	7175
39.10	10650	56.00	4096	68.00	2584	81.00	11502
40.00	186	57.00	10049	69.00	151216	82.00	3376
43.95	757	57.90	477	70.00	823	83.00	2975
44.95	485	58.10	120	72.95	907	83.90	534
46.80	117	61.00	1394	74.00	13049	85.00	1676
49.00	989	62.00	1690	75.00	21659	85.95	3016
50.10	30914	63.05	5293	76.05	7868	86.90	775
51.05	130877	63.95	872	77.10	173032	87.10	613
52.10	6203	65.00	2540	78.10	11201	88.00	483

Average of 3.284 to 3.295 min.: 2m103920.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
88.90	152	101.00	6516	112.00	1686	123.00	4422
91.00	2729	101.90	266	113.00	495	123.95	2189
92.05	2718	103.00	1800	114.30	120	124.95	2207
93.00	16129	104.00	3790	114.95	366	125.90	600
94.00	1227	105.00	3658	115.95	2766	126.20	571
95.00	541	106.00	1445	117.00	31445	127.00	189864
96.00	552	107.00	49130	118.00	2100	128.00	13985
97.05	404	108.00	7761	119.15	447	129.00	71165
98.00	11909	109.00	1442	120.00	442	130.00	6626
99.00	9962	110.00	94368	120.95	344	131.00	1263
100.00	883	111.00	14029	122.00	3072	131.85	576

Average of 3.284 to 3.295 min.: 2m103920.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
132.20	181	142.00	2976	151.40	171	160.95	3816
133.00	277	142.95	1914	151.80	568	161.90	310
134.00	1771	143.95	476	152.00	103	162.05	1111
135.00	5402	144.80	620	152.95	2377	163.00	346
136.00	1990	146.00	1506	154.00	2075	163.90	508
137.00	2166	147.05	4149	155.00	5223	165.00	2954
137.70	157	148.00	8743	156.05	6496	166.00	2410
138.00	498	148.95	1795	156.95	1540	167.00	15401
139.05	422	149.90	500	158.00	1707	168.05	8269
139.95	567	150.80	101	159.00	920	169.00	1369
141.00	7841	151.05	1209	160.00	2621	170.00	257

Average of 3.284 to 3.295 min.: 2m103920.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.20	241	181.00	4639	189.95	539	199.00	24697
170.95	772	181.95	427	190.90	471	200.00	1763
172.00	1529	182.20	134	191.05	729	201.45	2089
173.00	1959	182.85	504	192.00	3962	203.00	2598
174.00	3750	183.10	124	193.00	4326	204.05	12563
175.05	6497	184.05	1343	194.00	1064	205.00	20740
176.05	1930	185.00	5900	194.90	582	206.00	86352
177.00	3579	186.00	47170	195.20	348	207.00	11212
178.00	1078	187.00	13041	196.00	10055	208.00	2490
179.00	13333	188.10	1488	196.95	3129	209.00	1018
180.00	8836	188.95	2855	198.00	378218	209.90	360

Average of 3.284 to 3.295 min.: 2m103920.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
210.20	724	223.00	5012	232.10	370	242.00	3019
210.90	1131	224.00	47157	232.90	210	243.05	2674
211.10	2520	225.00	11298	233.10	167	244.05	37344
215.00	945	226.10	1276	233.95	1204	245.00	5173

216.00	1807	227.00	19240	234.95	1164	246.00	6775
217.00	23131	228.00	2595	236.00	832	246.95	1254
218.00	2966	229.00	4504	236.95	1818	247.80	102
218.95	392	229.80	127	238.00	164	248.00	216
219.80	189	230.05	562	239.00	868	248.95	1449
221.05	20558	231.00	1949	240.00	490	249.90	272
222.00	465	231.90	147	240.95	990	250.75	317

Average of 3.284 to 3.295 min.: 2m103920.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
251.10	121	260.40	109	272.95	6605	289.00	237
251.90	618	261.00	360	274.00	16194	290.00	297
252.95	1098	263.95	428	275.00	90376	290.70	159
253.90	289	265.00	4109	276.00	11536	292.00	251
254.10	1108	265.85	744	277.00	7340	293.05	1793
255.00	197226	267.80	182	277.95	902	293.85	418
256.00	27962	268.00	105	279.00	279	294.90	358
257.00	2030	270.00	205	280.80	124	296.00	24186
258.00	9968	271.00	114	282.95	921	297.00	3616
259.00	1770	271.20	258	283.90	515	297.90	284
259.90	222	272.05	564	285.05	1529	299.80	100

Average of 3.284 to 3.295 min.: 2m103920.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
301.00	524	317.00	118	332.80	148	353.05	1693
301.90	200	319.00	126	333.00	713	354.10	2145
303.00	3050	320.95	1197	334.05	4749	355.00	404
304.00	724	321.90	433	335.05	1518	358.70	109
307.95	385	323.05	8653	335.90	102	365.00	11279
309.00	162	324.05	1823	340.90	830	365.90	1288
310.00	284	325.90	163	341.20	216	371.05	617
314.00	1309	327.00	1570	342.00	257	372.00	4931
315.00	2747	327.95	1206	345.95	1879	373.00	1108
315.90	403	328.95	388	346.85	298	382.90	221
316.05	1077	331.95	603	352.05	2493	383.05	730

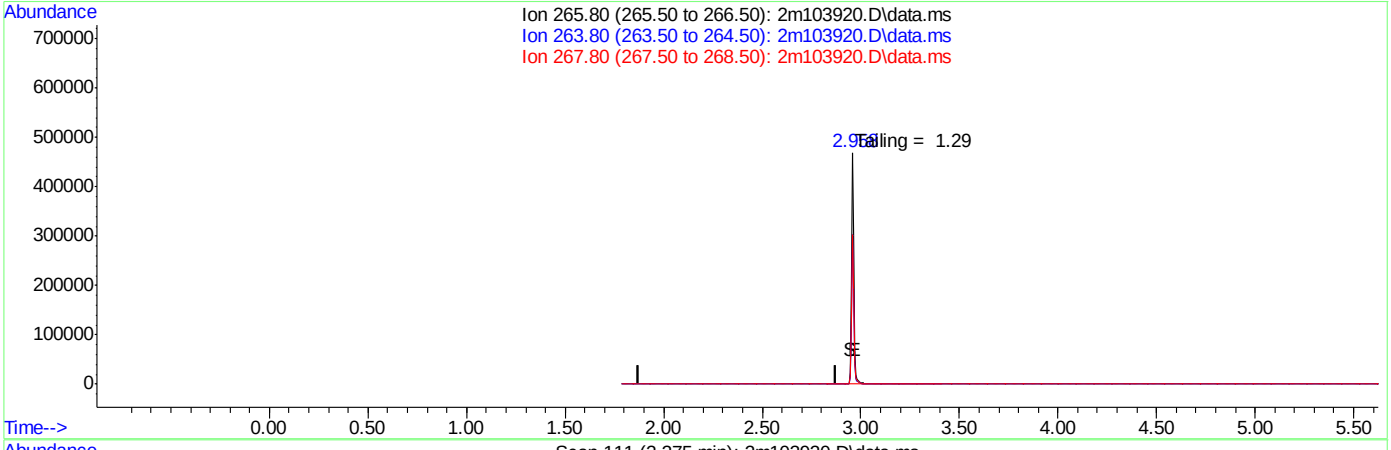
Average of 3.284 to 3.295 min.: 2m103920.D\data.ms
dftpp
Modified:subtracted

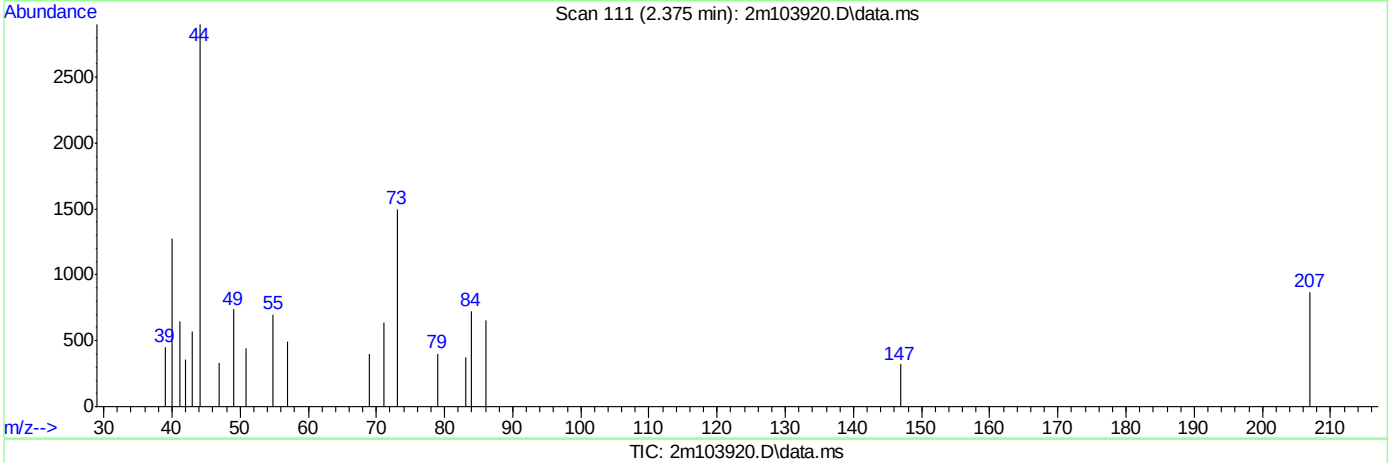
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
384.00	344	422.00	1634	433.10	176		
389.95	625	423.10	14627	433.80	109		
390.90	222	424.05	2762	434.10	105		
392.00	342	425.00	210	441.05	34077		
400.80	295	427.70	100	442.10	230490		
402.00	2107	429.70	107	443.10	44552		
403.00	3028	430.50	132	444.05	3211		
404.00	853	430.80	135	445.15	248		
415.10	100	431.40	113				
415.80	122	431.80	113				
421.00	2051	432.30	120				

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E2M4620\
Data File : 2m103920.D
Acq On : 11 May 2018 1:43 pm
Operator : christc2
Sample : dftpp
Misc : op10486,e2m4620,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 11 13:49:32 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2M.M
Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Sun Jan 28 15:07:48 2018
Response via : Initial Calibration





TIC: 2m103920.D\data.ms

(1) Pentachlorophenol (t)

2.375min (-2.375) 0.00ppb

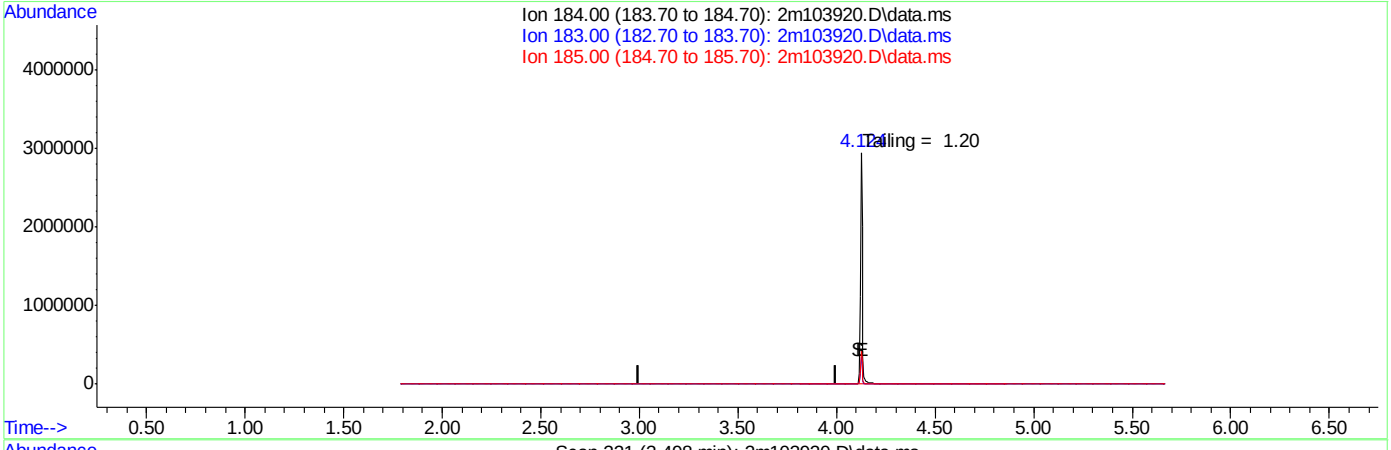
response 0

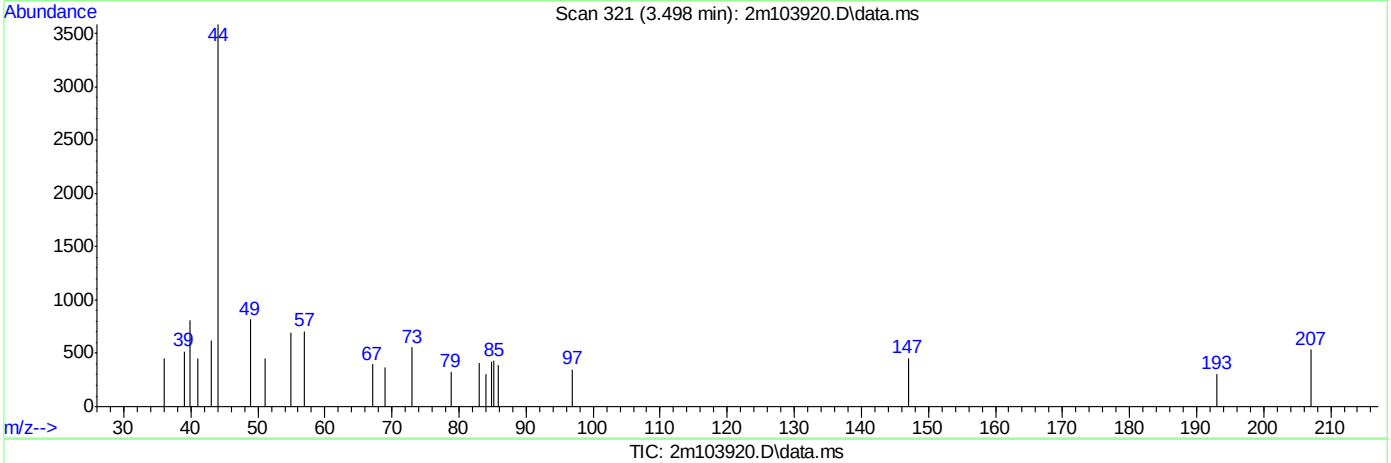
Ion	Exp%	Act%
265.80	100	0.00
263.80	61.00	0.00#
267.80	65.30	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E2M4620\
Data File : 2m103920.D
Acq On : 11 May 2018 1:43 pm
Operator : christc2
Sample : dftpp
Misc : op10486,e2m4620,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 11 13:49:32 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2M.M
Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Sun Jan 28 15:07:48 2018
Response via : Initial Calibration





TIC: 2m103920.D\data.ms

(2) Benzidine (t)

3.498min 0.00ppb d

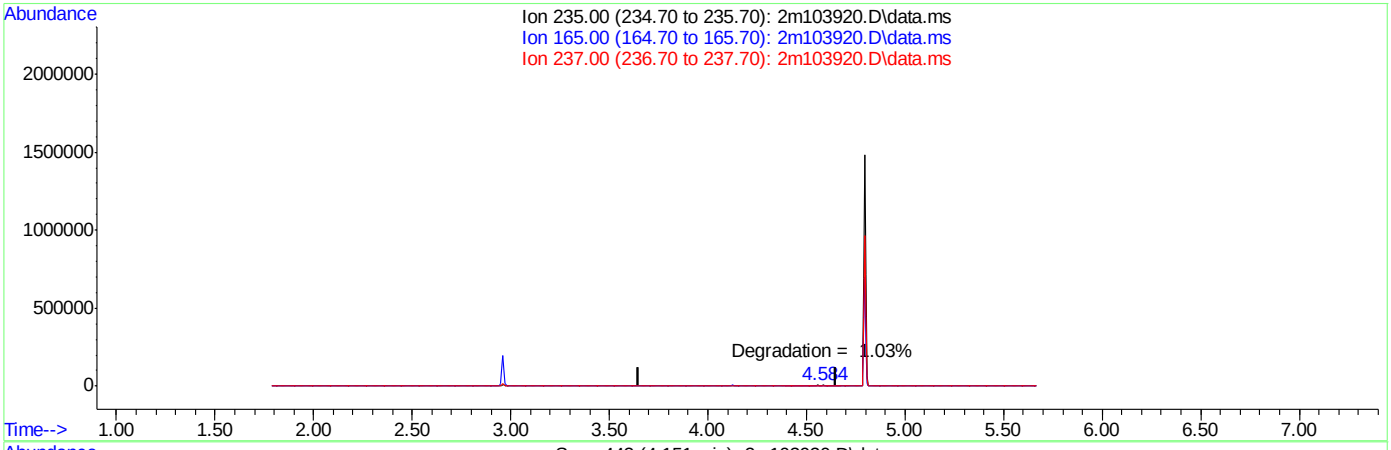
response 0

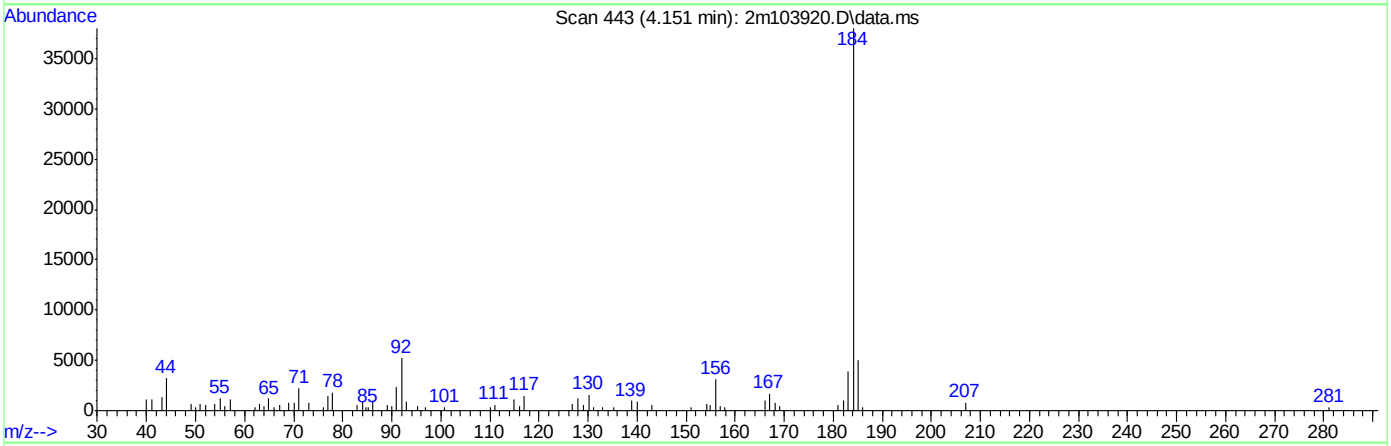
Ion	Exp%	Act%
184.00	100	0.00
183.00	10.60	0.00
185.00	13.50	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E2M4620\
Data File : 2m103920.D
Acq On : 11 May 2018 1:43 pm
Operator : christc2
Sample : dftpp
Misc : op10486,e2m4620,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 11 13:49:32 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2M.M
Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Sun Jan 28 15:07:48 2018
Response via : Initial Calibration





(3) PP-DDT (t)

4.151min (-4.151) 0.00ppb

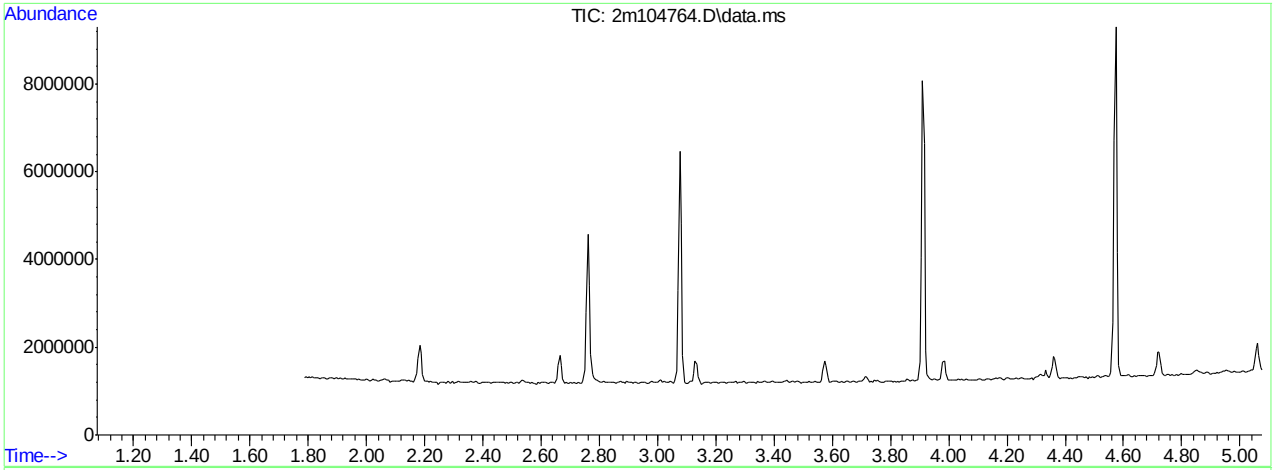
response 0

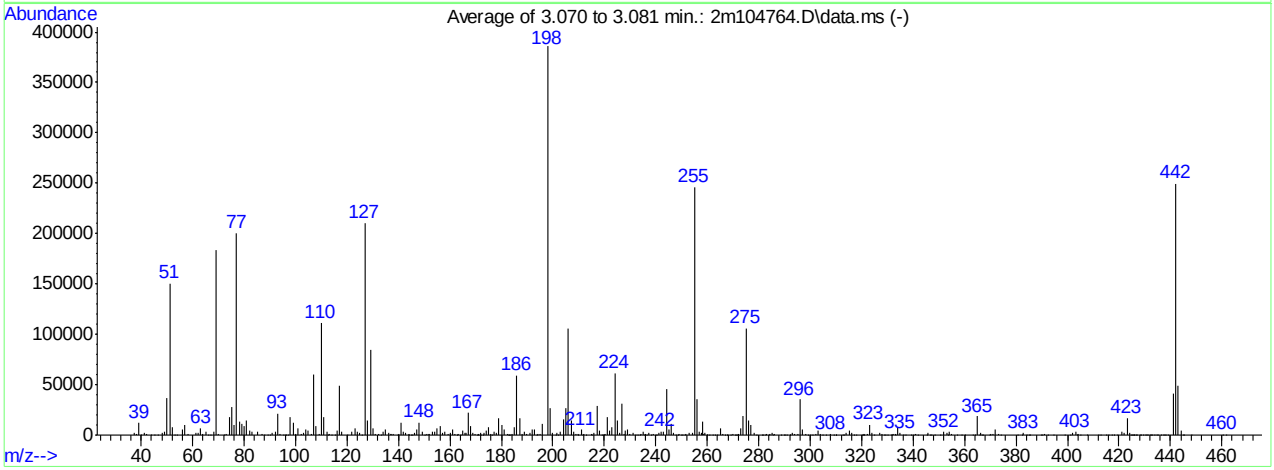
Ion	Exp%	Act%
235.00	100	0.00
165.00	52.20	0.00#
237.00	60.60	0.00#
0.00	0.00	0.00

DFTPP

Data File : C:\msdchem\1\DATA\E2M4654\2m104764.D Vial: 1
Acq On : 5 Jun 2018 11:58 am Operator: christc2
Sample : dftpp Inst : MS2M
Misc : op10486,e2m4654,1000,,,1,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\DFTPP2M.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um





AutoFind: Scans 241, 242, 243; Background Corrected with Scan 236

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	39.1	150672	PASS
68	69	0.00	2	1.9	3509	PASS
69	198	0.00	100	47.7	183946	PASS
70	69	0.00	2	0.6	1066	PASS
127	198	40	60	54.6	210730	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	385728	PASS
199	198	5	9	7.1	27283	PASS
275	198	10	30	27.5	106072	PASS
365	198	1	100	4.8	18633	PASS
441	443	0.10	100	84.0	41223	PASS
442	198	40	100	64.6	249373	PASS
443	442	17	23	19.7	49085	PASS

2m104764.D DFTPP2M.M Tue Jun 05 13:37:43 2018

Average of 3.070 to 3.081 min.: 2m104764.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.05	2540	50.10	36494	64.05	1103	76.10	10155
38.05	1045	51.10	150672	65.10	3183	77.05	200369
39.10	11875	52.05	7646	66.00	122	78.10	12868
39.95	209	53.10	502	67.00	69	79.00	11324
41.00	1768	53.90	64	68.05	3509	79.95	9238
42.05	1002	56.05	5224	69.00	183946	81.00	14492
44.00	229	57.05	9528	70.00	1066	82.00	4216
45.10	245	58.05	598	71.95	254	83.00	2965
46.20	271	61.05	2806	73.05	1664	85.00	3819
48.05	2208	62.05	2520	74.10	17849	87.00	1626
49.10	2965	63.05	7124	75.00	27568	88.00	306

Average of 3.070 to 3.081 min.: 2m104764.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
88.95	172	99.00	12616	110.00	110992	122.00	3513
89.80	149	100.00	1297	111.05	17351	123.05	7210
91.05	2396	100.95	7260	112.05	2860	124.00	3234
92.00	3505	102.00	625	112.80	273	125.00	2237
93.00	21234	103.00	2714	113.10	631	125.80	292
94.05	1622	104.05	5292	114.00	110	127.00	210730
95.00	549	104.95	4423	115.20	230	128.05	15010
96.00	510	106.00	1344	116.05	4003	129.00	84971
96.20	281	107.05	60439	116.95	48994	129.95	6901
97.00	457	107.95	8860	118.05	3614	130.95	768
98.00	17745	109.10	1507	120.00	546	132.05	829

Average of 3.070 to 3.081 min.: 2m104764.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
133.05	228	142.90	2417	151.70	753	161.05	5208
134.00	2978	143.90	710	152.05	687	162.00	1618
134.95	5948	144.20	147	153.05	3477	162.80	163
136.05	2510	144.90	254	154.00	3482	163.05	721
136.90	1320	145.15	556	155.00	6906	164.00	577
137.05	1404	146.05	2620	156.05	9148	164.95	3968
137.95	1045	147.00	5781	156.95	1887	165.90	1974
139.80	363	147.95	12785	157.95	3072	166.10	1905
140.10	1071	149.05	3066	159.05	1572	167.00	22087
141.00	11887	150.05	580	160.00	2245	168.00	8448
142.00	3686	151.05	1180	160.20	766	169.05	2282

Average of 3.070 to 3.081 min.: 2m104764.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
169.90	767	176.10	46	185.05	8362	194.95	1073
170.70	276	176.95	3283	186.00	59280	196.05	11612
170.90	173	177.90	1729	187.05	16746	198.00	385728
171.10	692	178.95	16317	188.05	1697	199.00	27283
171.80	228	180.00	10427	189.00	3412	199.95	1917
172.00	2106	181.05	5615	189.90	715	200.90	278
172.80	555	182.15	689	191.00	1816	201.40	2324
173.00	2244	182.65	466	192.05	5721	202.10	259
174.00	4309	182.90	282	192.95	5899	202.95	3585
175.05	8360	183.20	448	193.90	588	204.00	15528
175.85	1377	184.05	1607	194.20	1191	205.05	26990

Average of 3.070 to 3.081 min.: 2m104764.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
206.10	105442	215.05	1098	224.05	61384	233.80	590
207.10	14504	216.05	2563	225.05	14341	234.05	1335
208.00	3883	217.00	29503	226.05	1934	235.05	2857
209.00	1135	217.95	4123	227.00	31725	235.60	271

209.70	360	218.95	378	227.80	650	236.10	1261
209.95	1430	219.20	281	228.05	4459	236.60	182
211.05	5506	219.90	131	228.95	5655	237.10	2184
211.60	373	220.20	825	229.95	1084	238.10	104
211.95	686	221.05	17466	231.00	2354	239.00	1644
212.85	254	221.90	4129	232.05	444	239.80	578
214.90	295	223.05	8200	232.95	326	240.10	557

Average of 3.070 to 3.081 min.: 2m104764.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
241.05	2103	250.40	136	259.05	2288	267.85	4
242.05	3872	251.00	387	259.75	217	269.05	441
243.05	3734	251.85	995	260.10	184	269.80	607
244.10	46173	253.05	1928	260.95	536	270.90	178
245.05	5995	254.05	2086	261.90	126	271.20	327
246.00	11439	255.00	246221	263.10	118	271.60	154
247.00	2737	256.00	35381	263.80	263	272.00	1262
247.85	509	256.95	3224	265.05	6634	273.00	7071
248.50	352	257.80	2171	265.90	1279	274.05	19200
249.00	1576	258.00	13840	266.70	181	275.00	106072
249.85	374	258.80	612	267.60	224	276.05	14414

Average of 3.070 to 3.081 min.: 2m104764.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
277.00	10500	285.90	660	297.10	5066	309.05	286
278.05	1721	288.80	354	298.10	670	309.80	132
278.95	536	289.90	175	299.00	158	310.10	188
281.05	199	290.10	131	300.20	200	312.70	144
281.90	130	291.05	477	300.85	440	313.00	142
282.70	281	292.00	241	302.00	911	314.00	1991
283.00	1093	292.20	290	303.05	4646	315.05	5024
283.70	113	293.00	2199	304.05	1104	316.00	2219
284.15	641	294.00	830	304.90	145	317.10	203
285.00	2257	295.00	1022	306.30	127	317.90	210
285.60	122	296.00	35514	308.05	646	319.90	214

Average of 3.070 to 3.081 min.: 2m104764.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
320.30	206	330.00	112	340.20	208	353.60	194
320.70	297	331.20	109	340.90	994	354.05	3259
321.10	1066	331.90	221	341.95	341	355.00	1257
322.05	722	332.10	995	345.50	112	357.25	286
323.10	10084	332.90	650	345.95	2386	359.00	197
324.05	2185	333.10	444	346.60	129	360.00	223
324.90	136	334.00	7818	346.90	188	363.10	102
326.90	2328	335.00	1892	348.20	106	364.00	174
327.85	956	336.20	103	350.50	110	365.00	18633
328.60	264	337.00	101	352.00	2859	365.70	414
329.10	219	339.10	275	353.00	2193	366.05	2812

Average of 3.070 to 3.081 min.: 2m104764.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
366.75	446	383.95	526	403.05	3238	419.20	109
367.00	171	384.90	220	403.70	113	421.05	2992
369.50	133	385.20	171	403.95	775	421.90	2374
370.00	629	389.80	550	405.00	141	423.10	17019
370.90	1154	390.10	473	407.80	141	424.05	2778
372.05	5702	391.05	891	412.00	114	424.80	534
373.10	1695	392.15	389	412.70	122	425.00	130
374.20	258	394.70	169	415.00	132	425.30	181
380.40	107	398.70	117	415.70	246	425.80	116
382.20	102	400.90	442	417.20	128	426.00	121
382.95	1774	402.00	2379	418.20	210	426.60	261

Average of 3.070 to 3.081 min.: 2m104764.D\data.ms

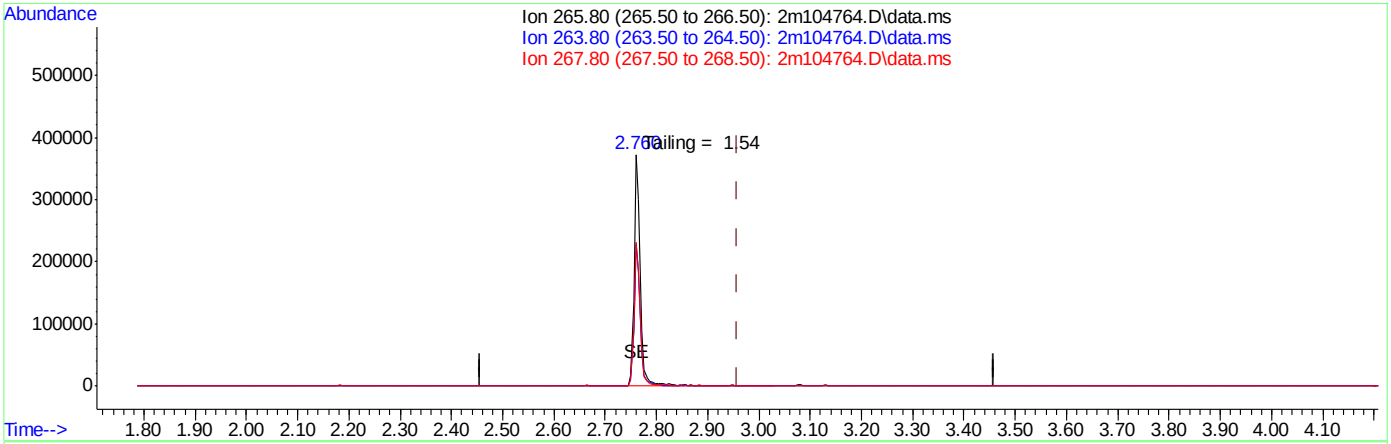
dftpp
Modified:subtracted

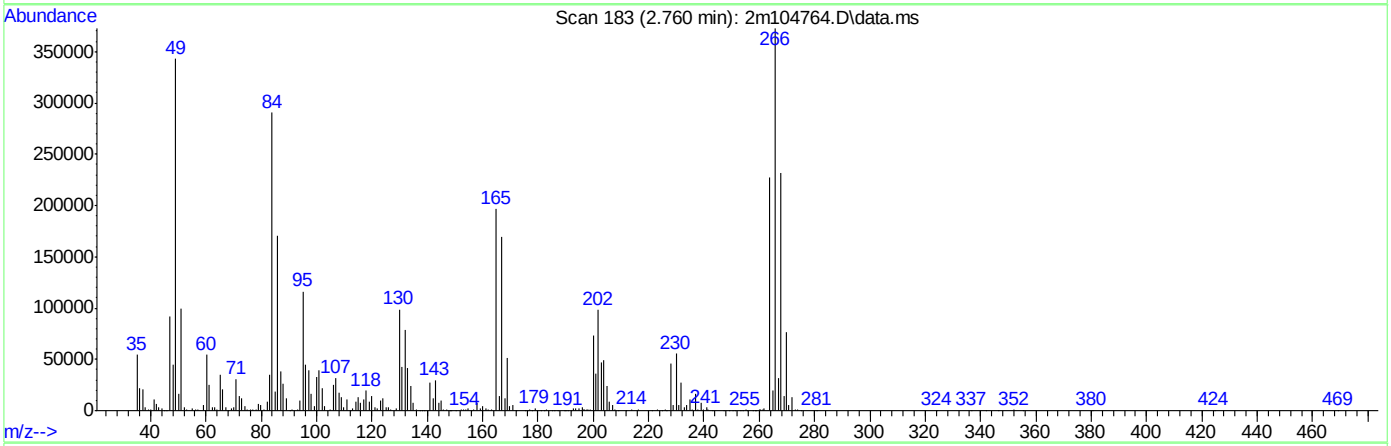
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
427.00	339	434.70	243	444.90	224		
427.90	153	435.00	234	445.10	172		
428.50	112	436.30	240	448.10	111		
429.40	140	437.20	375	460.20	189		
430.30	163	437.50	173	461.50	123		
430.80	109	438.20	225				
431.00	334	438.90	140				
432.00	525	441.10	41223				
432.50	101	442.10	249373				
433.00	314	443.10	49085				
433.90	320	444.10	4364				

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E2M4654\
Data File : 2m104764.D
Acq On : 5 Jun 2018 11:58 am
Operator : christc2
Sample : dftpp
Misc : op10486,e2m4654,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 05 12:04:15 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2M.M
Quant Title : Semi Volatile GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Fri May 11 15:17:17 2018
Response via : Initial Calibration





TIC: 2m104764.D\data.ms

(1) Pentachlorophenol (t)

2.760min (-0.198) 0.00ppb

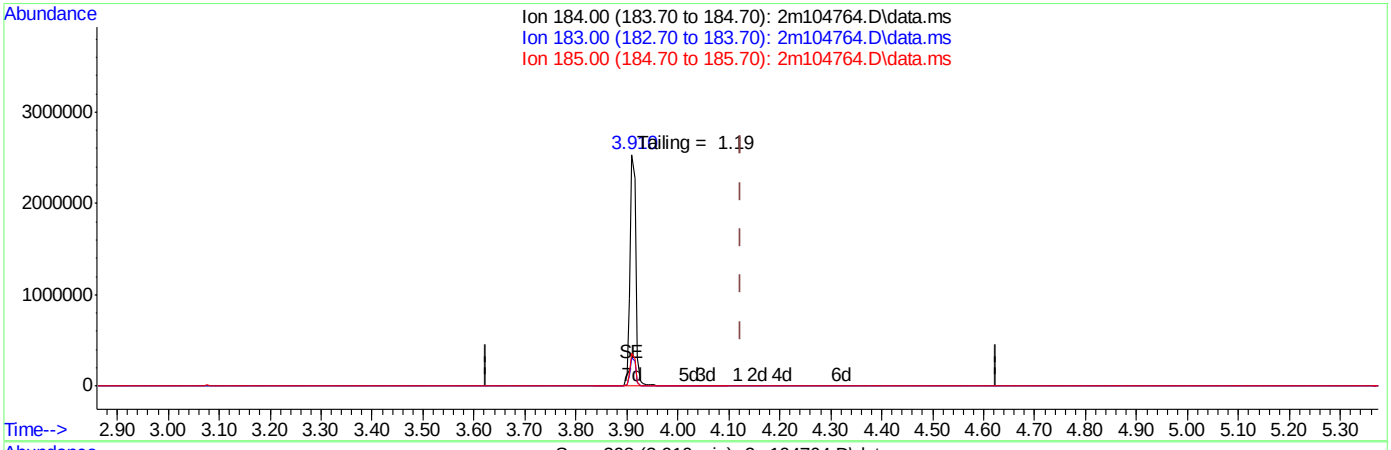
response 321498

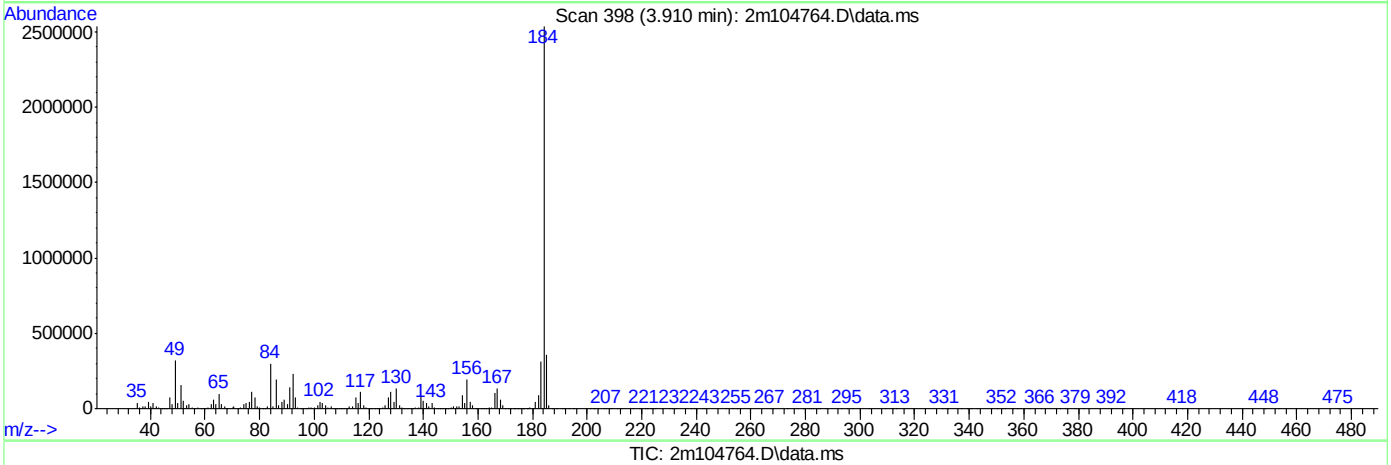
Ion	Exp%	Act%
265.80	100	100
263.80	64.30	60.79
267.80	64.40	62.09
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E2M4654\
Data File : 2m104764.D
Acq On    :  5 Jun 2018  11:58 am
Operator  : christc2
Sample    : dftpp
Misc      : op10486,e2m4654,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Jun 05 12:04:15 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2M.M
Quant Title  : Semi Volatile  GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Fri May 11 15:17:17 2018
Response via : Initial Calibration
```





TIC: 2m104764.D\data.ms

(2) Benzidine (t)

3.910min (-0.214) 0.00ppb m

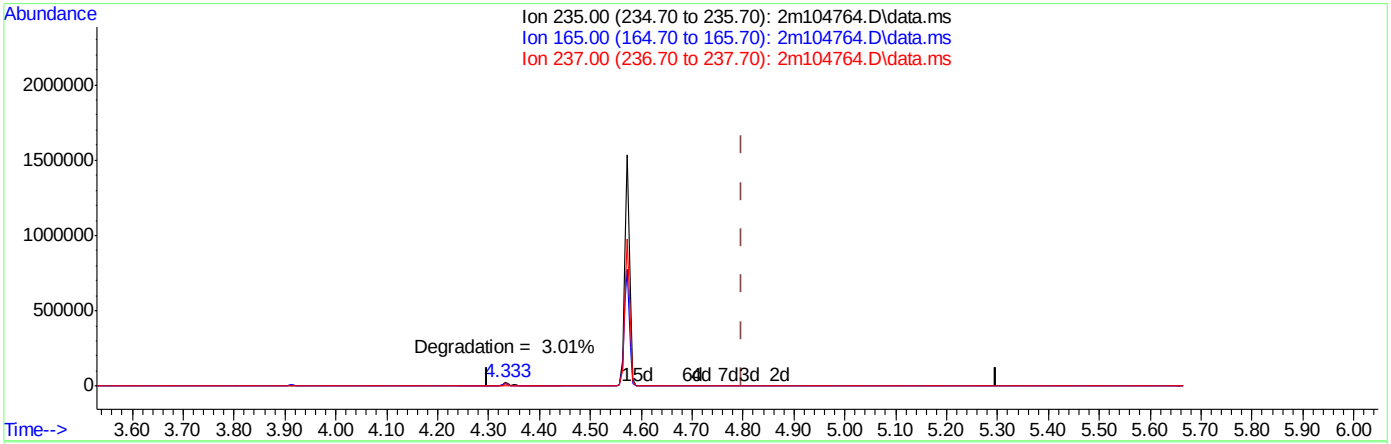
response 2083896

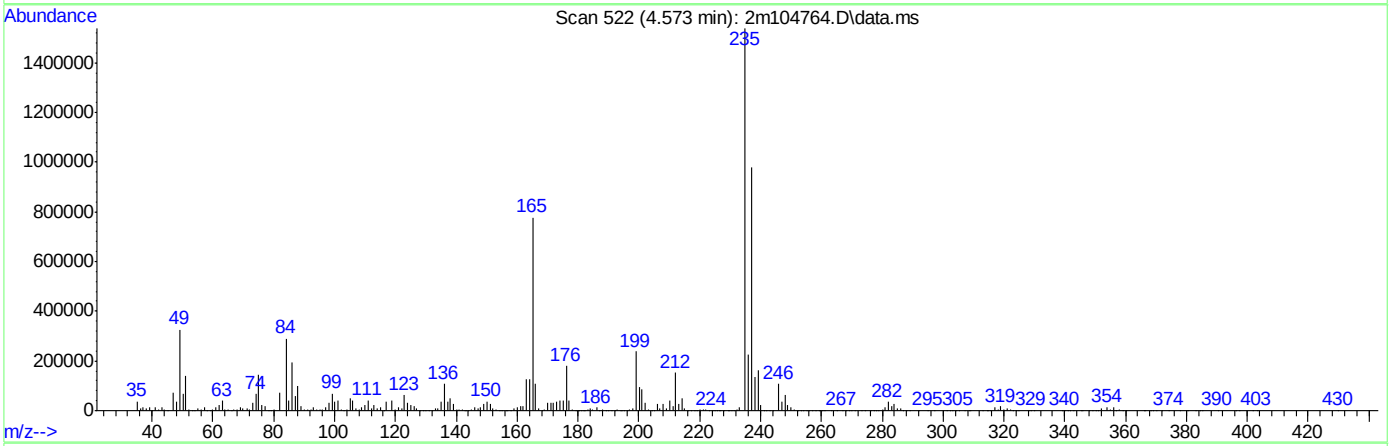
Ion	Exp%	Act%
184.00	100	100
183.00	11.60	12.39
185.00	14.00	14.22
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E2M4654\
Data File : 2m104764.D
Acq On    :  5 Jun 2018  11:58 am
Operator  : christc2
Sample    : dftpp
Misc      : op10486,e2m4654,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Jun 05 12:04:15 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2M.M
Quant Title  : Semi Volatile  GC/MS, ZB-5 15m x .25mm x .25um
QLast Update : Fri May 11 15:17:17 2018
Response via : Initial Calibration
```





TIC: 2m104764.D\data.ms

(3) PP-DDT (t)

4.573min (-0.225) 0.00ppb

response 1051801

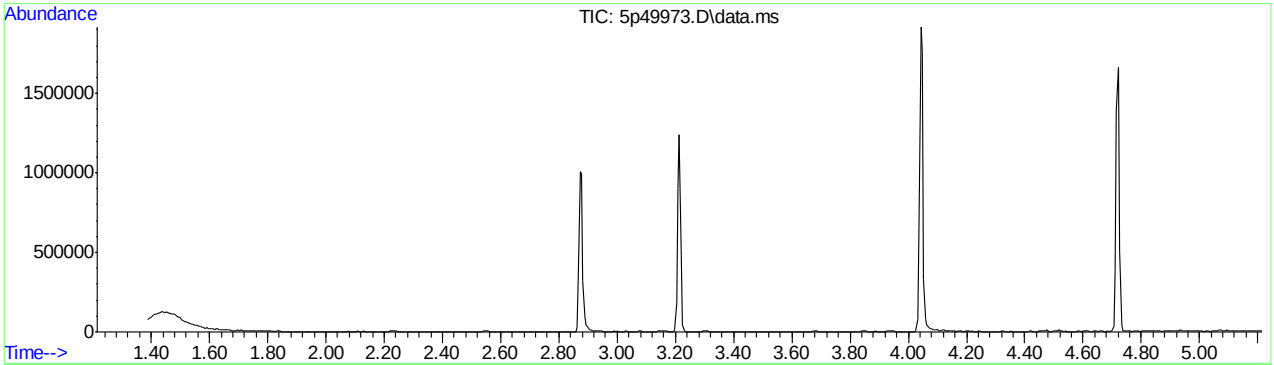
Ion	Exp%	Act%
235.00	100	100
165.00	47.10	53.01
237.00	65.30	64.28
0.00	0.00	0.00

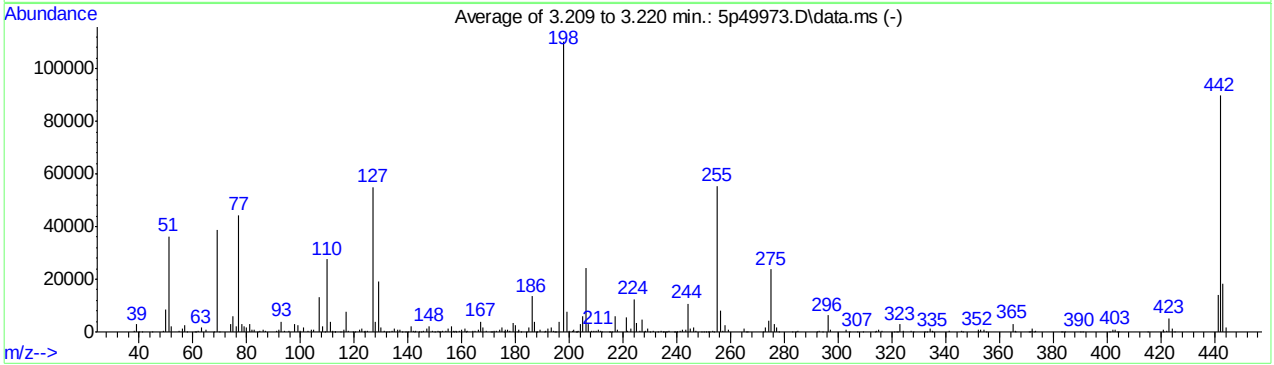
DFTPPR

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49973.D
Acq On : 7 May 2018 2:10 pm
Operator : johnb1
Sample : dftpp
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M
Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Wed Jan 31 09:46:31 2018
Last Update : Wed Jan 31 09:46:31 2018





AutoFind: Scans 342, 343, 344; Background Corrected with Scan 337
AUTOFIND via AUTOINTEGRATE

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	33.0	36416	PASS
68	69	0.00	2	0.3	126	PASS
69	198	0.00	100	35.1	38752	PASS
70	69	0.00	2	0.2	91	PASS
127	198	40	60	50.0	55101	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	110309	PASS
199	198	5	9	7.0	7675	PASS
275	198	10	30	21.5	23723	PASS
365	198	1	100	2.9	3177	PASS
441	443	0.10	100	77.0	14045	PASS
442	198	40	100	81.3	89720	PASS
443	442	17	23	20.3	18237	PASS

DFTPP5P.M Wed May 09 15:50:32 2018 RPT1 Page: 1

Average of 3.209 to 3.220 min.: 5p49973.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
38.05	421	57.10	2445	75.10	5811	86.00	884
39.15	2807	57.90	67	76.10	1937	87.10	455
40.05	193	60.90	222	77.10	44463	91.05	648
41.05	167	61.10	208	78.10	2788	92.05	722
45.00	66	62.05	386	79.05	2225	93.00	3954
49.10	322	63.10	1527	80.05	1756	94.00	294
50.10	8512	65.10	762	81.00	3102	95.95	272
51.10	36416	67.90	126	81.95	667	98.00	3097
52.10	1982	69.00	38752	83.00	723	99.00	2443
55.05	254	70.00	91	84.00	90	100.10	289
56.00	1204	74.10	3022	84.95	581	101.05	1795

Average of 3.209 to 3.220 min.: 5p49973.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
103.05	528	115.00	67	127.10	55101	137.80	116
104.05	987	116.05	656	128.05	3744	139.10	127
105.05	884	117.05	7744	129.05	19016	140.05	196
107.05	13122	118.00	576	130.10	1653	141.05	2199
108.10	2097	119.70	101	131.00	482	142.05	607
108.90	194	120.20	73	132.20	128	142.30	94
110.00	27646	122.00	845	133.00	88	142.95	401
111.00	3655	123.00	1287	133.95	385	144.05	166
112.00	539	123.80	221	134.95	1442	145.00	174
112.90	73	123.95	459	136.00	748	145.95	310
113.05	170	125.10	631	137.05	675	147.10	1186

Average of 3.209 to 3.220 min.: 5p49973.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
148.00	2209	157.20	265	167.05	4031	177.00	715
149.10	617	157.70	84	168.05	1710	177.85	242
150.10	102	157.95	294	169.05	529	179.05	3570
151.00	388	159.00	308	170.80	162	180.05	2405
151.80	188	160.00	718	171.10	100	180.80	132
152.10	147	161.05	1086	172.00	337	181.05	1004
152.95	616	161.70	69	173.05	624	182.10	144
154.10	588	162.10	392	174.00	994	184.00	195
155.00	1419	164.15	256	175.05	1755	185.00	1609
156.05	2045	165.00	599	175.90	124	186.10	13507
157.00	165	166.15	673	176.15	954	187.05	3700

Average of 3.209 to 3.220 min.: 5p49973.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
187.80	140	198.00	110309	207.10	2963	218.05	776
188.00	141	199.00	7675	208.10	614	221.05	5488
189.00	679	200.15	529	209.05	307	221.80	325
190.90	86	201.00	251	210.05	355	223.05	1368
191.25	266	201.65	688	211.00	930	224.10	12555
192.05	1238	202.30	95	211.50	250	225.10	3511
193.10	1506	202.80	194	211.90	77	226.05	331
194.05	242	203.10	262	214.90	116	227.00	4667
194.60	67	204.10	3203	215.10	144	227.90	183
194.95	175	205.10	6015	215.80	177	228.10	323
196.05	3672	206.10	24121	217.00	5990	229.05	1155

Average of 3.209 to 3.220 min.: 5p49973.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
230.00	146	239.90	101	251.00	74	265.90	77
231.05	424	240.10	101	251.70	67	266.10	157
233.05	165	241.05	228	252.20	97	272.10	151
233.95	288	242.05	719	253.10	302	273.00	1674

DFTPP5P.M Wed May 09 15:50:32 2018 RPT1 Page: 2

234.90	195	243.10	771	253.80	100	274.10	4351
235.10	184	244.10	10821	255.00	55544	275.05	23723
235.90	81	245.10	1281	256.05	8270	276.05	3045
236.20	80	246.10	1601	257.05	636	277.00	1624
237.00	509	247.00	265	258.05	2656	278.00	217
239.00	79	248.95	225	259.00	698	283.00	84
239.30	67	249.90	73	265.05	1295	284.30	69

Average of 3.209 to 3.220 min.: 5p49973.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
285.05	436	314.05	319	332.90	137	355.10	72
292.00	83	315.00	667	334.10	1397	365.00	3177
293.00	401	316.05	391	334.80	85	365.80	129
294.10	85	321.00	137	335.05	250	366.00	335
296.05	6353	321.70	100	341.05	406	371.00	69
296.95	804	321.90	70	345.90	294	371.20	147
303.00	818	323.10	2934	346.10	126	371.90	432
304.00	117	324.05	604	351.90	198	372.10	1193
307.10	83	326.95	449	352.05	732	372.90	225
309.00	83	327.90	106	353.10	663	373.15	255
313.90	98	332.05	178	354.10	823	382.90	198

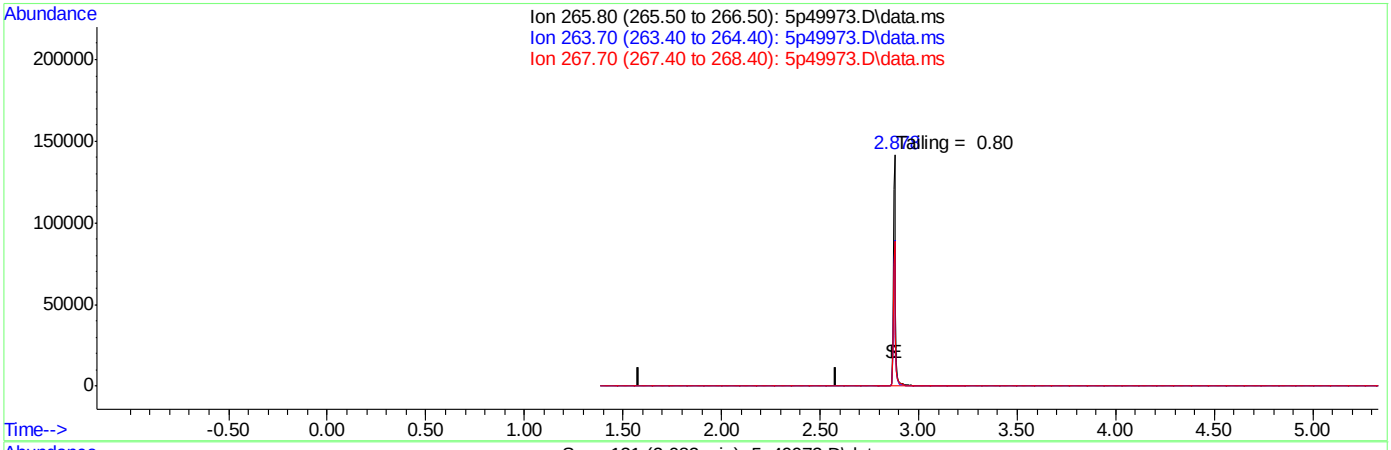
Average of 3.209 to 3.220 min.: 5p49973.D\data.ms
dftpp
Modified:subtracted

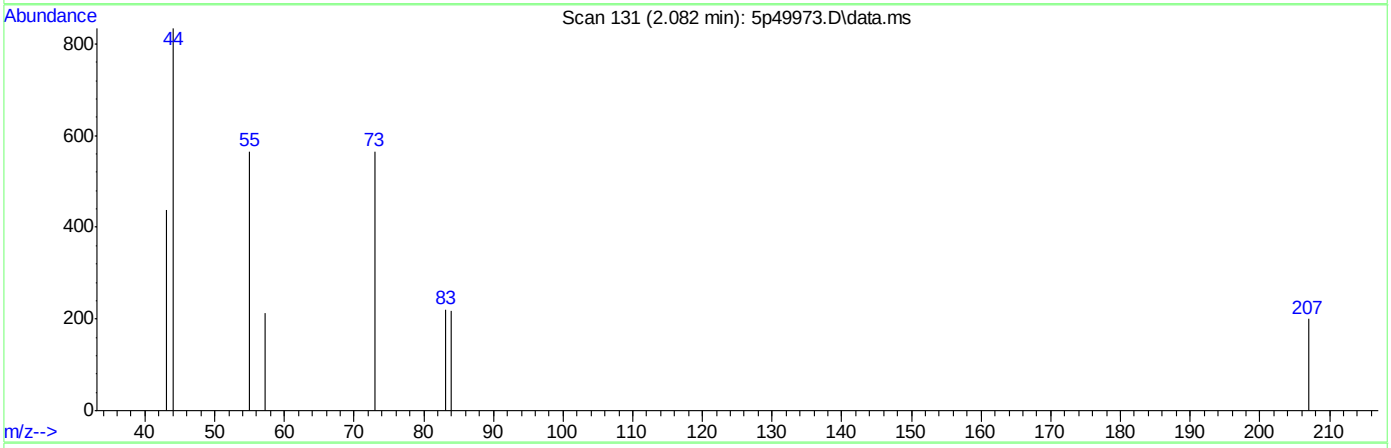
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
383.20	115	421.05	784				
384.00	145	422.10	620				
390.00	211	423.05	5165				
390.90	108	424.05	1265				
401.00	75	425.10	83				
402.15	701	441.10	14045				
403.05	941	442.05	89720				
403.90	172	443.05	18237				
404.10	111	444.05	1606				
415.00	87						
420.90	207						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49973.D
Acq On : 7 May 2018 2:10 pm
Operator : johnb1
Sample : dftpp
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:17:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M
Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Wed Jan 31 09:46:31 2018
QLast Update : Wed Jan 31 09:46:31 2018
Response via : Initial Calibration





TIC: 5p49973.D\data.ms

(1) Pentachlorophenol (MC)

2.082min (-2.082) 0.00ng

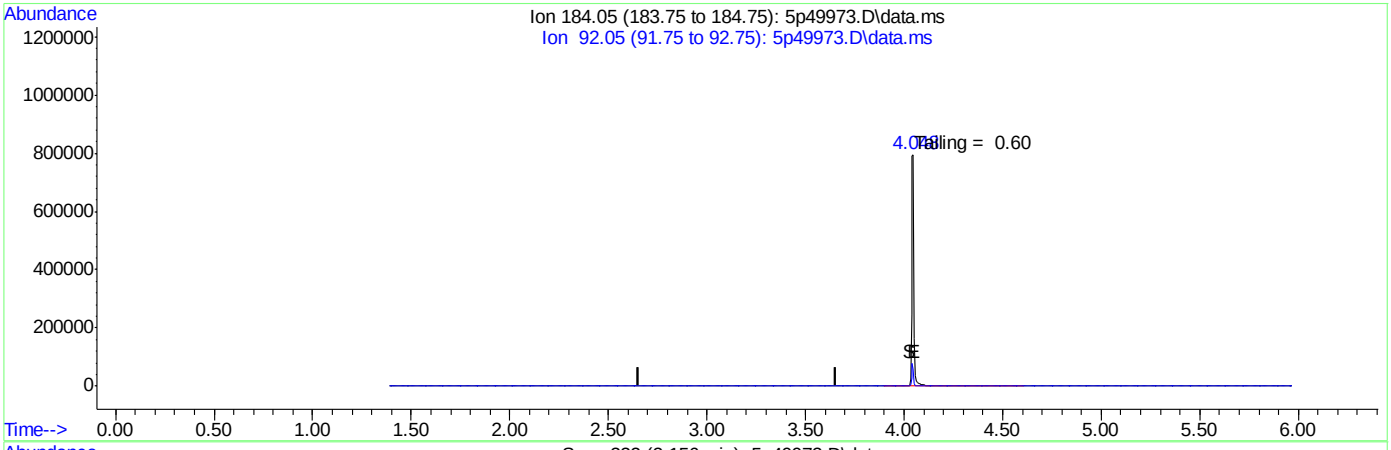
response 0

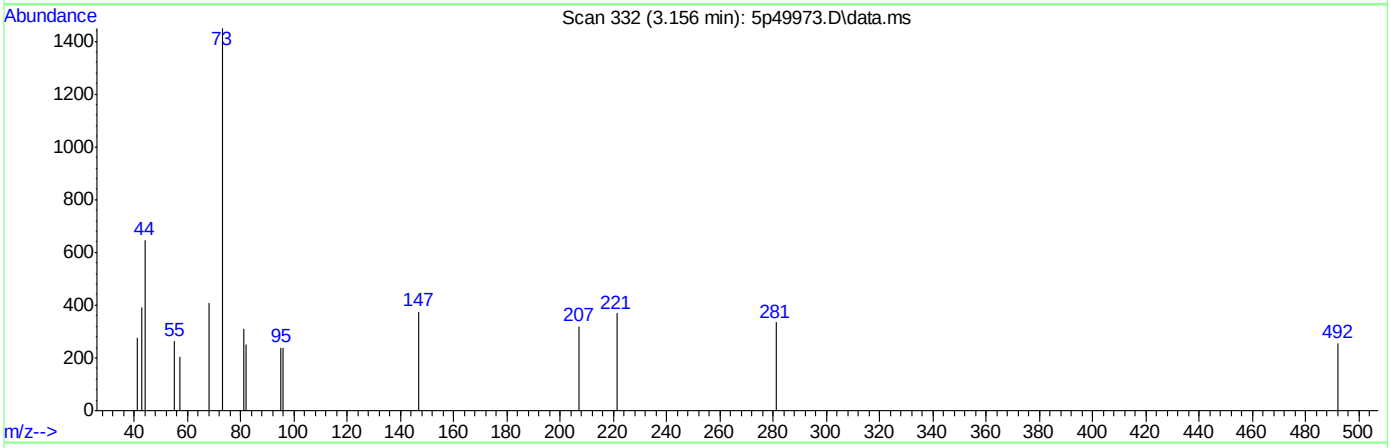
Ion	Exp%	Act%
265.80	100	0.00
263.70	63.60	0.00#
267.70	68.40	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49973.D
Acq On : 7 May 2018 2:10 pm
Operator : johnb1
Sample : dftpp
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:17:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M
Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Wed Jan 31 09:46:31 2018
QLast Update : Wed Jan 31 09:46:31 2018
Response via : Initial Calibration





(2) Benzidine (M)

3.156min (-3.156) 0.00ng

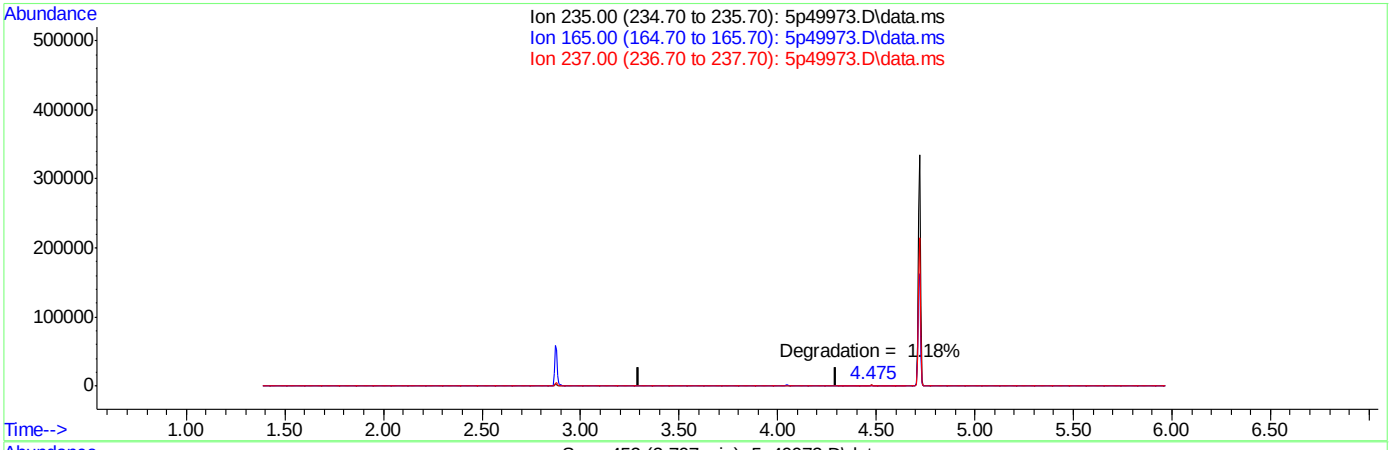
response 0

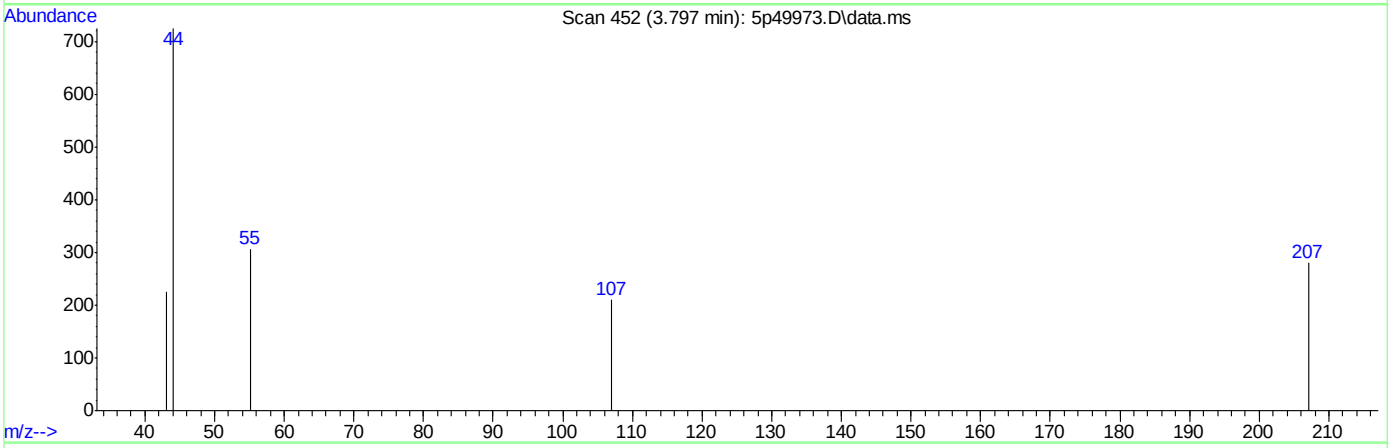
Ion	Exp%	Act%
184.05	100	0.00
92.05	9.30	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49973.D
Acq On : 7 May 2018 2:10 pm
Operator : johnb1
Sample : dftpp
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:17:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M
Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Wed Jan 31 09:46:31 2018
QLast Update : Wed Jan 31 09:46:31 2018
Response via : Initial Calibration





TIC: 5p49973.D\data.ms

(3) PP-DDT (MC)

3.797min (-3.797) 0.00ppb

response 0

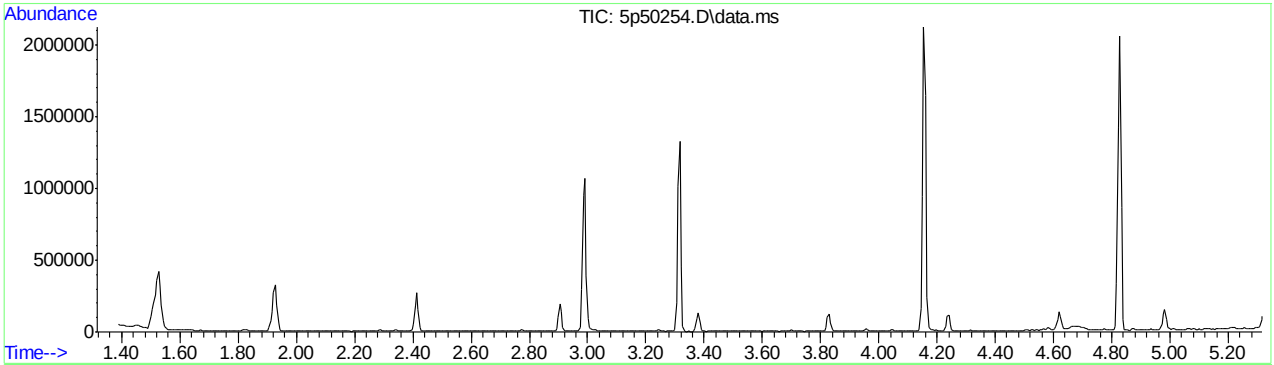
Ion	Exp%	Act%
235.00	100	0.00
165.00	52.40	0.00#
237.00	66.80	0.00#
0.00	0.00	0.00

DFTPPR

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50254.D
Acq On : 15 May 2018 1:18 am
Operator : georges
Sample : dftpp
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M
Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Mon May 14 11:39:11 2018
Last Update : Mon May 14 11:39:11 2018



AutoFind: Scans 361, 362, 363; Background Corrected with Scan 357
AUTOFIND via AUTOINTEGRATE

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	37.9	44822	PASS
68	69	0.00	2	0.9	350	PASS
69	198	0.00	100	33.9	40115	PASS
70	69	0.00	2	0.7	290	PASS
127	198	40	60	42.2	49878	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	118293	PASS
199	198	5	9	6.4	7599	PASS
275	198	10	30	26.9	31845	PASS
365	198	1	100	4.4	5186	PASS
441	443	0.10	100	20.6	3600	PASS
442	198	40	100	74.3	87840	PASS
443	442	17	23	19.9	17509	PASS

Average of 3.311 to 3.321 min.: 5p50254.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	67	55.10	326	74.10	3135	86.15	987
38.20	590	56.15	1392	75.15	6097	87.05	446
39.20	3023	57.20	2900	76.20	2593	88.15	156
40.15	287	61.20	463	77.20	43635	91.20	718
41.25	411	62.20	367	78.20	3323	92.15	691
43.25	369	63.15	1387	79.15	2485	93.15	4280
45.00	122	65.15	922	80.15	2219	94.10	333
47.20	103	68.05	350	81.15	3045	96.10	140
50.20	10214	69.15	40115	82.10	729	96.30	173
51.20	44822	70.05	290	83.15	355	98.15	2871
52.20	2225	73.10	186	85.15	274	99.10	2609

Average of 3.311 to 3.321 min.: 5p50254.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
100.20	183	112.05	347	125.30	100	136.10	620
101.20	1843	116.20	441	126.00	124	137.15	687
102.15	219	117.15	7143	127.20	49878	138.25	216
103.05	453	118.15	757	128.15	4480	140.05	293
104.15	1434	119.10	92	129.15	18346	141.20	2175
105.10	1071	120.00	112	130.15	1532	142.10	944
105.90	159	121.10	82	131.10	380	142.95	386
107.20	13801	122.10	693	131.70	67	143.20	71
108.20	2186	123.20	1296	132.10	107	144.10	77
110.15	25990	124.10	237	134.15	399	145.00	167
111.15	3937	125.10	611	135.15	1548	146.10	247

Average of 3.311 to 3.321 min.: 5p50254.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
147.20	1155	158.10	388	166.25	716	177.10	886
148.15	2227	158.90	108	167.20	4295	178.15	240
149.20	640	159.20	218	168.20	1766	179.10	3647
150.30	198	160.00	150	169.15	418	180.20	2632
151.20	348	160.20	509	172.10	539	181.10	1293
151.70	151	161.15	1190	173.10	318	182.25	233
153.15	584	161.90	107	174.15	788	182.90	69
154.15	501	162.10	183	175.20	2037	184.15	457
155.15	1246	164.20	108	176.00	152	185.00	689
156.20	2375	165.15	771	176.25	662	185.20	1207
157.15	503	166.00	104	176.60	341	186.20	13450

Average of 3.311 to 3.321 min.: 5p50254.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
187.20	4277	199.10	7599	209.30	128	218.20	583
187.95	333	200.15	603	209.70	100	221.15	6080
188.30	91	201.10	166	210.10	87	222.15	748
189.05	743	201.70	634	210.25	319	223.10	1872
191.20	532	202.20	168	210.95	839	224.20	14112
192.20	1282	203.15	639	211.20	284	225.20	3954
193.20	917	204.15	3623	211.60	205	226.10	214
194.20	174	205.20	6416	212.50	77	226.30	129
195.10	158	206.20	26535	215.15	198	227.10	6037
196.15	2696	207.20	3901	217.10	6744	228.20	736
198.10	118293	208.15	773	218.00	290	229.15	1408

Average of 3.311 to 3.321 min.: 5p50254.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
230.20	235	242.15	833	256.15	9207	271.40	128
231.20	629	243.20	962	257.15	791	271.70	116
234.05	378	244.20	12951	258.15	3438	272.10	167
235.15	430	245.20	1681	258.95	219	273.10	1973

DFTPP5P.M Tue May 15 09:56:51 2018 RPT1 Page: 2

236.10	300	246.10	2050	259.20	275	274.20	5194
236.80	75	247.15	281	260.90	88	275.20	31845
237.10	422	249.10	735	264.10	127	276.15	4036
238.90	84	251.10	95	265.15	1152	277.10	2023
239.20	55	252.00	85	265.90	132	278.10	462
240.15	178	253.10	341	266.15	178	281.10	76
241.15	443	255.10	67557	267.70	130	281.90	78

Average of 3.311 to 3.321 min.: 5p50254.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
283.20	379	303.20	1062	323.20	3286	336.10	101
284.15	277	304.10	119	324.20	669	341.00	184
285.10	419	310.20	122	326.95	352	341.20	180
289.10	89	314.00	284	327.20	199	345.80	303
290.10	78	314.20	151	328.15	349	346.15	421
292.70	131	315.10	766	331.80	67	352.10	1158
293.10	711	316.20	693	332.20	201	353.05	717
293.90	78	321.00	66	333.25	402	354.10	1107
296.10	8373	321.20	306	334.20	1877	355.20	126
297.10	1032	321.90	103	334.90	69	365.10	5186
302.30	121	322.20	80	335.20	331	366.00	730

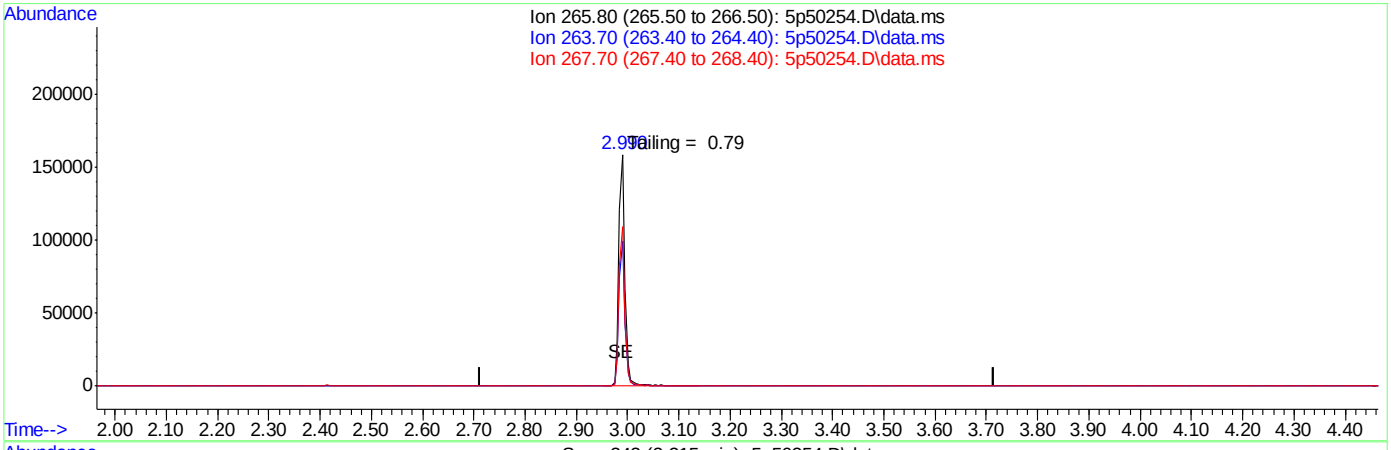
Average of 3.311 to 3.321 min.: 5p50254.D\data.ms
dftpp
Modified:subtracted

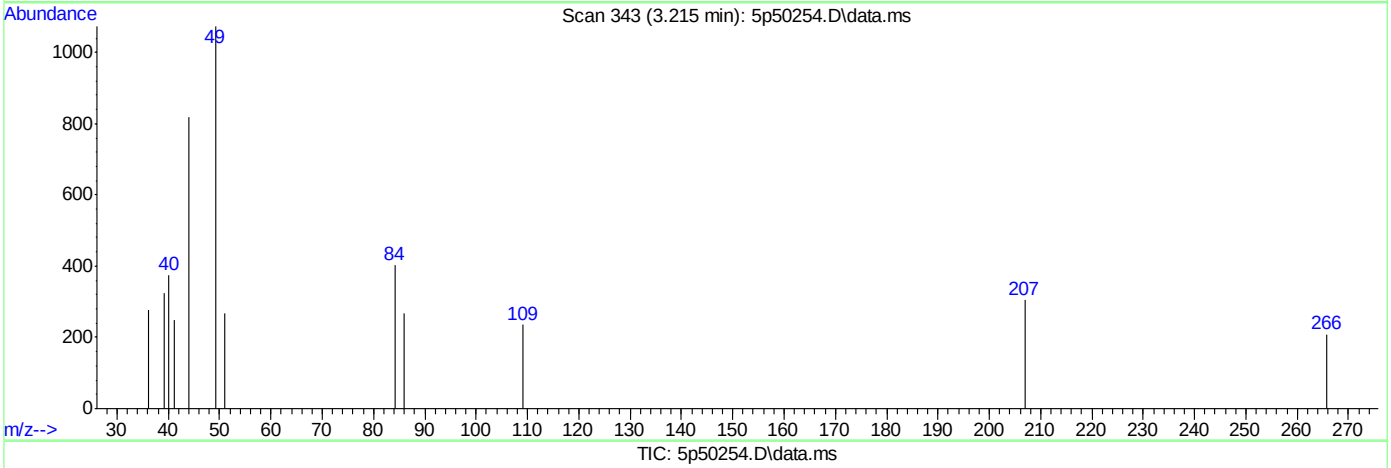
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
370.10	69	402.10	959	442.20	87840		
371.05	340	403.15	1450	443.20	17509		
372.20	2183	404.15	467	444.15	1570		
373.10	488	405.20	90				
383.00	122	420.20	81				
383.15	365	421.10	1148				
384.10	73	423.20	6958				
390.20	389	424.20	1543				
391.00	101	425.25	241				
392.00	118	426.20	76				
401.70	130	441.20	3600				

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50254.D
Acq On : 15 May 2018 1:18 am
Operator : georges
Sample : dftpp
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 15 01:24:34 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M
Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Mon May 14 11:39:11 2018
QLast Update : Mon May 14 11:39:11 2018
Response via : Initial Calibration





TIC: 5p50254.D\data.ms

(1) Pentachlorophenol (MC)

3.214min (-3.214) 0.00ng

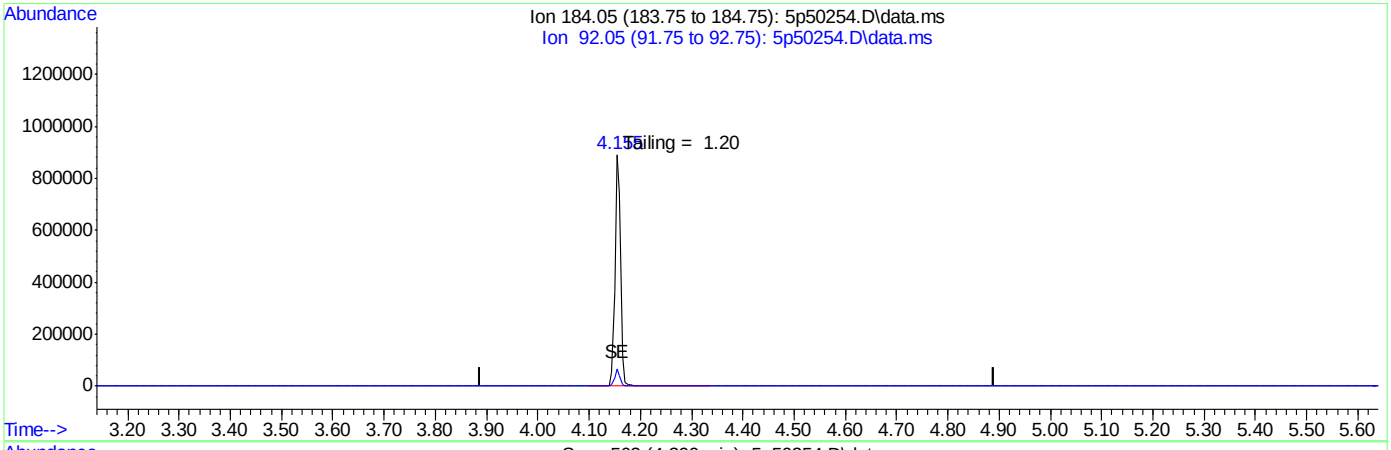
response 0

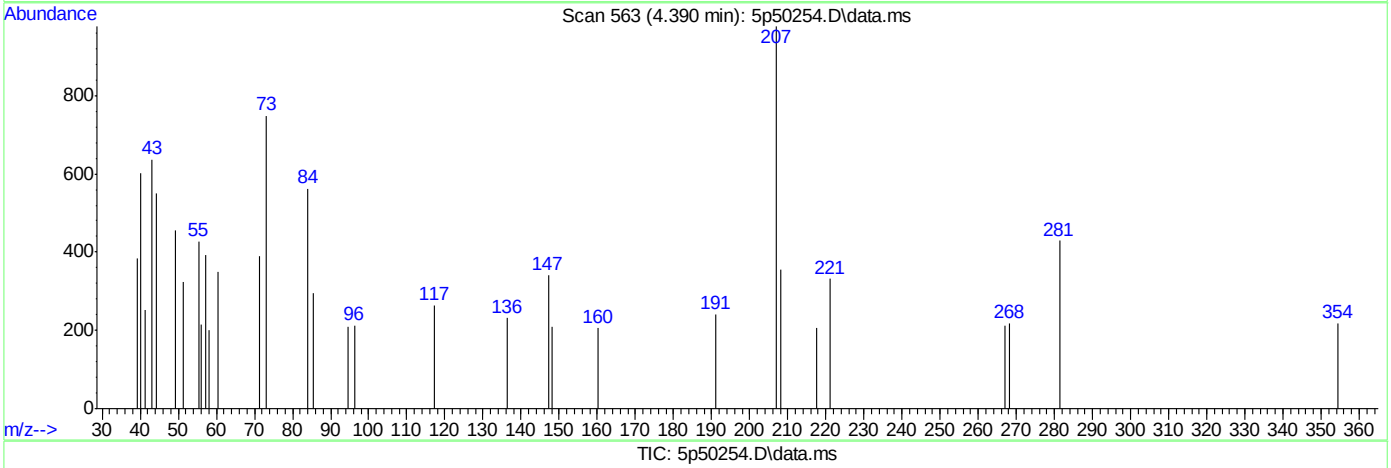
Ion	Exp%	Act%
265.80	100	0.00
263.70	62.10	0.00#
267.70	58.90	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50254.D
Acq On : 15 May 2018 1:18 am
Operator : georges
Sample : dftpp
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 15 01:24:34 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M
Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Mon May 14 11:39:11 2018
QLast Update : Mon May 14 11:39:11 2018
Response via : Initial Calibration





TIC: 5p50254.D\data.ms

(2) Benzidine (M)

4.390min (-4.390) 0.00ng

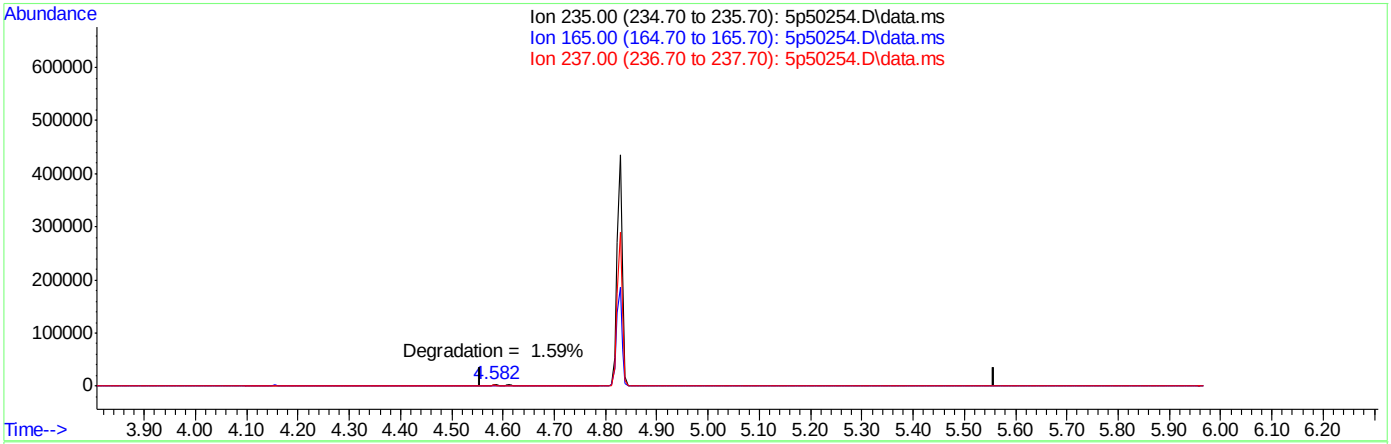
response 0

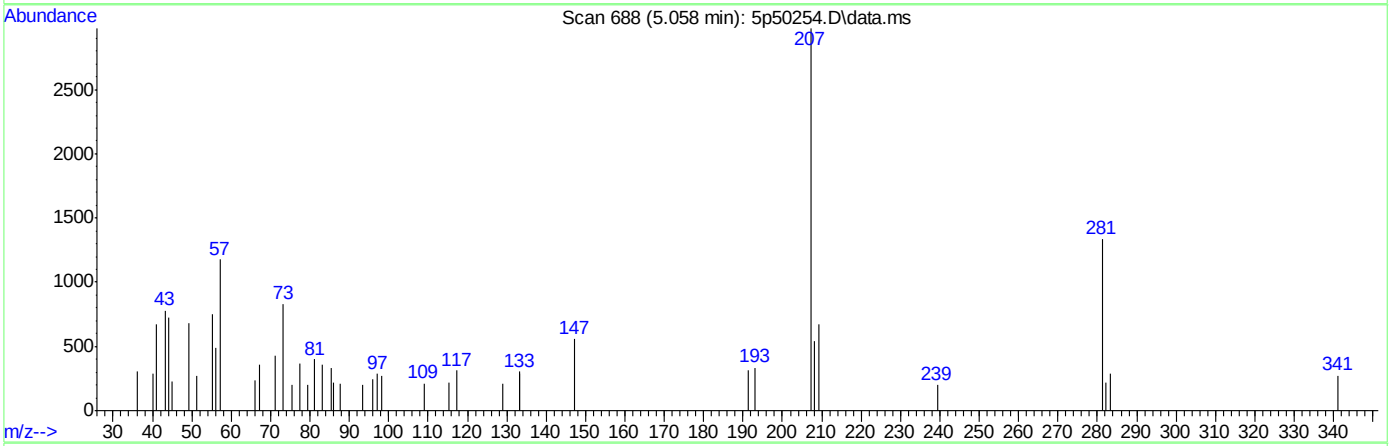
Ion	Exp%	Act%
184.05	100	0.00
92.05	5.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50254.D
Acq On : 15 May 2018 1:18 am
Operator : georges
Sample : dftpp
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 15 01:24:34 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M
Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Mon May 14 11:39:11 2018
QLast Update : Mon May 14 11:39:11 2018
Response via : Initial Calibration





(3) PP-DDT (MC)

5.057min (-5.057) 0.00ppb

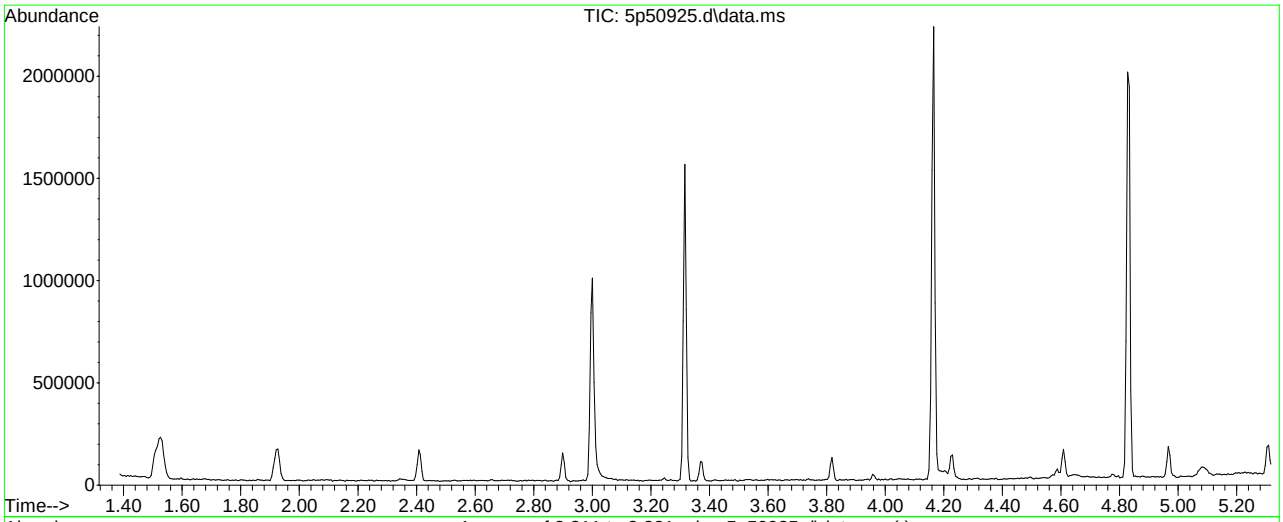
response 0

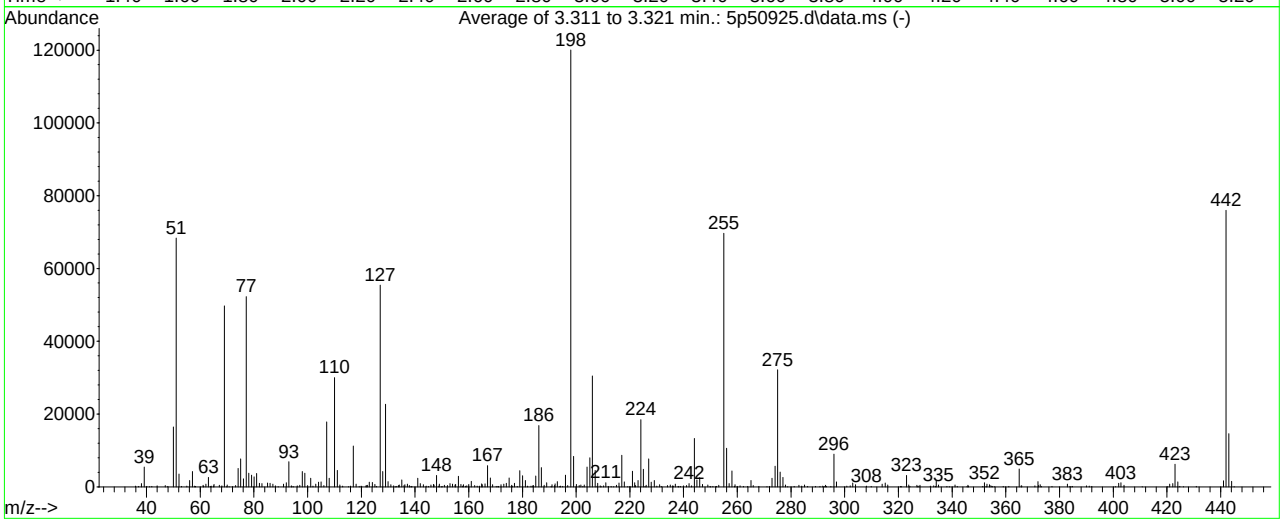
Ion	Exp%	Act%
235.00	100	0.00
165.00	44.10	0.00#
237.00	61.50	0.00#
0.00	0.00	0.00

DFTPPR

Data File : C:\msdchem\1\data\da...eel\e5p2426\5p50925.d Vial: 1
Acq On : 5 Jun 2018 12:24 pm Operator: christc2
Sample : dftpp Inst : MS5P
Misc : op6115,e5p2426,1000,,,1,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Wed Jan 31 09:46:31 2018





AutoFind: Scans 361, 362, 363; Background Corrected with Scan 357

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	57.0	68364	PASS
68	69	0.00	2	0.5	247	PASS
69	198	0.00	100	41.4	49709	PASS
70	69	0.00	2	1.1	527	PASS
127	198	40	60	46.2	55429	PASS
197	198	0.00	1	0.3	368	PASS
198	198	100	100	100.0	120008	PASS
199	198	5	9	7.0	8342	PASS
275	198	10	30	26.8	32160	PASS
365	198	1	100	4.0	4856	PASS
441	443	0.10	100	11.6	1696	PASS
442	198	40	100	63.3	76000	PASS
443	442	17	23	19.2	14595	PASS

5p50925.d DFTPP5P.M Tue Jun 05 20:31:48 2018

Average of 3.311 to 3.321 min.: 5p50925.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	164	51.10	68364	63.10	2608	72.00	74
37.05	113	52.10	3508	63.80	108	73.15	370
38.15	875	53.00	150	64.10	182	74.10	5026
39.15	5427	55.00	217	64.90	284	75.05	7641
40.10	143	56.05	1701	65.10	674	76.05	2224
41.10	38	57.10	4202	67.10	402	77.10	52280
42.00	100	57.95	199	68.10	247	78.10	3765
43.95	270	58.20	88	69.00	49709	79.10	3210
47.00	353	61.10	462	69.80	70	80.05	2751
47.95	150	61.30	172	70.05	527	81.05	3677
50.05	16479	62.10	714	70.80	69	82.05	940

Average of 3.311 to 3.321 min.: 5p50925.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
83.00	922	94.80	74	106.00	379	119.20	141
85.10	1014	96.10	283	107.05	17808	119.90	187
86.05	945	97.05	448	108.05	2368	120.10	67
87.05	763	98.00	4188	110.00	30027	121.70	246
88.00	240	99.00	3722	111.05	4544	122.00	341
89.00	68	100.00	365	112.05	486	122.20	448
91.05	710	101.10	2319	113.00	183	123.00	1294
92.05	1093	101.95	191	115.20	78	124.10	1161
93.05	6906	103.00	732	116.00	213	125.05	664
93.95	304	104.05	1296	117.05	11204	125.70	97
94.20	104	105.05	1332	118.05	723	127.00	55429

Average of 3.311 to 3.321 min.: 5p50925.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
128.00	4204	136.20	551	145.95	497	153.95	760
129.05	22652	137.10	714	146.90	691	154.85	502
130.00	1460	137.85	333	147.10	517	155.10	641
130.95	572	138.10	116	148.05	3132	156.10	2920
132.05	251	138.60	99	148.80	181	157.05	666
132.70	74	138.80	113	149.10	748	157.70	208
133.20	108	141.05	2333	149.80	73	158.05	586
133.85	335	141.95	888	150.10	92	158.80	123
134.10	489	143.05	578	150.95	453	159.05	277
135.05	1915	144.10	200	152.05	369	159.80	241
135.85	331	145.00	88	153.00	870	160.05	637

Average of 3.311 to 3.321 min.: 5p50925.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
160.95	1472	170.90	91	180.05	3053	190.70	120
162.15	356	171.10	82	181.05	1710	191.00	564
163.10	180	172.00	606	181.95	196	191.90	348
164.00	198	173.00	729	183.20	186	192.15	820
164.85	851	173.95	940	183.85	295	193.00	1411
165.05	586	175.05	2434	184.10	316	193.90	99
166.05	847	175.95	432	185.00	2950	194.10	193
167.00	5842	176.20	167	186.05	16856	195.00	95
168.05	2418	177.00	966	187.05	5271	196.05	3172
168.90	555	178.10	142	188.05	431	196.80	368
170.20	143	179.00	4408	189.00	1090	198.00	120008

Average of 3.311 to 3.321 min.: 5p50925.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
199.00	8342	208.05	932	217.95	1372	227.00	7659
200.05	694	208.95	270	219.20	71	227.95	1272
201.15	362	209.30	123	220.00	129	229.05	1753
201.75	510	210.20	261	221.00	4301	230.00	225
202.50	100	211.00	1156	221.75	1133	231.05	584
203.00	531	212.00	88	222.10	327	231.70	89
204.05	5468	213.00	119	223.00	1741	234.00	370
205.10	7964	214.00	69	224.05	18440	235.00	485
206.05	30443	215.05	400	225.00	4807	235.90	291
207.05	4493	215.95	1010	225.70	98	236.15	166
207.80	204	217.00	8692	226.10	430	236.95	724

Average of 3.311 to 3.321 min.: 5p50925.d\data.ms

dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
238.00	82	249.05	477	258.90	150	272.95	2389
238.20	87	249.90	120	259.15	586	274.10	5681
238.80	114	250.10	67	260.00	113	275.00	32160
240.00	293	250.90	121	261.05	309	275.95	4038
241.10	375	251.90	75	262.30	105	276.95	2595
242.05	867	252.30	115	263.80	82	277.95	469
243.00	240	253.05	419	265.05	1749	278.80	75
244.05	13289	255.00	69664	265.90	350	281.20	128
245.00	1904	256.05	10582	268.00	84	282.90	446
246.00	2497	256.95	861	271.10	67	284.00	213
247.00	670	258.00	4331	272.00	135	285.05	472

Average of 3.311 to 3.321 min.: 5p50925.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
286.20	130	302.05	259	323.90	498	338.10	94
289.10	122	303.00	1033	324.30	88	339.00	67
290.80	82	304.05	594	326.85	451	341.10	468
291.80	180	308.10	186	327.20	132	341.90	148
292.30	100	309.90	111	327.60	174	345.60	122
292.85	398	313.90	737	328.00	424	345.85	410
293.20	129	315.05	1064	331.90	165	346.10	202
294.80	101	316.05	499	333.10	256	351.40	149
296.00	9003	320.80	154	333.80	130	352.05	1142
296.90	1347	321.00	115	334.05	1607	352.70	144
300.75	203	323.00	3121	334.95	500	352.95	700

Average of 3.311 to 3.321 min.: 5p50925.d\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
353.90	582	371.95	1404	392.00	89	424.80	103
354.10	374	372.20	330	400.90	74	426.10	73
354.75	164	372.80	554	402.05	971	430.90	94
355.00	121	373.20	91	402.90	1119	441.10	1696
355.70	67	377.20	119	404.05	414	442.00	76000
359.00	87	382.95	710	410.80	69	443.00	14595
361.10	81	383.90	115	420.30	72	444.10	1543
364.95	4856	384.30	68	421.00	763	445.00	67
365.70	307	384.80	90	422.20	908		
365.95	244	390.05	309	423.00	6243		
370.85	286	391.05	225	424.00	1349		

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50925.d
Acq On    :  5 Jun 2018  12:24 pm
Operator  : christc2
Sample    : dftpp                                    Inst     : MS5P
Misc      : op6115,e5p2426,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M
Quant Results File: DFTPP5P.RES
Quant Time: Jun 05 20:33:09 2018
Quant Title  : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Wed Jan 31 09:46:31 2018
QLast Update : Tue Jun 05 20:32:41 2018
Response via : Initial Calibration
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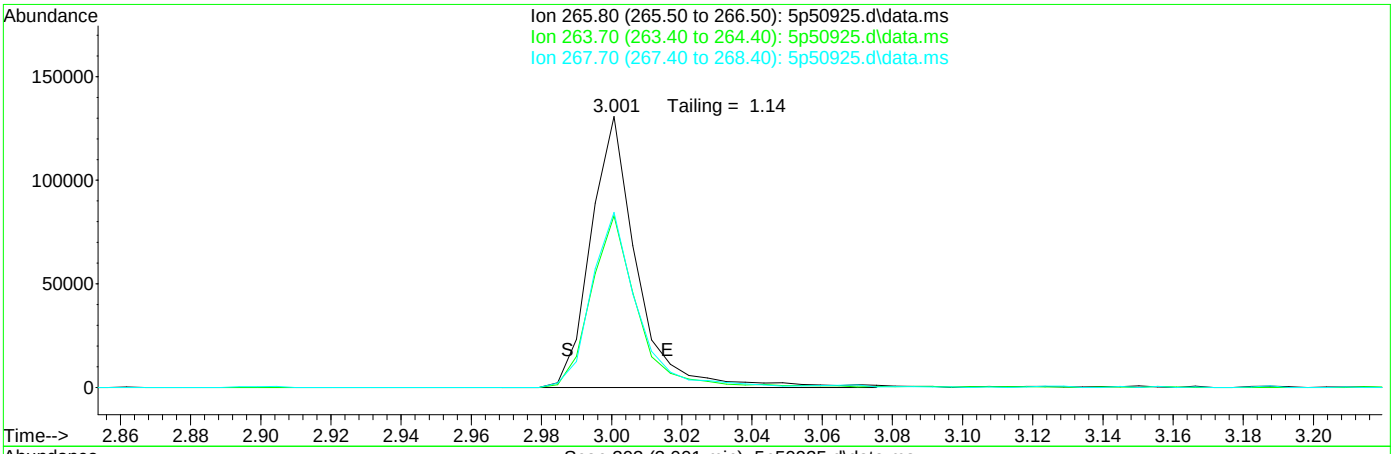
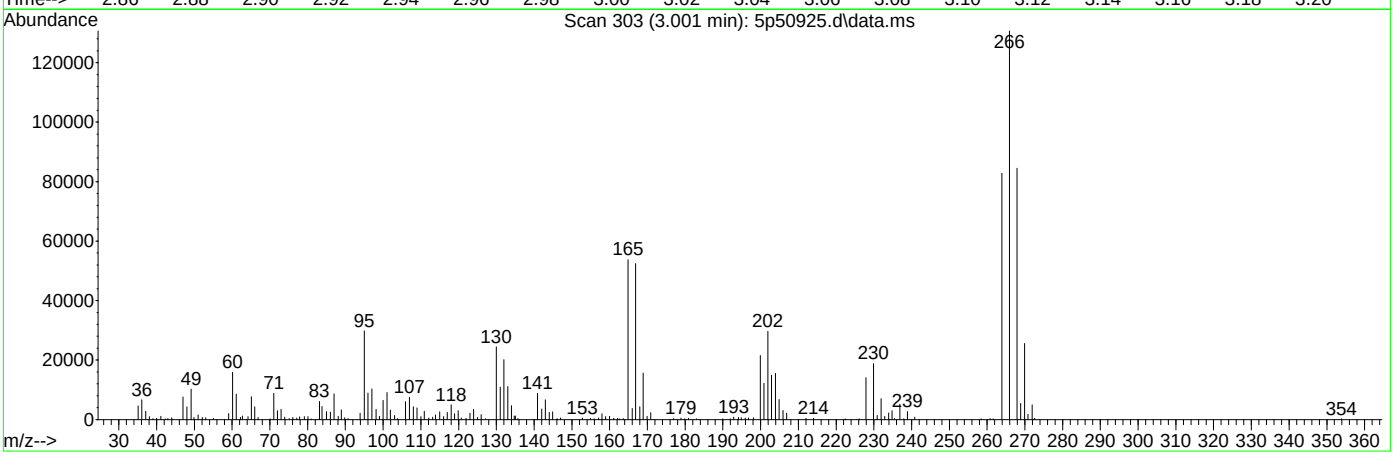




TIC: 5p50925.d\data.ms

(1) Pentachlorophenol (MC)

3.001min (-3.001) 0.00ng

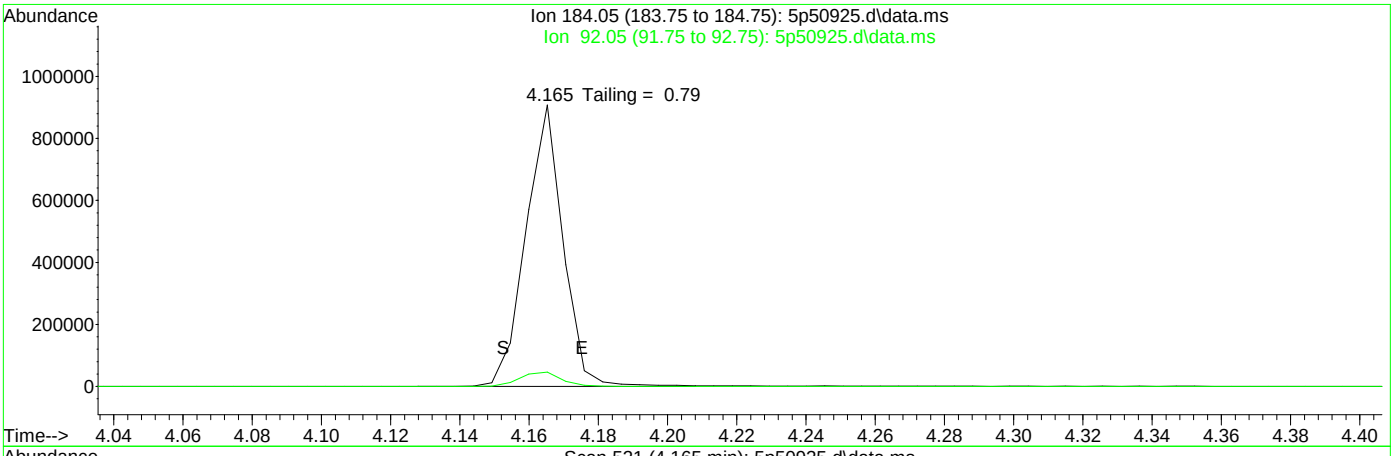
response 0

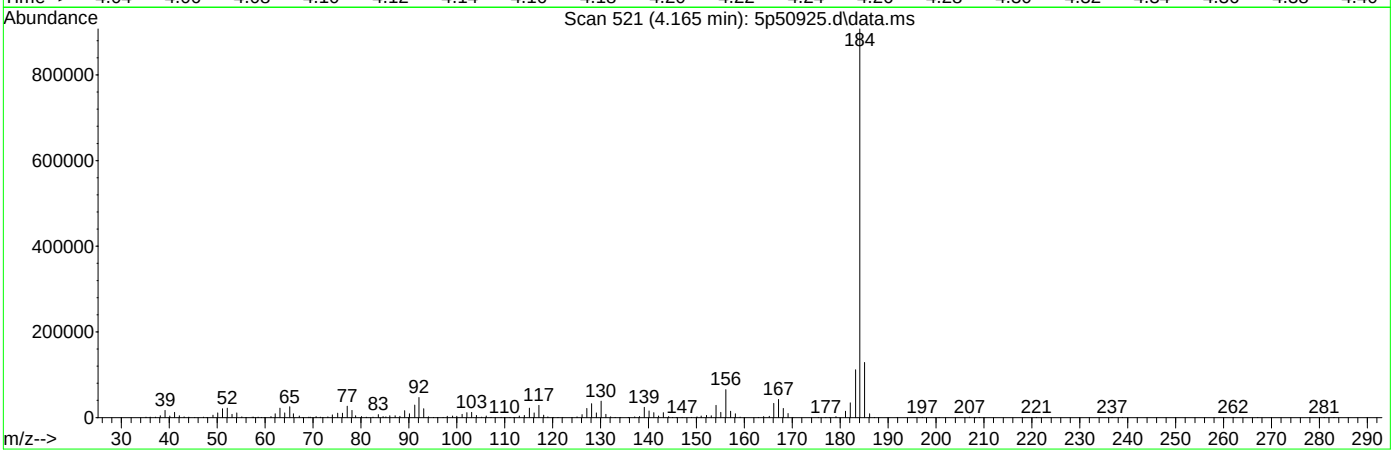
Ion	Exp%	Act%
265.80	100	0.00
263.70	63.40	0.00#
267.70	64.60	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50925.d
Acq On    :  5 Jun 2018  12:24 pm
Operator  : christc2
Sample    : dftpp                                    Inst     : MS5P
Misc      : op6115,e5p2426,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M
Quant Results File: DFTPP5P.RES
Quant Time: Jun 05 20:33:09 2018
Quant Title  : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Wed Jan 31 09:46:31 2018
QLast Update : Tue Jun 05 20:32:41 2018
Response via : Initial Calibration
```





TIC: 5p50925.d\data.ms

(2) Benzidine (M)

4.165min (-4.165) 0.00ng

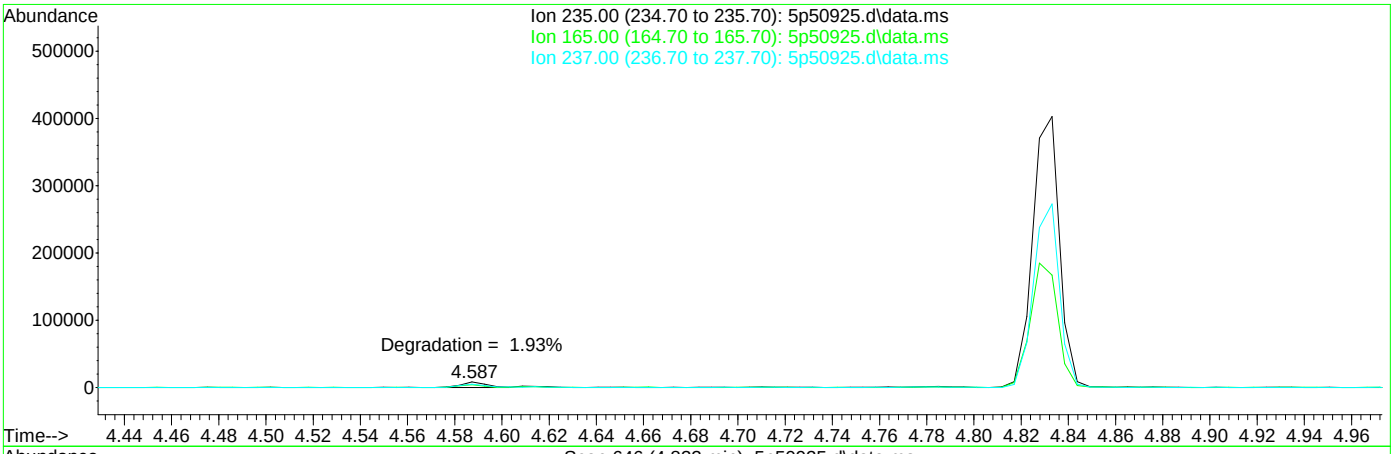
response 0

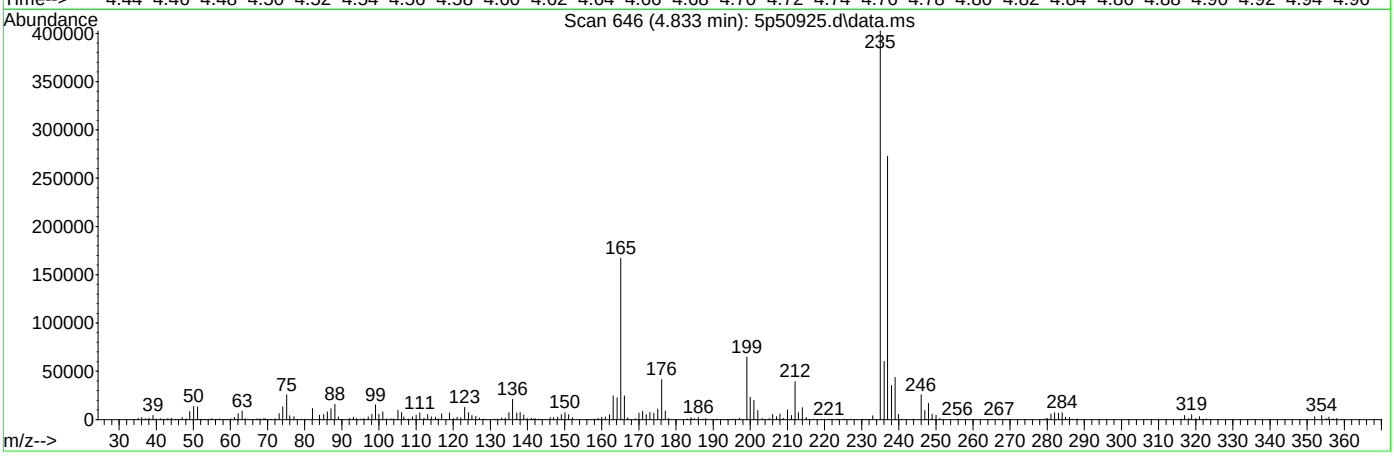
Ion	Exp%	Act%
184.05	100	0.00
92.05	63.40	0.00#
0.00	64.60	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50925.d
Acq On : 5 Jun 2018 12:24 pm
Operator : christc2
Sample : dftpp Inst : MS5P
Misc : op6115,e5p2426,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M
Quant Results File: DFTPP5P.RES
Quant Time: Jun 05 20:33:09 2018
Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Wed Jan 31 09:46:31 2018
QLast Update : Tue Jun 05 20:32:41 2018
Response via : Initial Calibration





TIC: 5p50925.d\data.ms

(3) PP-DDT (MC)

4.833min (-4.833) 0.00ppb

response 0

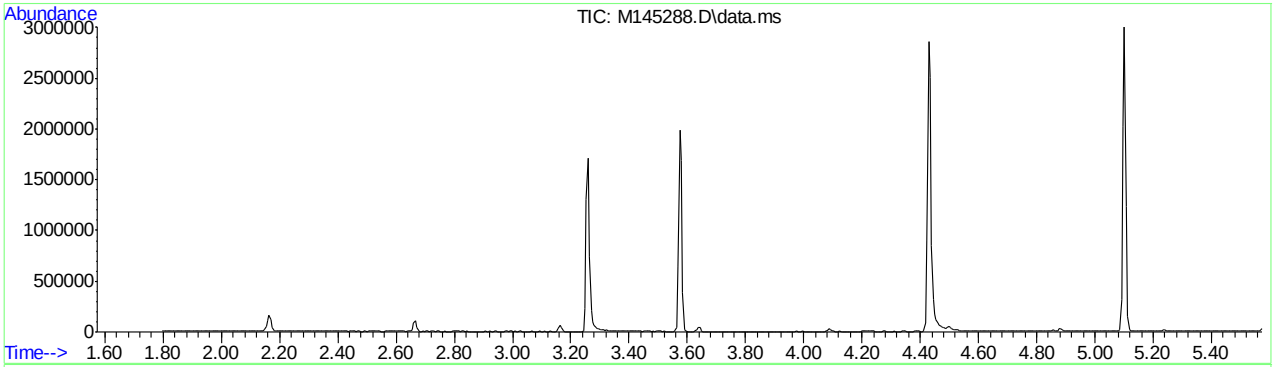
Ion	Exp%	Act%
235.00	100	0.00
165.00	63.40	0.00#
237.00	64.60	0.00#
0.00	0.00	0.00

DFTPPR

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145288.D
Acq On : 17 Apr 2018 10:55 am
Operator : chriss2
Sample : dftpp
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
Last Update : Sun Feb 18 15:20:41 2018



AutoFind: Scans 333, 334, 335; Background Corrected with Scan 329

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	32.2	54344	PASS
68	69	0.00	2	0.5	349	PASS
69	198	0.00	100	40.4	68186	PASS
70	69	0.00	2	0.6	378	PASS
127	198	40	60	52.9	89104	PASS
197	198	0.00	1	0.3	462	PASS
198	198	100	100	100.0	168576	PASS
199	198	5	9	6.9	11591	PASS
275	198	10	30	23.5	39557	PASS
365	198	1	100	2.9	4960	PASS
441	443	0.10	100	73.4	18883	PASS
442	198	40	100	78.5	132344	PASS
443	442	17	23	19.4	25736	PASS

Average of 3.568 to 3.579 min.: M145288.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.15	205	52.15	2886	68.15	349	81.05	5225
38.15	721	53.05	90	69.05	68186	82.05	1418
39.15	3594	55.10	287	70.05	378	83.05	1237
39.95	85	56.05	1745	73.10	647	85.10	911
40.15	300	57.10	3972	74.10	6530	86.05	1461
41.15	104	58.05	239	75.05	10225	87.05	641
42.05	89	61.10	645	76.15	3503	88.00	332
45.15	76	62.05	978	77.10	79265	89.05	70
49.05	250	63.10	2305	78.15	5459	91.10	1105
50.15	14039	64.10	441	79.05	4670	92.05	1256
51.15	54344	65.15	1250	80.05	3793	93.05	7672

Average of 3.568 to 3.579 min.: M145288.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
94.10	523	106.05	189	118.05	1286	130.10	3044
94.95	79	107.05	24758	119.05	189	131.05	770
96.10	181	108.05	3946	120.10	192	131.95	115
97.15	87	110.05	46965	121.15	67	132.15	92
98.10	6401	111.05	7313	122.05	1444	134.05	949
99.05	5754	112.10	749	123.05	2620	135.10	2507
100.00	507	113.15	139	124.10	1184	136.05	925
101.05	3007	114.05	79	125.00	870	137.10	1385
103.05	1061	115.05	148	127.05	89104	138.00	288
104.00	1914	116.10	1036	128.05	6276	138.25	136
105.05	1797	117.05	16243	129.05	34130	138.85	91

Average of 3.568 to 3.579 min.: M145288.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
140.05	363	150.15	234	160.10	899	170.75	82
141.05	3942	151.05	607	161.10	1988	171.05	183
142.05	1514	152.05	485	162.05	462	172.05	798
143.10	1173	153.00	1198	162.95	112	173.05	1070
144.10	188	154.00	858	164.10	255	174.05	1654
145.00	171	155.05	2178	165.05	1496	175.05	3071
145.25	128	156.05	3720	166.10	1342	176.00	963
146.05	595	157.05	786	167.05	8691	177.05	1359
147.05	2115	158.00	706	168.05	5586	178.05	579
148.05	4560	159.00	418	169.05	889	179.05	5948
149.05	958	159.95	213	170.25	205	180.05	4132

Average of 3.568 to 3.579 min.: M145288.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
181.05	2180	191.10	648	201.55	748	213.10	213
182.05	277	192.05	2030	203.05	1169	215.05	486
183.05	137	193.10	2214	204.05	6159	216.05	889
184.05	435	194.05	477	205.05	9919	217.05	10288
185.05	2701	194.85	98	206.05	41396	218.00	1334
186.05	23355	196.05	5581	207.05	5693	219.05	68
187.05	6663	196.75	462	208.05	1419	221.05	9197
188.15	795	198.05	168576	209.05	426	223.05	2176
189.05	1392	199.05	11591	210.10	771	224.05	21863
190.15	82	200.05	1075	211.05	1658	225.05	5422
190.95	136	201.05	126	211.95	112	226.00	708

Average of 3.568 to 3.579 min.: M145288.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
227.05	8667	238.05	69	249.05	525	265.05	1815
228.10	1334	238.95	377	250.85	72	267.85	88
229.00	1659	240.05	205	253.10	271	269.90	178
230.05	264	241.05	505	255.05	87722	270.95	115

DFTPPM.M Wed Apr 18 02:28:33 2018 MSM Page: 2

231.00	693	242.05	1396	256.05	13488	271.15	110
232.05	75	243.05	1286	257.05	1237	272.00	283
233.05	119	244.05	17216	258.05	4944	273.05	2979
234.00	637	245.05	2666	259.05	984	274.05	6856
235.05	659	246.05	2977	260.95	68	275.05	39557
236.10	448	247.05	841	262.95	76	276.05	5627
237.05	845	248.05	101	263.90	147	277.05	3088

Average of 3.568 to 3.579 min.: M145288.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
277.95	481	295.05	110	314.05	550	334.05	2353
279.05	67	296.05	11022	315.05	1299	335.05	609
281.05	78	297.05	1504	316.05	633	341.05	450
283.00	326	297.95	179	321.05	355	342.05	147
284.00	241	301.95	242	322.00	244	346.00	840
285.05	551	303.05	1547	323.05	3967	346.95	191
285.95	107	304.05	350	324.05	581	352.05	1189
288.95	154	307.90	138	326.95	659	353.00	739
292.05	120	308.85	85	327.95	236	354.05	1495
293.00	821	310.05	72	332.00	209	354.95	221
293.95	109	313.85	76	333.05	314	364.95	4960

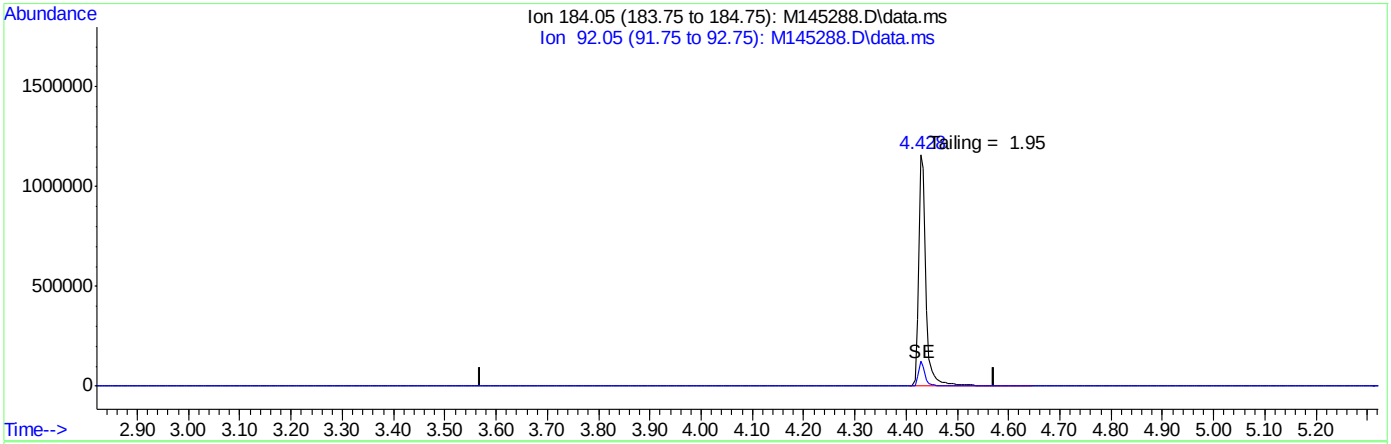
Average of 3.568 to 3.579 min.: M145288.D\data.ms
dftpp
Modified:subtracted

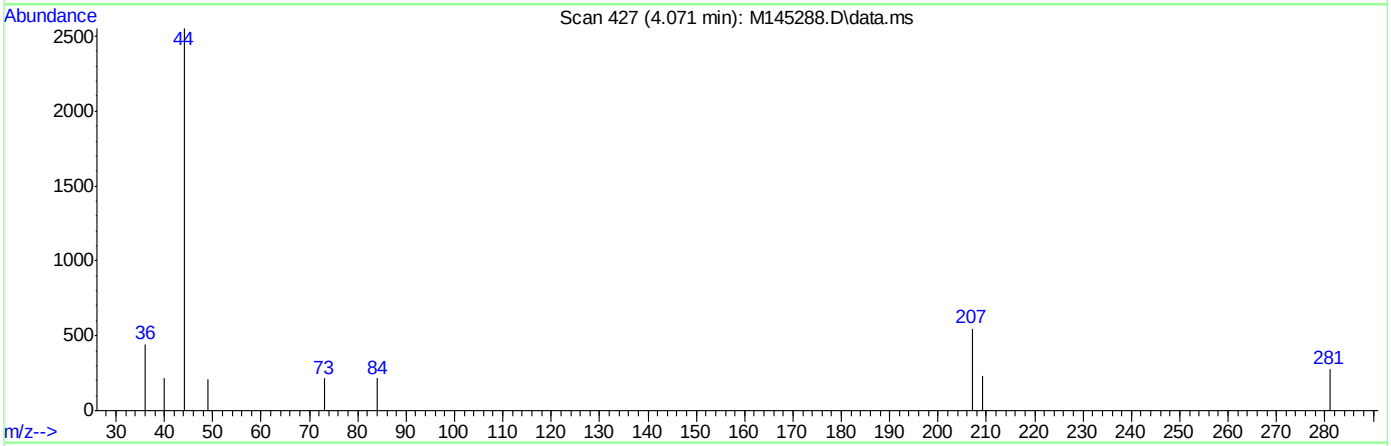
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
366.00	628	392.05	68	441.05	18883		
367.05	71	402.00	994	442.05	132344		
369.95	81	402.85	71	443.05	25736		
371.05	323	403.05	1099	444.05	2117		
372.05	2265	404.05	421				
373.05	587	420.85	120				
383.05	554	421.05	974				
384.00	233	422.00	1055				
390.05	236	423.05	7167				
390.95	130	424.05	1732				
391.15	130	424.95	219				

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145288.D
Acq On    : 17 Apr 2018  10:55 am
Operator  : chriss2
Sample    : dftpp
Misc      : op10492,em6169,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Apr 17 11:37:30 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title  : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
QLast Update : Sun Feb 18 15:20:41 2018
Response via : Continuing Cal File:
```





TIC: M145288.D\data.ms

(2) Benzidine (M)

4.071min (-4.071) 0.00ppm

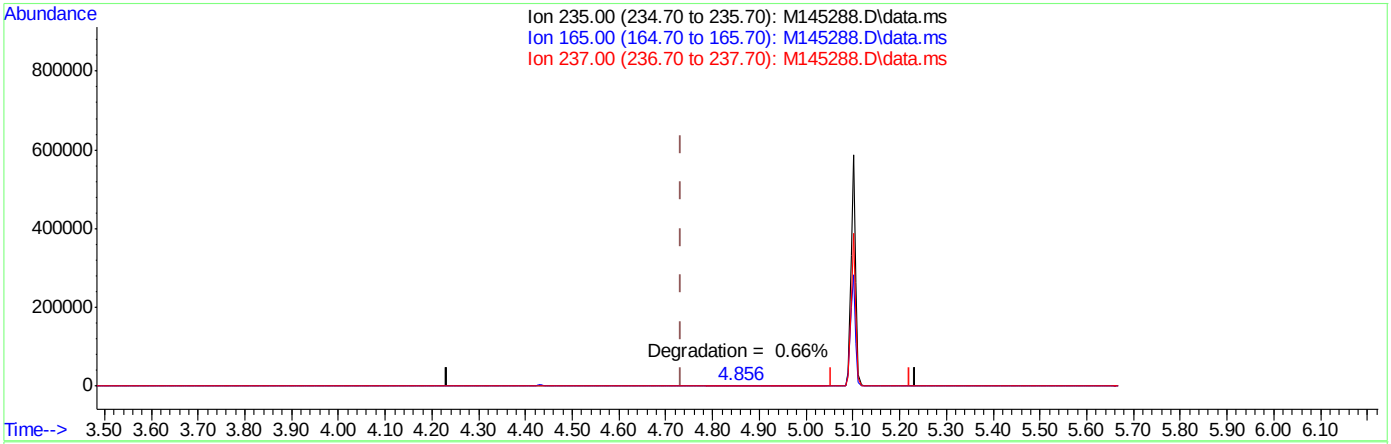
response 0

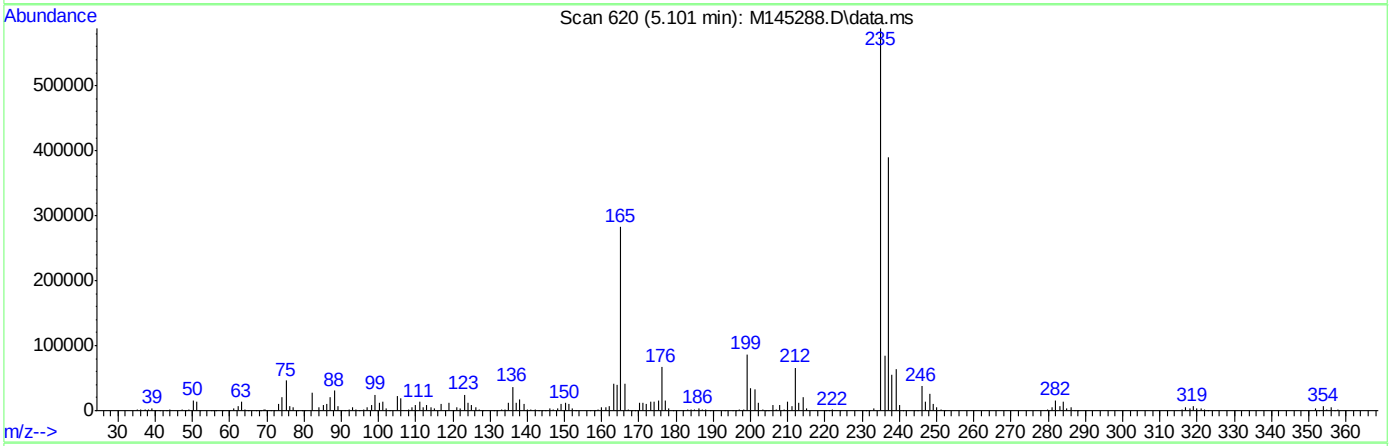
Ion	Exp%	Act%
184.05	100	0.00
92.05	7.20	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145288.D
Acq On : 17 Apr 2018 10:55 am
Operator : chriss2
Sample : dftpp
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 17 11:37:30 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
QLast Update : Sun Feb 18 15:20:41 2018
Response via : Continuing Cal File:





TIC: M145288.D\data.ms

(3) PP-DDT (MC)

5.101min (+0.368) 0.00ppm m

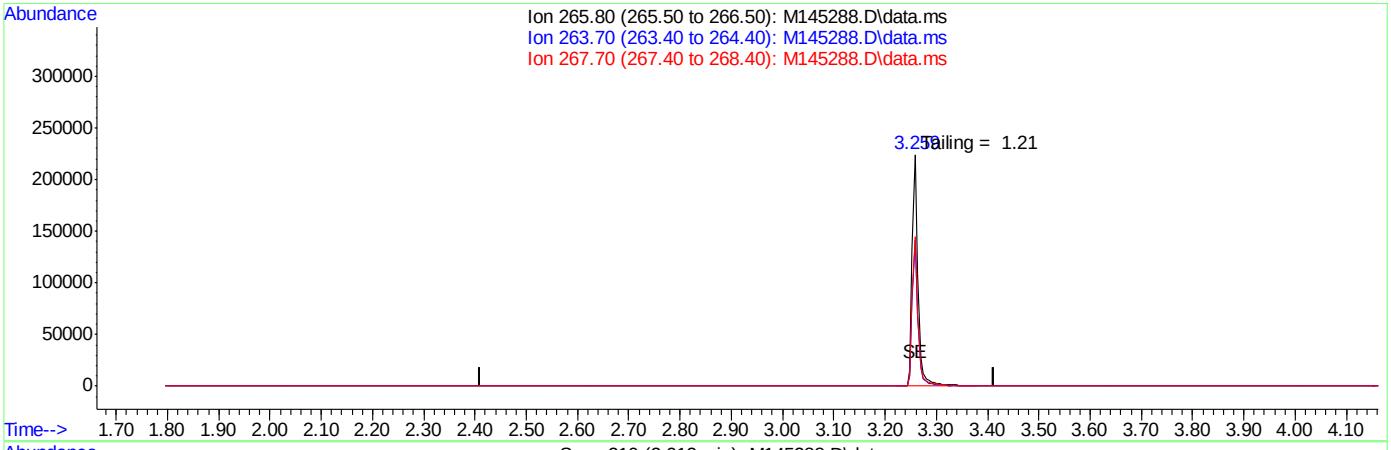
response 402911

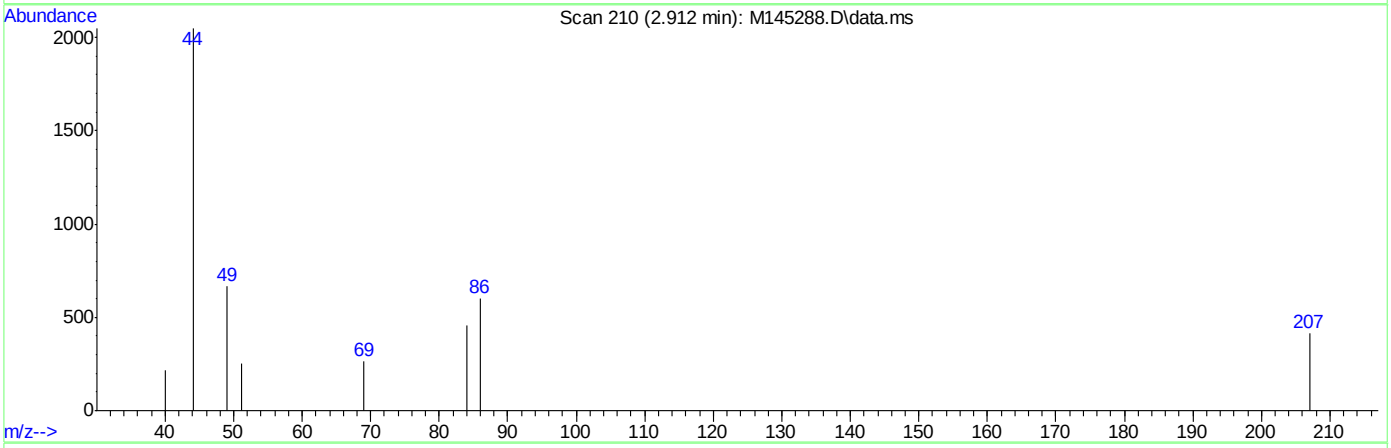
Ion	Exp%	Act%
235.00	100	100
165.00	42.80	47.96
237.00	66.60	66.17
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145288.D
Acq On    : 17 Apr 2018  10:55 am
Operator  : chriss2
Sample    : dftpp
Misc      : op10492,em6169,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Apr 17 11:37:30 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title  : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
QLast Update : Sun Feb 18 15:20:41 2018
Response via : Continuing Cal File:
```





TIC: M145288.D\data.ms

(1) Pentachlorophenol (MC)

2.912min (-2.912) 0.00ppm

response 0

Ion	Exp%	Act%
265.80	100	0.00
263.70	61.50	0.00#
267.70	64.40	0.00#
0.00	0.00	0.00

9.5.8.3

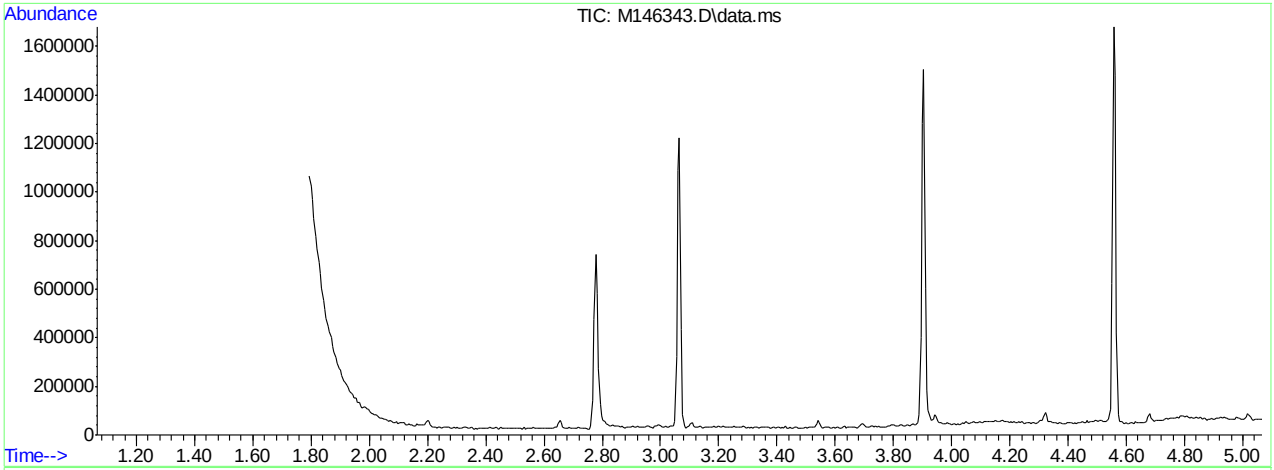
9

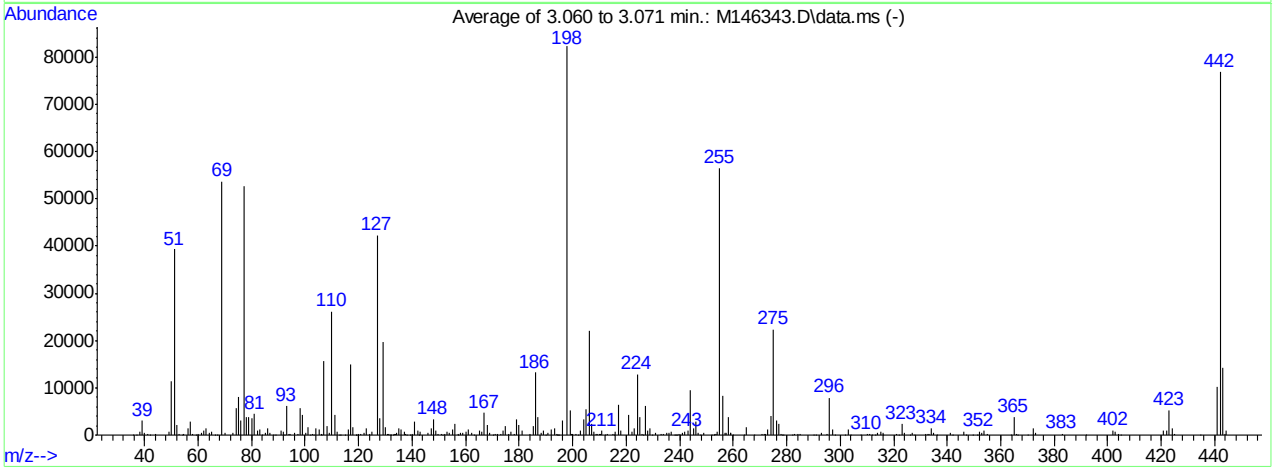
DFTPPR

Data File : D:\EM6221\M146343.D
Acq On : 24 May 2018 12:16 pm
Sample : dftpp
Misc : op10492,em6221,1000,,,1,1
MS Integration Params: rteint.p

Vial: 1
Operator: seanb1
Inst : Instrument #1
Multiplr: 1.00

Method : D:\DFTPPm.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018





AutoFind: Scans 238, 239, 240; Background Corrected with Scan 233

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	47.8	39329	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	65.3	53674	PASS
70	69	0.00	2	0.8	438	PASS
127	198	40	60	51.4	42219	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	82203	PASS
199	198	5	9	6.5	5335	PASS
275	198	10	30	27.2	22367	PASS
365	198	1	100	4.6	3804	PASS
441	443	0.10	100	71.9	10238	PASS
442	198	40	100	93.3	76720	PASS
443	442	17	23	18.5	14231	PASS

M146343.D DFTPPm.M Fri May 25 12:49:38 2018 RPT1

Average of 3.060 to 3.071 min.: M146343.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	124	52.10	2040	63.10	1465	77.10	52589
37.10	97	52.95	267	64.10	380	78.05	3852
38.05	684	54.00	72	65.10	816	79.05	3815
39.10	3030	54.70	141	66.10	96	80.00	3591
40.05	424	56.05	1459	67.10	56	81.05	4426
41.05	271	57.00	2781	69.00	53674	82.00	1063
42.10	78	58.10	290	70.05	438	83.05	1143
43.95	128	59.00	67	73.05	379	84.00	11
49.00	698	59.95	144	74.10	5700	85.00	557
50.05	11355	61.05	563	75.00	8076	86.00	1351
51.05	39329	62.10	974	76.10	2987	86.95	580

Average of 3.060 to 3.071 min.: M146343.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
88.00	103	99.05	4204	108.00	1984	118.90	98
89.10	67	100.10	448	109.00	409	119.10	82
91.05	926	101.00	1673	110.00	26167	120.00	290
92.00	705	102.00	77	111.00	4339	120.90	163
92.20	117	102.90	356	112.00	629	122.00	567
93.05	6158	103.20	125	112.70	91	123.00	1484
93.95	357	104.00	1408	113.10	15	123.90	350
94.20	160	105.05	1234	114.80	93	125.00	605
96.15	397	106.00	163	116.05	1157	127.00	42219
97.10	326	106.20	97	117.00	14832	128.05	3530
98.10	5665	107.00	15681	118.00	1614	129.00	19783

Average of 3.060 to 3.071 min.: M146343.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
130.00	1615	137.00	808	148.00	3355	157.30	116
130.80	252	137.65	314	149.00	890	158.00	565
131.05	259	138.00	119	149.80	197	158.95	455
131.80	70	139.00	83	151.05	260	160.00	694
132.20	90	139.95	229	151.30	89	161.00	1225
132.70	120	141.00	2758	152.10	331	162.10	366
133.15	266	142.00	912	153.05	834	162.90	91
133.90	196	142.60	87	154.00	521	165.00	1042
134.05	521	143.00	685	155.00	1282	166.00	746
135.10	1359	145.95	580	156.05	2459	167.00	4736
136.00	1189	147.00	1409	157.10	165	168.00	2249

Average of 3.060 to 3.071 min.: M146343.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
169.10	442	180.00	2259	193.05	1492	202.10	72
170.10	82	181.00	965	193.90	154	203.00	980
170.90	187	183.95	358	194.20	88	204.00	3407
172.00	345	185.10	1875	194.70	122	205.05	5463
173.05	307	186.05	13249	195.00	90	206.05	22155
173.95	990	187.05	3839	196.00	3039	207.00	2385
175.00	1793	188.05	525	198.00	82203	208.00	683
175.95	180	189.00	958	198.95	5335	208.90	348
177.05	834	190.00	108	199.70	131	209.20	132
177.95	354	190.90	368	200.10	214	210.05	271
179.00	3419	192.05	1163	201.30	181	210.30	275

Average of 3.060 to 3.071 min.: M146343.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
211.00	851	224.05	12860	234.95	573	244.00	9572
212.00	118	225.05	3705	236.00	501	245.00	1441
213.05	167	225.80	139	237.00	622	246.00	2750
215.00	137	226.20	105	238.10	70	247.00	514

215.40	95	227.00	6240	238.70	98	247.90	106
216.00	737	227.95	1047	239.00	122	249.00	443
217.00	6354	229.00	1324	239.90	144	252.00	127
217.95	890	229.70	79	240.10	125	252.80	76
221.00	4308	231.00	405	241.00	481	253.10	223
222.10	646	232.90	170	242.00	726	253.40	162
223.00	1466	233.95	270	243.10	943	254.00	677

Average of 3.060 to 3.071 min.: M146343.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
255.00	56483	270.95	264	282.10	86	301.90	98
256.00	8315	271.70	171	283.00	293	303.00	1115
256.90	416	272.10	362	284.10	148	304.00	95
257.20	378	272.95	1163	285.10	231	307.80	77
258.00	3803	274.00	4047	290.00	81	310.10	226
258.90	457	275.00	22367	290.90	87	310.80	130
259.10	376	276.00	3026	293.05	483	312.00	30
259.90	77	276.95	2329	295.00	150	313.10	101
264.00	70	277.80	156	296.00	7830	314.10	564
265.00	1563	278.10	89	296.95	1166	315.05	641
268.00	71	278.90	121	298.20	70	315.90	105

Average of 3.060 to 3.071 min.: M146343.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
316.05	442	334.05	1492	353.90	1000	402.00	972
320.95	308	334.95	387	354.95	236	402.95	744
321.80	78	336.00	86	363.60	84	404.00	276
323.00	2345	340.95	381	365.00	3804	405.00	100
324.00	476	342.00	117	365.85	234	420.95	938
326.10	79	346.00	692	366.10	119	422.00	982
326.95	556	347.10	92	370.00	125	423.00	5299
327.90	79	349.40	74	371.95	1536	424.00	1411
332.00	232	351.10	87	373.00	409	425.10	142
332.90	203	352.05	738	382.95	302	434.50	70
333.10	132	352.95	471	392.00	71	441.00	10238

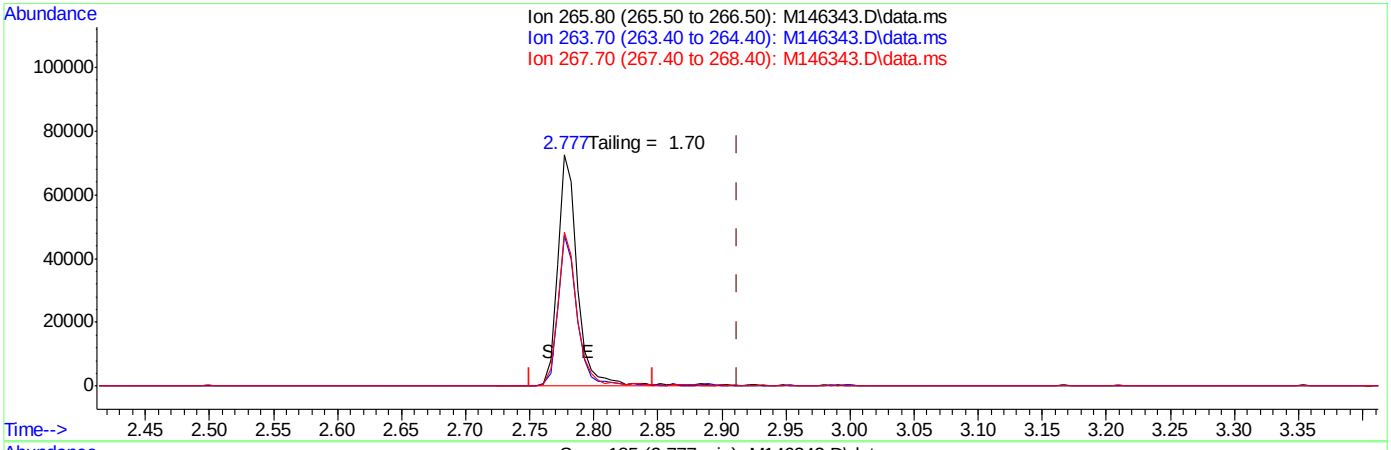
Average of 3.060 to 3.071 min.: M146343.D\data.ms
dftpp
Modified:subtracted

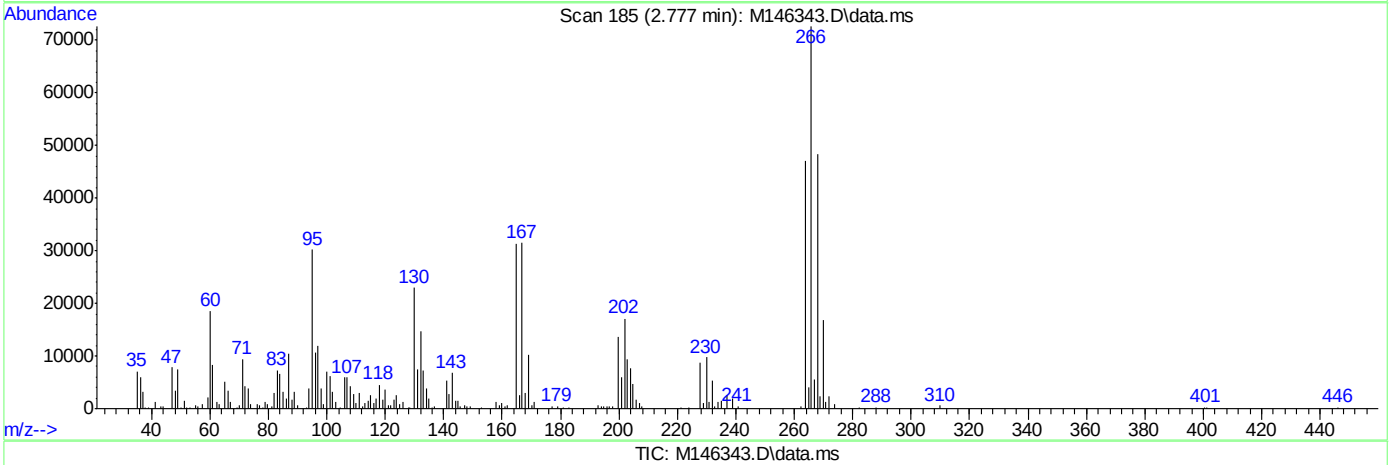
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
442.00	76720						
443.00	14231						
443.90	169						
444.05	884						

Quantitation Report (Qedit)

Data Path : D:\EM6221\
Data File : M146343.D
Acq On : 24 May 2018 12:16 pm
Operator : seanb1
Sample : dftpp
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 24 12:21:40 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
QLast Update : Sun Feb 18 15:20:41 2018
Response via : Continuing Cal File:





TIC: M146343.D\data.ms

(1) Pentachlorophenol (MC)

2.777min (-0.135) 0.00ppm

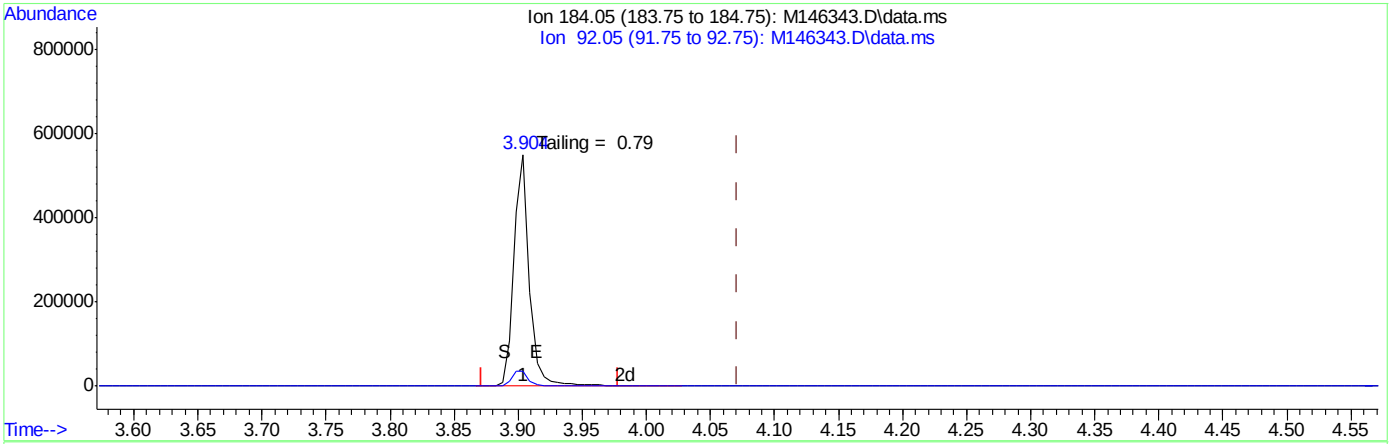
response 77571

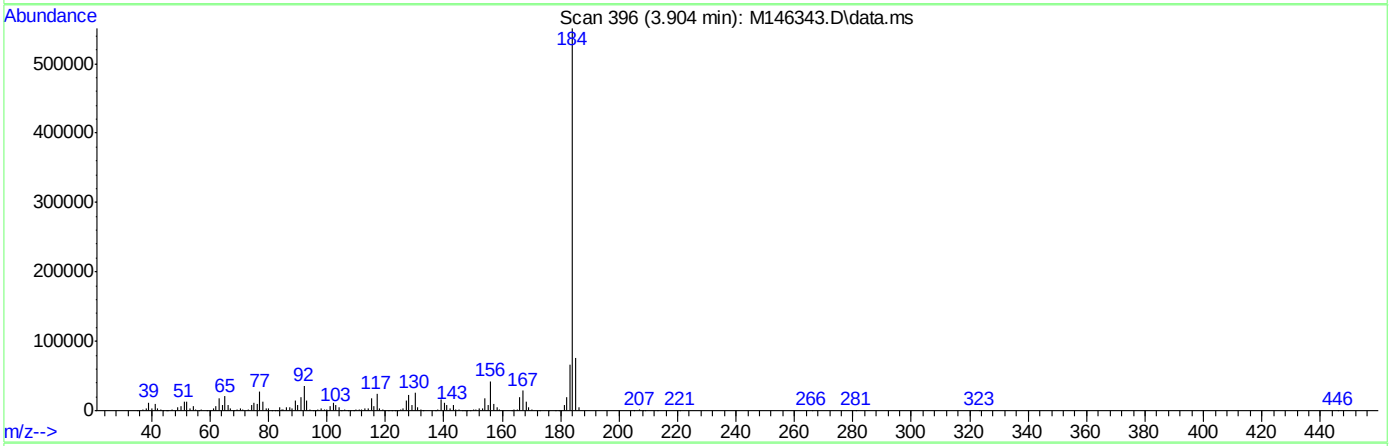
Ion	Exp%	Act%
265.80	100	100
263.70	61.50	64.64
267.70	64.40	66.24
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : D:\EM6221\
Data File : M146343.D
Acq On : 24 May 2018 12:16 pm
Operator : seanb1
Sample : dftpp
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 24 12:21:40 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
QLast Update : Sun Feb 18 15:20:41 2018
Response via : Continuing Cal File:





(2) Benzidine (M)

3.904min (-0.167) 0.00ppm

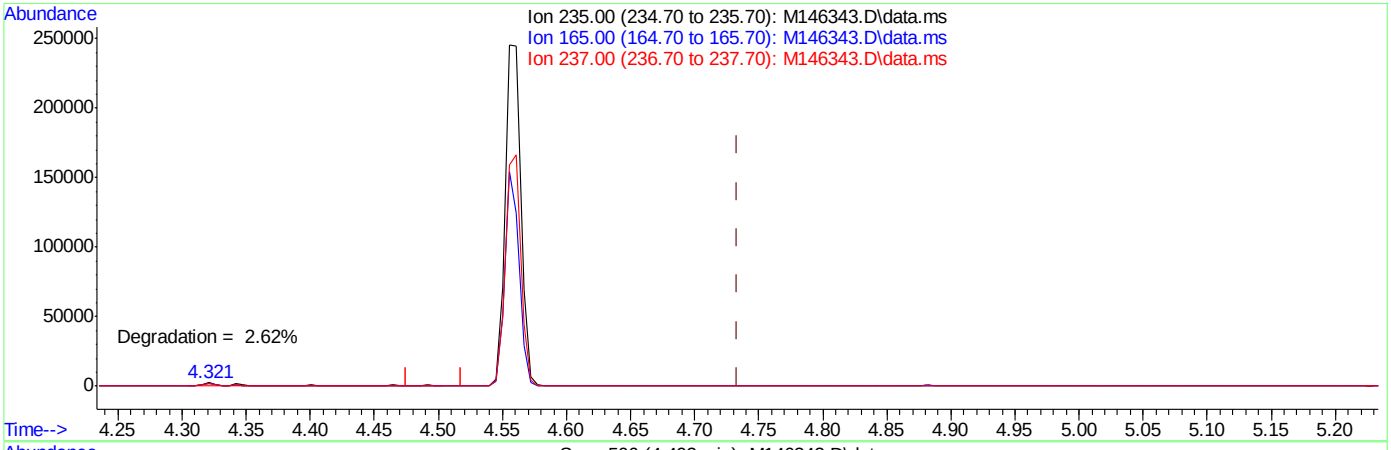
response 460036

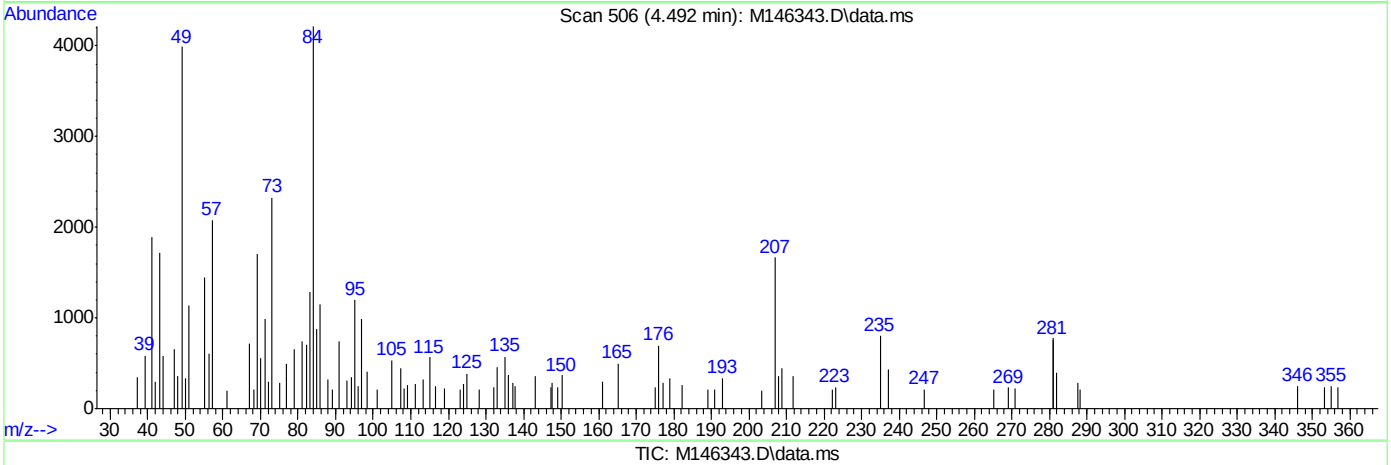
Ion	Exp%	Act%
184.05	100	100
92.05	7.20	6.34
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : D:\EM6221\
Data File : M146343.D
Acq On : 24 May 2018 12:16 pm
Operator : seanb1
Sample : dftpp
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 24 12:21:40 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
QLast Update : Sun Feb 18 15:20:41 2018
Response via : Continuing Cal File:





TIC: M146343.D\data.ms

(3) PP-DDT (MC)

4.492min (-0.242) 0.00ppm

response 1037

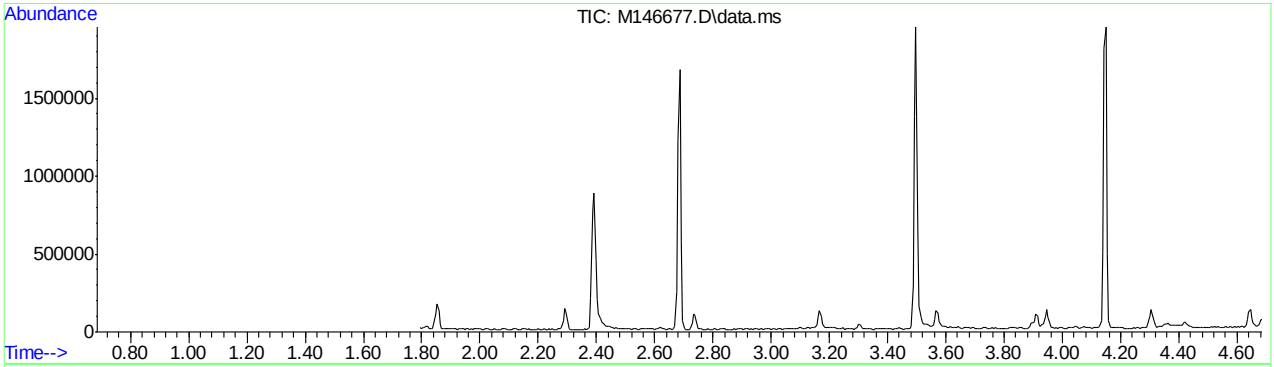
Ion	Exp%	Act%
235.00	100	100
165.00	42.80	44.23
237.00	66.60	50.25
0.00	0.00	0.00

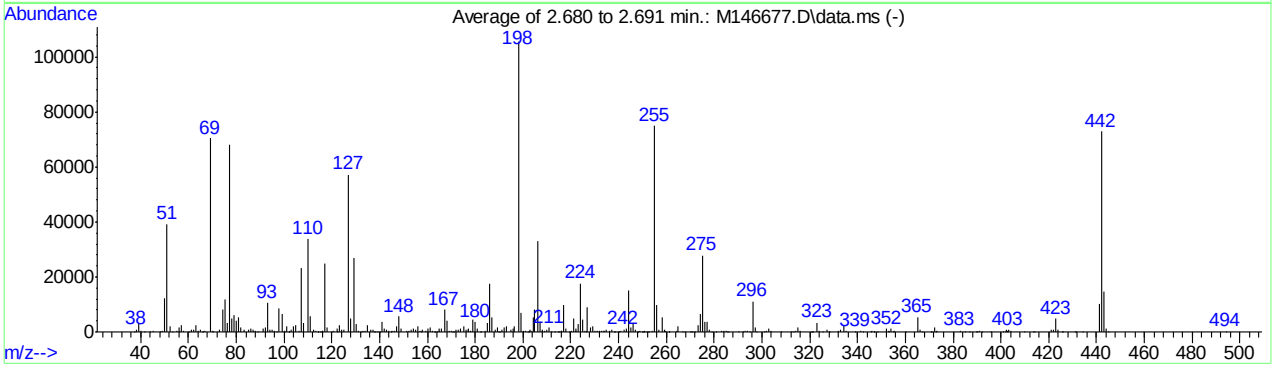
DFTPPR

Data Path : C:\msdchem\1\DATA\EM6235\
Data File : M146677.D
Acq On : 6 Jun 2018 9:01 am
Operator : johnb1
Sample : dftpp
Misc : op10492,em6235,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
Last Update : Sun Feb 18 15:20:41 2018





AutoFind: Scans 167, 168, 169; Background Corrected with Scan 162

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	37.1	39210	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	66.6	70330	PASS
70	69	0.00	2	0.3	230	PASS
127	198	40	60	54.2	57232	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	105568	PASS
199	198	5	9	6.7	7088	PASS
275	198	10	30	26.3	27756	PASS
365	198	1	100	5.2	5487	PASS
441	443	0.10	100	69.7	10275	PASS
442	198	40	100	69.0	72818	PASS
443	442	17	23	20.2	14739	PASS

Average of 2.680 to 2.691 min.: M146677.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.10	96	52.15	2032	64.20	364	76.15	3285
38.10	879	53.15	191	65.20	884	76.35	370
39.10	3381	55.05	378	65.95	165	77.15	68059
40.10	436	55.85	117	66.15	107	78.15	4722
41.65	112	56.15	1470	67.05	434	79.05	6311
44.10	218	57.10	2606	69.05	70330	80.05	3939
45.15	396	58.15	382	70.05	230	81.00	5235
47.95	73	60.15	92	70.25	72	82.10	1753
49.10	488	61.15	709	73.15	784	83.10	989
50.15	12225	62.15	755	74.15	8055	85.10	702
51.15	39210	63.10	2582	75.15	11930	86.00	1280

Average of 2.680 to 2.691 min.: M146677.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.15	944	99.05	6637	108.05	3317	117.05	24870
88.00	388	100.05	449	110.05	33818	118.10	1754
89.05	79	100.25	133	111.05	5837	120.05	126
91.15	1320	101.05	2139	112.15	660	121.00	231
92.15	1623	101.95	98	113.10	315	122.00	1348
93.05	10570	102.25	111	114.05	68	122.35	152
94.05	973	103.20	713	114.25	69	123.10	2442
95.05	728	104.05	1902	115.05	114	124.10	753
96.10	559	105.05	2462	115.45	83	125.10	905
97.00	65	106.15	234	116.05	530	127.05	57232
98.05	8525	107.00	23398	116.25	455	128.05	4850

Average of 2.680 to 2.691 min.: M146677.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
129.05	26979	138.90	218	149.05	1052	160.05	1206
130.05	2754	140.00	180	151.10	293	161.00	1673
131.10	541	141.05	3591	152.10	621	162.15	494
132.15	132	142.15	1145	153.05	965	163.05	110
133.05	233	142.75	781	154.00	1061	163.25	169
134.05	610	144.00	280	155.05	1019	164.15	69
135.00	2438	144.85	155	156.10	2053	164.75	263
136.10	976	145.15	407	156.85	384	165.10	1238
137.05	886	146.00	416	157.25	92	166.05	1424
137.80	210	147.05	2140	158.10	852	167.05	8115
138.15	74	148.05	5543	159.20	592	168.05	3922

Average of 2.680 to 2.691 min.: M146677.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
169.05	590	178.05	243	189.10	1442	200.05	606
170.05	227	179.00	4655	189.95	170	201.25	555
170.35	138	180.05	3652	190.15	96	201.95	196
171.05	201	181.00	1430	191.10	761	202.25	83
172.00	669	182.05	213	192.05	1812	202.90	756
173.10	784	182.35	107	193.10	2017	203.15	556
174.05	1435	184.10	596	194.95	647	204.10	5409
175.05	2235	185.10	3241	195.95	1290	205.00	8121
176.00	896	186.05	17472	196.15	2120	206.05	32909
176.95	777	187.05	5223	198.05	105568	207.05	3780
177.10	1066	188.15	749	199.00	7088	207.85	499

Average of 2.680 to 2.691 min.: M146677.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
208.05	807	218.00	1177	227.05	9141	237.00	685
209.10	503	219.15	172	228.10	1462	238.05	87
210.15	906	220.25	488	229.05	2011	238.75	126
211.10	1592	221.00	4701	230.00	372	239.95	116

DFTPPM.M Wed Jun 06 15:12:13 2018 MSM

Page: 2

211.95	156	221.95	1095	230.90	278	240.15	204
213.25	102	222.15	387	232.10	236	241.05	464
214.65	165	223.05	3055	233.10	236	242.10	986
215.05	18	224.05	17660	233.75	340	243.10	1326
215.95	424	225.05	4325	234.05	531	244.05	15196
216.15	344	225.95	467	235.00	794	245.05	1795
217.05	9755	226.15	125	236.10	421	246.05	3199

Average of 2.680 to 2.691 min.: M146677.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
246.95	802	253.85	266	266.85	90	278.00	661
247.75	87	255.05	74957	267.85	94	278.95	87
248.15	98	256.05	9767	270.05	67	280.95	119
248.90	604	257.00	985	270.45	85	283.05	328
249.95	185	258.05	5307	271.10	186	284.05	309
250.15	175	259.00	831	271.75	78	285.00	571
250.65	69	259.85	283	273.05	2288	285.25	93
250.95	308	260.85	77	274.00	6737	286.15	106
251.85	109	261.15	107	275.05	27756	290.05	81
252.25	74	264.15	273	276.05	3861	292.05	67
252.55	116	265.05	1937	277.05	3553	293.05	584

Average of 2.680 to 2.691 min.: M146677.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
294.10	267	312.95	81	327.95	90	346.85	131
294.95	67	314.00	326	328.25	147	347.15	122
296.05	11105	315.00	1496	332.00	242	348.15	75
297.10	1796	316.15	613	333.05	640	352.10	1080
297.85	67	320.75	162	334.05	2375	352.85	159
300.95	70	320.95	133	335.15	473	353.10	578
301.90	311	321.15	131	339.15	66	354.00	1300
303.05	1265	323.05	3326	341.15	356	354.85	108
303.90	383	324.00	505	342.25	74	355.15	293
308.15	99	325.25	91	345.65	177	360.05	90
312.25	107	327.00	809	346.00	540	365.00	5487

Average of 2.680 to 2.691 min.: M146677.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
366.05	911	389.90	209	409.75	96	434.05	67
366.95	101	390.95	248	413.75	94	441.00	10275
370.85	77	391.85	76	414.15	69	442.05	72818
371.05	100	395.85	77	420.95	910	443.05	14739
372.10	1743	400.85	80	422.00	871	444.00	1083
372.75	183	401.85	82	423.05	4852	445.15	97
373.05	283	402.05	644	423.95	940	494.05	72
382.95	532	402.85	171	425.55	84		
384.85	72	402.95	344	425.95	79		
386.85	99	403.10	666	431.05	161		
389.75	106	404.05	462	431.55	70		

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\EM6235\
Data File : M146677.D
Acq On    :  6 Jun 2018   9:01 am
Operator  : johnb1
Sample    : dftpp
Misc      : op10492,em6235,1000,,,1,1
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Jun 06 09:07:53 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title  : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
QLast Update : Sun Feb 18 15:20:41 2018
Response via : Continuing Cal File:
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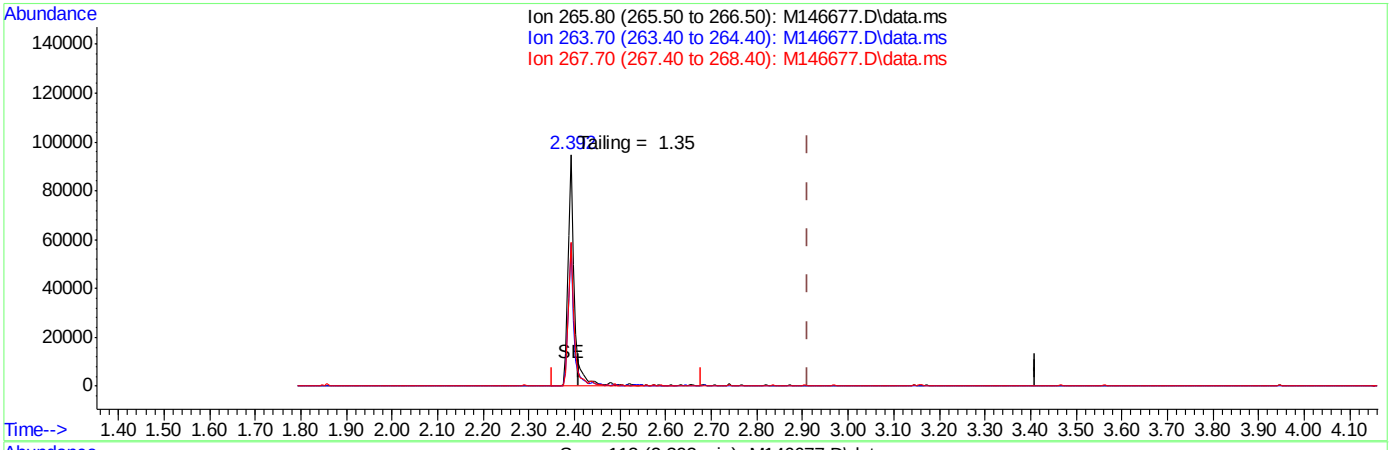
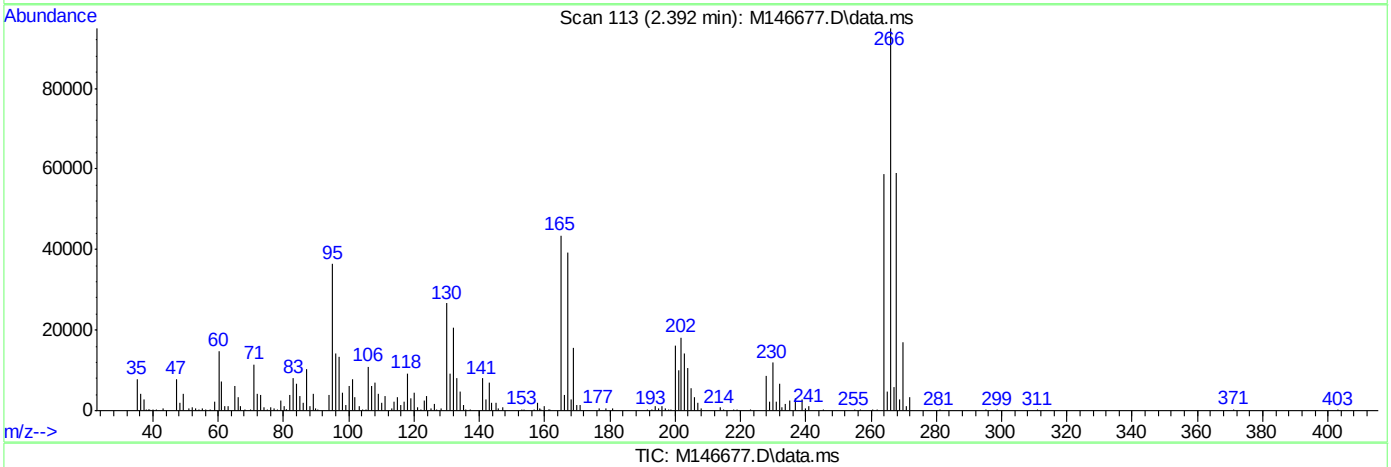




TIC: M146677.D\data.ms

(1) Pentachlorophenol (MC)

2.392min (-0.520) 0.00ppm m

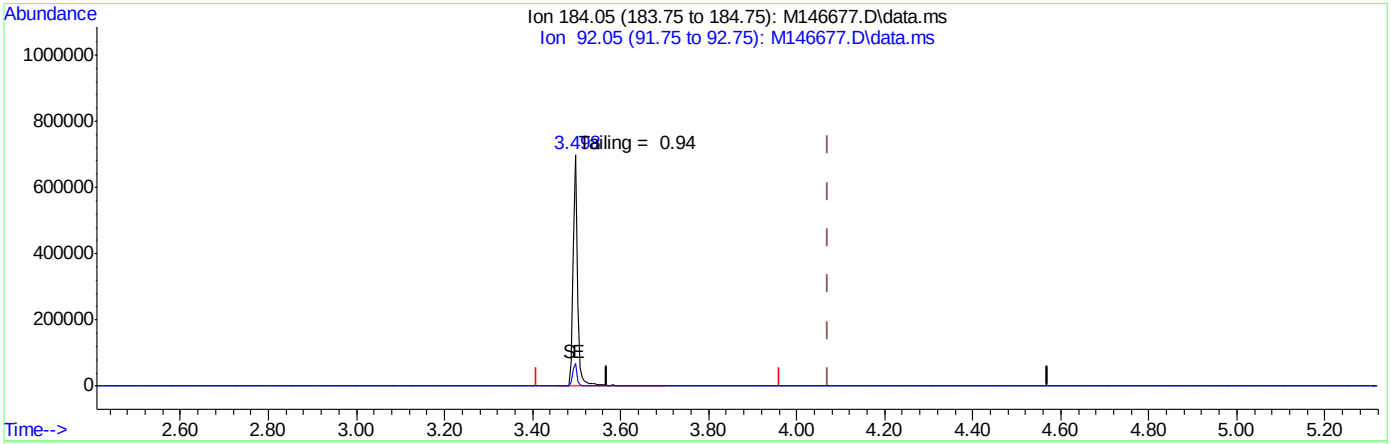
response 94688

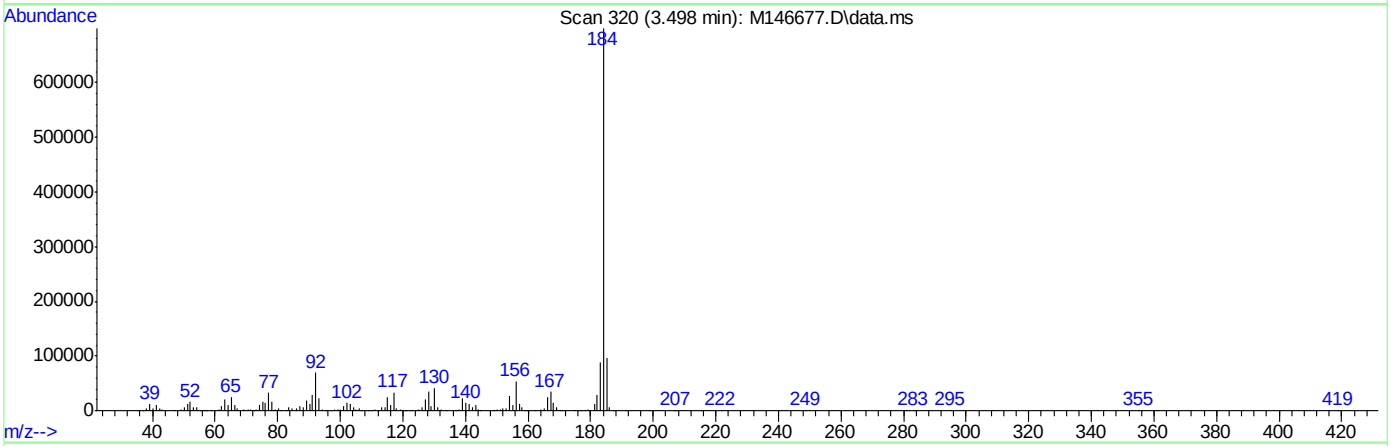
Ion	Exp%	Act%
265.80	100	100
263.70	61.50	61.78
267.70	64.40	62.21
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6235\
Data File : M146677.D
Acq On : 6 Jun 2018 9:01 am
Operator : johnb1
Sample : dftpp
Misc : op10492,em6235,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 06 09:07:53 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
QLast Update : Sun Feb 18 15:20:41 2018
Response via : Continuing Cal File:





TIC: M146677.D\data.ms

(2) Benzidine (M)

3.498min (-0.574) 0.00ppm m

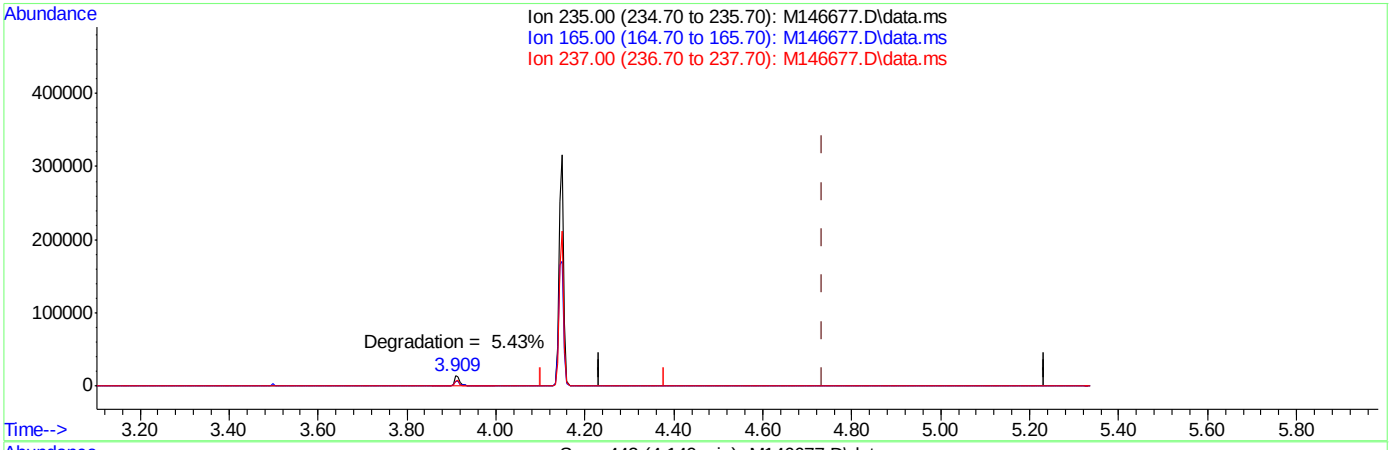
response 525722

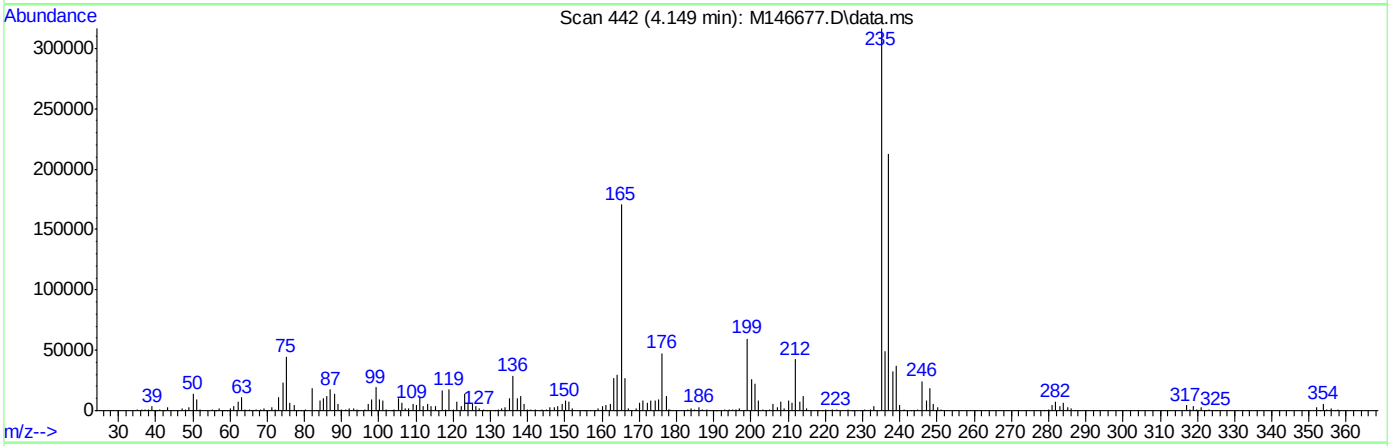
Ion	Exp%	Act%
184.05	100	100
92.05	7.20	9.84#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6235\
Data File : M146677.D
Acq On : 6 Jun 2018 9:01 am
Operator : johnb1
Sample : dftpp
Misc : op10492,em6235,1000,,,1,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 06 09:07:53 2018
Quant Method : C:\MSDCHEM\1\METHODS\DFTPPM.M
Quant Title : Semi Volatile Extractables by GC/MS rxi-5silms 30mSun Feb 18 15:20:41 2018
QLast Update : Sun Feb 18 15:20:41 2018
Response via : Continuing Cal File:





TIC: M146677.D\data.ms

(3) PP-DDT (MC)

4.149min (-0.584) 0.00ppm m

response 232025

Ion	Exp%	Act%
235.00	100	100
165.00	42.80	53.93
237.00	66.60	67.14
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
05/11/18 16:35

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103895.D
Acq On : 9 May 2018 11:56 am
Operator : christc2
Sample : ic4618-100
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 12:41:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:27:24 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.670	152	611937	40.00	ppm	0.00
24) Naphthalene-d8	5.761	136	2389326	40.00	ppm	0.00
47) Acenaphthene-d10	7.831	164	1291754	40.00	ppm	0.01
69) Phenanthrene-d10	9.997	188	2216841	40.00	ppm	0.01
83) Chrysene-d12	14.174	240	2177193	40.00	ppm	0.01
91) Perylene-d12	16.282	264	2175501	40.00	ppm	0.01
101) 1,4-Dichlorobenzene-d4a	4.670	152	611937	40.00	ppm	0.00
103) Acenaphthene-d10a	7.831	164	1291754	40.00	ppm	0.01
105) Chrysene-d12a	14.174	240	2177193	40.00	ppm	0.01
108) Phenanthrene-d10a	9.997	188	2216841	40.00	ppm	0.01
112) Naphthalene-d8a	5.761	136	2389326	40.00	ppm	0.00
114) Chrysene-d12b	14.174	240	2177193	40.00	ppm	0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.675	112	2017902	99.74	ppm	0.00
Spiked Amount 50.000			Recovery	=	199.48%	
8) Phenol-d5	4.402	99	2550003	100.25	ppm	0.00
Spiked Amount 50.000			Recovery	=	200.50%	
25) Nitrobenzene-d5	5.114	82	2151788	98.07	ppm	0.00
Spiked Amount 50.000			Recovery	=	196.14%	
51) 2-Fluorobiphenyl	6.959	172	4569458	96.75	ppm	0.00
Spiked Amount 50.000			Recovery	=	193.50%	
73) 2,4,6-Tribromophenol	8.954	330	681469	100.76	ppm	0.01
Spiked Amount 50.000			Recovery	=	201.52%	
85) Terphenyl-d14	12.554	244	4591848	95.56	ppm	0.01
Spiked Amount 50.000			Recovery	=	191.12%	
107) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.193	88	903722	98.77	ppm	98
3) Pyridine	2.509	79	2292766	100.72	ppm	100
4) N-Nitrosodimethylamine	2.482	74	1406215	99.25	ppm	98
6) Indene	4.873	116	3416878	97.74	ppm	99
7) Cumene	4.071	105	5006395	96.98	ppm	98
9) Phenol	4.413	94	2904738	100.26	ppm	87
10) Aniline	4.418	93	2926425	96.56	ppm	91
11) bis(2-Chloroethyl)ether	4.472	93	1960022	98.63	ppm	98
12) 2-Chlorophenol	4.515	128	2154182	99.38	ppm	97
13) Decane	4.552	43	2061590	94.49	ppm	99
14) 1,3-Dichlorobenzene	4.627	146	2366704	97.34	ppm	98
15) 1,4-Dichlorobenzene	4.680	146	2396896	96.95	ppm	100
16) Benzyl alcohol	4.782	108	1362164	100.67	ppm	91
17) 1,2-Dichlorobenzene	4.803	146	2227409	96.57	ppm	97
18) Acetophenone	4.991	105	2782556	95.81	ppm	98
19) 2-Methylphenol	4.873	108	1877318	97.91	ppm	100
20) 2,2'-oxybis(1-Chloropr...	4.884	45	2275912	95.85	ppm	98
21) 3&4-Methylphenol	4.991	108	2021713	99.49	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103895.D
Acq On : 9 May 2018 11:56 am
Operator : christc2
Sample : ic4618-100
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 12:41:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:27:24 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	4.996	70	1498916	95.70	ppm		95
23) Hexachloroethane	5.076	201	769361	97.43	ppm		93
26) Nitrobenzene	5.130	77	2117633	97.52	ppm		98
27) Quinoline	6.146	129	4035800	100.11	ppm		99
28) Isophorone	5.338	82	3769116	98.79	ppm		97
29) 2-Nitrophenol	5.408	139	1175446	99.74	ppm		96
30) 2,4-Dimethylphenol	5.445	107	1888415	101.67	ppm		98
31) Benzoic acid	5.579	105	1598201m	103.87	ppm		
32) bis(2-Chloroethoxy)met...	5.531	93	2153313	98.39	ppm		99
33) 2,4-Dichlorophenol	5.632	162	1733119	100.22	ppm		97
34) 2,6-Dichlorophenol	5.846	162	1693010	98.95	ppm		99
35) 1,3,5-Trichlorobenzene	5.419	180	1969293	97.54	ppm		98
36) 1,2,4-Trichlorobenzene	5.713	180	1834025	96.86	ppm		99
37) 1,2,3-Trichlorobenzene	5.932	180	1788884	96.57	ppm		98
38) Naphthalene	5.788	128	5989501	98.22	ppm		100
39) 4-Chloroaniline	5.841	127	2550057	98.25	ppm		98
40) 2,3-Dichloroaniline	6.852	161	2188392	100.33	ppm		98
41) Caprolactam	6.221	55	908746	100.19	ppm		98
42) Hexachlorobutadiene	5.916	225	964008	97.68	ppm		99
43) 4-Chloro-3-methylphenol	6.360	107	1714145	101.60	ppm		95
44) 2-Methylnaphthalene	6.520	141	3576997	99.72	ppm		99
45) 1-Methylnaphthalene	6.633	141	3736093	99.85	ppm		99
46) Dimethylnaphthalene	7.285	156	3850808	100.52	ppm		99
48) Hexachlorocyclopentadiene	6.713	237	2385043	199.65	ppm		98
49) 2,4,6-Trichlorophenol	6.857	196	1255930	98.41	ppm		95
50) 2,4,5-Trichlorophenol	6.905	196	1311402	97.30	ppm		100
52) 2-Chloronaphthalene	7.103	162	3770523	96.24	ppm		99
53) Biphenyl	7.082	154	5221427	97.85	ppm		100
54) 2-Nitroaniline	7.237	65	1122947	99.55	ppm		98
55) Dimethylphthalate	7.494	163	4180905	98.78	ppm		100
56) Acenaphthylene	7.638	152	6197607	97.25	ppm		99
57) 2,6-Dinitrotoluene	7.563	165	996379	100.66	ppm		91
58) 3-Nitroaniline	7.783	138	1155260	97.49	ppm		95
59) Acenaphthene	7.874	153	4072320	98.32	ppm		98
60) 2,4-Dinitrophenol	7.932	184	1229695	214.43	ppm	#	67
61) 4-Nitrophenol	8.045	109	529276	101.15	ppm		97
62) Dibenzofuran	8.114	168	5473817	97.81	ppm		99
63) 2,4-Dinitrotoluene	8.114	165	1389686	100.61	ppm		96
64) 2,3,4,6-Tetrachlorophenol	8.301	232	1126033	100.60	ppm		98
65) Diethylphthalate	8.494	149	4268785	99.30	ppm		99
66) Fluorene	8.606	166	4518947	99.18	ppm		100
67) 4-Chlorophenyl-phenyle...	8.622	204	1963424	97.24	ppm		98
68) 4-Nitroaniline	8.660	138	1129457	97.70	ppm		99
70) 4,6-Dinitro-2-methylph...	8.708	198	818215	101.50	ppm		100
71) n-Nitrosodiphenylamine	8.804	169	3226816	99.46	ppm		99
72) 1,2-Diphenylhydrazine	8.852	77	4258640	99.27	ppm		94
74) 4-Bromophenyl-phenylether	9.344	248	1193161	98.39	ppm		93
75) Hexachlorobenzene	9.430	284	1326022	96.74	ppm		98
76) Pentachlorophenol	9.735	266	1871613	204.02	ppm		98
77) Phenanthrene	10.034	178	6117922	98.14	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103895.D
Acq On : 9 May 2018 11:56 am
Operator : christc2
Sample : ic4618-100
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 12:41:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:27:24 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Anthracene	10.115	178	6248216	97.99	ppm	99
79)	Carbazole	10.382	167	5969670	100.09	ppm	100
80)	Di-n-butylphthalate	11.019	149	7459947	100.17	ppm	100
81)	Fluoranthene	11.890	202	6552765	99.43	ppm	98
82)	Octadecane	9.965	57	2903975	100.44	ppm	97
84)	Pyrene	12.238	202	6846281	93.70	ppm	98
86)	Butylbenzylphthalate	13.388	149	3300191	96.58	ppm	99
87)	Benzo[a]anthracene	14.158	228	6292640	97.62	ppm	100
88)	3,3'-Dichlorobenzidine	14.164	252	2373765	96.05	ppm	99
89)	Chrysene	14.217	228	5949824	96.18	ppm	100
90)	bis(2-Ethylhexyl)phtha...	14.356	149	4617747	96.83	ppm	99
92)	Di-n-octylphthalate	15.346	149	7991819	98.32	ppm	100
93)	Benzo[b]fluoranthene	15.763	252	6594959	95.79	ppm	99
94)	Benzo[k]fluoranthene	15.816	252	5868987	96.10	ppm	99
95)	Benzo[a]pyrene	16.207	252	5663243	95.64	ppm	99
96)	Indeno[1,2,3-cd]pyrene	17.811	276	5834621	100.83	ppm	99
97)	Dibenz(a,h)acridine	17.464	279	5133907	96.61	ppm	100
98)	Dibenz[a,h]anthracene	17.854	278	5765350	95.81	ppm	97
99)	7,12-Dimethylbenz(a)an...	15.779	256	2893577	96.17	ppm	98
100)	Benzo[g,h,i]perylene	18.250	276	5426822	97.17	ppm	99

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

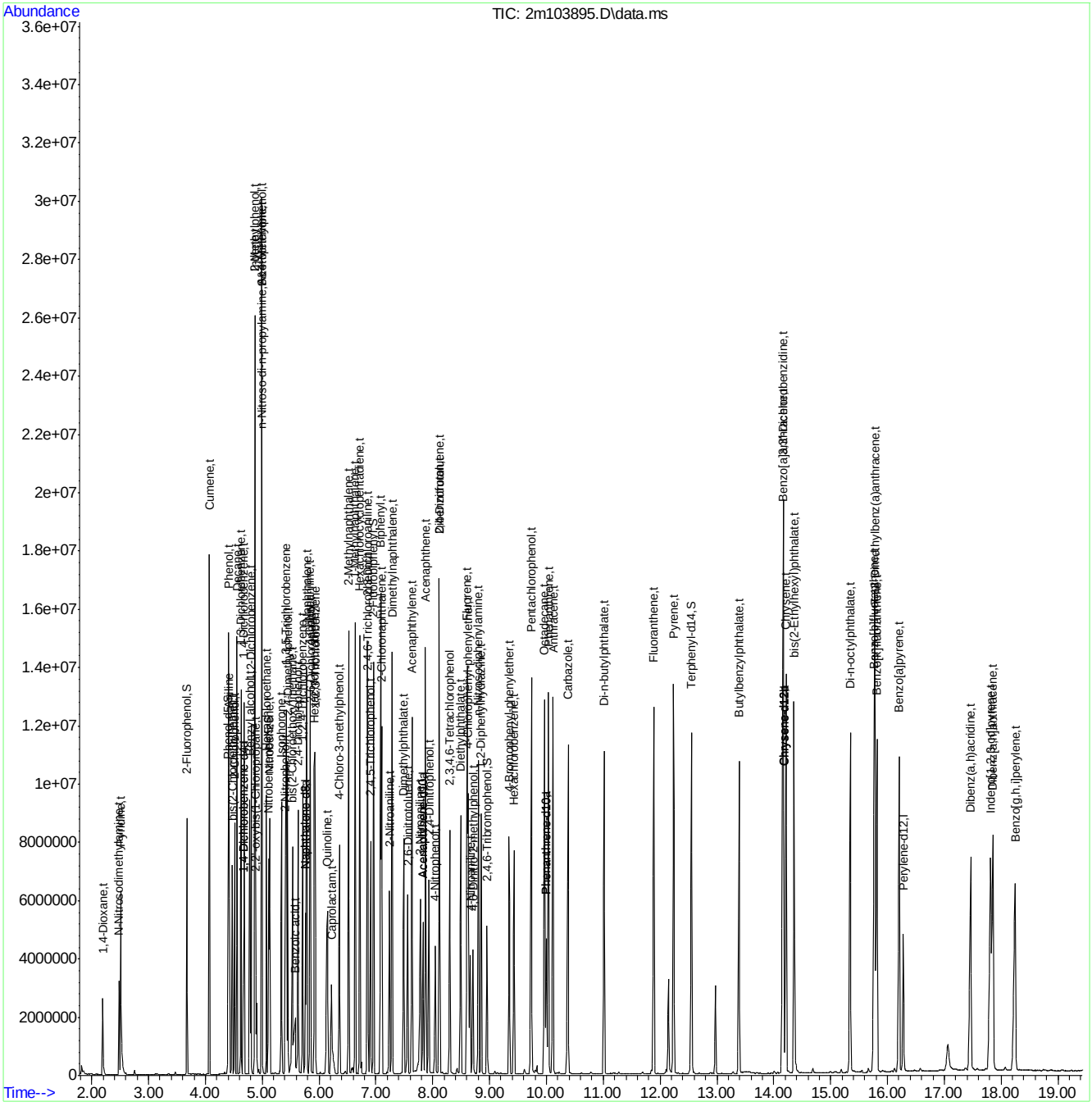
9.6.1

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103895.D
Acq On : 9 May 2018 11:56 am
Operator : christc2
Sample : ic4618-100
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 12:41:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:27:24 2018
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number:	E2M4618-IC4618	**Method:**	SW846 8270D
Lab FileID:	2M103895.D	**Analyst approved:**	05/11/18 15:24 Sean Block
Injection Time:	05/09/18 11:56	**Supervisor approved:**	05/11/18 16:35 Nina Pandya

Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic Acid	65-85-0		5.58	Split peak

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103895.D
Acq On    :  9 May 2018  11:56 am
Operator  : christc2
Sample    : ic4618-100
Misc      : op10486,e2m4618,1000,,,1,1
ALS Vial  : 2   Sample Multiplier: 1

Quant Time: May 11 10:28:19 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title  : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:27:24 2018
Response via : Initial Calibration
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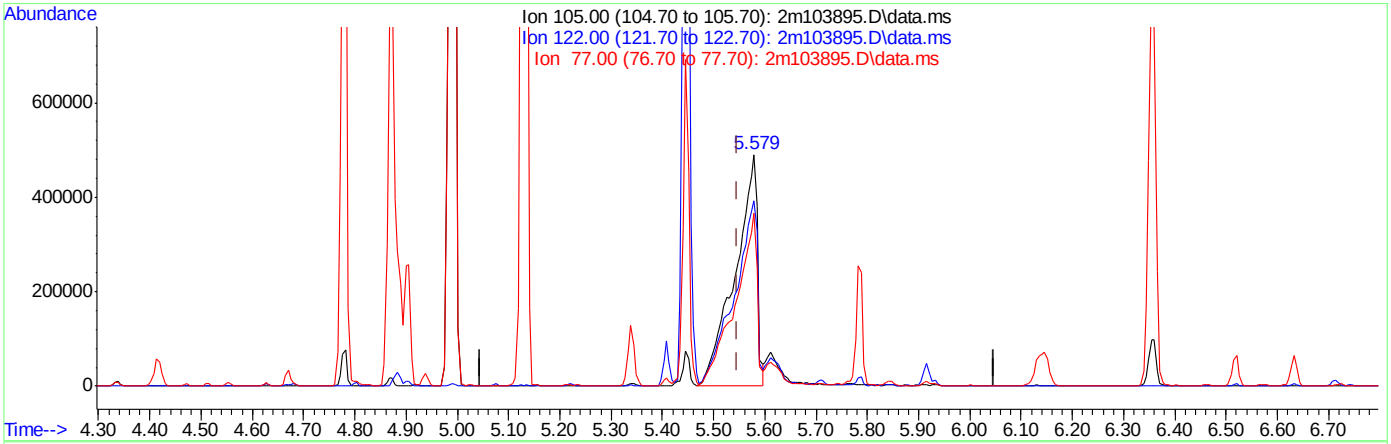

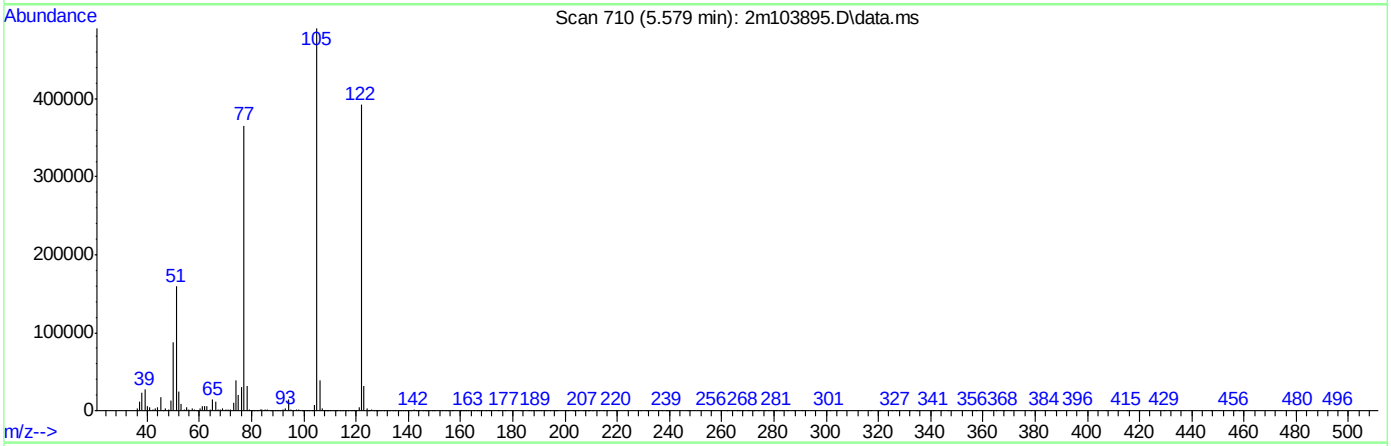

TIC: 2m103895.D\data.ms

(31) Benzoic acid (t)

5.579min (+0.032) 94.89ppm

response 1460089

Ion	Exp%	Act%
105.00	100	100
122.00	80.60	77.49
77.00	73.10	74.01
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103895.D
Acq On    :  9 May 2018  11:56 am
Operator  : christc2
Sample    : ic4618-100
Misc      : op10486,e2m4618,1000,,,1,1
ALS Vial  : 2   Sample Multiplier: 1

Quant Time: May 11 10:28:19 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title  : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:27:24 2018
Response via : Initial Calibration
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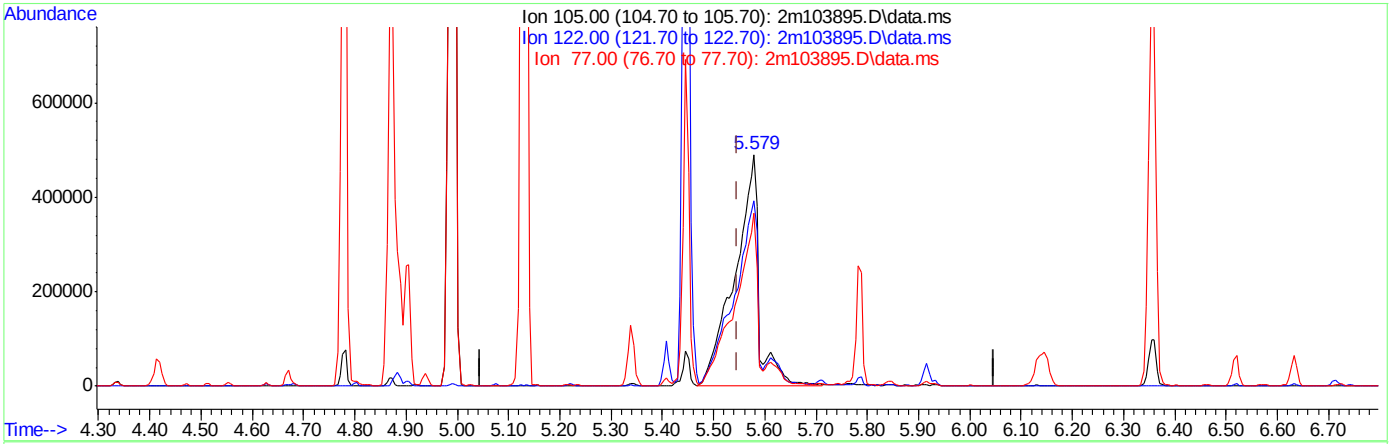
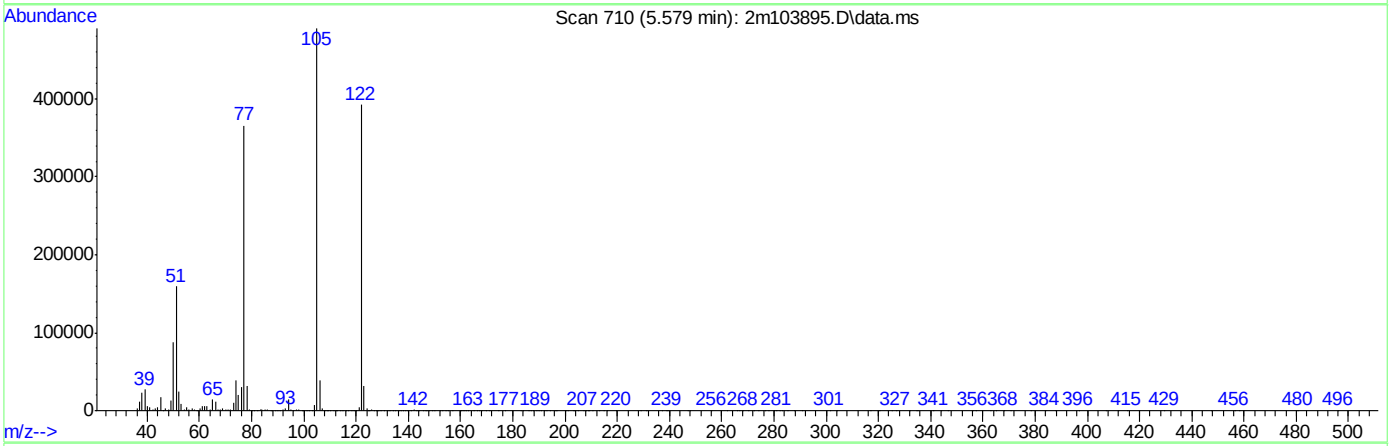




TIC: 2m103895.D\data.ms

(31) Benzoic acid (t)

5.579min (+0.032) 103.87ppm m

response 1598201

Ion	Exp%	Act%
105.00	100	100
122.00	80.60	79.94
77.00	73.10	74.50
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103896.D
Acq On : 9 May 2018 12:22 pm
Operator : christc2
Sample : ic4618-80
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 11 10:29:13 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:27:24 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.670	152	608497	40.00	ppm	0.00
24) Naphthalene-d8	5.761	136	2342644	40.00	ppm	0.00
47) Acenaphthene-d10	7.826	164	1269144	40.00	ppm	0.00
69) Phenanthrene-d10	9.992	188	2190799	40.00	ppm	0.00
83) Chrysene-d12	14.164	240	2074188	40.00	ppm	0.00
91) Perylene-d12	16.271	264	2093310	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.670	152	608497	40.00	ppm	0.00
103) Acenaphthene-d10a	7.826	164	1269144	40.00	ppm	0.00
105) Chrysene-d12a	14.164	240	2074188	40.00	ppm	0.00
108) Phenanthrene-d10a	9.992	188	2190799	40.00	ppm	0.00
112) Naphthalene-d8a	5.761	136	2342644	40.00	ppm	0.00
114) Chrysene-d12b	14.164	240	2074188	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.675	112	1573953	78.24	ppm	0.00
Spiked Amount 50.000			Recovery	=	156.48%	
8) Phenol-d5	4.397	99	1980330	78.29	ppm	0.00
Spiked Amount 50.000			Recovery	=	156.58%	
25) Nitrobenzene-d5	5.114	82	1714253	79.69	ppm	0.00
Spiked Amount 50.000			Recovery	=	159.38%	
51) 2-Fluorobiphenyl	6.954	172	3606896	77.73	ppm	0.00
Spiked Amount 50.000			Recovery	=	155.46%	
73) 2,4,6-Tribromophenol	8.949	330	540852	80.92	ppm	0.00
Spiked Amount 50.000			Recovery	=	161.84%	
85) Terphenyl-d14	12.543	244	3631675	79.33	ppm	0.00
Spiked Amount 50.000			Recovery	=	158.66%	
107) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.193	88	701464	77.10	ppm	98
3) Pyridine	2.509	79	1825312	80.64	ppm	99
4) N-Nitrosodimethylamine	2.477	74	1105353	78.45	ppm	99
6) Indene	4.873	116	2718920	78.22	ppm	99
7) Cumene	4.071	105	3953927	77.03	ppm	99
9) Phenol	4.408	94	2272085	78.87	ppm	98
10) Aniline	4.418	93	2336048	77.52	ppm	98
11) bis(2-Chloroethyl)ether	4.467	93	1546799	78.28	ppm	97
12) 2-Chlorophenol	4.509	128	1700047	78.88	ppm	97
13) Decane	4.552	43	1662560	76.63	ppm	99
14) 1,3-Dichlorobenzene	4.627	146	1879882	77.75	ppm	99
15) 1,4-Dichlorobenzene	4.681	146	1906451	77.55	ppm	100
16) Benzyl alcohol	4.777	108	1076568	80.01	ppm	95
17) 1,2-Dichlorobenzene	4.804	146	1781199	77.66	ppm	96
18) Acetophenone	4.985	105	2248228	77.85	ppm	98
19) 2-Methylphenol	4.868	108	1507989	79.09	ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.884	45	1830068	77.51	ppm	97
21) 3&4-Methylphenol	4.991	108	1623579	80.35	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103896.D
Acq On : 9 May 2018 12:22 pm
Operator : christc2
Sample : ic4618-80
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 11 10:29:13 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:27:24 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	4.991	70	1209551	77.66	ppm		97
23) Hexachloroethane	5.076	201	615981	78.45	ppm		99
26) Nitrobenzene	5.130	77	1687178	79.25	ppm		95
27) Quinoline	6.135	129	3203239	81.04	ppm		98
28) Isophorone	5.333	82	2998899	80.17	ppm		97
29) 2-Nitrophenol	5.403	139	933813	80.82	ppm		94
30) 2,4-Dimethylphenol	5.440	107	1493508	82.01	ppm		98
31) Benzoic acid	5.568	105	1246985	82.66	ppm		98
32) bis(2-Chloroethoxy)met...	5.526	93	1716374	79.99	ppm		99
33) 2,4-Dichlorophenol	5.627	162	1363165	80.39	ppm		97
34) 2,6-Dichlorophenol	5.847	162	1341463	79.96	ppm		97
35) 1,3,5-Trichlorobenzene	5.419	180	1560509	78.83	ppm		100
36) 1,2,4-Trichlorobenzene	5.707	180	1463327	78.82	ppm		99
37) 1,2,3-Trichlorobenzene	5.927	180	1440384	79.31	ppm		99
38) Naphthalene	5.782	128	4762335	79.65	ppm		100
39) 4-Chloroaniline	5.836	127	2062152	81.03	ppm		98
40) 2,3-Dichloroaniline	6.847	161	1732150	81.00	ppm		99
41) Caprolactam	6.205	55	723937	81.40	ppm		98
42) Hexachlorobutadiene	5.911	225	767673	79.34	ppm		99
43) 4-Chloro-3-methylphenol	6.349	107	1341699	81.11	ppm		99
44) 2-Methylnaphthalene	6.515	141	2810842	79.92	ppm		98
45) 1-Methylnaphthalene	6.627	141	2936894	80.05	ppm		98
46) Dimethylnaphthalene	7.275	156	3029746	80.66	ppm		99
48) Hexachlorocyclopentadiene	6.708	237	1874721	159.73	ppm		97
49) 2,4,6-Trichlorophenol	6.852	196	996764	79.50	ppm		95
50) 2,4,5-Trichlorophenol	6.895	196	1042848	78.76	ppm		100
52) 2-Chloronaphthalene	7.098	162	3000483	77.95	ppm		98
53) Biphenyl	7.077	154	4132618	78.83	ppm		99
54) 2-Nitroaniline	7.232	65	876247	79.07	ppm		97
55) Dimethylphthalate	7.483	163	3314938	79.72	ppm		99
56) Acenaphthylene	7.628	152	4879372	77.93	ppm		99
57) 2,6-Dinitrotoluene	7.553	165	790349	81.27	ppm		97
58) 3-Nitroaniline	7.777	138	923410	79.31	ppm		98
59) Acenaphthene	7.868	153	3216110	79.03	ppm		100
60) 2,4-Dinitrophenol	7.922	184	950260	168.66	ppm	#	63
61) 4-Nitrophenol	8.034	109	405748	78.92	ppm		98
62) Dibenzofuran	8.109	168	4351994	79.15	ppm		98
63) 2,4-Dinitrotoluene	8.109	165	1093513	80.58	ppm		98
64) 2,3,4,6-Tetrachlorophenol	8.296	232	882633	80.26	ppm		96
65) Diethylphthalate	8.483	149	3363802	79.64	ppm		99
66) Fluorene	8.596	166	3549524	79.29	ppm		100
67) 4-Chlorophenyl-phenyle...	8.617	204	1571735	79.23	ppm		98
68) 4-Nitroaniline	8.644	138	896259	78.91	ppm		94
70) 4,6-Dinitro-2-methylph...	8.697	198	652621	81.92	ppm		98
71) n-Nitrosodiphenylamine	8.794	169	2546881	79.44	ppm		100
72) 1,2-Diphenylhydrazine	8.847	77	3365486	79.38	ppm		96
74) 4-Bromophenyl-phenylether	9.339	248	947316	79.05	ppm		96
75) Hexachlorobenzene	9.419	284	1066882	78.76	ppm		93
76) Pentachlorophenol	9.724	266	1461147	161.17	ppm		99
77) Phenanthrene	10.029	178	4905308	79.62	ppm		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103896.D
Acq On : 9 May 2018 12:22 pm
Operator : christc2
Sample : ic4618-80
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 11 10:29:13 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:27:24 2018
Response via : Initial Calibration

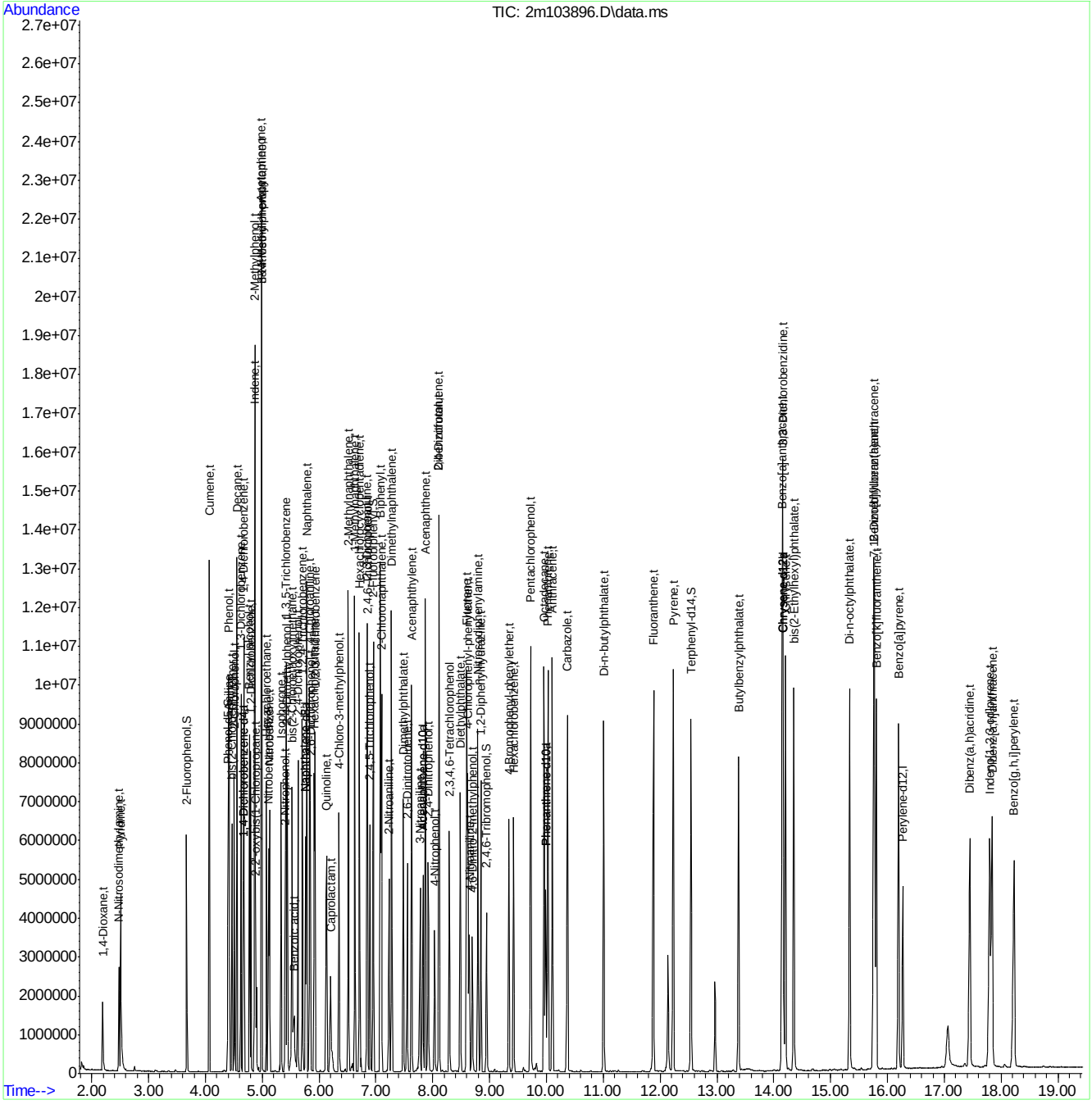
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	10.104	178	4965226	78.80	ppm	99
79) Carbazole	10.371	167	4734453	80.32	ppm	99
80) Di-n-butylphthalate	11.008	149	5921215	80.45	ppm	99
81) Fluoranthene	11.885	202	5216390	80.09	ppm	100
82) Octadecane	9.960	57	2308199	80.79	ppm	97
84) Pyrene	12.233	202	5448220	78.27	ppm	99
86) Butylbenzylphthalate	13.383	149	2589847	79.55	ppm	97
87) Benzo[a]anthracene	14.148	228	4900444	79.80	ppm	99
88) 3,3'-Dichlorobenzidine	14.158	252	1874319	79.61	ppm	98
89) Chrysene	14.206	228	4687071	79.53	ppm	99
90) bis(2-Ethylhexyl)phtha...	14.351	149	3635416	80.02	ppm	99
92) Di-n-octylphthalate	15.335	149	6259097	80.02	ppm	100
93) Benzo[b]fluoranthene	15.758	252	5156631	77.84	ppm	99
94) Benzo[k]fluoranthene	15.806	252	4683755	79.70	ppm	97
95) Benzo[a]pyrene	16.196	252	4475117	78.54	ppm	100
96) Indeno[1,2,3-cd]pyrene	17.801	276	4469205	80.27	ppm	99
97) Dibenz(a,h)acridine	17.453	279	4025372	78.72	ppm	99
98) Dibenz[a,h]anthracene	17.844	278	4545794	78.51	ppm	98
99) 7,12-Dimethylbenz(a)an...	15.768	256	2299091	79.41	ppm	97
100) Benzo[g,h,i]perylene	18.229	276	4219821	78.52	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103896.D
Acq On : 9 May 2018 12:22 pm
Operator : christc2
Sample : ic4618-80
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 11 10:29:13 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:27:24 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103897.D
Acq On : 9 May 2018 12:47 pm
Operator : christc2
Sample : icc4618-50
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 11 10:25:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:24:44 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.670	152	611513	40.00	ppm	0.00
24) Naphthalene-d8	5.761	136	2389437	40.00	ppm	0.00
47) Acenaphthene-d10	7.820	164	1265516	40.00	ppm	0.00
69) Phenanthrene-d10	9.986	188	2183120	40.00	ppm	0.00
83) Chrysene-d12	14.163	240	2028570	40.00	ppm	0.00
91) Perylene-d12	16.271	264	2040361	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.670	152	611513	40.00	ppm	0.00
103) Acenaphthene-d10a	7.820	164	1265516	40.00	ppm	0.00
105) Chrysene-d12a	14.163	240	2028570	40.00	ppm	0.00
108) Phenanthrene-d10a	9.986	188	2183120	40.00	ppm	0.00
112) Naphthalene-d8a	5.761	136	2389437	40.00	ppm	0.00
114) Chrysene-d12b	14.163	240	2028570	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.669	112	1010895	47.13	ppm	-0.02
Spiked Amount 50.000			Recovery	=	94.26%	
8) Phenol-d5	4.397	99	1270959	46.68	ppm	0.00
Spiked Amount 50.000			Recovery	=	93.36%	
25) Nitrobenzene-d5	5.108	82	1097126	38.38	ppm	0.00
Spiked Amount 50.000			Recovery	=	76.76%	
51) 2-Fluorobiphenyl	6.953	172	2313484	43.53	ppm	0.00
Spiked Amount 50.000			Recovery	=	87.06%	
73) 2,4,6-Tribromophenol	8.943	330	333016	51.32	ppm	0.00
Spiked Amount 50.000			Recovery	=	102.64%	
85) Terphenyl-d14	12.543	244	2238653	46.30	ppm	0.00
Spiked Amount 50.000			Recovery	=	92.60%	
107) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.193	88	457189	54.56	ppm	85
3) Pyridine	2.509	79	1137420	48.48	ppm	84
4) N-Nitrosodimethylamine	2.477	74	707944	51.82	ppm #	55
6) Indene	4.867	116	1746692	48.18	ppm	97
7) Cumene	4.071	105	2579297	44.60	ppm	91
9) Phenol	4.402	94	1447597	45.66	ppm	84
10) Aniline	4.418	93	1514231	46.69	ppm	89
11) bis(2-Chloroethyl)ether	4.466	93	992946	46.45	ppm	91
12) 2-Chlorophenol	4.509	128	1083021	46.29	ppm	89
13) Decane	4.552	43	1090204	38.26	ppm	88
14) 1,3-Dichlorobenzene	4.627	146	1214847	47.29	ppm	98
15) 1,4-Dichlorobenzene	4.680	146	1235300	46.67	ppm #	39
16) Benzyl alcohol	4.771	108	676109	48.16	ppm	78
17) 1,2-Dichlorobenzene	4.798	146	1152458	47.50	ppm	97
18) Acetophenone	4.985	105	1451080	42.38	ppm	90
19) 2-Methylphenol	4.867	108	958046	47.86	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.878	45	1186410	40.91	ppm	97
21) 3&4-Methylphenol	4.985	108	1015369	44.86	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103897.D
Acq On : 9 May 2018 12:47 pm
Operator : christc2
Sample : icc4618-50
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 11 10:25:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:24:44 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	4.985	70	782602	39.51	ppm		83
23) Hexachloroethane	5.076	201	394563	46.65	ppm		86
26) Nitrobenzene	5.124	77	1085774	38.57	ppm		88
27) Quinoline	6.124	129	2015875	47.28	ppm		95
28) Isophorone	5.333	82	1907800	41.28	ppm		88
29) 2-Nitrophenol	5.402	139	589258	46.61	ppm		82
30) 2,4-Dimethylphenol	5.440	107	928710	42.06	ppm		84
31) Benzoic acid	5.547	105	769360	43.39	ppm		88
32) bis(2-Chloroethoxy)met...	5.520	93	1094272	45.04	ppm		100
33) 2,4-Dichlorophenol	5.622	162	864733	46.78	ppm		98
34) 2,6-Dichlorophenol	5.841	162	855557	45.73	ppm	#	1
35) 1,3,5-Trichlorobenzene	5.418	180	1009548	47.42	ppm		98
36) 1,2,4-Trichlorobenzene	5.707	180	946781	46.35	ppm		98
37) 1,2,3-Trichlorobenzene	5.927	180	926235	46.37	ppm		98
38) Naphthalene	5.782	128	3049315	45.65	ppm		100
39) 4-Chloroaniline	5.830	127	1297811	46.86	ppm		92
40) 2,3-Dichloroaniline	6.841	161	1090604	46.81	ppm		95
41) Caprolactam	6.189	55	453553	40.24	ppm		90
42) Hexachlorobutadiene	5.910	225	493459	42.54	ppm		98
43) 4-Chloro-3-methylphenol	6.344	107	843588	40.00	ppm		89
44) 2-Methylnaphthalene	6.515	141	1793665	46.57	ppm		91
45) 1-Methylnaphthalene	6.627	141	1870977	46.84	ppm		95
46) Dimethylnaphthalene	7.274	156	1915527	46.84	ppm		94
48) Hexachlorocyclopentadiene	6.707	237	1170333	87.47	ppm		98
49) 2,4,6-Trichlorophenol	6.852	196	625132	43.45	ppm		97
50) 2,4,5-Trichlorophenol	6.895	196	660186	45.01	ppm		99
52) 2-Chloronaphthalene	7.093	162	1919046	43.24	ppm		95
53) Biphenyl	7.076	154	2613789	44.51	ppm		99
54) 2-Nitroaniline	7.226	65	552543	33.88	ppm	#	76
55) Dimethylphthalate	7.483	163	2073234	39.64	ppm		99
56) Acenaphthylene	7.627	152	3121799	45.12	ppm		100
57) 2,6-Dinitrotoluene	7.547	165	484871	44.53	ppm		78
58) 3-Nitroaniline	7.772	138	580478	47.86	ppm		82
59) Acenaphthene	7.868	153	2028881	43.17	ppm		98
60) 2,4-Dinitrophenol	7.916	184	561819	76.54	ppm		74
61) 4-Nitrophenol	8.023	109	256314	29.74	ppm	#	63
62) Dibenzofuran	8.109	168	2741363	43.23	ppm		88
63) 2,4-Dinitrotoluene	8.103	165	676616	43.27	ppm		74
64) 2,3,4,6-Tetrachlorophenol	8.291	232	548316	45.55	ppm		87
65) Diethylphthalate	8.483	149	2105843	34.43	ppm		97
66) Fluorene	8.595	166	2231821	44.19	ppm		99
67) 4-Chlorophenyl-phenyle...	8.617	204	989089	41.76	ppm		84
68) 4-Nitroaniline	8.638	138	566282	49.05	ppm	#	65
70) 4,6-Dinitro-2-methylph...	8.692	198	396932	47.37	ppm		81
71) n-Nitrosodiphenylamine	8.788	169	1597463	46.38	ppm		99
72) 1,2-Diphenylhydrazine	8.847	77	2112370	38.39	ppm		86
74) 4-Bromophenyl-phenylether	9.339	248	597095	48.35	ppm	#	80
75) Hexachlorobenzene	9.419	284	674935	48.96	ppm		87
76) Pentachlorophenol	9.724	266	903421	101.87	ppm		98
77) Phenanthrene	10.024	178	3069582	45.32	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103897.D
Acq On : 9 May 2018 12:47 pm
Operator : christc2
Sample : icc4618-50
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 11 10:25:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:24:44 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Anthracene	10.098	178	3139676	46.37	ppm	99
79)	Carbazole	10.366	167	2936905	46.31	ppm	97
80)	Di-n-butylphthalate	11.008	149	3667160	40.78	ppm	98
81)	Fluoranthene	11.880	202	3245061	47.59	ppm	99
82)	Octadecane	9.954	57	1423581	42.84	ppm	90
84)	Pyrene	12.227	202	3404001	46.43	ppm	98
86)	Butylbenzylphthalate	13.377	149	1591976	44.43	ppm	89
87)	Benzo[a]anthracene	14.147	228	3003039	45.68	ppm	99
88)	3,3'-Dichlorobenzidine	14.153	252	1151339	49.21	ppm	98
89)	Chrysene	14.201	228	2881790	45.51	ppm	100
90)	bis(2-Ethylhexyl)phtha...	14.351	149	2221606	44.86	ppm	94
92)	Di-n-octylphthalate	15.335	149	3811909	51.55	ppm	66
93)	Benzo[b]fluoranthene	15.752	252	3228519	49.93	ppm	97
94)	Benzo[k]fluoranthene	15.795	252	2863920	43.19	ppm	95
95)	Benzo[a]pyrene	16.191	252	2776927	50.76	ppm	95
96)	Indeno[1,2,3-cd]pyrene	17.790	276	2713458	41.75	ppm	95
97)	Dibenz(a,h)acridine	17.442	279	2492073	54.07	ppm	100
98)	Dibenz[a,h]anthracene	17.833	278	2821976	53.38	ppm	90
99)	7,12-Dimethylbenz(a)an...	15.763	256	1410941	49.34	ppm	86
100)	Benzo[g,h,i]perylene	18.218	276	2619049	49.79	ppm	93

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

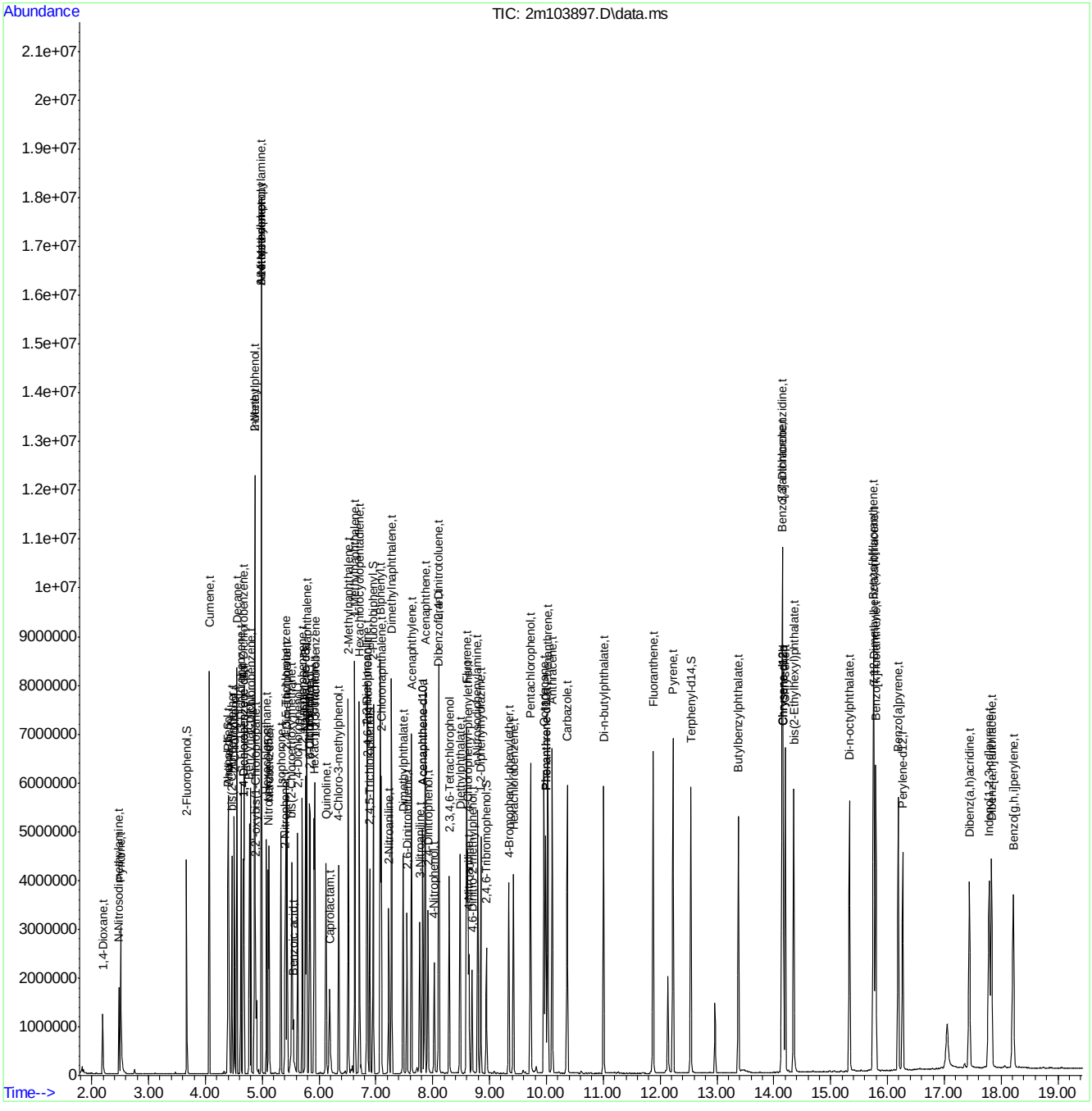
9.6.3

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103897.D
Acq On : 9 May 2018 12:47 pm
Operator : christc2
Sample : icc4618-50
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 11 10:25:22 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:24:44 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103898.D
Acq On : 9 May 2018 1:13 pm
Operator : christc2
Sample : ic4618-25
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 11 10:30:00 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:29:24 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.664	152	631661	40.00	ppm	0.00
24) Naphthalene-d8	5.761	136	2413624	40.00	ppm	0.00
47) Acenaphthene-d10	7.820	164	1274722	40.00	ppm	0.00
69) Phenanthrene-d10	9.986	188	2146941	40.00	ppm	0.00
83) Chrysene-d12	14.158	240	2002653	40.00	ppm	0.00
91) Perylene-d12	16.265	264	2018605	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.664	152	631661	40.00	ppm	0.00
103) Acenaphthene-d10a	7.820	164	1274722	40.00	ppm	0.00
105) Chrysene-d12a	14.158	240	2002653	40.00	ppm	0.00
108) Phenanthrene-d10a	9.986	188	2146941	40.00	ppm	0.00
112) Naphthalene-d8a	5.761	136	2413624	40.00	ppm	0.00
114) Chrysene-d12b	14.158	240	2002653	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.669	112	517688	25.07	ppm	0.00
Spiked Amount 50.000			Recovery	=	50.14%	
8) Phenol-d5	4.391	99	641699	24.70	ppm	0.00
Spiked Amount 50.000			Recovery	=	49.40%	
25) Nitrobenzene-d5	5.108	82	551582	24.93	ppm	0.00
Spiked Amount 50.000			Recovery	=	49.86%	
51) 2-Fluorobiphenyl	6.953	172	1158665	25.22	ppm	0.00
Spiked Amount 50.000			Recovery	=	50.44%	
73) 2,4,6-Tribromophenol	8.943	330	170114	25.82	ppm	0.00
Spiked Amount 50.000			Recovery	=	51.64%	
85) Terphenyl-d14	12.537	244	1100915	25.01	ppm	0.00
Spiked Amount 50.000			Recovery	=	50.02%	
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.193	88	235274	25.37	ppm	95
3) Pyridine	2.509	79	630497	26.73	ppm	96
4) N-Nitrosodimethylamine	2.477	74	365422	25.23	ppm	100
6) Indene	4.868	116	878976	24.63	ppm	99
7) Cumene	4.071	105	1312522	25.10	ppm	99
9) Phenol	4.402	94	731998	24.65	ppm	97
10) Aniline	4.413	93	804326	26.12	ppm	95
11) bis(2-Chloroethyl)ether	4.461	93	509113	25.09	ppm	95
12) 2-Chlorophenol	4.509	128	553120	24.90	ppm	98
13) Decane	4.552	43	564054	25.58	ppm	99
14) 1,3-Dichlorobenzene	4.621	146	621557	25.12	ppm	97
15) 1,4-Dichlorobenzene	4.680	146	635126	25.27	ppm	100
16) Benzyl alcohol	4.771	108	337994	24.20	ppm	95
17) 1,2-Dichlorobenzene	4.798	146	588518	25.09	ppm	99
18) Acetophenone	4.980	105	744066	25.16	ppm	99
19) 2-Methylphenol	4.862	108	479484	24.36	ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.878	45	615114	25.49	ppm	99
21) 3&4-Methylphenol	4.980	108	510383	24.28	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103898.D
Acq On : 9 May 2018 1:13 pm
Operator : christc2
Sample : ic4618-25
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 11 10:30:00 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:29:24 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	4.985	70	394542	24.77	ppm	96
23) Hexachloroethane	5.076	201	201438	24.95	ppm	97
26) Nitrobenzene	5.124	77	548027	25.10	ppm	96
27) Quinoline	6.114	129	1021527	24.92	ppm	99
28) Isophorone	5.327	82	959030	24.86	ppm	98
29) 2-Nitrophenol	5.402	139	295778	24.72	ppm	93
30) 2,4-Dimethylphenol	5.434	107	466492	24.55	ppm	94
31) Benzoic acid	5.525	105	365204	23.11	ppm	99
32) bis(2-Chloroethoxy)met...	5.520	93	560907	25.37	ppm	98
33) 2,4-Dichlorophenol	5.622	162	436268	24.91	ppm	99
34) 2,6-Dichlorophenol	5.841	162	432457	25.03	ppm	98
35) 1,3,5-Trichlorobenzene	5.413	180	516035	25.49	ppm	97
36) 1,2,4-Trichlorobenzene	5.707	180	473557	24.94	ppm	99
37) 1,2,3-Trichlorobenzene	5.927	180	479807	25.75	ppm	97
38) Naphthalene	5.777	128	1544789	25.13	ppm	100
39) 4-Chloroaniline	5.830	127	661607	25.07	ppm	99
40) 2,3-Dichloroaniline	6.841	161	542560	24.47	ppm	99
41) Caprolactam	6.173	55	226005	24.45	ppm	99
42) Hexachlorobutadiene	5.910	225	251379	25.32	ppm	98
43) 4-Chloro-3-methylphenol	6.344	107	421749	24.58	ppm	96
44) 2-Methylnaphthalene	6.510	141	898971	24.82	ppm	99
45) 1-Methylnaphthalene	6.627	141	939059	24.84	ppm	99
46) Dimethylnaphthalene	7.274	156	962943	24.78	ppm	98
48) Hexachlorocyclopentadiene	6.707	237	568463	48.26	ppm	98
49) 2,4,6-Trichlorophenol	6.847	196	314538	25.05	ppm	97
50) 2,4,5-Trichlorophenol	6.889	196	332176	25.17	ppm	99
52) 2-Chloronaphthalene	7.093	162	962820	25.23	ppm	99
53) Biphenyl	7.071	154	1296005	24.79	ppm	99
54) 2-Nitroaniline	7.221	65	274108	24.77	ppm	98
55) Dimethylphthalate	7.478	163	1042531	25.01	ppm	99
56) Acenaphthylene	7.627	152	1556879	25.08	ppm	99
57) 2,6-Dinitrotoluene	7.542	165	246767	25.06	ppm	99
58) 3-Nitroaniline	7.766	138	283670	24.36	ppm	97
59) Acenaphthene	7.863	153	1017006	25.03	ppm	99
60) 2,4-Dinitrophenol	7.911	184	248273	42.72	ppm	97
61) 4-Nitrophenol	8.018	109	127931	24.94	ppm	99
62) Dibenzofuran	8.103	168	1373784	25.01	ppm	98
63) 2,4-Dinitrotoluene	8.098	165	331250	24.21	ppm	94
64) 2,3,4,6-Tetrachlorophenol	8.291	232	273959	24.76	ppm	96
65) Diethylphthalate	8.478	149	1050932	24.83	ppm	98
66) Fluorene	8.590	166	1110813	24.82	ppm	98
67) 4-Chlorophenyl-phenyle...	8.612	204	510296	25.73	ppm	97
68) 4-Nitroaniline	8.628	138	275150	24.28	ppm	96
70) 4,6-Dinitro-2-methylph...	8.681	198	180908	22.90	ppm	93
71) n-Nitrosodiphenylamine	8.788	169	803579	25.67	ppm	99
72) 1,2-Diphenylhydrazine	8.842	77	1055046	25.49	ppm	99
74) 4-Bromophenyl-phenylether	9.334	248	296377	25.39	ppm	95
75) Hexachlorobenzene	9.414	284	338528	25.70	ppm	99
76) Pentachlorophenol	9.719	266	434840	48.77	ppm	100
77) Phenanthrene	10.018	178	1530833	25.42	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103898.D
Acq On : 9 May 2018 1:13 pm
Operator : christc2
Sample : ic4618-25
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 11 10:30:00 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:29:24 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	10.098	178	1553704	25.35	ppm	99
79) Carbazole	10.366	167	1463542	25.29	ppm	99
80) Di-n-butylphthalate	11.002	149	1786530	24.70	ppm	99
81) Fluoranthene	11.874	202	1588506	24.87	ppm	99
82) Octadecane	9.954	57	711983	25.30	ppm	99
84) Pyrene	12.222	202	1682163	25.30	ppm	99
86) Butylbenzylphthalate	13.377	149	769983	24.57	ppm	98
87) Benzo[a]anthracene	14.142	228	1472571	24.87	ppm	100
88) 3,3'-Dichlorobenzidine	14.147	252	568104	25.05	ppm	99
89) Chrysene	14.196	228	1437199	25.33	ppm	99
90) bis(2-Ethylhexyl)phtha...	14.345	149	1064088	24.26	ppm	98
92) Di-n-octylphthalate	15.329	149	1845676	24.47	ppm	99
93) Benzo[b]fluoranthene	15.747	252	1574968	24.99	ppm	99
94) Benzo[k]fluoranthene	15.784	252	1418593	25.08	ppm	100
95) Benzo[a]pyrene	16.185	252	1349402	24.78	ppm	99
96) Indeno[1,2,3-cd]pyrene	17.779	276	1362053	25.33	ppm	97
97) Dibenz(a,h)acridine	17.437	279	1219026	24.92	ppm	99
98) Dibenz[a,h]anthracene	17.822	278	1396077	25.24	ppm	98
99) 7,12-Dimethylbenz(a)an...	15.752	256	679383	24.42	ppm	100
100) Benzo[g,h,i]perylene	18.207	276	1310460	25.52	ppm	99

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

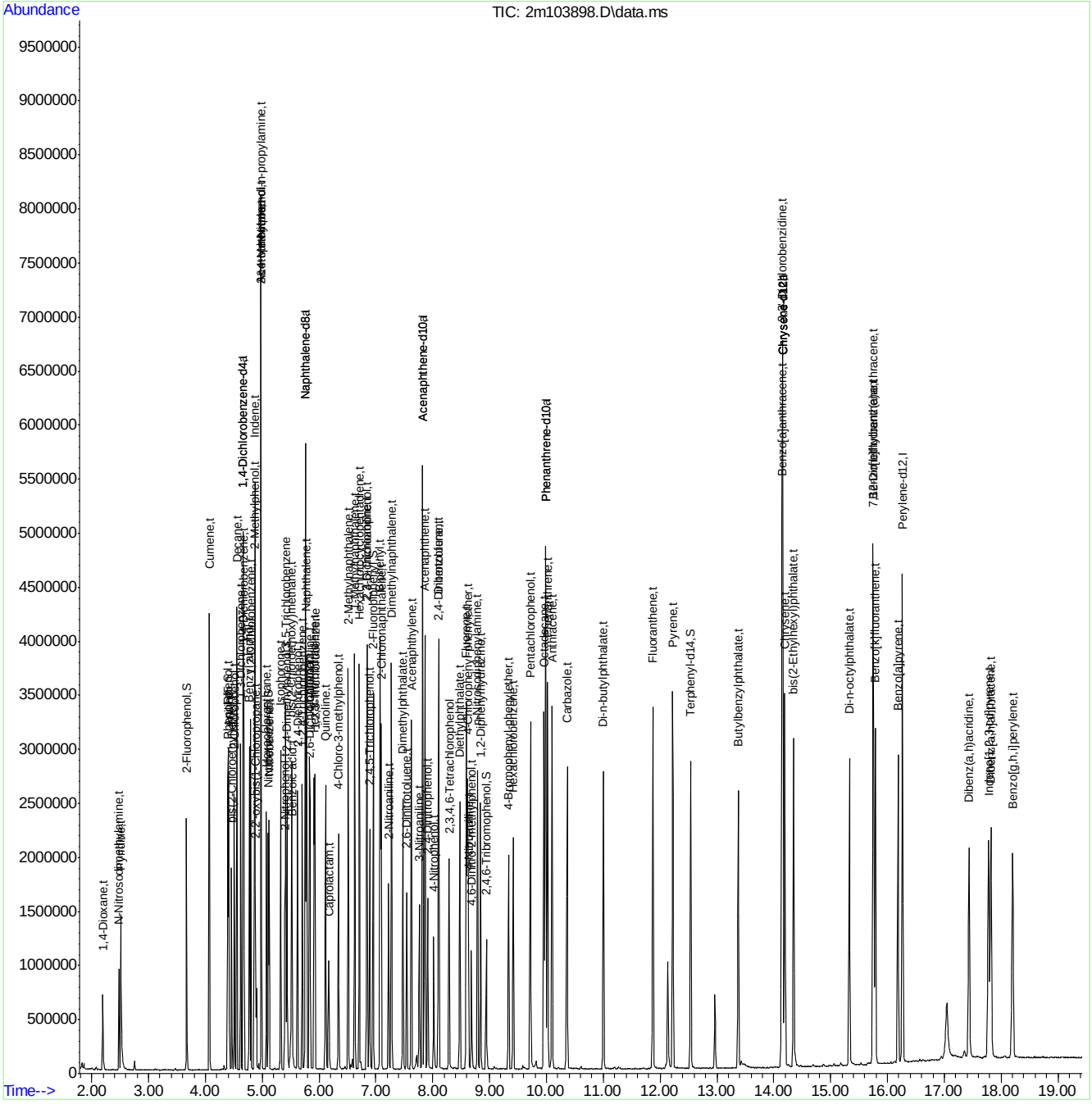
9.6.4

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103898.D
Acq On : 9 May 2018 1:13 pm
Operator : christc2
Sample : ic4618-25
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 11 10:30:00 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:29:24 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103899.D
Acq On : 9 May 2018 1:38 pm
Operator : christc2
Sample : ic4618-10
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 11 10:30:38 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:30:05 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.664	152	648682	40.00	ppm	0.00
24) Naphthalene-d8	5.755	136	2456567	40.00	ppm	0.00
47) Acenaphthene-d10	7.820	164	1290250	40.00	ppm	0.00
69) Phenanthrene-d10	9.986	188	2222426	40.00	ppm	0.00
83) Chrysene-d12	14.158	240	2003544	40.00	ppm	0.00
91) Perylene-d12	16.265	264	2013633	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.664	152	648682	40.00	ppm	0.00
103) Acenaphthene-d10a	7.820	164	1290250	40.00	ppm	0.00
105) Chrysene-d12a	14.158	240	2003544	40.00	ppm	0.00
108) Phenanthrene-d10a	9.986	188	2222426	40.00	ppm	0.00
112) Naphthalene-d8a	5.755	136	2456567	40.00	ppm	0.00
114) Chrysene-d12b	14.158	240	2003544	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.669	112	219942	10.36	ppm	0.00
Spiked Amount 50.000			Recovery	=	20.72%	
8) Phenol-d5	4.391	99	269514	10.14	ppm	0.00
Spiked Amount 50.000			Recovery	=	20.28%	
25) Nitrobenzene-d5	5.103	82	234630	10.43	ppm	0.00
Spiked Amount 50.000			Recovery	=	20.86%	
51) 2-Fluorobiphenyl	6.948	172	499704	10.71	ppm	0.00
Spiked Amount 50.000			Recovery	=	21.42%	
73) 2,4,6-Tribromophenol	8.943	330	66098	9.59	ppm	0.00
Spiked Amount 50.000			Recovery	=	19.18%	
85) Terphenyl-d14	12.537	244	468948	10.65	ppm	0.00
Spiked Amount 50.000			Recovery	=	21.30%	
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.193	88	99724	10.42	ppm	95
3) Pyridine	2.514	79	271452	10.95	ppm	95
4) N-Nitrosodimethylamine	2.477	74	154540	10.36	ppm	98
6) Indene	4.868	116	372824	10.22	ppm	98
7) Cumene	4.071	105	549193	10.21	ppm	98
9) Phenol	4.402	94	317664	10.47	ppm	95
10) Aniline	4.413	93	352283	10.98	ppm	96
11) bis(2-Chloroethyl)ether	4.461	93	218321	10.46	ppm	99
12) 2-Chlorophenol	4.509	128	238927	10.49	ppm	96
13) Decane	4.552	43	243282	10.66	ppm	98
14) 1,3-Dichlorobenzene	4.621	146	270143	10.61	ppm	95
15) 1,4-Dichlorobenzene	4.680	146	271995	10.50	ppm	98
16) Benzyl alcohol	4.771	108	141952	10.00	ppm	93
17) 1,2-Dichlorobenzene	4.798	146	251886	10.44	ppm	99
18) Acetophenone	4.980	105	313383	10.30	ppm	99
19) 2-Methylphenol	4.862	108	204965	10.23	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.878	45	263286	10.56	ppm	99
21) 3&4-Methylphenol	4.980	108	213279	9.98	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103899.D
Acq On : 9 May 2018 1:38 pm
Operator : christc2
Sample : ic4618-10
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 11 10:30:38 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:30:05 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	4.980	70	167680	10.28	ppm		96
23) Hexachloroethane	5.076	201	89826	10.84	ppm		94
26) Nitrobenzene	5.119	77	232467	10.45	ppm		98
27) Quinoline	6.114	129	429553	10.31	ppm		100
28) Isophorone	5.327	82	407753	10.40	ppm		99
29) 2-Nitrophenol	5.402	139	124171	10.23	ppm		95
30) 2,4-Dimethylphenol	5.434	107	198485	10.33	ppm		92
31) Benzoic acid	5.504	105	143834	9.17	ppm		94
32) bis(2-Chloroethoxy)met...	5.520	93	239359	10.59	ppm		98
33) 2,4-Dichlorophenol	5.622	162	180767	10.15	ppm		96
34) 2,6-Dichlorophenol	5.836	162	180284	10.25	ppm		99
35) 1,3,5-Trichlorobenzene	5.413	180	220291	10.62	ppm		96
36) 1,2,4-Trichlorobenzene	5.702	180	203448	10.54	ppm		98
37) 1,2,3-Trichlorobenzene	5.921	180	201567	10.52	ppm		98
38) Naphthalene	5.777	128	657240	10.49	ppm		100
39) 4-Chloroaniline	5.825	127	280296	10.43	ppm		98
40) 2,3-Dichloroaniline	6.841	161	232035	10.36	ppm		97
41) Caprolactam	6.157	55	96480	10.33	ppm		99
42) Hexachlorobutadiene	5.910	225	106775	10.52	ppm		98
43) 4-Chloro-3-methylphenol	6.338	107	177538	10.22	ppm		96
44) 2-Methylnaphthalene	6.510	141	378558	10.29	ppm		98
45) 1-Methylnaphthalene	6.622	141	399508	10.40	ppm		98
46) Dimethylnaphthalene	7.269	156	409128	10.37	ppm		99
48) Hexachlorocyclopentadiene	6.707	237	230650	19.57	ppm		96
49) 2,4,6-Trichlorophenol	6.847	196	131304	10.33	ppm		97
50) 2,4,5-Trichlorophenol	6.884	196	139241	10.40	ppm		97
52) 2-Chloronaphthalene	7.093	162	411132	10.61	ppm		99
53) Biphenyl	7.071	154	554201	10.50	ppm		99
54) 2-Nitroaniline	7.221	65	112824	10.10	ppm		97
55) Dimethylphthalate	7.478	163	445867	10.56	ppm		99
56) Acenaphthylene	7.622	152	658606	10.47	ppm		100
57) 2,6-Dinitrotoluene	7.542	165	100448	10.07	ppm		95
58) 3-Nitroaniline	7.761	138	116565	9.98	ppm		99
59) Acenaphthene	7.863	153	430357	10.46	ppm		97
60) 2,4-Dinitrophenol	7.911	184	86402	15.44	ppm	#	58
61) 4-Nitrophenol	8.013	109	50082	9.65	ppm		99
62) Dibenzofuran	8.103	168	575071	10.34	ppm		99
63) 2,4-Dinitrotoluene	8.093	165	131337	9.59	ppm		97
64) 2,3,4,6-Tetrachlorophenol	8.285	232	112817	10.11	ppm		98
65) Diethylphthalate	8.473	149	440053	10.29	ppm		99
66) Fluorene	8.590	166	461932	10.22	ppm		100
67) 4-Chlorophenyl-phenyle...	8.612	204	213311	10.52	ppm		99
68) 4-Nitroaniline	8.622	138	119085	10.48	ppm		98
70) 4,6-Dinitro-2-methylph...	8.676	198	68339	8.60	ppm		91
71) n-Nitrosodiphenylamine	8.783	169	331719	10.14	ppm		98
72) 1,2-Diphenylhydrazine	8.842	77	442905	10.27	ppm		96
74) 4-Bromophenyl-phenylether	9.334	248	127287	10.48	ppm		95
75) Hexachlorobenzene	9.414	284	145775	10.59	ppm		97
76) Pentachlorophenol	9.713	266	174185	19.03	ppm		97
77) Phenanthrene	10.018	178	647355	10.33	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103899.D
Acq On : 9 May 2018 1:38 pm
Operator : christc2
Sample : ic4618-10
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 11 10:30:38 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:30:05 2018
Response via : Initial Calibration

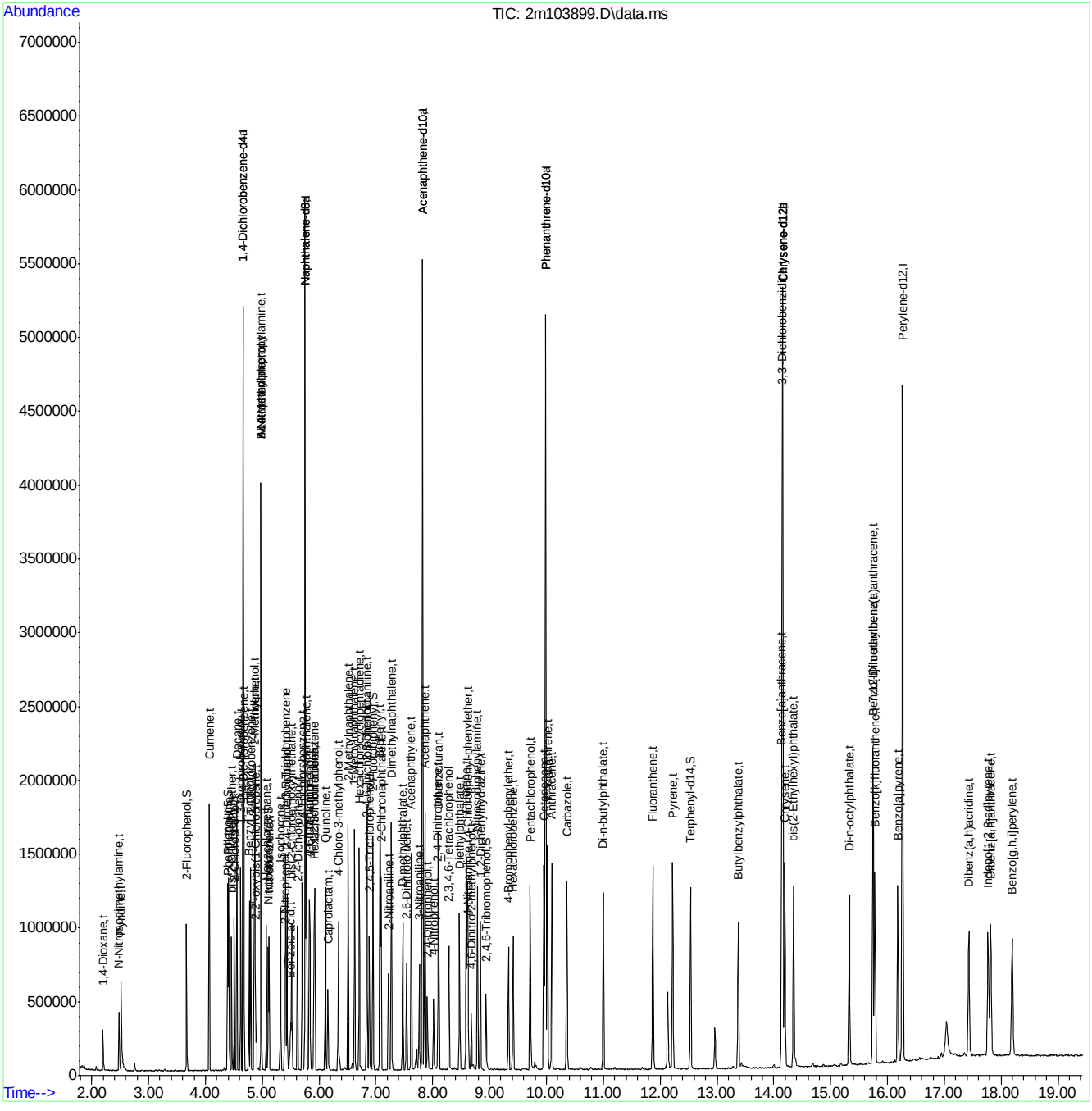
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
78)	Anthracene	10.093	178	657873	10.32 ppm	100
79)	Carbazole	10.361	167	612321	10.18 ppm	99
80)	Di-n-butylphthalate	11.002	149	746521	10.01 ppm	100
81)	Fluoranthene	11.874	202	661189	10.02 ppm	99
82)	Octadecane	9.954	57	298460	10.21 ppm	98
84)	Pyrene	12.217	202	707570	10.60 ppm	99
86)	Butylbenzylphthalate	13.377	149	318171	10.21 ppm	96
87)	Benzo[a]anthracene	14.137	228	617490	10.44 ppm	99
88)	3,3'-Dichlorobenzidine	14.147	252	233502	10.29 ppm	98
89)	Chrysene	14.196	228	596304	10.46 ppm	99
90)	bis(2-Ethylhexyl)phtha...	14.345	149	440493	10.14 ppm	99
92)	Di-n-octylphthalate	15.329	149	754393	10.10 ppm	99
93)	Benzo[b]fluoranthene	15.741	252	648368	10.31 ppm	99
94)	Benzo[k]fluoranthene	15.779	252	602891	10.67 ppm	99
95)	Benzo[a]pyrene	16.180	252	566920	10.47 ppm	98
96)	Indeno[1,2,3-cd]pyrene	17.768	276	542080	10.06 ppm	97
97)	Dibenz(a,h)acridine	17.431	279	502758	10.31 ppm	100
98)	Dibenz[a,h]anthracene	17.817	278	569939	10.30 ppm	98
99)	7,12-Dimethylbenz(a)an...	15.747	256	278990	10.13 ppm	98
100)	Benzo[g,h,i]perylene	18.196	276	535791	10.39 ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103899.D
Acq On : 9 May 2018 1:38 pm
Operator : christc2
Sample : ic4618-10
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 11 10:30:38 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:30:05 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103900.D
Acq On : 9 May 2018 2:04 pm
Operator : christc2
Sample : ic4618-5
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 11 10:31:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:30:49 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.665	152	691461	40.00	ppm	0.00
24) Naphthalene-d8	5.756	136	2587528	40.00	ppm	0.00
47) Acenaphthene-d10	7.820	164	1374832	40.00	ppm	0.00
69) Phenanthrene-d10	9.986	188	2335000	40.00	ppm	0.00
83) Chrysene-d12	14.158	240	2108790	40.00	ppm	0.00
91) Perylene-d12	16.266	264	2105164	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.665	152	691461	40.00	ppm	0.00
103) Acenaphthene-d10a	7.820	164	1374832	40.00	ppm	0.00
105) Chrysene-d12a	14.158	240	2108790	40.00	ppm	0.00
108) Phenanthrene-d10a	9.986	188	2335000	40.00	ppm	0.00
112) Naphthalene-d8a	5.756	136	2587528	40.00	ppm	0.00
114) Chrysene-d12b	14.158	240	2108790	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.670	112	108718	4.76	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.52%	
8) Phenol-d5	4.392	99	137895	4.85	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.70%	
25) Nitrobenzene-d5	5.103	82	115576	4.83	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.66%	
51) 2-Fluorobiphenyl	6.948	172	253904	5.02	ppm	0.00
Spiked Amount 50.000			Recovery	=	10.04%	
73) 2,4,6-Tribromophenol	8.938	330	33760	4.71	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.42%	
85) Terphenyl-d14	12.538	244	230999	4.90	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.80%	
107) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.199	88	51713	5.02	ppm	98
3) Pyridine	2.520	79	134720	4.98	ppm	94
4) N-Nitrosodimethylamine	2.482	74	76666	4.78	ppm	91
6) Indene	4.868	116	187205	4.79	ppm	99
7) Cumene	4.071	105	280221	4.86	ppm	98
9) Phenol	4.397	94	154449	4.72	ppm	99
10) Aniline	4.413	93	181988	5.19	ppm	97
11) bis(2-Chloroethyl)ether	4.461	93	110081	4.89	ppm	97
12) 2-Chlorophenol	4.504	128	122330	4.98	ppm	98
13) Decane	4.552	43	124130	5.02	ppm	98
14) 1,3-Dichlorobenzene	4.622	146	135996	4.94	ppm	97
15) 1,4-Dichlorobenzene	4.681	146	137858	4.93	ppm	96
16) Benzyl alcohol	4.771	108	71604	4.73	ppm	96
17) 1,2-Dichlorobenzene	4.798	146	124034	4.77	ppm	97
18) Acetophenone	4.980	105	157245	4.81	ppm	97
19) 2-Methylphenol	4.857	108	103090	4.80	ppm	98
20) 2,2'-oxybis(1-Chloropr...	4.878	45	134186	4.98	ppm	98
21) 3&4-Methylphenol	4.980	108	108233	4.75	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103900.D
Acq On : 9 May 2018 2:04 pm
Operator : christc2
Sample : ic4618-5
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 11 10:31:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:30:49 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	4.980	70	82591	4.72	ppm		96
23) Hexachloroethane	5.076	201	43398	4.81	ppm		98
26) Nitrobenzene	5.119	77	118383	5.00	ppm		98
27) Quinoline	6.114	129	216964	4.90	ppm		98
28) Isophorone	5.322	82	205548	4.93	ppm		98
29) 2-Nitrophenol	5.397	139	61193	4.76	ppm		98
30) 2,4-Dimethylphenol	5.435	107	97923	4.80	ppm		97
31) Benzoic acid	5.488	105	65881	4.07	ppm		96
32) bis(2-Chloroethoxy)met...	5.520	93	119326	4.94	ppm		98
33) 2,4-Dichlorophenol	5.622	162	93877	4.99	ppm		94
34) 2,6-Dichlorophenol	5.836	162	89552	4.80	ppm		97
35) 1,3,5-Trichlorobenzene	5.413	180	111487	5.03	ppm		96
36) 1,2,4-Trichlorobenzene	5.702	180	104669	5.08	ppm		98
37) 1,2,3-Trichlorobenzene	5.921	180	103215	5.05	ppm		98
38) Naphthalene	5.777	128	330925	4.95	ppm		99
39) 4-Chloroaniline	5.825	127	144041	5.03	ppm		99
40) 2,3-Dichloroaniline	6.841	161	117031	4.92	ppm		97
41) Caprolactam	6.151	55	47831	4.82	ppm		96
42) Hexachlorobutadiene	5.911	225	52900	4.89	ppm		96
43) 4-Chloro-3-methylphenol	6.333	107	88379	4.80	ppm		97
44) 2-Methylnaphthalene	6.510	141	192392	4.93	ppm		98
45) 1-Methylnaphthalene	6.622	141	202020	4.94	ppm		95
46) Dimethylnaphthalene	7.269	156	205826	4.91	ppm		96
48) Hexachlorocyclopentadiene	6.708	237	110984	8.89	ppm		94
49) 2,4,6-Trichlorophenol	6.847	196	62811	4.60	ppm		99
50) 2,4,5-Trichlorophenol	6.884	196	69596	4.83	ppm		97
52) 2-Chloronaphthalene	7.087	162	212098	5.06	ppm		99
53) Biphenyl	7.071	154	276974	4.87	ppm		98
54) 2-Nitroaniline	7.216	65	54799	4.59	ppm		96
55) Dimethylphthalate	7.473	163	224572	4.92	ppm		99
56) Acenaphthylene	7.622	152	329264	4.86	ppm		100
57) 2,6-Dinitrotoluene	7.542	165	49761	4.67	ppm		94
58) 3-Nitroaniline	7.761	138	56256	4.52	ppm		90
59) Acenaphthene	7.863	153	217979	4.92	ppm		99
60) 2,4-Dinitrophenol	7.906	184	37642	6.69	ppm	#	55
61) 4-Nitrophenol	8.013	109	24488	4.47	ppm		97
62) Dibenzofuran	8.104	168	294802	4.93	ppm		98
63) 2,4-Dinitrotoluene	8.093	165	62168	4.30	ppm		99
64) 2,3,4,6-Tetrachlorophenol	8.286	232	57300	4.80	ppm		95
65) Diethylphthalate	8.473	149	219806	4.79	ppm		100
66) Fluorene	8.590	166	236941	4.89	ppm		99
67) 4-Chlorophenyl-phenyle...	8.612	204	107867	4.93	ppm		98
68) 4-Nitroaniline	8.617	138	59312	4.84	ppm		94
70) 4,6-Dinitro-2-methylph...	8.676	198	28818	3.58	ppm		92
71) n-Nitrosodiphenylamine	8.783	169	169189	4.91	ppm		97
72) 1,2-Diphenylhydrazine	8.836	77	224038	4.91	ppm		96
74) 4-Bromophenyl-phenylether	9.334	248	63899	4.95	ppm		97
75) Hexachlorobenzene	9.414	284	72266	4.92	ppm		98
76) Pentachlorophenol	9.714	266	85604	9.01	ppm		97
77) Phenanthrene	10.018	178	327930	4.94	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103900.D
Acq On : 9 May 2018 2:04 pm
Operator : christc2
Sample : ic4618-5
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 11 10:31:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:30:49 2018
Response via : Initial Calibration

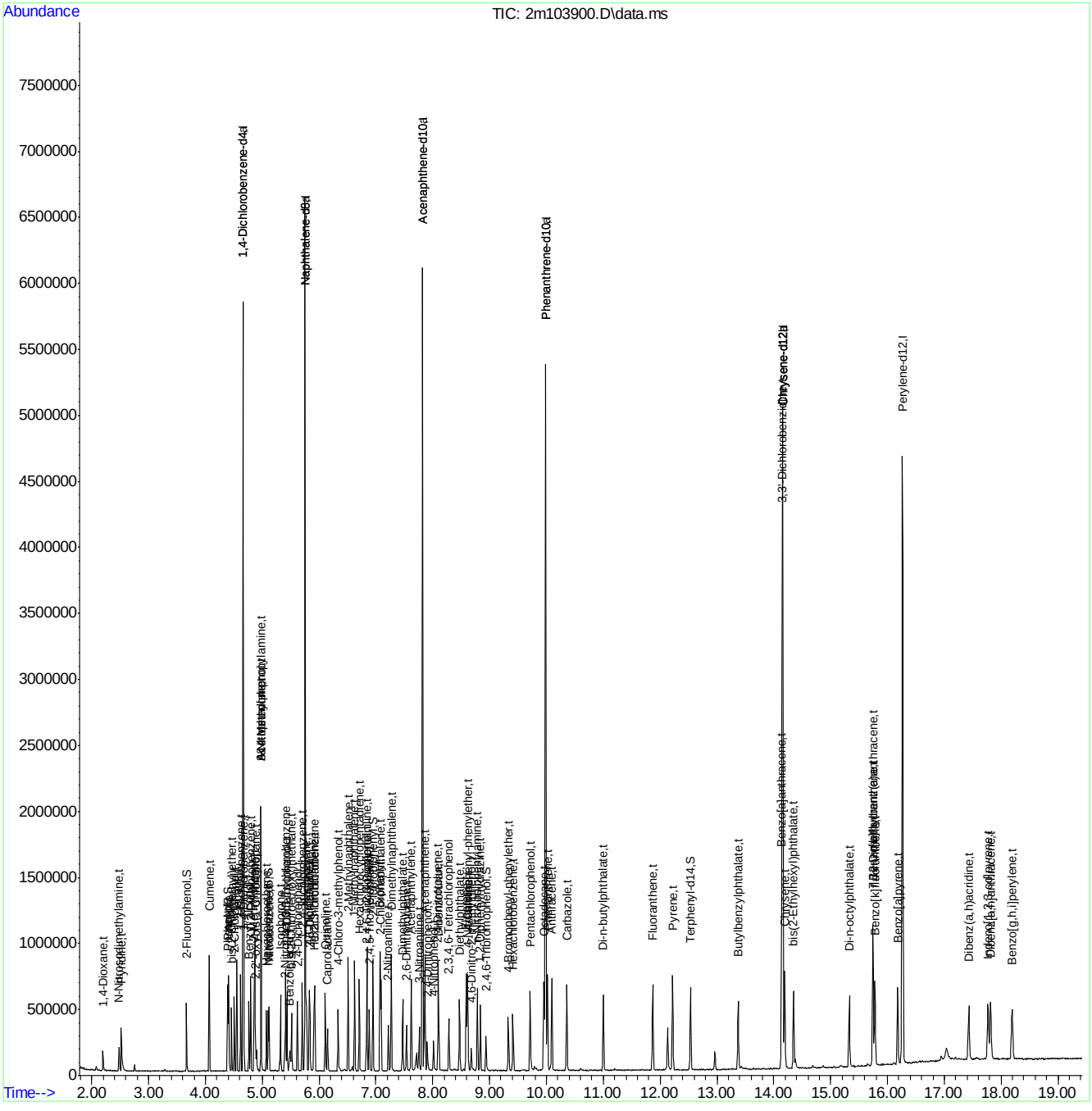
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Anthracene	10.093	178	334283	4.95	ppm	99
79)	Carbazole	10.361	167	302749	4.77	ppm	100
80)	Di-n-butylphthalate	11.003	149	366840	4.68	ppm	99
81)	Fluoranthene	11.869	202	326099	4.70	ppm	98
82)	Octadecane	9.954	57	145512	4.71	ppm	99
84)	Pyrene	12.217	202	358821	5.03	ppm	99
86)	Butylbenzylphthalate	13.372	149	156834	4.76	ppm	99
87)	Benzo[a]anthracene	14.137	228	314842	5.00	ppm	99
88)	3,3'-Dichlorobenzidine	14.148	252	113943	4.73	ppm	97
89)	Chrysene	14.190	228	301770	4.97	ppm	99
90)	bis(2-Ethylhexyl)phtha...	14.346	149	219503	4.78	ppm	99
92)	Di-n-octylphthalate	15.330	149	364960	4.66	ppm	100
93)	Benzo[b]fluoranthene	15.742	252	314741	4.75	ppm	100
94)	Benzo[k]fluoranthene	15.779	252	306469	5.10	ppm	97
95)	Benzo[a]pyrene	16.180	252	277162	4.84	ppm	98
96)	Indeno[1,2,3-cd]pyrene	17.769	276	266736	4.73	ppm	98
97)	Dibenz(a,h)acridine	17.432	279	247544	4.82	ppm	99
98)	Dibenz[a,h]anthracene	17.811	278	284442	4.88	ppm	100
99)	7,12-Dimethylbenz(a)an...	15.747	256	136079	4.71	ppm	95
100)	Benzo[g,h,i]perylene	18.191	276	269173	4.94	ppm	95

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103900.D
Acq On : 9 May 2018 2:04 pm
Operator : christc2
Sample : ic4618-5
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 11 10:31:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:30:49 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103901.D
Acq On : 9 May 2018 2:29 pm
Operator : christc2
Sample : ic4618-2
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 11 10:32:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:31:33 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.664	152	634096	40.00	ppm	0.00
24) Naphthalene-d8	5.756	136	2391935	40.00	ppm	0.00
47) Acenaphthene-d10	7.820	164	1252247	40.00	ppm	0.00
69) Phenanthrene-d10	9.986	188	2145083	40.00	ppm	0.00
83) Chrysene-d12	14.153	240	1955378	40.00	ppm	-0.01
91) Perylene-d12	16.266	264	1994061	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.664	152	634096	40.00	ppm	0.00
103) Acenaphthene-d10a	7.820	164	1252247	40.00	ppm	0.00
105) Chrysene-d12a	14.153	240	1955378	40.00	ppm	-0.01
108) Phenanthrene-d10a	9.986	188	2145083	40.00	ppm	0.00
112) Naphthalene-d8a	5.756	136	2391935	40.00	ppm	0.00
114) Chrysene-d12b	14.153	240	1955378	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.670	112	42040	2.03	ppm	0.00
Spiked Amount 50.000			Recovery	=	4.06%	
8) Phenol-d5	4.386	99	51353	1.98	ppm	-0.01
Spiked Amount 50.000			Recovery	=	3.96%	
25) Nitrobenzene-d5	5.103	82	44122	2.01	ppm	0.00
Spiked Amount 50.000			Recovery	=	4.02%	
51) 2-Fluorobiphenyl	6.948	172	89766	1.95	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.90%	
73) 2,4,6-Tribromophenol	8.938	330	12509	1.92	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.84%	
85) Terphenyl-d14	12.538	244	84305	1.94	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.88%	
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.199	88	19940	2.11	ppm	90
3) Pyridine	2.530	79	48396	1.95	ppm	94
4) N-Nitrosodimethylamine	2.482	74	28972	1.99	ppm	97
6) Indene	4.868	116	68792	1.94	ppm	95
7) Cumene	4.071	105	103032	1.96	ppm	98
9) Phenol	4.397	94	59706	2.01	ppm	99
10) Aniline	4.413	93	67543	2.09	ppm	96
11) bis(2-Chloroethyl)ether	4.461	93	40519	1.97	ppm	98
12) 2-Chlorophenol	4.504	128	44475	1.97	ppm	96
13) Decane	4.552	43	47931	2.11	ppm	97
14) 1,3-Dichlorobenzene	4.622	146	50253	1.99	ppm	98
15) 1,4-Dichlorobenzene	4.680	146	50007	1.96	ppm	95
16) Benzyl alcohol	4.766	108	27080	1.97	ppm	97
17) 1,2-Dichlorobenzene	4.798	146	46998	1.99	ppm	96
18) Acetophenone	4.980	105	58096	1.95	ppm	96
19) 2-Methylphenol	4.857	108	39303	2.01	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.878	45	51481	2.08	ppm	96
21) 3&4-Methylphenol	4.980	108	40212	1.94	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103901.D
Acq On : 9 May 2018 2:29 pm
Operator : christc2
Sample : ic4618-2
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 11 10:32:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:31:33 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
22) n-Nitroso-di-n-propyla...	4.980	70	30517	1.92	ppm	89
23) Hexachloroethane	5.076	201	16004	1.95	ppm	98
26) Nitrobenzene	5.119	77	43868	2.00	ppm	96
27) Quinoline	6.109	129	80428	1.97	ppm	98
28) Isophorone	5.322	82	76665	1.99	ppm	95
29) 2-Nitrophenol	5.397	139	22480	1.91	ppm	94
30) 2,4-Dimethylphenol	5.435	107	36988	1.98	ppm	97
31) Benzoic acid	5.477	105	21777	1.51	ppm	95
32) bis(2-Chloroethoxy)met...	5.520	93	44280	1.99	ppm	95
33) 2,4-Dichlorophenol	5.616	162	35469	2.04	ppm	97
34) 2,6-Dichlorophenol	5.836	162	33104	1.94	ppm	97
35) 1,3,5-Trichlorobenzene	5.413	180	43136	2.10	ppm	93
36) 1,2,4-Trichlorobenzene	5.702	180	38223	2.00	ppm	96
37) 1,2,3-Trichlorobenzene	5.921	180	37982	2.01	ppm	94
38) Naphthalene	5.777	128	125113	2.03	ppm	99
39) 4-Chloroaniline	5.825	127	52404	1.98	ppm	98
40) 2,3-Dichloroaniline	6.841	161	42960	1.96	ppm	99
41) Caprolactam	6.146	55	16786	1.84	ppm	88
42) Hexachlorobutadiene	5.911	225	20889	2.10	ppm	94
43) 4-Chloro-3-methylphenol	6.333	107	33411	1.98	ppm	99
44) 2-Methylnaphthalene	6.510	141	71345	1.98	ppm	96
45) 1-Methylnaphthalene	6.622	141	74768	1.98	ppm	99
46) Dimethylnaphthalene	7.269	156	74890	1.94	ppm	96
48) Hexachlorocyclopentadiene	6.708	237	37699	3.39	ppm	96
49) 2,4,6-Trichlorophenol	6.841	196	24692	2.02	ppm	94
50) 2,4,5-Trichlorophenol	6.884	196	24566	1.88	ppm	98
52) 2-Chloronaphthalene	7.087	162	78577	2.05	ppm	97
53) Biphenyl	7.071	154	104723	2.03	ppm	96
54) 2-Nitroaniline	7.216	65	20248	1.89	ppm	95
55) Dimethylphthalate	7.472	163	83781	2.02	ppm	99
56) Acenaphthylene	7.622	152	121219	1.97	ppm	99
57) 2,6-Dinitrotoluene	7.542	165	17077	1.78	ppm	97
58) 3-Nitroaniline	7.761	138	19360	1.74	ppm	86
59) Acenaphthene	7.863	153	79377	1.97	ppm	97
60) 2,4-Dinitrophenol	7.906	184	9543	1.99	ppm	82
61) 4-Nitrophenol	8.013	109	7856	1.61	ppm	91
62) Dibenzofuran	8.104	168	107208	1.97	ppm	99
63) 2,4-Dinitrotoluene	8.093	165	22966	1.80	ppm	93
64) 2,3,4,6-Tetrachlorophenol	8.285	232	20464	1.90	ppm	94
65) Diethylphthalate	8.473	149	80164	1.93	ppm	94
66) Fluorene	8.590	166	87978	2.00	ppm	98
67) 4-Chlorophenyl-phenyle...	8.612	204	40281	2.03	ppm	96
68) 4-Nitroaniline	8.617	138	19871	1.79	ppm	99
70) 4,6-Dinitro-2-methylph...	8.676	198	10006	1.43	ppm	95
71) n-Nitrosodiphenylamine	8.783	169	61750	1.96	ppm	98
72) 1,2-Diphenylhydrazine	8.836	77	80098	1.92	ppm	94
74) 4-Bromophenyl-phenylether	9.328	248	23305	1.97	ppm	89
75) Hexachlorobenzene	9.409	284	26447	1.97	ppm	91
76) Pentachlorophenol	9.714	266	29195	3.41	ppm	98
77) Phenanthrene	10.018	178	125267	2.06	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103901.D
Acq On : 9 May 2018 2:29 pm
Operator : christc2
Sample : ic4618-2
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 11 10:32:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:31:33 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	10.093	178	121810	1.97	ppm	98
79) Carbazole	10.361	167	111717	1.93	ppm	97
80) Di-n-butylphthalate	11.003	149	132266	1.86	ppm	99
81) Fluoranthene	11.874	202	123319	1.96	ppm	97
82) Octadecane	9.954	57	54202	1.93	ppm	98
84) Pyrene	12.217	202	130812	1.98	ppm	98
86) Butylbenzylphthalate	13.372	149	60825	2.01	ppm	96
87) Benzo[a]anthracene	14.137	228	119394	2.05	ppm	96
88) 3,3'-Dichlorobenzidine	14.148	252	40627	1.84	ppm	95
89) Chrysene	14.190	228	114390	2.03	ppm	98
90) bis(2-Ethylhexyl)phtha...	14.345	149	79771	1.89	ppm	99
92) Di-n-octylphthalate	15.330	149	134929	1.84	ppm	97
93) Benzo[b]fluoranthene	15.736	252	117799	1.90	ppm	98
94) Benzo[k]fluoranthene	15.779	252	111649	1.95	ppm	98
95) Benzo[a]pyrene	16.180	252	102494	1.90	ppm	99
96) Indeno[1,2,3-cd]pyrene	17.763	276	101649	1.92	ppm	94
97) Dibenz(a,h)acridine	17.426	279	92460	1.91	ppm	99
98) Dibenz[a,h]anthracene	17.811	278	104685	1.90	ppm	97
99) 7,12-Dimethylbenz(a)an...	15.747	256	50339	1.86	ppm	97
100) Benzo[g,h,i]perylene	18.191	276	98778	1.92	ppm	100

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

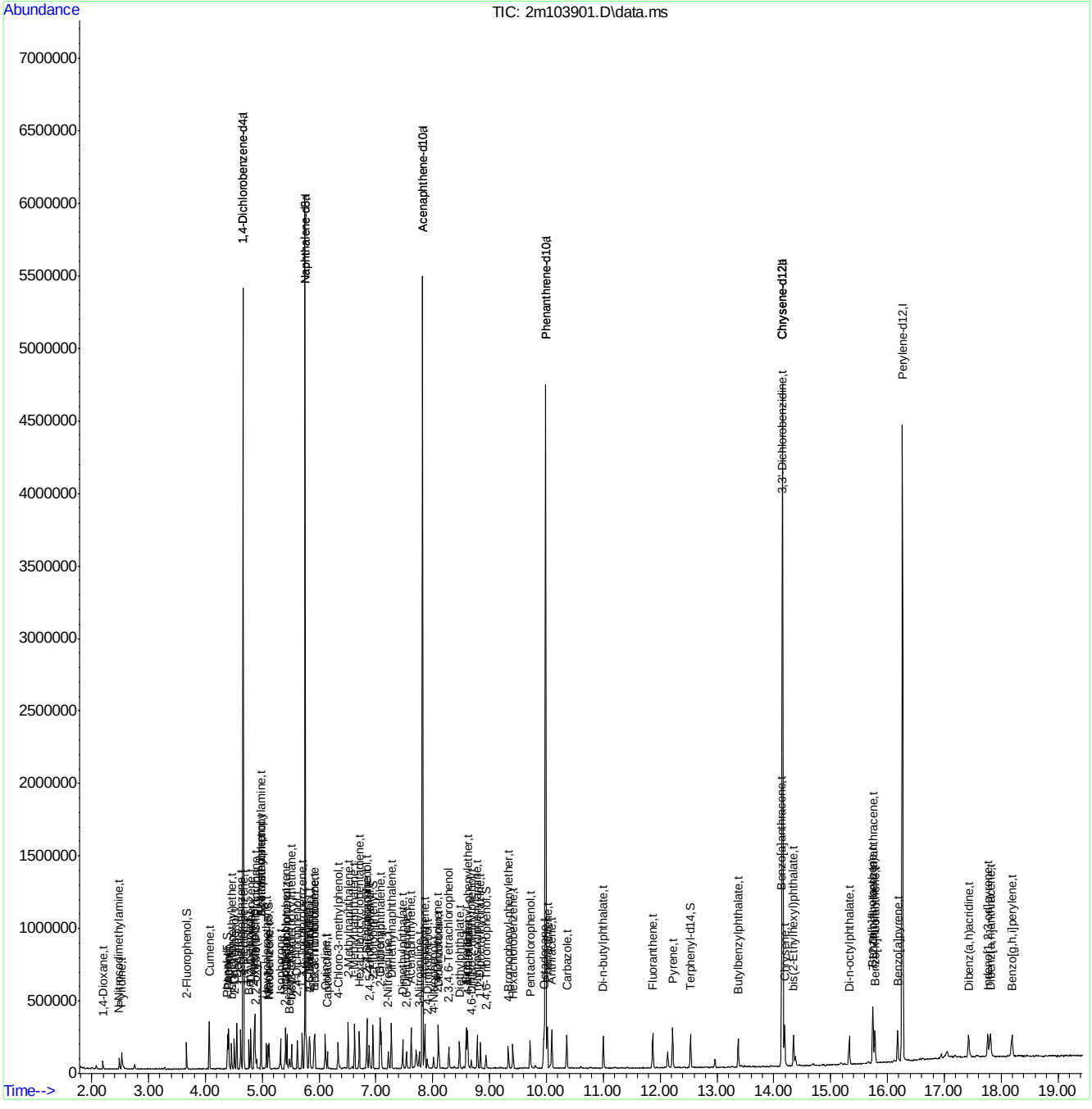
9.6.7

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103901.D
Acq On : 9 May 2018 2:29 pm
Operator : christc2
Sample : ic4618-2
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 11 10:32:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:31:33 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103902.D
Acq On : 9 May 2018 2:55 pm
Operator : christc2
Sample : ic4618-1
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 11 10:32:43 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:32:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.664	152	642368	40.00	ppm	0.00
24) Naphthalene-d8	5.755	136	2422851	40.00	ppm	0.00
47) Acenaphthene-d10	7.820	164	1279587	40.00	ppm	0.00
69) Phenanthrene-d10	9.981	188	2173273	40.00	ppm	0.00
83) Chrysene-d12	14.153	240	2007505	40.00	ppm	-0.01
91) Perylene-d12	16.265	264	2058543	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.664	152	642368	40.00	ppm	0.00
103) Acenaphthene-d10a	7.820	164	1279587	40.00	ppm	0.00
105) Chrysene-d12a	14.153	240	2007505	40.00	ppm	-0.01
108) Phenanthrene-d10a	9.981	188	2173273	40.00	ppm	0.00
112) Naphthalene-d8a	5.755	136	2422851	40.00	ppm	0.00
114) Chrysene-d12b	14.153	240	2007505	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.669	112	19932	0.95	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.90%	
8) Phenol-d5	4.391	99	26044	0.99	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.98%	
25) Nitrobenzene-d5	5.103	82	21646	0.97	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.94%	
51) 2-Fluorobiphenyl	6.948	172	47257	1.01	ppm	0.00
Spiked Amount 50.000			Recovery	=	2.02%	
73) 2,4,6-Tribromophenol	8.938	330	6609	1.01	ppm	0.00
Spiked Amount 50.000			Recovery	=	2.02%	
85) Terphenyl-d14	12.537	244	43236	0.97	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.94%	
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.198	88	10229	1.06	ppm	97
3) Pyridine	2.535	79	25294	1.01	ppm	96
4) N-Nitrosodimethylamine	2.487	74	14987	1.02	ppm	95
6) Indene	4.867	116	35675	1.00	ppm	94
7) Cumene	4.070	105	55372	1.04	ppm	99
9) Phenol	4.397	94	30141	1.00	ppm	98
10) Aniline	4.413	93	35739	1.08	ppm	98
11) bis(2-Chloroethyl)ether	4.461	93	21555	1.04	ppm	95
12) 2-Chlorophenol	4.509	128	21769	0.96	ppm	90
13) Decane	4.552	43	25485	1.10	ppm	87
14) 1,3-Dichlorobenzene	4.621	146	26027	1.02	ppm	98
15) 1,4-Dichlorobenzene	4.680	146	26563	1.03	ppm	95
16) Benzyl alcohol	4.771	108	14890	1.07	ppm	79
17) 1,2-Dichlorobenzene	4.798	146	26079	1.09	ppm	95
18) Acetophenone	4.980	105	30086	1.00	ppm	91
19) 2-Methylphenol	4.857	108	19608	0.99	ppm	94
20) 2,2'-oxybis(1-Chloropr...	4.878	45	27065	1.07	ppm	96
21) 3&4-Methylphenol	4.980	108	19806	0.95	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103902.D
Acq On : 9 May 2018 2:55 pm
Operator : christc2
Sample : ic4618-1
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 11 10:32:43 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:32:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	4.980	70	16567	1.04	ppm		91
23) Hexachloroethane	5.076	201	8594	1.04	ppm		87
26) Nitrobenzene	5.119	77	22059	0.99	ppm		98
27) Quinoline	6.114	129	41279	1.00	ppm		96
28) Isophorone	5.327	82	39922	1.03	ppm		99
29) 2-Nitrophenol	5.397	139	11358	0.96	ppm		98
30) 2,4-Dimethylphenol	5.434	107	18335	0.97	ppm		98
31) Benzoic acid	5.472	105	8529	0.61	ppm		92
32) bis(2-Chloroethoxy)met...	5.520	93	23075	1.02	ppm		97
33) 2,4-Dichlorophenol	5.616	162	17736	1.00	ppm		97
34) 2,6-Dichlorophenol	5.836	162	17804	1.03	ppm		94
35) 1,3,5-Trichlorobenzene	5.413	180	21856	1.04	ppm		94
36) 1,2,4-Trichlorobenzene	5.702	180	20733	1.07	ppm		95
37) 1,2,3-Trichlorobenzene	5.921	180	21183	1.10	ppm		98
38) Naphthalene	5.777	128	65473	1.05	ppm		98
39) 4-Chloroaniline	5.825	127	26930	1.01	ppm		94
40) 2,3-Dichloroaniline	6.841	161	21769	0.98	ppm		97
41) Caprolactam	6.140	55	8783	0.97	ppm		94
42) Hexachlorobutadiene	5.910	225	10366	1.02	ppm		98
43) 4-Chloro-3-methylphenol	6.333	107	16229	0.95	ppm		92
44) 2-Methylnaphthalene	6.509	141	37669	1.04	ppm		95
45) 1-Methylnaphthalene	6.622	141	38138	1.00	ppm		96
46) Dimethylnaphthalene	7.269	156	39680	1.02	ppm		95
48) Hexachlorocyclopentadiene	6.707	237	17464	1.58	ppm		98
49) 2,4,6-Trichlorophenol	6.841	196	12402	0.99	ppm		87
50) 2,4,5-Trichlorophenol	6.884	196	12978	0.98	ppm		84
52) 2-Chloronaphthalene	7.087	162	40468	1.03	ppm		97
53) Biphenyl	7.071	154	52439	0.99	ppm		99
54) 2-Nitroaniline	7.215	65	10478	0.97	ppm		92
55) Dimethylphthalate	7.472	163	44270	1.04	ppm		98
56) Acenaphthylene	7.622	152	63285	1.01	ppm		98
57) 2,6-Dinitrotoluene	7.542	165	8508	0.89	ppm		94
58) 3-Nitroaniline	7.756	138	10177	0.92	ppm		94
59) Acenaphthene	7.863	153	41781	1.02	ppm		94
60) 2,4-Dinitrophenol	7.905	184	4404	0.98	ppm	#	43
61) 4-Nitrophenol	8.012	109	3946	0.82	ppm	#	70
62) Dibenzofuran	8.098	168	55233	1.00	ppm		94
63) 2,4-Dinitrotoluene	8.093	165	10591	0.82	ppm		95
64) 2,3,4,6-Tetrachlorophenol	8.285	232	10148	0.93	ppm		92
65) Diethylphthalate	8.472	149	41605	0.99	ppm		99
66) Fluorene	8.590	166	43722	0.97	ppm		92
67) 4-Chlorophenyl-phenyle...	8.611	204	21035	1.03	ppm		97
68) 4-Nitroaniline	8.617	138	9779	0.88	ppm		93
70) 4,6-Dinitro-2-methylph...	8.681	198	4506	0.67	ppm		93
71) n-Nitrosodiphenylamine	8.783	169	31082	0.98	ppm		94
72) 1,2-Diphenylhydrazine	8.836	77	42473	1.01	ppm		93
74) 4-Bromophenyl-phenylether	9.328	248	12263	1.03	ppm		94
75) Hexachlorobenzene	9.414	284	14915	1.10	ppm		89
76) Pentachlorophenol	9.713	266	13208	1.56	ppm		92
77) Phenanthrene	10.018	178	64379	1.04	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103902.D
Acq On : 9 May 2018 2:55 pm
Operator : christc2
Sample : ic4618-1
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 11 10:32:43 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:32:11 2018
Response via : Initial Calibration

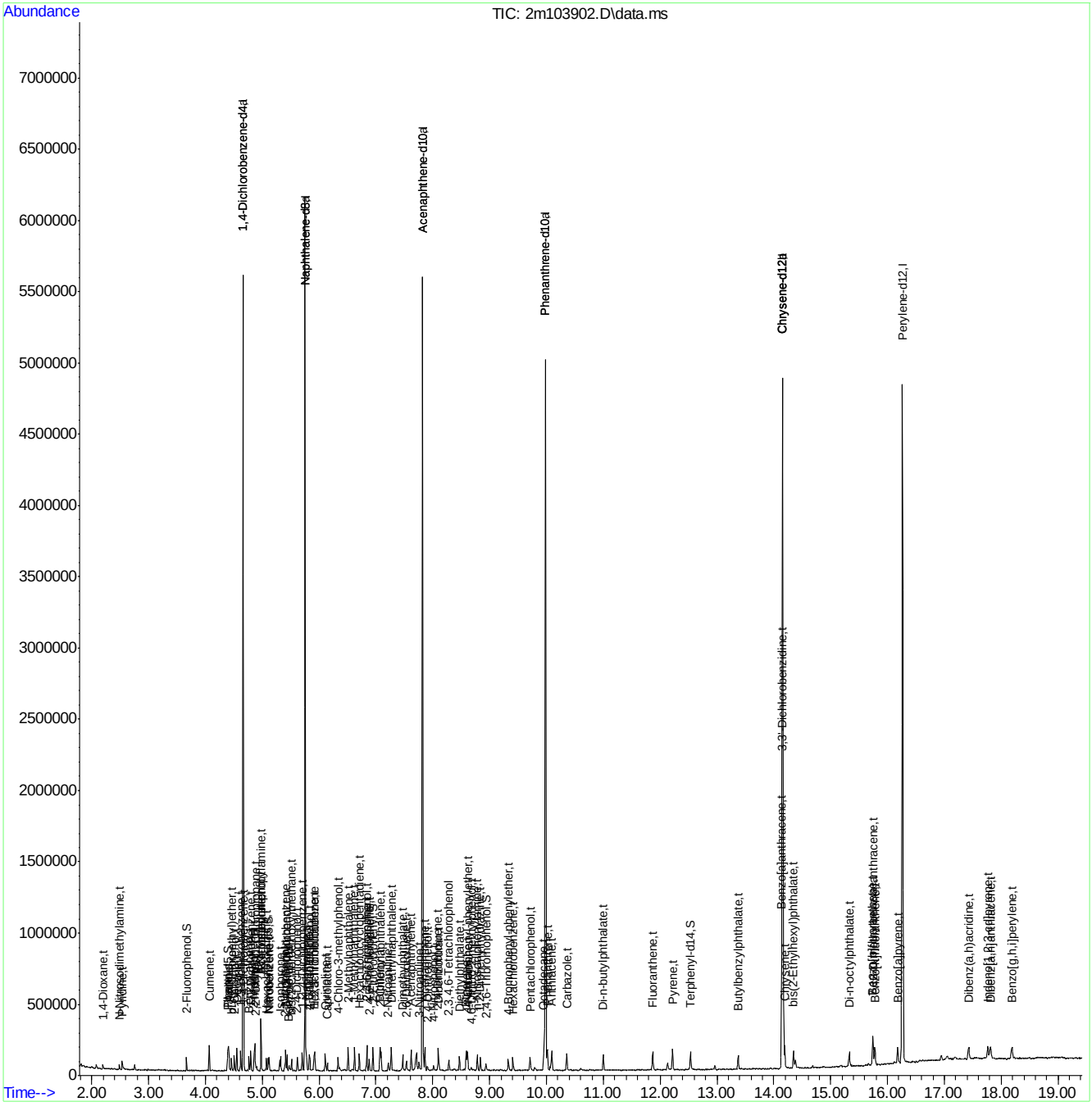
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Anthracene	10.093	178	61898	0.99	ppm	95
79)	Carbazole	10.360	167	57594	0.99	ppm	99
80)	Di-n-butylphthalate	11.002	149	68655	0.96	ppm	99
81)	Fluoranthene	11.869	202	63355	1.00	ppm	96
82)	Octadecane	9.949	57	27729	0.98	ppm	91
84)	Pyrene	12.216	202	66126	0.97	ppm	97
86)	Butylbenzylphthalate	13.372	149	30687	0.99	ppm	97
87)	Benzo[a]anthracene	14.137	228	67094	1.12	ppm	95
88)	3,3'-Dichlorobenzidine	14.142	252	20156	0.90	ppm	92
89)	Chrysene	14.190	228	59612	1.03	ppm	99
90)	bis(2-Ethylhexyl)phtha...	14.345	149	41567	0.97	ppm	97
92)	Di-n-octylphthalate	15.329	149	71860	0.96	ppm	98
93)	Benzo[b]fluoranthene	15.736	252	60230	0.95	ppm	96
94)	Benzo[k]fluoranthene	15.779	252	60009	1.02	ppm	96
95)	Benzo[a]pyrene	16.180	252	52193	0.95	ppm	99
96)	Indeno[1,2,3-cd]pyrene	17.768	276	54385	1.00	ppm	94
97)	Dibenz(a,h)acridine	17.431	279	47831	0.97	ppm	98
98)	Dibenz[a,h]anthracene	17.811	278	54668	0.97	ppm	96
99)	7,12-Dimethylbenz(a)an...	15.747	256	26600	0.96	ppm	98
100)	Benzo[g,h,i]perylene	18.191	276	51081	0.97	ppm	94

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4618\
Data File : 2m103902.D
Acq On : 9 May 2018 2:55 pm
Operator : christc2
Sample : ic4618-1
Misc : op10486,e2m4618,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 11 10:32:43 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 10:32:11 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4619\
Data File : 2m103912.D
Acq On : 9 May 2018 10:23 pm
Operator : sufiyana
Sample : icv4618-50
Misc : op10486,e2m4619,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 11 12:53:54 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 12:53:20 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.664	152	839528	40.00	ppm	0.00
24) Naphthalene-d8	5.756	136	3083293	40.00	ppm	0.00
47) Acenaphthene-d10	7.820	164	1662009	40.00	ppm	0.00
69) Phenanthrene-d10	9.981	188	2603252	40.00	ppm	0.00
83) Chrysene-d12	14.153	240	2203261	40.00	ppm	-0.01
91) Perylene-d12	16.260	264	1974540	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.664	152	839528	40.00	ppm	0.00
103) Acenaphthene-d10a	7.820	164	1662009	40.00	ppm	0.00
105) Chrysene-d12a	14.153	240	2203261	40.00	ppm	0.00
108) Phenanthrene-d10a	9.981	188	2603252	40.00	ppm	0.00
112) Naphthalene-d8a	5.756	136	3083293	40.00	ppm	0.00
114) Chrysene-d12b	14.153	240	2203261	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.675	112	1347948	49.27	ppm	0.00
Spiked Amount 50.000			Recovery	=	98.54%	
8) Phenol-d5	4.392	99	1640787	47.81	ppm	0.00
Spiked Amount 50.000			Recovery	=	95.62%	
25) Nitrobenzene-d5	5.103	82	1427550	50.66	ppm	0.00
Spiked Amount 50.000			Recovery	=	101.32%	
51) 2-Fluorobiphenyl	6.948	172	2834955	46.69	ppm	0.00
Spiked Amount 50.000			Recovery	=	93.38%	
73) 2,4,6-Tribromophenol	8.938	330	383129	48.65	ppm	0.00
Spiked Amount 50.000			Recovery	=	97.30%	
85) Terphenyl-d14	12.538	244	2674263	55.35	ppm	0.00
Spiked Amount 50.000			Recovery	=	110.70%	
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	

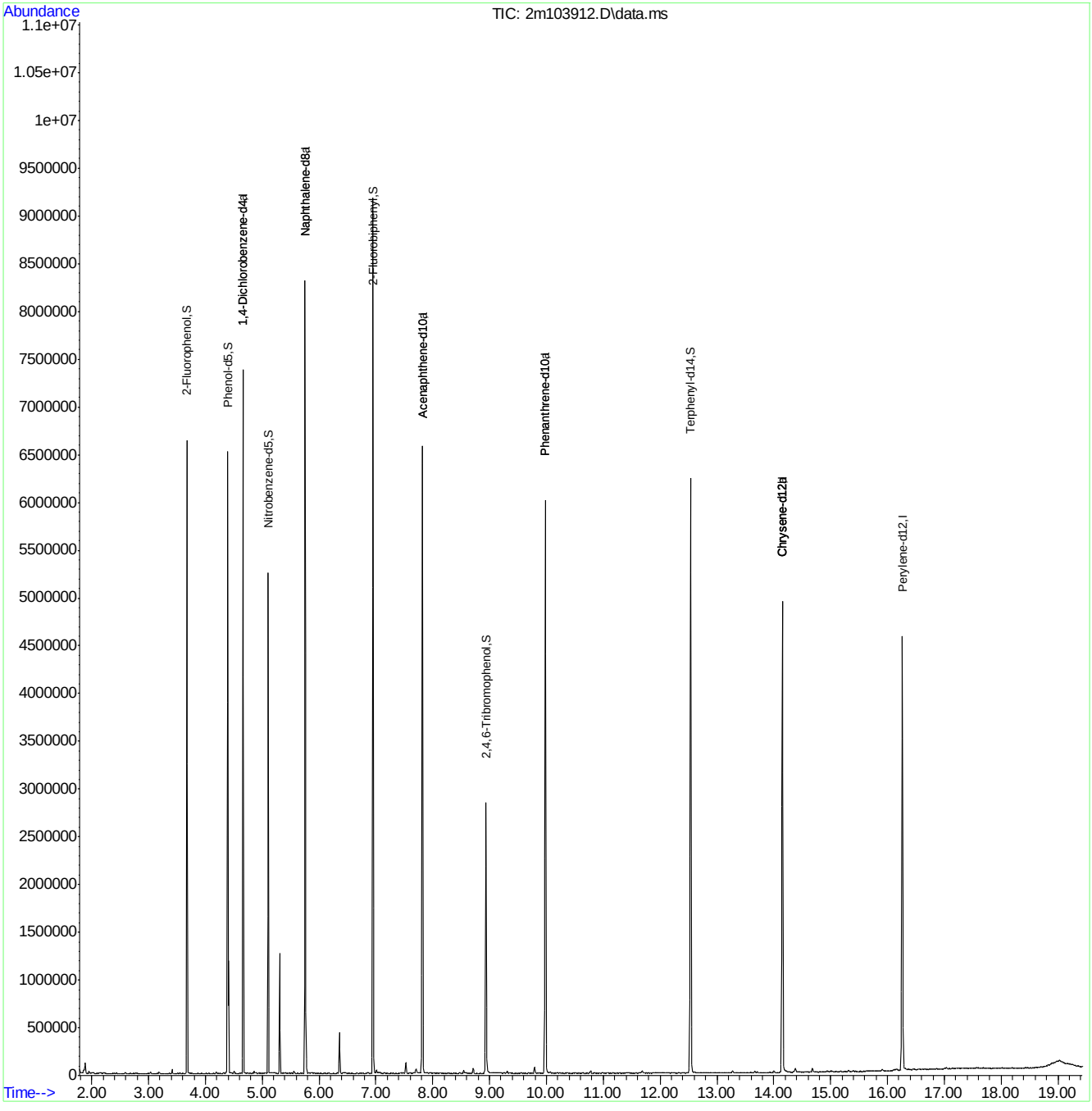
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4619\
Data File : 2m103912.D
Acq On : 9 May 2018 10:23 pm
Operator : sufiyana
Sample : icv4618-50
Misc : op10486,e2m4619,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 11 12:53:54 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 12:53:20 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4619\
Data File : 2m103913.D
Acq On : 9 May 2018 10:48 pm
Operator : sufiyana
Sample : icv4618-50
Misc : op10486,e2m4619,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 11 12:55:07 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 12:53:20 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.664	152	824310	40.00	ppm	0.00
24) Naphthalene-d8	5.756	136	3049556	40.00	ppm	0.00
47) Acenaphthene-d10	7.820	164	1474229	40.00	ppm	0.00
69) Phenanthrene-d10	9.981	188	2540678	40.00	ppm	0.00
83) Chrysene-d12	14.153	240	2011894	40.00	ppm	-0.01
91) Perylene-d12	16.260	264	1903893	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.664	152	824310	40.00	ppm	0.00
103) Acenaphthene-d10a	7.820	164	1474229	40.00	ppm	0.00
105) Chrysene-d12a	14.153	240	2011894	40.00	ppm	0.00
108) Phenanthrene-d10a	9.981	188	2540678	40.00	ppm	0.00
112) Naphthalene-d8a	5.756	136	3049556	40.00	ppm	0.00
114) Chrysene-d12b	14.153	240	2011894	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	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%	
107) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
9) Phenol	4.402	94	1727402	44.65	ppm	95
12) 2-Chlorophenol	4.509	128	1449616	49.93	ppm	97
19) 2-Methylphenol	4.862	108	1209545	47.66	ppm	96
21) 3&4-Methylphenol	4.980	108	1294652	48.58	ppm	99
29) 2-Nitrophenol	5.397	139	741696	50.01	ppm	97
30) 2,4-Dimethylphenol	5.435	107	1141325	48.04	ppm	99
31) Benzoic acid	5.547	105	871059	48.37	ppm	97
33) 2,4-Dichlorophenol	5.617	162	1105347	49.70	ppm	99
34) 2,6-Dichlorophenol	5.836	162	1096649	50.38	ppm	99
43) 4-Chloro-3-methylphenol	6.333	107	1052418	49.19	ppm	99
49) 2,4,6-Trichlorophenol	6.847	196	772240	53.62	ppm	98
50) 2,4,5-Trichlorophenol	6.884	196	804419	53.14	ppm	96
60) 2,4-Dinitrophenol	7.906	184	275315	45.97	ppm	98
61) 4-Nitrophenol	8.018	109	274296	49.91	ppm	99
64) 2,3,4,6-Tetrachlorophenol	8.286	232	637435	50.98	ppm	99
70) 4,6-Dinitro-2-methylph...	8.681	198	430031	48.08	ppm	99
76) Pentachlorophenol	9.714	266	568936	58.53	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4619\
Data File : 2m103913.D
Acq On : 9 May 2018 10:48 pm
Operator : sufiyana
Sample : icv4618-50
Misc : op10486,e2m4619,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 11 12:55:07 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 12:53:20 2018
Response via : Initial Calibration

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

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

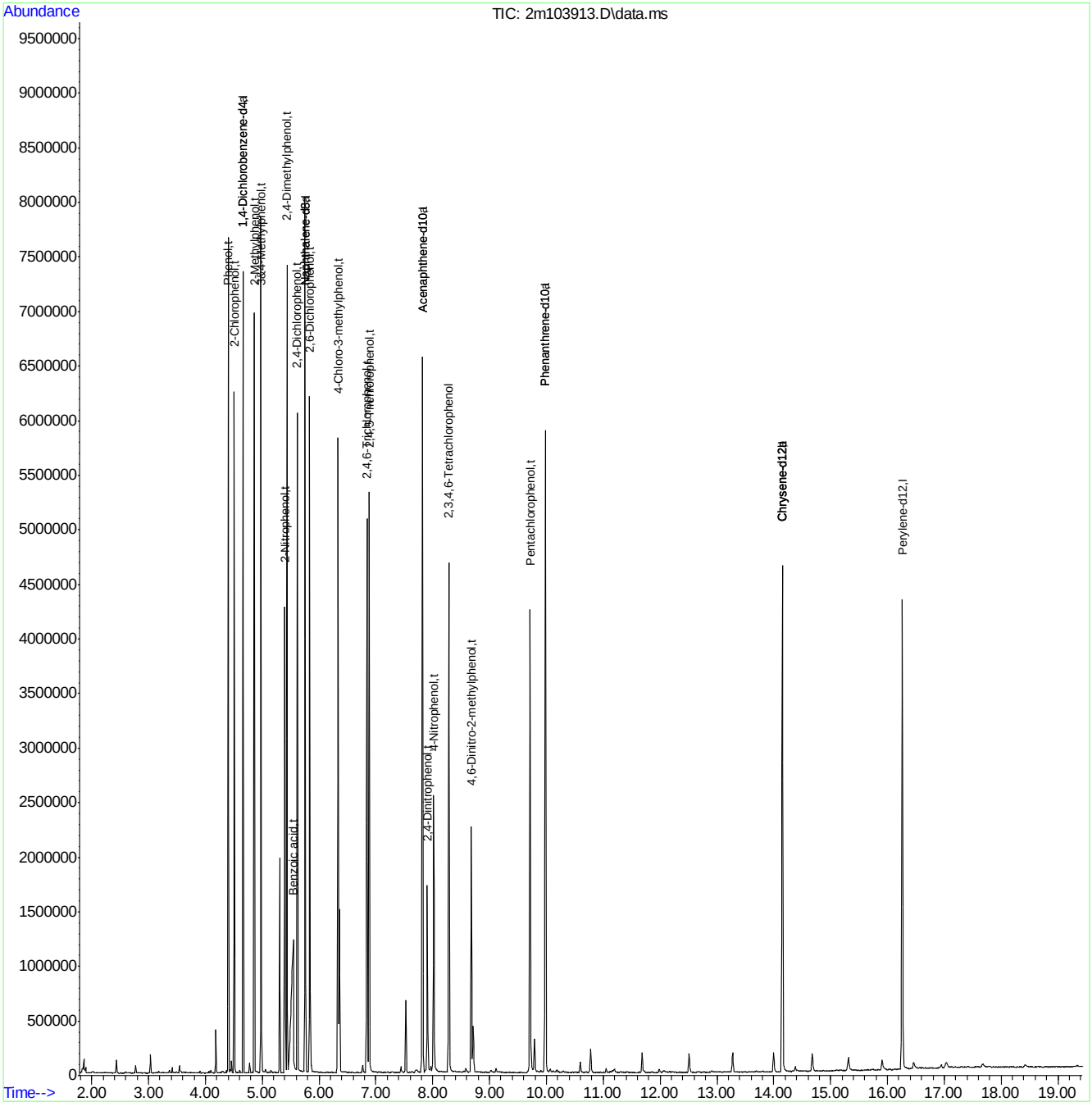
9.6.10

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4619\
Data File : 2m103913.D
Acq On : 9 May 2018 10:48 pm
Operator : sufiyana
Sample : icv4618-50
Misc : op10486,e2m4619,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 11 12:55:07 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 12:53:20 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4619\
Data File : 2m103915.D
Acq On : 9 May 2018 11:38 pm
Operator : sufiyana
Sample : icv4618-50
Misc : op10486,e2m4619,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 11 15:05:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 12:53:20 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.664	152	843088	40.00	ppm	0.00
24) Naphthalene-d8	5.755	136	3140937	40.00	ppm	0.00
47) Acenaphthene-d10	7.820	164	1632552	40.00	ppm	0.00
69) Phenanthrene-d10	9.981	188	2659263	40.00	ppm	0.00
83) Chrysene-d12	14.158	240	2210730	40.00	ppm	0.00
91) Perylene-d12	16.266	264	2078936	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.664	152	843088	40.00	ppm	0.00
103) Acenaphthene-d10a	7.820	164	1632552	40.00	ppm	0.00
105) Chrysene-d12a	14.158	240	2210730	40.00	ppm	0.00
108) Phenanthrene-d10a	9.981	188	2659263	40.00	ppm	0.00
112) Naphthalene-d8a	5.755	136	3140937	40.00	ppm	0.00
114) Chrysene-d12b	14.158	240	2210730	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
110) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
4) N-Nitrosodimethylamine	2.498	74	774592	39.91	ppm	99
11) bis(2-Chloroethyl)ether	4.461	93	1381962	50.53	ppm	97
14) 1,3-Dichlorobenzene	4.627	146	1599506	47.80	ppm	99
15) 1,4-Dichlorobenzene	4.680	146	1615046	47.66	ppm	99
17) 1,2-Dichlorobenzene	4.798	146	1523497	48.14	ppm	100
20) 2,2'-oxybis(1-Chloropr...	4.878	45	1735538	52.34	ppm	99
22) n-Nitroso-di-n-propyla...	4.980	70	964560	45.87	ppm	97
23) Hexachloroethane	5.076	201	519234	47.70	ppm	94
26) Nitrobenzene	5.124	77	1322024	46.17	ppm	94
28) Isophorone	5.322	82	2444158	48.40	ppm	96
32) bis(2-Chloroethoxy)met...	5.520	93	1489300	51.00	ppm	100
36) 1,2,4-Trichlorobenzene	5.702	180	1222208	48.51	ppm	99
38) Naphthalene	5.777	128	3943385	48.49	ppm	99
42) Hexachlorobutadiene	5.911	225	661667	50.30	ppm	98
48) Hexachlorocyclopentadiene	6.708	237	653840	47.12	ppm	97
52) 2-Chloronaphthalene	7.087	162	2379956	47.60	ppm	100
55) Dimethylphthalate	7.478	163	2568499	47.36	ppm	99
56) Acenaphthylene	7.622	152	3735676	46.81	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4619\
Data File : 2m103915.D
Acq On : 9 May 2018 11:38 pm
Operator : sufiyana
Sample : icv4618-50
Misc : op10486,e2m4619,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 11 15:05:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 12:53:20 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
57) 2,6-Dinitrotoluene	7.547	165	560310	46.23	ppm	94
59) Acenaphthene	7.863	153	2508702	47.91	ppm	99
63) 2,4-Dinitrotoluene	8.098	165	690759	42.69	ppm	79
65) Diethylphthalate	8.473	149	2537300	47.27	ppm	100
66) Fluorene	8.590	166	2693245	47.20	ppm	100
67) 4-Chlorophenyl-phenyle...	8.612	204	1211873	46.73	ppm	98
71) n-Nitrosodiphenylamine	8.788	169	1809510	46.60	ppm	100
72) 1,2-Diphenylhydrazine	8.842	77	2577023	50.10	ppm	99
74) 4-Bromophenyl-phenylether	9.334	248	713786	48.74	ppm	95
75) Hexachlorobenzene	9.414	284	800205	47.82	ppm	97
77) Phenanthrene	10.018	178	3668448	48.35	ppm	99
78) Anthracene	10.099	178	3648114	47.86	ppm	100
80) Di-n-butylphthalate	11.002	149	4219402	48.49	ppm	100
81) Fluoranthene	11.874	202	3627987	46.60	ppm	99
84) Pyrene	12.222	202	3690936	49.99	ppm	100
86) Butylbenzylphthalate	13.377	149	1698474	49.79	ppm	98
87) Benzo[a]anthracene	14.142	228	3100185	46.34	ppm	99
89) Chrysene	14.201	228	2950769	46.42	ppm	99
90) bis(2-Ethylhexyl)phtha...	14.345	149	2330244	49.55	ppm	99
92) Di-n-octylphthalate	15.330	149	3916269	52.16	ppm	99
93) Benzo[b]fluoranthene	15.747	252	2865944	45.04	ppm	98
94) Benzo[k]fluoranthene	15.784	252	2894361	48.99	ppm	99
95) Benzo[a]pyrene	16.185	252	2662140	48.26	ppm	100
96) Indeno[1,2,3-cd]pyrene	17.779	276	2614473	47.62	ppm	100
98) Dibenz[a,h]anthracene	17.822	278	2624273	46.51	ppm	98
100) Benzo[g,h,i]perylene	18.207	276	2666671	50.41	ppm	99

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

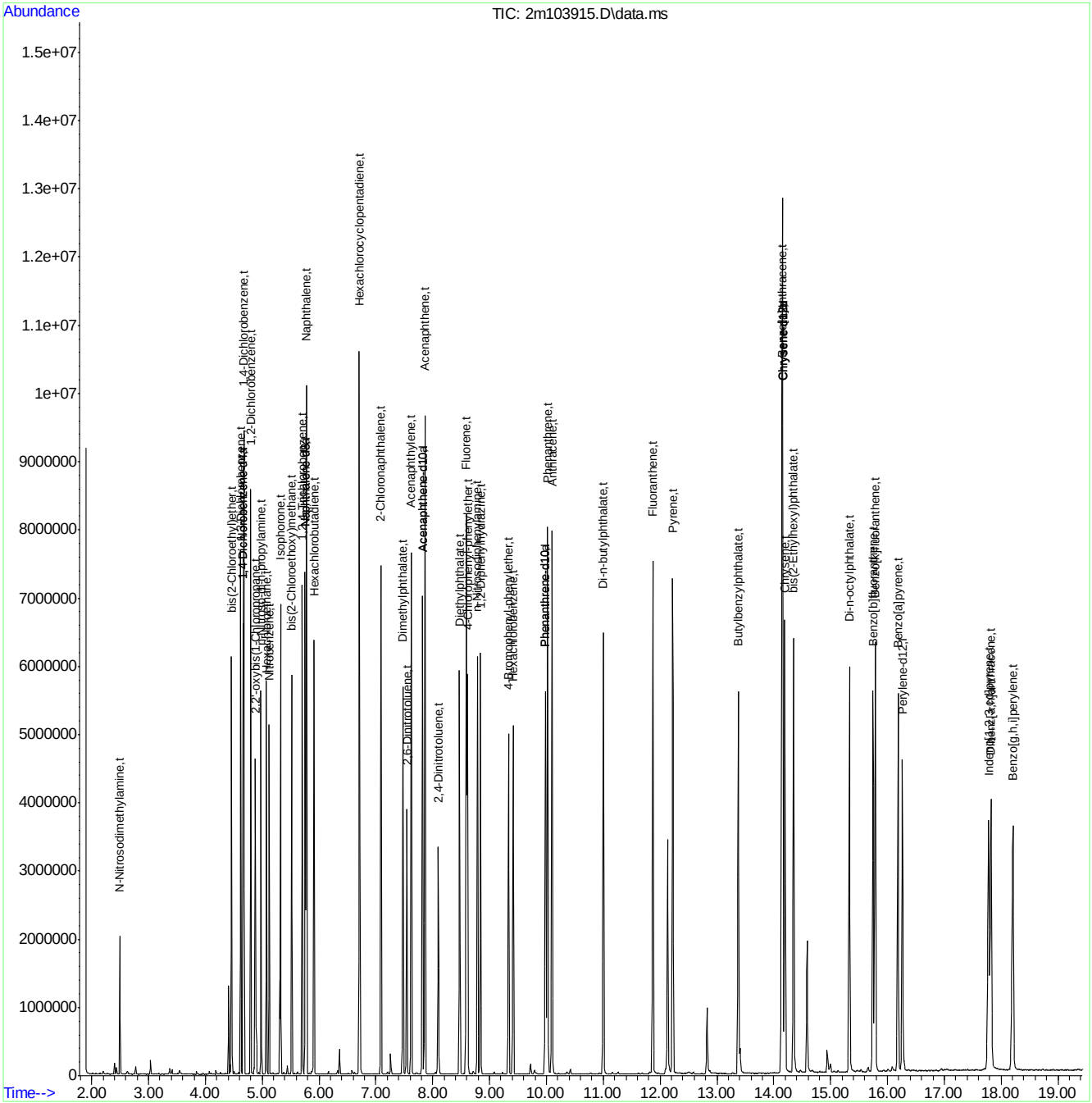
9.6.11

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4619\
Data File : 2m103915.D
Acq On : 9 May 2018 11:38 pm
Operator : sufiyana
Sample : icv4618-50
Misc : op10486,e2m4619,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 11 15:05:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 12:53:20 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4619\
Data File : 2m103916.D
Acq On : 10 May 2018 12:04 am
Operator : sufiyana
Sample : icv4618-50
Misc : op10486,e2m4619,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 11 15:15:56 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 12:53:20 2018
Response via : Initial Calibration

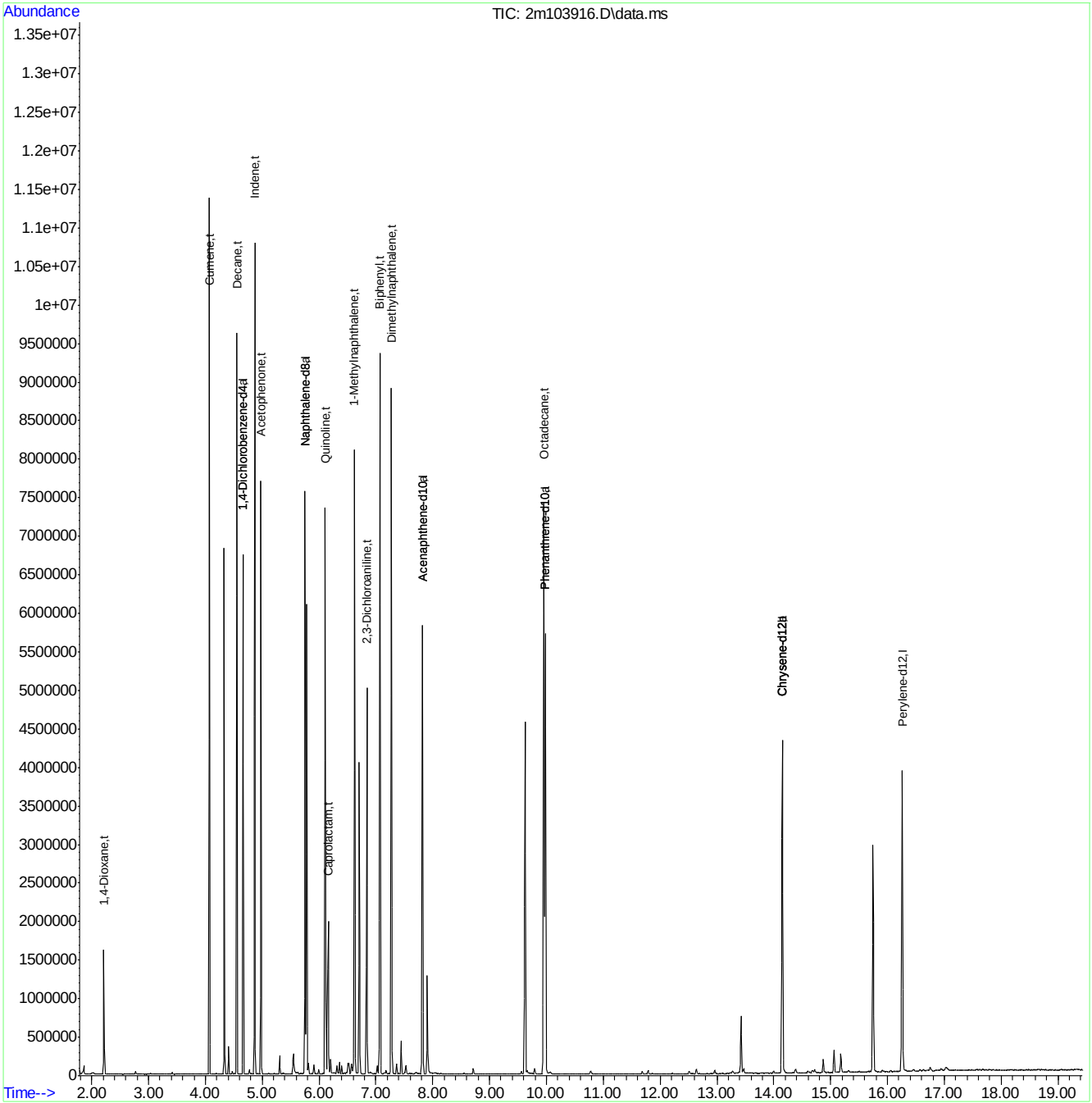
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.664	152	765442	40.00	ppm	0.00
24) Naphthalene-d8	5.755	136	2898166	40.00	ppm	0.00
47) Acenaphthene-d10	7.820	164	1384003	40.00	ppm	0.00
69) Phenanthrene-d10	9.981	188	2419596	40.00	ppm	0.00
83) Chrysene-d12	14.147	240	1952527	40.00	ppm	-0.02
91) Perylene-d12	16.260	264	1751292	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.664	152	765442	40.00	ppm	0.00
103) Acenaphthene-d10a	7.820	164	1384003	40.00	ppm	0.00
105) Chrysene-d12a	14.147	240	1952527	40.00	ppm	0.00
108) Phenanthrene-d10a	9.981	188	2419596	40.00	ppm	0.00
112) Naphthalene-d8a	5.755	136	2898166	40.00	ppm	0.00
114) Chrysene-d12b	14.147	240	1952527	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
110) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.215	88	521910	45.08	ppm	97
6) Indene	4.868	116	2265853	53.11	ppm	99
7) Cumene	4.071	105	3007897	47.37	ppm	99
13) Decane	4.552	43	1276110	45.98	ppm	99
18) Acetophenone	4.980	105	1672087	46.89	ppm	81
27) Quinoline	6.108	129	2389773	48.54	ppm	99
40) 2,3-Dichloroaniline	6.841	161	1098694	41.56	ppm	98
41) Caprolactam	6.162	55	469955	43.29	ppm	95
45) 1-Methylnaphthalene	6.622	141	2021258	44.36	ppm	99
46) Dimethylnaphthalene	7.269	156	2185139	46.81	ppm	99
53) Biphenyl	7.071	154	2976786	52.28	ppm	100
82) Octadecane	9.954	57	1584191	50.43	ppm	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4619\
Data File : 2m103916.D
Acq On : 10 May 2018 12:04 am
Operator : sufiyana
Sample : icv4618-50
Misc : op10486,e2m4619,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 11 15:15:56 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 12:53:20 2018
Response via : Initial Calibration



M2M4618.M Fri May 11 15:15:59 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4619\
Data File : 2m103917.D
Acq On : 10 May 2018 12:29 am
Operator : sufiyana
Sample : icv4618-50
Misc : op10486,e2m4619,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 11 13:03:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 12:53:20 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.664	152	678152	40.00	ppm	0.00
24) Naphthalene-d8	5.756	136	2545260	40.00	ppm	0.00
47) Acenaphthene-d10	7.815	164	1351935	40.00	ppm	0.00
69) Phenanthrene-d10	9.981	188	2312994	40.00	ppm	0.00
83) Chrysene-d12	14.153	240	2155858	40.00	ppm	-0.01
91) Perylene-d12	16.260	264	2165751	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4a	4.664	152	678152	40.00	ppm	0.00
103) Acenaphthene-d10a	7.815	164	1351935	40.00	ppm	0.00
105) Chrysene-d12a	14.153	240	2155858	40.00	ppm	0.00
108) Phenanthrene-d10a	9.981	188	2312994	40.00	ppm	0.00
112) Naphthalene-d8a	5.756	136	2545260	40.00	ppm	0.00
114) Chrysene-d12b	14.153	240	2155858	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%	
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
88) 3,3'-Dichlorobenzidine	14.148	252	1204122	50.90	ppm	98

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

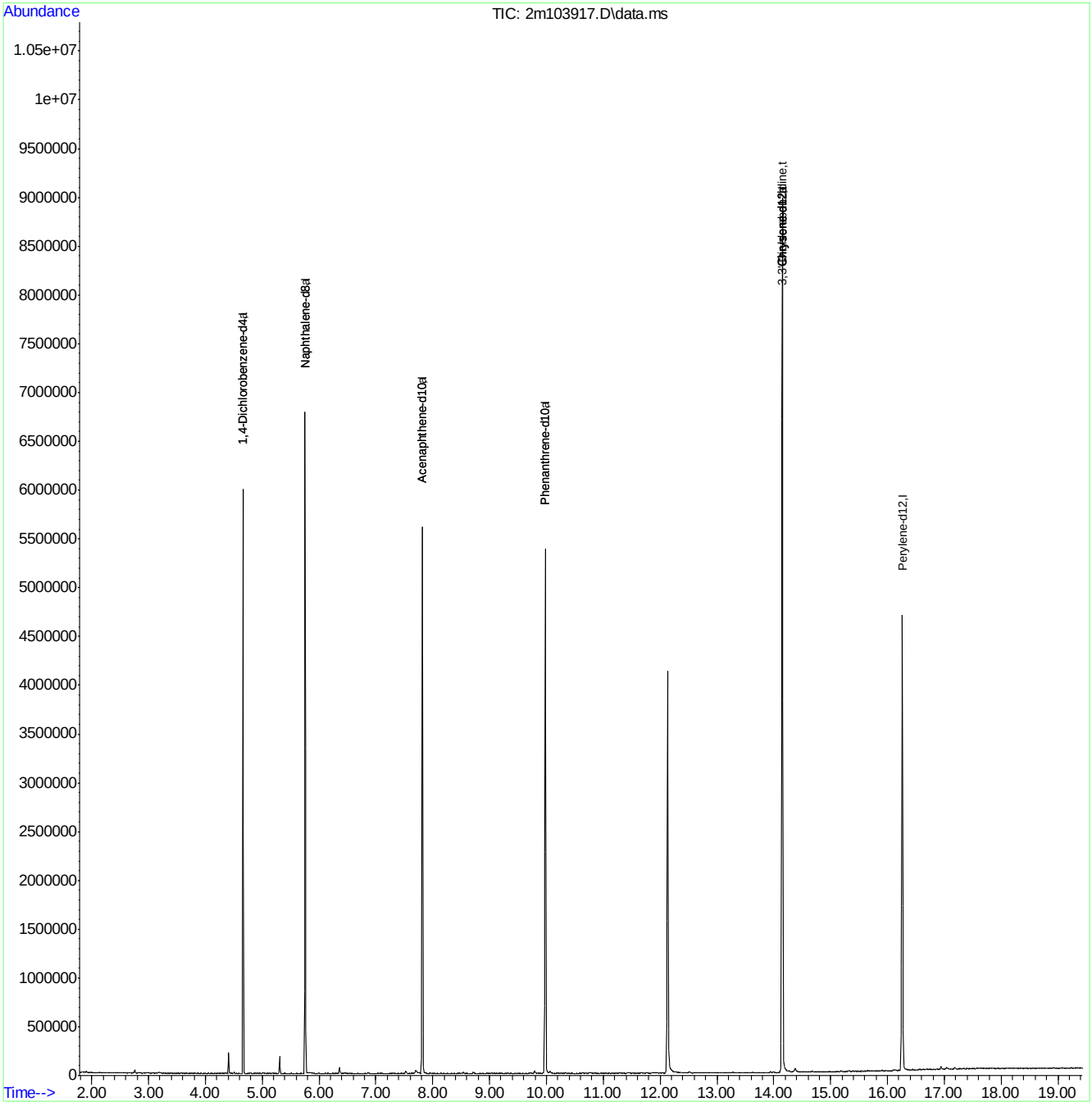
9.6.13

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4619\
Data File : 2m103917.D
Acq On : 10 May 2018 12:29 am
Operator : sufiyana
Sample : icv4618-50
Misc : op10486,e2m4619,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 11 13:03:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 12:53:20 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4620\
Data File : 2m103921.D
Acq On : 11 May 2018 1:55 pm
Operator : christc2
Sample : icv4618-50
Misc : op10486,e2m4620,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 15:18:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 12:53:20 2018
Response via : Initial Calibration

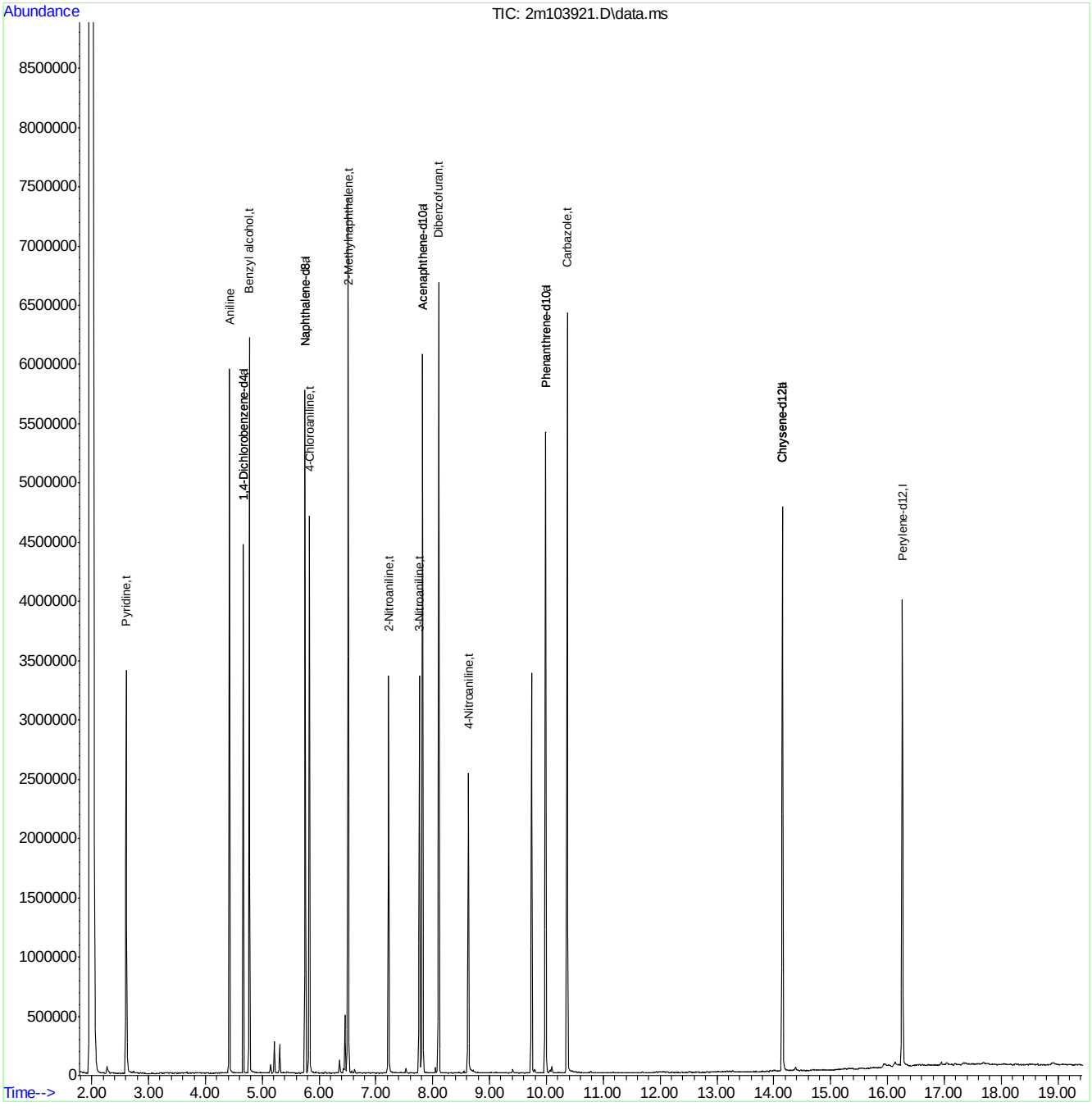
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.670	152	671030	40.00	ppm	0.00
24) Naphthalene-d8	5.756	136	2684707	40.00	ppm	0.00
47) Acenaphthene-d10	7.820	164	1443008	40.00	ppm	0.00
69) Phenanthrene-d10	9.986	188	2447872	40.00	ppm	0.00
83) Chrysene-d12	14.153	240	2007549	40.00	ppm	-0.01
91) Perylene-d12	16.266	264	1888767	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.670	152	671030	40.00	ppm	0.00
103) Acenaphthene-d10a	7.820	164	1443008	40.00	ppm	0.00
105) Chrysene-d12a	14.153	240	2007549	40.00	ppm	0.00
108) Phenanthrene-d10a	9.986	188	2447872	40.00	ppm	0.00
112) Naphthalene-d8a	5.756	136	2684707	40.00	ppm	0.00
114) Chrysene-d12b	14.153	240	2007549	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%			
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
110) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
3) Pyridine	2.605	79	1274913	48.96	ppm	100
10) Aniline	4.424	93	1845840	53.40	ppm	99
16) Benzyl alcohol	4.777	108	788029	53.68	ppm	93
39) 4-Chloroaniline	5.830	127	1365958	46.19	ppm	98
44) 2-Methylnaphthalene	6.515	141	1962911	48.49	ppm	99
54) 2-Nitroaniline	7.221	65	582342	47.73	ppm	97
58) 3-Nitroaniline	7.767	138	616911	49.56	ppm	100
62) Dibenzofuran	8.104	168	3064178	49.23	ppm	99
68) 4-Nitroaniline	8.628	138	560187	45.28	ppm	98
79) Carbazole	10.366	167	3153308	48.12	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4620\
Data File : 2m103921.D
Acq On : 11 May 2018 1:55 pm
Operator : christc2
Sample : icv4618-50
Misc : op10486,e2m4620,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 11 15:18:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Fri May 11 12:53:20 2018
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
06/05/18 17:05

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4654\
Data File : 2m104765.D
Acq On : 5 Jun 2018 12:10 pm
Operator : christc2
Sample : cc4618-50
Misc : op10486,e2m4654,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 05 13:40:11 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Mon Jun 04 09:10:13 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.498	152	370846	40.00	ppm	-0.03
24) Naphthalene-d8	5.558	136	1452702	40.00	ppm	-0.03
47) Acenaphthene-d10	7.579	164	781753	40.00	ppm	-0.04
69) Phenanthrene-d10	9.729	188	1534474	40.00	ppm	-0.04
83) Chrysene-d12	13.896	240	1594208	40.00	ppm	-0.05
91) Perylene-d12	16.003	264	1579901	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4a	4.498	152	370846	40.00	ppm	-0.03
103) Acenaphthene-d10a	7.579	164	781753	40.00	ppm	-0.04
105) Chrysene-d12a	13.896	240	1594208	40.00	ppm	-0.05
108) Phenanthrene-d10a	9.729	188	1534474	40.00	ppm	-0.04
112) Naphthalene-d8a	5.558	136	1452702	40.00	ppm	-0.03
114) Chrysene-d12b	13.896	240	1594208	40.00	ppm	-0.05
System Monitoring Compounds						
5) 2-Fluorophenol	3.557	112	627380	51.92	ppm	-0.03
Spiked Amount 50.000				Recovery =	103.84%	
8) Phenol-d5	4.290	99	842182	55.55	ppm	-0.03
Spiked Amount 50.000				Recovery =	111.10%	
25) Nitrobenzene-d5	4.932	82	857873	64.61	ppm	-0.03
Spiked Amount 50.000				Recovery =	129.22%	
51) 2-Fluorobiphenyl	6.729	172	1601087	56.06	ppm	-0.03
Spiked Amount 50.000				Recovery =	112.12%	
73) 2,4,6-Tribromophenol	8.708	330	278524	60.00	ppm	-0.04
Spiked Amount 50.000				Recovery =	120.00%	
85) Terphenyl-d14	12.275	244	1751719	50.10	ppm	-0.05
Spiked Amount 50.000				Recovery =	100.20%	
107) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount 50.000				Recovery =	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.985	88	295179	52.62	ppm	96
3) Pyridine	2.327	79	734146	51.02	ppm	97
4) N-Nitrosodimethylamine	2.295	74	441812	51.75	ppm	84
6) Indene	4.691	116	1123895	54.38	ppm	96
7) Cumene	3.899	105	1793773	58.31	ppm	94
9) Phenol	4.301	94	895371	51.44	ppm	69
10) Aniline	4.263	93	869445	45.51	ppm	92
11) bis(2-Chloroethyl)ether	4.301	93	663381	55.14	ppm	77
12) 2-Chlorophenol	4.365	128	683373	52.32	ppm	92
13) Decane	4.381	43	675314	50.22	ppm	99
14) 1,3-Dichlorobenzene	4.456	146	787710	53.52	ppm	97
15) 1,4-Dichlorobenzene	4.509	146	793775	53.25	ppm	99
16) Benzyl alcohol	4.622	108	446099	54.98	ppm	92
17) 1,2-Dichlorobenzene	4.627	146	758133	54.46	ppm	99
18) Acetophenone	4.809	105	1044052	60.44	ppm	86
19) 2-Methylphenol	4.734	108	607500	53.21	ppm	92
20) 2,2'-oxybis(1-Chloropr...	4.707	45	709343	48.63	ppm	95
21) 3&4-Methylphenol	4.857	108	648878	54.12	ppm	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4654\
Data File : 2m104765.D
Acq On : 5 Jun 2018 12:10 pm
Operator : christc2
Sample : cc4618-50
Misc : op10486,e2m4654,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 05 13:40:11 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Mon Jun 04 09:10:13 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	4.814	70	571545	61.80	ppm		98
23) Hexachloroethane	4.889	201	300391	62.74	ppm		87
26) Nitrobenzene	4.948	77	832493	62.87	ppm		90
27) Quinoline	5.921	129	1327506	53.80	ppm		95
28) Isophorone	5.146	82	1460286	62.52	ppm		91
29) 2-Nitrophenol	5.215	139	387885	54.90	ppm		67
30) 2,4-Dimethylphenol	5.279	107	741015	65.48	ppm		85
31) Benzoic acid	5.424	105	606191	70.67	ppm		93
32) bis(2-Chloroethoxy)met...	5.333	93	725127	53.69	ppm		98
33) 2,4-Dichlorophenol	5.456	162	593891	56.06	ppm		97
34) 2,6-Dichlorophenol	5.654	162	587611	56.67	ppm		96
35) 1,3,5-Trichlorobenzene	5.226	180	700363	55.74	ppm		98
36) 1,2,4-Trichlorobenzene	5.509	180	648021	55.61	ppm		98
37) 1,2,3-Trichlorobenzene	5.723	180	644184	55.65	ppm		97
38) Naphthalene	5.579	128	1987412	52.84	ppm		99
39) 4-Chloroaniline	5.643	127	748863	46.80	ppm		90
40) 2,3-Dichloroaniline	6.633	161	732497	55.27	ppm		95
41) Caprolactam	5.996	55	320284	58.86	ppm		96
42) Hexachlorobutadiene	5.702	225	435875	71.64	ppm		98
43) 4-Chloro-3-methylphenol	6.189	107	675391	66.27	ppm		86
44) 2-Methylnaphthalene	6.296	141	1202059	54.88	ppm		92
45) 1-Methylnaphthalene	6.403	141	1262356	55.27	ppm		92
46) Dimethylnaphthalene	7.044	156	1291468	55.19	ppm		94
48) Hexachlorocyclopentadiene	6.478	237	821382	123.63	ppm		97
49) 2,4,6-Trichlorophenol	6.649	196	442497	57.94	ppm		99
50) 2,4,5-Trichlorophenol	6.713	196	476964	59.42	ppm		100
52) 2-Chloronaphthalene	6.868	162	1307317	54.61	ppm		96
53) Biphenyl	6.847	154	1767795	54.96	ppm		99
54) 2-Nitroaniline	7.018	65	492744	74.54	ppm		85
55) Dimethylphthalate	7.253	163	1563575	60.21	ppm		99
56) Acenaphthylene	7.392	152	2130333	55.75	ppm		100
57) 2,6-Dinitrotoluene	7.333	165	365286	62.94	ppm		90
58) 3-Nitroaniline	7.558	138	382527	56.72	ppm		80
59) Acenaphthene	7.622	153	1403862	55.99	ppm		98
60) 2,4-Dinitrophenol	7.718	184	373826	108.05	ppm		78
61) 4-Nitrophenol	7.900	109	258962	88.86	ppm	#	57
62) Dibenzofuran	7.863	168	1925669	57.10	ppm		97
63) 2,4-Dinitrotoluene	7.890	165	507588	65.51	ppm		91
64) 2,3,4,6-Tetrachlorophenol	8.071	232	403120	60.80	ppm		95
65) Diethylphthalate	8.237	149	1638697	63.75	ppm		98
66) Fluorene	8.344	166	1572253	57.54	ppm		97
67) 4-Chlorophenyl-phenyle...	8.366	204	734968	59.19	ppm		87
68) 4-Nitroaniline	8.424	138	365547	54.54	ppm	#	57
70) 4,6-Dinitro-2-methylph...	8.483	198	298065	54.69	ppm		89
71) n-Nitrosodiphenylamine	8.547	169	1128017	50.35	ppm		99
72) 1,2-Diphenylhydrazine	8.596	77	1705564	57.46	ppm		93
74) 4-Bromophenyl-phenylether	9.082	248	462053	54.68	ppm		91
75) Hexachlorobenzene	9.168	284	563379	58.35	ppm		95
76) Pentachlorophenol	9.499	266	573035	97.62	ppm		99
77) Phenanthrene	9.767	178	2180360	49.80	ppm		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4654\
Data File : 2m104765.D
Acq On : 5 Jun 2018 12:10 pm
Operator : christc2
Sample : cc4618-50
Misc : op10486,e2m4654,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 05 13:40:11 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Mon Jun 04 09:10:13 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
78) Anthracene	9.842	178	2248443	51.11 ppm	99
79) Carbazole	10.131	167	2105024	51.25 ppm	98
80) Di-n-butylphthalate	10.746	149	2772818	55.23 ppm	98
81) Fluoranthene	11.618	202	2397654	53.37 ppm	97
82) Octadecane	9.692	57	1032325	51.82 ppm	97
84) Pyrene	11.960	202	2506545	47.08 ppm	98
86) Butylbenzylphthalate	13.110	149	1271803	51.70 ppm	91
87) Benzo[a]anthracene	13.880	228	2426541	50.30 ppm	99
88) 3,3'-Dichlorobenzidine	13.891	252	914787	52.29 ppm	98
89) Chrysene	13.939	228	2308666	50.37 ppm	99
90) bis(2-Ethylhexyl)phtha...	14.073	149	1817574	53.59 ppm	97
92) Di-n-octylphthalate	15.057	149	3168791	55.53 ppm	99
93) Benzo[b]fluoranthene	15.490	252	2600403	53.78 ppm	95
94) Benzo[k]fluoranthene	15.527	252	2322579	51.73 ppm	96
95) Benzo[a]pyrene	15.929	252	2210834	52.74 ppm	94
96) Indeno[1,2,3-cd]pyrene	17.448	276	2256543m	54.09 ppm	
97) Dibenz(a,h)acridine	17.127	279	1952897	51.74 ppm	99
98) Dibenz[a,h]anthracene	17.480	278	2230348	52.02 ppm	97
99) 7,12-Dimethylbenz(a)an...	15.485	256	1136550	53.96 ppm	91
100) Benzo[g,h,i]perylene	17.849	276	2095325	52.13 ppm	92

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

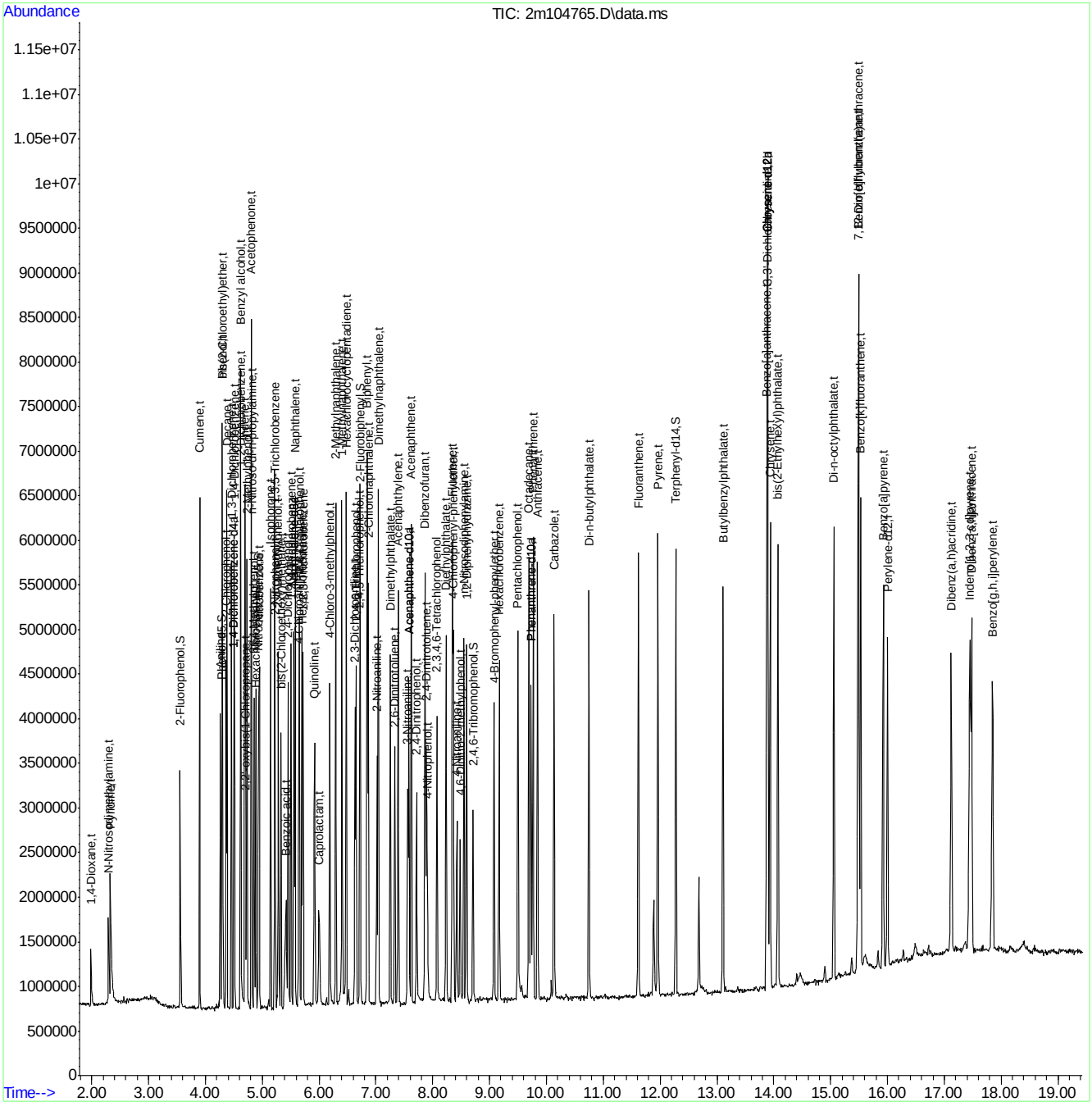
9.6.15

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M4654\
Data File : 2m104765.D
Acq On : 5 Jun 2018 12:10 pm
Operator : christc2
Sample : cc4618-50
Misc : op10486,e2m4654,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 05 13:40:11 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Mon Jun 04 09:10:13 2018
Response via : Initial Calibration



Manual Integration Approval Summary

Sample Number:	E2M4654-CC4618	**Method:**	SW846 8270D
Lab FileID:	2M104765.D	**Analyst approved:**	06/05/18 13:41 Ying Li
Injection Time:	06/05/18 12:10	**Supervisor approved:**	06/05/18 17:05 Nina Pandya

Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5		17.45	Overlapping peak

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E2M4654\
Data File : 2m104765.D
Acq On    :  5 Jun 2018  12:10 pm
Operator  : christc2
Sample    : cc4618-50
Misc      : op10486,e2m4654,1000,,,1,1
ALS Vial  : 2   Sample Multiplier: 1

Quant Time: Jun 05 13:39:27 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title  : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Mon Jun 04 09:10:13 2018
Response via : Initial Calibration
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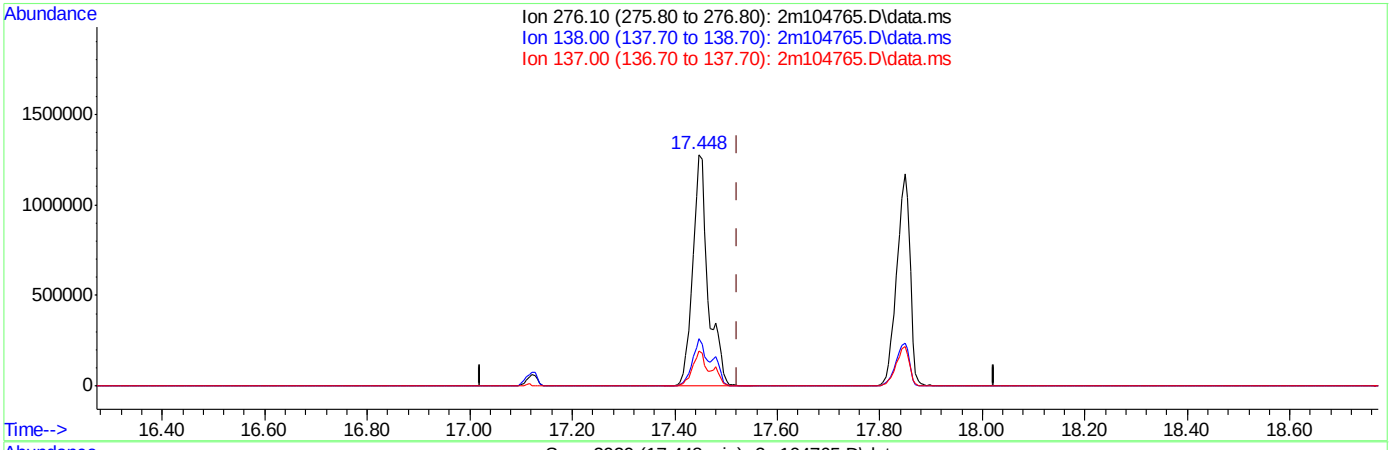
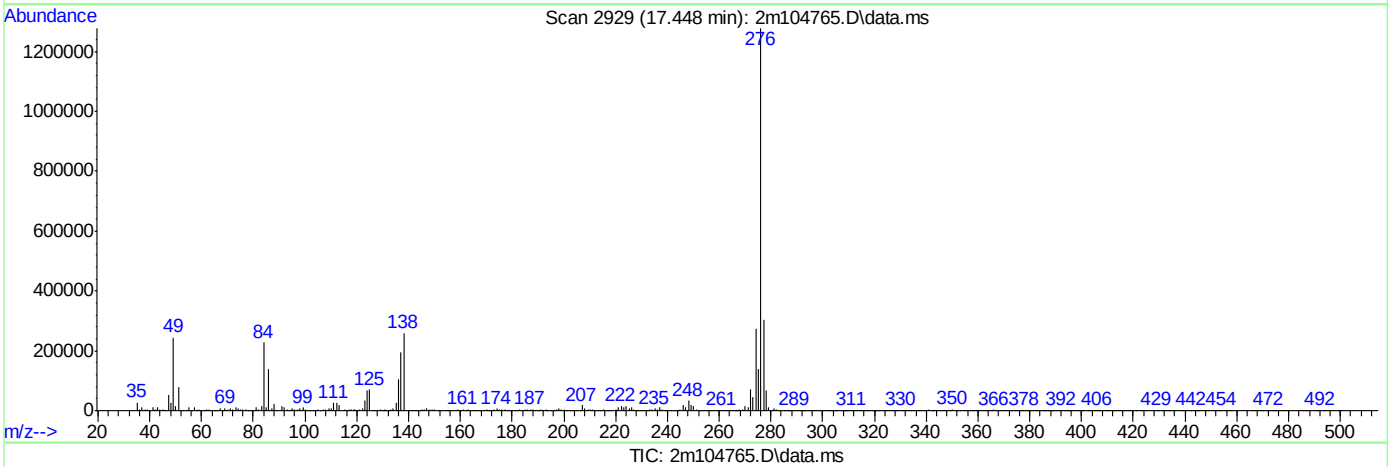




TIC: 2m104765.D\data.ms

(96) Indeno[1,2,3-cd]pyrene (t)

17.448min (-0.075) 63.80ppm

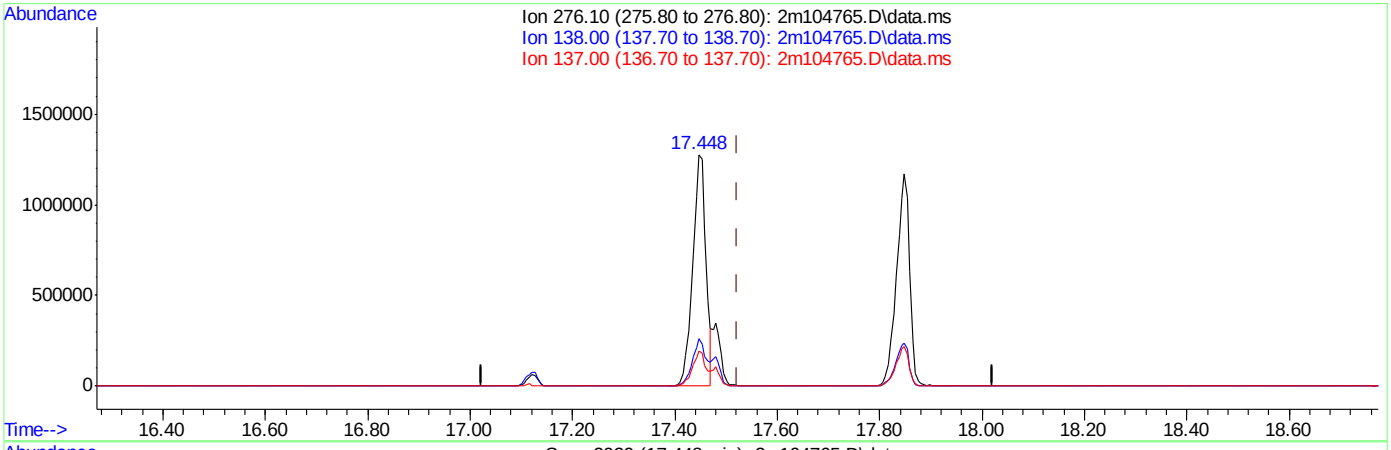
response 2661673

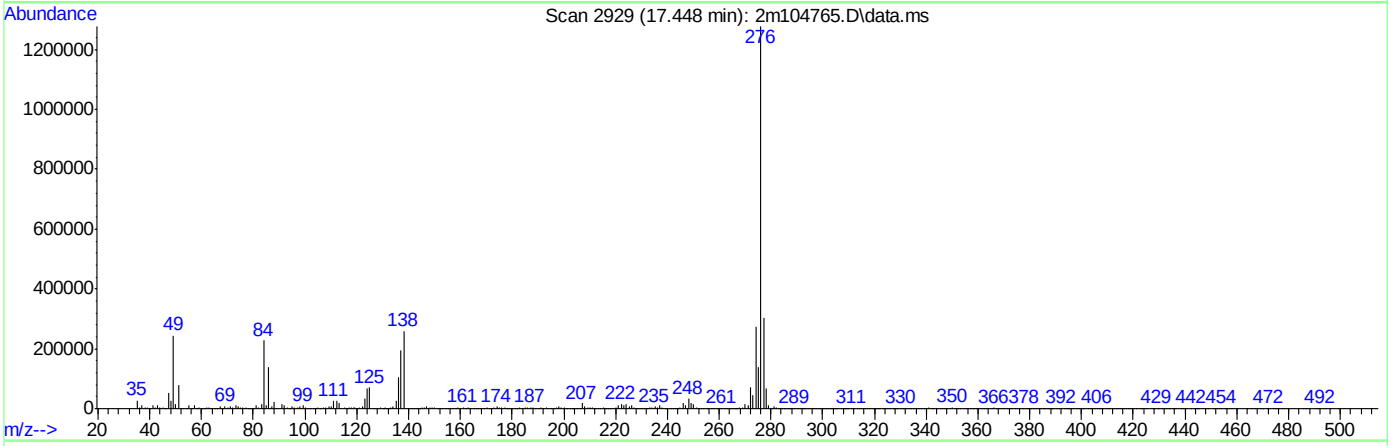
Ion	Exp%	Act%
276.10	100	100
138.00	22.70	20.18
137.00	16.80	15.13
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E2M4654\
Data File : 2m104765.D
Acq On    :  5 Jun 2018  12:10 pm
Operator  : christc2
Sample    : cc4618-50
Misc      : op10486,e2m4654,1000,,,1,1
ALS Vial  : 2   Sample Multiplier: 1

Quant Time: Jun 05 13:39:27 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2M4618.M
Quant Title  : Semi Volatile GC/MS,rxi 5sil ms 30m .25mm .25um
QLast Update : Mon Jun 04 09:10:13 2018
Response via : Initial Calibration
```





TIC: 2m104765.D\data.ms

(96) Indeno[1,2,3-cd]pyrene (t)

17.448min (-0.075) 54.09ppm m

response 2256543

Ion	Exp%	Act%
276.10	100	100
138.00	22.70	20.27
137.00	16.80	15.29
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49974.D
Acq On : 7 May 2018 2:23 pm
Operator : johnb1
Sample : ic2386-100
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 08 09:42:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration

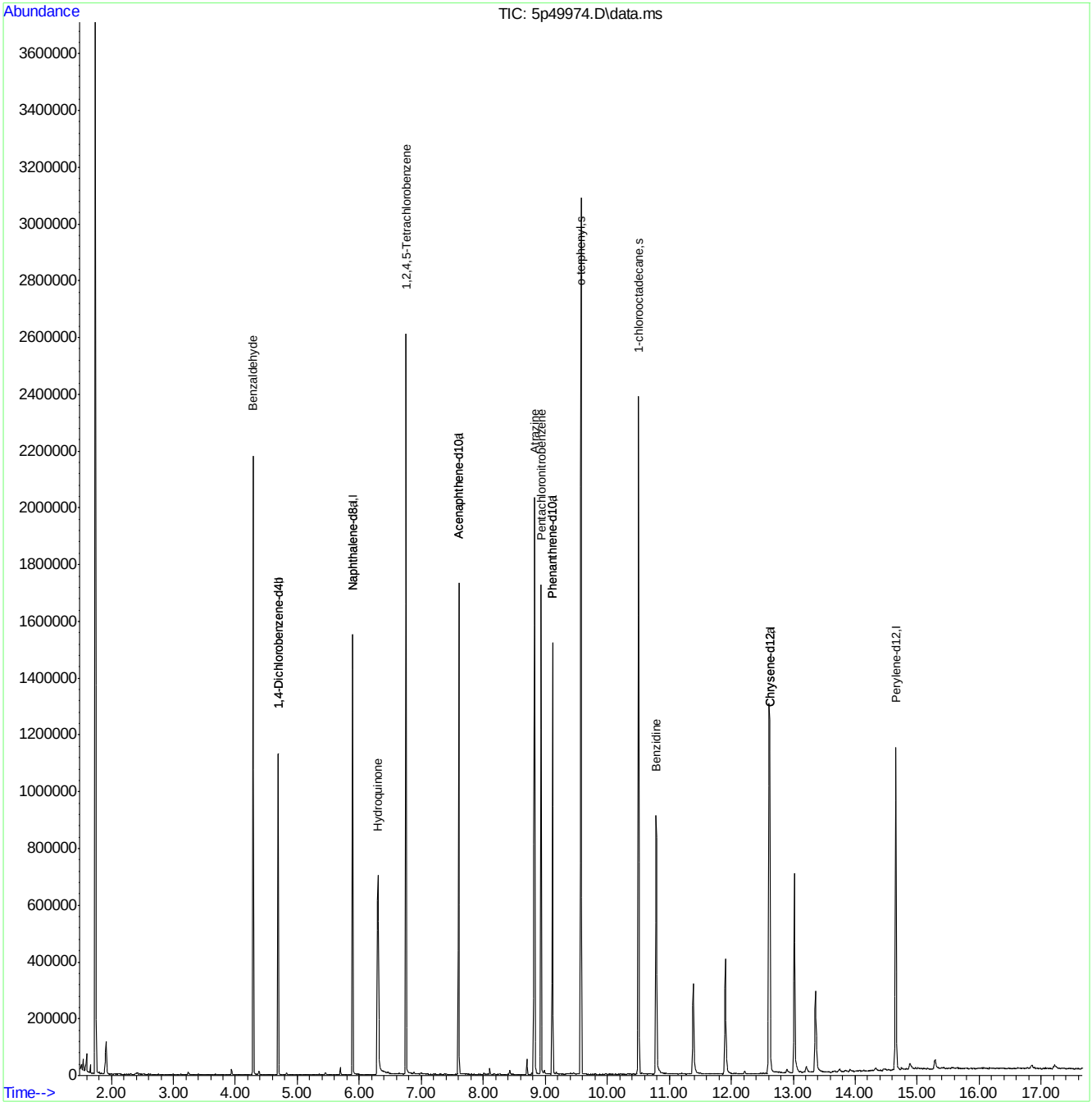
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.693	152	182309	40.00	ppm	0.00
24) Naphthalene-d8	5.895	136	651651	40.00	ppm	0.00
47) Acenaphthene-d10	7.604	164	334632	40.00	ppm	0.00
69) Phenanthrene-d10	9.116	188	551337	40.00	ppm	0.00
83) Chrysene-d12	12.626	240	486910	40.00	ppm	0.00
91) Perylene-d12	14.656	264	517060	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.693	152	182309	40.00	ppm	0.00
103) Acenaphthene-d10a	7.604	164	334632	40.00	ppm	0.00
105) Chrysene-d12a	12.626	240	486835	40.00	ppm	0.00
108) Phenanthrene-d10a	9.116	188	551337	40.00	ppm	0.00
112) Naphthalene-d8a	5.895	136	651651	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%	
107) 1-chlorooctadecane	10.505	57	389726	94.69	ppm	0.00
Spiked Amount 50.000			Recovery	=	189.38%	
109) o-terphenyl	9.576	230	633484	90.53	ppm	0.00
Spiked Amount 50.000			Recovery	=	181.06%	
Target Compounds						Qvalue
102) Benzaldehyde	4.287	105	349132	91.22	ppm	99
104) 1,2,4,5-Tetrachloroben...	6.755	216	426341	93.46	ppm	99
106) Benzidine	10.788	184	438644	85.59	ppm	98
110) Atrazine	8.828	215	130597	98.93	ppm	97
111) Pentachloronitrobenzene	8.934	295	58500	97.06	ppm	92
113) Hydroquinone	6.306	110	479782	92.80	ppm	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49974.D
Acq On : 7 May 2018 2:23 pm
Operator : johnb1
Sample : ic2386-100
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 08 09:42:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49975.D
Acq On : 7 May 2018 2:48 pm
Operator : johnb1
Sample : ic2386-80
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 08 09:42:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration

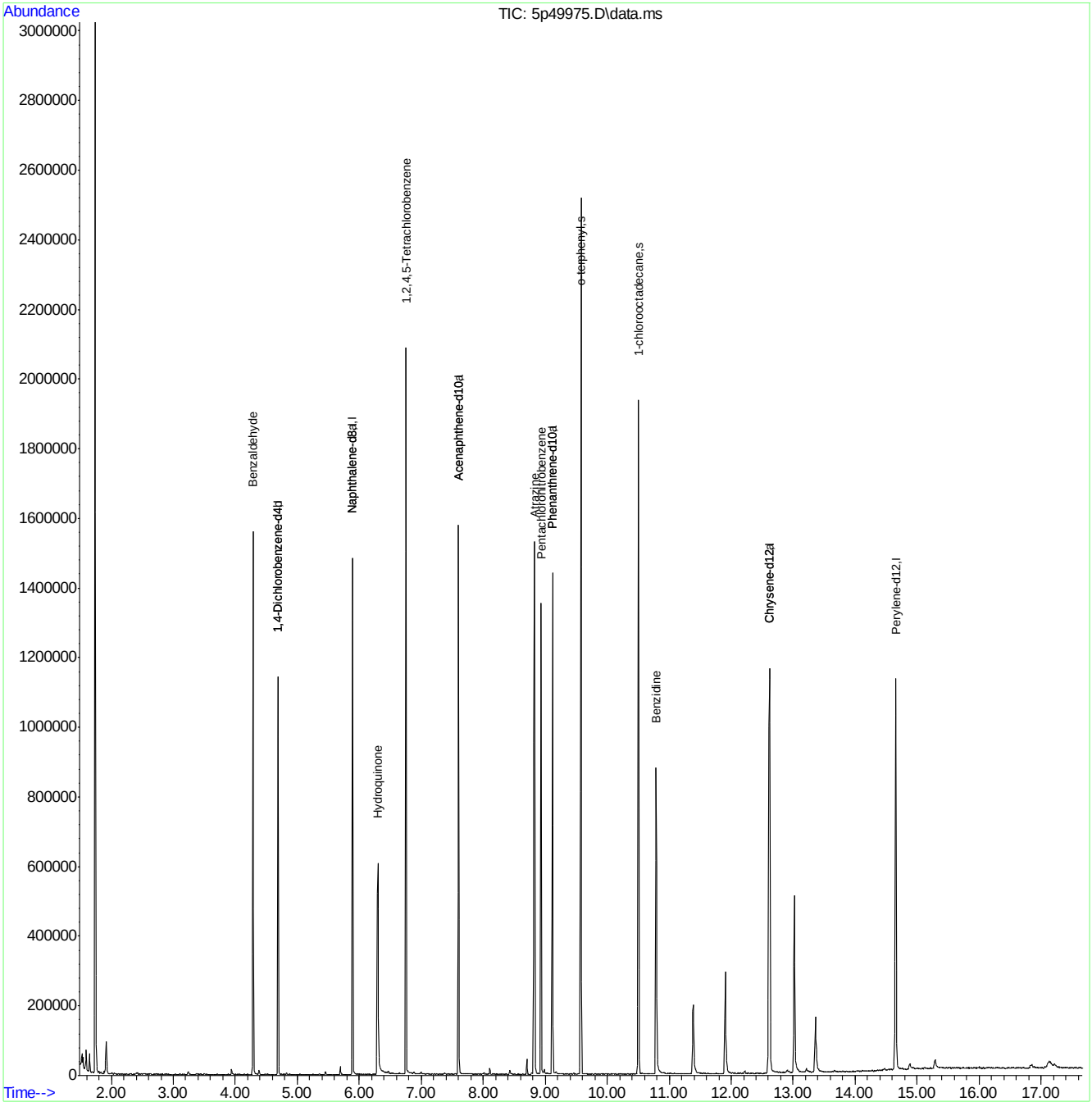
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.687	152	169900	40.00	ppm	0.00
24) Naphthalene-d8	5.890	136	625624	40.00	ppm	0.00
47) Acenaphthene-d10	7.599	164	321773	40.00	ppm	0.00
69) Phenanthrene-d10	9.116	188	536671	40.00	ppm	0.00
83) Chrysene-d12	12.621	240	472043	40.00	ppm	0.00
91) Perylene-d12	14.656	264	520623	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.687	152	169900	40.00	ppm	0.00
103) Acenaphthene-d10a	7.599	164	321773	40.00	ppm	0.00
105) Chrysene-d12a	12.621	240	472043	40.00	ppm	0.00
108) Phenanthrene-d10a	9.116	188	536671	40.00	ppm	0.00
112) Naphthalene-d8a	5.890	136	625624	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%			
107) 1-chlorooctadecane	10.505	57	308441	77.29	ppm	0.00
Spiked Amount 50.000			Recovery = 154.58%			
109) o-terphenyl	9.576	230	516599	75.85	ppm	0.00
Spiked Amount 50.000			Recovery = 151.70%			
Target Compounds						Qvalue
102) Benzaldehyde	4.287	105	268367	75.24	ppm	98
104) 1,2,4,5-Tetrachloroben...	6.755	216	337617	76.97	ppm	98
106) Benzidine	10.788	184	394177	79.32	ppm	98
110) Atrazine	8.828	215	102993	80.15	ppm	89
111) Pentachloronitrobenzene	8.935	295	46410	79.11	ppm	94
113) Hydroquinone	6.301	110	362931	73.12	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49975.D
Acq On : 7 May 2018 2:48 pm
Operator : johnb1
Sample : ic2386-80
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 08 09:42:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49976.D
Acq On : 7 May 2018 3:13 pm
Operator : johnb1
Sample : icc2386-50
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 08 09:43:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration

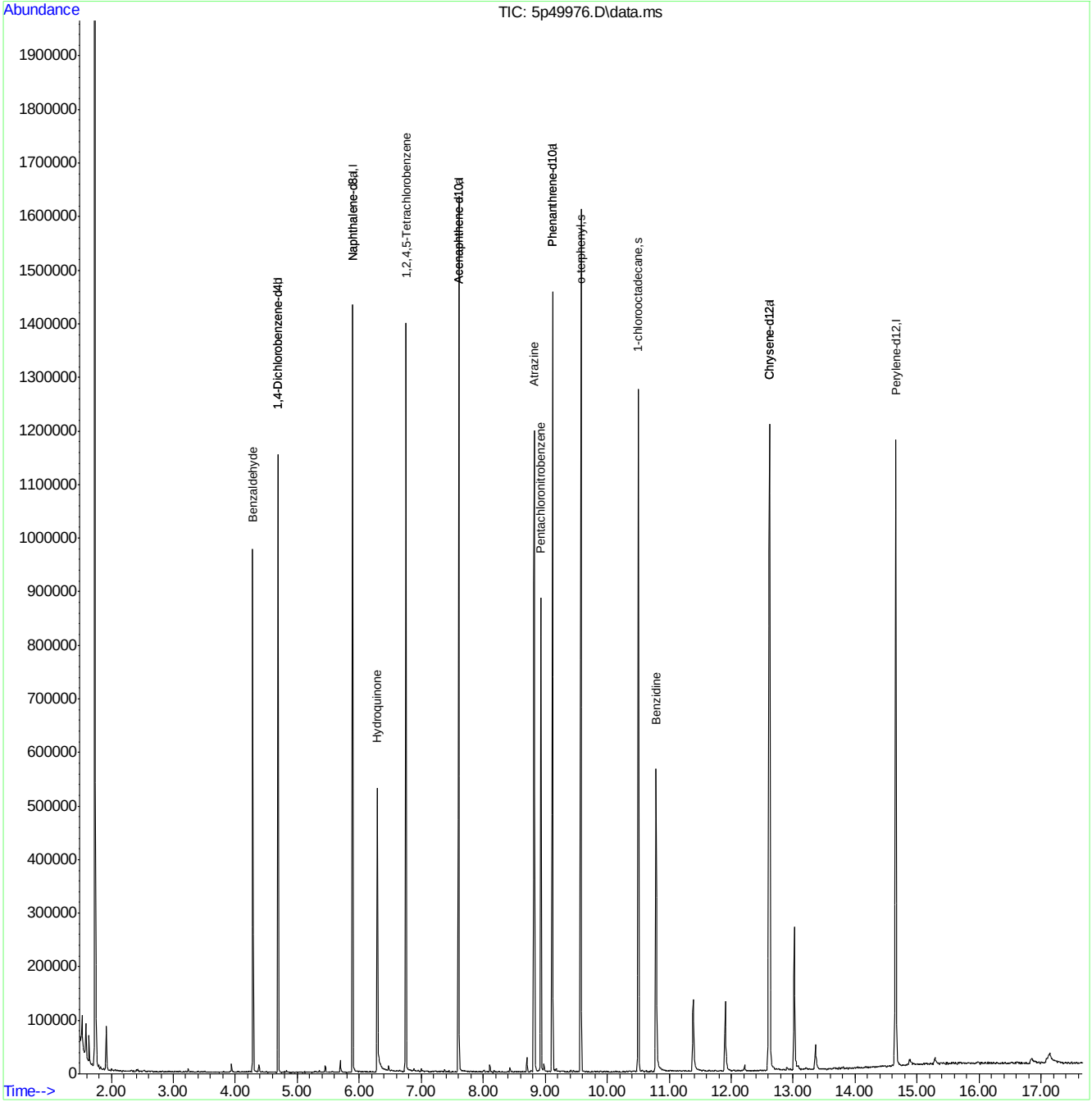
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.688	152	169185	40.00	ppm	0.00
24) Naphthalene-d8	5.895	136	628935	40.00	ppm	0.00
47) Acenaphthene-d10	7.604	164	328929	40.00	ppm	0.00
69) Phenanthrene-d10	9.116	188	558493	40.00	ppm	0.00
83) Chrysene-d12	12.621	240	503697	40.00	ppm	0.00
91) Perylene-d12	14.656	264	533871	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.688	152	169185	40.00	ppm	0.00
103) Acenaphthene-d10a	7.604	164	328929	40.00	ppm	0.00
105) Chrysene-d12a	12.621	240	503697	40.00	ppm	0.00
108) Phenanthrene-d10a	9.116	188	558493	40.00	ppm	0.00
112) Naphthalene-d8a	5.895	136	628935	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%	
107) 1-chlorooctadecane	10.500	57	212912	50.00	ppm	0.00
Spiked Amount 50.000			Recovery	=	100.00%	
109) o-terphenyl	9.576	230	354400	50.00	ppm	0.00
Spiked Amount 50.000			Recovery	=	100.00%	
Target Compounds						Qvalue
102) Benzaldehyde	4.287	105	177601	50.00	ppm	100
104) 1,2,4,5-Tetrachloroben...	6.755	216	224200	50.00	ppm	100
106) Benzidine	10.788	184	265125	50.00	ppm	100
110) Atrazine	8.822	215	66864	50.00	ppm	100
111) Pentachloronitrobenzene	8.929	295	30527	50.00	ppm	100
113) Hydroquinone	6.290	110	236025	47.30	ppm	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49976.D
Acq On : 7 May 2018 3:13 pm
Operator : johnb1
Sample : icc2386-50
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 08 09:43:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49977.D
Acq On : 7 May 2018 3:38 pm
Operator : johnb1
Sample : ic2386-25
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 08 09:43:45 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration

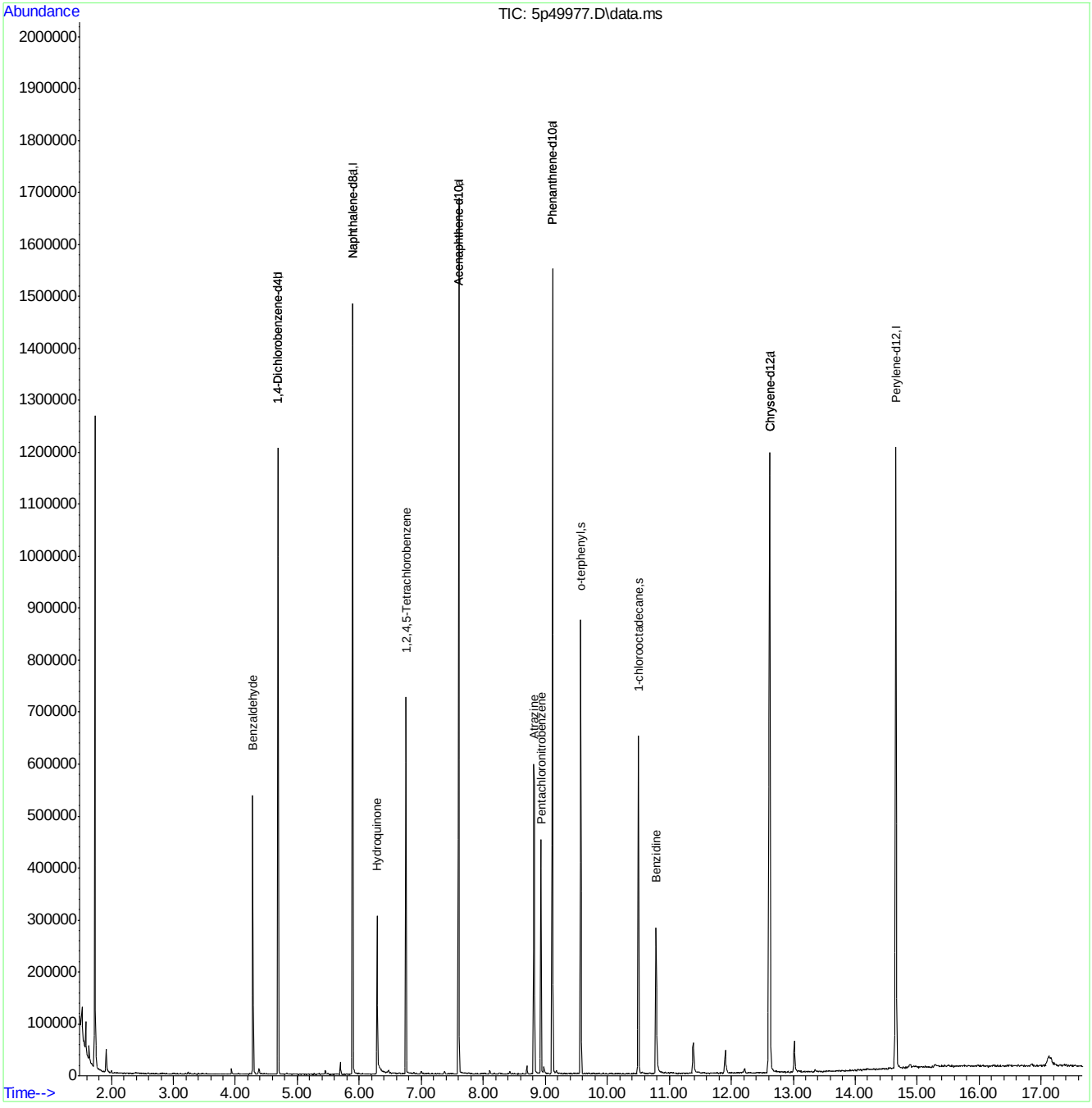
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.687	152	177018	40.00	ppm	0.00
24) Naphthalene-d8	5.895	136	637182	40.00	ppm	0.00
47) Acenaphthene-d10	7.604	164	336833	40.00	ppm	0.00
69) Phenanthrene-d10	9.116	188	583056	40.00	ppm	0.00
83) Chrysene-d12	12.626	240	521168	40.00	ppm	0.00
91) Perylene-d12	14.656	264	541056	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.687	152	177018	40.00	ppm	0.00
103) Acenaphthene-d10a	7.604	164	336833	40.00	ppm	0.00
105) Chrysene-d12a	12.626	240	521111	40.00	ppm	0.00
108) Phenanthrene-d10a	9.116	188	583056	40.00	ppm	0.00
112) Naphthalene-d8a	5.895	136	637182	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%	
107) 1-chlorooctadecane	10.505	57	109125	24.77	ppm	0.00
Spiked Amount 50.000			Recovery	=	49.54%	
109) o-terphenyl	9.575	230	182918	24.72	ppm	0.00
Spiked Amount 50.000			Recovery	=	49.44%	
Target Compounds						Qvalue
102) Benzaldehyde	4.281	105	95781	25.77	ppm	95
104) 1,2,4,5-Tetrachloroben...	6.755	216	116377	25.34	ppm	95
106) Benzidine	10.788	184	135700	24.74	ppm	98
110) Atrazine	8.822	215	34279	24.55	ppm	87
111) Pentachloronitrobenzene	8.934	295	15148	23.77	ppm	86
113) Hydroquinone	6.290	110	108110	21.39	ppm	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49977.D
Acq On : 7 May 2018 3:38 pm
Operator : johnb1
Sample : ic2386-25
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 08 09:43:45 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49978.D
Acq On : 7 May 2018 4:03 pm
Operator : johnb1
Sample : ic2386-10
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 08 09:44:13 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration

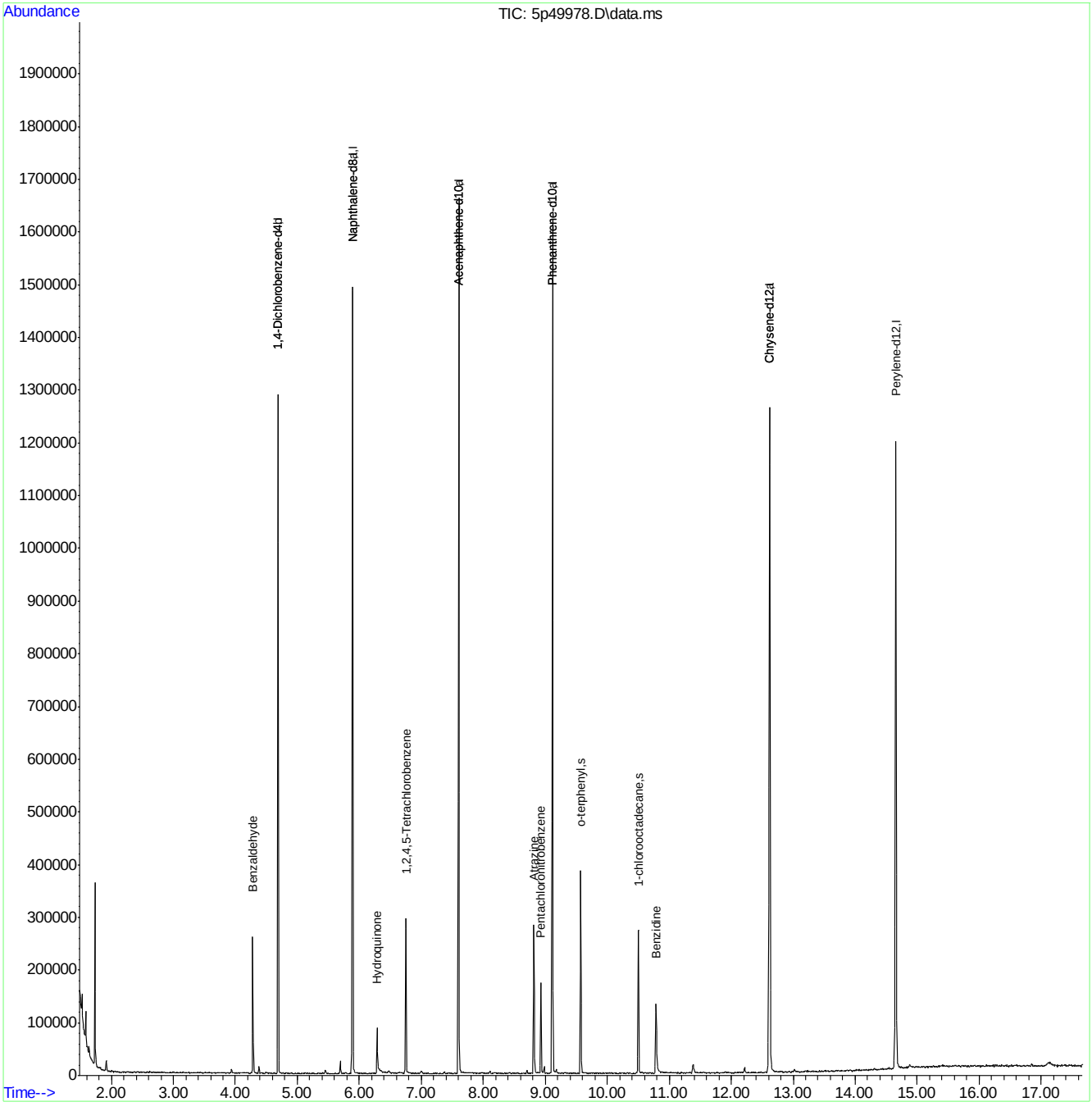
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.687	152	183342	40.00	ppm	0.00
24) Naphthalene-d8	5.895	136	656327	40.00	ppm	0.00
47) Acenaphthene-d10	7.604	164	337630	40.00	ppm	0.00
69) Phenanthrene-d10	9.116	188	595327	40.00	ppm	0.00
83) Chrysene-d12	12.621	240	533999	40.00	ppm	0.00
91) Perylene-d12	14.656	264	546476	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.687	152	183342	40.00	ppm	0.00
103) Acenaphthene-d10a	7.604	164	337630	40.00	ppm	0.00
105) Chrysene-d12a	12.621	240	533999	40.00	ppm	0.00
108) Phenanthrene-d10a	9.116	188	595327	40.00	ppm	0.00
112) Naphthalene-d8a	5.895	136	656327	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%	
107) 1-chlorooctadecane	10.505	57	44406	9.84	ppm	0.00
Spiked Amount 50.000			Recovery	=	19.68%	
109) o-terphenyl	9.570	230	77886	10.31	ppm	0.00
Spiked Amount 50.000			Recovery	=	20.62%	
Target Compounds						Qvalue
102) Benzaldehyde	4.281	105	44077	11.45	ppm	94
104) 1,2,4,5-Tetrachloroben...	6.755	216	49884	10.84	ppm	98
106) Benzidine	10.788	184	68518	12.19	ppm	99
110) Atrazine	8.817	215	13822	9.70	ppm	90
111) Pentachloronitrobenzene	8.929	295	5769	8.86	ppm	95
113) Hydroquinone	6.290	110	40738	7.82	ppm	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49978.D
Acq On : 7 May 2018 4:03 pm
Operator : johnb1
Sample : ic2386-10
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 08 09:44:13 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration



9.6.20 9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49979.D
Acq On : 7 May 2018 4:28 pm
Operator : johnb1
Sample : ic2386-5
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 08 09:44:53 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration

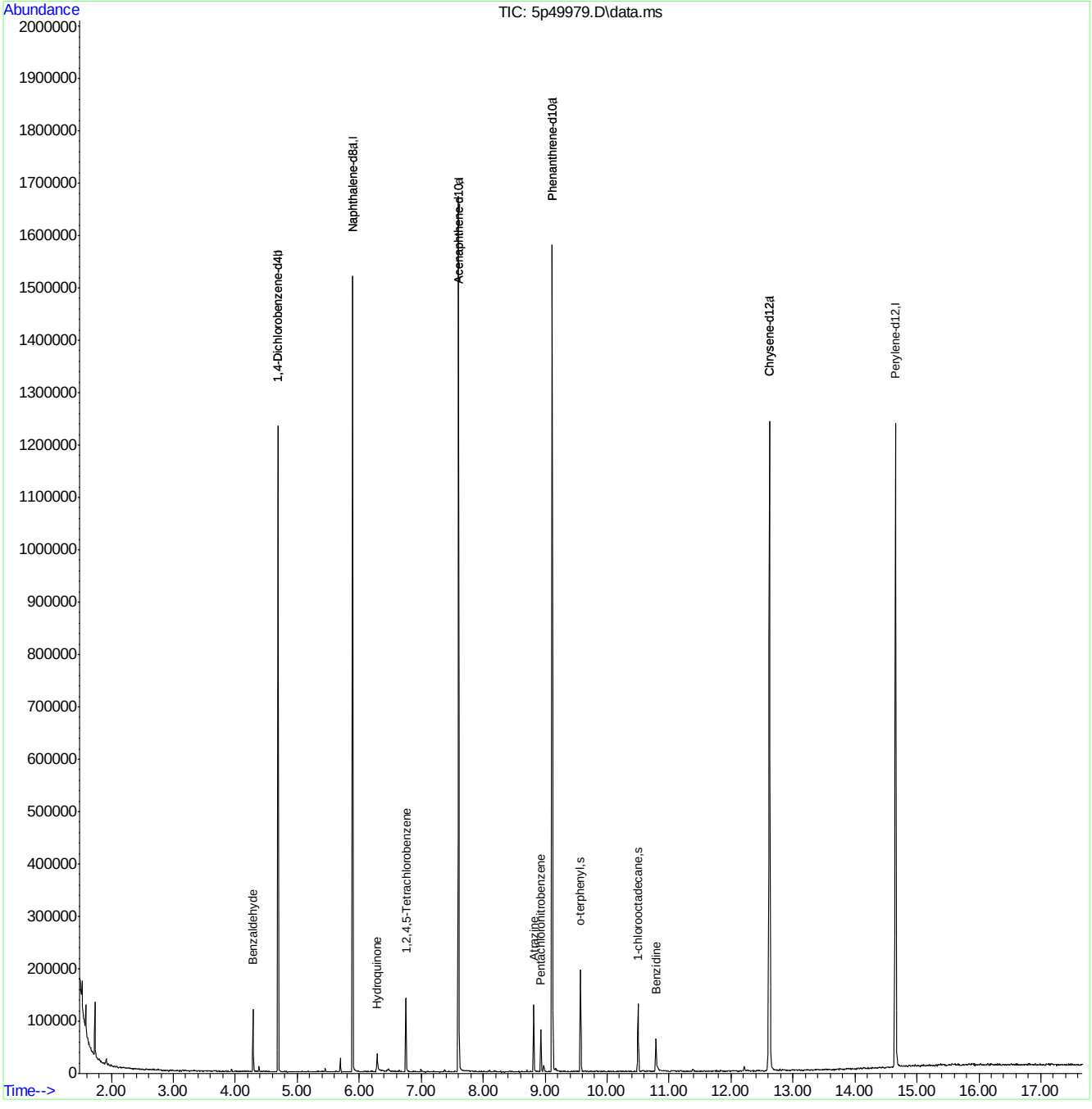
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.687	152	178964	40.00 ppm	0.00
24) Naphthalene-d8	5.895	136	639058	40.00 ppm	0.00
47) Acenaphthene-d10	7.604	164	329488	40.00 ppm	0.00
69) Phenanthrene-d10	9.116	188	589034	40.00 ppm	0.00
83) Chrysene-d12	12.621	240	534652	40.00 ppm	0.00
91) Perylene-d12	14.656	264	541464	40.00 ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.687	152	178964	40.00 ppm	0.00
103) Acenaphthene-d10a	7.604	164	329488	40.00 ppm	0.00
105) Chrysene-d12a	12.621	240	534652	40.00 ppm	0.00
108) Phenanthrene-d10a	9.116	188	589034	40.00 ppm	0.00
112) Naphthalene-d8a	5.895	136	639058	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%	
107) 1-chlorooctadecane	10.505	57	21981	4.86 ppm	0.00
Spiked Amount 50.000			Recovery	= 9.72%	
109) o-terphenyl	9.570	230	37997	5.08 ppm	0.00
Spiked Amount 50.000			Recovery	= 10.16%	
Target Compounds					Qvalue
102) Benzaldehyde	4.287	105	21709	5.78 ppm	98
104) 1,2,4,5-Tetrachloroben...	6.755	216	24844	5.53 ppm	100
106) Benzidine	10.788	184	30631	5.44 ppm	93
110) Atrazine	8.817	215	7070	5.01 ppm	92
111) Pentachloronitrobenzene	8.929	295	2443	3.79 ppm	92
113) Hydroquinone	6.290	110	15708	3.10 ppm	92

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49979.D
Acq On : 7 May 2018 4:28 pm
Operator : johnb1
Sample : ic2386-5
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 08 09:44:53 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration



5P49980.D

Manual Integrations APPROVED (compounds with "m" flag)

Kristi Schollenberger 05/09/18 16:09

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49980.D
Acq On : 7 May 2018 4:52 pm
Operator : johnb1
Sample : ic2386-2
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 08 09:45:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.687	152	165260	40.00	ppm	0.00
24) Naphthalene-d8	5.895	136	607833	40.00	ppm	0.00
47) Acenaphthene-d10	7.604	164	315191	40.00	ppm	0.00
69) Phenanthrene-d10	9.116	188	574473	40.00	ppm	0.00
83) Chrysene-d12	12.621	240	514222	40.00	ppm	0.00
91) Perylene-d12	14.656	264	532297	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.687	152	165260	40.00	ppm	0.00
103) Acenaphthene-d10a	7.604	164	315191	40.00	ppm	0.00
105) Chrysene-d12a	12.621	240	514222	40.00	ppm	0.00
108) Phenanthrene-d10a	9.116	188	574473	40.00	ppm	0.00
112) Naphthalene-d8a	5.895	136	607833	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%	
107) 1-chlorooctadecane	10.500	57	7445	1.71	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.42%	
109) o-terphenyl	9.570	230	15039	2.06	ppm	0.00
Spiked Amount 50.000			Recovery	=	4.12%	
Target Compounds						Qvalue
102) Benzaldehyde	4.287	105	9591	2.76	ppm	91
104) 1,2,4,5-Tetrachloroben...	6.755	216	9287	2.16	ppm	92
106) Benzidine	10.783	184	7249	1.34	ppm	78
110) Atrazine	8.817	215	2448	1.78	ppm	96
111) Pentachloronitrobenzene	8.934	295	1090	1.74	ppm #	67
113) Hydroquinone	6.290	110	6657m	1.38	ppm	

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

9.6.22

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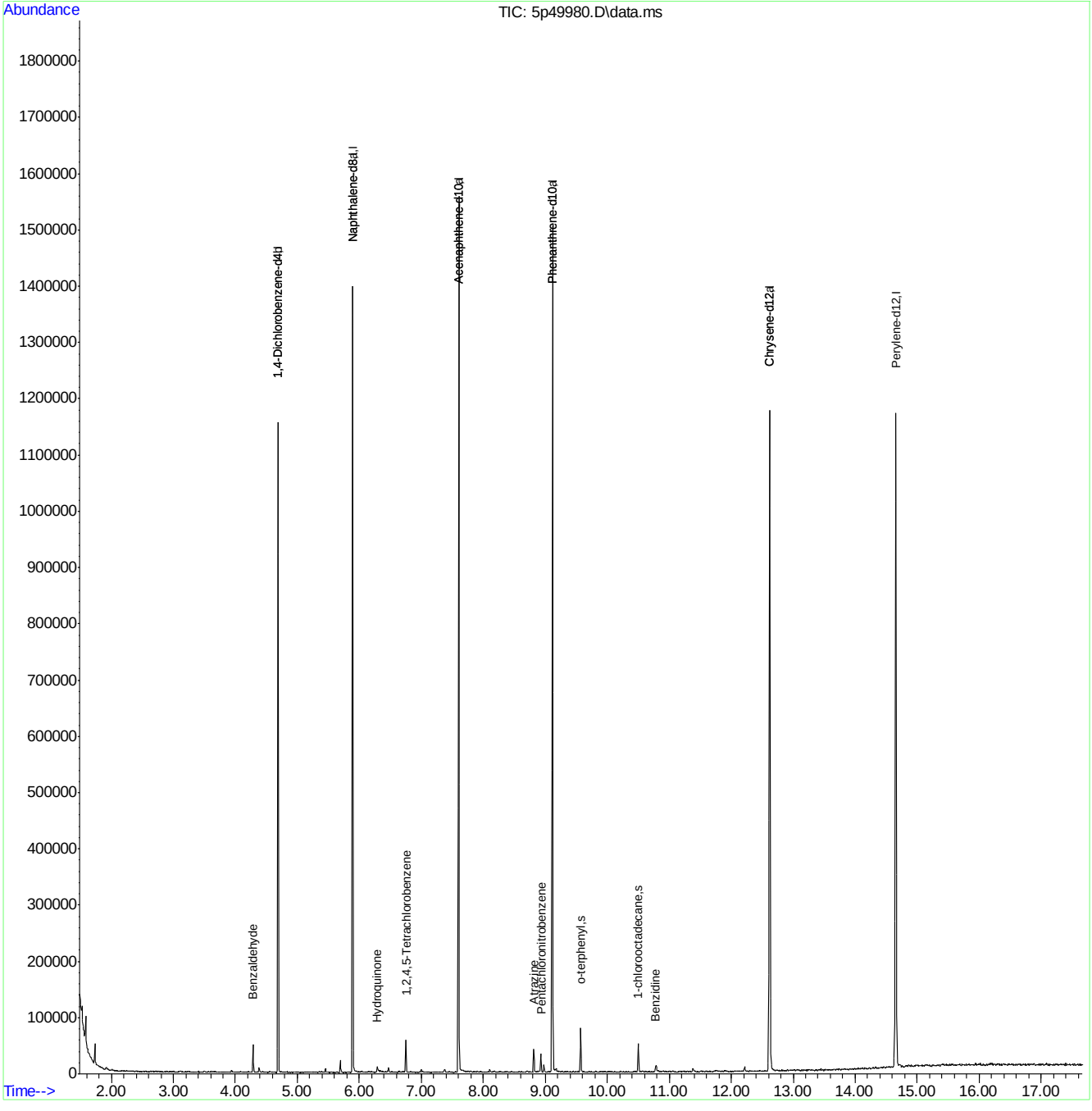
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49980.D
Acq On : 7 May 2018 4:52 pm
Operator : johnb1
Sample : ic2386-2
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 08 09:45:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration



Manual Integration Approval Summary

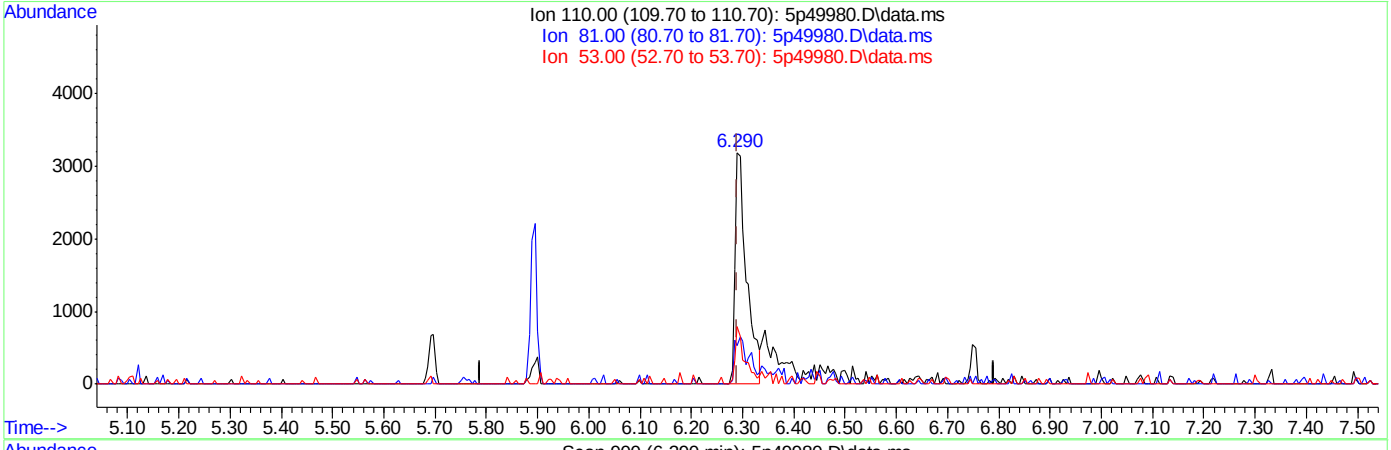
Sample Number:	E5P2386-IC2386	**Method:**	SW846 8270D
Lab FileID:	5P49980.D	**Analyst approved:**	05/08/18 10:55 Sean Block
Injection Time:	05/07/18 16:52	**Supervisor approved:**	05/09/18 16:09 Kristi Schollenberger

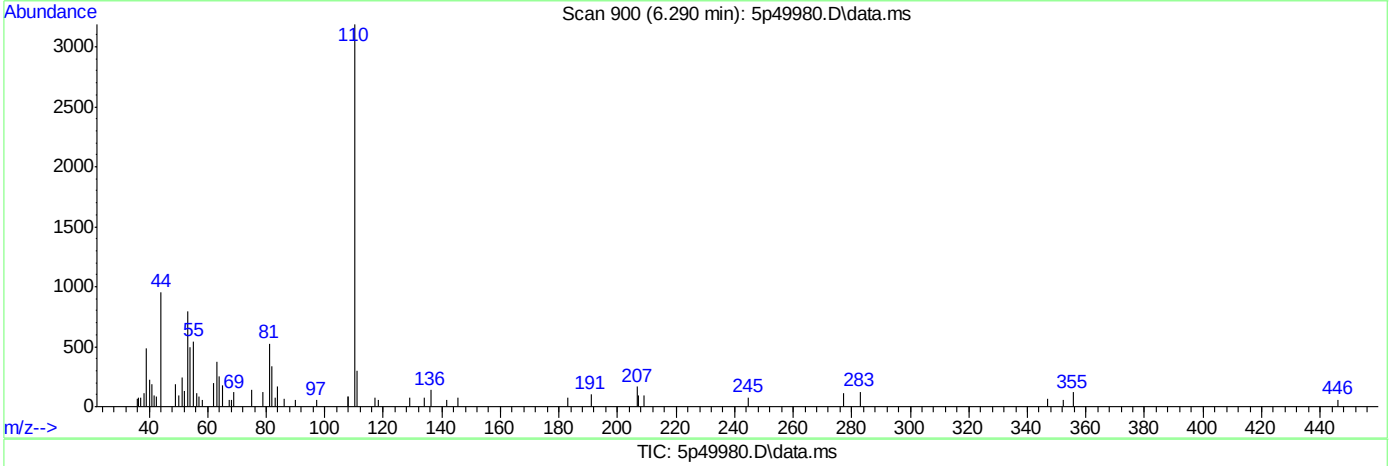
Parameter	CAS	Sig#	R.T. (min.)	Reason
Hydroquinone	123-31-9		6.29	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49980.D
Acq On : 7 May 2018 4:52 pm
Operator : johnb1
Sample : ic2386-2
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 08 09:45:06 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration





TIC: 5p49980.D\data.ms

(113) Hydroquinone

6.290min (-0.000) 1.03ppm

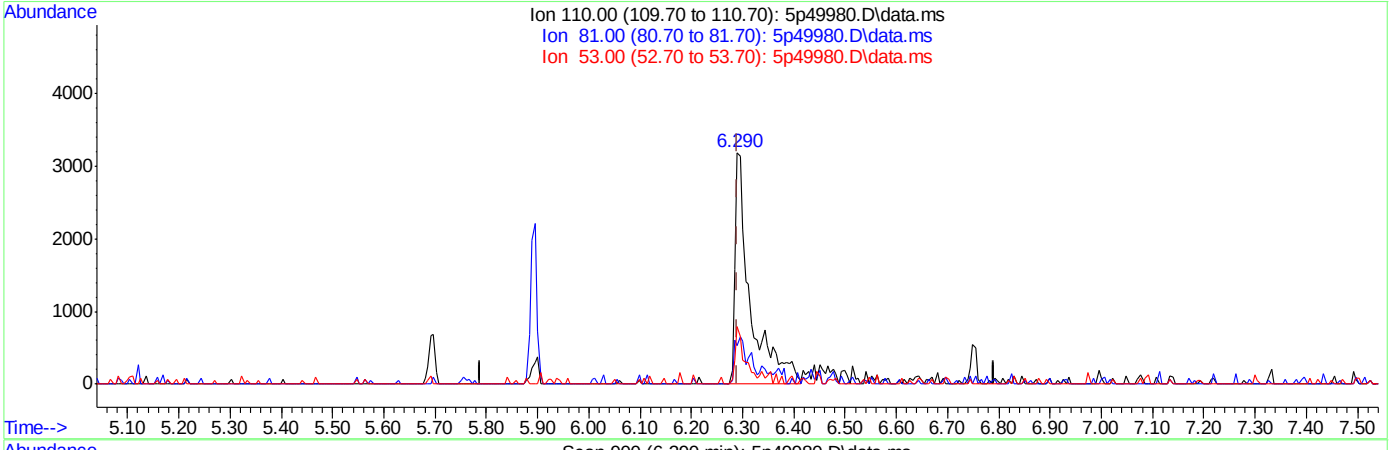
response 4988

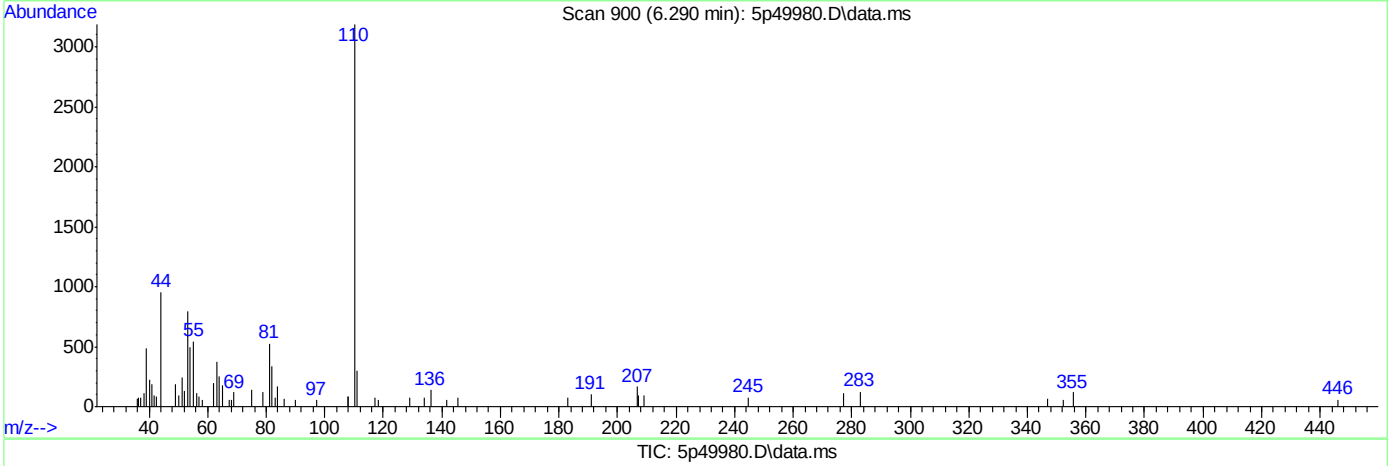
Ion	Exp%	Act%
110.00	100	100
81.00	26.40	15.14
53.00	20.00	25.09
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49980.D
Acq On : 7 May 2018 4:52 pm
Operator : johnb1
Sample : ic2386-2
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 08 09:45:06 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration





TIC: 5p49980.D\data.ms

(113) Hydroquinone

6.290min (-0.000) 1.38ppm m

response 6657

Ion	Exp%	Act%
110.00	100	100
81.00	26.40	16.50
53.00	20.00	24.98
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49981.D
Acq On : 7 May 2018 5:18 pm
Operator : johnb1
Sample : ic2386-1
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 08 09:46:09 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.688	152	166801	40.00	ppm	0.00
24) Naphthalene-d8	5.895	136	616819	40.00	ppm	0.00
47) Acenaphthene-d10	7.604	164	319185	40.00	ppm	0.00
69) Phenanthrene-d10	9.116	188	576723	40.00	ppm	0.00
83) Chrysene-d12	12.621	240	519060	40.00	ppm	0.00
91) Perylene-d12	14.656	264	529351	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.688	152	166801	40.00	ppm	0.00
103) Acenaphthene-d10a	7.604	164	319185	40.00	ppm	0.00
105) Chrysene-d12a	12.621	240	519060	40.00	ppm	0.00
108) Phenanthrene-d10a	9.116	188	576723	40.00	ppm	0.00
112) Naphthalene-d8a	5.895	136	616819	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%	
107) 1-chlorooctadecane	10.500	57	4241	0.97	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.94%	
109) o-terphenyl	9.570	230	7103	0.97	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.94%	
Target Compounds						Qvalue
102) Benzaldehyde	4.287	105	3798	1.08	ppm	95
104) 1,2,4,5-Tetrachloroben...	6.750	216	4952	1.14	ppm	93
106) Benzidine	10.788	184	2666	0.49	ppm	95
110) Atrazine	8.817	215	1077	0.78	ppm #	76
113) Hydroquinone	6.301	110	2513	0.51	ppm	86

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

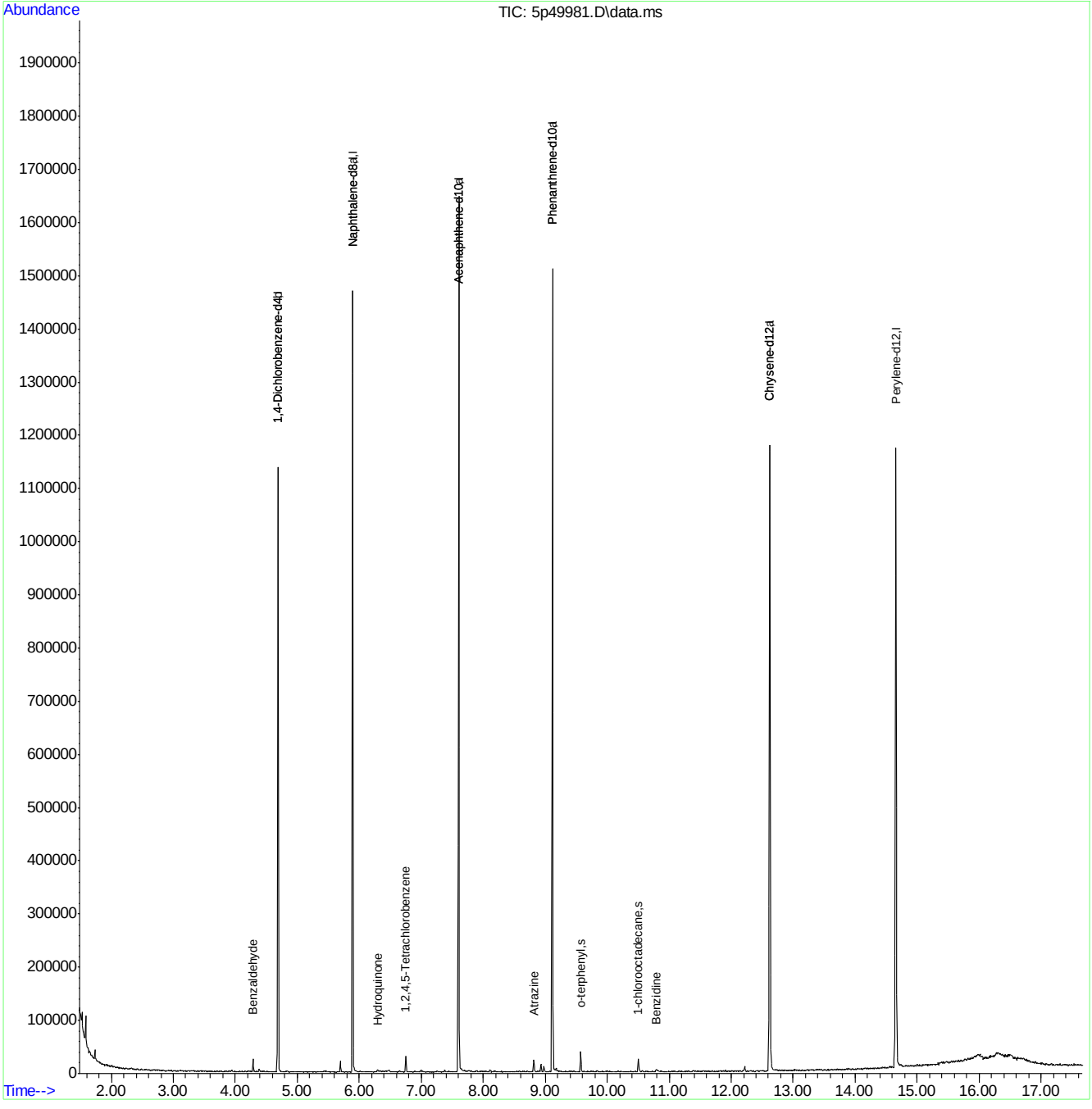
9.6.23

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49981.D
Acq On : 7 May 2018 5:18 pm
Operator : johnb1
Sample : ic2386-1
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 08 09:46:09 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:41:34 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49984a.D
Acq On : 7 May 2018 6:33 pm
Operator : johnb1
Sample : icv2386-50
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 08 10:08:32 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:55:14 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.693	152	178565	40.00 ppm	0.00
24) Naphthalene-d8	5.895	136	770692	40.00 ppm	0.00
47) Acenaphthene-d10	7.604	164	423773	40.00 ppm	0.00
69) Phenanthrene-d10	9.116	188	711337	40.00 ppm	0.00
83) Chrysene-d12	12.626	240	638019	40.00 ppm	0.00
91) Perylene-d12	14.656	264	603869	40.00 ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.693	152	178565	40.00 ppm	0.00
103) Acenaphthene-d10a	7.604	164	423773	40.00 ppm	0.00
105) Chrysene-d12a	12.626	240	638001	40.00 ppm	0.00
108) Phenanthrene-d10a	9.116	188	711337	40.00 ppm	0.00
112) Naphthalene-d8a	5.895	136	770692	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%	
107) 1-chlorooctadecane	0.000	57	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
109) o-terphenyl	0.000	230	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
Target Compounds					Qvalue
111) Pentachloronitrobenzene	8.934	295	39709	55.65 ppm	89

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

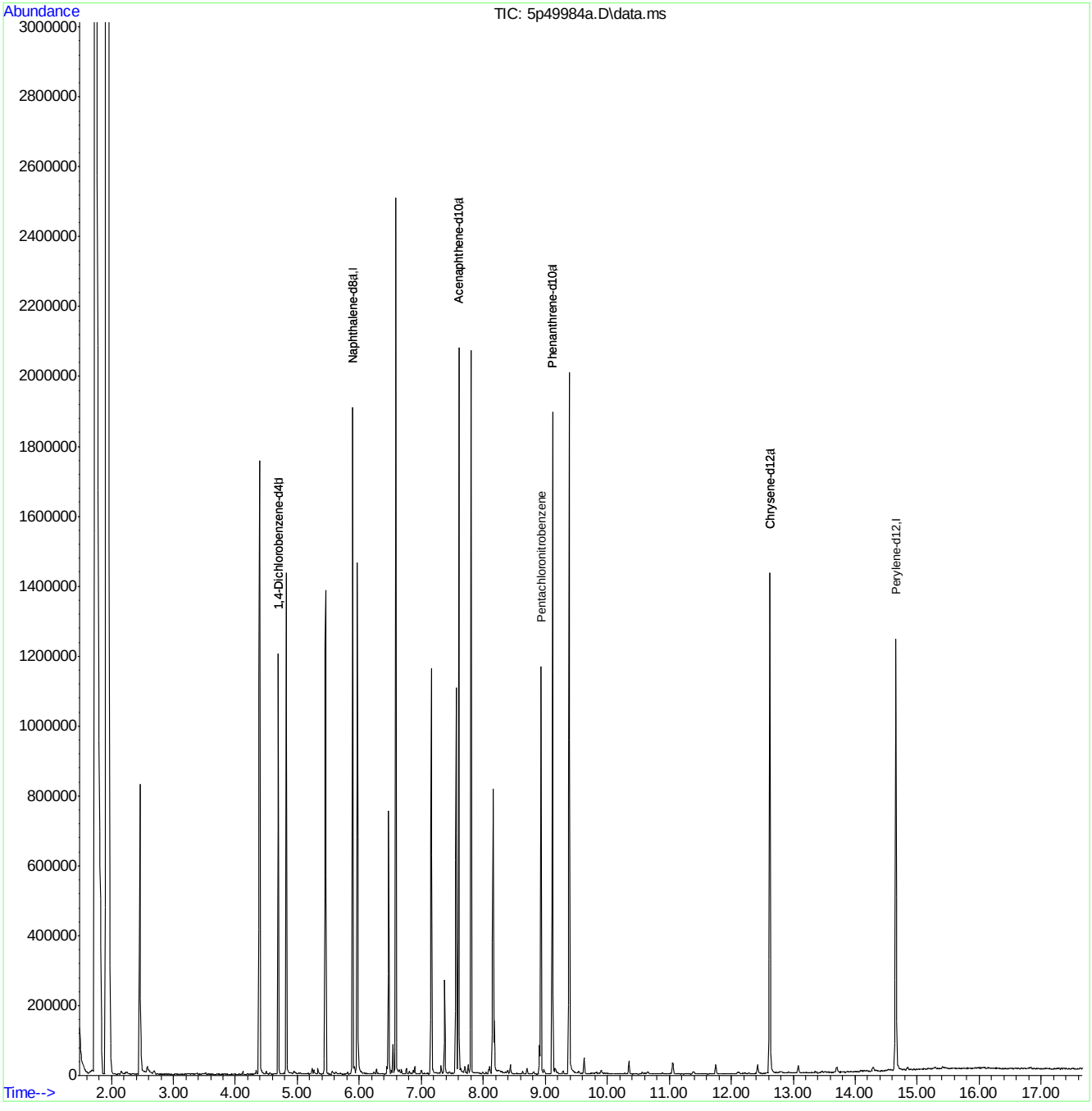
9.6.24

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49984a.D
Acq On : 7 May 2018 6:33 pm
Operator : johnb1
Sample : icv2386-50
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 08 10:08:32 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:55:14 2018
Response via : Initial Calibration



9.6.24

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49985a.D
Acq On : 7 May 2018 6:58 pm
Operator : johnb1
Sample : icv2386-50
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 08 10:10:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:55:14 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.693	152	207336	40.00 ppm	0.00
24) Naphthalene-d8	5.895	136	721800	40.00 ppm	0.00
47) Acenaphthene-d10	7.604	164	384136	40.00 ppm	0.00
69) Phenanthrene-d10	9.116	188	642796	40.00 ppm	0.00
83) Chrysene-d12	12.631	240	469043	40.00 ppm	0.00
91) Perylene-d12	14.656	264	503393	40.00 ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.693	152	207336	40.00 ppm	0.00
103) Acenaphthene-d10a	7.604	164	384136	40.00 ppm	0.00
105) Chrysene-d12a	12.631	240	469222	40.00 ppm	0.01
108) Phenanthrene-d10a	9.116	188	642796	40.00 ppm	0.00
112) Naphthalene-d8a	5.895	136	721800	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	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%	
107) 1-chlorooctadecane	0.000	57	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
109) o-terphenyl	0.000	230	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
Target Compounds					Qvalue
104) 1,2,4,5-Tetrachloroben...	6.755	216	292507	53.71 ppm	99
106) Benzidine	10.788	184	425980	84.21 ppm	100

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

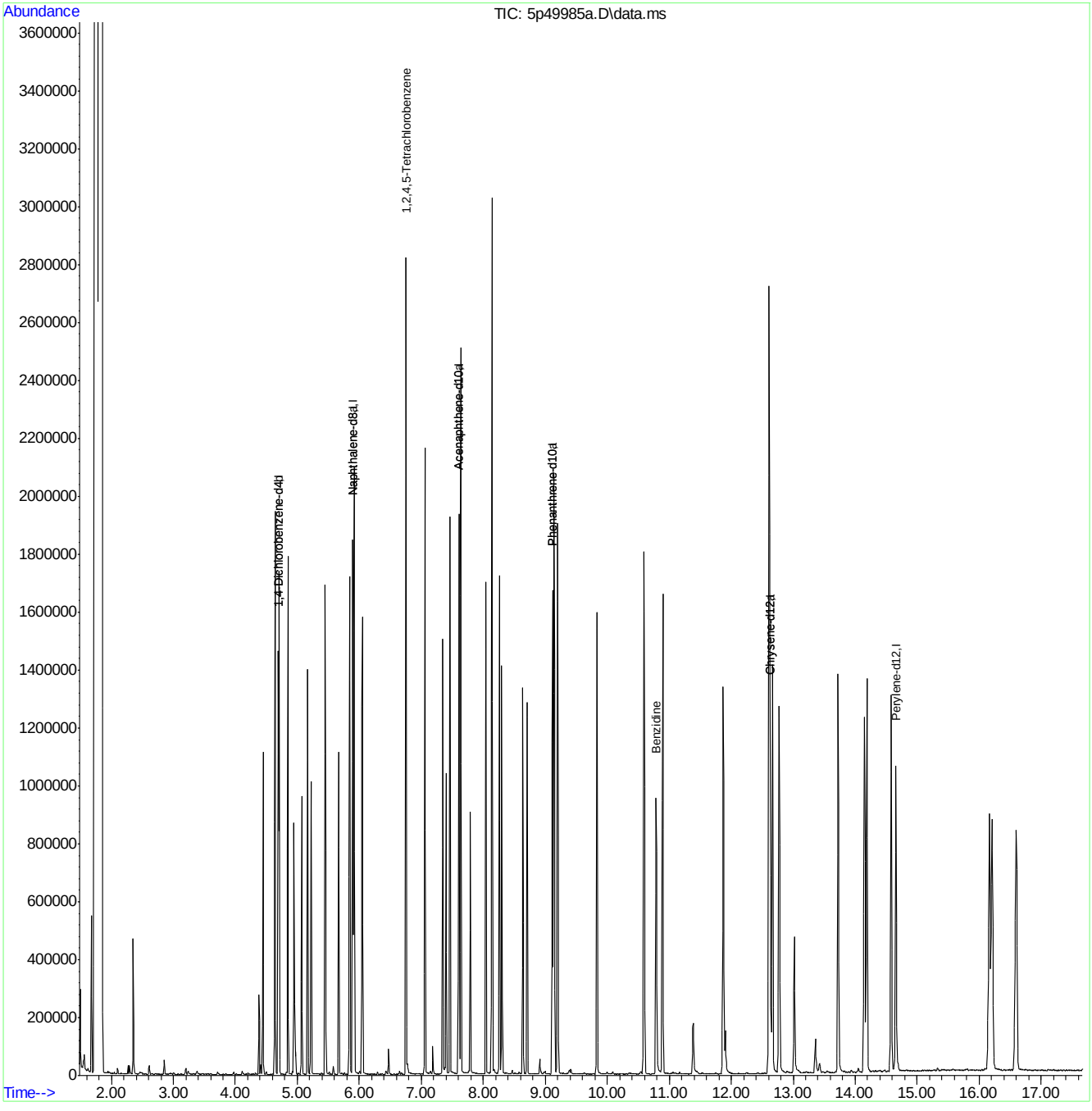
9.6.25

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49985a.D
Acq On : 7 May 2018 6:58 pm
Operator : johnb1
Sample : icv2386-50
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 08 10:10:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:55:14 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49986a.D
Acq On : 7 May 2018 7:23 pm
Operator : johnb1
Sample : icv2386-50
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 08 10:11:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:55:14 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.693	152	209427	40.00 ppm	0.00
24) Naphthalene-d8	5.895	136	775690	40.00 ppm	0.00
47) Acenaphthene-d10	7.604	164	369109	40.00 ppm	0.00
69) Phenanthrene-d10	9.116	188	626148	40.00 ppm	0.00
83) Chrysene-d12	12.621	240	541464	40.00 ppm	0.00
91) Perylene-d12	14.656	264	512633	40.00 ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.693	152	209427	40.00 ppm	0.00
103) Acenaphthene-d10a	7.604	164	369109	40.00 ppm	0.00
105) Chrysene-d12a	12.621	240	541464	40.00 ppm	0.00
108) Phenanthrene-d10a	9.116	188	626148	40.00 ppm	0.00
112) Naphthalene-d8a	5.895	136	775690	40.00 ppm	0.00
System Monitoring Compounds					
5) 2-Fluorophenol	0.000	112	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
8) Phenol-d5	0.000	99	0d	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
85) Terphenyl-d14	0.000	244	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
107) 1-chlorooctadecane	0.000	57	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
109) o-terphenyl	0.000	230	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
Target Compounds					Qvalue
102) Benzaldehyde	4.287	105	233921	49.20 ppm	98
110) Atrazine	8.822	215	83295	58.36 ppm	95

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

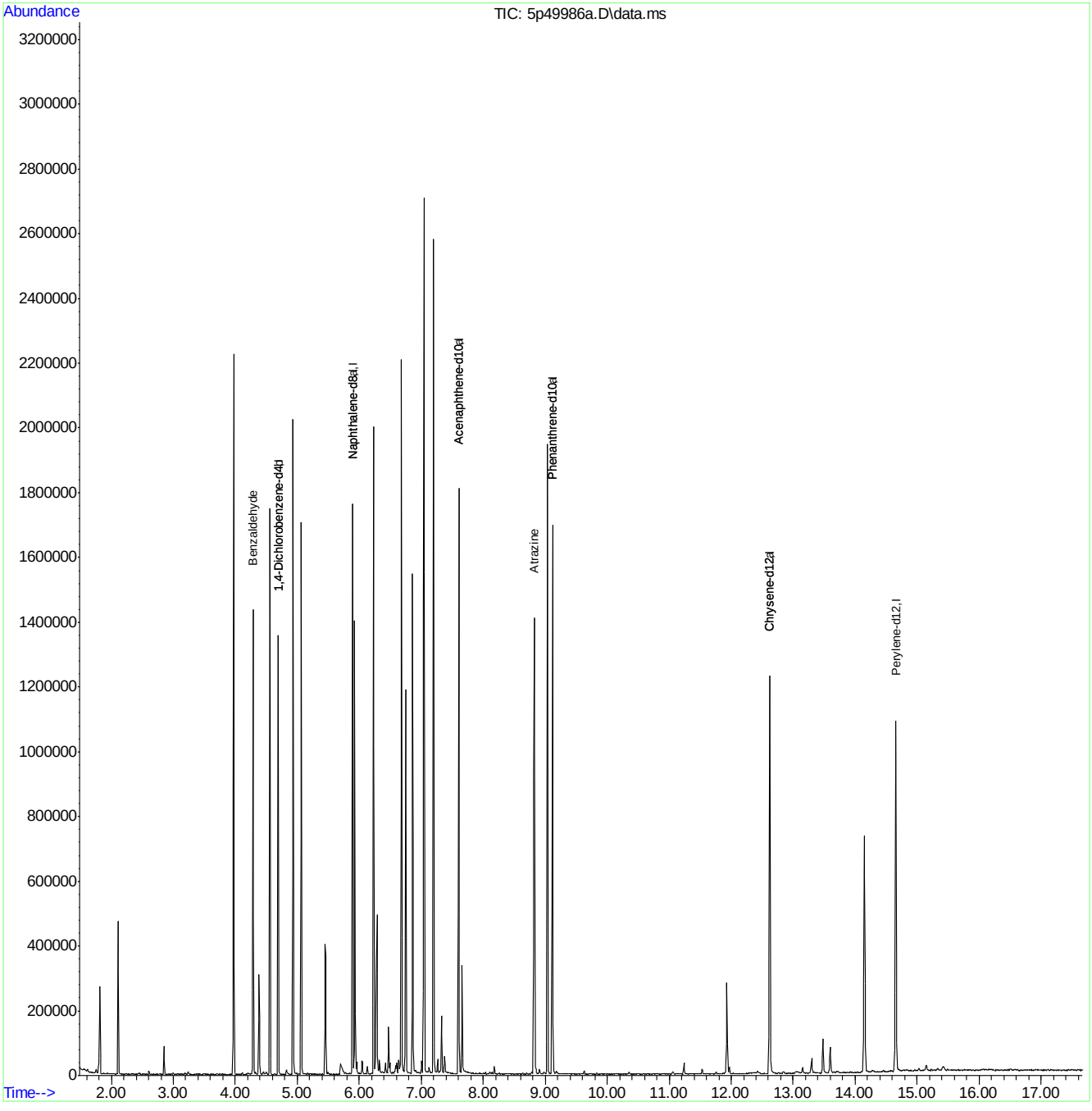
9.6.26

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49986a.D
Acq On : 7 May 2018 7:23 pm
Operator : johnb1
Sample : icv2386-50
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 08 10:11:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:55:14 2018
Response via : Initial Calibration



M5P2385.M Tue May 08 10:11:26 2018 RPT1 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49988.D
Acq On : 7 May 2018 8:13 pm
Operator : johnb1
Sample : icv2386-50
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 08 10:02:57 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:55:14 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.687	152	220134	40.00	ppm	0.00
24) Naphthalene-d8	5.895	136	808309	40.00	ppm	0.00
47) Acenaphthene-d10	7.604	164	392250	40.00	ppm	0.00
69) Phenanthrene-d10	9.116	188	719799	40.00	ppm	0.00
83) Chrysene-d12	12.626	240	663192	40.00	ppm	0.00
91) Perylene-d12	14.656	264	643342	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.687	152	220134	40.00	ppm	0.00
103) Acenaphthene-d10a	7.604	164	392250	40.00	ppm	0.00
105) Chrysene-d12a	12.626	240	663041	40.00	ppm	0.00
108) Phenanthrene-d10a	9.116	188	719799	40.00	ppm	0.00
112) Naphthalene-d8a	5.895	136	808309	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%			
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
113) Hydroquinone	6.295	110	297544	56.63	ppm	97

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

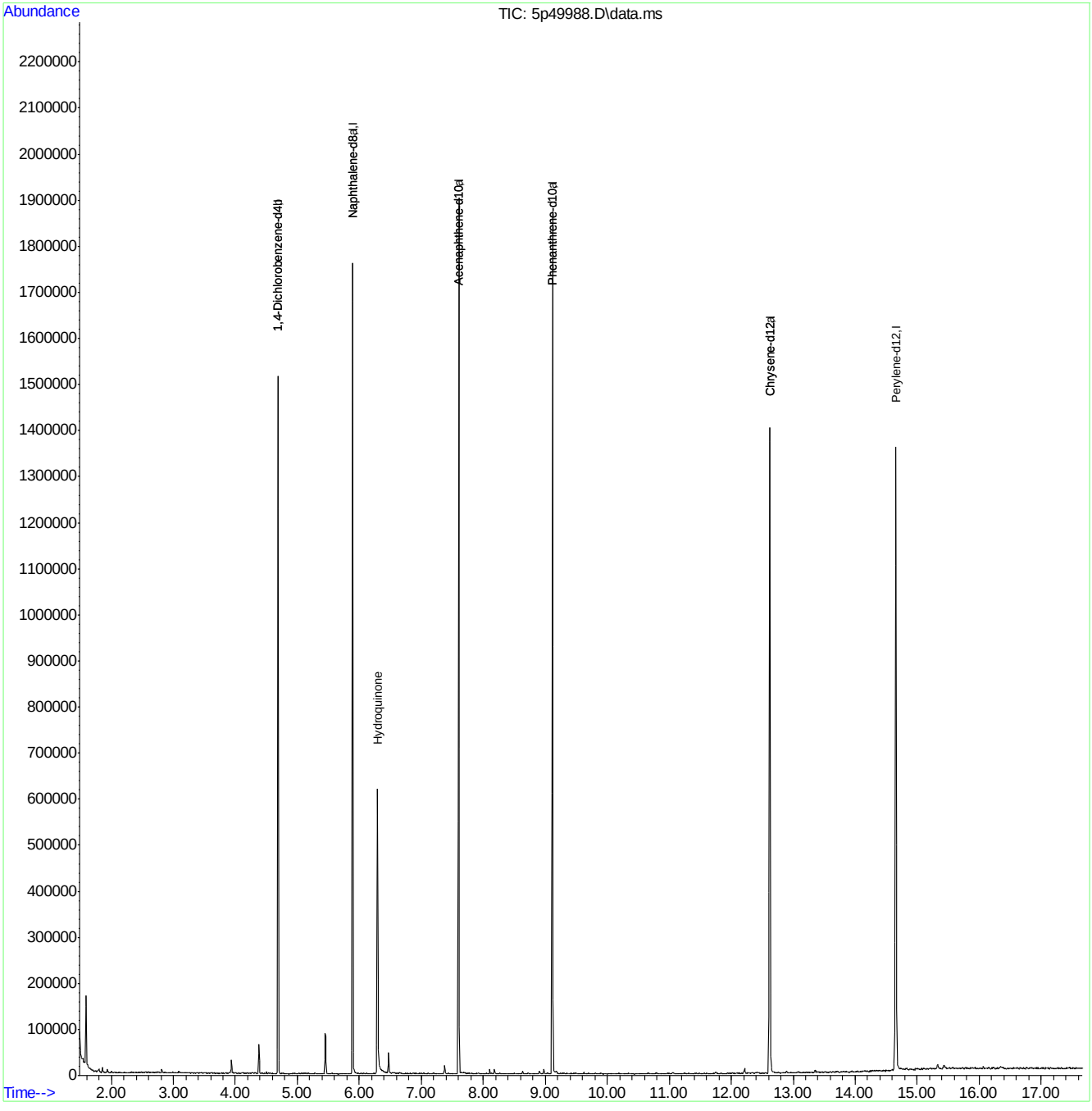
9.6.27

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2386\
Data File : 5p49988.D
Acq On : 7 May 2018 8:13 pm
Operator : johnb1
Sample : icv2386-50
Misc : op6115,e5p2386,1000,,,1,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 08 10:02:57 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2385.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 08 09:55:14 2018
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
05/15/18 22:36

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50255.D
Acq On : 15 May 2018 1:38 am
Operator : georges
Sample : ic2399-100
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 15 10:02:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 09:57:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.639	152	115157	40.00	ppm	-0.05
24) Naphthalene-d8	5.841	136	455118	40.00	ppm	-0.05
47) Acenaphthene-d10	7.546	164	273162	40.00	ppm	-0.06
69) Phenanthrene-d10	9.052	188	510370	40.00	ppm	-0.06
83) Chrysene-d12	12.551	240	478645	40.00	ppm	-0.07
91) Perylene-d12	14.576	264	556514	40.00	ppm	-0.08
101) 1,4-Dichlorobenzene-d4b	4.639	152	115157	40.00	ppm	-0.05
103) Acenaphthene-d10a	7.546	164	273162	40.00	ppm	-0.06
105) Chrysene-d12a	12.551	240	478645	40.00	ppm	-0.07
108) Phenanthrene-d10a	9.052	188	510370	40.00	ppm	-0.06
112) Naphthalene-d8a	5.841	136	455118	40.00	ppm	-0.05
System Monitoring Compounds						
5) 2-Fluorophenol	3.475	112	415620	113.64	ppm	-0.04
Spiked Amount 50.000			Recovery	=	227.28%	
8) Phenol-d5	4.324	99	508717	119.28	ppm	-0.03
Spiked Amount 50.000			Recovery	=	238.56%	
25) Nitrobenzene-d5	5.158	82	433508	120.39	ppm	-0.05
Spiked Amount 50.000			Recovery	=	240.78%	
51) 2-Fluorobiphenyl	6.894	172	847229	86.07	ppm	-0.05
Spiked Amount 50.000			Recovery	=	172.14%	
73) 2,4,6-Tribromophenol	8.326	330	214010	133.22	ppm	-0.05
Spiked Amount 50.000			Recovery	=	266.44%	
85) Terphenyl-d14	11.061	244	1165182	106.24	ppm	-0.07
Spiked Amount 50.000			Recovery	=	212.48%	
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.043	88	186720	120.26	ppm	94
3) Pyridine	2.326	79	428906	116.46	ppm	81
4) N-Nitrosodimethylamine	2.294	74	256188	121.28	ppm	80
6) Indene	4.874	116	608474	104.24	ppm	98
7) Cumene	3.918	105	973319	110.27	ppm	97
9) Phenol	4.340	94	522654	109.01	ppm	62
10) Aniline	4.340	93	504981	97.69	ppm	100
11) bis(2-Chloroethyl)ether	4.399	93	334906	109.91	ppm	100
12) 2-Chlorophenol	4.452	128	399701	106.34	ppm	93
13) Decane	4.500	43	462422	123.52	ppm	94
14) 1,3-Dichlorobenzene	4.586	146	427121	92.69	ppm	99
15) 1,4-Dichlorobenzene	4.655	146	412318	91.40	ppm	99
16) Benzyl alcohol	4.778	108	276645	116.86	ppm	89
17) 1,2-Dichlorobenzene	4.794	146	394321	90.42	ppm	96
18) Acetophenone	5.019	105	571610	115.41	ppm	93
19) 2-Methylphenol	4.890	108	345201	110.83	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.901	45	561343	126.72	ppm	92
21) 3&4-Methylphenol	5.035	108	363687	111.43	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50255.D
Acq On : 15 May 2018 1:38 am
Operator : georges
Sample : ic2399-100
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 15 10:02:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 09:57:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	5.029	70	253049	115.57	ppm		93
23) Hexachloroethane	5.109	201	177735	121.42	ppm		97
26) Nitrobenzene	5.179	77	405038	115.56	ppm		90
27) Quinoline	6.199	129	817234	105.42	ppm		96
28) Isophorone	5.409	82	759522	118.89	ppm		95
29) 2-Nitrophenol	5.478	139	227624	104.08	ppm		87
30) 2,4-Dimethylphenol	5.537	107	391543	112.84	ppm		92
31) Benzoic acid	5.697	105	373646	144.90	ppm		92
32) bis(2-Chloroethoxy)met...	5.617	93	390380	108.39	ppm		99
33) 2,4-Dichlorophenol	5.718	162	348195	99.95	ppm		97
34) 2,6-Dichlorophenol	5.932	162	326557	100.73	ppm		99
35) 1,3,5-Trichlorobenzene	5.494	180	387437	96.07	ppm		95
36) 1,2,4-Trichlorobenzene	5.788	180	394654	102.50	ppm		98
37) 1,2,3-Trichlorobenzene	6.002	180	359081	98.08	ppm		96
38) Naphthalene	5.863	128	1055203	96.01	ppm		99
39) 4-Chloroaniline	5.922	127	467475	97.80	ppm		92
40) 2,3-Dichloroaniline	6.808	161	425447	100.35	ppm		95
41) Caprolactam	6.279	55	261667m	143.67	ppm		
42) Hexachlorobutadiene	5.991	225	236836	125.86	ppm		99
43) 4-Chloro-3-methylphenol	6.413	107	376727	121.88	ppm		85
44) 2-Methylnaphthalene	6.531	141	636862	91.16	ppm		95
45) 1-Methylnaphthalene	6.627	141	654543	89.81	ppm		96
46) Dimethylnaphthalene	7.145	156	694904	96.90	ppm		97
48) Hexachlorocyclopentadiene	6.696	237	538880	267.18	ppm		94
49) 2,4,6-Trichlorophenol	6.819	196	246163	94.72	ppm		87
50) 2,4,5-Trichlorophenol	6.856	196	274858	101.20	ppm		89
52) 2-Chloronaphthalene	7.006	162	696174	83.78	ppm		99
53) Biphenyl	6.990	154	987656	89.17	ppm		98
54) 2-Nitroaniline	7.113	65	252407	127.26	ppm	#	75
55) Dimethylphthalate	7.300	163	893029	95.44	ppm		98
56) Acenaphthylene	7.407	152	1090376	80.68	ppm		97
57) 2,6-Dinitrotoluene	7.348	165	207437	110.31	ppm		85
58) 3-Nitroaniline	7.513	138	243430	100.61	ppm		85
59) Acenaphthene	7.578	153	743474	88.96	ppm		96
60) 2,4-Dinitrophenol	7.615	184	272015	265.01	ppm		75
61) 4-Nitrophenol	7.706	109	141966	138.30	ppm	#	76
62) Dibenzofuran	7.749	168	987396	83.95	ppm		98
63) 2,4-Dinitrotoluene	7.743	165	263878	105.81	ppm		92
64) 2,3,4,6-Tetrachlorophenol	7.877	232	281228	130.86	ppm		95
65) Diethylphthalate	7.989	149	838643	89.04	ppm		97
66) Fluorene	8.085	166	804752	87.05	ppm		99
67) 4-Chlorophenyl-phenyle...	8.085	204	410435	102.06	ppm		91
68) 4-Nitroaniline	8.123	138	216755	90.61	ppm		76
70) 4,6-Dinitro-2-methylph...	8.149	198	200279	125.82	ppm		88
71) n-Nitrosodiphenylamine	8.208	169	614777	82.84	ppm		97
72) 1,2-Diphenylhydrazine	8.245	77	774445	93.01	ppm		96
74) 4-Bromophenyl-phenylether	8.577	248	321059	122.43	ppm		85
75) Hexachlorobenzene	8.646	284	358170	108.64	ppm		87
76) Pentachlorophenol	8.860	266	451824	238.39	ppm		94
77) Phenanthrene	9.079	178	1217390	88.17	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50255.D
Acq On : 15 May 2018 1:38 am
Operator : georges
Sample : ic2399-100
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 15 10:02:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 09:57:35 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Anthracene	9.138	178	1234359	87.27	ppm	99
79)	Carbazole	9.325	167	1195881	84.93	ppm	99
80)	Di-n-butylphthalate	9.763	149	1495257	85.28	ppm	99
81)	Fluoranthene	10.521	202	1546528	101.56	ppm	98
82)	Octadecane	8.967	57	635983	99.45	ppm	96
84)	Pyrene	10.820	202	1548467	87.29	ppm	99
86)	Butylbenzylphthalate	11.793	149	698555	81.82	ppm	91
87)	Benzo[a]anthracene	12.535	228	1414865	93.83	ppm	98
88)	3,3'-Dichlorobenzidine	12.535	252	616652	103.35	ppm	97
89)	Chrysene	12.594	228	1342987	95.13	ppm	99
90)	bis(2-Ethylhexyl)phtha...	12.690	149	858409	78.26	ppm	97
92)	Di-n-octylphthalate	13.646	149	1590085	76.93	ppm	97
93)	Benzo[b]fluoranthene	14.074	252	1598681	92.52	ppm	97
94)	Benzo[k]fluoranthene	14.122	252	1260473	80.76	ppm	97
95)	Benzo[a]pyrene	14.506	252	1443070	92.11	ppm	95
96)	Indeno[1,2,3-cd]pyrene	16.066	276	1511363	103.32	ppm	80
97)	Dibenz(a,h)acridine	15.730	279	1337224	101.49	ppm	98
98)	Dibenz[a,h]anthracene	16.109	278	1424215	98.18	ppm	91
99)	7,12-Dimethylbenz(a)an...	14.084	256	674210	92.62	ppm	97
100)	Benzo[g,h,i]perylene	16.488	276	1396809	97.35	ppm	87

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

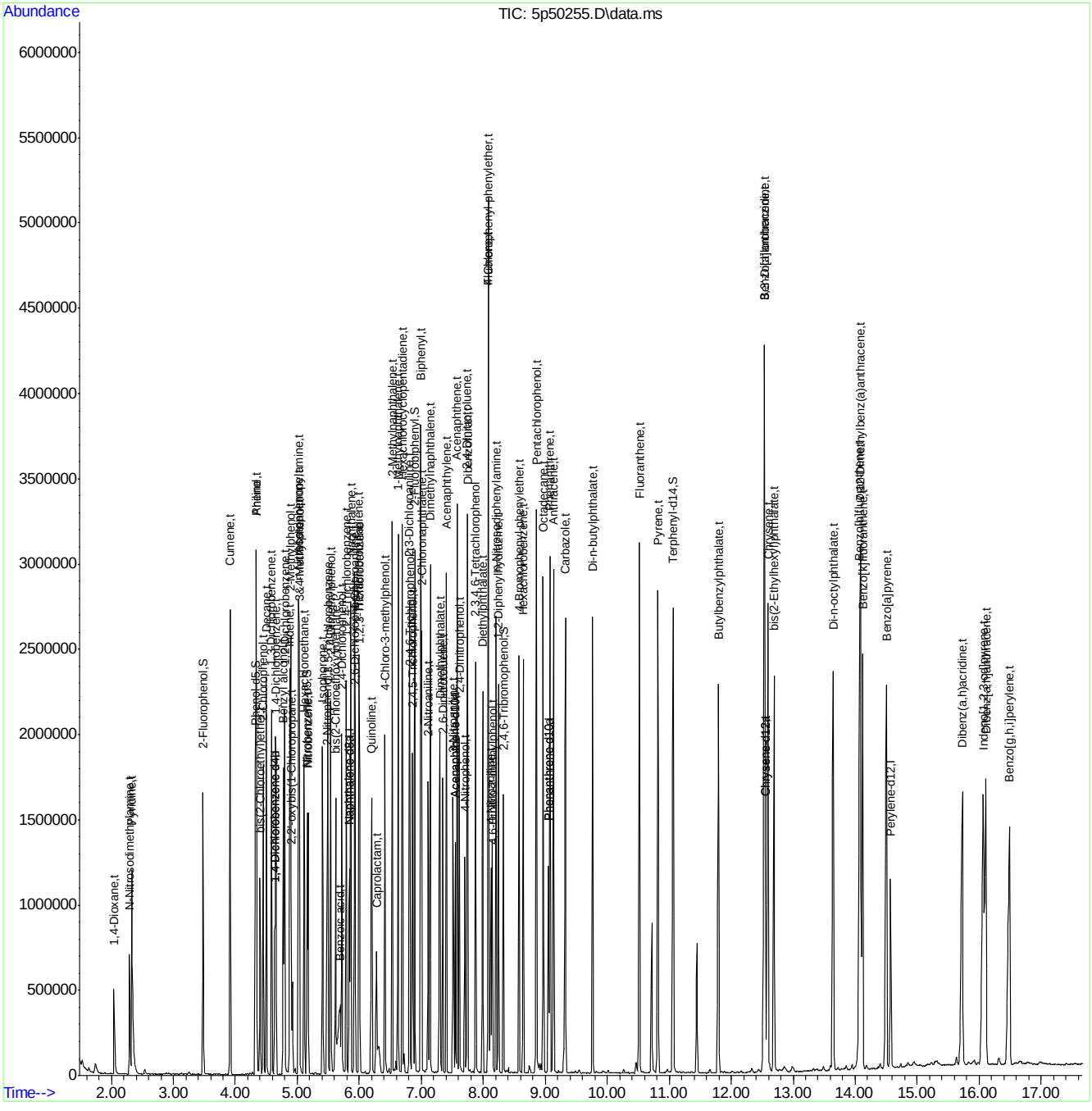
9.6.28

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50255.D
Acq On : 15 May 2018 1:38 am
Operator : georges
Sample : ic2399-100
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 15 10:02:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 09:57:35 2018
Response via : Initial Calibration



Manual Integration Approval Summary

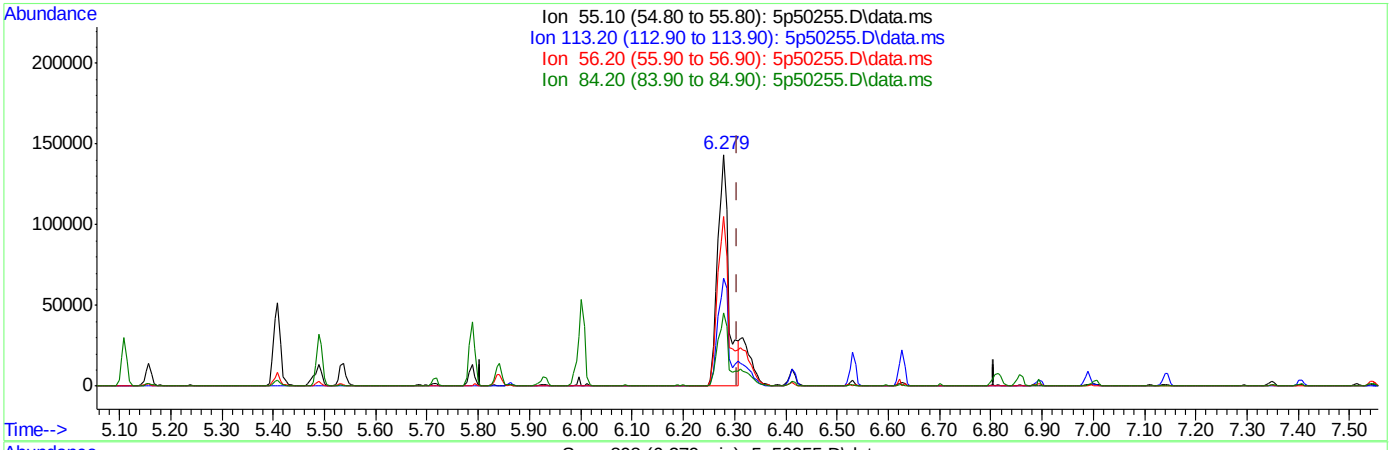
Sample Number:	E5P2399-IC2399	**Method:**	SW846 8270D
Lab FileID:	5P50255.D	**Analyst approved:**	05/15/18 10:41 Sean Block
Injection Time:	05/15/18 01:38	**Supervisor approved:**	05/15/18 22:36 Nina Pandya

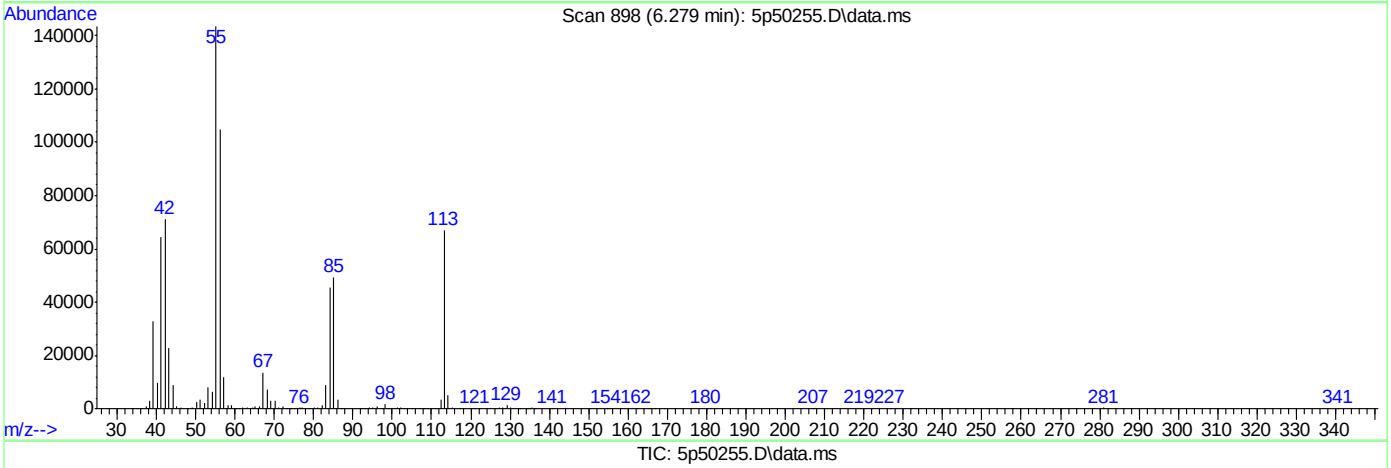
Parameter	CAS	Sig#	R.T. (min.)	Reason
Caprolactam	105-60-2		6.28	Split peak

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50255.D
Acq On    : 15 May 2018   1:38 am
Operator  : georges
Sample    : ic2399-100
Misc      : op6115,e5p2399,1000,,,1,1
ALS Vial  : 2   Sample Multiplier: 1

Quant Time: May 15 09:58:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title  : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 09:57:35 2018
Response via : Initial Calibration
```





TIC: 5p50255.D\data.ms

(41) Caprolactam (t)

6.279min (-0.027) 117.35ppm

response 213725

Ion	Exp%	Act%
55.10	100	100
113.20	65.10	45.67
56.20	74.40	72.45
84.20	36.20	31.23

9.6.28.2

9

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50255.D
Acq On    : 15 May 2018   1:38 am
Operator  : georges
Sample    : ic2399-100
Misc      : op6115,e5p2399,1000,,,1,1
ALS Vial  : 2   Sample Multiplier: 1

Quant Time: May 15 09:58:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title  : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 09:57:35 2018
Response via : Initial Calibration
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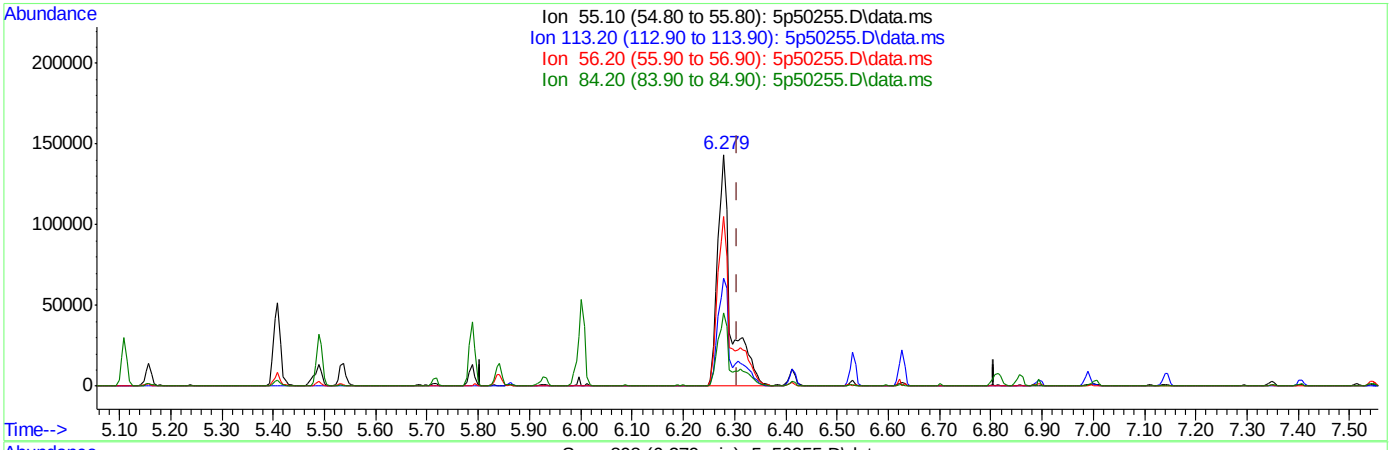
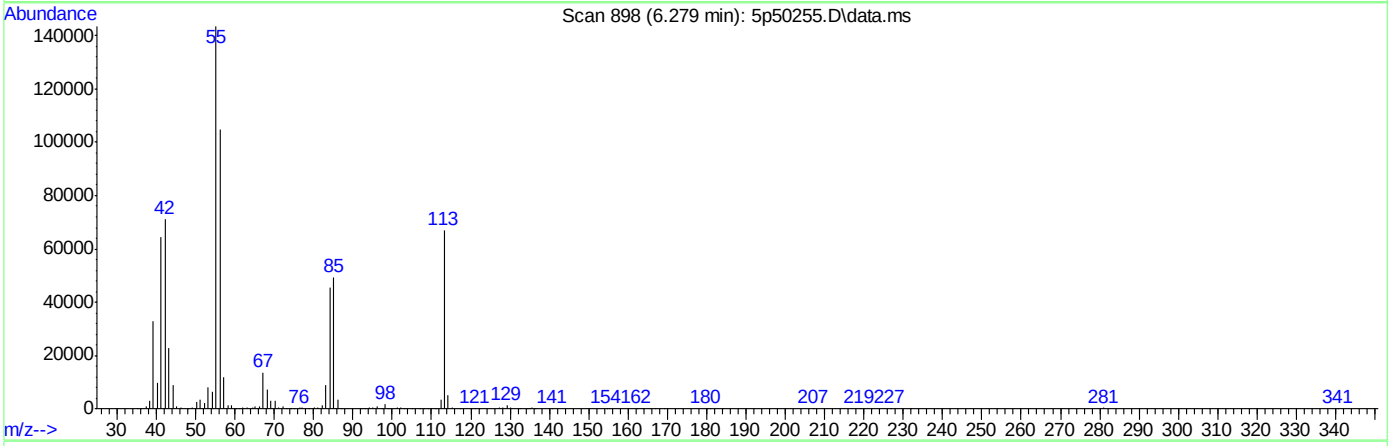




TIC: 5p50255.D\data.ms

(41) Caprolactam (t)

6.279min (-0.027) 143.67ppm m

response 261667

Ion	Exp%	Act%
55.10	100	100
113.20	65.10	46.64
56.20	74.40	73.16
84.20	36.20	31.54

9.6.28.3

9

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
05/15/18 22:36

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50256.D
Acq On : 15 May 2018 2:03 am
Operator : georges
Sample : ic2399-80
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 15 10:02:16 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 09:57:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.634	152	113926	40.00	ppm	-0.05
24) Naphthalene-d8	5.836	136	453033	40.00	ppm	-0.06
47) Acenaphthene-d10	7.546	164	267189	40.00	ppm	-0.06
69) Phenanthrene-d10	9.047	188	489987	40.00	ppm	-0.07
83) Chrysene-d12	12.546	240	468966	40.00	ppm	-0.08
91) Perylene-d12	14.571	264	541776	40.00	ppm	-0.09
101) 1,4-Dichlorobenzene-d4b	4.634	152	113926	40.00	ppm	-0.05
103) Acenaphthene-d10a	7.546	164	267189	40.00	ppm	-0.06
105) Chrysene-d12a	12.546	240	468563	40.00	ppm	-0.07
108) Phenanthrene-d10a	9.047	188	489987	40.00	ppm	-0.07
112) Naphthalene-d8a	5.836	136	453033	40.00	ppm	-0.06
System Monitoring Compounds						
5) 2-Fluorophenol	3.475	112	320232	88.50	ppm	-0.04
Spiked Amount 50.000			Recovery	=	177.00%	
8) Phenol-d5	4.324	99	401760	95.22	ppm	-0.03
Spiked Amount 50.000			Recovery	=	190.44%	
25) Nitrobenzene-d5	5.152	82	338860	94.54	ppm	-0.05
Spiked Amount 50.000			Recovery	=	189.08%	
51) 2-Fluorobiphenyl	6.894	172	672235	69.82	ppm	-0.05
Spiked Amount 50.000			Recovery	=	139.64%	
73) 2,4,6-Tribromophenol	8.320	330	168501	109.25	ppm	-0.06
Spiked Amount 50.000			Recovery	=	218.50%	
85) Terphenyl-d14	11.061	244	935581	87.07	ppm	-0.07
Spiked Amount 50.000			Recovery	=	174.14%	
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.048	88	141185	91.91	ppm	99
3) Pyridine	2.326	79	339707	93.24	ppm	79
4) N-Nitrosodimethylamine	2.294	74	200134	95.77	ppm	81
6) Indene	4.874	116	489995	84.85	ppm	98
7) Cumene	3.918	105	793282	90.84	ppm	96
9) Phenol	4.335	94	416563	87.82	ppm	61
10) Aniline	4.340	93	412216	80.61	ppm	69
11) bis(2-Chloroethyl)ether	4.399	93	265771	88.17	ppm	100
12) 2-Chlorophenol	4.447	128	320355	86.15	ppm	90
13) Decane	4.500	43	380002	102.60	ppm	95
14) 1,3-Dichlorobenzene	4.586	146	342723	75.18	ppm	98
15) 1,4-Dichlorobenzene	4.650	146	336734	75.45	ppm	99
16) Benzyl alcohol	4.773	108	218338	93.22	ppm	85
17) 1,2-Dichlorobenzene	4.794	146	319558	74.07	ppm	96
18) Acetophenone	5.013	105	452976	92.45	ppm	96
19) 2-Methylphenol	4.890	108	273709	88.83	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.896	45	457985m	104.51	ppm	
21) 3&4-Methylphenol	5.029	108	290347	89.92	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50256.D
Acq On : 15 May 2018 2:03 am
Operator : georges
Sample : ic2399-80
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 15 10:02:16 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 09:57:35 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22)	n-Nitroso-di-n-propyla...	5.024	70	203721	94.05	ppm		87
23)	Hexachloroethane	5.109	201	144531	99.81	ppm		95
26)	Nitrobenzene	5.174	77	318953	91.42	ppm		88
27)	Quinoline	6.194	129	650109	84.25	ppm		96
28)	Isophorone	5.403	82	601788	94.63	ppm		92
29)	2-Nitrophenol	5.478	139	183712	84.39	ppm		85
30)	2,4-Dimethylphenol	5.532	107	313554	90.78	ppm		90
31)	Benzoic acid	5.681	105	292208	113.84	ppm		92
32)	bis(2-Chloroethoxy)met...	5.612	93	311622	86.92	ppm		98
33)	2,4-Dichlorophenol	5.713	162	280771	80.96	ppm		96
34)	2,6-Dichlorophenol	5.927	162	261631	81.08	ppm		97
35)	1,3,5-Trichlorobenzene	5.489	180	326401	81.31	ppm		98
36)	1,2,4-Trichlorobenzene	5.788	180	317297	82.79	ppm		98
37)	1,2,3-Trichlorobenzene	6.002	180	290610	79.74	ppm		96
38)	Naphthalene	5.857	128	845784	77.31	ppm		98
39)	4-Chloroaniline	5.921	127	370843	77.94	ppm		94
40)	2,3-Dichloroaniline	6.808	161	347377	82.31	ppm		97
41)	Caprolactam	6.274	55	199880	110.25	ppm		90
42)	Hexachlorobutadiene	5.991	225	194813	104.00	ppm		99
43)	4-Chloro-3-methylphenol	6.408	107	299142	97.23	ppm		82
44)	2-Methylnaphthalene	6.531	141	510644	73.43	ppm		97
45)	1-Methylnaphthalene	6.627	141	541050	74.58	ppm		98
46)	Dimethylnaphthalene	7.140	156	554483	77.67	ppm		98
48)	Hexachlorocyclopentadiene	6.691	237	437204	221.61	ppm		96
49)	2,4,6-Trichlorophenol	6.814	196	201956	79.45	ppm		87
50)	2,4,5-Trichlorophenol	6.856	196	223810	84.25	ppm		93
52)	2-Chloronaphthalene	7.006	162	555635	68.36	ppm		99
53)	Biphenyl	6.990	154	791440	73.05	ppm		99
54)	2-Nitroaniline	7.107	65	202175	104.21	ppm	#	72
55)	Dimethylphthalate	7.294	163	706907	77.24	ppm		99
56)	Acenaphthylene	7.407	152	887338	67.12	ppm		99
57)	2,6-Dinitrotoluene	7.348	165	162589	88.39	ppm		83
58)	3-Nitroaniline	7.513	138	190858	80.64	ppm		89
59)	Acenaphthene	7.578	153	606599	74.20	ppm		97
60)	2,4-Dinitrophenol	7.615	184	213655	214.55	ppm		92
61)	4-Nitrophenol	7.700	109	111572	111.12	ppm	#	79
62)	Dibenzofuran	7.749	168	800813	69.61	ppm		94
63)	2,4-Dinitrotoluene	7.738	165	220729	90.49	ppm		80
64)	2,3,4,6-Tetrachlorophenol	7.877	232	218000	103.71	ppm		92
65)	Diethylphthalate	7.989	149	675536	73.32	ppm		95
66)	Fluorene	8.080	166	661948	73.20	ppm		99
67)	4-Chlorophenyl-phenyle...	8.085	204	333386	84.76	ppm		90
68)	4-Nitroaniline	8.117	138	175785	75.12	ppm		85
70)	4,6-Dinitro-2-methylph...	8.144	198	157174	102.04	ppm		95
71)	n-Nitrosodiphenylamine	8.208	169	495257	69.51	ppm		99
72)	1,2-Diphenylhydrazine	8.240	77	624305	78.10	ppm		98
74)	4-Bromophenyl-phenylether	8.577	248	256647	101.94	ppm	#	81
75)	Hexachlorobenzene	8.641	284	286425	90.50	ppm		90
76)	Pentachlorophenol	8.860	266	363519	199.78	ppm		95
77)	Phenanthrene	9.079	178	988412	74.56	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50256.D
Acq On : 15 May 2018 2:03 am
Operator : georges
Sample : ic2399-80
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 15 10:02:16 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 09:57:35 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
78)	Anthracene	9.132	178	1006348	74.11 ppm	99
79)	Carbazole	9.324	167	958047	70.87 ppm	99
80)	Di-n-butylphthalate	9.763	149	1195818	71.04 ppm	99
81)	Fluoranthene	10.516	202	1262072	86.33 ppm	98
82)	Octadecane	8.967	57	522244	85.06 ppm	96
84)	Pyrene	10.815	202	1260194	72.51 ppm	99
86)	Butylbenzylphthalate	11.793	149	547068	65.40 ppm	92
87)	Benzo[a]anthracene	12.530	228	1136134	76.90 ppm	100
88)	3,3'-Dichlorobenzidine	12.530	252	504981	86.38 ppm	97
89)	Chrysene	12.589	228	1070444	77.39 ppm	99
90)	bis(2-Ethylhexyl)phtha...	12.685	149	684097	63.66 ppm	97
92)	Di-n-octylphthalate	13.641	149	1288804	64.05 ppm	96
93)	Benzo[b]fluoranthene	14.074	252	1267295	75.34 ppm	97
94)	Benzo[k]fluoranthene	14.116	252	1105373	72.75 ppm	96
95)	Benzo[a]pyrene	14.501	252	1147216	75.22 ppm	96
96)	Indeno[1,2,3-cd]pyrene	16.061	276	1197623	84.10 ppm	82
97)	Dibenz(a,h)acridine	15.719	279	1087119	84.75 ppm	98
98)	Dibenz[a,h]anthracene	16.098	278	1157928	82.00 ppm	92
99)	7,12-Dimethylbenz(a)an...	14.079	256	561228	79.20 ppm	96
100)	Benzo[g,h,i]perylene	16.483	276	1137298	81.42 ppm	87

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

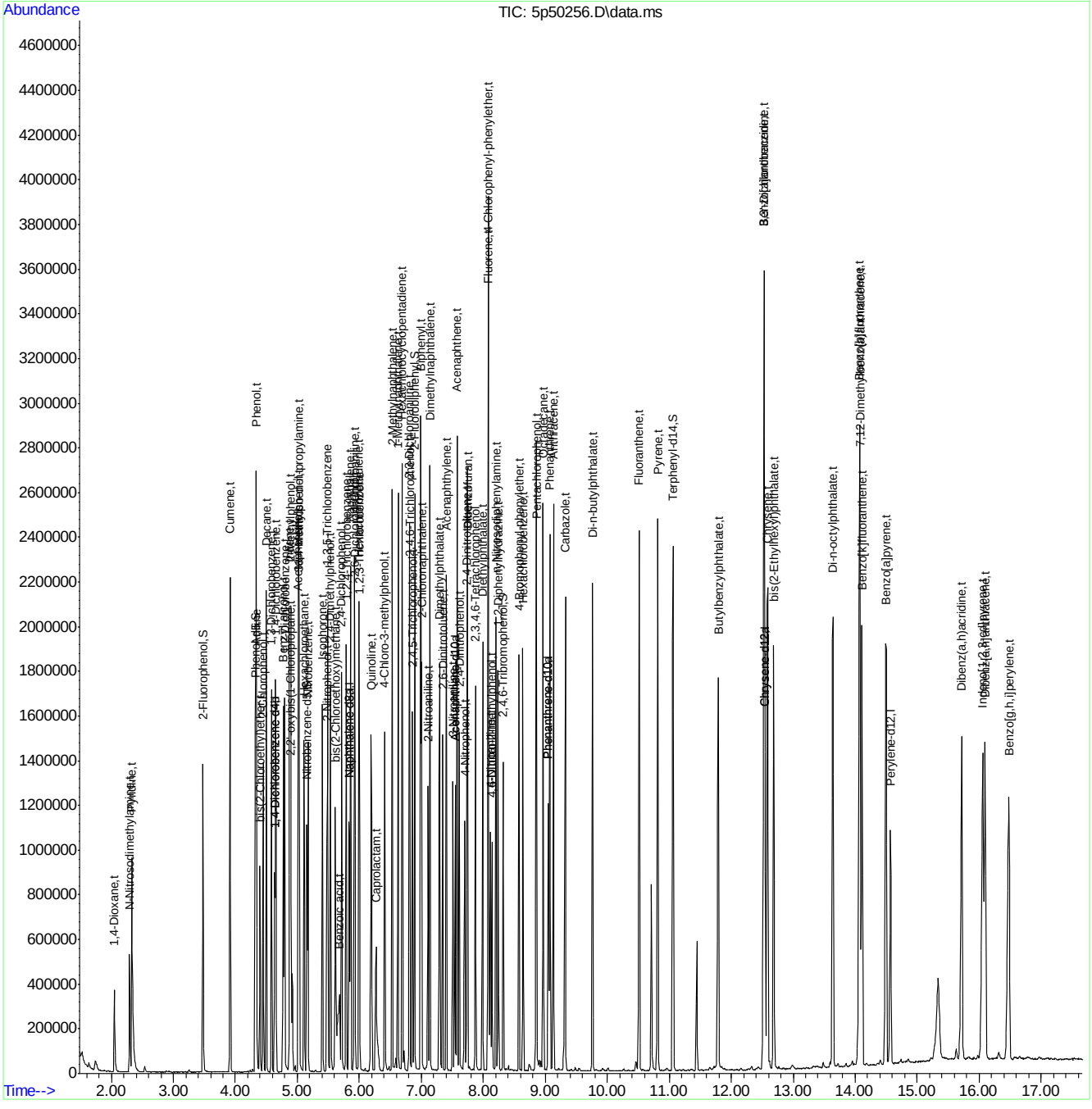
9.6.29

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50256.D
Acq On : 15 May 2018 2:03 am
Operator : georges
Sample : ic2399-80
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 15 10:02:16 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 09:57:35 2018
Response via : Initial Calibration



Manual Integration Approval Summary

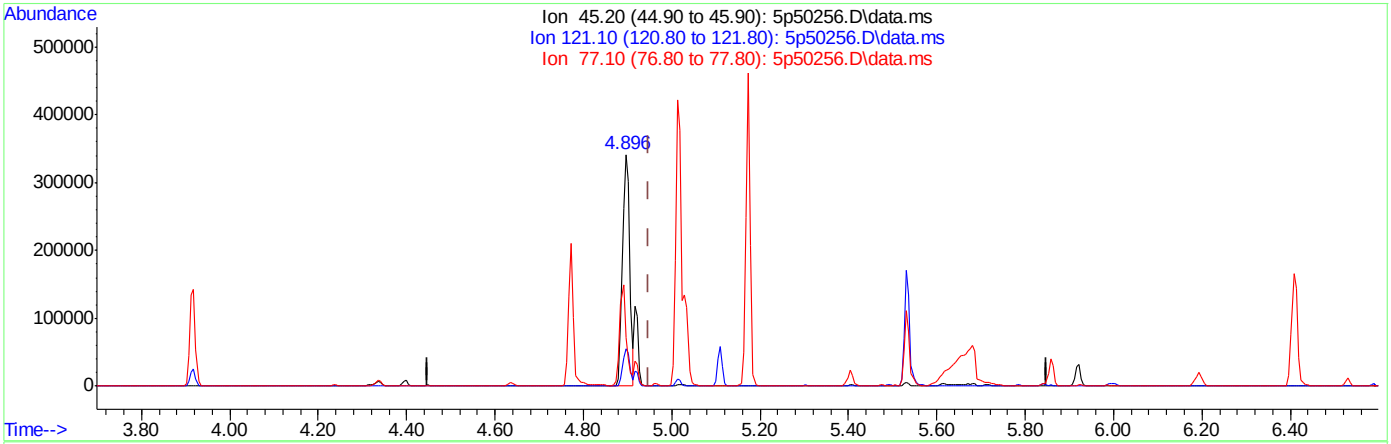
Sample Number:	E5P2399-IC2399	**Method:**	SW846 8270D
Lab FileID:	5P50256.D	**Analyst approved:**	05/15/18 10:41 Sean Block
Injection Time:	05/15/18 02:03	**Supervisor approved:**	05/15/18 22:36 Nina Pandya

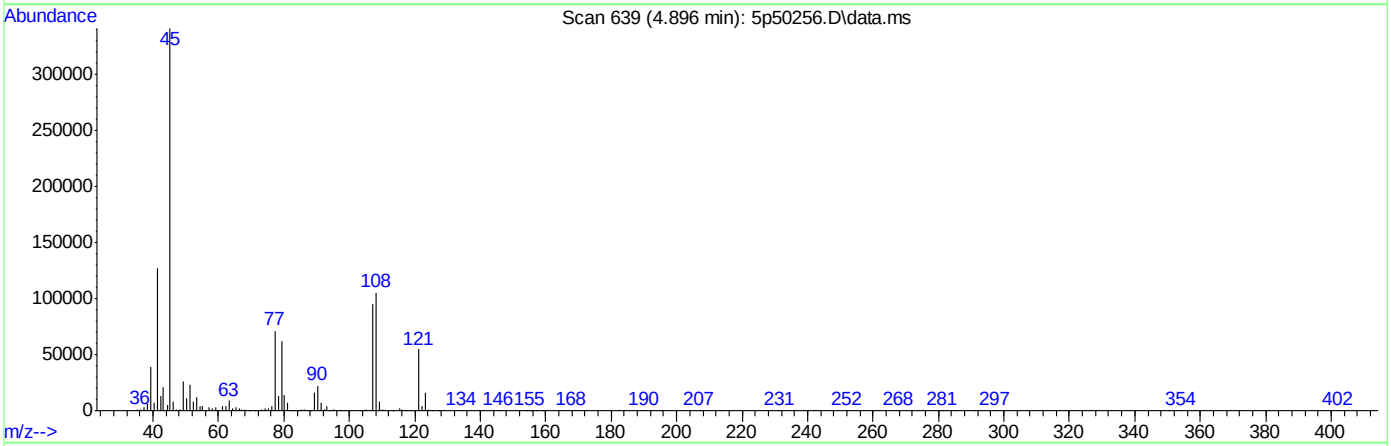
Parameter	CAS	Sig#	R.T. (min.)	Reason
2,2'-Oxybis(1-chloropropane)	108-60-1		4.90	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50256.D
Acq On : 15 May 2018 2:03 am
Operator : georges
Sample : ic2399-80
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 15 09:59:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 09:57:35 2018
Response via : Initial Calibration





TIC: 5p50256.D\data.ms

(20) 2,2'-oxybis(1-Chloropropane (t)

4.896min (-0.053) 86.50ppm

response 379090

Ion	Exp%	Act%
45.20	100	100
121.10	20.10	16.02
77.10	10.80	19.64
0.00	0.00	0.00

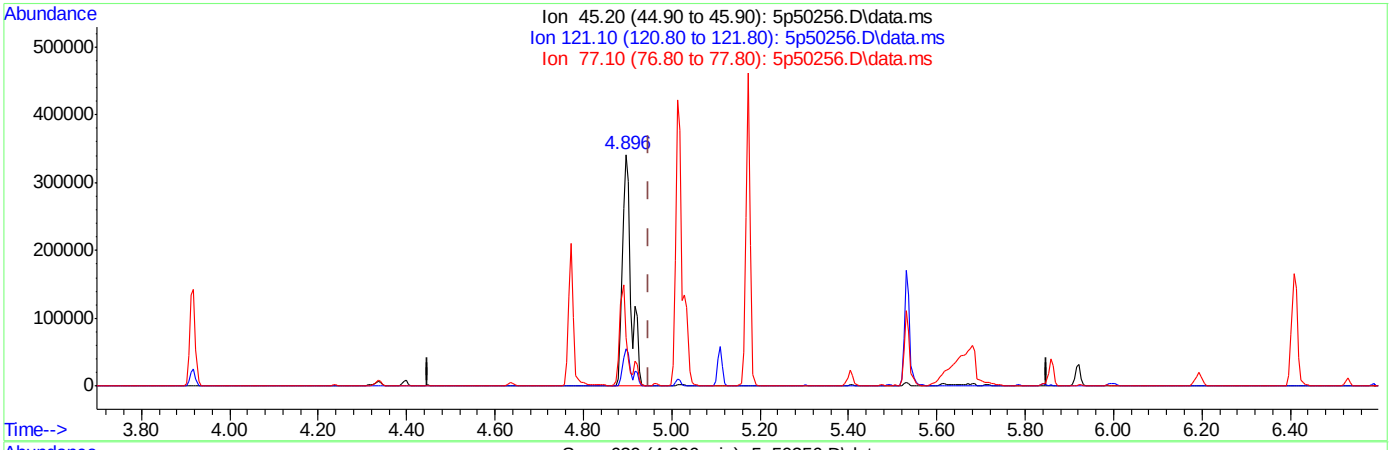
9.6.29.2

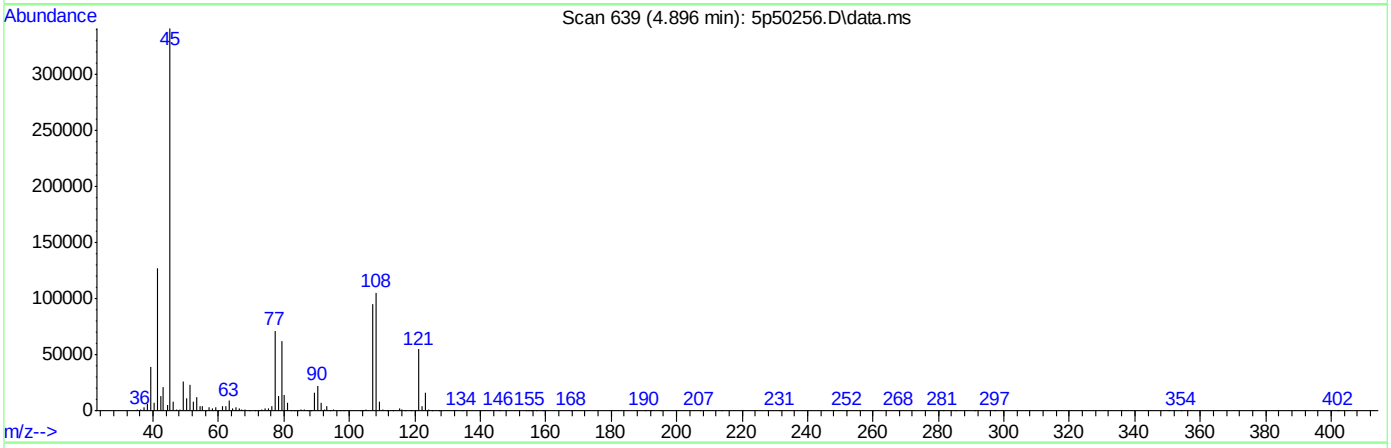
9

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50256.D
Acq On    : 15 May 2018   2:03 am
Operator  : georges
Sample    : ic2399-80
Misc      : op6115,e5p2399,1000,,,1,1
ALS Vial  : 3   Sample Multiplier: 1

Quant Time: May 15 09:59:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title  : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 09:57:35 2018
Response via : Initial Calibration
```





TIC: 5p50256.D\data.ms

(20) 2,2'-oxybis(1-Chloropropane (t)

4.896min (-0.053) 104.51ppm m

response 457985

Ion	Exp%	Act%
45.20	100	100
121.10	20.10	16.05
77.10	10.80	20.84
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
05/15/18 22:36

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50257.D
Acq On : 15 May 2018 2:28 am
Operator : georges
Sample : icc2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 15 10:06:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.634	152	113086	40.00	ppm	0.00
24) Naphthalene-d8	5.836	136	465001	40.00	ppm	0.00
47) Acenaphthene-d10	7.545	164	280180	40.00	ppm	0.00
69) Phenanthrene-d10	9.047	188	520888	40.00	ppm	0.00
83) Chrysene-d12	12.546	240	508173	40.00	ppm	0.00
91) Perylene-d12	14.570	264	578467	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.634	152	113086	40.00	ppm	0.00
103) Acenaphthene-d10a	7.545	164	280180	40.00	ppm	0.00
105) Chrysene-d12a	12.546	240	508134	40.00	ppm	0.00
108) Phenanthrene-d10a	9.047	188	520888	40.00	ppm	0.00
112) Naphthalene-d8a	5.836	136	465001	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.475	112	213301	59.39	ppm	0.00
Spiked Amount 50.000			Recovery	=	118.78%	
8) Phenol-d5	4.319	99	274693	65.59	ppm	0.01
Spiked Amount 50.000			Recovery	=	131.18%	
25) Nitrobenzene-d5	5.152	82	225479	61.29	ppm	0.00
Spiked Amount 50.000			Recovery	=	122.58%	
51) 2-Fluorobiphenyl	6.894	172	463115	45.87	ppm	0.00
Spiked Amount 50.000			Recovery	=	91.74%	
73) 2,4,6-Tribromophenol	8.320	330	113344	69.13	ppm	0.00
Spiked Amount 50.000			Recovery	=	138.26%	
85) Terphenyl-d14	11.055	244	643447	55.26	ppm	0.00
Spiked Amount 50.000			Recovery	=	110.52%	
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.048	88	90610	59.43	ppm	99
3) Pyridine	2.331	79	232621	64.32	ppm	82
4) N-Nitrosodimethylamine	2.294	74	133523	64.37	ppm	76
6) Indene	4.874	116	326543	56.96	ppm	99
7) Cumene	3.918	105	522051	60.23	ppm	97
9) Phenol	4.329	94	285895	60.72	ppm	58
10) Aniline	4.335	93	277475	54.66	ppm	100
11) bis(2-Chloroethyl)ether	4.393	93	179535	60.00	ppm	100
12) 2-Chlorophenol	4.447	128	211667	57.34	ppm	89
13) Decane	4.500	43	259296	70.53	ppm	94
14) 1,3-Dichlorobenzene	4.586	146	231572	51.18	ppm	99
15) 1,4-Dichlorobenzene	4.650	146	229091	51.71	ppm	97
16) Benzyl alcohol	4.773	108	143278	61.63	ppm	85
17) 1,2-Dichlorobenzene	4.794	146	217299	50.74	ppm	96
18) Acetophenone	5.013	105	310932	63.93	ppm	92
19) 2-Methylphenol	4.885	108	182531	59.68	ppm	98
20) 2,2'-oxybis(1-Chloropr...	4.896	45	317605m	73.01	ppm	
21) 3&4-Methylphenol	5.029	108	195776	61.08	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50257.D
Acq On : 15 May 2018 2:28 am
Operator : georges
Sample : icc2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 15 10:06:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	5.019	70	140956	65.55	ppm		86
23) Hexachloroethane	5.109	201	94827	65.97	ppm		94
26) Nitrobenzene	5.168	77	218440	61.00	ppm		83
27) Quinoline	6.188	129	437716	55.26	ppm		97
28) Isophorone	5.398	82	406419	62.27	ppm		90
29) 2-Nitrophenol	5.473	139	123177	55.13	ppm		79
30) 2,4-Dimethylphenol	5.531	107	210413	59.35	ppm		90
31) Benzoic acid	5.665	105	189279	71.84	ppm		95
32) bis(2-Chloroethoxy)met...	5.612	93	208600	56.69	ppm		100
33) 2,4-Dichlorophenol	5.713	162	194264	54.58	ppm		97
34) 2,6-Dichlorophenol	5.927	162	178909	54.02	ppm		98
35) 1,3,5-Trichlorobenzene	5.489	180	221538	53.77	ppm		97
36) 1,2,4-Trichlorobenzene	5.788	180	216694	55.09	ppm		97
37) 1,2,3-Trichlorobenzene	6.002	180	199643	53.37	ppm		96
38) Naphthalene	5.857	128	570863	50.84	ppm		99
39) 4-Chloroaniline	5.916	127	257023	52.63	ppm		93
40) 2,3-Dichloroaniline	6.803	161	234412	54.11	ppm		97
41) Caprolactam	6.258	55	134739	72.41	ppm		90
42) Hexachlorobutadiene	5.991	225	127441	66.28	ppm		97
43) 4-Chloro-3-methylphenol	6.407	107	201855	63.92	ppm		86
44) 2-Methylnaphthalene	6.530	141	351778	49.28	ppm		97
45) 1-Methylnaphthalene	6.627	141	363081	48.76	ppm		97
46) Dimethylnaphthalene	7.139	156	381311	52.04	ppm		98
48) Hexachlorocyclopentadiene	6.691	237	297085	143.61	ppm		98
49) 2,4,6-Trichlorophenol	6.814	196	138150	51.83	ppm		83
50) 2,4,5-Trichlorophenol	6.851	196	149557	53.69	ppm		93
52) 2-Chloronaphthalene	7.000	162	384458	45.11	ppm		98
53) Biphenyl	6.984	154	538917	47.44	ppm		98
54) 2-Nitroaniline	7.107	65	134186	65.96	ppm	#	77
55) Dimethylphthalate	7.294	163	476987	49.70	ppm		99
56) Acenaphthylene	7.401	152	598373	43.16	ppm		97
57) 2,6-Dinitrotoluene	7.342	165	113473	58.83	ppm		86
58) 3-Nitroaniline	7.508	138	128090	51.61	ppm		84
59) Acenaphthene	7.577	153	413196	48.20	ppm		98
60) 2,4-Dinitrophenol	7.610	184	141481	137.98	ppm		71
61) 4-Nitrophenol	7.695	109	72197	68.57	ppm	#	78
62) Dibenzofuran	7.743	168	557968	46.25	ppm		99
63) 2,4-Dinitrotoluene	7.738	165	145794	57.00	ppm		88
64) 2,3,4,6-Tetrachlorophenol	7.871	232	149692	67.91	ppm		97
65) Diethylphthalate	7.983	149	453424	46.93	ppm		97
66) Fluorene	8.080	166	458666	48.37	ppm		100
67) 4-Chlorophenyl-phenyle...	8.085	204	229471	55.63	ppm		89
68) 4-Nitroaniline	8.112	138	121077	49.35	ppm		84
70) 4,6-Dinitro-2-methylph...	8.138	198	104253	63.17	ppm		94
71) n-Nitrosodiphenylamine	8.203	169	332276	43.87	ppm		98
72) 1,2-Diphenylhydrazine	8.240	77	423574	49.84	ppm		99
74) 4-Bromophenyl-phenylether	8.571	248	178634	66.75	ppm		87
75) Hexachlorobenzene	8.641	284	198952	59.13	ppm		88
76) Pentachlorophenol	8.854	266	248663	128.55	ppm		96
77) Phenanthrene	9.073	178	671964	47.68	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50257.D
Acq On : 15 May 2018 2:28 am
Operator : georges
Sample : icc2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 15 10:06:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Anthracene	9.132	178	689010	47.73	ppm	100
79)	Carbazole	9.319	167	657791	45.77	ppm	100
80)	Di-n-butylphthalate	9.762	149	819573	45.80	ppm	98
81)	Fluoranthene	10.516	202	862247	55.48	ppm	98
82)	Octadecane	8.966	57	365579	56.01	ppm	95
84)	Pyrene	10.810	202	869395	46.16	ppm	100
86)	Butylbenzylphthalate	11.787	149	372772	41.12	ppm	90
87)	Benzo[a]anthracene	12.524	228	786265	49.12	ppm	100
88)	3,3'-Dichlorobenzidine	12.524	252	357149	56.38	ppm	94
89)	Chrysene	12.583	228	745501	49.74	ppm	99
90)	bis(2-Ethylhexyl)phtha...	12.685	149	473547	40.66	ppm	98
92)	Di-n-octylphthalate	13.636	149	870037	40.50	ppm	96
93)	Benzo[b]fluoranthene	14.063	252	875118	48.72	ppm	96
94)	Benzo[k]fluoranthene	14.106	252	761519	46.94	ppm	97
95)	Benzo[a]pyrene	14.490	252	791301	48.59	ppm	96
96)	Indeno[1,2,3-cd]pyrene	16.050	276	806604	53.05	ppm	97
97)	Dibenz(a,h)acridine	15.714	279	735175	53.68	ppm	100
98)	Dibenz[a,h]anthracene	16.088	278	788494	52.29	ppm	91
99)	7,12-Dimethylbenz(a)an...	14.068	256	383015	50.62	ppm	98
100)	Benzo[g,h,i]perylene	16.467	276	775554	52.00	ppm	87

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

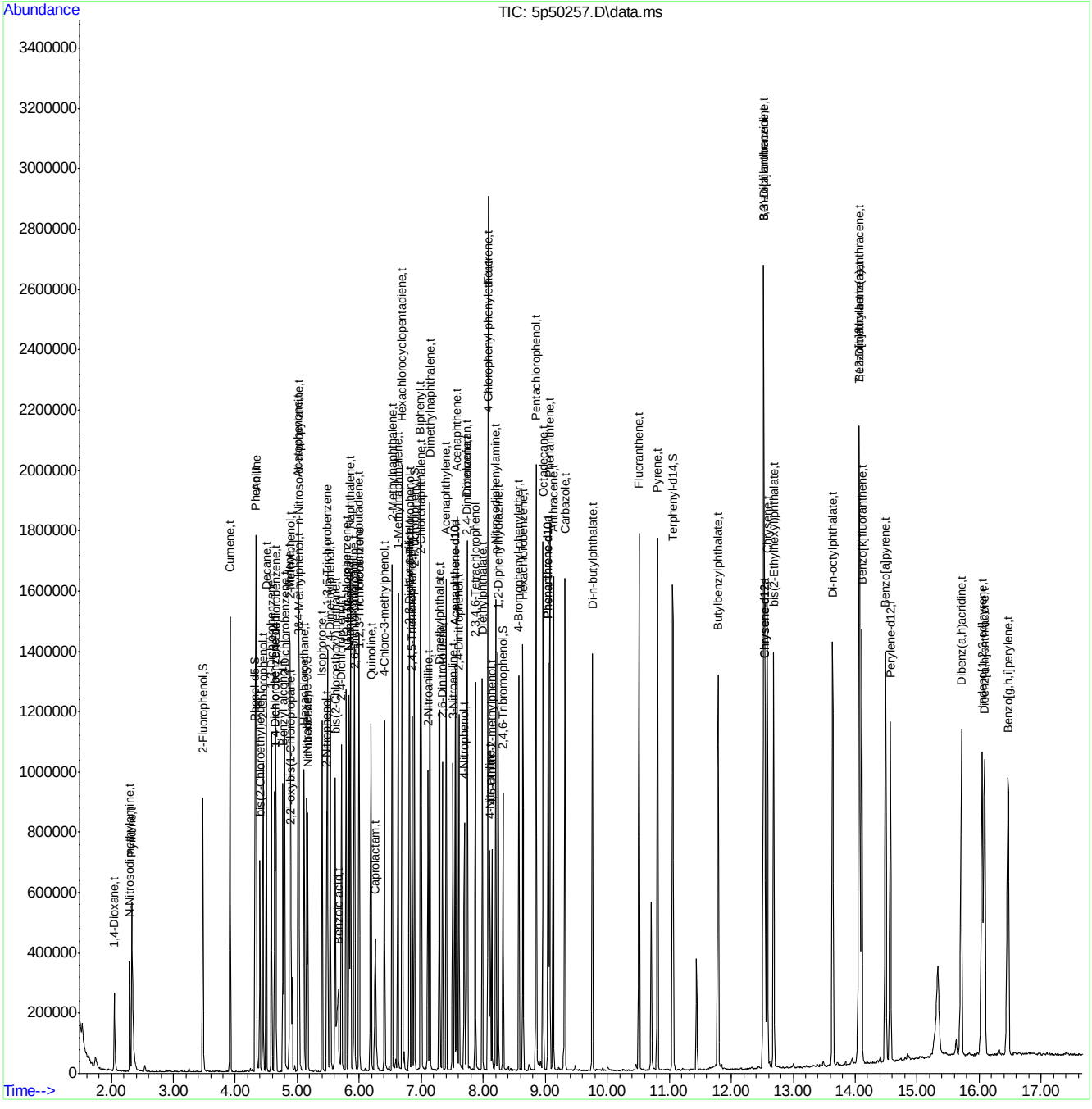
9.6.30

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50257.D
Acq On : 15 May 2018 2:28 am
Operator : georges
Sample : icc2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 15 10:06:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration



Manual Integration Approval Summary

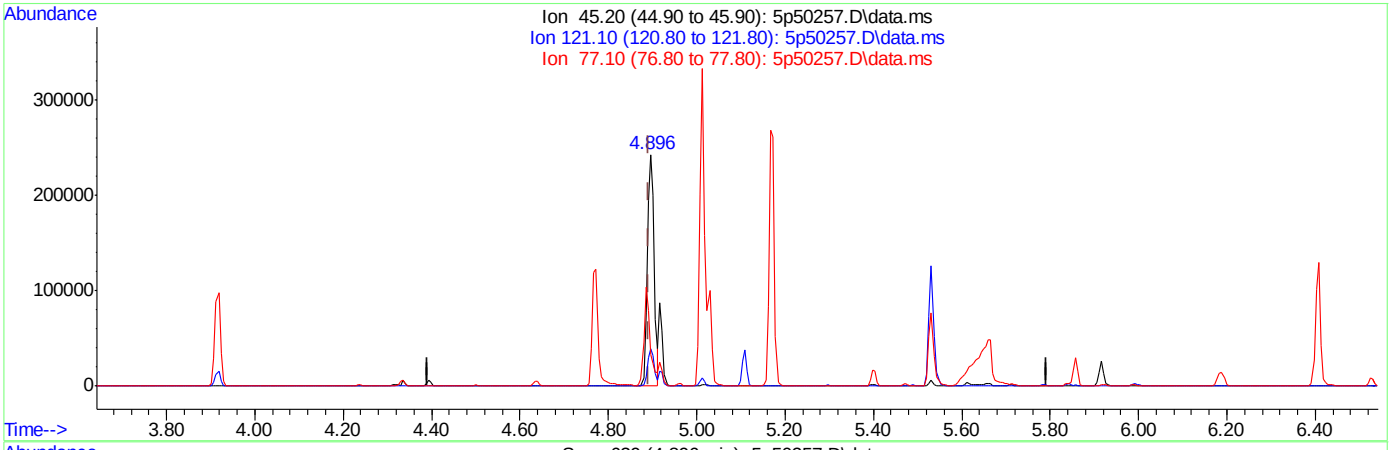
Sample Number:	E5P2399-ICC2399	**Method:**	SW846 8270D
Lab FileID:	5P50257.D	**Analyst approved:**	05/15/18 10:41 Sean Block
Injection Time:	05/15/18 02:28	**Supervisor approved:**	05/15/18 22:36 Nina Pandya

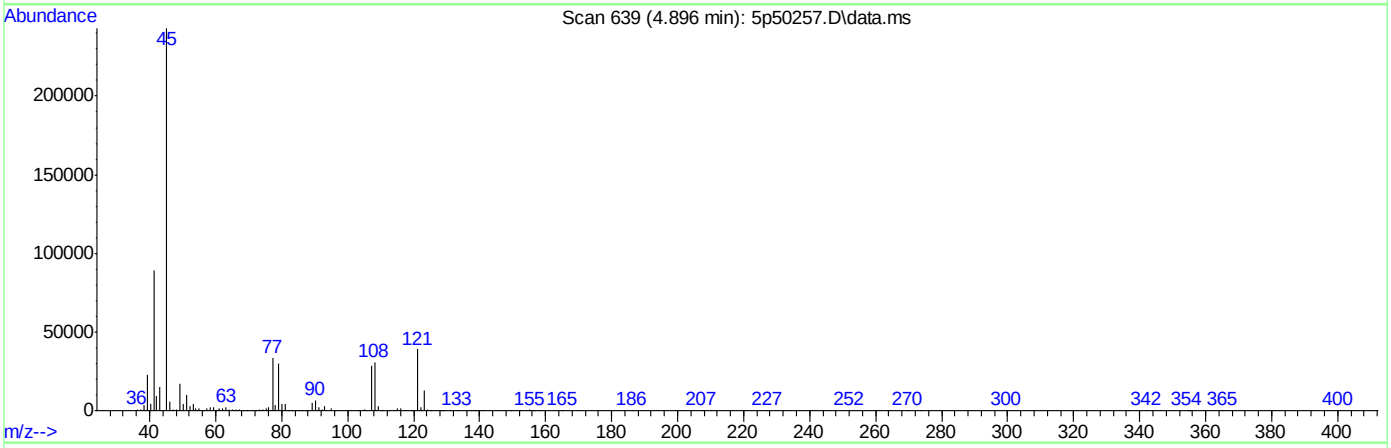
Parameter	CAS	Sig#	R.T. (min.)	Reason
2,2'-Oxybis(1-chloropropane)	108-60-1		4.90	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50257.D
Acq On : 15 May 2018 2:28 am
Operator : georges
Sample : icc2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 15 10:05:27 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration





TIC: 5p50257.D\data.ms

(20) 2,2'-oxybis(1-Chloropropane (t)

4.896min (+0.003) 61.24ppm

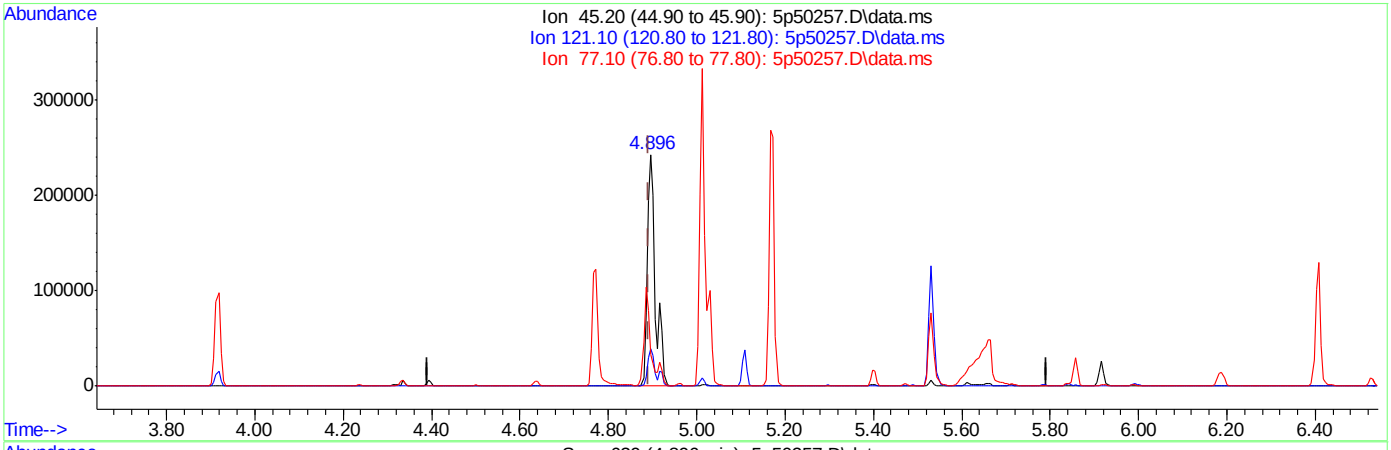
response 266399

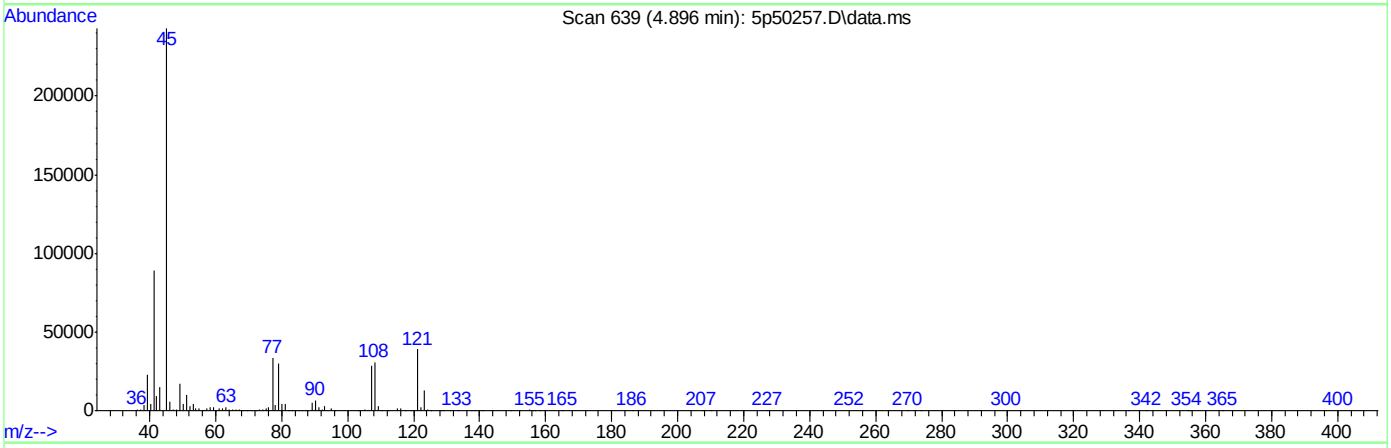
Ion	Exp%	Act%
45.20	100	100
121.10	20.10	15.92
77.10	10.80	11.62
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50257.D
Acq On : 15 May 2018 2:28 am
Operator : georges
Sample : icc2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 15 10:05:27 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration





TIC: 5p50257.D\data.ms

(20) 2,2'-oxybis(1-Chloropropane (t)

4.896min (+0.003) 73.01ppm m

response 317605

Ion	Exp%	Act%
45.20	100	100
121.10	20.10	16.01
77.10	10.80	13.71
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
05/15/18 22:36

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50258.D
Acq On : 15 May 2018 2:53 am
Operator : georges
Sample : ic2399-25
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 15 10:07:04 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.634	152	122026	40.00	ppm	0.00
24) Naphthalene-d8	5.836	136	485825	40.00	ppm	0.00
47) Acenaphthene-d10	7.540	164	290102	40.00	ppm	0.00
69) Phenanthrene-d10	9.047	188	531658	40.00	ppm	0.00
83) Chrysene-d12	12.541	240	541611	40.00	ppm	0.00
91) Perylene-d12	14.565	264	589047	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.634	152	122026	40.00	ppm	0.00
103) Acenaphthene-d10a	7.540	164	290102	40.00	ppm	0.00
105) Chrysene-d12a	12.541	240	541777	40.00	ppm	0.00
108) Phenanthrene-d10a	9.047	188	531658	40.00	ppm	0.00
112) Naphthalene-d8a	5.836	136	485825	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.475	112	107003	27.61	ppm	0.00
Spiked Amount 50.000			Recovery	=	55.22%	
8) Phenol-d5	4.313	99	139214	30.80	ppm	0.00
Spiked Amount 50.000			Recovery	=	61.60%	
25) Nitrobenzene-d5	5.152	82	121418	31.59	ppm	0.00
Spiked Amount 50.000			Recovery	=	63.18%	
51) 2-Fluorobiphenyl	6.888	172	251809	24.09	ppm	0.00
Spiked Amount 50.000			Recovery	=	48.18%	
73) 2,4,6-Tribromophenol	8.315	330	60401	36.09	ppm	0.00
Spiked Amount 50.000			Recovery	=	72.18%	
85) Terphenyl-d14	11.055	244	345316	27.82	ppm	0.00
Spiked Amount 50.000			Recovery	=	55.64%	
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.048	88	48276	29.34	ppm	86
3) Pyridine	2.332	79	118760	30.43	ppm	82
4) N-Nitrosodimethylamine	2.294	74	67414	30.12	ppm	74
6) Indene	4.874	116	176693	28.57	ppm	96
7) Cumene	3.918	105	283336	30.29	ppm	96
9) Phenol	4.330	94	154856	30.48	ppm #	54
10) Aniline	4.335	93	157602	28.77	ppm	76
11) bis(2-Chloroethyl)ether	4.394	93	98432	30.49	ppm	96
12) 2-Chlorophenol	4.447	128	116077	29.14	ppm	92
13) Decane	4.500	43	147126	37.09	ppm	94
14) 1,3-Dichlorobenzene	4.586	146	126008	25.81	ppm	99
15) 1,4-Dichlorobenzene	4.650	146	124914	26.13	ppm	97
16) Benzyl alcohol	4.768	108	76670	30.56	ppm	83
17) 1,2-Dichlorobenzene	4.794	146	117781	25.49	ppm	99
18) Acetophenone	5.008	105	163233	31.10	ppm	97
19) 2-Methylphenol	4.885	108	100398	30.42	ppm	95
20) 2,2'-oxybis(1-Chloropr...	4.896	45	177991m	37.92	ppm	
21) 3&4-Methylphenol	5.024	108	106115	30.68	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50258.D
Acq On : 15 May 2018 2:53 am
Operator : georges
Sample : ic2399-25
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 15 10:07:04 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	5.013	70	76906	33.15	ppm		82
23) Hexachloroethane	5.109	201	52391	33.78	ppm		89
26) Nitrobenzene	5.168	77	120299	32.15	ppm		86
27) Quinoline	6.178	129	236564	28.59	ppm		96
28) Isophorone	5.398	82	217536	31.90	ppm		93
29) 2-Nitrophenol	5.473	139	65156	27.91	ppm		81
30) 2,4-Dimethylphenol	5.526	107	106519	28.76	ppm		91
31) Benzoic acid	5.638	105	95417	34.66	ppm		92
32) bis(2-Chloroethoxy)met...	5.612	93	111128	28.90	ppm		99
33) 2,4-Dichlorophenol	5.708	162	103138	27.73	ppm		96
34) 2,6-Dichlorophenol	5.922	162	98854	28.57	ppm		93
35) 1,3,5-Trichlorobenzene	5.489	180	121967	28.33	ppm		95
36) 1,2,4-Trichlorobenzene	5.788	180	117835	28.67	ppm		96
37) 1,2,3-Trichlorobenzene	6.002	180	112343	28.74	ppm		95
38) Naphthalene	5.857	128	304917	25.99	ppm		99
39) 4-Chloroaniline	5.916	127	138907	27.22	ppm		95
40) 2,3-Dichloroaniline	6.803	161	128435	28.38	ppm		97
41) Caprolactam	6.242	55	71930	37.00	ppm		90
42) Hexachlorobutadiene	5.991	225	71585	35.64	ppm		100
43) 4-Chloro-3-methylphenol	6.402	107	107820	32.68	ppm		87
44) 2-Methylnaphthalene	6.525	141	191213	25.64	ppm		95
45) 1-Methylnaphthalene	6.621	141	195086	25.08	ppm		95
46) Dimethylnaphthalene	7.134	156	210777	27.53	ppm		98
48) Hexachlorocyclopentadiene	6.691	237	156569	73.09	ppm		97
49) 2,4,6-Trichlorophenol	6.808	196	74836	27.12	ppm		88
50) 2,4,5-Trichlorophenol	6.846	196	80989	28.08	ppm		93
52) 2-Chloronaphthalene	7.001	162	217527	24.65	ppm		100
53) Biphenyl	6.985	154	288062	24.49	ppm		99
54) 2-Nitroaniline	7.102	65	73863	35.07	ppm	#	71
55) Dimethylphthalate	7.289	163	253019	25.46	ppm		99
56) Acenaphthylene	7.401	152	329443	22.95	ppm		98
57) 2,6-Dinitrotoluene	7.343	165	57280	28.68	ppm		94
58) 3-Nitroaniline	7.503	138	65469	25.48	ppm		78
59) Acenaphthene	7.572	153	220080	24.80	ppm		99
60) 2,4-Dinitrophenol	7.604	184	71964	70.45	ppm	#	70
61) 4-Nitrophenol	7.690	109	37232	34.15	ppm	#	81
62) Dibenzofuran	7.743	168	302218	24.20	ppm		97
63) 2,4-Dinitrotoluene	7.733	165	79963	30.19	ppm		96
64) 2,3,4,6-Tetrachlorophenol	7.871	232	75964	33.28	ppm		94
65) Diethylphthalate	7.984	149	245438	24.54	ppm		96
66) Fluorene	8.074	166	250633	25.53	ppm		98
67) 4-Chlorophenyl-phenyle...	8.080	204	122774	28.75	ppm		96
68) 4-Nitroaniline	8.101	138	66087	26.01	ppm		89
70) 4,6-Dinitro-2-methylph...	8.133	198	53867	32.33	ppm		96
71) n-Nitrosodiphenylamine	8.197	169	177809	23.00	ppm		100
72) 1,2-Diphenylhydrazine	8.235	77	232535	26.81	ppm		98
74) 4-Bromophenyl-phenylether	8.571	248	92472	33.85	ppm		82
75) Hexachlorobenzene	8.641	284	105118	30.61	ppm		86
76) Pentachlorophenol	8.849	266	125092	63.36	ppm		95
77) Phenanthrene	9.073	178	363471	25.27	ppm		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50258.D
Acq On : 15 May 2018 2:53 am
Operator : georges
Sample : ic2399-25
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 15 10:07:04 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Anthracene	9.127	178	373334	25.34	ppm	98
79)	Carbazole	9.314	167	350528	23.90	ppm	99
80)	Di-n-butylphthalate	9.757	149	430706	23.58	ppm	99
81)	Fluoranthene	10.510	202	459120	28.94	ppm	98
82)	Octadecane	8.961	57	199380	29.93	ppm	92
84)	Pyrene	10.810	202	471781	23.50	ppm	99
86)	Butylbenzylphthalate	11.787	149	193882	20.07	ppm	90
87)	Benzo[a]anthracene	12.525	228	435275	25.51	ppm	98
88)	3,3'-Dichlorobenzidine	12.519	252	193748	28.70	ppm	92
89)	Chrysene	12.578	228	401328	25.12	ppm	98
90)	bis(2-Ethylhexyl)phtha...	12.685	149	251150	20.24	ppm	99
92)	Di-n-octylphthalate	13.636	149	461023	21.07	ppm	95
93)	Benzo[b]fluoranthene	14.058	252	475632	26.01	ppm	97
94)	Benzo[k]fluoranthene	14.095	252	418391	25.33	ppm	97
95)	Benzo[a]pyrene	14.485	252	424863	25.62	ppm	97
96)	Indeno[1,2,3-cd]pyrene	16.040	276	427881	27.64	ppm	95
97)	Dibenz(a,h)acridine	15.708	279	386915	27.74	ppm	100
98)	Dibenz[a,h]anthracene	16.082	278	425944	27.74	ppm	91
99)	7,12-Dimethylbenz(a)an...	14.063	256	204473	26.54	ppm	98
100)	Benzo[g,h,i]perylene	16.456	276	406807	26.79	ppm	89

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

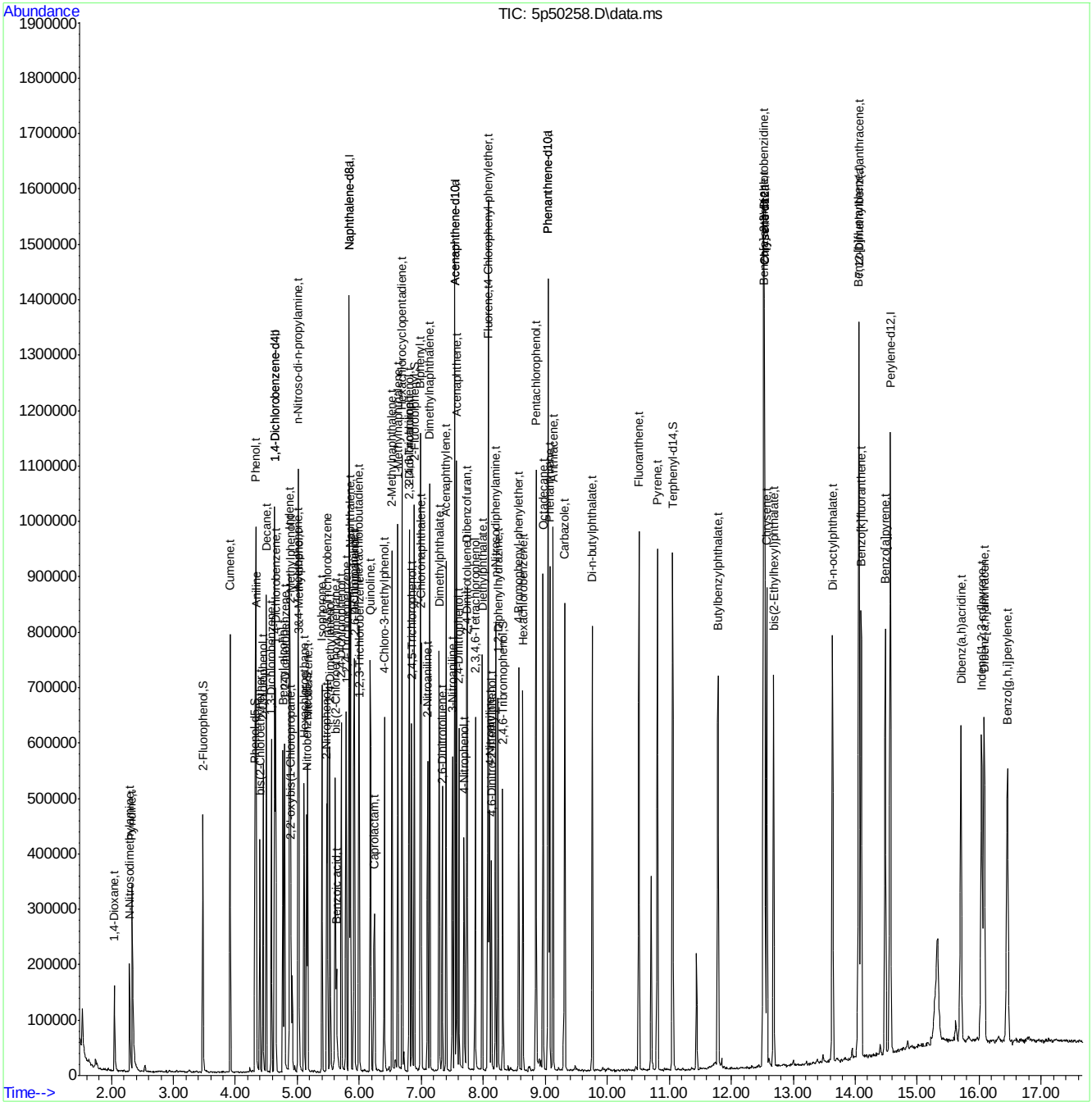
9.6.31

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50258.D
Acq On : 15 May 2018 2:53 am
Operator : georges
Sample : ic2399-25
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 15 10:07:04 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration



Manual Integration Approval Summary

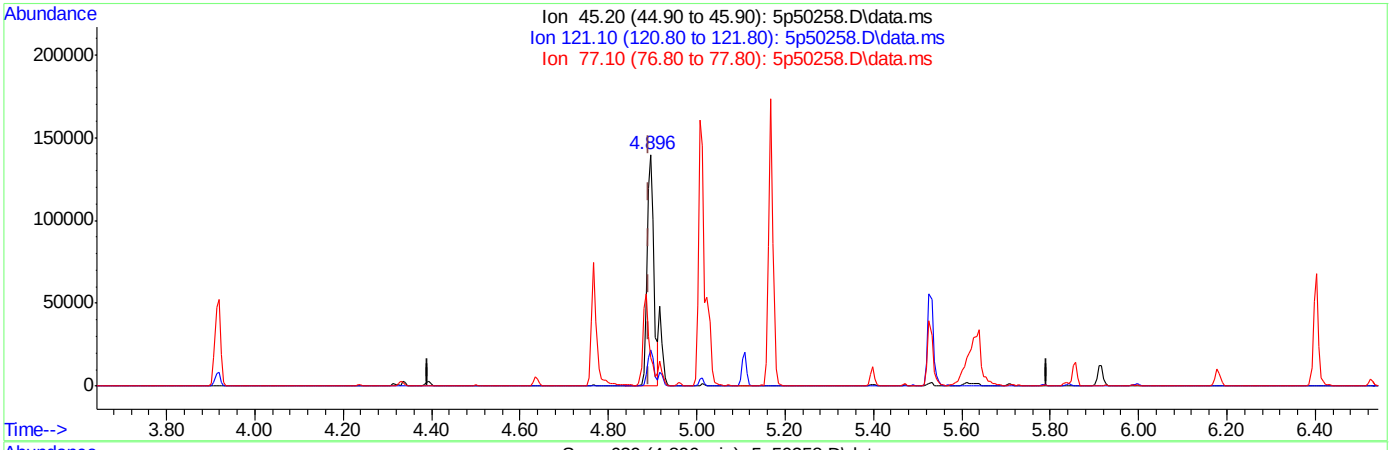
Sample Number:	E5P2399-IC2399	**Method:**	SW846 8270D
Lab FileID:	5P50258.D	**Analyst approved:**	05/15/18 10:41 Sean Block
Injection Time:	05/15/18 02:53	**Supervisor approved:**	05/15/18 22:36 Nina Pandya

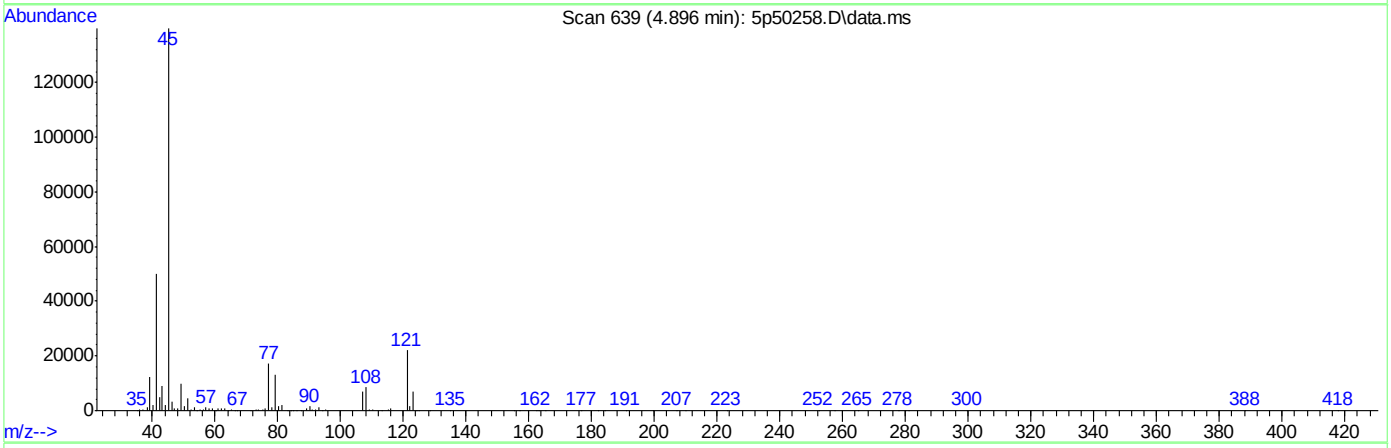
Parameter	CAS	Sig#	R.T. (min.)	Reason
2,2'-Oxybis(1-chloropropane)	108-60-1		4.90	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50258.D
Acq On : 15 May 2018 2:53 am
Operator : georges
Sample : ic2399-25
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 15 10:06:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration





TIC: 5p50258.D\data.ms

(20) 2,2'-oxybis(1-Chloropropane (t)

4.896min (+0.003) 32.43ppm

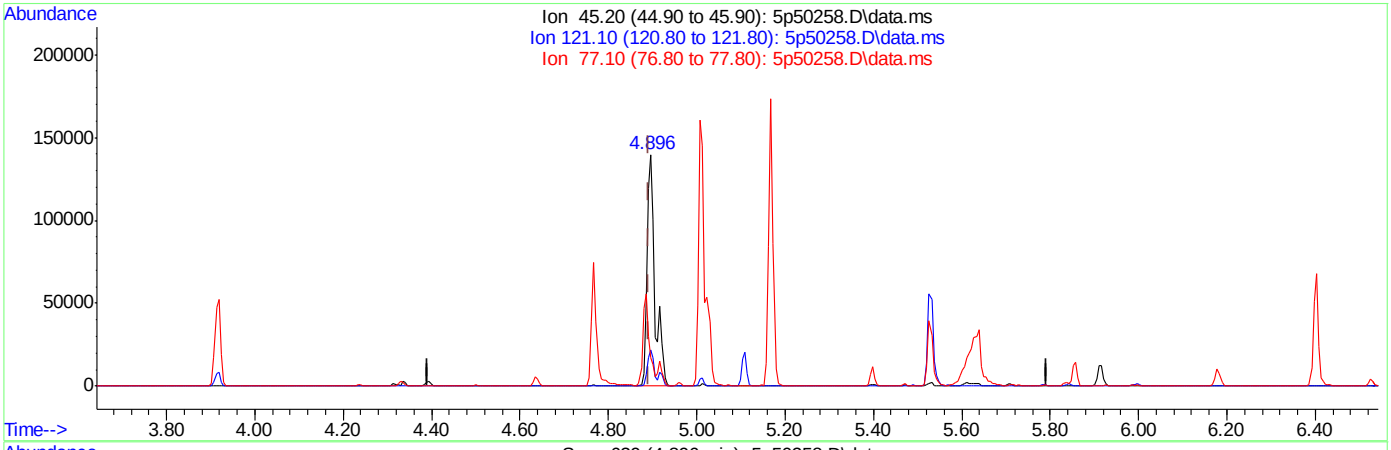
response 152231

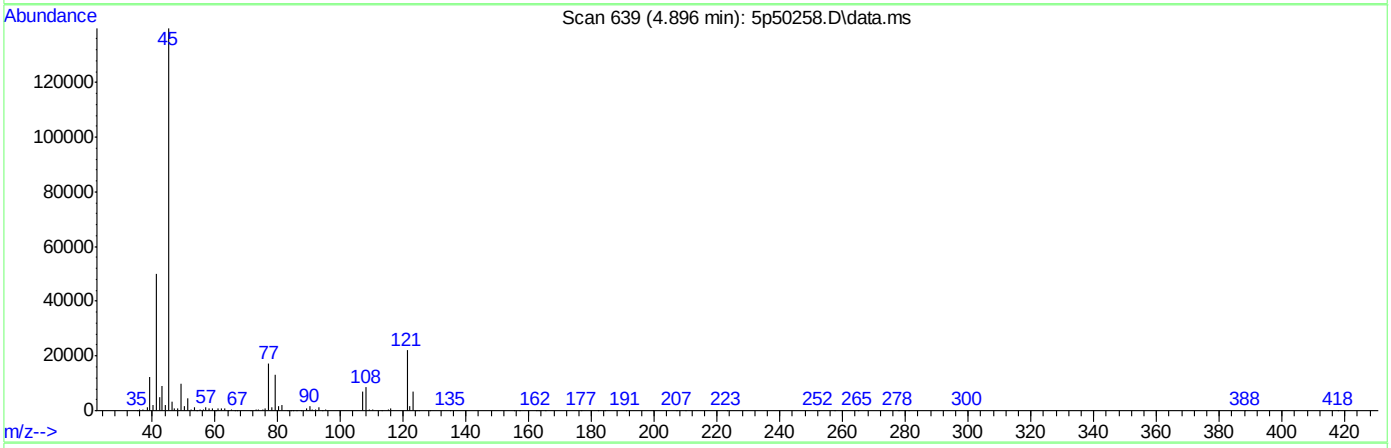
Ion	Exp%	Act%
45.20	100	100
121.10	20.10	15.93
77.10	10.80	10.28
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50258.D
Acq On : 15 May 2018 2:53 am
Operator : georges
Sample : ic2399-25
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 15 10:06:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration





TIC: 5p50258.D\data.ms

(20) 2,2'-oxybis(1-Chloropropane (t)

4.896min (+0.003) 37.92ppm m

response 177991

Ion	Exp%	Act%
45.20	100	100
121.10	20.10	15.78
77.10	10.80	12.30
0.00	0.00	0.00

9.6.31.3

9

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
05/15/18 22:36

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50259.D
Acq On : 15 May 2018 3:18 am
Operator : georges
Sample : ic2399-10
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 15 10:09:11 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.634	152	125362	40.00	ppm	0.00
24) Naphthalene-d8	5.836	136	499554	40.00	ppm	0.00
47) Acenaphthene-d10	7.540	164	295573	40.00	ppm	0.00
69) Phenanthrene-d10	9.047	188	555511	40.00	ppm	0.00
83) Chrysene-d12	12.535	240	583946	40.00	ppm	-0.01
91) Perylene-d12	14.565	264	610451	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.634	152	125362	40.00	ppm	0.00
103) Acenaphthene-d10a	7.540	164	295573	40.00	ppm	0.00
105) Chrysene-d12a	12.535	240	583884	40.00	ppm	-0.01
108) Phenanthrene-d10a	9.047	188	555511	40.00	ppm	0.00
112) Naphthalene-d8a	5.836	136	499554	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.475	112	44479	11.17	ppm	0.00
Spiked Amount 50.000			Recovery = 22.34%			
8) Phenol-d5	4.313	99	57158	12.31	ppm	0.00
Spiked Amount 50.000			Recovery = 24.62%			
25) Nitrobenzene-d5	5.147	82	51911	13.13	ppm	0.00
Spiked Amount 50.000			Recovery = 26.26%			
51) 2-Fluorobiphenyl	6.888	172	114574	10.76	ppm	0.00
Spiked Amount 50.000			Recovery = 21.52%			
73) 2,4,6-Tribromophenol	8.315	330	27805	15.90	ppm	0.00
Spiked Amount 50.000			Recovery = 31.80%			
85) Terphenyl-d14	11.055	244	154122	11.52	ppm	0.00
Spiked Amount 50.000			Recovery = 23.04%			
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.048	88	20136	11.91	ppm	92
3) Pyridine	2.342	79	50450	12.58	ppm	74
4) N-Nitrosodimethylamine	2.294	74	27327	11.88	ppm	75
6) Indene	4.874	116	76336	12.01	ppm	96
7) Cumene	3.918	105	119539	12.44	ppm	98
9) Phenol	4.329	94	67220	12.88	ppm #	46
10) Aniline	4.335	93	71767	12.75	ppm	69
11) bis(2-Chloroethyl)ether	4.394	93	43004	12.96	ppm	97
12) 2-Chlorophenol	4.447	128	49981	12.21	ppm	90
13) Decane	4.500	43	64708	15.88	ppm	91
14) 1,3-Dichlorobenzene	4.580	146	56334	11.23	ppm	97
15) 1,4-Dichlorobenzene	4.650	146	51664	10.52	ppm	96
16) Benzyl alcohol	4.767	108	32208	12.50	ppm	84
17) 1,2-Dichlorobenzene	4.794	146	50952	10.73	ppm	97
18) Acetophenone	5.008	105	71089	13.19	ppm	97
19) 2-Methylphenol	4.880	108	43482	12.82	ppm	93
20) 2,2'-oxybis(1-Chloropr...	4.896	45	81816m	16.97	ppm	
21) 3&4-Methylphenol	5.024	108	48595	13.68	ppm	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50259.D
Acq On : 15 May 2018 3:18 am
Operator : georges
Sample : ic2399-10
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 15 10:09:11 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	5.013	70	34696	14.56	ppm		84
23) Hexachloroethane	5.109	201	22635	14.20	ppm		91
26) Nitrobenzene	5.168	77	52014	13.52	ppm		94
27) Quinoline	6.178	129	100269	11.78	ppm		93
28) Isophorone	5.398	82	93155	13.28	ppm		94
29) 2-Nitrophenol	5.473	139	27221	11.34	ppm		85
30) 2,4-Dimethylphenol	5.526	107	48358	12.70	ppm		83
31) Benzoic acid	5.612	105	38607	13.64	ppm		92
32) bis(2-Chloroethoxy)met...	5.606	93	48066	12.16	ppm		97
33) 2,4-Dichlorophenol	5.708	162	44822	11.72	ppm		97
34) 2,6-Dichlorophenol	5.921	162	42899	12.06	ppm		93
35) 1,3,5-Trichlorobenzene	5.483	180	52607	11.88	ppm		98
36) 1,2,4-Trichlorobenzene	5.782	180	52001	12.30	ppm		97
37) 1,2,3-Trichlorobenzene	5.996	180	49574	12.34	ppm		98
38) Naphthalene	5.857	128	131646	10.91	ppm		98
39) 4-Chloroaniline	5.911	127	60579	11.55	ppm		90
40) 2,3-Dichloroaniline	6.803	161	56887	12.22	ppm		95
41) Caprolactam	6.231	55	31605	15.81	ppm		88
42) Hexachlorobutadiene	5.985	225	30516	14.77	ppm		95
43) 4-Chloro-3-methylphenol	6.397	107	46132	13.60	ppm		90
44) 2-Methylnaphthalene	6.525	141	84976	11.08	ppm		95
45) 1-Methylnaphthalene	6.621	141	87987	11.00	ppm		95
46) Dimethylnaphthalene	7.134	156	91826	11.67	ppm		99
48) Hexachlorocyclopentadiene	6.691	237	69102	31.66	ppm		95
49) 2,4,6-Trichlorophenol	6.808	196	33899	12.06	ppm		93
50) 2,4,5-Trichlorophenol	6.846	196	35795	12.18	ppm		96
52) 2-Chloronaphthalene	6.995	162	96852	10.77	ppm		98
53) Biphenyl	6.984	154	128735	10.74	ppm		98
54) 2-Nitroaniline	7.102	65	31029	14.46	ppm		81
55) Dimethylphthalate	7.289	163	114243	11.28	ppm		98
56) Acenaphthylene	7.401	152	145004	9.92	ppm		98
57) 2,6-Dinitrotoluene	7.337	165	26109	12.83	ppm		82
58) 3-Nitroaniline	7.503	138	29529	11.28	ppm		84
59) Acenaphthene	7.572	153	98047	10.84	ppm		100
60) 2,4-Dinitrophenol	7.604	184	27384	29.23	ppm		79
61) 4-Nitrophenol	7.684	109	15748	14.18	ppm	#	55
62) Dibenzofuran	7.743	168	136630	10.74	ppm		98
63) 2,4-Dinitrotoluene	7.732	165	34689	12.86	ppm		97
64) 2,3,4,6-Tetrachlorophenol	7.871	232	33793	14.53	ppm		93
65) Diethylphthalate	7.978	149	105768	10.38	ppm		96
66) Fluorene	8.074	166	111082	11.10	ppm		97
67) 4-Chlorophenyl-phenyle...	8.080	204	58140	13.36	ppm		92
68) 4-Nitroaniline	8.096	138	29674	11.46	ppm		81
70) 4,6-Dinitro-2-methylph...	8.128	198	22064	13.53	ppm		93
71) n-Nitrosodiphenylamine	8.197	169	80608	9.98	ppm		100
72) 1,2-Diphenylhydrazine	8.235	77	104189	11.50	ppm		99
74) 4-Bromophenyl-phenylether	8.571	248	41783	14.64	ppm	#	82
75) Hexachlorobenzene	8.641	284	45632	12.72	ppm		84
76) Pentachlorophenol	8.849	266	53038	25.71	ppm		91
77) Phenanthrene	9.068	178	163794	10.90	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50259.D
Acq On : 15 May 2018 3:18 am
Operator : georges
Sample : ic2399-10
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 15 10:09:11 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Anthracene	9.127	178	171248	11.12	ppm	99
79)	Carbazole	9.314	167	156417	10.21	ppm	98
80)	Di-n-butylphthalate	9.757	149	186010	9.75	ppm	97
81)	Fluoranthene	10.510	202	198490	11.98	ppm	97
82)	Octadecane	8.961	57	88466	12.71	ppm	89
84)	Pyrene	10.804	202	207212	9.58	ppm	99
86)	Butylbenzylphthalate	11.787	149	83464	8.01	ppm	90
87)	Benzo[a]anthracene	12.519	228	195277	10.62	ppm	99
88)	3,3'-Dichlorobenzidine	12.519	252	85556	11.75	ppm	93
89)	Chrysene	12.572	228	177660	10.32	ppm	100
90)	bis(2-Ethylhexyl)phtha...	12.685	149	111293	8.32	ppm	98
92)	Di-n-octylphthalate	13.630	149	197626	8.72	ppm	94
93)	Benzo[b]fluoranthene	14.052	252	211677	11.17	ppm	95
94)	Benzo[k]fluoranthene	14.090	252	190447	11.12	ppm	95
95)	Benzo[a]pyrene	14.485	252	184345	10.73	ppm	97
96)	Indeno[1,2,3-cd]pyrene	16.034	276	185949	11.59	ppm	97
97)	Dibenz(a,h)acridine	15.703	279	167214	11.57	ppm	97
98)	Dibenz[a,h]anthracene	16.077	278	189083	11.88	ppm	91
99)	7,12-Dimethylbenz(a)an...	14.058	256	89189	11.17	ppm	99
100)	Benzo[g,h,i]perylene	16.451	276	180348	11.46	ppm	87

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

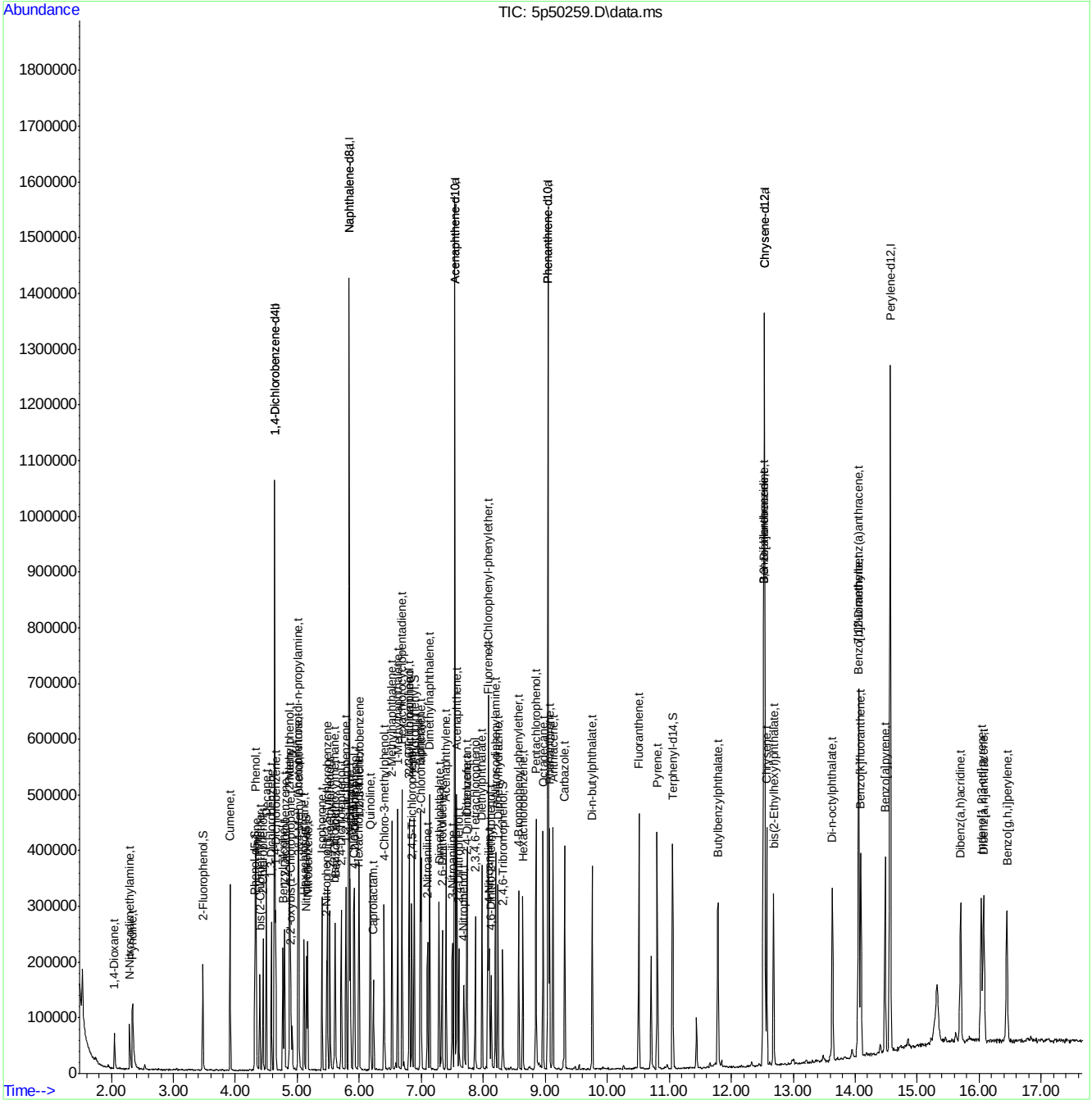
9.6.32

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50259.D
Acq On : 15 May 2018 3:18 am
Operator : georges
Sample : ic2399-10
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 15 10:09:11 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration



Manual Integration Approval Summary

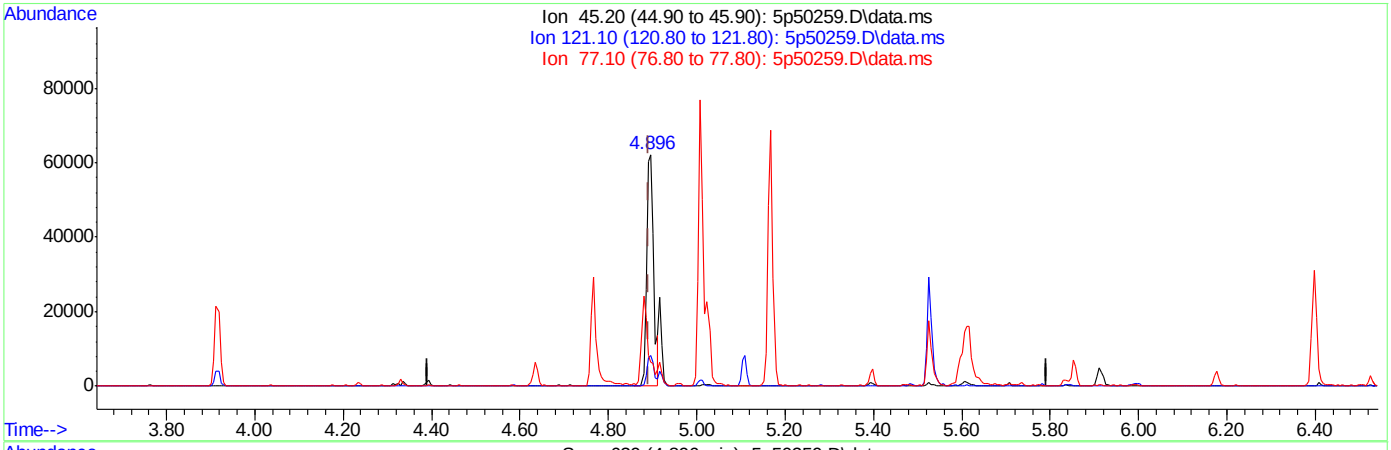
Sample Number:	E5P2399-IC2399	**Method:**	SW846 8270D
Lab FileID:	5P50259.D	**Analyst approved:**	05/15/18 10:41 Sean Block
Injection Time:	05/15/18 03:18	**Supervisor approved:**	05/15/18 22:36 Nina Pandya

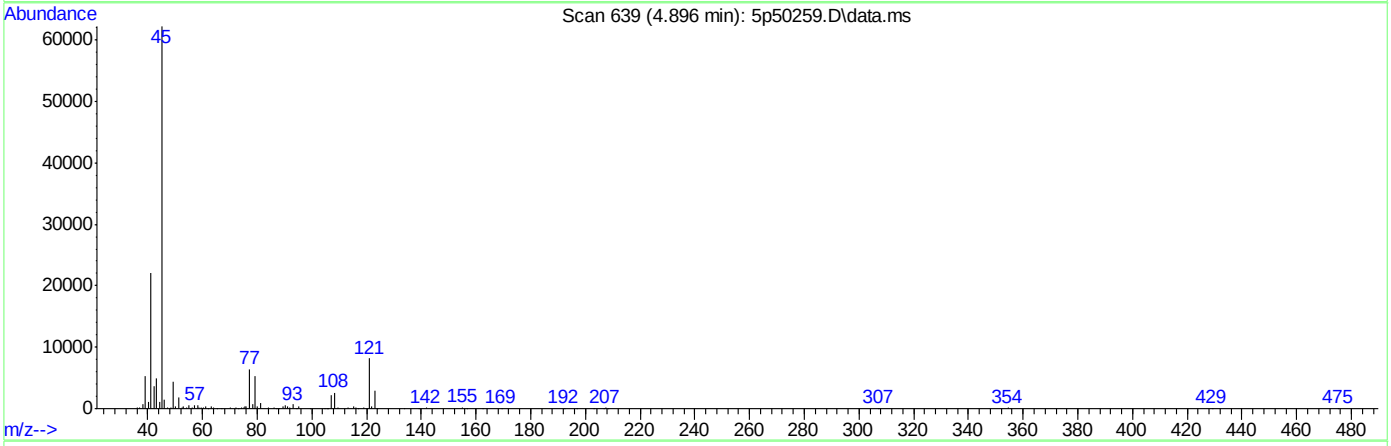
Parameter	CAS	Sig#	R.T. (min.)	Reason
2,2'-Oxybis(1-chloropropane)	108-60-1		4.90	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50259.D
Acq On : 15 May 2018 3:18 am
Operator : georges
Sample : ic2399-10
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 15 10:07:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration





TIC: 5p50259.D\data.ms

(20) 2,2'-oxybis(1-Chloropropane (t)

4.896min (+0.003) 14.50ppm

response 69923

Ion	Exp%	Act%
45.20	100	100
121.10	20.10	12.97
77.10	10.80	7.32
0.00	0.00	0.00

9.6.32.2

9

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50259.D
Acq On    : 15 May 2018   3:18 am
Operator  : georges
Sample    : ic2399-10
Misc      : op6115,e5p2399,1000,,,1,1
ALS Vial  : 6   Sample Multiplier: 1

Quant Time: May 15 10:07:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title  : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration
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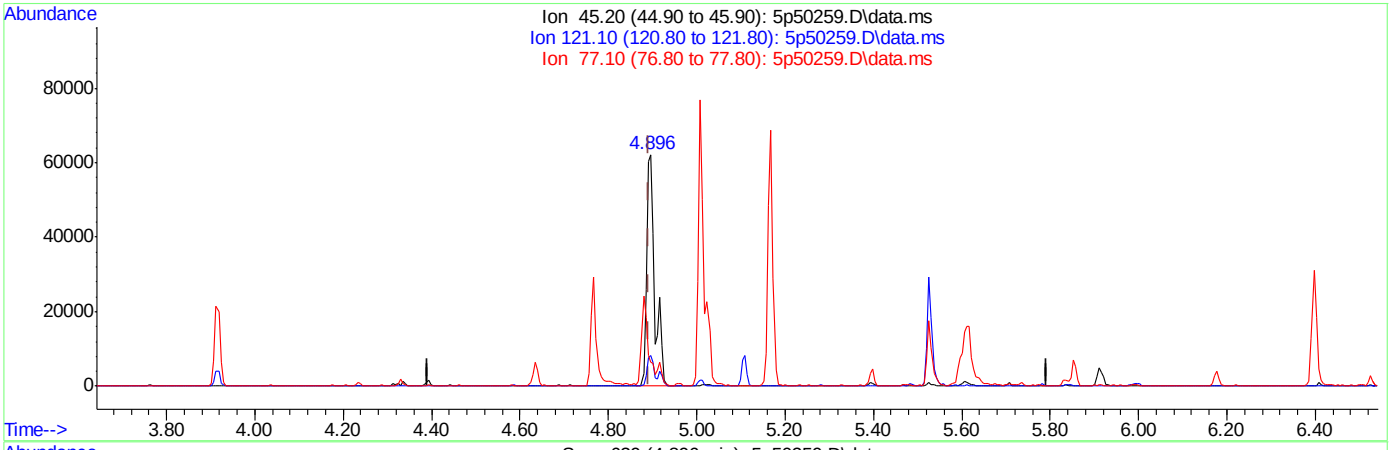
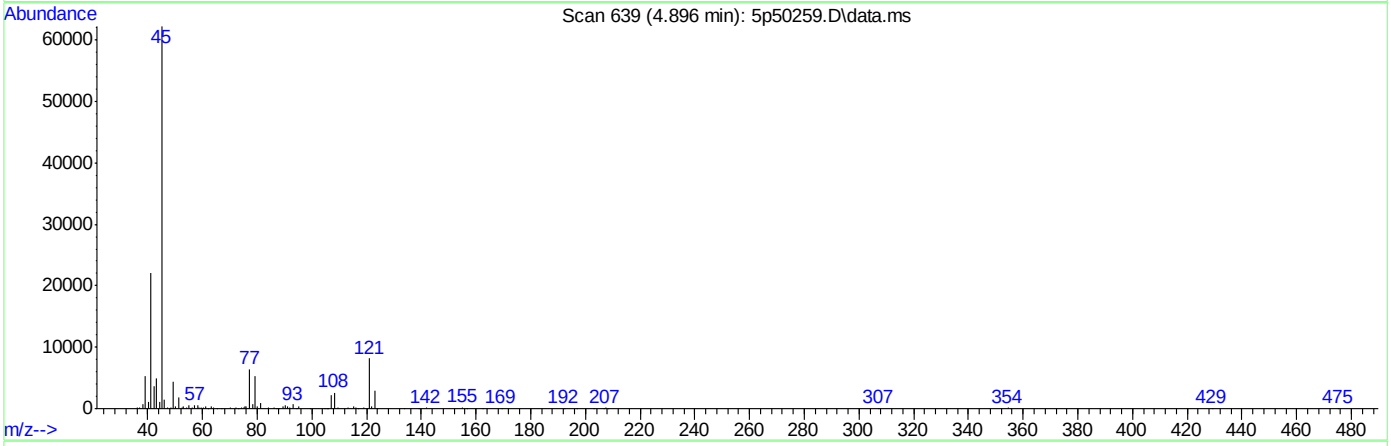




TIC: 5p50259.D\data.ms

(20) 2,2'-oxybis(1-Chloropropane (t)

4.896min (+0.003) 16.97ppm m

response 81816

Ion	Exp%	Act%
45.20	100	100
121.10	20.10	13.12
77.10	10.80	10.41
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50260.D
Acq On : 15 May 2018 3:43 am
Operator : georges
Sample : ic2399-5
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 15 10:10:04 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.634	152	138732	40.00	ppm	0.00
24) Naphthalene-d8	5.836	136	533590	40.00	ppm	0.00
47) Acenaphthene-d10	7.540	164	325287	40.00	ppm	0.00
69) Phenanthrene-d10	9.047	188	605665	40.00	ppm	0.00
83) Chrysene-d12	12.535	240	628347	40.00	ppm	-0.01
91) Perylene-d12	14.565	264	656742	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.634	152	138732	40.00	ppm	0.00
103) Acenaphthene-d10a	7.540	164	325287	40.00	ppm	0.00
105) Chrysene-d12a	12.535	240	628399	40.00	ppm	-0.01
108) Phenanthrene-d10a	9.047	188	605665	40.00	ppm	0.00
112) Naphthalene-d8a	5.836	136	533590	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.475	112	22796	5.17	ppm	0.00
Spiked Amount 50.000			Recovery	=	10.34%	
8) Phenol-d5	4.314	99	30267	5.89	ppm	0.00
Spiked Amount 50.000			Recovery	=	11.78%	
25) Nitrobenzene-d5	5.147	82	27761	6.58	ppm	0.00
Spiked Amount 50.000			Recovery	=	13.16%	
51) 2-Fluorobiphenyl	6.889	172	59716	5.09	ppm	0.00
Spiked Amount 50.000			Recovery	=	10.18%	
73) 2,4,6-Tribromophenol	8.315	330	13235	6.94	ppm	0.00
Spiked Amount 50.000			Recovery	=	13.88%	
85) Terphenyl-d14	11.050	244	79063	5.49	ppm	-0.01
Spiked Amount 50.000			Recovery	=	10.98%	
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.054	88	10574	5.65	ppm	96
3) Pyridine	2.348	79	23565	5.31	ppm	77
4) N-Nitrosodimethylamine	2.300	74	13796	5.42	ppm	67
6) Indene	4.875	116	39859	5.67	ppm	97
7) Cumene	3.913	105	60814	5.72	ppm	93
9) Phenol	4.324	94	34254	5.93	ppm	78
10) Aniline	4.335	93	39004	6.26	ppm	70
11) bis(2-Chloroethyl)ether	4.394	93	21824	5.95	ppm	98
12) 2-Chlorophenol	4.447	128	25989	5.74	ppm	94
13) Decane	4.501	43	35497	7.87	ppm	90
14) 1,3-Dichlorobenzene	4.581	146	29738	5.36	ppm	97
15) 1,4-Dichlorobenzene	4.650	146	28682	5.28	ppm	97
16) Benzyl alcohol	4.768	108	15974	5.60	ppm	83
17) 1,2-Dichlorobenzene	4.794	146	27134	5.16	ppm	98
18) Acetophenone	5.008	105	39898	6.69	ppm	92
19) 2-Methylphenol	4.880	108	24356	6.49	ppm	93
20) 2,2'-oxybis(1-Chloropr...	4.896	45	41588	7.79	ppm	92
21) 3&4-Methylphenol	5.024	108	24862	6.32	ppm	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50260.D
Acq On : 15 May 2018 3:43 am
Operator : georges
Sample : ic2399-5
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 15 10:10:04 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	5.013	70	17594	6.67	ppm		78
23) Hexachloroethane	5.110	201	12345	7.00	ppm		88
26) Nitrobenzene	5.168	77	25959	6.32	ppm		92
27) Quinoline	6.178	129	51696	5.69	ppm		97
28) Isophorone	5.398	82	48711	6.50	ppm		97
29) 2-Nitrophenol	5.473	139	14493	5.65	ppm		91
30) 2,4-Dimethylphenol	5.526	107	22856	5.62	ppm		98
31) Benzoic acid	5.601	105	18576	6.14	ppm		94
32) bis(2-Chloroethoxy)met...	5.612	93	25205	5.97	ppm		98
33) 2,4-Dichlorophenol	5.708	162	22779	5.58	ppm		96
34) 2,6-Dichlorophenol	5.922	162	22449	5.91	ppm		90
35) 1,3,5-Trichlorobenzene	5.484	180	27854	5.89	ppm		99
36) 1,2,4-Trichlorobenzene	5.783	180	27030	5.99	ppm		99
37) 1,2,3-Trichlorobenzene	5.996	180	26635	6.20	ppm		95
38) Naphthalene	5.852	128	69664	5.41	ppm		98
39) 4-Chloroaniline	5.911	127	31661	5.65	ppm		97
40) 2,3-Dichloroaniline	6.803	161	30147	6.06	ppm		95
41) Caprolactam	6.226	55	16322	7.64	ppm		84
42) Hexachlorobutadiene	5.986	225	15485	7.02	ppm		94
43) 4-Chloro-3-methylphenol	6.397	107	23233	6.41	ppm		84
44) 2-Methylnaphthalene	6.525	141	44153	5.39	ppm		93
45) 1-Methylnaphthalene	6.621	141	44833	5.25	ppm		93
46) Dimethylnaphthalene	7.134	156	49769	5.92	ppm		99
48) Hexachlorocyclopentadiene	6.691	237	34167	14.23	ppm		94
49) 2,4,6-Trichlorophenol	6.808	196	17558	5.67	ppm		94
50) 2,4,5-Trichlorophenol	6.846	196	18459	5.71	ppm		79
52) 2-Chloronaphthalene	6.995	162	51503	5.20	ppm		97
53) Biphenyl	6.985	154	68903	5.22	ppm		96
54) 2-Nitroaniline	7.097	65	15554	6.59	ppm	#	60
55) Dimethylphthalate	7.284	163	57689	5.18	ppm		99
56) Acenaphthylene	7.401	152	75925	4.72	ppm		97
57) 2,6-Dinitrotoluene	7.337	165	12863	5.74	ppm		95
58) 3-Nitroaniline	7.498	138	15268	5.30	ppm		86
59) Acenaphthene	7.572	153	51265	5.15	ppm		96
60) 2,4-Dinitrophenol	7.604	184	11762	14.18	ppm	#	74
61) 4-Nitrophenol	7.685	109	7159	5.86	ppm	#	75
62) Dibenzofuran	7.738	168	72341	5.17	ppm		94
63) 2,4-Dinitrotoluene	7.733	165	17725	5.97	ppm		92
64) 2,3,4,6-Tetrachlorophenol	7.871	232	17281	6.75	ppm		92
65) Diethylphthalate	7.978	149	55688	4.96	ppm		94
66) Fluorene	8.075	166	58749	5.34	ppm		100
67) 4-Chlorophenyl-phenyle...	8.080	204	30367	6.34	ppm		91
68) 4-Nitroaniline	8.096	138	14607	5.13	ppm		84
70) 4,6-Dinitro-2-methylph...	8.128	198	10393	6.72	ppm		95
71) n-Nitrosodiphenylamine	8.197	169	41158	4.67	ppm		94
72) 1,2-Diphenylhydrazine	8.235	77	54697	5.54	ppm		95
74) 4-Bromophenyl-phenylether	8.571	248	20749	6.67	ppm		82
75) Hexachlorobenzene	8.635	284	25590	6.54	ppm		92
76) Pentachlorophenol	8.849	266	25062	11.14	ppm		98
77) Phenanthrene	9.068	178	82645	5.04	ppm		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50260.D
Acq On : 15 May 2018 3:43 am
Operator : georges
Sample : ic2399-5
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 15 10:10:04 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Anthracene	9.127	178	84888	5.06	ppm	97
79)	Carbazole	9.314	167	82469	4.94	ppm	99
80)	Di-n-butylphthalate	9.757	149	94650	4.55	ppm	98
81)	Fluoranthene	10.511	202	98278	5.44	ppm	95
82)	Octadecane	8.961	57	47333	6.24	ppm	91
84)	Pyrene	10.804	202	107420	4.61	ppm	100
86)	Butylbenzylphthalate	11.782	149	43142	3.85	ppm	88
87)	Benzo[a]anthracene	12.519	228	99600	5.03	ppm	98
88)	3,3'-Dichlorobenzidine	12.519	252	42437	5.42	ppm	93
89)	Chrysene	12.573	228	95212	5.14	ppm	98
90)	bis(2-Ethylhexyl)phtha...	12.680	149	55214	3.83	ppm	98
92)	Di-n-octylphthalate	13.630	149	99653	4.09	ppm	96
93)	Benzo[b]fluoranthene	14.052	252	105300	5.16	ppm	96
94)	Benzo[k]fluoranthene	14.090	252	102311	5.55	ppm	96
95)	Benzo[a]pyrene	14.480	252	99296	5.37	ppm	94
96)	Indeno[1,2,3-cd]pyrene	16.029	276	95348	5.52	ppm	99
97)	Dibenz(a,h)acridine	15.698	279	86499	5.56	ppm	96
98)	Dibenz[a,h]anthracene	16.072	278	99710	5.82	ppm	88
99)	7,12-Dimethylbenz(a)an...	14.052	256	42321	4.93	ppm	99
100)	Benzo[g,h,i]perylene	16.446	276	90876	5.37	ppm	85

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

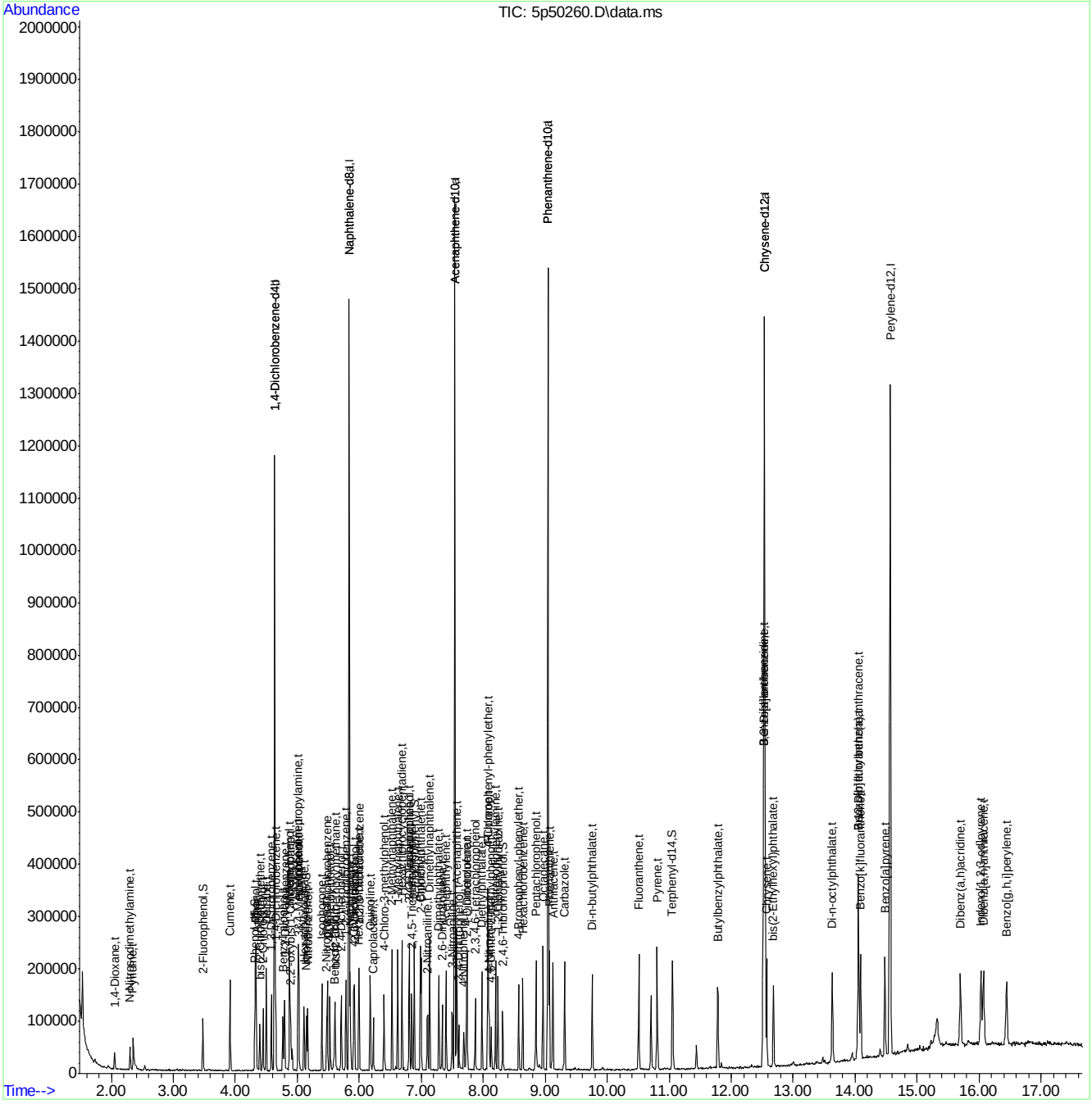
9.6.33

6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50260.D
Acq On : 15 May 2018 3:43 am
Operator : georges
Sample : ic2399-5
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 15 10:10:04 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50261.D
Acq On : 15 May 2018 4:08 am
Operator : georges
Sample : ic2399-2
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 15 10:10:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.634	152	125962	40.00 ppm	0.00
24) Naphthalene-d8	5.836	136	524239	40.00 ppm	0.00
47) Acenaphthene-d10	7.540	164	309055	40.00 ppm	0.00
69) Phenanthrene-d10	9.041	188	585807	40.00 ppm	0.00
83) Chrysene-d12	12.535	240	602093	40.00 ppm	-0.01
91) Perylene-d12	14.565	264	631447	40.00 ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.634	152	125962	40.00 ppm	0.00
103) Acenaphthene-d10a	7.540	164	309055	40.00 ppm	0.00
105) Chrysene-d12a	12.535	240	602093	40.00 ppm	-0.01
108) Phenanthrene-d10a	9.041	188	585807	40.00 ppm	0.00
112) Naphthalene-d8a	5.836	136	524239	40.00 ppm	0.00
System Monitoring Compounds					
5) 2-Fluorophenol	3.475	112	8819	2.20 ppm	0.00
Spiked Amount 50.000			Recovery	= 4.40%	
8) Phenol-d5	4.313	99	10984	2.35 ppm	0.00
Spiked Amount 50.000			Recovery	= 4.70%	
25) Nitrobenzene-d5	5.147	82	10033	2.42 ppm	0.00
Spiked Amount 50.000			Recovery	= 4.84%	
51) 2-Fluorobiphenyl	6.888	172	23303	2.09 ppm	0.00
Spiked Amount 50.000			Recovery	= 4.18%	
73) 2,4,6-Tribromophenol	8.315	330	4996	2.71 ppm	0.00
Spiked Amount 50.000			Recovery	= 5.42%	
85) Terphenyl-d14	11.050	244	30767	2.23 ppm	-0.01
Spiked Amount 50.000			Recovery	= 4.46%	
107) 1-chlorooctadecane	0.000	57	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
109) o-terphenyl	0.000	230	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
Target Compounds					Qvalue
2) 1,4-Dioxane	2.054	88	4303	2.53 ppm	92
3) Pyridine	2.358	79	9704	2.41 ppm	89
4) N-Nitrosodimethylamine	2.305	74	5613	2.43 ppm	78
6) Indene	4.874	116	16218	2.54 ppm	99
7) Cumene	3.913	105	23927	2.48 ppm	90
9) Phenol	4.329	94	13062	2.49 ppm #	50
10) Aniline	4.335	93	14926	2.64 ppm	78
11) bis(2-Chloroethyl)ether	4.394	93	8476	2.54 ppm	91
12) 2-Chlorophenol	4.447	128	10419	2.53 ppm	94
13) Decane	4.500	43	13471	3.29 ppm	94
14) 1,3-Dichlorobenzene	4.586	146	11156	2.21 ppm	93
15) 1,4-Dichlorobenzene	4.650	146	10779	2.18 ppm	96
16) Benzyl alcohol	4.768	108	6216	2.40 ppm	91
17) 1,2-Dichlorobenzene	4.794	146	10480	2.20 ppm	95
18) Acetophenone	5.008	105	14490	2.67 ppm	93
19) 2-Methylphenol	4.880	108	9210	2.70 ppm	94
20) 2,2'-oxybis(1-Chloropr...	4.890	45	15956	3.29 ppm	85
21) 3&4-Methylphenol	5.024	108	9346	2.62 ppm	91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50261.D
Acq On : 15 May 2018 4:08 am
Operator : georges
Sample : ic2399-2
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 15 10:10:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	5.013	70	6779	2.83	ppm		81
23) Hexachloroethane	5.109	201	4709	2.94	ppm		88
26) Nitrobenzene	5.168	77	10225	2.53	ppm		96
27) Quinoline	6.178	129	20394	2.28	ppm		96
28) Isophorone	5.398	82	18521	2.52	ppm		89
29) 2-Nitrophenol	5.473	139	4957	1.97	ppm		79
30) 2,4-Dimethylphenol	5.526	107	9150	2.29	ppm	#	73
31) Benzoic acid	5.585	105	7150	2.41	ppm		88
32) bis(2-Chloroethoxy)met...	5.606	93	10192	2.46	ppm		95
33) 2,4-Dichlorophenol	5.708	162	9004	2.24	ppm		94
34) 2,6-Dichlorophenol	5.921	162	8782	2.35	ppm		94
35) 1,3,5-Trichlorobenzene	5.483	180	11461	2.47	ppm		94
36) 1,2,4-Trichlorobenzene	5.783	180	10140	2.29	ppm		98
37) 1,2,3-Trichlorobenzene	5.996	180	10294	2.44	ppm		96
38) Naphthalene	5.852	128	27866	2.20	ppm		98
39) 4-Chloroaniline	5.911	127	10770	1.96	ppm		83
40) 2,3-Dichloroaniline	6.803	161	11631	2.38	ppm		96
41) Caprolactam	6.221	55	5732	2.73	ppm		81
42) Hexachlorobutadiene	5.986	225	5255	2.42	ppm		89
43) 4-Chloro-3-methylphenol	6.397	107	9044	2.54	ppm		91
44) 2-Methylnaphthalene	6.525	141	16957	2.11	ppm		99
45) 1-Methylnaphthalene	6.621	141	18224	2.17	ppm		88
46) Dimethylnaphthalene	7.134	156	19096	2.31	ppm		95
48) Hexachlorocyclopentadiene	6.691	237	13213	5.79	ppm		92
49) 2,4,6-Trichlorophenol	6.808	196	5933	2.02	ppm		75
50) 2,4,5-Trichlorophenol	6.846	196	7348	2.39	ppm		90
52) 2-Chloronaphthalene	6.995	162	19042	2.03	ppm		87
53) Biphenyl	6.979	154	25645	2.05	ppm		98
54) 2-Nitroaniline	7.097	65	5586	2.49	ppm	#	68
55) Dimethylphthalate	7.284	163	21746	2.05	ppm		93
56) Acenaphthylene	7.401	152	29978	1.96	ppm		96
57) 2,6-Dinitrotoluene	7.337	165	5203	2.45	ppm		95
58) 3-Nitroaniline	7.497	138	5316	1.94	ppm		94
59) Acenaphthene	7.572	153	20434	2.16	ppm		98
60) 2,4-Dinitrophenol	7.604	184	3673	7.70	ppm		77
61) 4-Nitrophenol	7.690	109	3054	2.63	ppm	#	60
62) Dibenzofuran	7.738	168	29055	2.18	ppm		92
63) 2,4-Dinitrotoluene	7.727	165	6203	2.20	ppm		72
64) 2,3,4,6-Tetrachlorophenol	7.871	232	6967	2.87	ppm		85
65) Diethylphthalate	7.978	149	20991	1.97	ppm		91
66) Fluorene	8.074	166	23337	2.23	ppm		98
67) 4-Chlorophenyl-phenyle...	8.080	204	12126	2.67	ppm		89
68) 4-Nitroaniline	8.090	138	5717	2.11	ppm		77
70) 4,6-Dinitro-2-methylph...	8.128	198	3304	3.26	ppm		92
71) n-Nitrosodiphenylamine	8.197	169	16803	1.97	ppm		95
72) 1,2-Diphenylhydrazine	8.235	77	20787	2.17	ppm		91
74) 4-Bromophenyl-phenylether	8.571	248	7976	2.65	ppm	#	77
75) Hexachlorobenzene	8.635	284	10025	2.65	ppm		82
76) Pentachlorophenol	8.849	266	8684	3.99	ppm		98
77) Phenanthrene	9.068	178	33212	2.10	ppm		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50261.D
Acq On : 15 May 2018 4:08 am
Operator : georges
Sample : ic2399-2
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 15 10:10:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Anthracene	9.127	178	34772	2.14	ppm	93
79)	Carbazole	9.314	167	30570	1.89	ppm	95
80)	Di-n-butylphthalate	9.757	149	35342	1.76	ppm	96
81)	Fluoranthene	10.505	202	39610	2.27	ppm	96
82)	Octadecane	8.961	57	17058	2.32	ppm	92
84)	Pyrene	10.804	202	41451	1.86	ppm	98
86)	Butylbenzylphthalate	11.782	149	15137	1.41	ppm	96
87)	Benzo[a]anthracene	12.519	228	38946	2.05	ppm	95
88)	3,3'-Dichlorobenzidine	12.519	252	16269	2.17	ppm	94
89)	Chrysene	12.567	228	36106	2.03	ppm	98
90)	bis(2-Ethylhexyl)phtha...	12.679	149	20342	1.47	ppm	94
92)	Di-n-octylphthalate	13.630	149	37514	1.60	ppm	93
93)	Benzo[b]fluoranthene	14.047	252	44015	2.25	ppm	97
94)	Benzo[k]fluoranthene	14.084	252	38150	2.15	ppm	95
95)	Benzo[a]pyrene	14.480	252	37432	2.11	ppm	93
96)	Indeno[1,2,3-cd]pyrene	16.029	276	36541	2.20	ppm	94
97)	Dibenz(a,h)acridine	15.698	279	33926	2.27	ppm	95
98)	Dibenz[a,h]anthracene	16.072	278	37053	2.25	ppm	88
99)	7,12-Dimethylbenz(a)an...	14.058	256	16789	2.03	ppm	93
100)	Benzo[g,h,i]perylene	16.440	276	36187	2.22	ppm	88

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

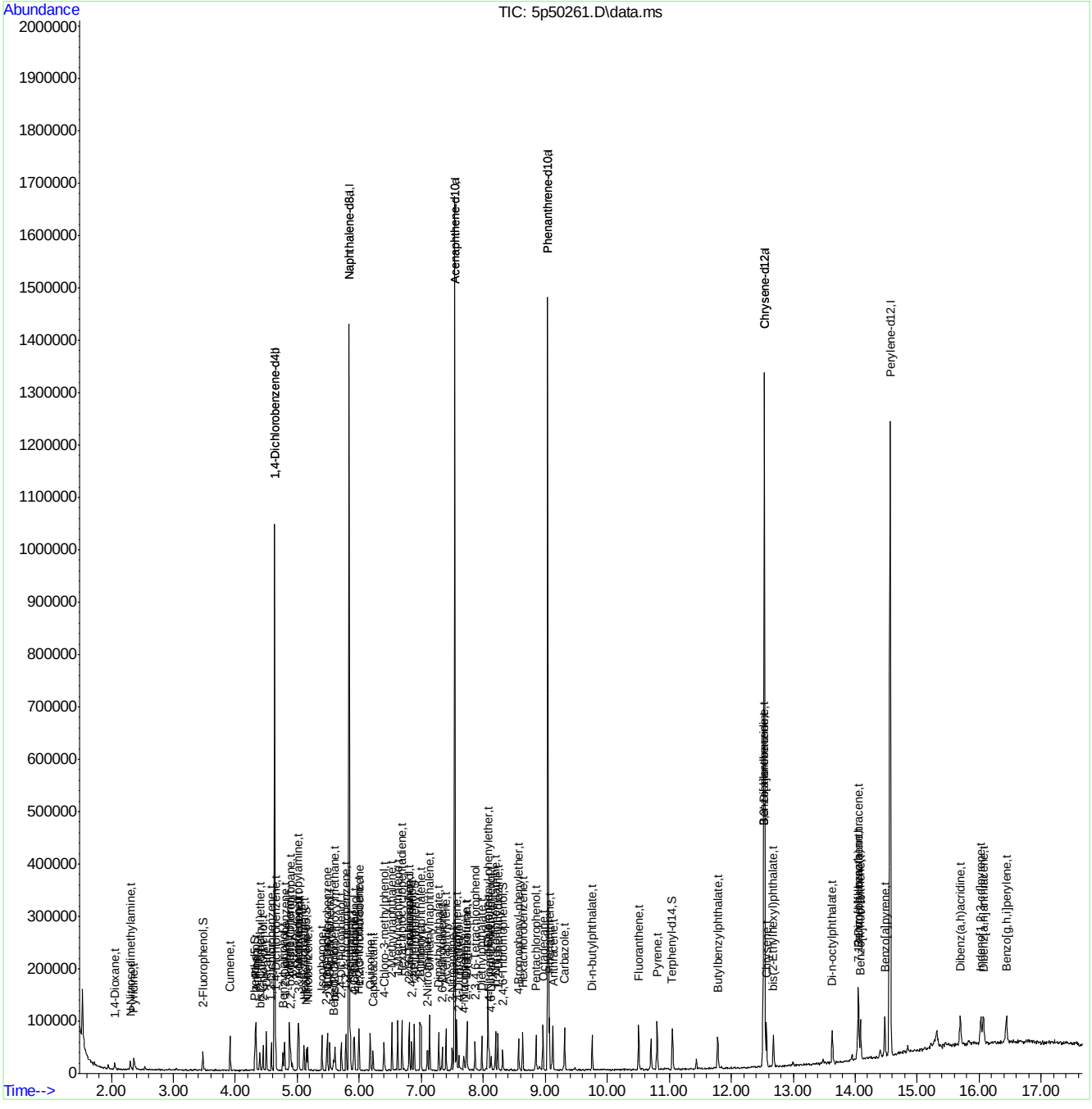
9.6.34

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50261.D
Acq On : 15 May 2018 4:08 am
Operator : georges
Sample : ic2399-2
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 15 10:10:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration



M5P2399.M Tue May 15 10:10:51 2018 RPT1 Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50262.D
Acq On : 15 May 2018 4:33 am
Operator : georges
Sample : ic2399-1
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 15 10:11:42 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.634	152	130952	40.00	ppm	0.00
24) Naphthalene-d8	5.836	136	530167	40.00	ppm	0.00
47) Acenaphthene-d10	7.540	164	318712	40.00	ppm	0.00
69) Phenanthrene-d10	9.041	188	595889	40.00	ppm	0.00
83) Chrysene-d12	12.535	240	626499	40.00	ppm	-0.01
91) Perylene-d12	14.565	264	653984	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.634	152	130952	40.00	ppm	0.00
103) Acenaphthene-d10a	7.540	164	318712	40.00	ppm	0.00
105) Chrysene-d12a	12.535	240	626441	40.00	ppm	-0.01
108) Phenanthrene-d10a	9.041	188	595889	40.00	ppm	0.00
112) Naphthalene-d8a	5.836	136	530167	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.475	112	4366	1.05	ppm	0.00
Spiked Amount 50.000			Recovery	=	2.10%	
8) Phenol-d5	4.314	99	5738	1.18	ppm	0.00
Spiked Amount 50.000			Recovery	=	2.36%	
25) Nitrobenzene-d5	5.147	82	5358	1.28	ppm	0.00
Spiked Amount 50.000			Recovery	=	2.56%	
51) 2-Fluorobiphenyl	6.888	172	12390	1.08	ppm	0.00
Spiked Amount 50.000			Recovery	=	2.16%	
73) 2,4,6-Tribromophenol	8.315	330	2602	1.39	ppm	0.00
Spiked Amount 50.000			Recovery	=	2.78%	
85) Terphenyl-d14	11.050	244	15285	1.06	ppm	-0.01
Spiked Amount 50.000			Recovery	=	2.12%	
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.054	88	2258	1.28	ppm	98
3) Pyridine	2.374	79	5220	1.25	ppm	91
4) N-Nitrosodimethylamine	2.305	74	2772	1.15	ppm	67
6) Indene	4.874	116	7972	1.20	ppm	96
7) Cumene	3.918	105	12005	1.20	ppm	93
9) Phenol	4.330	94	6557	1.20	ppm #	51
10) Aniline	4.335	93	7766	1.32	ppm	67
11) bis(2-Chloroethyl)ether	4.394	93	4541	1.31	ppm	86
12) 2-Chlorophenol	4.447	128	5357	1.25	ppm	93
13) Decane	4.500	43	7178	1.69	ppm	92
14) 1,3-Dichlorobenzene	4.581	146	6015	1.15	ppm	81
15) 1,4-Dichlorobenzene	4.650	146	5642	1.10	ppm	98
16) Benzyl alcohol	4.768	108	2738	1.02	ppm #	75
17) 1,2-Dichlorobenzene	4.794	146	5761	1.16	ppm	98
18) Acetophenone	5.008	105	7637	1.36	ppm	80
19) 2-Methylphenol	4.880	108	5216	1.47	ppm	94
20) 2,2'-oxybis(1-Chloropr...	4.896	45	8209	1.63	ppm	86
21) 3&4-Methylphenol	5.024	108	4483	1.21	ppm	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50262.D
Acq On : 15 May 2018 4:33 am
Operator : georges
Sample : ic2399-1
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 15 10:11:42 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
22) n-Nitroso-di-n-propyla...	5.013	70	4087	1.64	ppm		78
23) Hexachloroethane	5.110	201	2434	1.46	ppm		74
26) Nitrobenzene	5.168	77	5810	1.42	ppm		86
27) Quinoline	6.178	129	10180	1.13	ppm		88
28) Isophorone	5.398	82	10292	1.38	ppm		89
29) 2-Nitrophenol	5.473	139	2826	1.11	ppm		90
30) 2,4-Dimethylphenol	5.526	107	4673	1.16	ppm		93
31) Benzoic acid	5.585	105	3357	1.12	ppm		92
32) bis(2-Chloroethoxy)met...	5.606	93	5192	1.24	ppm		87
33) 2,4-Dichlorophenol	5.708	162	4561	1.12	ppm		93
34) 2,6-Dichlorophenol	5.922	162	4642	1.23	ppm		89
35) 1,3,5-Trichlorobenzene	5.483	180	6039	1.29	ppm		97
36) 1,2,4-Trichlorobenzene	5.783	180	5379	1.20	ppm		99
37) 1,2,3-Trichlorobenzene	5.996	180	5212	1.22	ppm		94
38) Naphthalene	5.852	128	14424	1.13	ppm		93
39) 4-Chloroaniline	5.911	127	6195	1.11	ppm		97
40) 2,3-Dichloroaniline	6.803	161	6015	1.22	ppm		83
41) Caprolactam	6.221	55	3873	1.83	ppm		72
42) Hexachlorobutadiene	5.991	225	3599	1.64	ppm		88
43) 4-Chloro-3-methylphenol	6.397	107	4748	1.32	ppm	#	93
44) 2-Methylnaphthalene	6.525	141	9088	1.12	ppm		97
45) 1-Methylnaphthalene	6.621	141	9754	1.15	ppm		90
46) Dimethylnaphthalene	7.134	156	10576	1.27	ppm		95
48) Hexachlorocyclopentadiene	6.691	237	6338	2.69	ppm		90
49) 2,4,6-Trichlorophenol	6.808	196	3085	1.02	ppm		81
50) 2,4,5-Trichlorophenol	6.846	196	3559	1.12	ppm		81
52) 2-Chloronaphthalene	6.995	162	10211	1.05	ppm		92
53) Biphenyl	6.985	154	14385	1.11	ppm		97
54) 2-Nitroaniline	7.097	65	2832	1.22	ppm	#	73
55) Dimethylphthalate	7.284	163	11694	1.07	ppm		94
56) Acenaphthylene	7.401	152	14227	0.90	ppm		98
57) 2,6-Dinitrotoluene	7.337	165	2351	1.07	ppm		75
58) 3-Nitroaniline	7.497	138	2801	0.99	ppm		84
59) Acenaphthene	7.572	153	10661	1.09	ppm		83
60) 2,4-Dinitrophenol	7.604	184	1859	6.08	ppm	#	92
61) 4-Nitrophenol	7.690	109	1738	1.45	ppm	#	58
62) Dibenzofuran	7.738	168	14622	1.07	ppm		95
63) 2,4-Dinitrotoluene	7.727	165	3681	1.27	ppm		91
64) 2,3,4,6-Tetrachlorophenol	7.871	232	3376	1.35	ppm		86
65) Diethylphthalate	7.978	149	9735	0.89	ppm		87
66) Fluorene	8.074	166	11590	1.07	ppm		94
67) 4-Chlorophenyl-phenyle...	8.080	204	6149	1.31	ppm		89
68) 4-Nitroaniline	8.091	138	2757	0.99	ppm		79
70) 4,6-Dinitro-2-methylph...	8.128	198	1989	2.57	ppm		85
71) n-Nitrosodiphenylamine	8.197	169	8568	0.99	ppm		89
72) 1,2-Diphenylhydrazine	8.235	77	10955	1.13	ppm		96
74) 4-Bromophenyl-phenylether	8.571	248	4374	1.43	ppm	#	81
75) Hexachlorobenzene	8.635	284	4968	1.29	ppm		97
76) Pentachlorophenol	8.849	266	3620	1.64	ppm		87
77) Phenanthrene	9.068	178	17610	1.09	ppm		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50262.D
Acq On : 15 May 2018 4:33 am
Operator : georges
Sample : ic2399-1
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 15 10:11:42 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Anthracene	9.122	178	17628	1.07	ppm	97
79)	Carbazole	9.314	167	15825	0.96	ppm	91
80)	Di-n-butylphthalate	9.757	149	18249	0.89	ppm	94
81)	Fluoranthene	10.511	202	20498	1.15	ppm	95
82)	Octadecane	8.961	57	9830	1.32	ppm	94
84)	Pyrene	10.804	202	21103	0.91	ppm	93
86)	Butylbenzylphthalate	11.782	149	8071	0.72	ppm	95
87)	Benzo[a]anthracene	12.519	228	21210	1.07	ppm	91
88)	3,3'-Dichlorobenzidine	12.519	252	8269	1.06	ppm	88
89)	Chrysene	12.567	228	19280	1.04	ppm	93
90)	bis(2-Ethylhexyl)phtha...	12.679	149	10450	0.73	ppm	98
92)	Di-n-octylphthalate	13.630	149	19221	0.79	ppm	91
93)	Benzo[b]fluoranthene	14.052	252	22272	1.10	ppm	89
94)	Benzo[k]fluoranthene	14.090	252	20314	1.11	ppm	94
95)	Benzo[a]pyrene	14.480	252	20501	1.11	ppm	96
96)	Indeno[1,2,3-cd]pyrene	16.024	276	19457	1.13	ppm	96
97)	Dibenz(a,h)acridine	15.698	279	17492	1.13	ppm	82
98)	Dibenz[a,h]anthracene	16.066	278	20503	1.20	ppm	85
99)	7,12-Dimethylbenz(a)an...	14.058	256	8569	1.00	ppm	94
100)	Benzo[g,h,i]perylene	16.440	276	18865	1.12	ppm	75

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

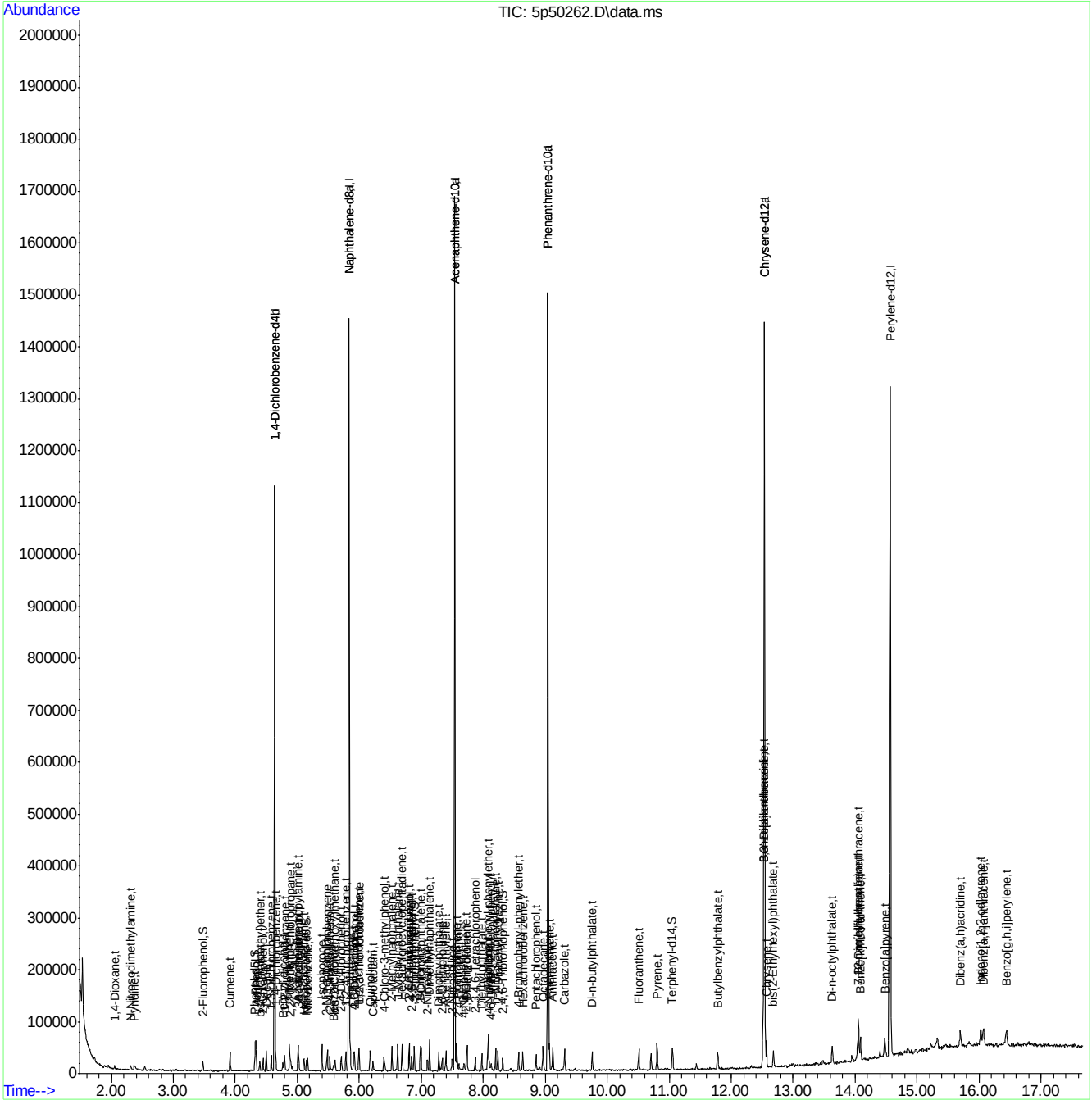
9.6.35

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50262.D
Acq On : 15 May 2018 4:33 am
Operator : georges
Sample : ic2399-1
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 15 10:11:42 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:05:21 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50263.D
Acq On : 15 May 2018 4:58 am
Operator : georges
Sample : icv2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 15 10:22:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:21:09 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.634	152	155204	40.00 ppm	0.00
24) Naphthalene-d8	5.836	136	588046	40.00 ppm	0.00
47) Acenaphthene-d10	7.540	164	356115	40.00 ppm	0.00
69) Phenanthrene-d10	9.041	188	630426	40.00 ppm	0.00
83) Chrysene-d12	12.535	240	649129	40.00 ppm	-0.01
91) Perylene-d12	14.565	264	631802	40.00 ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.634	152	155204	40.00 ppm	0.00
103) Acenaphthene-d10a	7.540	164	356115	40.00 ppm	0.00
105) Chrysene-d12a	12.535	240	649129	40.00 ppm	-0.01
108) Phenanthrene-d10a	9.041	188	630426	40.00 ppm	0.00
112) Naphthalene-d8a	5.836	136	588046	40.00 ppm	0.00
System Monitoring Compounds					
5) 2-Fluorophenol	3.475	112	253636	46.57 ppm	0.00
Spiked Amount 50.000			Recovery	= 93.14%	
8) Phenol-d5	4.313	99	324925	46.64 ppm	0.00
Spiked Amount 50.000			Recovery	= 93.28%	
25) Nitrobenzene-d5	5.152	82	294052	50.61 ppm	0.00
Spiked Amount 50.000			Recovery	= 101.22%	
51) 2-Fluorobiphenyl	6.888	172	587569	46.76 ppm	0.00
Spiked Amount 50.000			Recovery	= 93.52%	
73) 2,4,6-Tribromophenol	8.315	330	138197	49.55 ppm	0.00
Spiked Amount 50.000			Recovery	= 99.10%	
85) Terphenyl-d14	11.055	244	759508	46.43 ppm	0.00
Spiked Amount 50.000			Recovery	= 92.86%	
107) 1-chlorooctadecane	0.000	57	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
109) o-terphenyl	0.000	230	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
Target Compounds					Qvalue

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

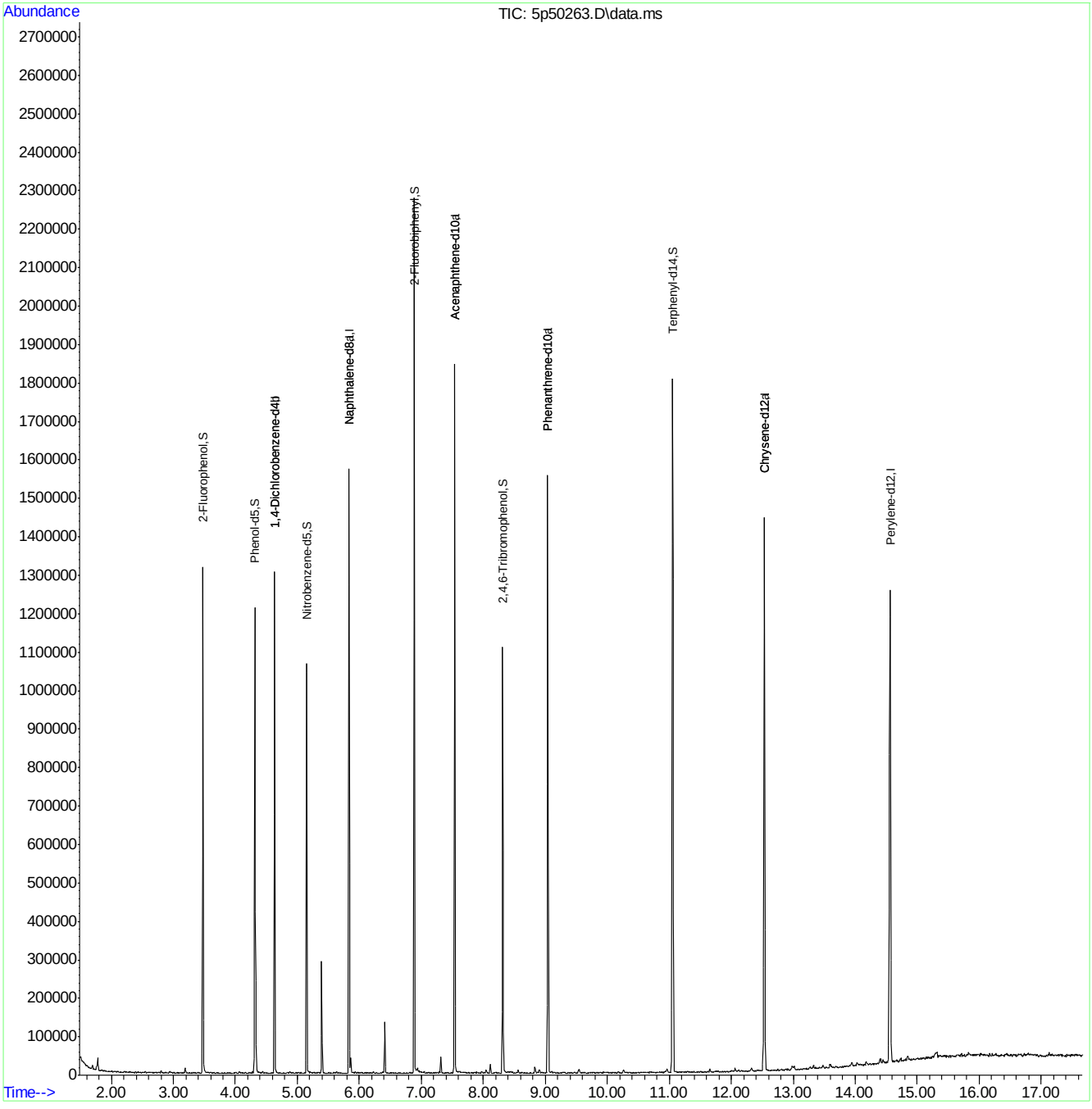
9.6.36

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50263.D
Acq On : 15 May 2018 4:58 am
Operator : georges
Sample : icv2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 15 10:22:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:21:09 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50264.D
Acq On : 15 May 2018 5:23 am
Operator : georges
Sample : icv2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 15 10:23:58 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:21:09 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.634	152	140084	40.00	ppm	0.00
24) Naphthalene-d8	5.836	136	528499	40.00	ppm	0.00
47) Acenaphthene-d10	7.540	164	302333	40.00	ppm	0.00
69) Phenanthrene-d10	9.047	188	569055	40.00	ppm	0.00
83) Chrysene-d12	12.535	240	578578	40.00	ppm	-0.01
91) Perylene-d12	14.565	264	599595	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.634	152	140084	40.00	ppm	0.00
103) Acenaphthene-d10a	7.540	164	302333	40.00	ppm	0.00
105) Chrysene-d12a	12.535	240	578578	40.00	ppm	-0.01
108) Phenanthrene-d10a	9.047	188	569055	40.00	ppm	0.00
112) Naphthalene-d8a	5.836	136	528499	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
9) Phenol	4.330	94	320575	46.08	ppm	95
12) 2-Chlorophenol	4.447	128	261239	48.92	ppm	93
19) 2-Methylphenol	4.880	108	235207	49.50	ppm	96
21) 3&4-Methylphenol	5.024	108	255487	52.34	ppm	96
29) 2-Nitrophenol	5.473	139	142689	51.83	ppm	84
30) 2,4-Dimethylphenol	5.526	107	232106	49.58	ppm	89
31) Benzoic acid	5.654	105	198480	49.98	ppm	93
33) 2,4-Dichlorophenol	5.708	162	214758	48.56	ppm	97
34) 2,6-Dichlorophenol	5.922	162	212631	50.01	ppm	98
43) 4-Chloro-3-methylphenol	6.397	107	225234	48.98	ppm	88
49) 2,4,6-Trichlorophenol	6.808	196	163758	54.04	ppm	85
50) 2,4,5-Trichlorophenol	6.840	196	165290	49.20	ppm	95
60) 2,4-Dinitrophenol	7.604	184	74383	49.49	ppm #	78
61) 4-Nitrophenol	7.690	109	76504	49.58	ppm #	81
64) 2,3,4,6-Tetrachlorophenol	7.871	232	155488	48.08	ppm	94
70) 4,6-Dinitro-2-methylph...	8.128	198	116806	55.57	ppm	97
76) Pentachlorophenol	8.849	266	149929	61.63	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50264.D
Acq On : 15 May 2018 5:23 am
Operator : georges
Sample : icv2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 15 10:23:58 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:21:09 2018
Response via : Initial Calibration

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

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

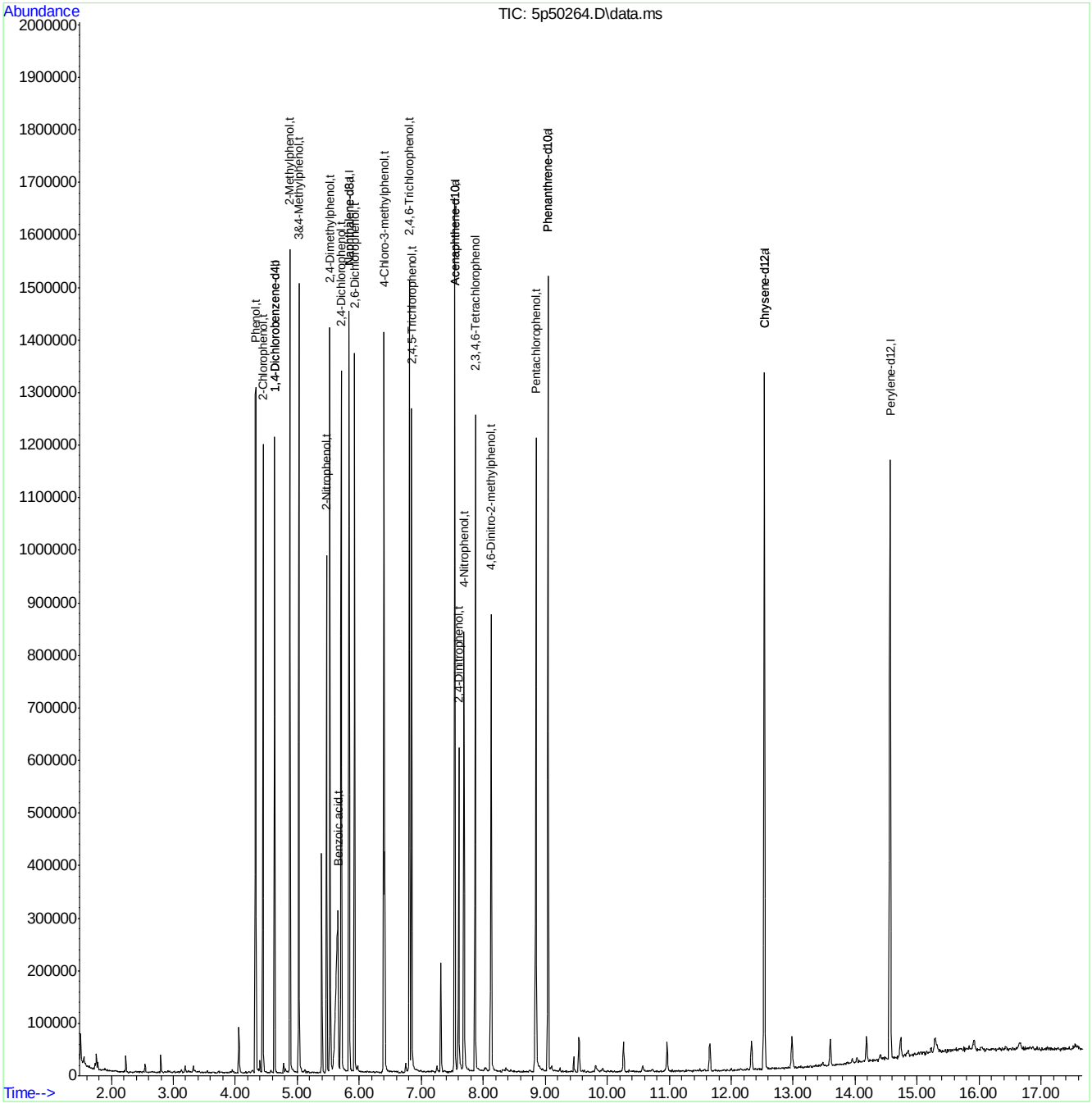
9.6.37

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50264.D
Acq On : 15 May 2018 5:23 am
Operator : georges
Sample : icv2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 15 10:23:58 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:21:09 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50265.D
Acq On : 15 May 2018 5:47 am
Operator : georges
Sample : icv2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 15 10:24:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:21:09 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.634	152	119083	40.00 ppm	0.00
24) Naphthalene-d8	5.836	136	495741	40.00 ppm	0.00
47) Acenaphthene-d10	7.540	164	281962	40.00 ppm	0.00
69) Phenanthrene-d10	9.041	188	542573	40.00 ppm	0.00
83) Chrysene-d12	12.535	240	560066	40.00 ppm	-0.01
91) Perylene-d12	14.565	264	577582	40.00 ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.634	152	119083	40.00 ppm	0.00
103) Acenaphthene-d10a	7.540	164	281962	40.00 ppm	0.00
105) Chrysene-d12a	12.535	240	560066	40.00 ppm	-0.01
108) Phenanthrene-d10a	9.041	188	542573	40.00 ppm	0.00
112) Naphthalene-d8a	5.836	136	495741	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%	
107) 1-chlorooctadecane	0.000	57	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
109) o-terphenyl	0.000	230	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
Target Compounds					Qvalue
3) Pyridine	2.401	79	229308	50.15 ppm	85
10) Aniline	4.340	93	339911	54.13 ppm	62
16) Benzyl alcohol	4.773	108	147506	51.41 ppm	91
39) 4-Chloroaniline	5.911	127	257446	46.71 ppm	90
44) 2-Methylnaphthalene	6.525	141	350341	44.93 ppm	97
54) 2-Nitroaniline	7.102	65	139670	51.84 ppm #	71
58) 3-Nitroaniline	7.503	138	130078	50.71 ppm	83
62) Dibenzofuran	7.743	168	587966	49.25 ppm	95
68) 4-Nitroaniline	8.101	138	124750	49.97 ppm	87
79) Carbazole	9.319	167	666506	47.35 ppm	99

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

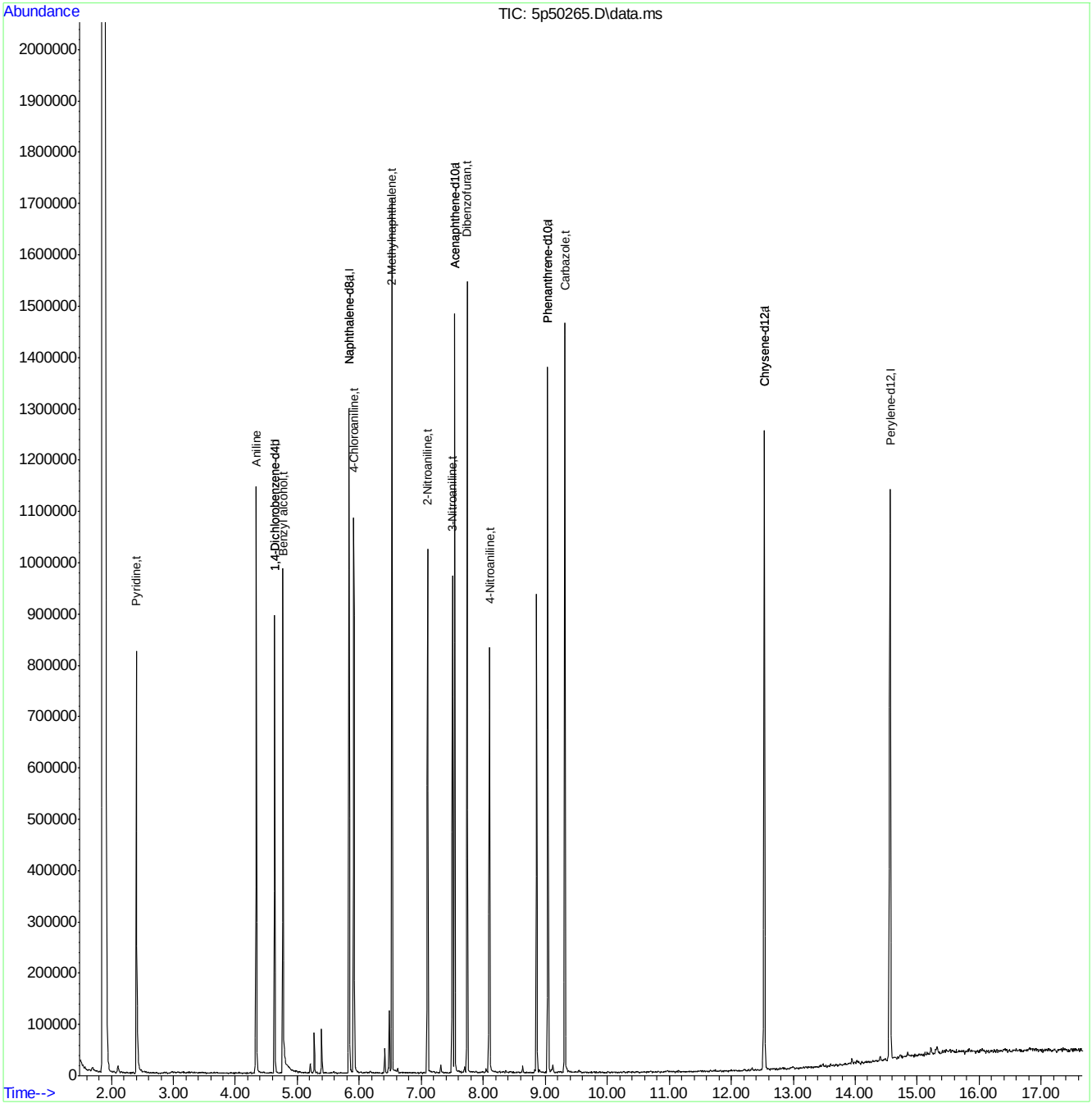
9.6.38

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50265.D
Acq On : 15 May 2018 5:47 am
Operator : georges
Sample : icv2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 15 10:24:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:21:09 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50266.D
Acq On : 15 May 2018 6:12 am
Operator : georges
Sample : icv2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 15 10:27:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:21:09 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.634	152	120570	40.00 ppm	0.00
24) Naphthalene-d8	5.836	136	470844	40.00 ppm	0.00
47) Acenaphthene-d10	7.540	164	251367	40.00 ppm	0.00
69) Phenanthrene-d10	9.047	188	498647	40.00 ppm	0.00
83) Chrysene-d12	12.540	240	441359	40.00 ppm	0.00
91) Perylene-d12	14.565	264	502916	40.00 ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.634	152	120570	40.00 ppm	0.00
103) Acenaphthene-d10a	7.540	164	251367	40.00 ppm	0.00
105) Chrysene-d12a	12.540	240	441359	40.00 ppm	0.00
108) Phenanthrene-d10a	9.047	188	498647	40.00 ppm	0.00
112) Naphthalene-d8a	5.836	136	470844	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	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%	
107) 1-chlorooctadecane	0.000	57	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
109) o-terphenyl	0.000	230	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
Target Compounds					Qvalue
4) N-Nitrosodimethylamine	2.294	74	110422	41.85 ppm	76
11) bis(2-Chloroethyl)ether	4.394	93	205433	53.17 ppm	95
14) 1,3-Dichlorobenzene	4.586	146	253726	50.26 ppm	99
15) 1,4-Dichlorobenzene	4.650	146	242331	49.83 ppm	99
17) 1,2-Dichlorobenzene	4.794	146	241198	51.34 ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.896	45	392997	56.11 ppm	92
22) n-Nitroso-di-n-propyla...	5.013	70	148477	47.91 ppm	84
23) Hexachloroethane	5.109	201	101743	48.79 ppm	97
26) Nitrobenzene	5.168	77	219724	47.95 ppm	88
28) Isophorone	5.398	82	407724	48.56 ppm	95
32) bis(2-Chloroethoxy)met...	5.612	93	239753	55.14 ppm	98
36) 1,2,4-Trichlorobenzene	5.782	180	227319	50.29 ppm	96
38) Naphthalene	5.857	128	594870	49.93 ppm	100
42) Hexachlorobutadiene	5.991	225	139097	51.75 ppm	97
48) Hexachlorocyclopentadiene	6.691	237	151609	57.23 ppm	99
52) 2-Chloronaphthalene	7.001	162	435963	58.74 ppm	98
55) Dimethylphthalate	7.289	163	478041	54.20 ppm	100
56) Acenaphthylene	7.401	152	597148	53.02 ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50266.D
Acq On : 15 May 2018 6:12 am
Operator : georges
Sample : icv2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 15 10:27:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:21:09 2018
Response via : Initial Calibration

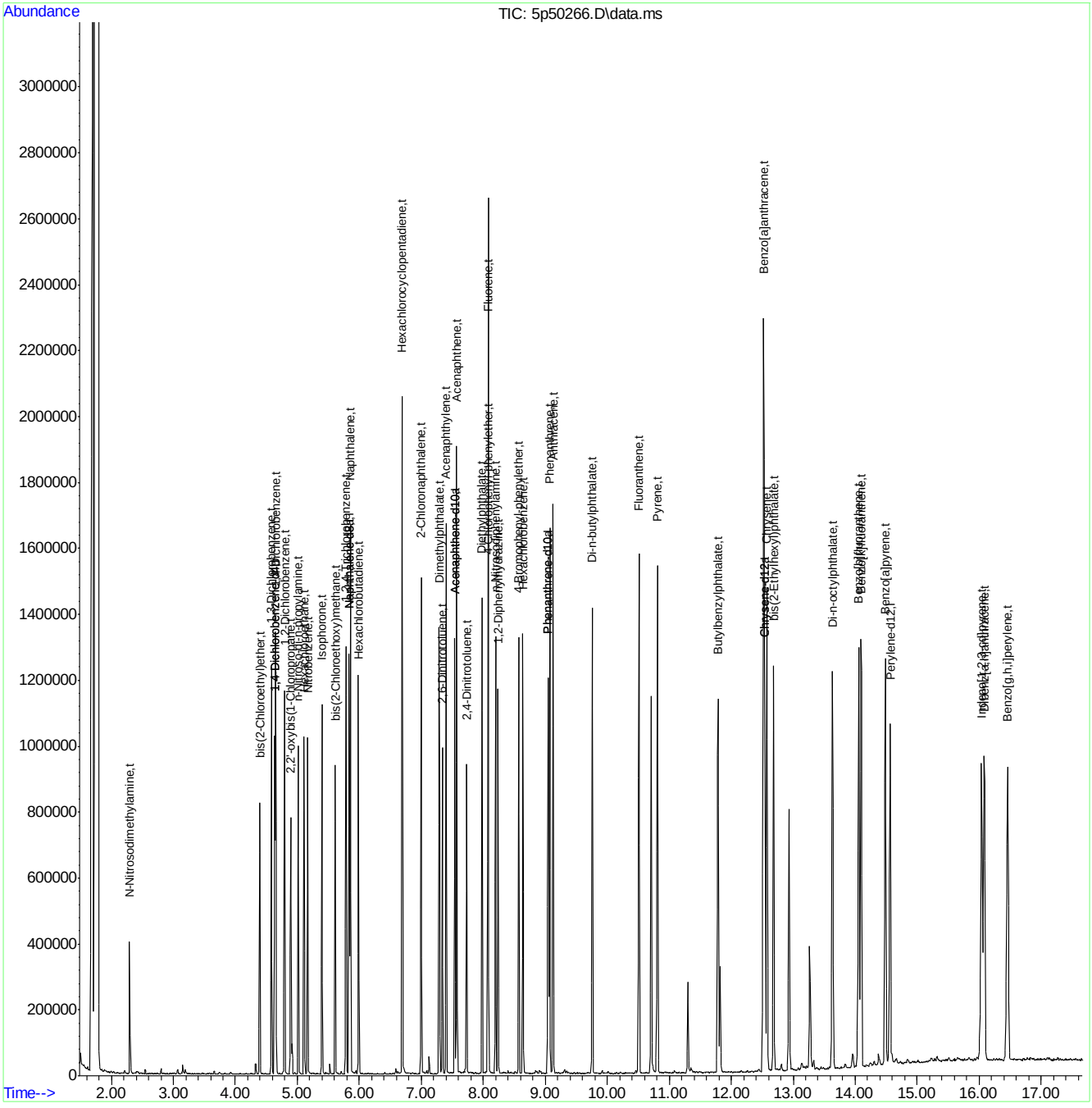
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
57)	2,6-Dinitrotoluene	7.342	165	105457	52.66 ppm	91
59)	Acenaphthene	7.572	153	406056	52.40 ppm	92
63)	2,4-Dinitrotoluene	7.732	165	140707	52.29 ppm	97
65)	Diethylphthalate	7.978	149	450246	54.48 ppm	97
66)	Fluorene	8.074	166	441076	50.94 ppm	100
67)	4-Chlorophenyl-phenyle...	8.085	204	227665	51.32 ppm	86
71)	n-Nitrosodiphenylamine	8.197	169	287577	42.86 ppm	97
72)	1,2-Diphenylhydrazine	8.235	77	418070	48.67 ppm	97
74)	4-Bromophenyl-phenylether	8.571	248	165511	48.13 ppm	83
75)	Hexachlorobenzene	8.641	284	188577	47.70 ppm	86
77)	Phenanthrene	9.073	178	668443	49.44 ppm	99
78)	Anthracene	9.127	178	659571	47.55 ppm	100
80)	Di-n-butylphthalate	9.757	149	753806	48.53 ppm	99
81)	Fluoranthene	10.516	202	788773	47.48 ppm	97
84)	Pyrene	10.810	202	762220	50.65 ppm	99
86)	Butylbenzylphthalate	11.787	149	336443	54.62 ppm	91
87)	Benzo[a]anthracene	12.524	228	705633	50.30 ppm	98
89)	Chrysene	12.578	228	655036	50.09 ppm	98
90)	bis(2-Ethylhexyl)phtha...	12.685	149	419716	52.99 ppm	99
92)	Di-n-octylphthalate	13.636	149	771333	50.80 ppm	96
93)	Benzo[b]fluoranthene	14.058	252	778721	48.36 ppm	94
94)	Benzo[k]fluoranthene	14.095	252	676707	47.52 ppm	96
95)	Benzo[a]pyrene	14.490	252	708379	48.99 ppm	97
96)	Indeno[1,2,3-cd]pyrene	16.040	276	729943	50.50 ppm	98
98)	Dibenz[a,h]anthracene	16.082	278	704439	48.61 ppm	92
100)	Benzo[g,h,i]perylene	16.462	276	721998	52.09 ppm	89

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50266.D
Acq On : 15 May 2018 6:12 am
Operator : georges
Sample : icv2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 15 10:27:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:21:09 2018
Response via : Initial Calibration



M5P2399.M Tue May 15 10:27:18 2018 RPT1 Page: 3

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50268.D
Acq On : 15 May 2018 10:30 am
Operator : georges
Sample : icv2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 15 10:52:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:21:09 2018
Response via : Initial Calibration

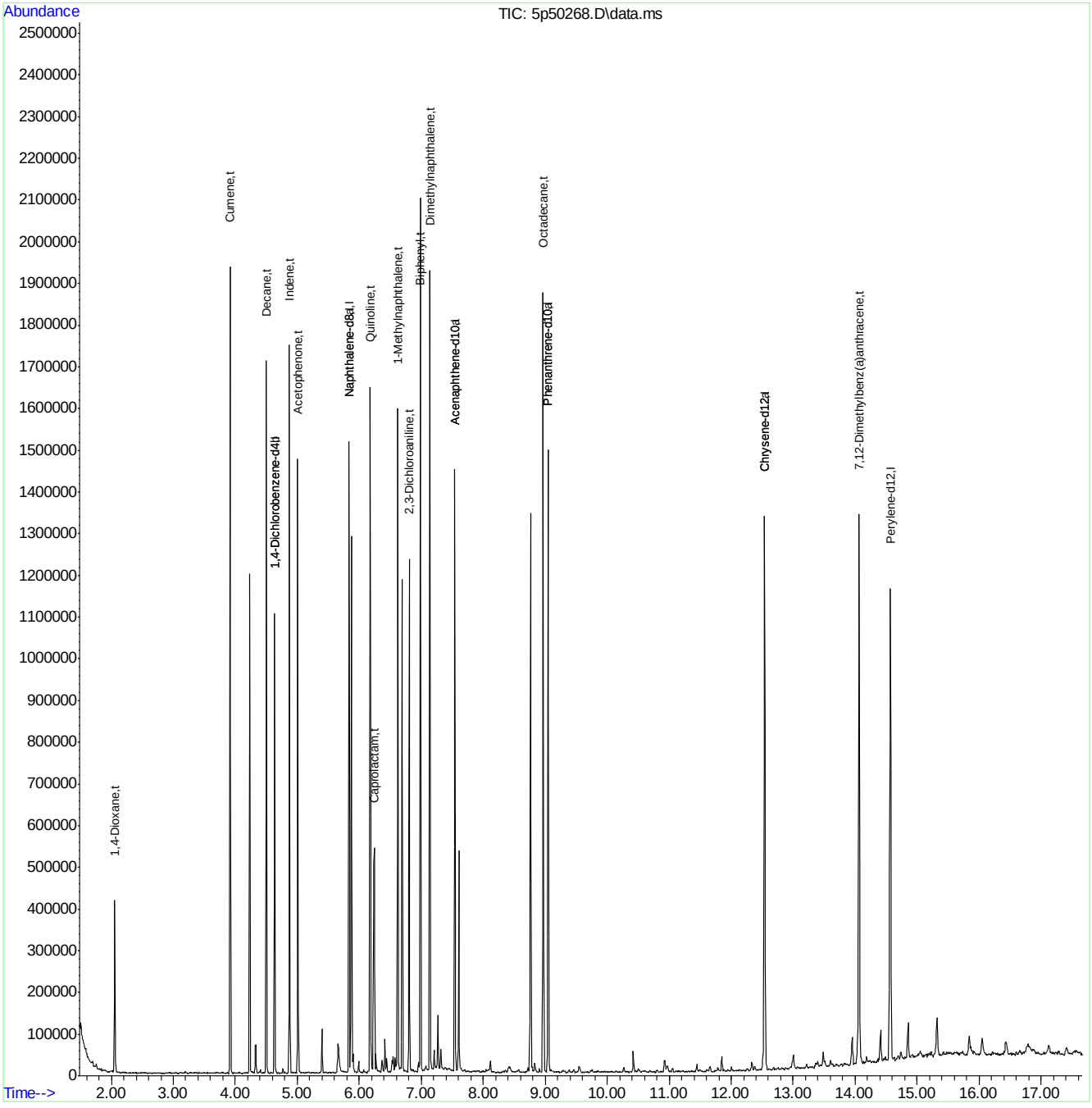
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.634	152	132401	40.00 ppm	0.00
24) Naphthalene-d8	5.836	136	549792	40.00 ppm	0.00
47) Acenaphthene-d10	7.540	164	291701	40.00 ppm	0.00
69) Phenanthrene-d10	9.047	188	541800	40.00 ppm	0.00
83) Chrysene-d12	12.541	240	602967	40.00 ppm	0.00
91) Perylene-d12	14.571	264	588665	40.00 ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.634	152	132401	40.00 ppm	0.00
103) Acenaphthene-d10a	7.540	164	291701	40.00 ppm	0.00
105) Chrysene-d12a	12.541	240	602967	40.00 ppm	0.00
108) Phenanthrene-d10a	9.047	188	541800	40.00 ppm	0.00
112) Naphthalene-d8a	5.836	136	549792	40.00 ppm	0.00
System Monitoring Compounds					
5) 2-Fluorophenol	0.000	112	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
8) Phenol-d5	0.000	99	0d	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
85) Terphenyl-d14	0.000	244	0d	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
107) 1-chlorooctadecane	0.000	57	0d	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
109) o-terphenyl	0.000	230	0	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
Target Compounds					Qvalue
2) 1,4-Dioxane	2.054	88	101839	47.63 ppm	94
6) Indene	4.875	116	412533	53.50 ppm	96
7) Cumene	3.918	105	576402	47.94 ppm	96
13) Decane	4.501	43	292577	45.68 ppm	97
18) Acetophenone	5.008	105	337637	46.59 ppm	92
27) Quinoline	6.178	129	474895	45.37 ppm	98
40) 2,3-Dichloroaniline	6.803	161	226200	38.85 ppm	96
41) Caprolactam	6.242	55	128602	38.82 ppm	92
45) 1-Methylnaphthalene	6.621	141	351983	39.04 ppm	98
46) Dimethylnaphthalene	7.140	156	404535	42.19 ppm	98
53) Biphenyl	6.985	154	569525	48.22 ppm	97
82) Octadecane	8.967	57	374508	47.09 ppm	97
99) 7,12-Dimethylbenz(a)an...	14.063	256	376621	48.25 ppm	98

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

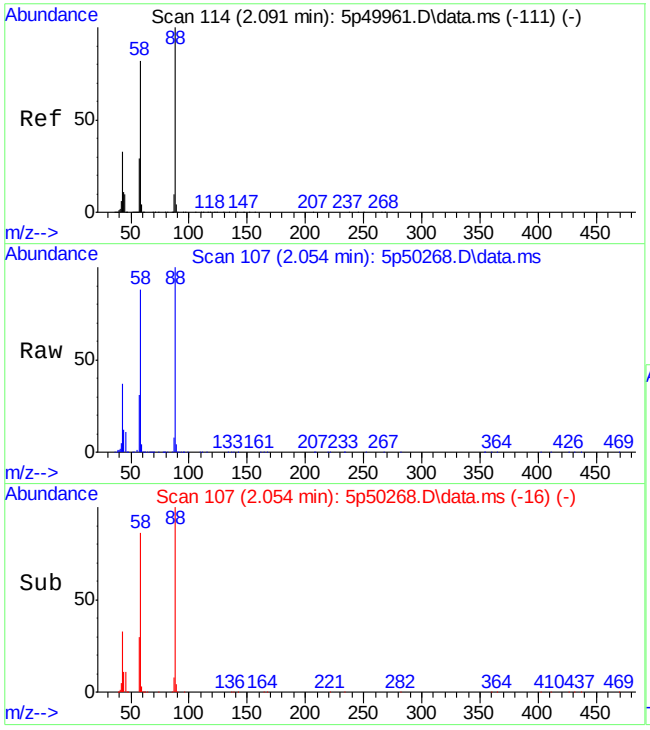
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50268.D
Acq On : 15 May 2018 10:30 am
Operator : georges
Sample : icv2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 15 10:52:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:21:09 2018
Response via : Initial Calibration



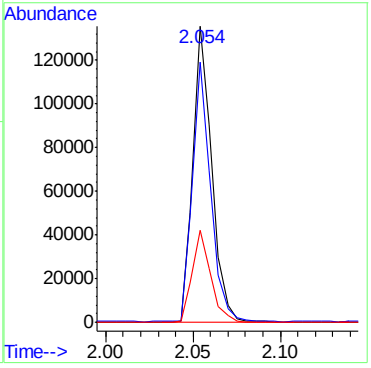
M5P2399.M Tue May 15 10:52:33 2018 RPT1 Page: 2

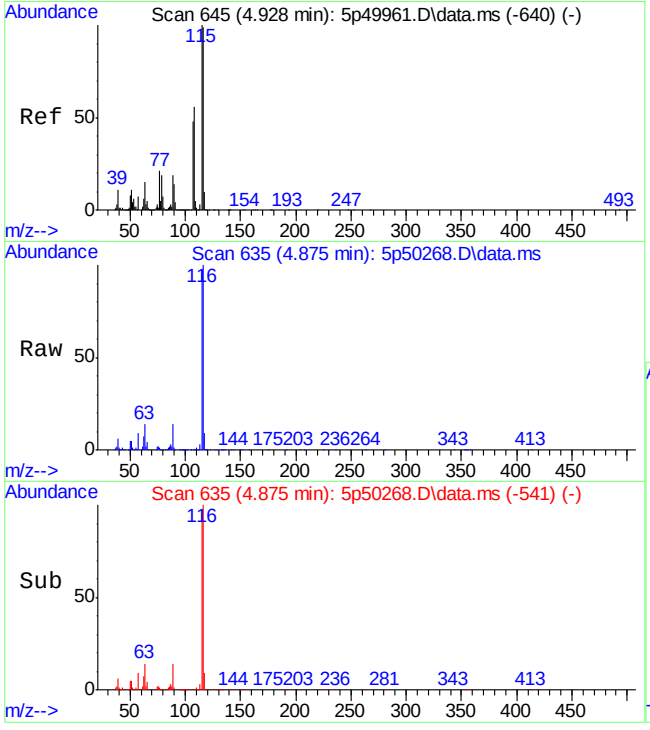


#2
1,4-Dioxane
Concen: 47.63 ppm
RT: 2.054 min Scan# 107
Delta R.T. -0.013 min
Lab File: 5p50268.D
Acq: 15 May 18 10:30 am

Tgt Ion: 88 Resp: 101839

Ion	Ratio	Lower	Upper
88	100		
58	87.3	51.8	111.8
57	30.9	0.0	58.6

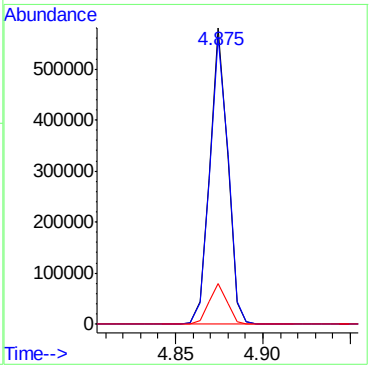




#6
Indene
Concen: 53.50 ppm
RT: 4.875 min Scan# 635
Delta R.T. 0.003 min
Lab File: 5p50268.D
Acq: 15 May 18 10:30 am

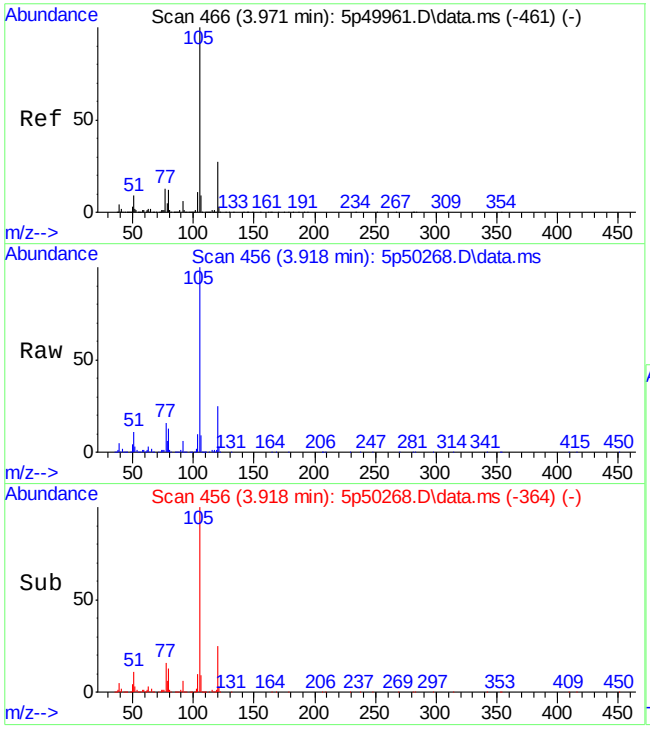
Tgt Ion:116 Resp: 412533

Ion	Ratio	Lower	Upper
116	100		
115	96.8	70.8	130.8
63	13.8	0.0	44.9



9.6.40

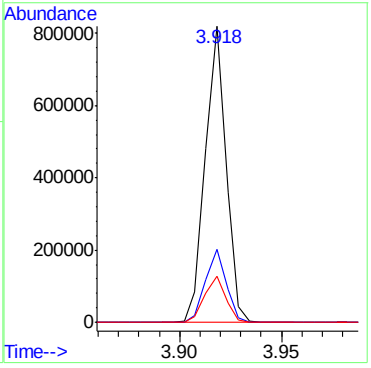
9

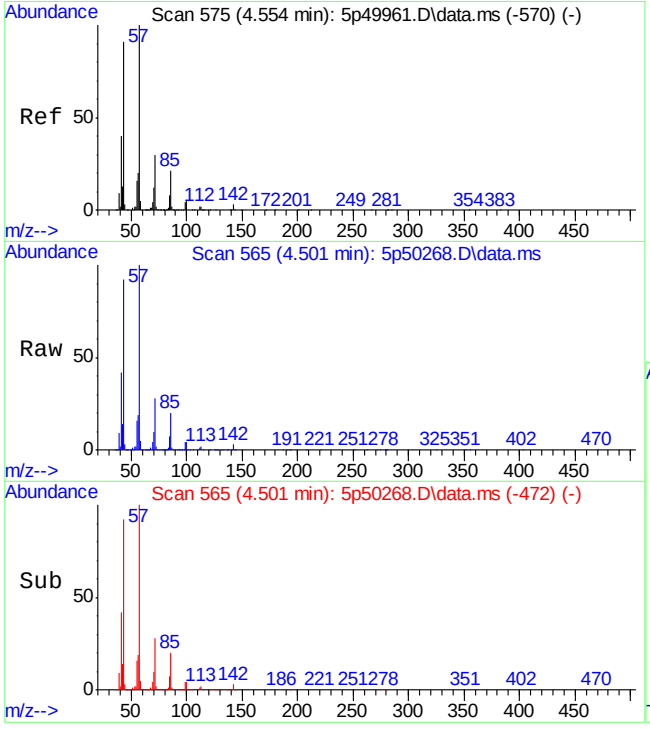


#7
Cumene
Concen: 47.94 ppm
RT: 3.918 min Scan# 456
Delta R.T. -0.008 min
Lab File: 5p50268.D
Acq: 15 May 18 10:30 am

Tgt Ion:105 Resp: 576402

Ion	Ratio	Lower	Upper
105	100		
120	24.8	0.0	56.6
77	15.6	0.0	43.5

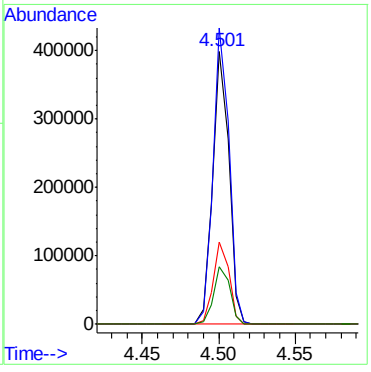


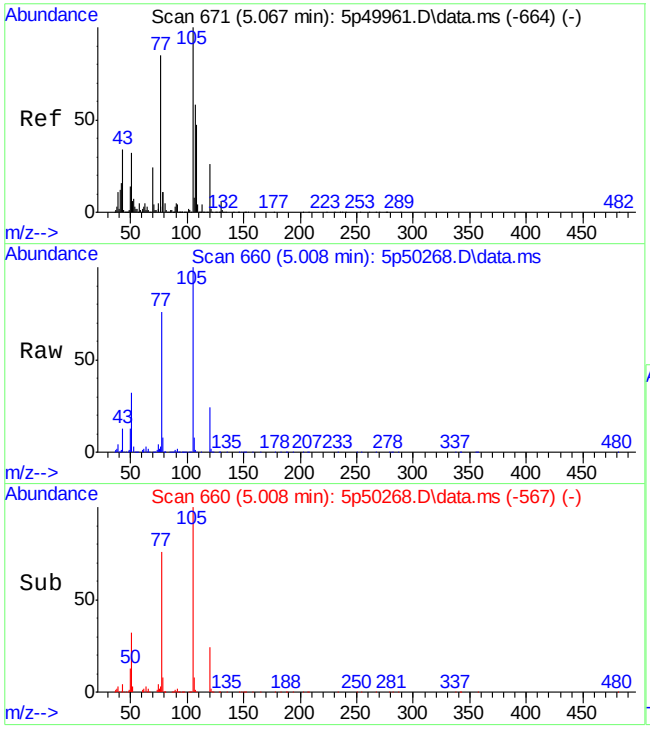


#13
Decane
Concen: 45.68 ppm
RT: 4.501 min Scan# 565
Delta R.T. -0.001 min
Lab File: 5p50268.D
Acq: 15 May 18 10:30 am

Tgt Ion: 43 Resp: 292577

Ion	Ratio	Lower	Upper
43	100		
57	108.6	80.0	140.0
71	30.0	3.5	63.5
85	21.2	0.0	53.0

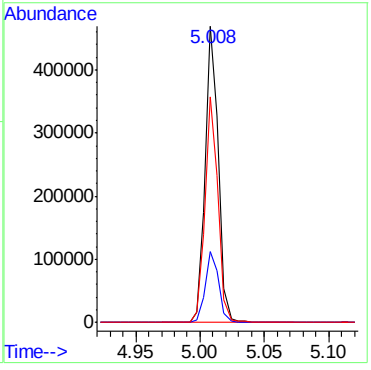


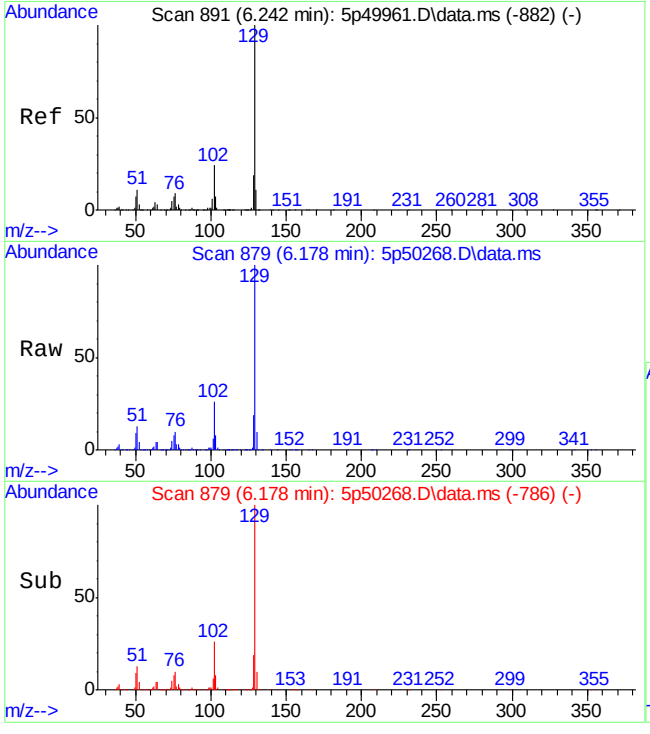


#18
Acetophenone
Concen: 46.59 ppm
RT: 5.008 min Scan# 660
Delta R.T. -0.001 min
Lab File: 5p50268.D
Acq: 15 May 18 10:30 am

Tgt Ion:105 Resp: 337637

Ion	Ratio	Lower	Upper
105	100		
120	23.9	0.0	55.7
77	76.3	54.9	114.9

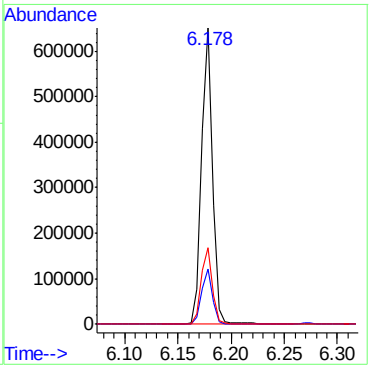




#27
Quinoline
Concen: 45.37 ppm
RT: 6.178 min Scan# 879
Delta R.T. -0.002 min
Lab File: 5p50268.D
Acq: 15 May 18 10:30 am

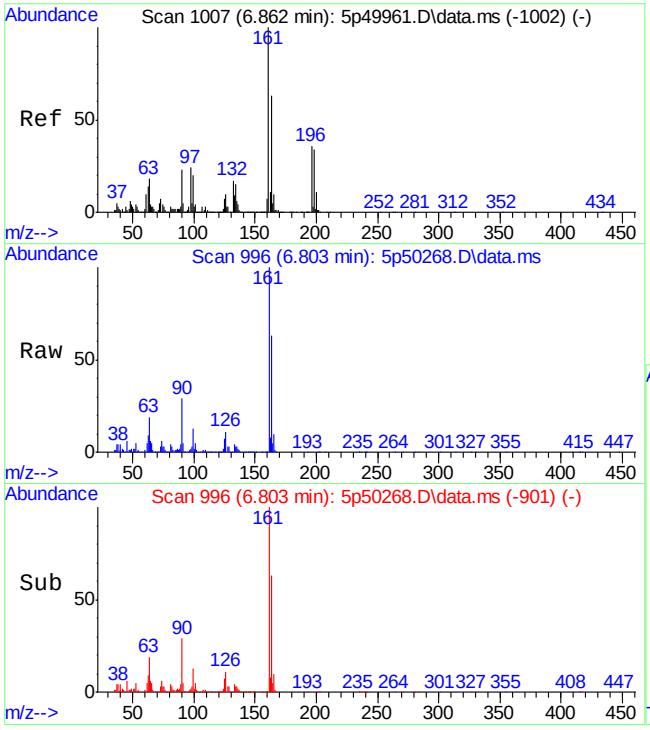
Tgt Ion:129 Resp: 474895

Ion	Ratio	Lower	Upper
129	100		
128	18.5	0.0	49.0
102	25.9	0.0	54.2



9.6.40

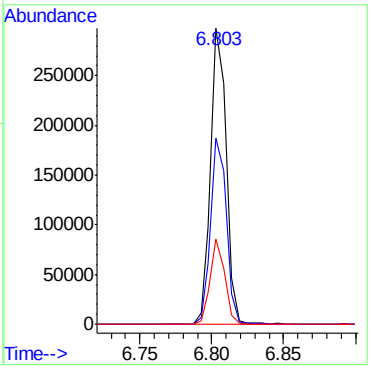
9

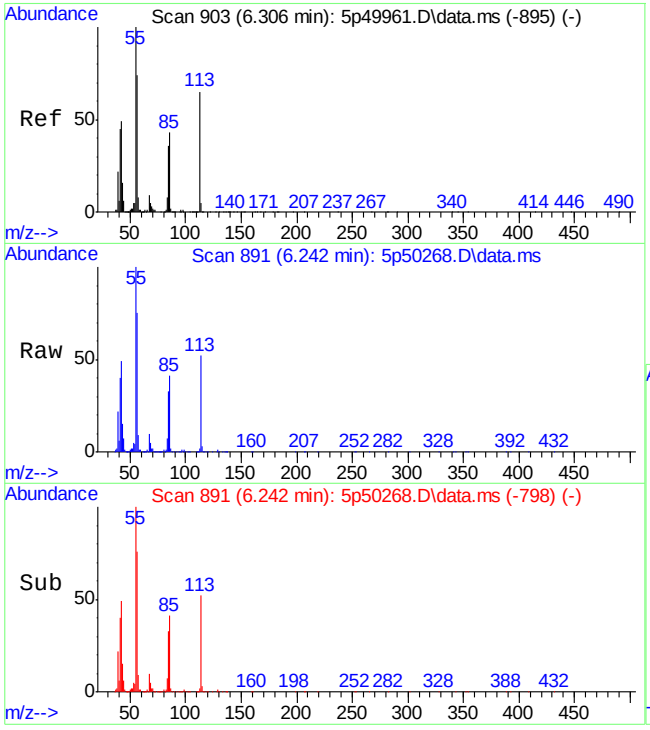


#40
2,3-Dichloroaniline
Concen: 38.85 ppm
RT: 6.803 min Scan# 996
Delta R.T. 0.010 min
Lab File: 5p50268.D
Acq: 15 May 18 10:30 am

Tgt Ion:161 Resp: 226200

Ion	Ratio	Lower	Upper
161	100		
163	62.6	33.4	93.4
90	28.9	0.0	52.8

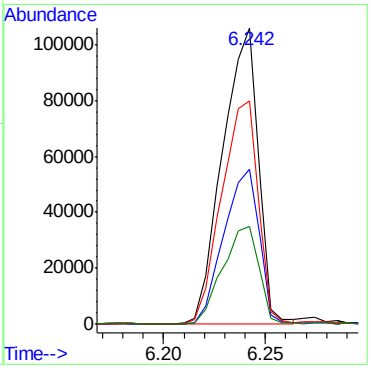


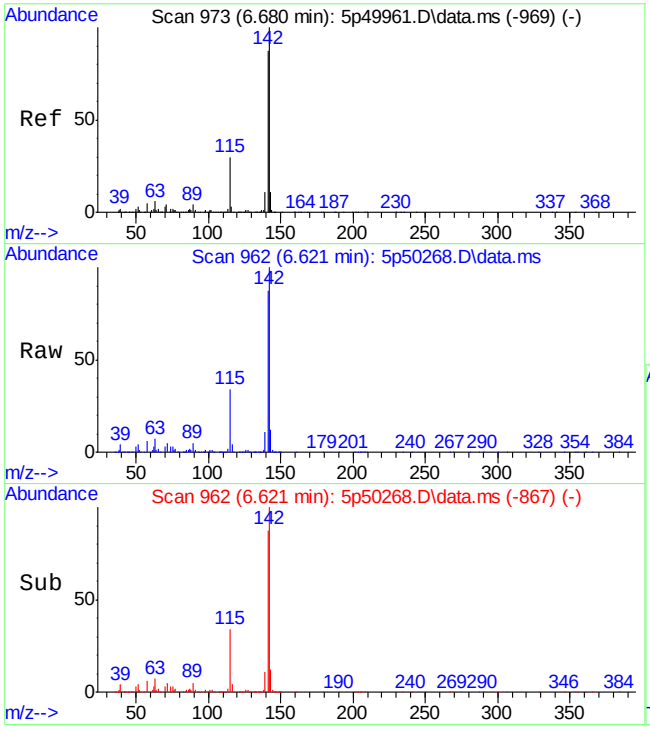


#41
Caprolactam
Concen: 38.82 ppm
RT: 6.242 min Scan# 891
Delta R.T. -0.001 min
Lab File: 5p50268.D
Acq: 15 May 18 10:30 am

Tgt Ion: 55 Resp: 128602

Ion	Ratio	Lower	Upper
55	100		
113	52.5	35.1	95.1
56	75.7	44.4	104.4
84	33.0	6.2	66.2

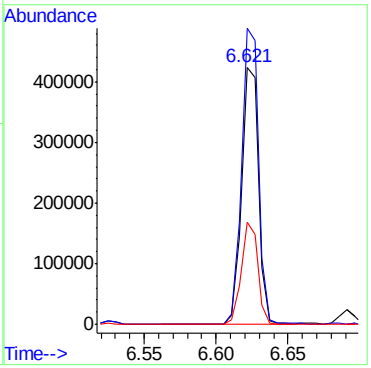


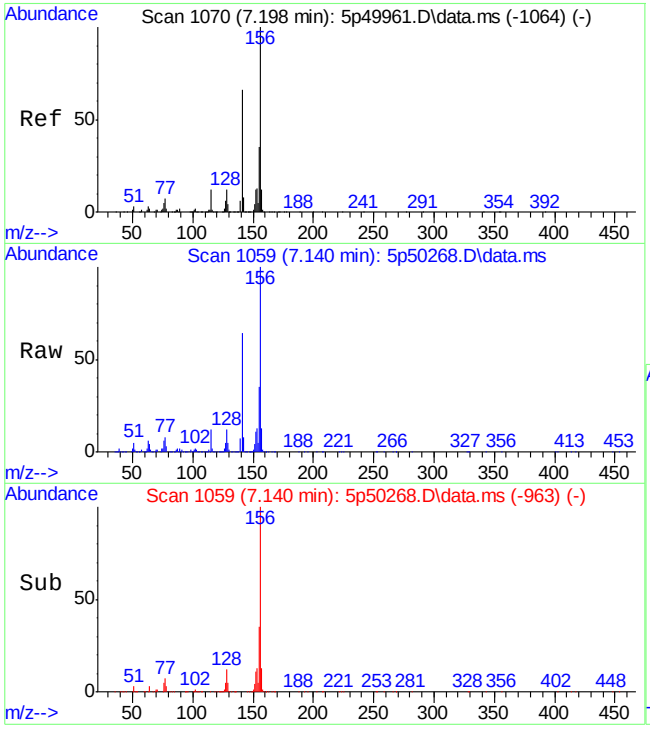


#45
1-Methylnaphthalene
Concen: 39.04 ppm
RT: 6.621 min Scan# 962
Delta R.T. 0.008 min
Lab File: 5p50268.D
Acq: 15 May 18 10:30 am

Tgt Ion:141 Resp: 351983

Ion	Ratio	Lower	Upper
141	100		
142	115.0	84.7	144.7
115	39.6	4.2	64.2

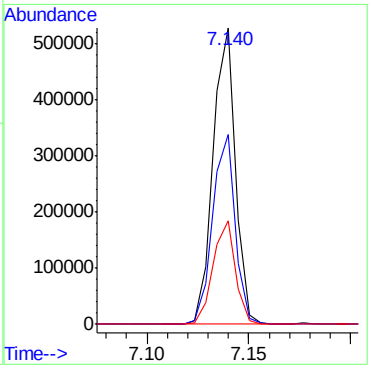


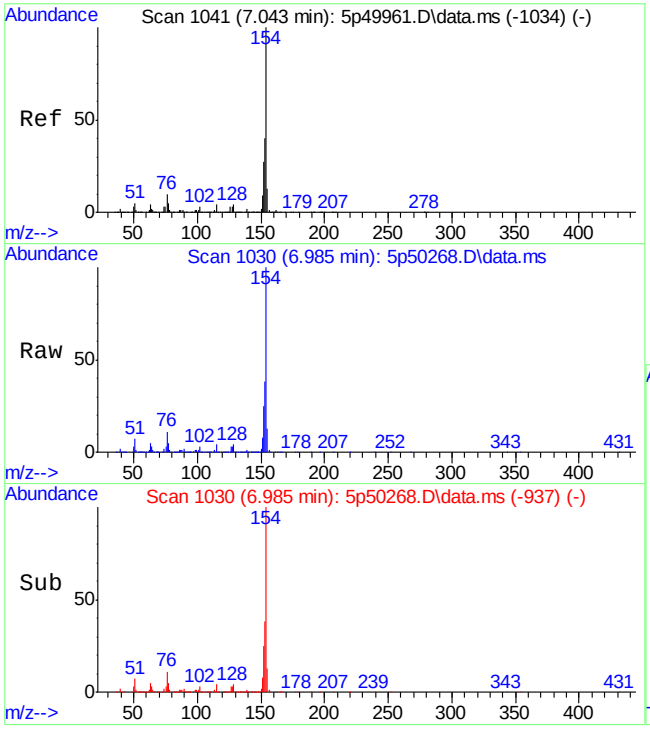


#46
Dimethylnaphthalene
Concen: 42.19 ppm
RT: 7.140 min Scan# 1059
Delta R.T. 0.013 min
Lab File: 5p50268.D
Acq: 15 May 18 10:30 am

Tgt Ion:156 Resp: 404535

Ion	Ratio	Lower	Upper
156	100		
141	63.9	35.6	95.6
155	34.9	4.7	64.7

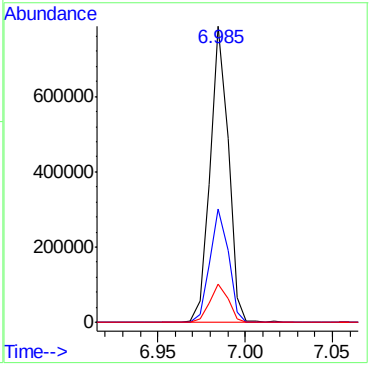


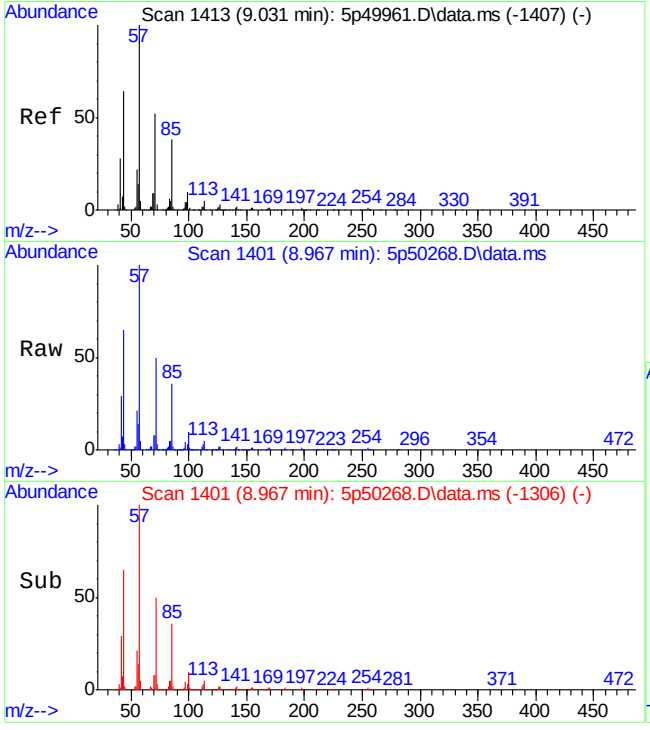


#53
Biphenyl
Concen: 48.22 ppm
RT: 6.985 min Scan# 1030
Delta R.T. -0.004 min
Lab File: 5p50268.D
Acq: 15 May 18 10:30 am

Tgt Ion:154 Resp: 569525

Ion	Ratio	Lower	Upper
154	100		
153	38.1	10.3	70.3
155	12.8	0.0	43.3

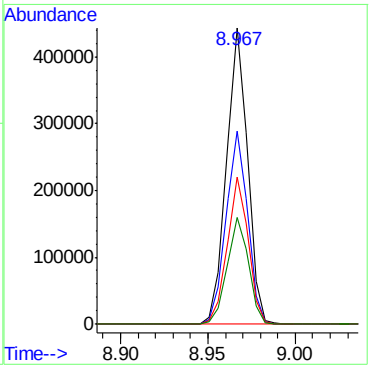


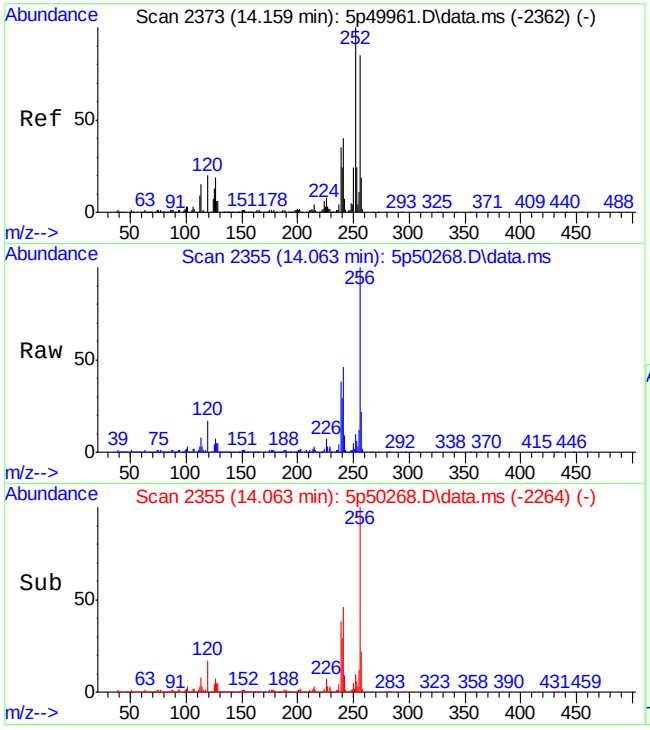


#82
Octadecane
Concen: 47.09 ppm
RT: 8.967 min Scan# 1401
Delta R.T. 0.005 min
Lab File: 5p50268.D
Acq: 15 May 18 10:30 am

Tgt Ion: 57 Resp: 374508

Ion	Ratio	Lower	Upper
57	100		
43	65.2	33.6	93.6
71	49.6	22.5	82.5
85	36.0	7.7	67.7

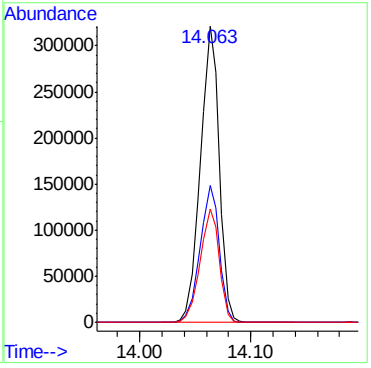




#99
7,12-Dimethylbenz(a)anthracene
Concen: 48.25 ppm
RT: 14.063 min Scan# 2355
Delta R.T. -0.013 min
Lab File: 5p50268.D
Acq: 15 May 18 10:30 am

Tgt Ion:256 Resp: 376621

Ion	Ratio	Lower	Upper
256	100		
241	46.1	16.8	76.8
239	38.4	10.9	70.9



9.6.40

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50269.D
Acq On : 15 May 2018 10:55 am
Operator : georges
Sample : icv2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 15 11:13:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:21:09 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.634	152	139926	40.00	ppm	0.00
24) Naphthalene-d8	5.836	136	555194	40.00	ppm	0.00
47) Acenaphthene-d10	7.540	164	338073	40.00	ppm	0.00
69) Phenanthrene-d10	9.041	188	621865	40.00	ppm	0.00
83) Chrysene-d12	12.535	240	596440	40.00	ppm	-0.01
91) Perylene-d12	14.565	264	702172	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.634	152	139926	40.00	ppm	0.00
103) Acenaphthene-d10a	7.540	164	338073	40.00	ppm	0.00
105) Chrysene-d12a	12.535	240	596440	40.00	ppm	-0.01
108) Phenanthrene-d10a	9.041	188	621865	40.00	ppm	0.00
112) Naphthalene-d8a	5.836	136	555194	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%			
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
88) 3,3'-Dichlorobenzidine	12.519	252	403128	49.35	ppm	99

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

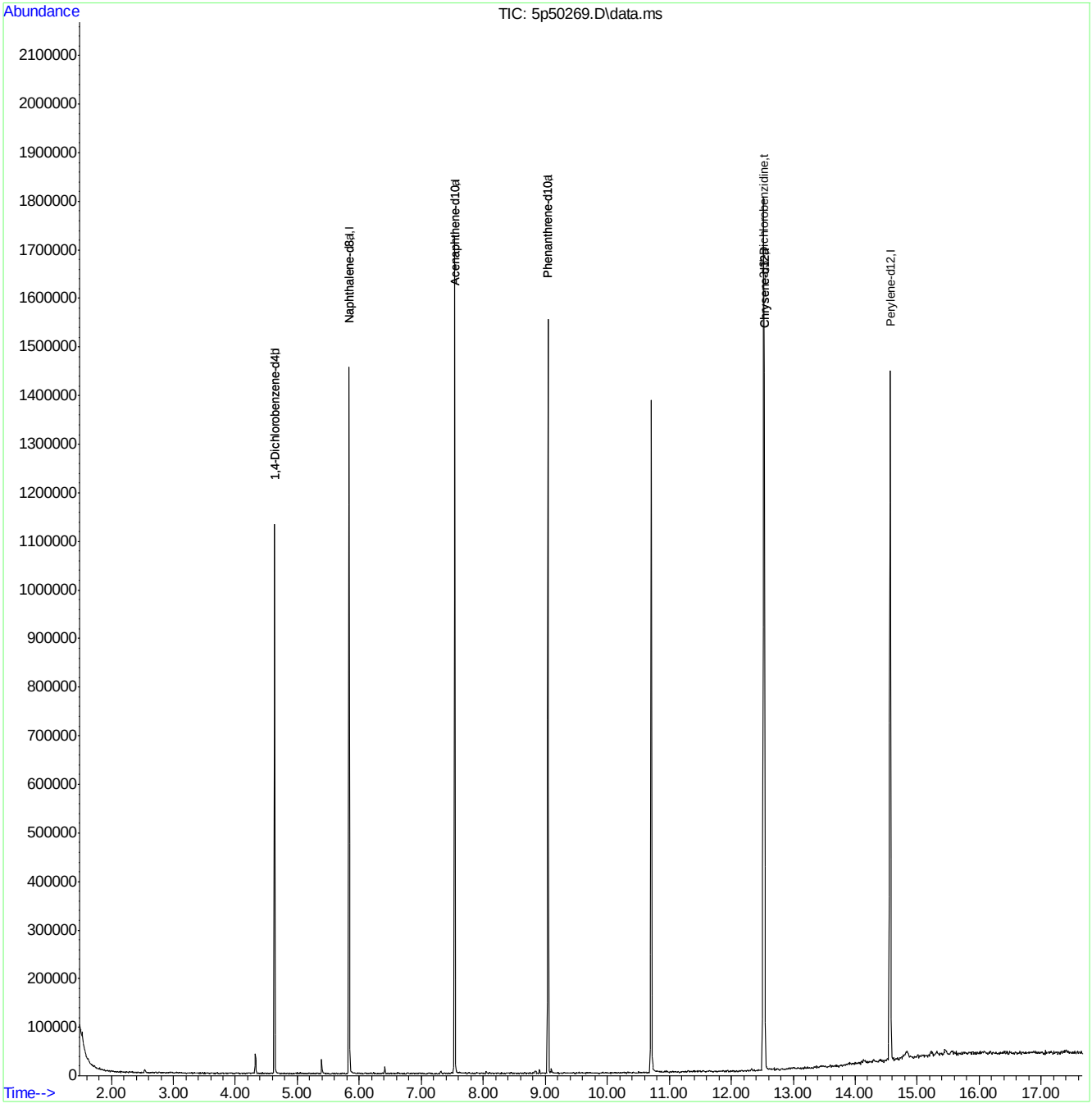
9.6.41

9

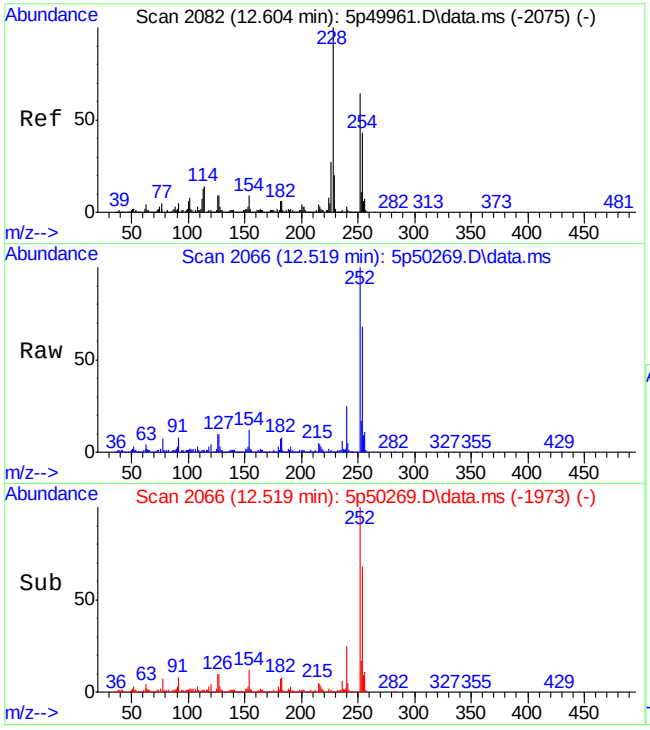
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2399\
Data File : 5p50269.D
Acq On : 15 May 2018 10:55 am
Operator : georges
Sample : icv2399-50
Misc : op6115,e5p2399,1000,,,1,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 15 11:13:35 2018
Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 15 10:21:09 2018
Response via : Initial Calibration



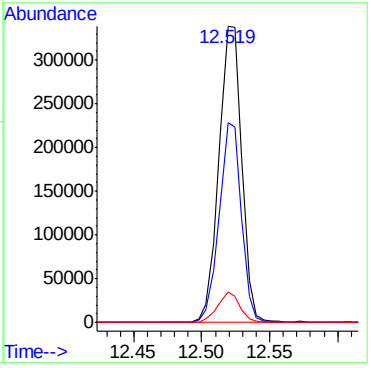
M5P2399.M Tue May 15 11:13:46 2018 RPT1 Page: 2



#88
3,3'-Dichlorobenzidine
Concen: 49.35 ppm
RT: 12.519 min Scan# 2066
Delta R.T. -0.005 min
Lab File: 5p50269.D
Acq: 15 May 18 10:55 am

Tgt Ion:252 Resp: 403128

Ion	Ratio	Lower	Upper
252	100		
254	67.5	37.4	97.4
126	10.3	0.0	43.5



9.6.41

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50926.d
Acq On : 5 Jun 2018 12:38 pm
Operator : christc2
Sample : cc2399-25 Inst : MS5P
Misc : op6115,e5p2426,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 20:55:57 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.420	152	101897	40.00	ppm	0.00
24) Naphthalene-d8	5.617	136	406565	40.00	ppm	0.00
47) Acenaphthene-d10	7.310	164	224348	40.00	ppm	0.00
69) Phenanthrene-d10	8.790	188	445779	40.00	ppm	0.00
83) Chrysene-d12	12.215	240	461293	40.00	ppm	0.00
91) Perylene-d12	14.229	264	496133	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.420	152	101897	40.00	ppm	0.00
103) Acenaphthene-d10a	7.310	164	224348	40.00	ppm	0.00
105) Chrysene-d12a	12.215	240	461185	40.00	ppm	0.00
108) Phenanthrene-d10a	8.790	188	445779	40.00	ppm	0.00
112) Naphthalene-d8a	5.617	136	406565	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.282	112	87386	24.44	ppm	-0.03
Spiked Amount 50.000			Recovery = 48.88%			
8) Phenol-d5	4.132	99	116668	25.51	ppm	0.02
Spiked Amount 50.000			Recovery = 51.02%			
25) Nitrobenzene-d5	4.933	82	117057	29.14	ppm	-0.03
Spiked Amount 50.000			Recovery = 58.28%			
51) 2-Fluorobiphenyl	6.669	172	217371	27.46	ppm	0.00
Spiked Amount 50.000			Recovery = 54.92%			
73) 2,4,6-Tribromophenol	8.085	330	48222	24.45	ppm	0.07
Spiked Amount 50.000			Recovery = 48.90%			
85) Terphenyl-d14	10.756	244	274687	23.63	ppm	-0.02
Spiked Amount 50.000			Recovery = 47.26%			
107) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
109) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.835	88	43334	26.34	ppm	74
3) Pyridine	2.118	79	96853	24.75	ppm #	48
4) N-Nitrosodimethylamine	2.086	74	57400	25.74	ppm #	19
6) Indene	4.655	116	154459	26.03	ppm	97
7) Cumene	3.699	105	259974	28.10	ppm	90
9) Phenol	4.148	94	127758	25.24	ppm	75
10) Aniline	4.121	93	138242	25.73	ppm	69
11) bis(2-Chloroethyl)ether	4.185	93	79855	24.46	ppm	95
12) 2-Chlorophenol	4.239	128	96077	24.74	ppm	81
13) Decane	4.287	43	181130	36.74	ppm	77
14) 1,3-Dichlorobenzene	4.367	146	110282	25.85	ppm	96
15) 1,4-Dichlorobenzene	4.431	146	107518	26.16	ppm	97
16) Benzyl alcohol	4.565	108	62611	25.50	ppm	75
17) 1,2-Dichlorobenzene	4.575	146	106509	26.83	ppm	93
18) Acetophenone	4.794	105	146352	26.24	ppm	95
19) 2-Methylphenol	4.693	108	86939	25.15	ppm	95
20) 2,2'-oxybis(1-Chloropr...	4.682	45	173331	29.28	ppm	79
21) 3&4-Methylphenol	4.837	108	92015	25.91	ppm	99
22) n-Nitroso-di-n-propyla...	4.805	70	71357	27.25	ppm #	62
23) Hexachloroethane	4.885	201	48092	27.29	ppm	98
26) Nitrobenzene	4.955	77	108489	27.42	ppm	86
27) Quinoline	5.959	129	193979	25.06	ppm	95
28) Isophorone	5.184	82	192165	26.50	ppm	87
29) 2-Nitrophenol	5.259	139	54846	25.90	ppm	61
30) 2,4-Dimethylphenol	5.328	107	93369	25.93	ppm	84

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50926.d
Acq On : 5 Jun 2018 12:38 pm
Operator : christc2
Sample : cc2399-25 Inst : MS5P
Misc : op6115,e5p2426,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 20:55:57 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
31) Benzoic acid	5.451	105	85850	28.10	ppm		93
32) bis(2-Chloroethoxy)met...	5.398	93	95576	25.46	ppm		98
33) 2,4-Dichlorophenol	5.505	162	86851	25.53	ppm		92
34) 2,6-Dichlorophenol	5.713	162	81427	24.89	ppm		98
35) 1,3,5-Trichlorobenzene	5.270	180	108123	26.47	ppm		98
36) 1,2,4-Trichlorobenzene	5.564	180	103968	26.64	ppm		98
37) 1,2,3-Trichlorobenzene	5.777	180	99925	26.82	ppm		93
38) Naphthalene	5.633	128	265755	25.83	ppm		95
39) 4-Chloroaniline	5.702	127	116031	25.67	ppm		89
40) 2,3-Dichloroaniline	6.584	161	110192	25.59	ppm		95
41) Caprolactam	6.028	55	73332	29.94	ppm		80
42) Hexachlorobutadiene	5.767	225	68540	29.53	ppm		98
43) 4-Chloro-3-methylphenol	6.205	107	99359	28.08	ppm		77
44) 2-Methylnaphthalene	6.306	141	162141	25.36	ppm		96
45) 1-Methylnaphthalene	6.397	141	169354	25.40	ppm		92
46) Dimethylnaphthalene	6.910	156	183990	25.95	ppm		97
48) Hexachlorocyclopentadiene	6.466	237	134757	56.99	ppm		93
49) 2,4,6-Trichlorophenol	6.595	196	63456	28.22	ppm		91
50) 2,4,5-Trichlorophenol	6.643	196	71713	28.77	ppm		92
52) 2-Chloronaphthalene	6.771	162	184581	27.87	ppm		94
53) Biphenyl	6.760	154	248686	27.38	ppm		98
54) 2-Nitroaniline	6.883	65	74372	34.69	ppm	#	54
55) Dimethylphthalate	7.070	163	218503	27.76	ppm		99
56) Acenaphthylene	7.172	152	274707	27.33	ppm		98
57) 2,6-Dinitrotoluene	7.123	165	47467	26.56	ppm		71
58) 3-Nitroaniline	7.289	138	56116	27.50	ppm		83
59) Acenaphthene	7.343	153	198011	28.63	ppm		98
60) 2,4-Dinitrophenol	7.391	184	52136	46.83	ppm	#	34
61) 4-Nitrophenol	7.503	109	38843	33.93	ppm	#	80
62) Dibenzofuran	7.513	168	271789	28.61	ppm		91
63) 2,4-Dinitrotoluene	7.513	165	66354	27.63	ppm	#	11
64) 2,3,4,6-Tetrachlorophenol	7.652	232	69900	29.13	ppm		95
65) Diethylphthalate	7.759	149	217829	29.53	ppm		97
66) Fluorene	7.845	166	222011	28.73	ppm		97
67) 4-Chlorophenyl-phenyle...	7.855	204	110253	27.85	ppm		95
68) 4-Nitroaniline	7.882	138	50837	25.59	ppm	#	67
70) 4,6-Dinitro-2-methylph...	7.914	198	43970	26.70	ppm		92
71) n-Nitrosodiphenylamine	7.973	169	160195	26.71	ppm		97
72) 1,2-Diphenylhydrazine	8.010	77	219049	28.53	ppm		97
74) 4-Bromophenyl-phenylether	8.331	248	77841	25.32	ppm		86
75) Hexachlorobenzene	8.395	284	90614	25.64	ppm		89
76) Pentachlorophenol	8.609	266	109063	57.23	ppm		98
77) Phenanthrene	8.812	178	315769	26.13	ppm		99
78) Anthracene	8.865	178	331044	26.70	ppm		89
79) Carbazole	9.057	167	296737	25.66	ppm		99
80) Di-n-butylphthalate	9.490	149	371361	26.74	ppm		98
81) Fluoranthene	10.217	202	408191	27.48	ppm		95
82) Octadecane	8.721	57	201333	30.77	ppm		82
84) Pyrene	10.505	202	413837	26.31	ppm		100
86) Butylbenzylphthalate	11.483	149	174630	27.13	ppm		91
87) Benzo[a]anthracene	12.199	228	375340	25.60	ppm		99
88) 3,3'-Dichlorobenzidine	12.204	252	145890	23.09	ppm		94
89) Chrysene	12.252	228	343862	25.16	ppm		99
90) bis(2-Ethylhexyl)phtha...	12.375	149	211347	25.53	ppm		100
92) Di-n-octylphthalate	13.315	149	383235	25.59	ppm		89
93) Benzo[b]fluoranthene	13.721	252	358974	22.60	ppm		98
94) Benzo[k]fluoranthene	13.764	252	331674	23.61	ppm		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50926.d
Acq On : 5 Jun 2018 12:38 pm
Operator : christc2
Sample : cc2399-25 Inst : MS5P
Misc : op6115,e5p2426,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 20:55:57 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95)	Benzo[a]pyrene	14.149	252	330954	23.20	ppm	95
96)	Indeno[1,2,3-cd]pyrene	15.607	276	337589	23.68	ppm	75
97)	Dibenz(a,h)acridine	15.308	279	304821	23.61	ppm	97
98)	Dibenz[a,h]anthracene	15.644	278	327702	22.92	ppm	90
99)	7,12-Dimethylbenz(a)an...	13.727	256	150563	22.88	ppm	90
100)	Benzo[g,h,i]perylene	15.981	276	315324	23.06	ppm	86

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

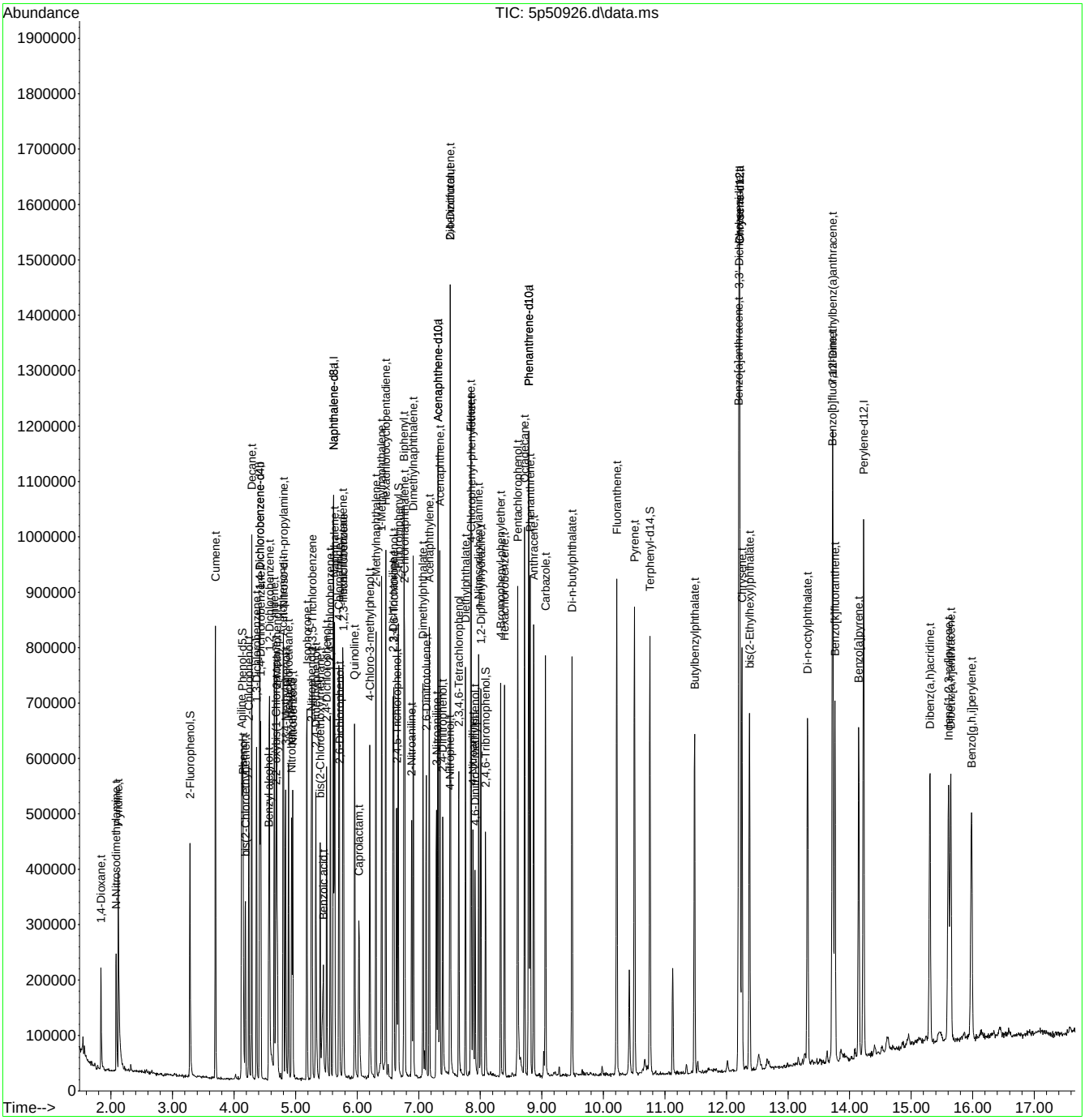
9.6.42

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50926.d
Acq On : 5 Jun 2018 12:38 pm
Operator : christc2
Sample : cc2399-25 Inst : MS5P
Misc : op6115,e5p2426,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 20:55:57 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50927.d
Acq On : 5 Jun 2018 1:09 pm
Operator : christc2
Sample : cc2386-25 Inst : MS5P
Misc : op6115,e5p2426,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 20:57:48 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration

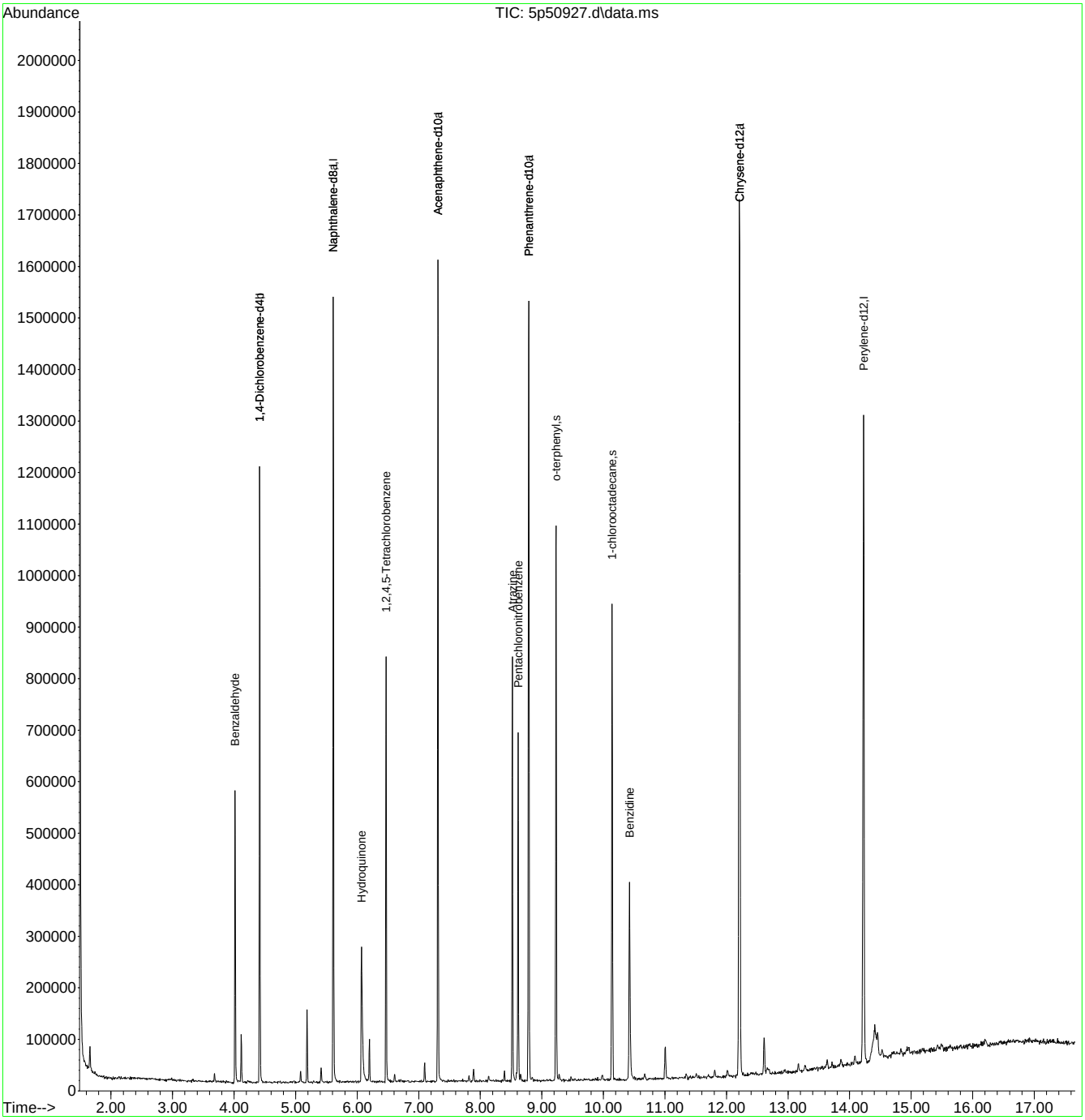
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.415	152	140146	40.00	ppm	0.00
24) Naphthalene-d8	5.612	136	524177	40.00	ppm	0.00
47) Acenaphthene-d10	7.310	164	303200	40.00	ppm	0.00
69) Phenanthrene-d10	8.790	188	575704	40.00	ppm	0.00
83) Chrysene-d12	12.215	240	633522	40.00	ppm	0.00
91) Perylene-d12	14.229	264	639544	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.415	152	140146	40.00	ppm	0.00
103) Acenaphthene-d10a	7.310	164	303200	40.00	ppm	0.00
105) Chrysene-d12a	12.215	240	633170	40.00	ppm	0.00
108) Phenanthrene-d10a	8.790	188	575704	40.00	ppm	0.00
112) Naphthalene-d8a	5.612	136	524177	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%	
107) 1-chlorooctadecane	10.142	57	154200	30.00	ppm	-0.02
Spiked Amount 50.000			Recovery	=	60.00%	
109) o-terphenyl	9.234	230	226436	31.42	ppm	0.00
Spiked Amount 50.000			Recovery	=	62.84%	
Target Compounds						Qvalue
102) Benzaldehyde	4.014	105	82076	25.80	ppm #	79
104) 1,2,4,5-Tetrachloroben...	6.472	216	130404	30.34	ppm	98
106) Benzidine	10.425	184	206247	30.22	ppm	97
110) Atrazine	8.523	215	40867	31.14	ppm	94
111) Pentachloronitrobenzene	8.614	295	18982	32.87	ppm #	68
113) Hydroquinone	6.071	110	117310	34.43	ppm	78

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data_aimeel\e5p2426\
Data File : 5p50927.d
Acq On : 5 Jun 2018 1:09 pm
Operator : christc2
Sample : cc2386-25 Inst : MS5P
Misc : op6115,e5p2426,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2399.M
Quant Results File: M5P2399.RES
Quant Time: Jun 05 20:57:48 2018
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue May 29 23:08:46 2018
Response via : Initial Calibration



M5P2399.M Tue Jun 05 21:00:13 2018 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145289.D
Acq On : 17 Apr 2018 11:39 am
Operator : chriss2
Sample : ic6169-100
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 17 17:03:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration

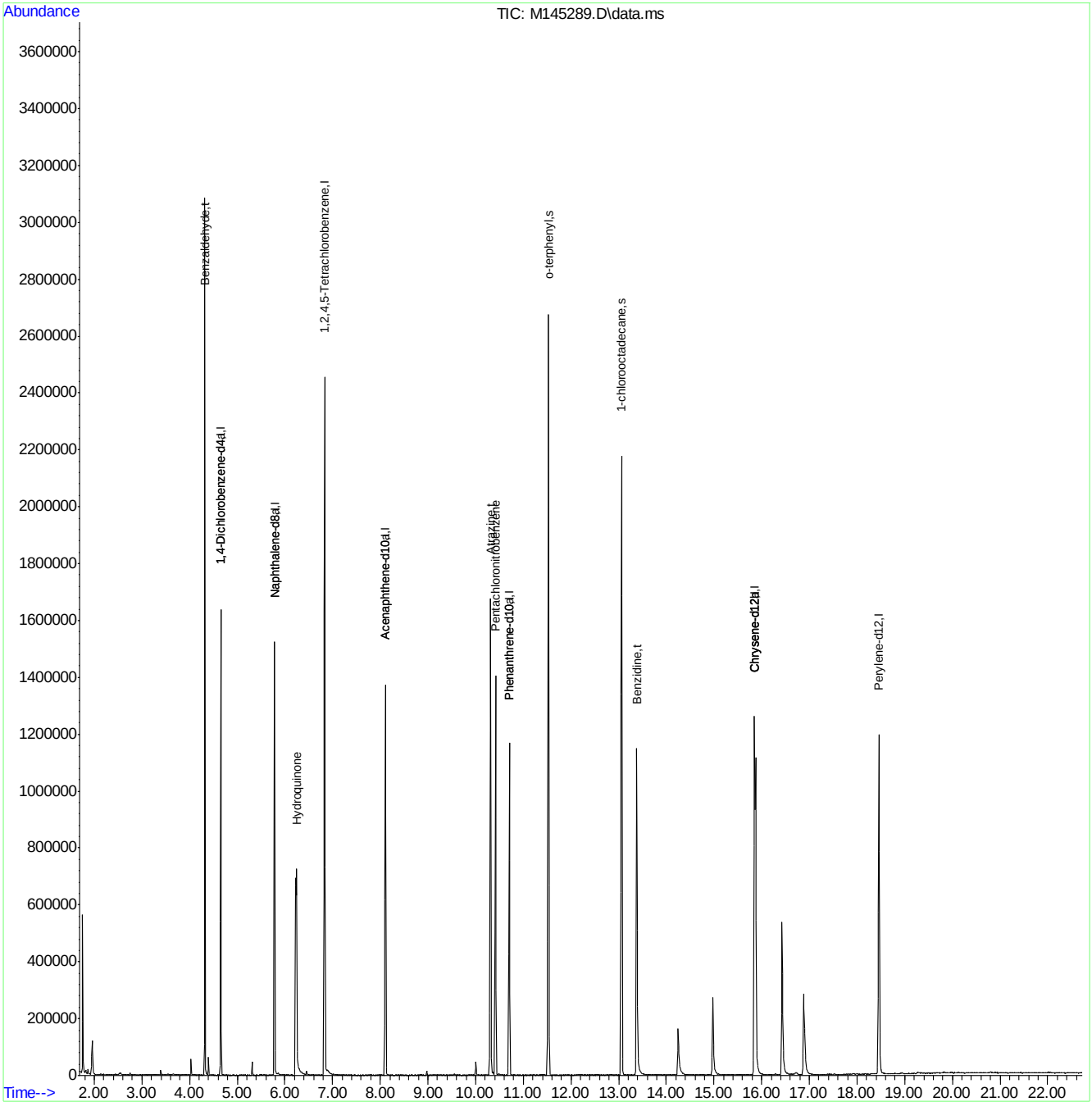
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.652	152	203543	40.00	ppm	0.00
24) Naphthalene-d8	5.784	136	718329	40.00	ppm	0.00
47) Acenaphthene-d10	8.108	164	359690	40.00	ppm	0.00
69) Phenanthrene-d10	10.704	188	634953	40.00	ppm	0.00
83) Chrysene-d12	15.852	240	621506	40.00	ppm	0.00
91) Perylene-d12	18.459	264	665724	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.652	152	203543	40.00	ppm	0.00
103) Acenaphthene-d10a	8.108	164	359690	40.00	ppm	0.00
106) Chrysene-d12a	15.852	240	621506	40.00	ppm	0.00
109) Phenanthrene-d10a	10.704	188	634953	40.00	ppm	0.00
112) Naphthalene-d8a	5.784	136	718329	40.00	ppm	0.00
114) Chrysene-d12b	15.852	240	621506	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%	
108) 1-chlorooctadecane	13.064	57	379035	96.27	ppm	0.00
Spiked Amount 50.000			Recovery	=	192.54%	
110) o-terphenyl	11.531	230	817736	93.30	ppm	0.00
Spiked Amount 50.000			Recovery	=	186.60%	
Target Compounds						Qvalue
102) Benzaldehyde	4.321	105	461421	87.36	ppm	98
104) 1,2,4,5-Tetrachloroben...	6.831	216	522092	95.68	ppm	99
105) Atrazine	10.319	215	186244	97.27	ppm	93
107) Benzidine	13.379	184	681053	74.98	ppm	99
111) Pentachloronitrobenzene	10.421	295	65869	102.66	ppm	99
113) Hydroquinone	6.244	110	667375	99.44	ppm	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145289.D
Acq On : 17 Apr 2018 11:39 am
Operator : chriss2
Sample : ic6169-100
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 17 17:03:47 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration



MM6168.M Tue Apr 17 17:03:57 2018 MSM

Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145290.D
Acq On : 17 Apr 2018 12:08 pm
Operator : chriss2
Sample : ic6169-80
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 17 17:04:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration

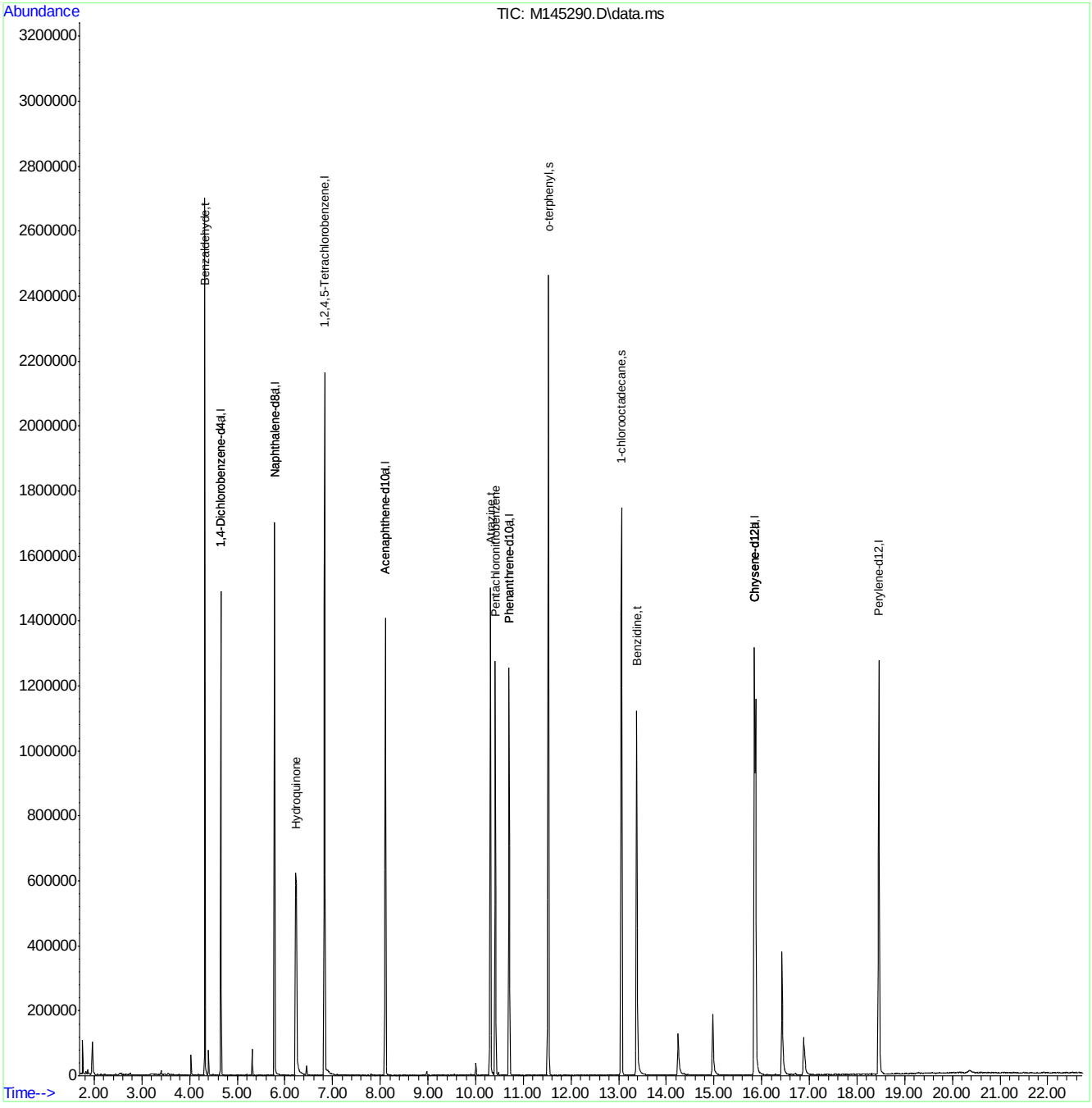
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.652	152	206471	40.00	ppm	0.00
24) Naphthalene-d8	5.784	136	742046	40.00	ppm	0.00
47) Acenaphthene-d10	8.107	164	370190	40.00	ppm	0.00
69) Phenanthrene-d10	10.703	188	671337	40.00	ppm	0.00
83) Chrysene-d12	15.852	240	646514	40.00	ppm	0.00
91) Perylene-d12	18.458	264	695445	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.652	152	206471	40.00	ppm	0.00
103) Acenaphthene-d10a	8.107	164	370190	40.00	ppm	0.00
106) Chrysene-d12a	15.852	240	646514	40.00	ppm	0.00
109) Phenanthrene-d10a	10.703	188	671337	40.00	ppm	0.00
112) Naphthalene-d8a	5.784	136	742046	40.00	ppm	0.00
114) Chrysene-d12b	15.852	240	646514	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%	
108) 1-chlorooctadecane	13.059	57	325664	79.51	ppm	0.00
Spiked Amount 50.000			Recovery	=	159.02%	
110) o-terphenyl	11.526	230	710763	76.70	ppm	0.00
Spiked Amount 50.000			Recovery	=	153.40%	
Target Compounds						Qvalue
102) Benzaldehyde	4.321	105	406077	75.79	ppm	98
104) 1,2,4,5-Tetrachloroben...	6.831	216	454332	80.90	ppm	99
105) Atrazine	10.313	215	157305	79.83	ppm	94
107) Benzidine	13.379	184	704706	74.58	ppm	98
111) Pentachloronitrobenzene	10.415	295	54669	80.59	ppm	100
113) Hydroquinone	6.238	110	530884	76.58	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145290.D
Acq On : 17 Apr 2018 12:08 pm
Operator : chriss2
Sample : ic6169-80
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 17 17:04:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145291.D
Acq On : 17 Apr 2018 12:37 pm
Operator : chriss2
Sample : icc6169-50
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 17 17:04:53 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration

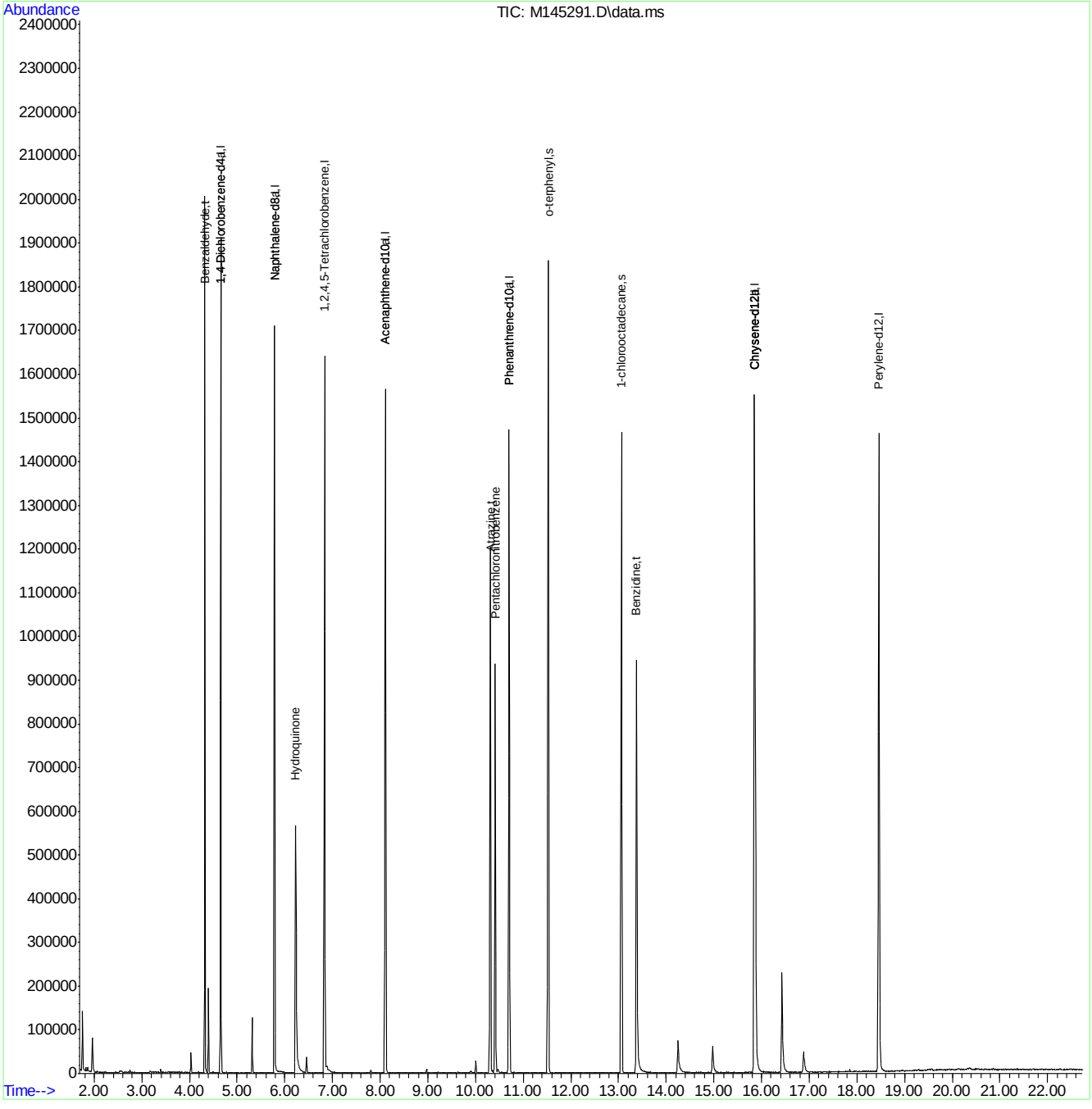
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.653	152	231342	40.00	ppm	0.00
24) Naphthalene-d8	5.786	136	826062	40.00	ppm	0.00
47) Acenaphthene-d10	8.109	164	425732	40.00	ppm	0.00
69) Phenanthrene-d10	10.705	188	773567	40.00	ppm	0.00
83) Chrysene-d12	15.848	240	767414	40.00	ppm	0.00
91) Perylene-d12	18.460	264	820743	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.653	152	231342	40.00	ppm	0.00
103) Acenaphthene-d10a	8.109	164	425732	40.00	ppm	0.00
106) Chrysene-d12a	15.848	240	767414	40.00	ppm	0.00
109) Phenanthrene-d10a	10.705	188	773567	40.00	ppm	0.00
112) Naphthalene-d8a	5.786	136	826062	40.00	ppm	0.00
114) Chrysene-d12b	15.848	240	767414	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%	
108) 1-chlorooctadecane	13.060	57	243086	50.00	ppm	0.00
Spiked Amount 50.000			Recovery	=	100.00%	
110) o-terphenyl	11.527	230	533898	50.00	ppm	0.00
Spiked Amount 50.000			Recovery	=	100.00%	
Target Compounds						Qvalue
102) Benzaldehyde	4.322	105	300162	50.00	ppm	100
104) 1,2,4,5-Tetrachloroben...	6.832	216	322928	50.00	ppm	100
105) Atrazine	10.315	215	113314	50.00	ppm	100
107) Benzidine	13.375	184	560810	50.00	ppm	100
111) Pentachloronitrobenzene	10.416	295	39085	50.00	ppm	100
113) Hydroquinone	6.224	110	385886	50.00	ppm	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145291.D
Acq On : 17 Apr 2018 12:37 pm
Operator : chriss2
Sample : icc6169-50
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 17 17:04:53 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration



MM6168.M Tue Apr 17 17:05:00 2018 MSM

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145292.D
Acq On : 17 Apr 2018 1:07 pm
Operator : chriss2
Sample : ic6169-25
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 17 17:05:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration

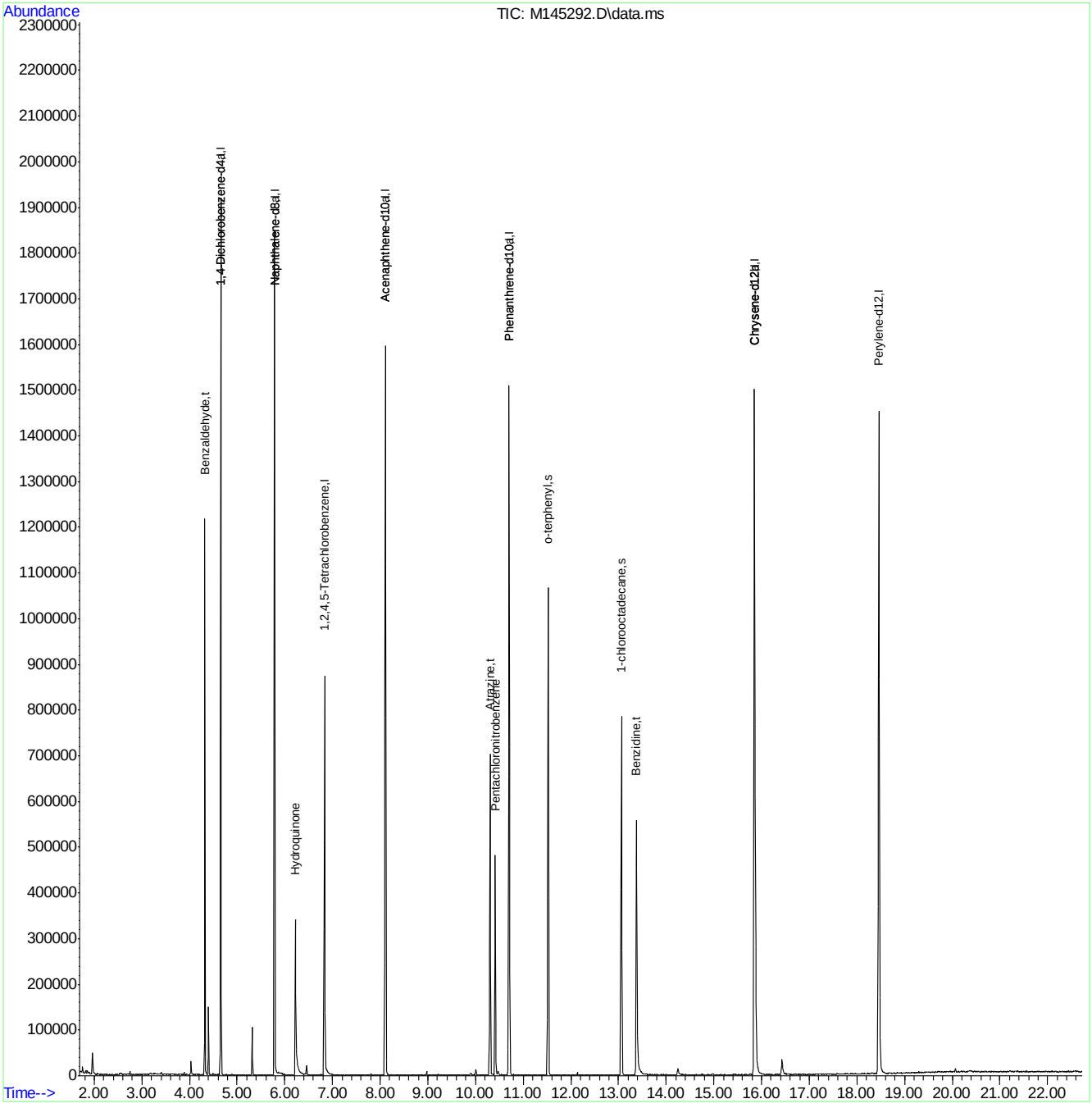
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.653	152	239454	40.00	ppm	0.00
24) Naphthalene-d8	5.785	136	830812	40.00	ppm	0.00
47) Acenaphthene-d10	8.109	164	435249	40.00	ppm	0.00
69) Phenanthrene-d10	10.704	188	786070	40.00	ppm	0.00
83) Chrysene-d12	15.848	240	771156	40.00	ppm	-0.01
91) Perylene-d12	18.460	264	800420	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.653	152	239454	40.00	ppm	0.00
103) Acenaphthene-d10a	8.109	164	435249	40.00	ppm	0.00
106) Chrysene-d12a	15.848	240	771156	40.00	ppm	0.00
109) Phenanthrene-d10a	10.704	188	786070	40.00	ppm	0.00
112) Naphthalene-d8a	5.785	136	830812	40.00	ppm	0.00
114) Chrysene-d12b	15.848	240	771156	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%			
108) 1-chlorooctadecane	13.060	57	130602	26.73	ppm	0.00
Spiked Amount 50.000			Recovery = 53.46%			
110) o-terphenyl	11.522	230	281705	25.96	ppm	0.00
Spiked Amount 50.000			Recovery = 51.92%			
Target Compounds						Qvalue
102) Benzaldehyde	4.322	105	173050	27.85	ppm	98
104) 1,2,4,5-Tetrachloroben...	6.832	216	182917	27.70	ppm	99
105) Atrazine	10.304	215	58483	25.24	ppm	93
107) Benzidine	13.375	184	336389	29.85	ppm	99
111) Pentachloronitrobenzene	10.416	295	19129	24.08	ppm	100
113) Hydroquinone	6.223	110	183840	23.68	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145292.D
Acq On : 17 Apr 2018 1:07 pm
Operator : chriss2
Sample : ic6169-25
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 17 17:05:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration



MM6168.M Tue Apr 17 17:05:25 2018 MSM

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145293.D
Acq On : 17 Apr 2018 1:36 pm
Operator : chriss2
Sample : ic6169-10
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 17 17:05:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.653	152	245610	40.00	ppm	0.00
24) Naphthalene-d8	5.785	136	854048	40.00	ppm	0.00
47) Acenaphthene-d10	8.108	164	442209	40.00	ppm	0.00
69) Phenanthrene-d10	10.704	188	812680	40.00	ppm	0.00
83) Chrysene-d12	15.853	240	772469	40.00	ppm	0.00
91) Perylene-d12	18.465	264	803603	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.653	152	245610	40.00	ppm	0.00
103) Acenaphthene-d10a	8.108	164	442209	40.00	ppm	0.00
106) Chrysene-d12a	15.853	240	772469	40.00	ppm	0.00
109) Phenanthrene-d10a	10.704	188	812680	40.00	ppm	0.00
112) Naphthalene-d8a	5.785	136	854048	40.00	ppm	0.00
114) Chrysene-d12b	15.853	240	772469	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%	
108) 1-chlorooctadecane	13.059	57	45847	9.37	ppm	0.00
Spiked Amount 50.000			Recovery	=	18.74%	
110) o-terphenyl	11.521	230	118283	10.54	ppm	0.00
Spiked Amount 50.000			Recovery	=	21.08%	
Target Compounds						Qvalue
102) Benzaldehyde	4.321	105	71876	11.28	ppm	95
104) 1,2,4,5-Tetrachloroben...	6.832	216	75691	11.28	ppm	98
105) Atrazine	10.303	215	20265	8.61	ppm	93
107) Benzidine	13.374	184	113919	10.09	ppm	99
111) Pentachloronitrobenzene	10.416	295	6183	7.53	ppm	94
113) Hydroquinone	6.223	110	63825	8.00	ppm	99

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

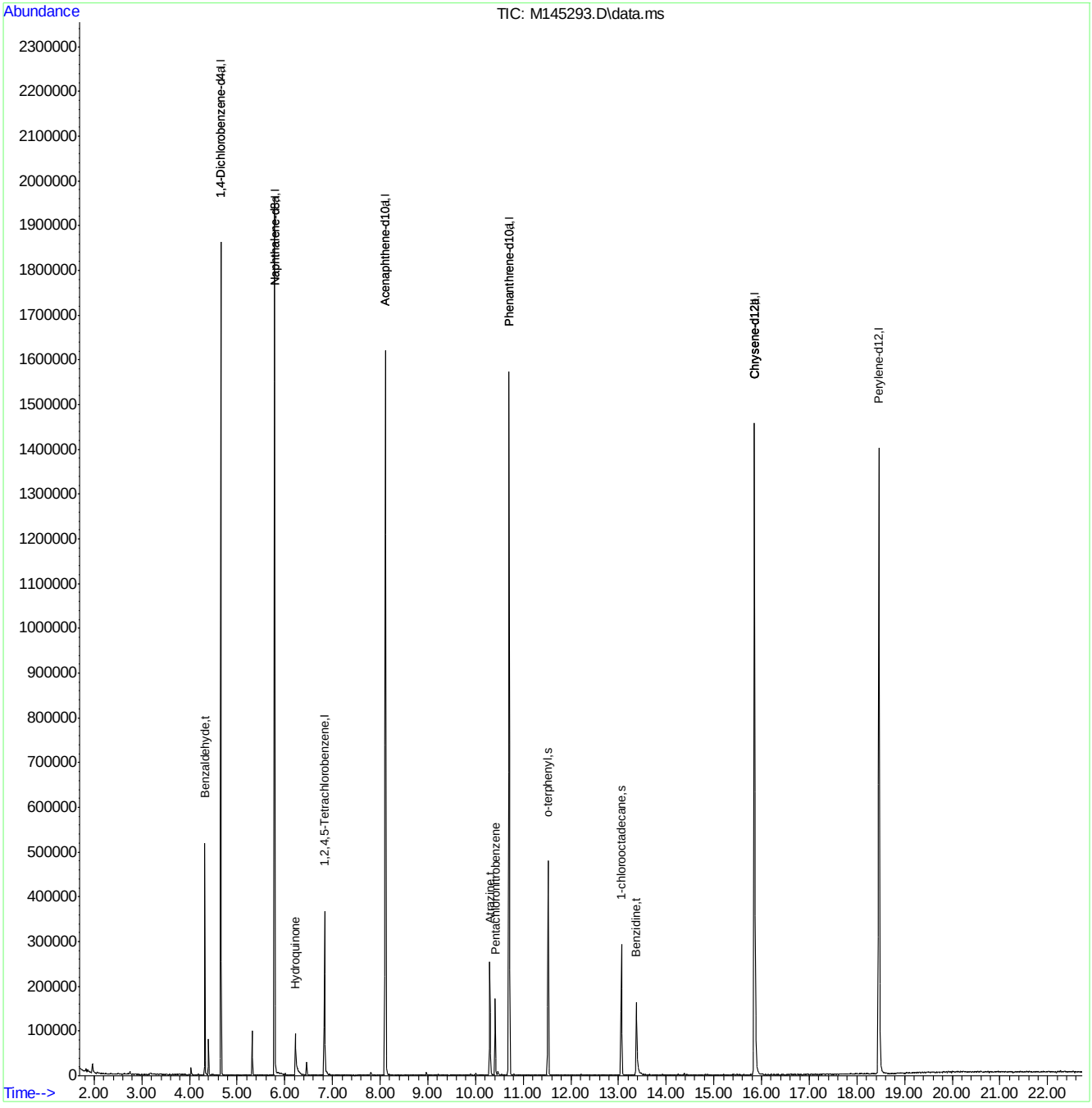
9.6.48

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145293.D
Acq On : 17 Apr 2018 1:36 pm
Operator : chriss2
Sample : ic6169-10
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 17 17:05:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration



MM6168.M Tue Apr 17 17:05:55 2018 MSM

Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145294.D
Acq On : 17 Apr 2018 2:06 pm
Operator : chriss2
Sample : ic6169-5
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 17 17:06:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.655	152	241401	40.00	ppm	0.00
24) Naphthalene-d8	5.782	136	826606	40.00	ppm	0.00
47) Acenaphthene-d10	8.105	164	433146	40.00	ppm	0.00
69) Phenanthrene-d10	10.706	188	816129	40.00	ppm	0.00
83) Chrysene-d12	15.850	240	766705	40.00	ppm	0.00
91) Perylene-d12	18.461	264	795828	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.655	152	241401	40.00	ppm	0.00
103) Acenaphthene-d10a	8.105	164	433146	40.00	ppm	0.00
106) Chrysene-d12a	15.850	240	766705	40.00	ppm	0.00
109) Phenanthrene-d10a	10.706	188	816129	40.00	ppm	0.00
112) Naphthalene-d8a	5.782	136	826606	40.00	ppm	0.00
114) Chrysene-d12b	15.850	240	766705	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%	
108) 1-chlorooctadecane	13.061	57	22146	4.56	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.12%	
110) o-terphenyl	11.523	230	63704	5.65	ppm	0.00
Spiked Amount 50.000			Recovery	=	11.30%	
Target Compounds						Qvalue
102) Benzaldehyde	4.324	105	39035	6.23	ppm	97
104) 1,2,4,5-Tetrachloroben...	6.828	216	41441	6.31	ppm	98
105) Atrazine	10.300	215	9760	4.23	ppm	92
107) Benzidine	13.377	184	48378	4.32	ppm	96
111) Pentachloronitrobenzene	10.412	295	2379	2.88	ppm #	81
113) Hydroquinone	6.225	110	23738	3.07	ppm	95

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

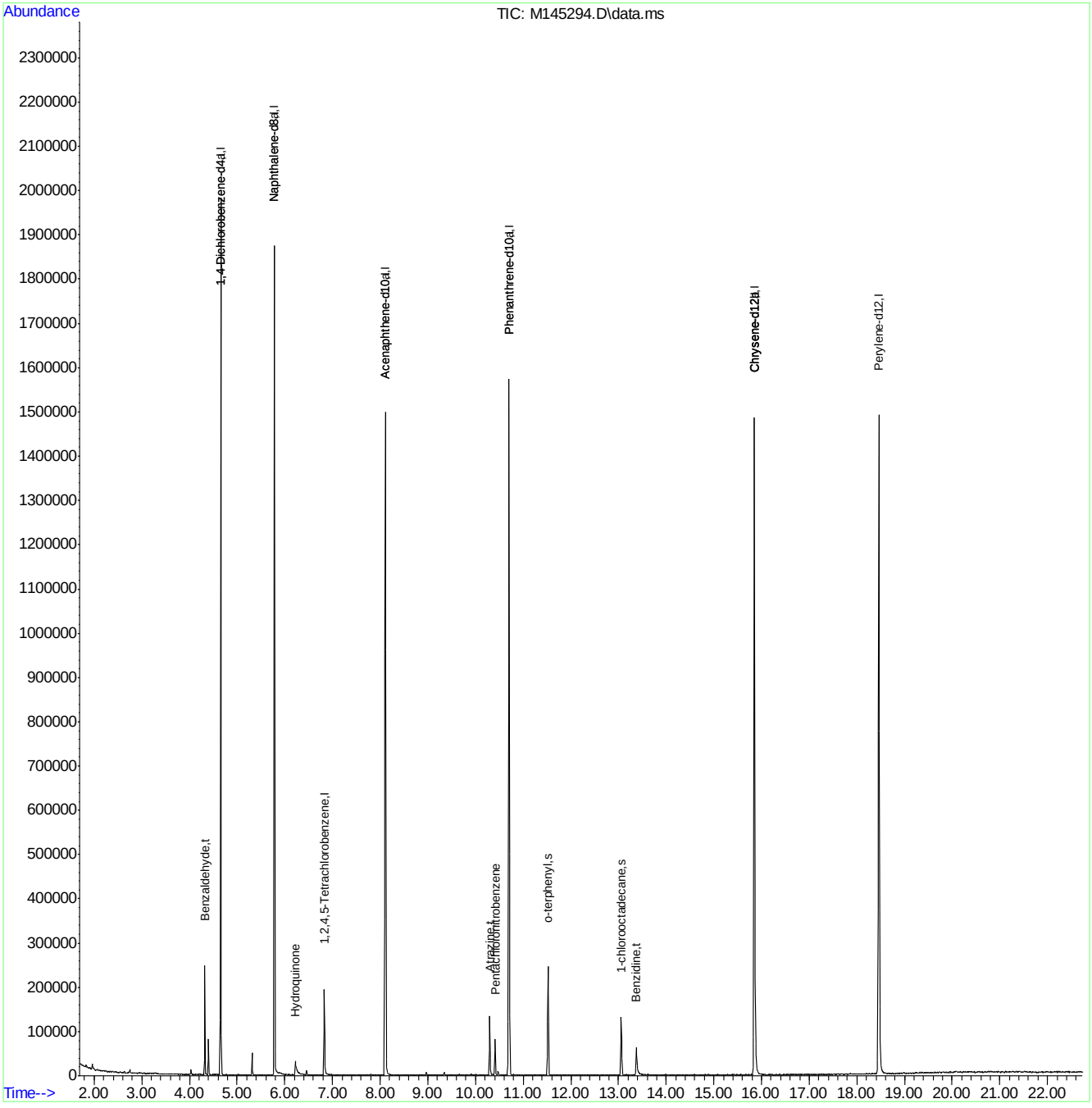
9.6.49

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145294.D
Acq On : 17 Apr 2018 2:06 pm
Operator : chriss2
Sample : ic6169-5
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 17 17:06:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration



MM6168.M Tue Apr 17 17:06:25 2018 MSM Page: 2

M145295.D

Manual Integrations APPROVED (compounds with "m" flag)

Nina Pandya 04/18/18 15:52

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145295.D
Acq On : 17 Apr 2018 2:35 pm
Operator : chriss2
Sample : ic6169-2
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 17 17:07:02 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.653	152	231675	40.00	ppm	0.00
24) Naphthalene-d8	5.785	136	783486	40.00	ppm	0.00
47) Acenaphthene-d10	8.108	164	409281	40.00	ppm	0.00
69) Phenanthrene-d10	10.704	188	773303	40.00	ppm	0.00
83) Chrysene-d12	15.853	240	716000	40.00	ppm	0.00
91) Perylene-d12	18.465	264	731362	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.653	152	231675	40.00	ppm	0.00
103) Acenaphthene-d10a	8.108	164	409281	40.00	ppm	0.00
106) Chrysene-d12a	15.853	240	716000	40.00	ppm	0.00
109) Phenanthrene-d10a	10.704	188	773303	40.00	ppm	0.00
112) Naphthalene-d8a	5.785	136	783486	40.00	ppm	0.00
114) Chrysene-d12b	15.853	240	716000	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%	
108) 1-chlorooctadecane	13.059	57	7034	1.55	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.10%	
110) o-terphenyl	11.521	230	21189	1.99	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.98%	
Target Compounds						Qvalue
102) Benzaldehyde	4.321	105	15334	2.55	ppm	97
104) 1,2,4,5-Tetrachloroben...	6.832	216	14624	2.36	ppm	97
105) Atrazine	10.298	215	2745	1.26	ppm	94
107) Benzidine	13.374	184	9522	0.91	ppm	94
113) Hydroquinone	6.228	110	7078m	0.97	ppm	

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

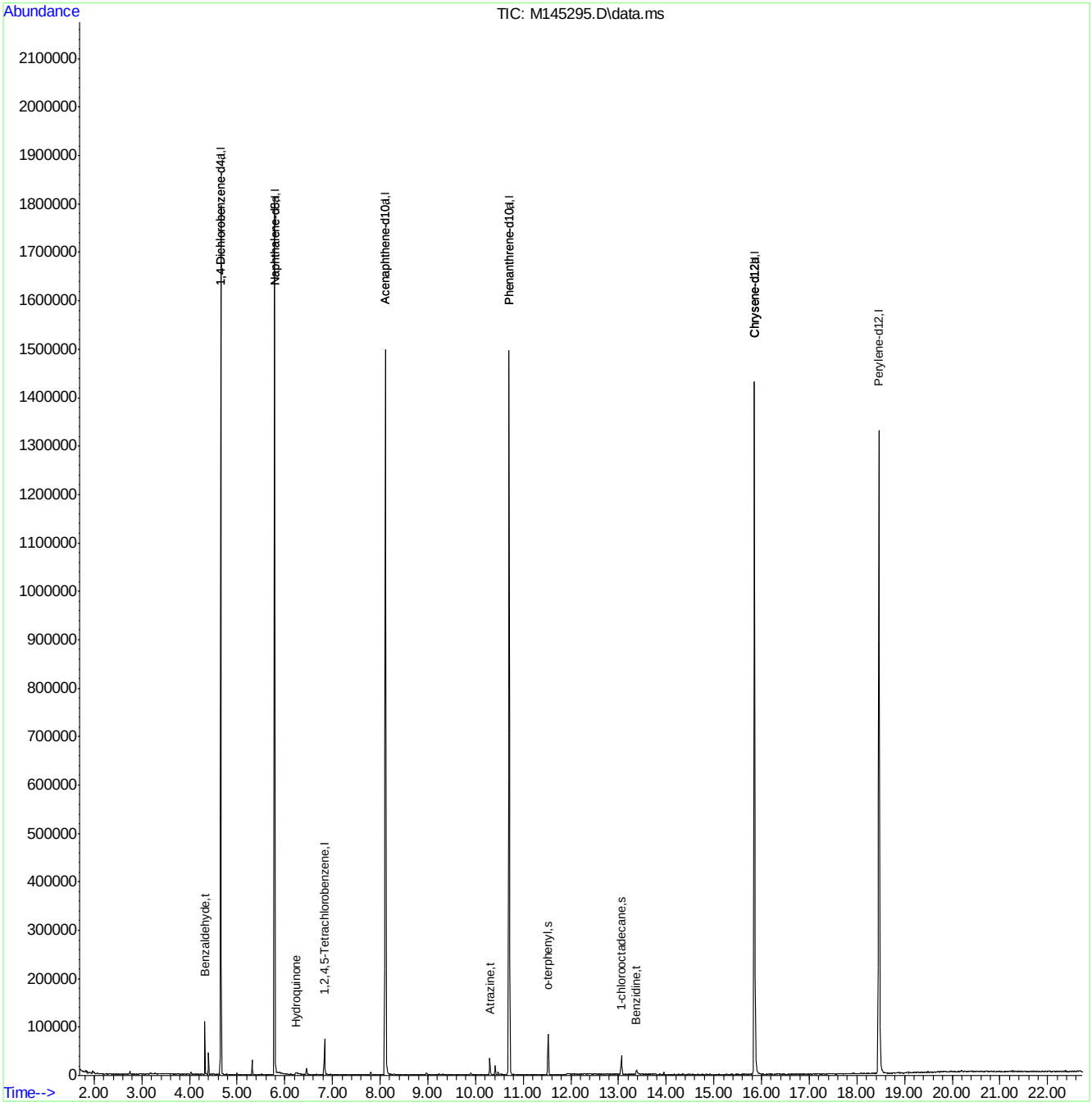
9.6.50

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145295.D
Acq On : 17 Apr 2018 2:35 pm
Operator : chriss2
Sample : ic6169-2
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 17 17:07:02 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration



MM6168.M Tue Apr 17 17:07:09 2018 MSM

Page: 2

9.6.50
9

Manual Integration Approval Summary

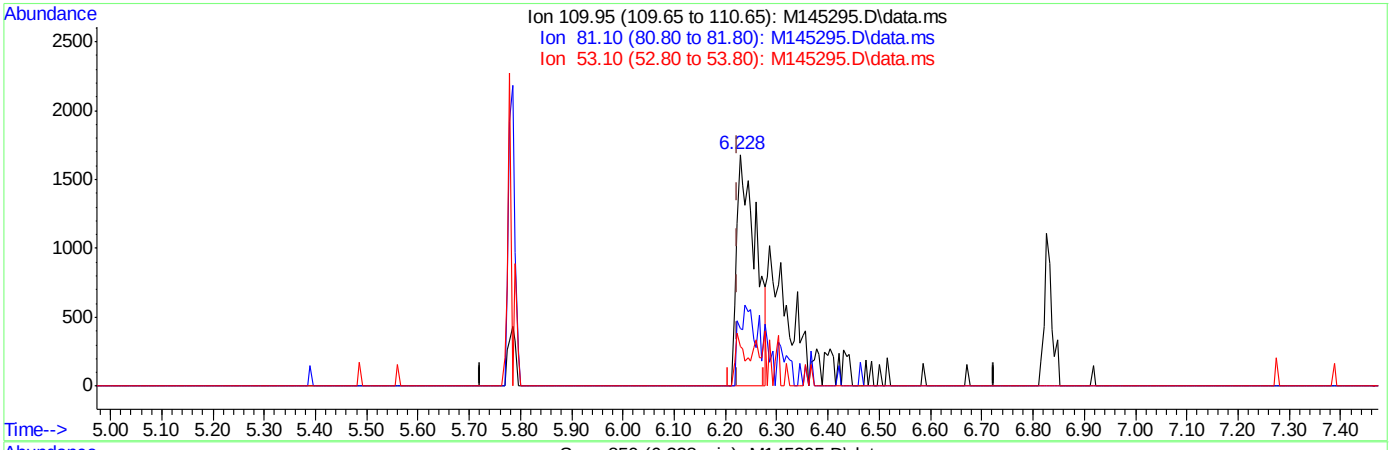
Sample Number:	EM6169-IC6169	**Method:**	SW846 8270D
Lab FileID:	M145295.D	**Analyst approved:**	04/18/18 02:50 Christopher Sowa
Injection Time:	04/17/18 14:35	**Supervisor approved:**	04/18/18 15:52 Nina Pandya

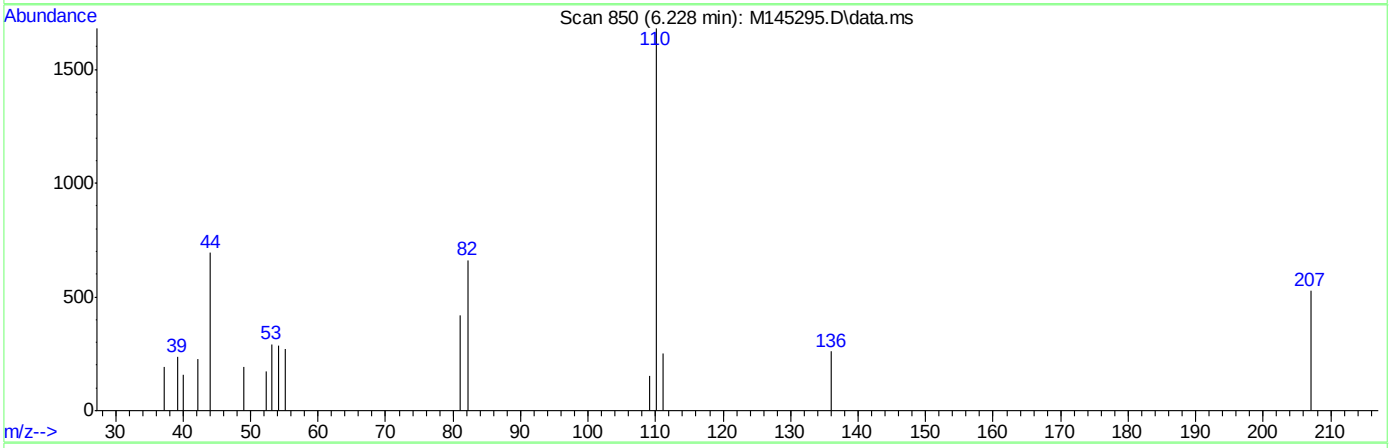
Parameter	CAS	Sig#	R.T. (min.)	Reason
Hydroquinone	123-31-9		6.23	Poor instrument integration

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145295.D
Acq On : 17 Apr 2018 2:35 pm
Operator : chriss2
Sample : ic6169-2
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 17 17:06:30 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration





TIC: M145295.D\data.ms

(113) Hydroquinone

6.228min (+0.005) 0.59ppm

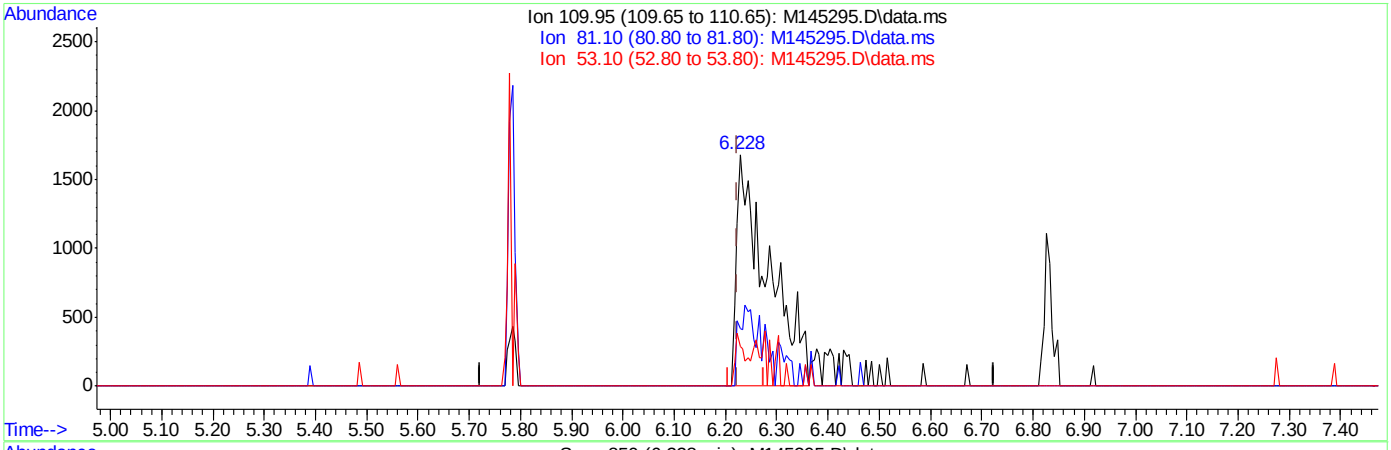
response 4294

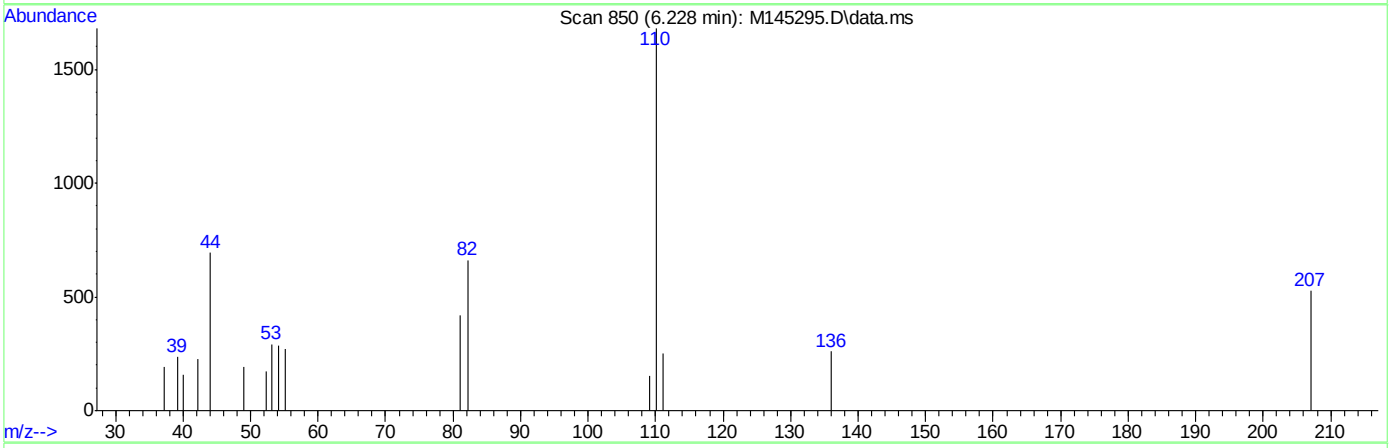
Ion	Exp%	Act%
109.95	100	100
81.10	29.40	14.78
53.10	17.50	6.69
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145295.D
Acq On : 17 Apr 2018 2:35 pm
Operator : chriss2
Sample : ic6169-2
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 17 17:06:30 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration





TIC: M145295.D\data.ms

(113) Hydroquinone

6.228min (+0.005) 0.97ppm m

response 7078

Ion	Exp%	Act%
109.95	100	100
81.10	29.40	24.99
53.10	17.50	17.31
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145296.D
Acq On : 17 Apr 2018 3:04 pm
Operator : chriss2
Sample : ic6169-1
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 17 17:07:29 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration

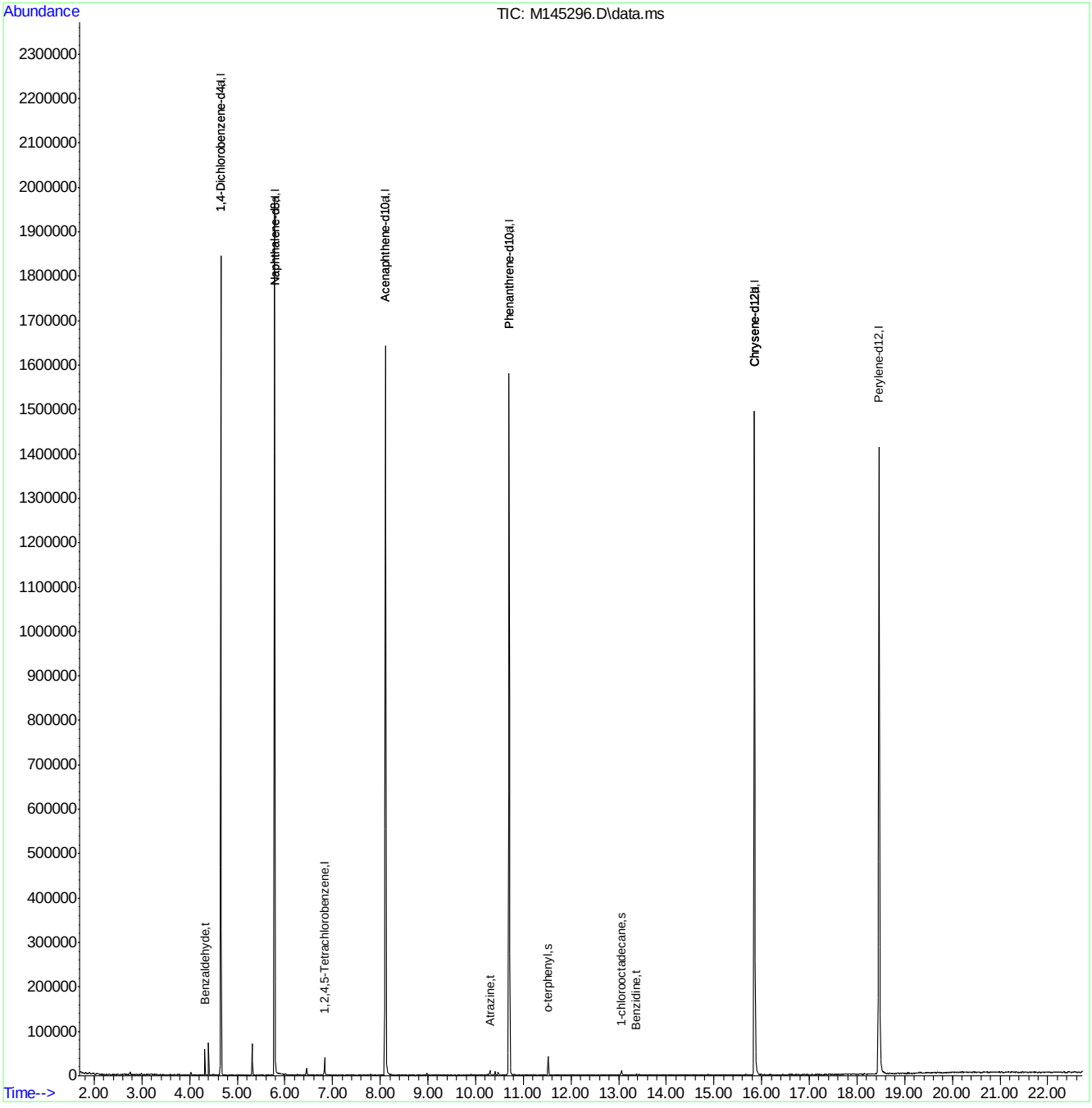
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.652	152	254215	40.00	ppm	0.00
24) Naphthalene-d8	5.784	136	848348	40.00	ppm	0.00
47) Acenaphthene-d10	8.108	164	434077	40.00	ppm	0.00
69) Phenanthrene-d10	10.703	188	823702	40.00	ppm	0.00
83) Chrysene-d12	15.852	240	758069	40.00	ppm	0.00
91) Perylene-d12	18.464	264	784947	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.652	152	254215	40.00	ppm	0.00
103) Acenaphthene-d10a	8.108	164	434077	40.00	ppm	0.00
106) Chrysene-d12a	15.852	240	758069	40.00	ppm	0.00
109) Phenanthrene-d10a	10.703	188	823702	40.00	ppm	0.00
112) Naphthalene-d8a	5.784	136	848348	40.00	ppm	0.00
114) Chrysene-d12b	15.852	240	758069	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%	
108) 1-chlorooctadecane	13.059	57	1874	0.39	ppm	0.00
Spiked Amount 50.000			Recovery	=	0.78%	
110) o-terphenyl	11.521	230	10414	0.92	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.84%	
Target Compounds						Qvalue
102) Benzaldehyde	4.321	105	8206	1.24	ppm	91
104) 1,2,4,5-Tetrachloroben...	6.831	216	7399	1.12	ppm	88
105) Atrazine	10.297	215	1306	0.57	ppm #	74
107) Benzidine	13.369	184	3031	0.27	ppm	85

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145296.D
Acq On : 17 Apr 2018 3:04 pm
Operator : chriss2
Sample : ic6169-1
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 17 17:07:29 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:03:09 2018
Response via : Initial Calibration



MM6168.M Tue Apr 17 17:07:40 2018 MSM

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145297.D
Acq On : 17 Apr 2018 3:34 pm
Operator : chriss2
Sample : icv6169-50
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 17 17:23:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:19:02 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.653	152	234639	40.00	ppm	0.00
24) Naphthalene-d8	5.785	136	799184	40.00	ppm	0.00
47) Acenaphthene-d10	8.109	164	411638	40.00	ppm	0.00
69) Phenanthrene-d10	10.705	188	779800	40.00	ppm	0.00
83) Chrysene-d12	15.853	240	771811	40.00	ppm	0.00
91) Perylene-d12	18.465	264	729060	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.653	152	234639	40.00	ppm	0.00
103) Acenaphthene-d10a	8.109	164	411638	40.00	ppm	0.00
106) Chrysene-d12a	15.853	240	771811	40.00	ppm	0.00
109) Phenanthrene-d10a	10.705	188	779800	40.00	ppm	0.00
112) Naphthalene-d8a	5.785	136	799184	40.00	ppm	0.00
114) Chrysene-d12b	15.853	240	771811	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%	
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
113) Hydroquinone	6.229	110	350019	52.93	ppm	98

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

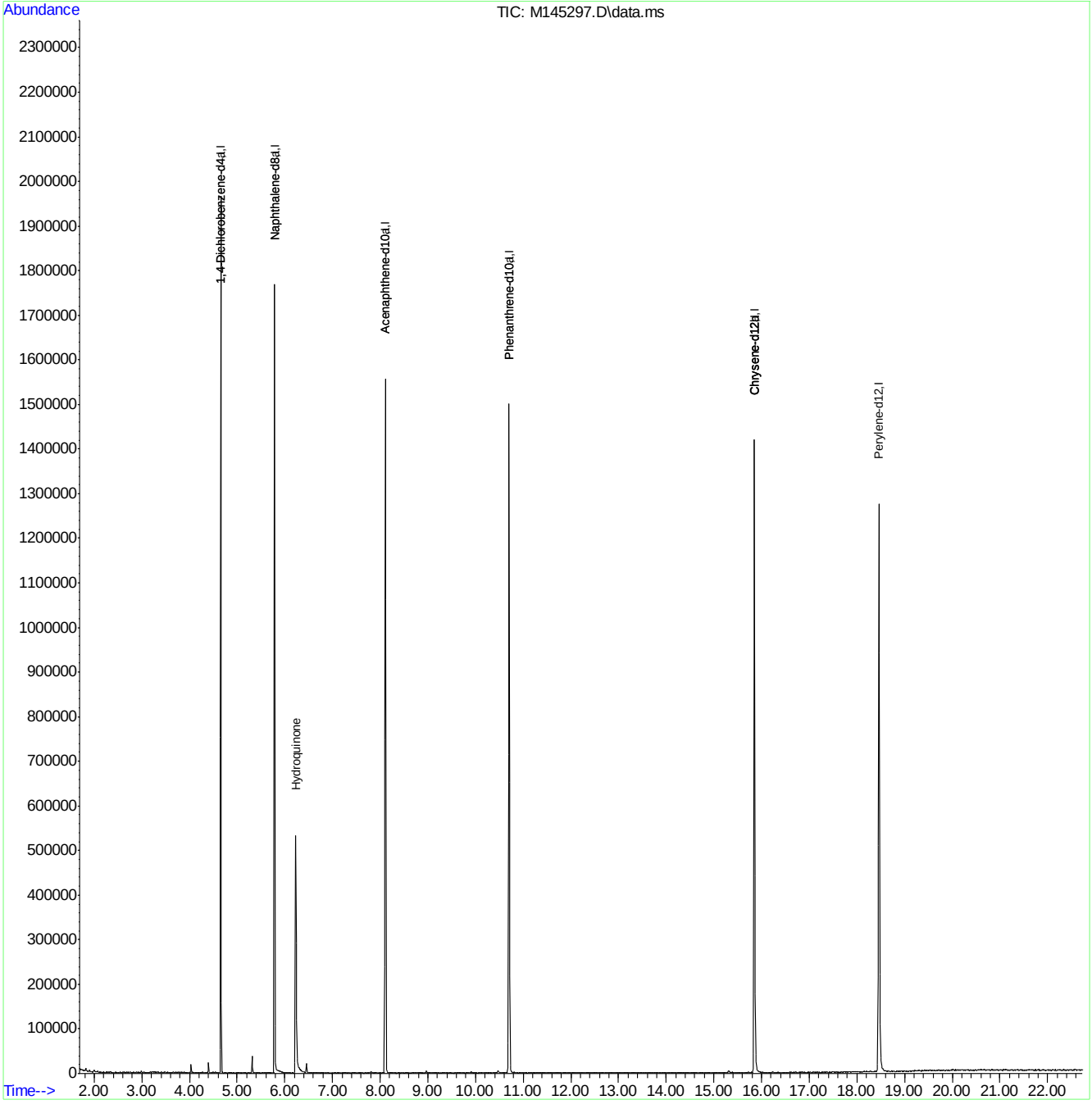
9.6.52

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145297.D
Acq On : 17 Apr 2018 3:34 pm
Operator : chriss2
Sample : icv6169-50
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 17 17:23:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:19:02 2018
Response via : Initial Calibration



MM6168.M Tue Apr 17 17:23:57 2018 MSM

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145298.D
Acq On : 17 Apr 2018 4:03 pm
Operator : chriss2
Sample : icv6169-50
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 17 17:24:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:19:02 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.663	152	194039	40.00	ppm	0.00
24) Naphthalene-d8	5.785	136	783440	40.00	ppm	0.00
47) Acenaphthene-d10	8.108	164	452728	40.00	ppm	0.00
69) Phenanthrene-d10	10.704	188	813528	40.00	ppm	0.00
83) Chrysene-d12	15.853	240	807652	40.00	ppm	0.00
91) Perylene-d12	18.464	264	742317	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.663	152	194039	40.00	ppm	0.00
103) Acenaphthene-d10a	8.108	164	452728	40.00	ppm	0.00
106) Chrysene-d12a	15.853	240	807652	40.00	ppm	0.00
109) Phenanthrene-d10a	10.704	188	813528	40.00	ppm	0.00
112) Naphthalene-d8a	5.785	136	783440	40.00	ppm	0.00
114) Chrysene-d12b	15.853	240	807652	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%	
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
111) Pentachloronitrobenzene	10.415	295	41937	51.10	ppm	97

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

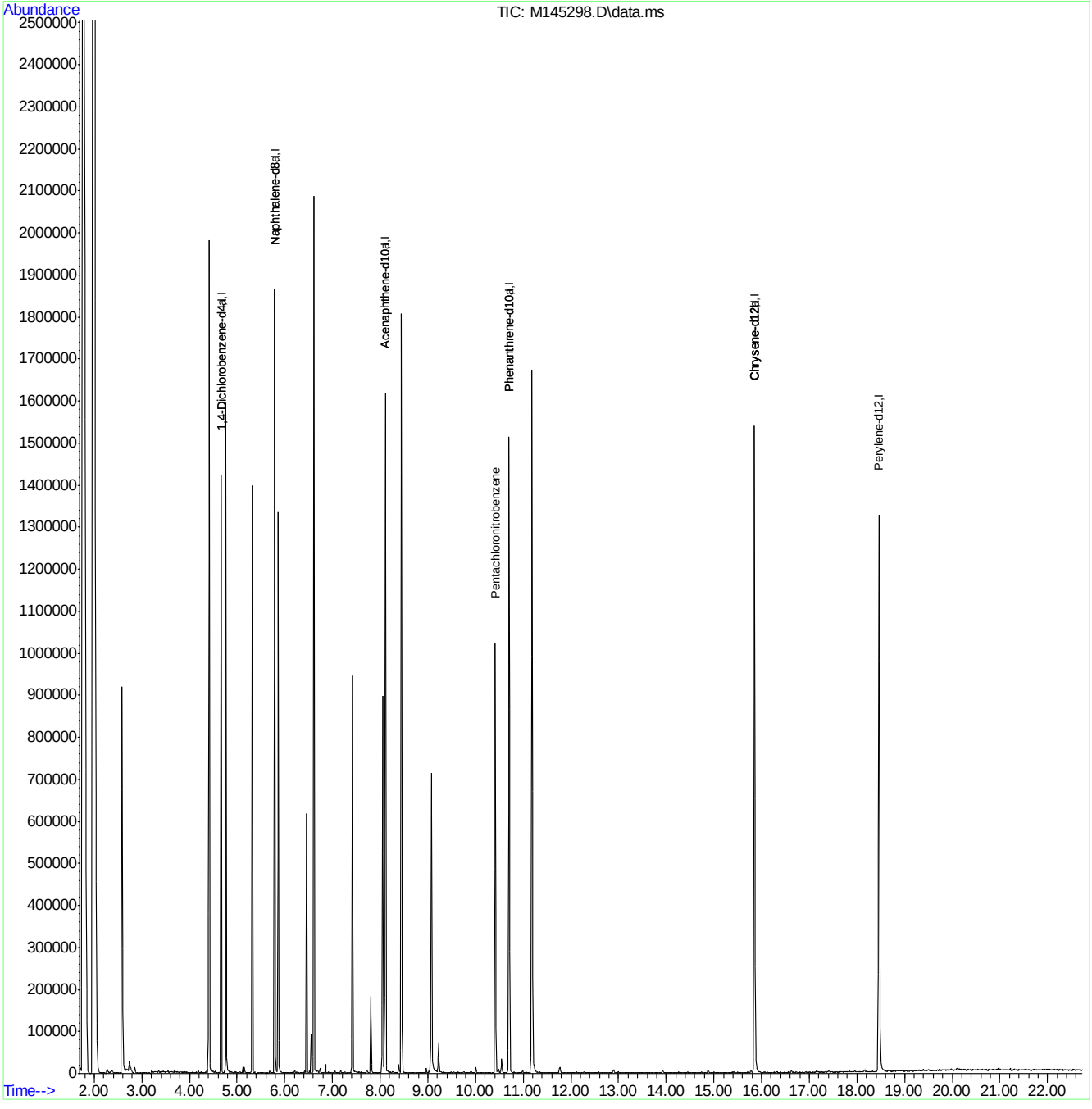
9.6.53

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145298.D
Acq On : 17 Apr 2018 4:03 pm
Operator : chriss2
Sample : icv6169-50
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 17 17:24:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:19:02 2018
Response via : Initial Calibration



MM6168.M Tue Apr 17 17:24:38 2018 MSM

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145299.D
Acq On : 17 Apr 2018 4:32 pm
Operator : chriss2
Sample : icv6169-50
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 17 17:25:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:19:02 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.655	152	206305	40.00	ppm	0.00
24) Naphthalene-d8	5.787	136	714576	40.00	ppm	0.00
47) Acenaphthene-d10	8.111	164	408590	40.00	ppm	0.00
69) Phenanthrene-d10	10.706	188	735197	40.00	ppm	0.00
83) Chrysene-d12	15.855	240	605563	40.00	ppm	0.00
91) Perylene-d12	18.462	264	617364	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.655	152	206305	40.00	ppm	0.00
103) Acenaphthene-d10a	8.111	164	408590	40.00	ppm	0.00
106) Chrysene-d12a	15.855	240	605563	40.00	ppm	0.00
109) Phenanthrene-d10a	10.706	188	735197	40.00	ppm	0.00
112) Naphthalene-d8a	5.787	136	714576	40.00	ppm	0.00
114) Chrysene-d12b	15.855	240	605563	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
104) 1,2,4,5-Tetrachloroben...	6.834	216	334300	49.21	ppm	100

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

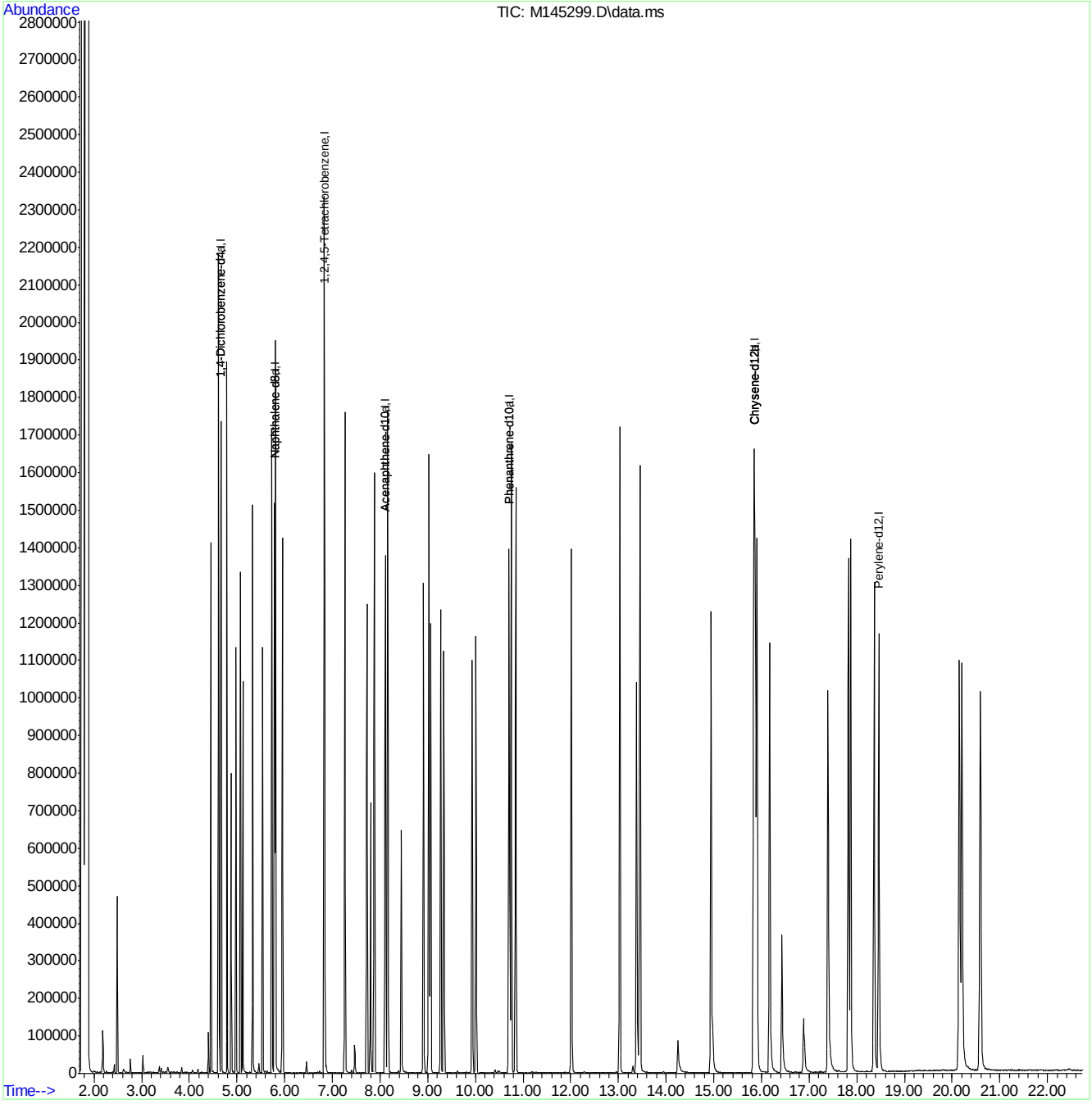
9.6.54

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145299.D
Acq On : 17 Apr 2018 4:32 pm
Operator : chriss2
Sample : icv6169-50
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 17 17:25:24 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:19:02 2018
Response via : Initial Calibration



MM6168.M Tue Apr 17 17:25:30 2018 MSM

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145300.D
Acq On : 17 Apr 2018 5:02 pm
Operator : chriss2
Sample : icv6169-50
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 17 17:26:00 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:19:02 2018
Response via : Initial Calibration

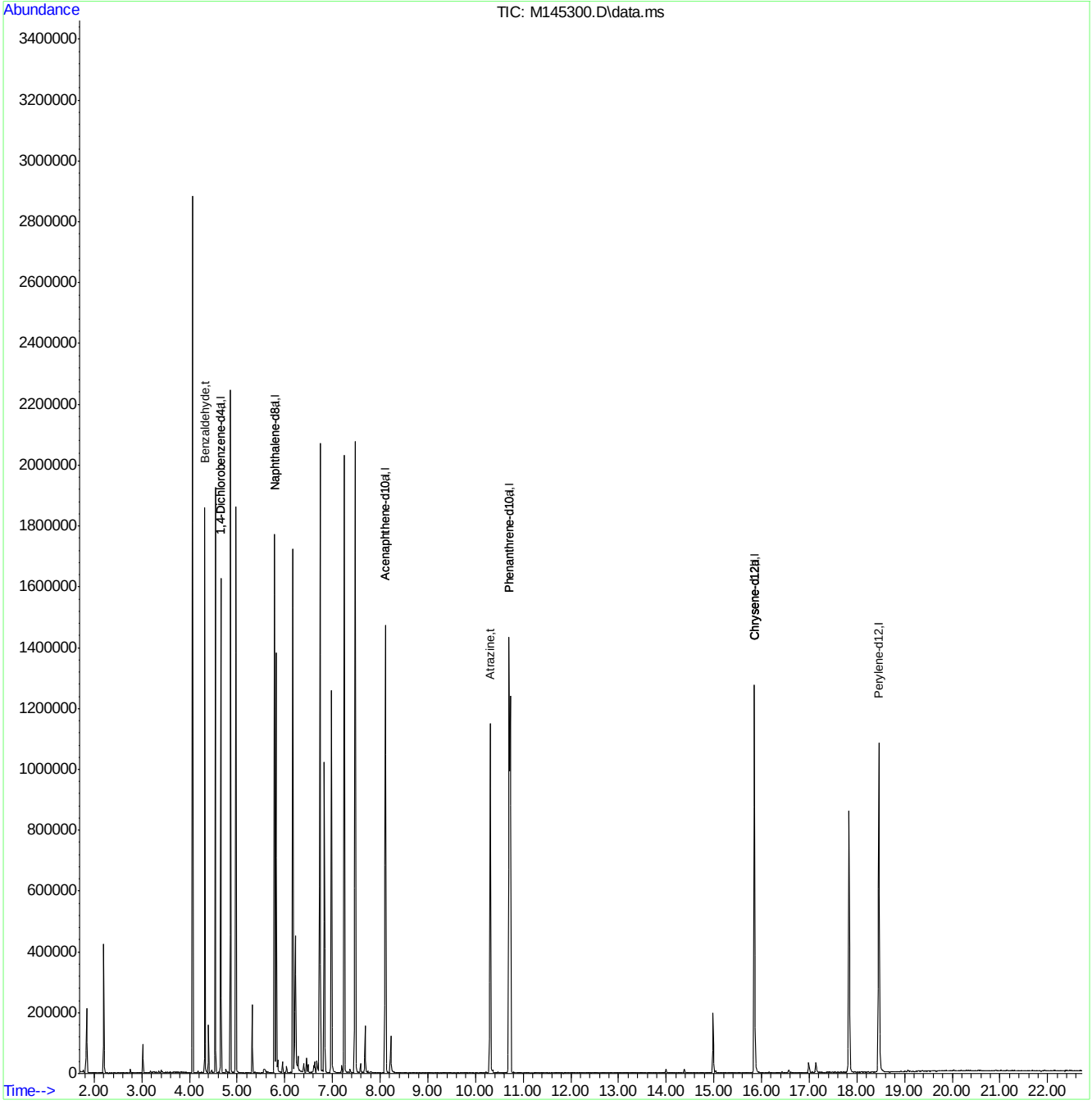
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.653	152	217149	40.00	ppm	0.00
24) Naphthalene-d8	5.785	136	782591	40.00	ppm	0.00
47) Acenaphthene-d10	8.108	164	397953	40.00	ppm	0.00
69) Phenanthrene-d10	10.704	188	736877	40.00	ppm	0.00
83) Chrysene-d12	15.853	240	655873	40.00	ppm	0.00
91) Perylene-d12	18.459	264	603503	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.653	152	217149	40.00	ppm	0.00
103) Acenaphthene-d10a	8.108	164	397953	40.00	ppm	0.00
106) Chrysene-d12a	15.853	240	655873	40.00	ppm	0.00
109) Phenanthrene-d10a	10.704	188	736877	40.00	ppm	0.00
112) Naphthalene-d8a	5.785	136	782591	40.00	ppm	0.00
114) Chrysene-d12b	15.853	240	655873	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
102) Benzaldehyde	4.321	105	257620	41.43	ppm	98
105) Atrazine	10.309	215	105854	50.87	ppm	93

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145300.D
Acq On : 17 Apr 2018 5:02 pm
Operator : chriss2
Sample : icv6169-50
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 17 17:26:00 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:19:02 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145301.D
Acq On : 17 Apr 2018 5:31 pm
Operator : chriss2
Sample : icv6169-50
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 18 02:15:07 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:19:02 2018
Response via : Initial Calibration

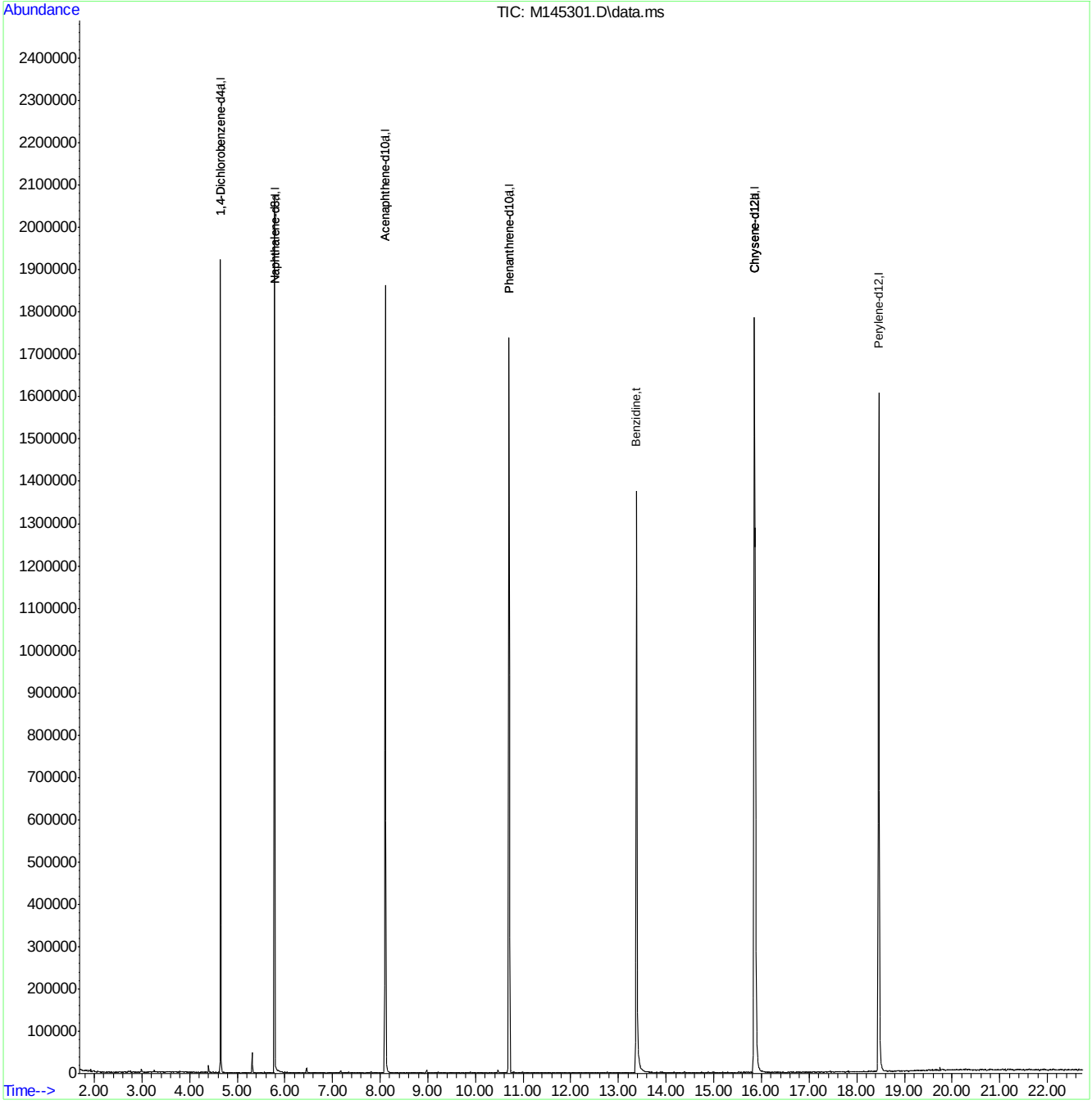
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.652	152	265745	40.00	ppm	0.00
24) Naphthalene-d8	5.784	136	887571	40.00	ppm	0.00
47) Acenaphthene-d10	8.108	164	540023	40.00	ppm	0.00
69) Phenanthrene-d10	10.703	188	926955	40.00	ppm	0.00
83) Chrysene-d12	15.852	240	900984	40.00	ppm	0.00
91) Perylene-d12	18.464	264	890115	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.652	152	265745	40.00	ppm	0.00
103) Acenaphthene-d10a	8.108	164	540023	40.00	ppm	0.00
106) Chrysene-d12a	15.852	240	900984	40.00	ppm	0.00
109) Phenanthrene-d10a	10.703	188	926955	40.00	ppm	0.00
112) Naphthalene-d8a	5.784	136	887571	40.00	ppm	0.00
114) Chrysene-d12b	15.852	240	900984	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%	
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
107) Benzidine	13.379	184	807683	61.82	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6168\
Data File : M145301.D
Acq On : 17 Apr 2018 5:31 pm
Operator : chriss2
Sample : icv6169-50
Misc : op10492,em6169,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 18 02:15:07 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6168.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Tue Apr 17 17:19:02 2018
Response via : Initial Calibration



MM6168.M Wed Apr 18 15:30:37 2018 MSM

Page: 2

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
05/25/18 18:23

Quantitation Report (QT Reviewed)

Data Path : D:\EM6221\
Data File : M146345.D
Acq On : 24 May 2018 12:57 pm
Operator : seanb1
Sample : ic6221-2
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 25 18:07:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon May 14 07:55:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.478	152	125080	40.00	ppm	-0.02
24) Naphthalene-d8	5.563	136	464855	40.00	ppm	-0.02
47) Acenaphthene-d10	7.817	164	257139	40.00	ppm	-0.03
69) Phenanthrene-d10	10.397	188	495965	40.00	ppm	-0.03
83) Chrysene-d12	15.542	240	538524	40.00	ppm	-0.06
91) Perylene-d12	18.159	264	409556	40.00	ppm	-0.07
101) 1,4-Dichlorobenzene-d4a	4.478	152	125080	40.00	ppm	-0.02
103) Acenaphthene-d10a	7.817	164	257139	40.00	ppm	-0.03
106) Chrysene-d12a	15.542	240	538524	40.00	ppm	-0.06
109) Phenanthrene-d10a	10.397	188	495965	40.00	ppm	-0.03
112) Naphthalene-d8a	5.563	136	464855	40.00	ppm	-0.02
114) Chrysene-d12b	15.542	240	538524	40.00	ppm	-0.06
System Monitoring Compounds						
5) 2-Fluorophenol	3.517	112	6606	1.41	ppm	-0.02
Spiked Amount 50.000			Recovery	=	2.82%	
8) Phenol-d5	4.249	99	10980	1.97	ppm	0.02
Spiked Amount 50.000			Recovery	=	3.94%	
25) Nitrobenzene-d5	4.916	82	10963	2.41	ppm	-0.01
Spiked Amount 50.000			Recovery	=	4.82%	
51) 2-Fluorobiphenyl	6.839	172	19987	2.00	ppm	0.02
Spiked Amount 50.000			Recovery	=	4.00%	
73) 2,4,6-Tribromophenol	9.153	330	2390	1.72	ppm	-0.05
Spiked Amount 50.000			Recovery	=	3.44%	
85) Terphenyl-d14	13.560	244	23125	1.80	ppm	-0.10
Spiked Amount 50.000			Recovery	=	3.60%	
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.973	88	2556	1.15	ppm	88
3) Pyridine	2.368	79	10698m	1.93	ppm	
4) N-Nitrosodimethylamine	2.304	42	5624	3.13	ppm #	29
6) Indene	4.676	116	14132	2.24	ppm	89
7) Cumene	3.880	105	24370	2.26	ppm	84
9) Phenol	4.254	94	12327	2.00	ppm #	35
10) Aniline	4.243	93	14748	2.29	ppm	75
11) bis(2-Chloroethyl)ether	4.291	93	8197	2.05	ppm	83
12) 2-Chlorophenol	4.339	128	9274	2.10	ppm	63
13) Decane	4.366	43	9853	3.42	ppm	82
14) 1,3-Dichlorobenzene	4.441	146	9838	1.89	ppm	80
15) 1,4-Dichlorobenzene	4.494	146	9689	1.98	ppm	86
16) Benzyl alcohol	4.601	108	5432	2.00	ppm #	64
17) 1,2-Dichlorobenzene	4.612	146	9560	2.09	ppm	87
18) Acetophenone	4.793	105	13577	2.62	ppm	90
19) 2-Methylphenol	4.697	108	7672	2.12	ppm	88
20) 2,2'-oxybis(1-Chloropr...	4.692	121	2543m	2.24	ppm	

Quantitation Report (QT Reviewed)

Data Path : D:\EM6221\
Data File : M146345.D
Acq On : 24 May 2018 12:57 pm
Operator : seanb1
Sample : ic6221-2
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 25 18:07:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon May 14 07:55:35 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
21) 3&4-Methylphenol	4.820	108	8421	2.33	ppm	#	38
22) n-Nitroso-di-n-propyla...	4.793	70	8201	3.22	ppm		85
23) Hexachloroethane	4.874	201	3655	2.23	ppm	#	76
26) Nitrobenzene	4.932	77	13224	3.14	ppm		79
27) Quinoline	5.942	129	16126	1.87	ppm		89
28) Isophorone	5.135	82	18458	2.35	ppm		75
29) 2-Nitrophenol	5.210	139	4302	2.00	ppm	#	27
30) 2,4-Dimethylphenol	5.264	107	8573	2.32	ppm		75
31) Benzoic acid	5.349	105	4567m	4.04	ppm		
32) bis(2-Chloroethoxy)met...	5.328	93	8991	2.06	ppm		90
33) 2,4-Dichlorophenol	5.451	162	6384	1.92	ppm		83
34) 2,6-Dichlorophenol	5.659	162	6367	1.95	ppm		77
35) 1,3,5-Trichlorobenzene	5.215	180	8933	2.08	ppm		93
36) 1,2,4-Trichlorobenzene	5.509	180	8273	1.90	ppm		89
37) 1,2,3-Trichlorobenzene	5.739	180	8435	2.16	ppm		79
38) Naphthalene	5.584	128	23258	1.91	ppm		99
39) 4-Chloroaniline	5.648	127	10041	1.93	ppm		67
40) 2,3-Dichloroaniline	6.727	161	8815	1.93	ppm		91
41) Caprolactam	6.011	55	2727	1.94	ppm	#	70
42) Hexachlorobutadiene	5.718	225	4971	2.29	ppm		96
43) 4-Chloro-3-methylphenol	6.214	107	7920	2.16	ppm		67
44) 2-Methylnaphthalene	6.359	141	14306	1.95	ppm		85
45) 1-Methylnaphthalene	6.476	142	18290	2.07	ppm		91
46) Dimethylnaphthalene	7.197	156	15697	2.02	ppm		93
48) Hexachlorocyclopentadiene	6.562	237	3900	2.02	ppm		94
49) 2,4,6-Trichlorophenol	6.743	196	4706	1.99	ppm		78
50) 2,4,5-Trichlorophenol	6.807	196	5055	1.93	ppm		78
52) 2-Chloronaphthalene	6.994	162	16147	2.01	ppm		95
53) Biphenyl	6.973	154	21779	2.10	ppm		94
54) 2-Nitroaniline	7.165	65	4547	2.53	ppm	#	55
55) Dimethylphthalate	7.448	163	18896	2.06	ppm		97
56) Acenaphthylene	7.593	152	23544	1.88	ppm		93
57) 2,6-Dinitrotoluene	7.534	165	2739	1.61	ppm		95
58) 3-Nitroaniline	7.790	138	3060	1.45	ppm		79
59) Acenaphthene	7.865	153	16537	2.10	ppm		91
60) 2,4-Dinitrophenol	7.988	184	1086	7.72	ppm		85
61) 4-Nitrophenol	8.202	109	1548	2.30	ppm	#	18
62) Dibenzofuran	8.148	168	21263	1.84	ppm		84
63) 2,4-Dinitrotoluene	8.186	165	3343	2.02	ppm		88
64) 2,3,4,6-Tetrachlorophenol	8.399	232	3672	1.78	ppm		84
65) Diethylphthalate	8.613	149	19560	2.18	ppm		100
66) Fluorene	8.725	166	16503	1.79	ppm		92
67) 4-Chlorophenyl-phenyle...	8.757	204	9702	2.23	ppm		87
68) 4-Nitroaniline	8.816	138	2538	1.26	ppm		92
70) 4,6-Dinitro-2-methylph...	8.891	198	1534m	3.74	ppm		
71) n-Nitrosodiphenylamine	8.971	169	12277	1.86	ppm		94
72) 1,2-Diphenylhydrazine	9.035	77	20622	2.32	ppm		90
74) 4-Bromophenyl-phenylether	9.623	248	5666	2.06	ppm		86
75) Hexachlorobenzene	9.708	284	7316	2.12	ppm		90
76) Pentachlorophenol	10.109	266	4027	2.16	ppm		91

Quantitation Report (QT Reviewed)

Data Path : D:\EM6221\
Data File : M146345.D
Acq On : 24 May 2018 12:57 pm
Operator : seanb1
Sample : ic6221-2
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 25 18:07:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon May 14 07:55:35 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
77)	Phenanthrene	10.435	178	28719	2.12	ppm		93
78)	Anthracene	10.536	178	25177	1.86	ppm		93
79)	Carbazole	10.889	167	21201	1.53	ppm		99
80)	Di-n-butylphthalate	11.701	149	26516	1.79	ppm		93
81)	Fluoranthene	12.716	202	28881	1.91	ppm		93
82)	Octadecane	10.413	57	9726	2.50	ppm		89
84)	Pyrene	13.133	202	31932	1.67	ppm		94
86)	Butylbenzylphthalate	14.623	149	9453	1.19	ppm	#	65
87)	Benzo[a]anthracene	15.526	228	28332	1.80	ppm		91
88)	3,3'-Dichlorobenzidine	15.563	252	8150	2.12	ppm		88
89)	Chrysene	15.590	228	28717	1.89	ppm		97
90)	bis(2-Ethylhexyl)phtha...	15.852	149	12110	2.10	ppm		88
92)	Di-n-octylphthalate	17.070	149	18005	2.75	ppm		93
93)	Benzo[b]fluoranthene	17.513	252	30672m	2.61	ppm		
94)	Benzo[k]fluoranthene	17.561	252	30091	2.70	ppm		98
95)	Benzo[a]pyrene	18.058	252	20878	2.08	ppm		96
96)	Indeno[1,2,3-cd]pyrene	19.816	276	19238m	2.01	ppm		
97)	Dibenz(a,h)acridine	19.490	279	17064	1.86	ppm		94
98)	Dibenz[a,h]anthracene	19.858	278	21242	2.08	ppm		95
99)	7,12-Dimethylbenz(a)an...	17.513	256	12312	2.64	ppm		96
100)	Benzo[g,h,i]perylene	20.232	276	23184	2.31	ppm		74

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

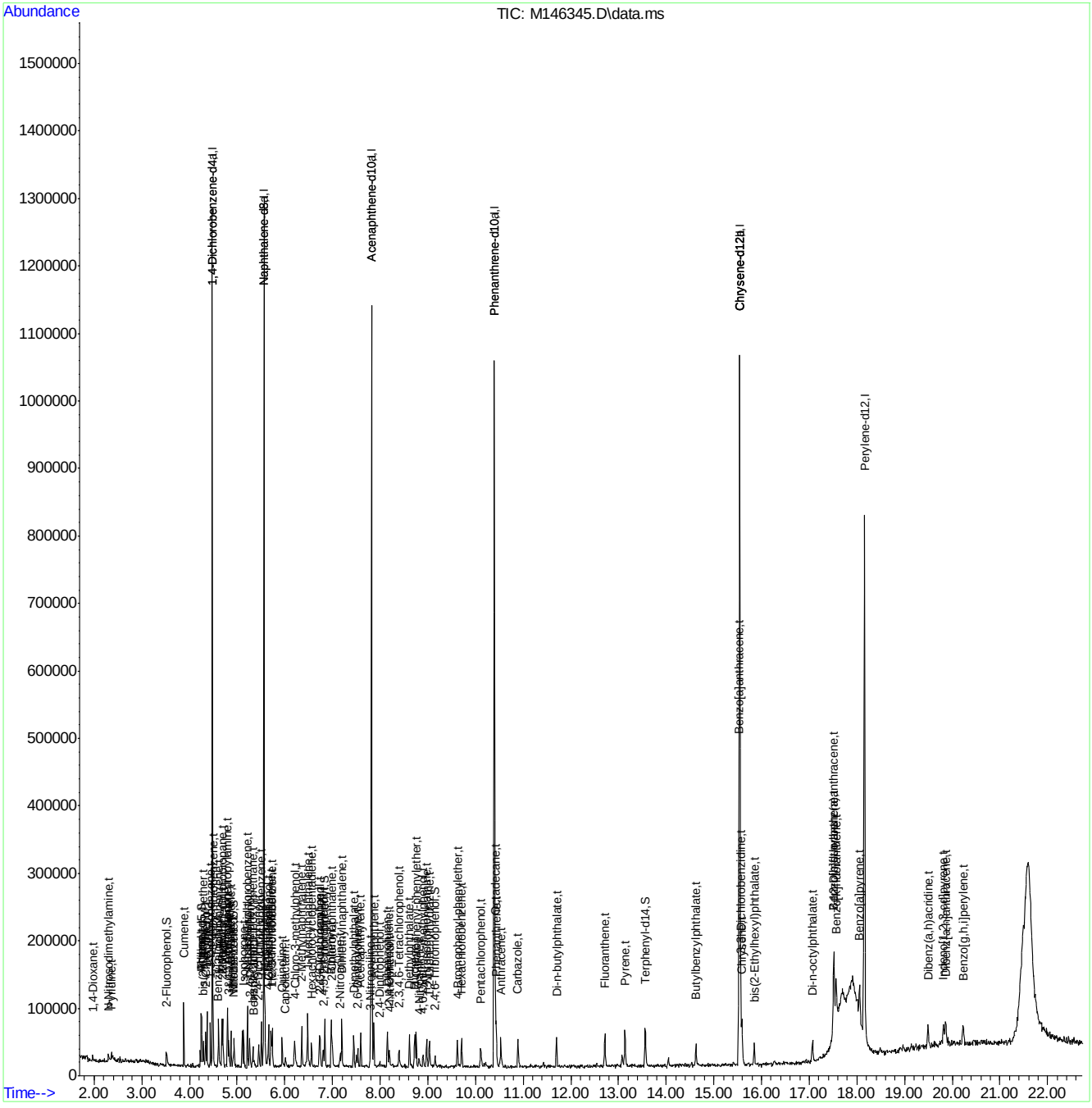
9.6.57

9

Quantitation Report (QT Reviewed)

Data Path : D:\EM6221\
Data File : M146345.D
Acq On : 24 May 2018 12:57 pm
Operator : seanb1
Sample : ic6221-2
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 25 18:07:51 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon May 14 07:55:35 2018
Response via : Initial Calibration



Manual Integration Approval Summary

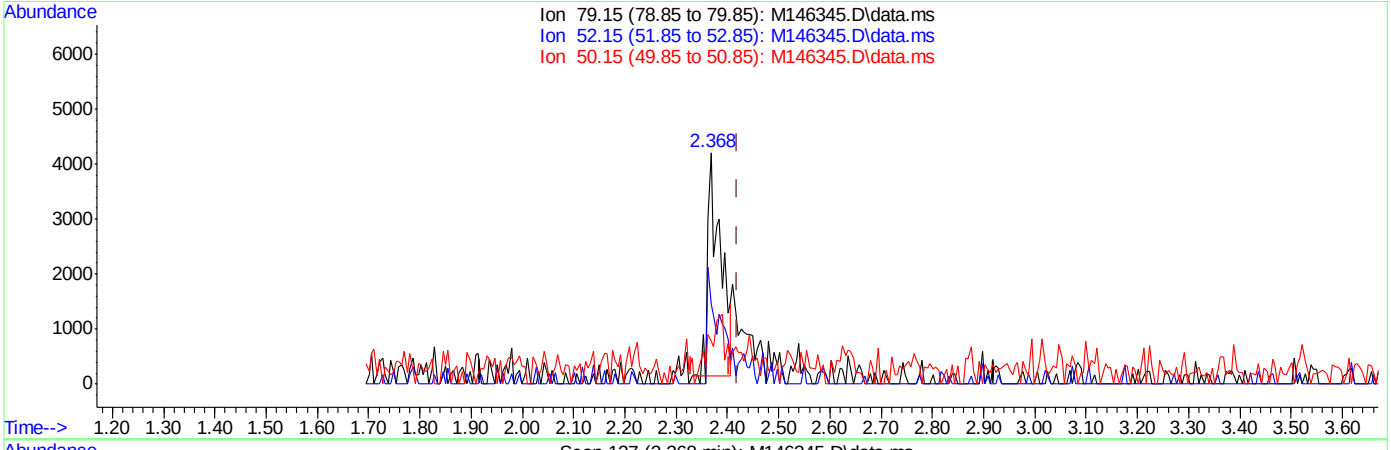
Sample Number:	EM6221-IC6221	**Method:**	SW846 8270D
Lab FileID:	M146345.D	**Analyst approved:**	05/25/18 18:15 Sean Block
Injection Time:	05/24/18 12:57	**Supervisor approved:**	05/25/18 18:23 Nina Pandya

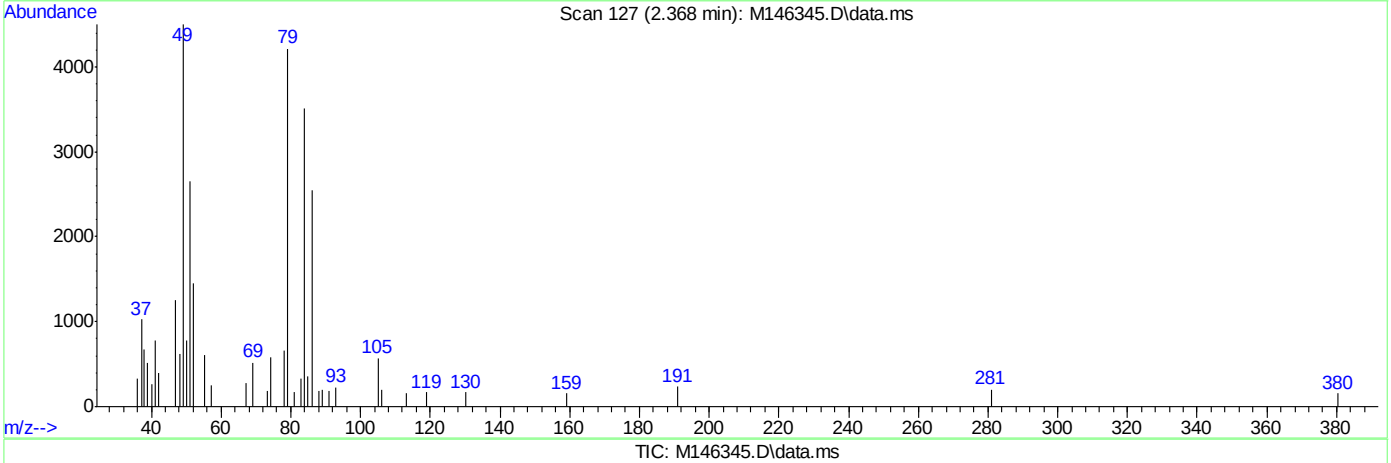
Parameter	CAS	Sig#	R.T. (min.)	Reason
Pyridine	110-86-1		2.37	Split peak
2,2'-Oxybis(1-chloropropane)	108-60-1		4.69	Split peak
Benzoic acid	65-85-0		5.35	Split peak
4,6-Dinitro-o-cresol	534-52-1		8.89	Split peak
Benzo(b)fluoranthene	205-99-2		17.51	Missed peak
Indeno(1,2,3-cd)pyrene	193-39-5		19.82	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146345.D
Acq On : 24 May 2018 12:57 pm
Operator : seanb1
Sample : ic6221-2
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 24 19:33:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon May 14 07:55:35 2018
Response via : Initial Calibration





TIC: M146345.D\data.ms

(3) Pyridine (t)

2.368min (-0.052) 1.24ppm

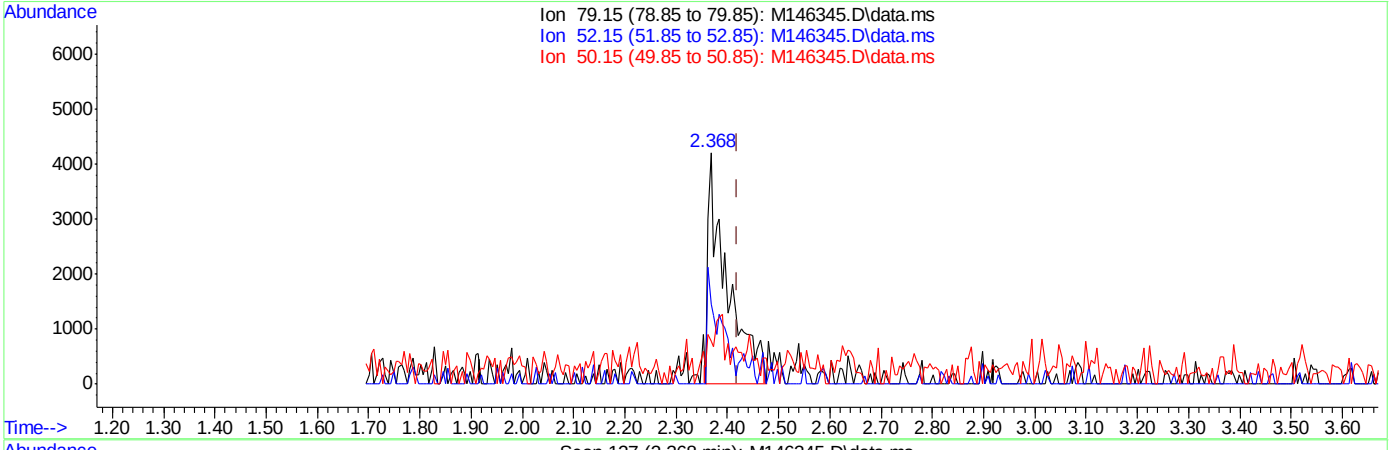
response 6862

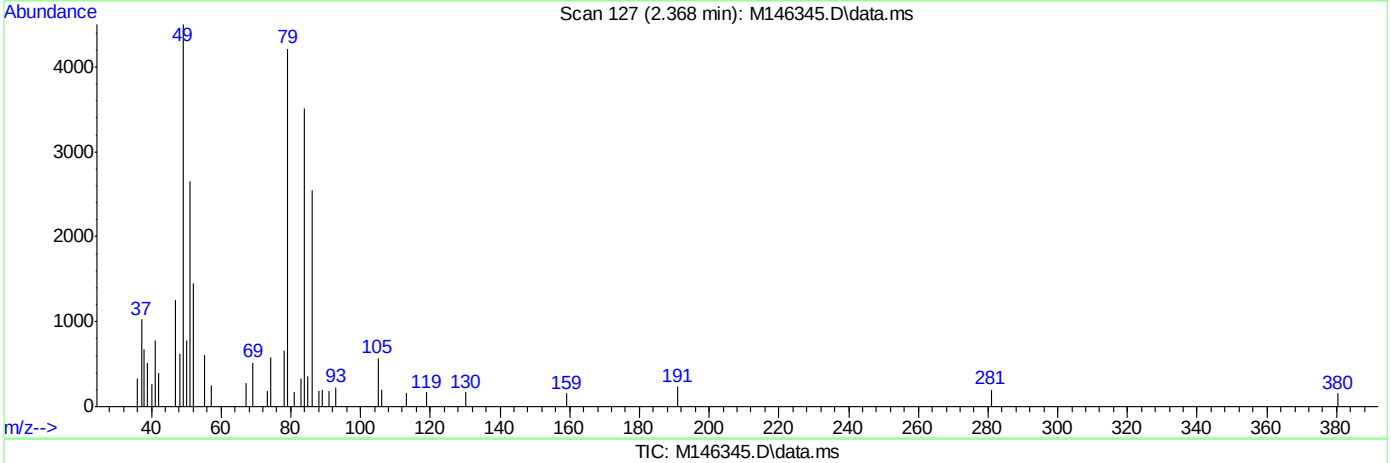
Ion	Exp%	Act%
79.15	100	100
52.15	52.00	35.72
50.15	21.00	10.98
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146345.D
Acq On : 24 May 2018 12:57 pm
Operator : seanb1
Sample : ic6221-2
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 24 19:33:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon May 14 07:55:35 2018
Response via : Initial Calibration





TIC: M146345.D\data.ms

(3) Pyridine (t)

2.368min (-0.052) 1.93ppm m

response 10698

Ion	Exp%	Act%
79.15	100	100
52.15	52.00	34.39
50.15	21.00	18.64
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146345.D
Acq On    : 24 May 2018  12:57 pm
Operator  : seanb1
Sample    : ic6221-2
Misc      : op10492,em6221,1000,,,1,1
ALS Vial  : 3   Sample Multiplier: 1

Quant Time: May 24 19:33:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title  : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon May 14 07:55:35 2018
Response via : Initial Calibration
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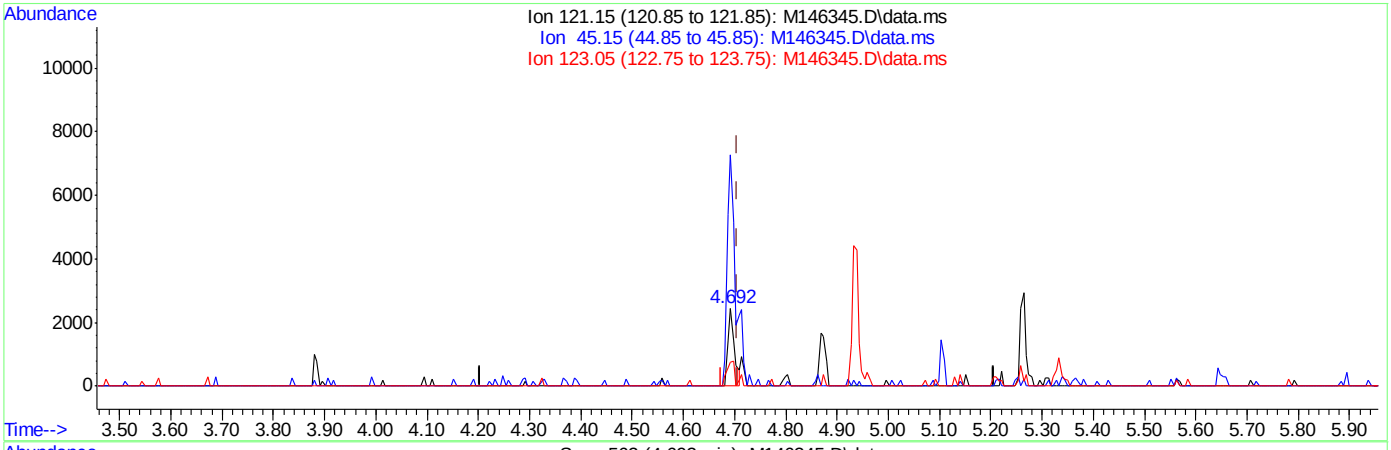
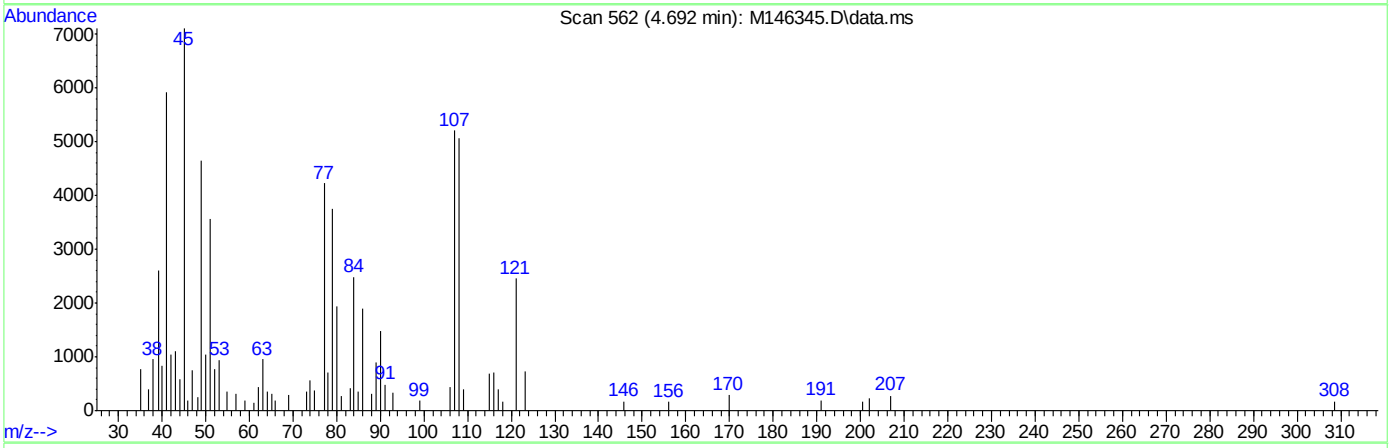




TIC: M146345.D\data.ms

(20) 2,2'-oxybis(1-Chloropropane (t)

4.692min (-0.014) 1.82ppm

response 2060

Ion	Exp%	Act%
121.15	100	100
45.15	285.20	281.40
123.05	32.30	29.61
0.00	0.00	0.00

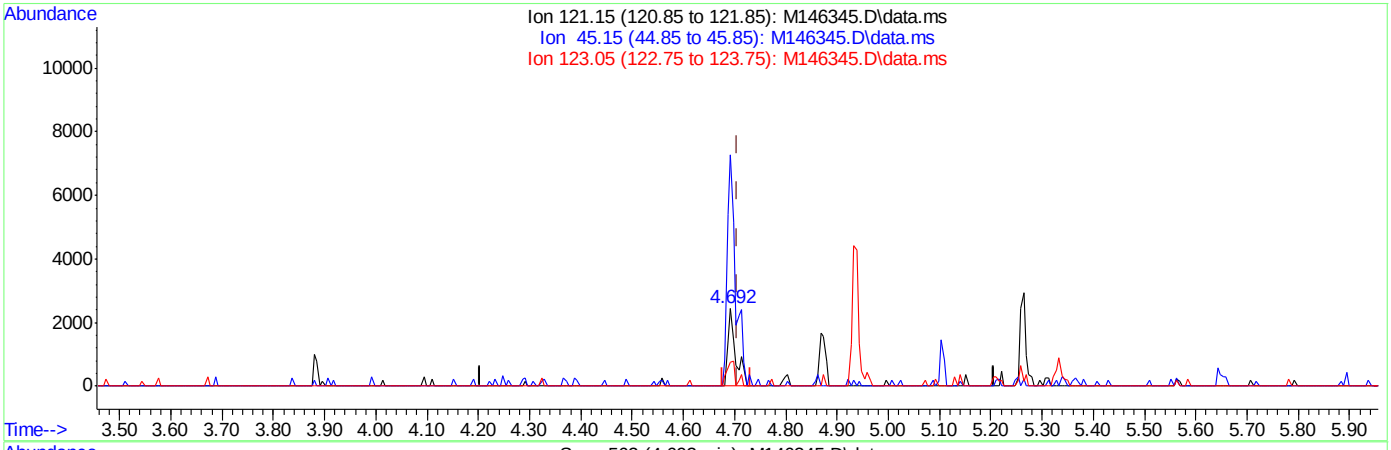
9.6.57.4

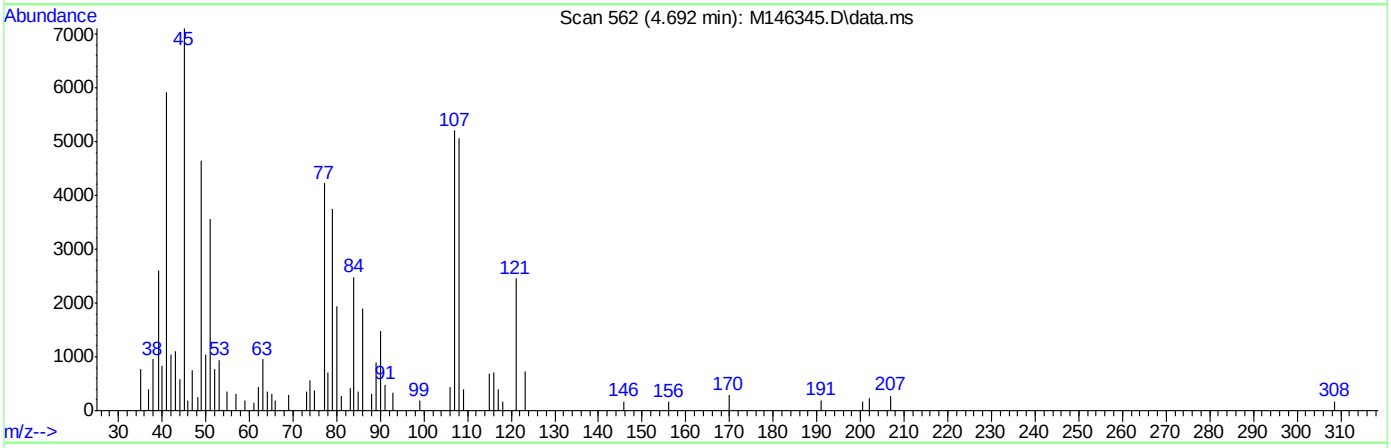
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146345.D
Acq On : 24 May 2018 12:57 pm
Operator : seanb1
Sample : ic6221-2
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 24 19:33:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon May 14 07:55:35 2018
Response via : Initial Calibration





TIC: M146345.D\data.ms

(20) 2,2'-oxybis(1-Chloropropane (t)

4.692min (-0.014) 2.24ppm m

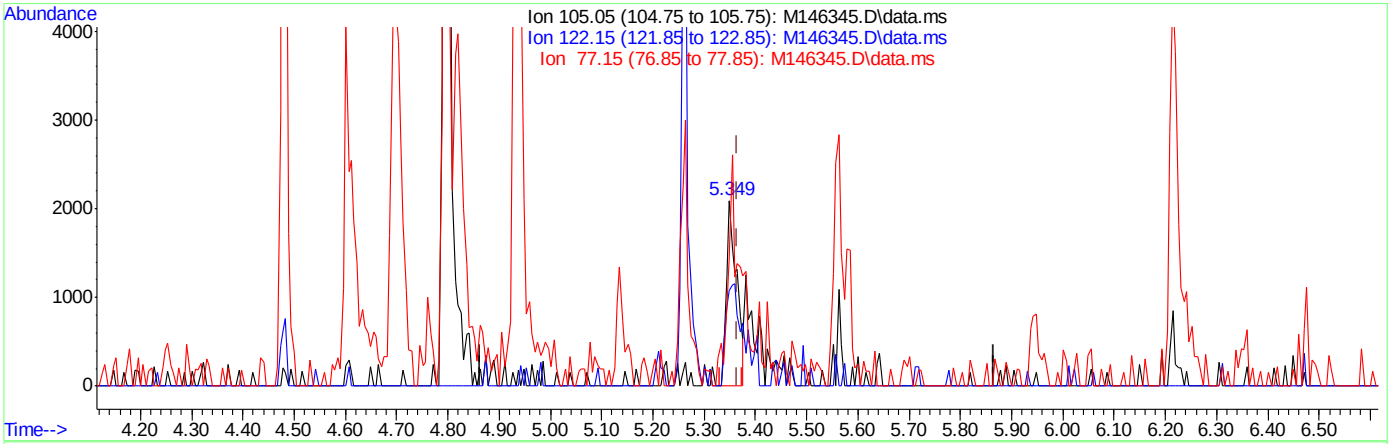
response 2543

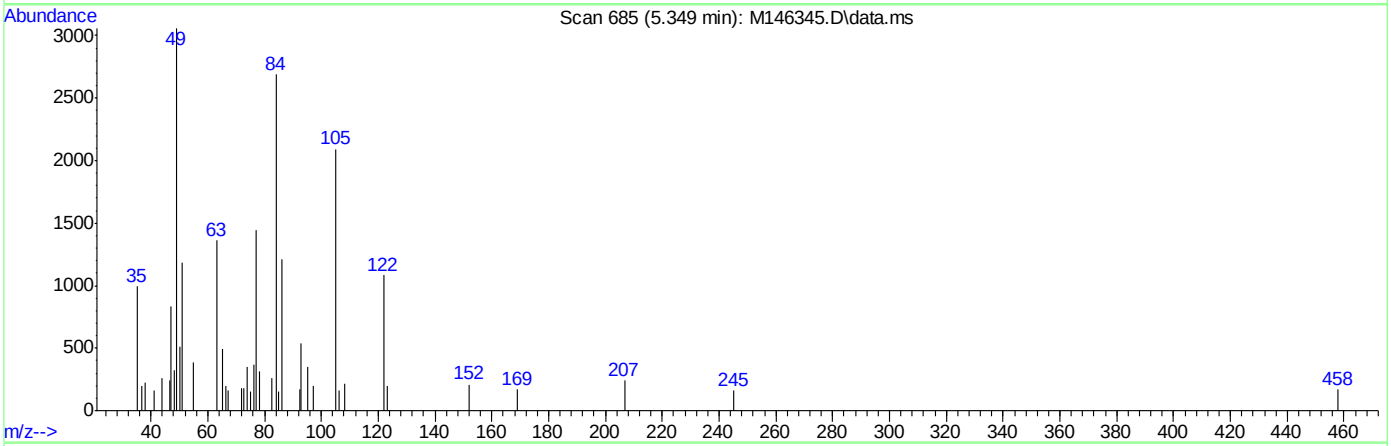
Ion	Exp%	Act%
121.15	100	100
45.15	285.20	289.68
123.05	32.30	30.14
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146345.D
Acq On : 24 May 2018 12:57 pm
Operator : seanb1
Sample : ic6221-2
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 24 19:33:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon May 14 07:55:35 2018
Response via : Initial Calibration





TIC: M146345.D\data.ms

(31) Benzoic acid (t)

5.349min (-0.016) 3.41ppm

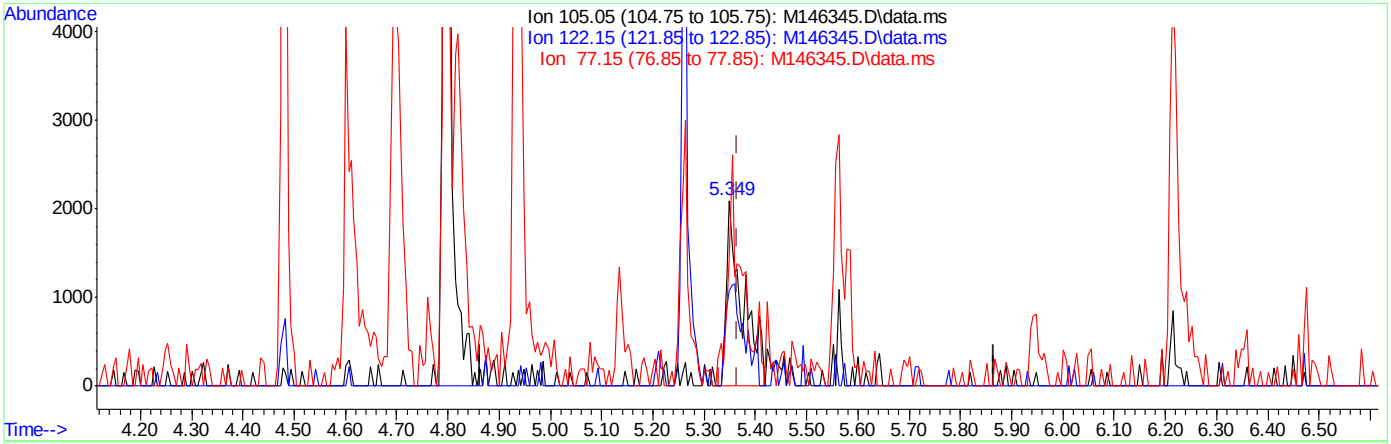
response 2941

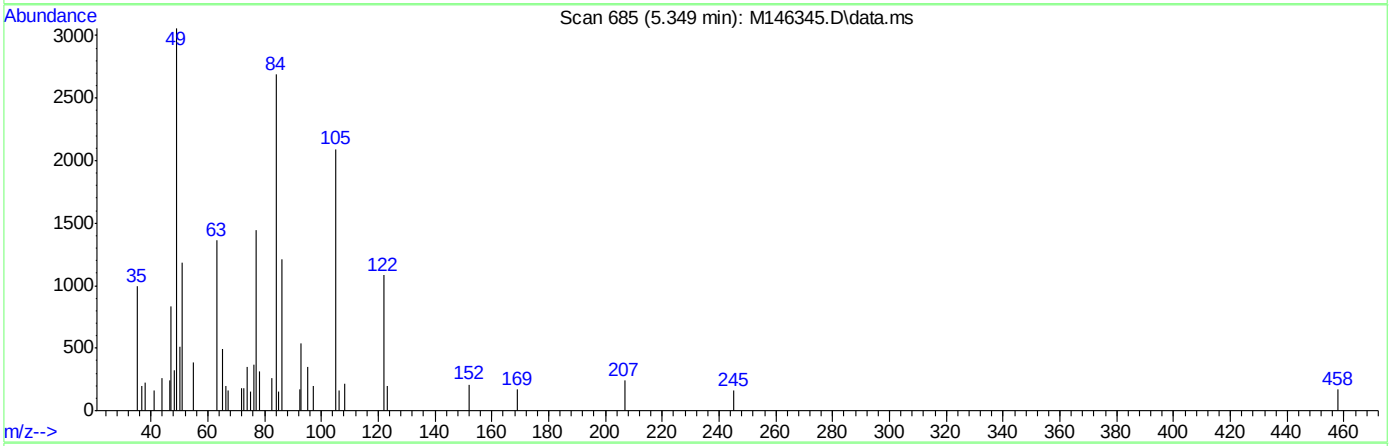
Ion	Exp%	Act%
105.05	100	100
122.15	82.10	39.78#
77.15	67.40	31.85#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146345.D
Acq On : 24 May 2018 12:57 pm
Operator : seanb1
Sample : ic6221-2
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 24 19:33:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon May 14 07:55:35 2018
Response via : Initial Calibration





TIC: M146345.D\data.ms

(31) Benzoic acid (t)

5.349min (-0.016) 4.04ppm m

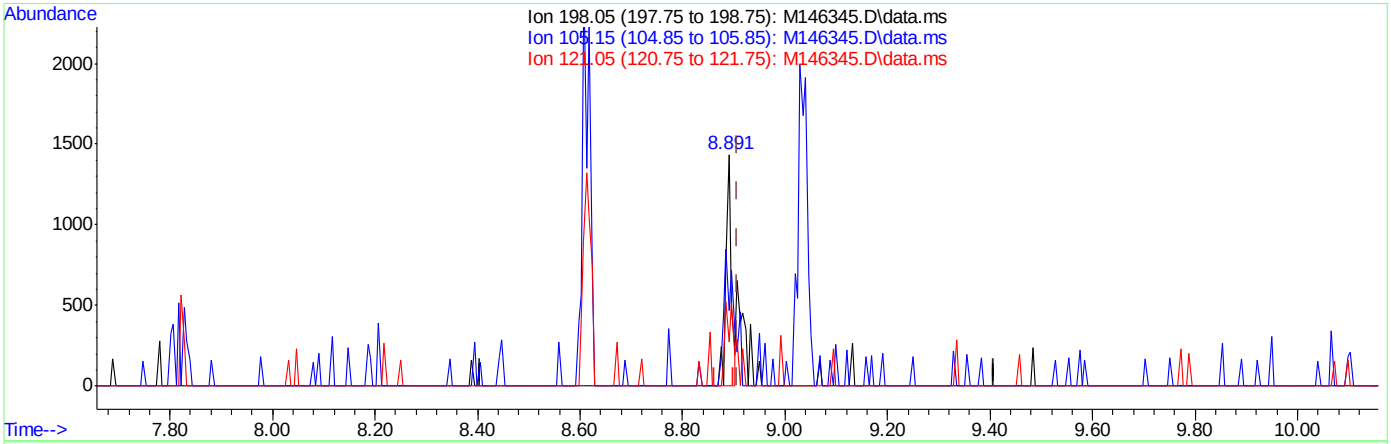
response 4567

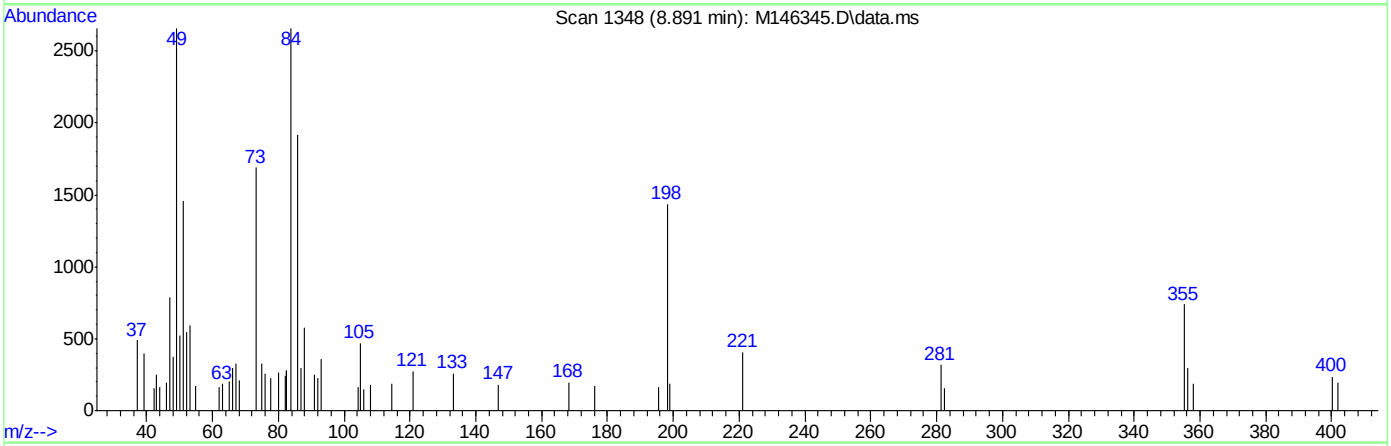
Ion	Exp%	Act%
105.05	100	100
122.15	82.10	51.74#
77.15	67.40	68.90
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146345.D
Acq On : 24 May 2018 12:57 pm
Operator : seanb1
Sample : ic6221-2
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 24 19:33:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon May 14 07:55:35 2018
Response via : Initial Calibration





TIC: M146345.D\data.ms

(70) 4,6-Dinitro-2-methylphenol (t)

8.891min (-0.017) 3.42ppm

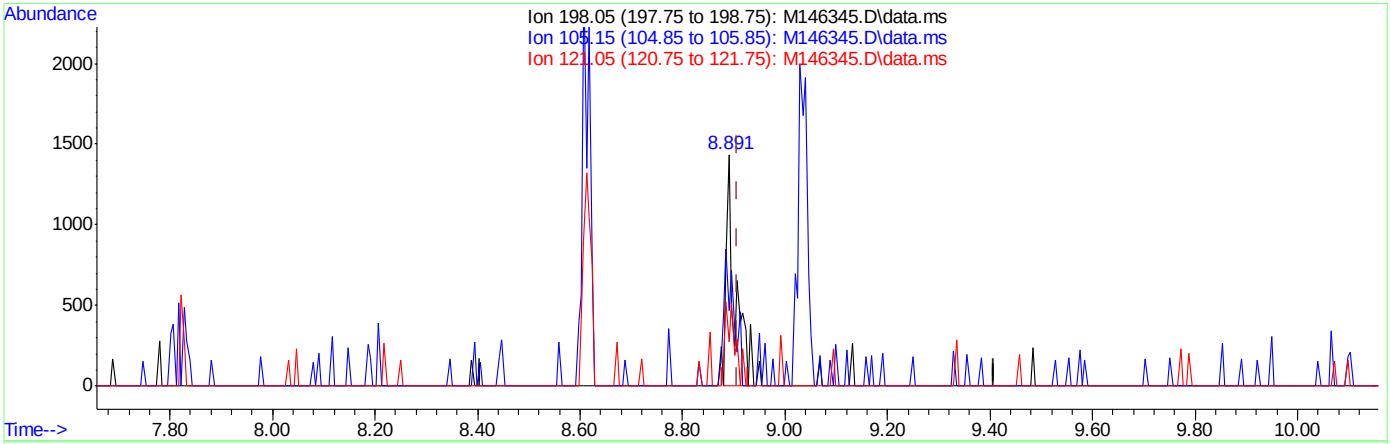
response 1018

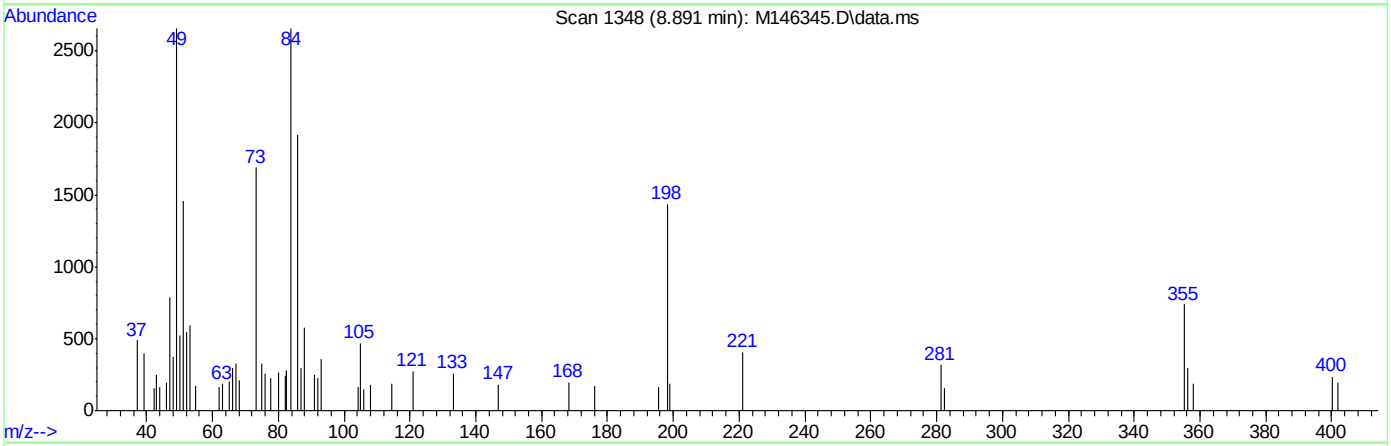
Ion	Exp%	Act%
198.05	100	100
105.15	40.90	22.25
121.05	34.60	13.66
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146345.D
Acq On : 24 May 2018 12:57 pm
Operator : seanb1
Sample : ic6221-2
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 24 19:33:01 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon May 14 07:55:35 2018
Response via : Initial Calibration





TIC: M146345.D\data.ms

(70) 4,6-Dinitro-2-methylphenol (t)

8.891min (-0.017) 3.74ppm m

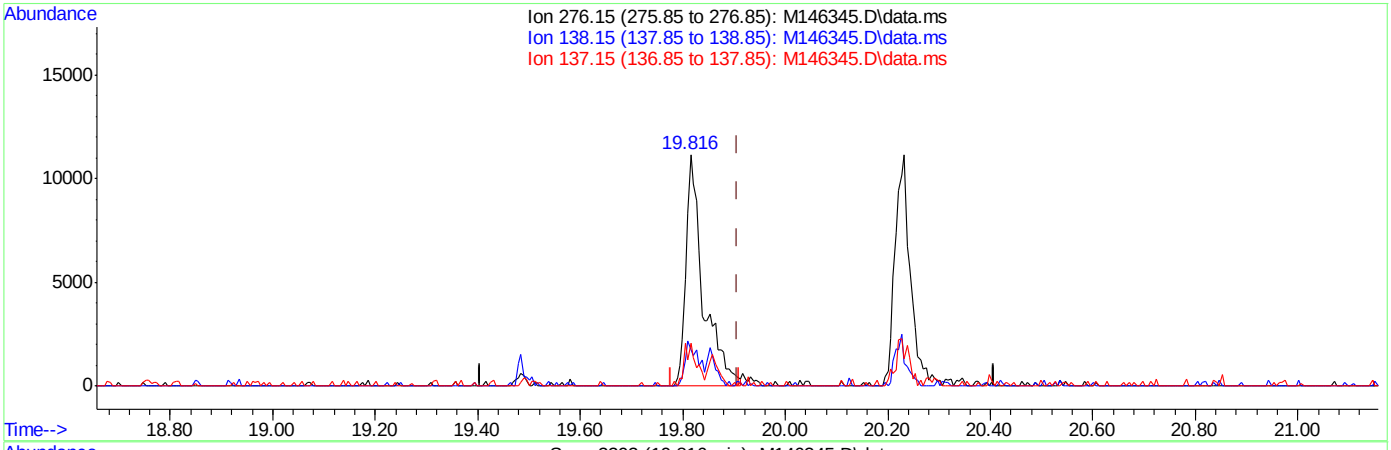
response 1534

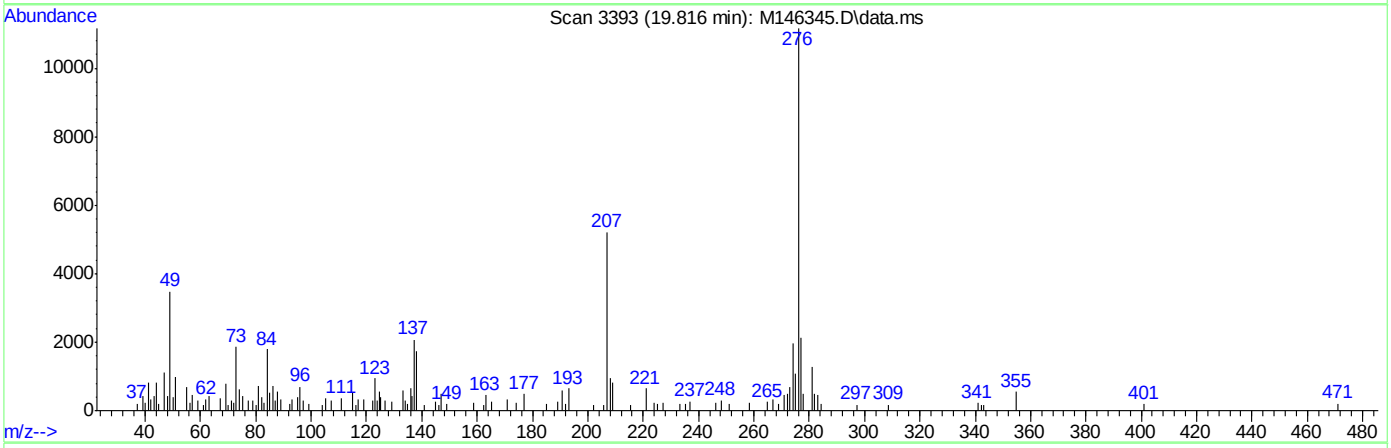
Ion	Exp%	Act%
198.05	100	100
105.15	40.90	32.66
121.05	34.60	19.15
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146345.D
Acq On : 24 May 2018 12:57 pm
Operator : seanb1
Sample : ic6221-2
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 24 19:34:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon May 14 07:55:35 2018
Response via : Initial Calibration





TIC: M146345.D\data.ms

(96) Indeno[1,2,3-cd]pyrene (t)

19.816min (-0.091) 2.73ppm

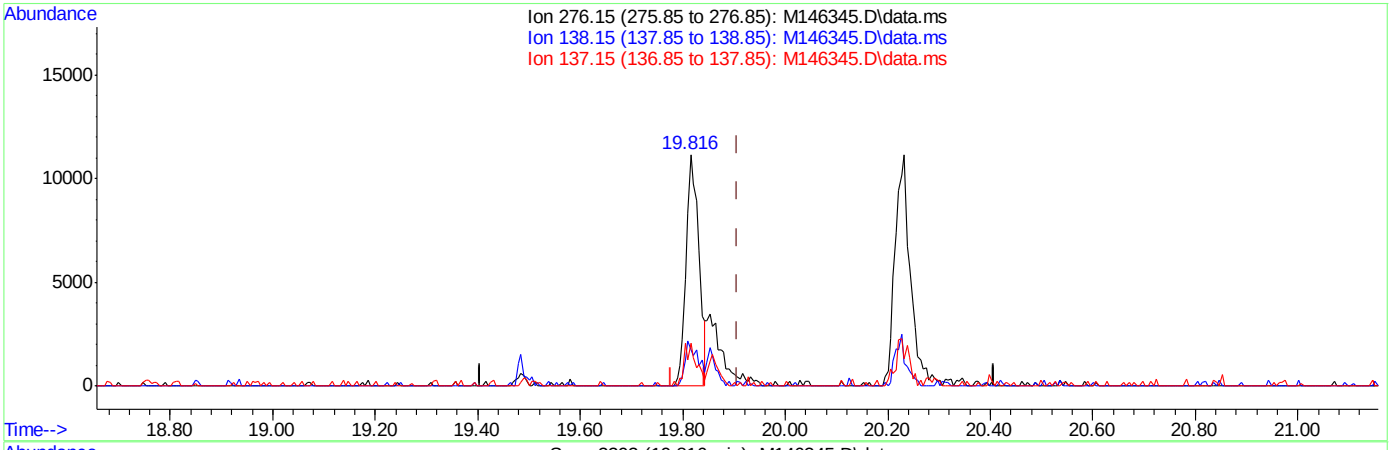
response 26098

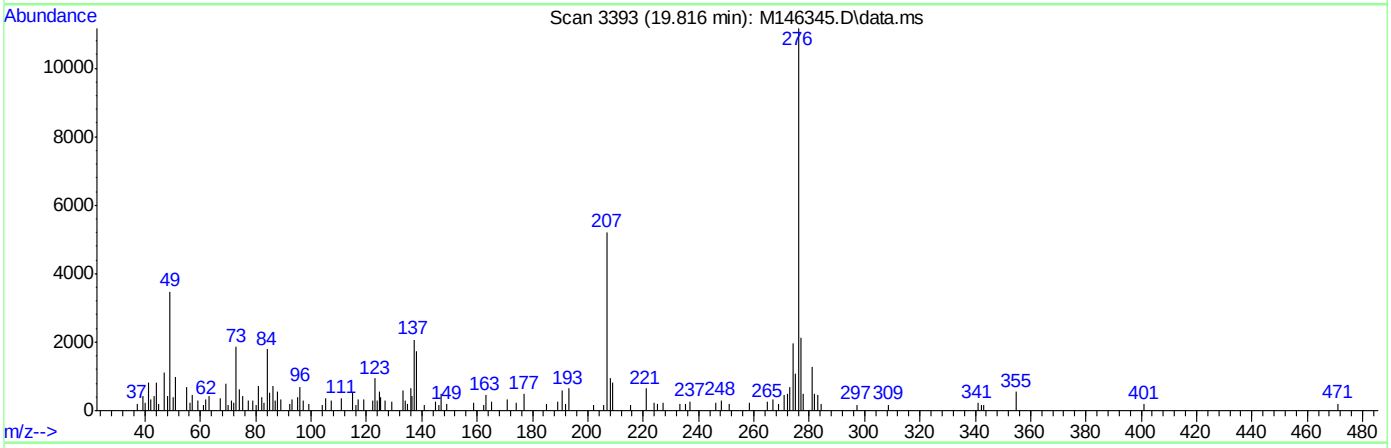
Ion	Exp%	Act%
276.15	100	100
138.15	22.40	15.14
137.15	15.70	18.06
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146345.D
Acq On    : 24 May 2018  12:57 pm
Operator  : seanb1
Sample    : ic6221-2
Misc      : op10492,em6221,1000,,,1,1
ALS Vial  : 3   Sample Multiplier: 1

Quant Time: May 24 19:34:17 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title  : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon May 14 07:55:35 2018
Response via : Initial Calibration
```





TIC: M146345.D\data.ms

(96) Indeno[1,2,3-cd]pyrene (t)

19.816min (-0.091) 2.01ppm m

response 19238

Ion	Exp%	Act%
276.15	100	100
138.15	22.40	15.66
137.15	15.70	18.51
0.00	0.00	0.00

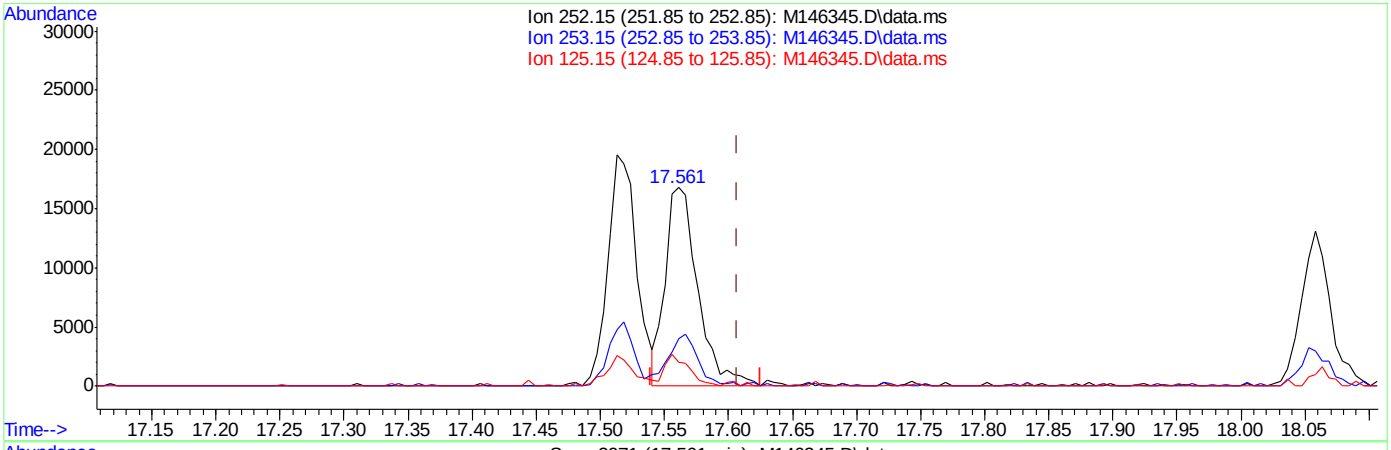
9.6.57.11

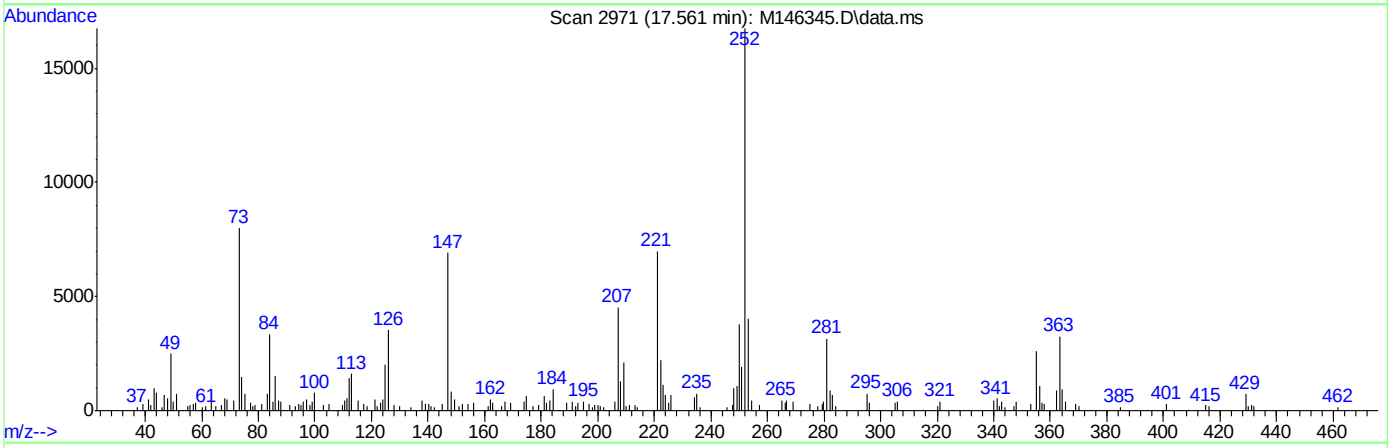
9

Quantitation Report (Qedit)

Data Path : D:\EM6221\
Data File : M146345.D
Acq On : 24 May 2018 12:57 pm
Operator : seanb1
Sample : ic6221-2
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 24 19:42:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon May 14 07:55:35 2018
Response via : Initial Calibration





TIC: M146345.D\data.ms

(93) Benzo[b]fluoranthene (t)

17.561min (-0.046) 2.56ppm

response 30091

Ion	Exp%	Act%
252.15	100	100
253.15	22.10	23.21
125.15	11.00	11.53
0.00	0.00	0.00

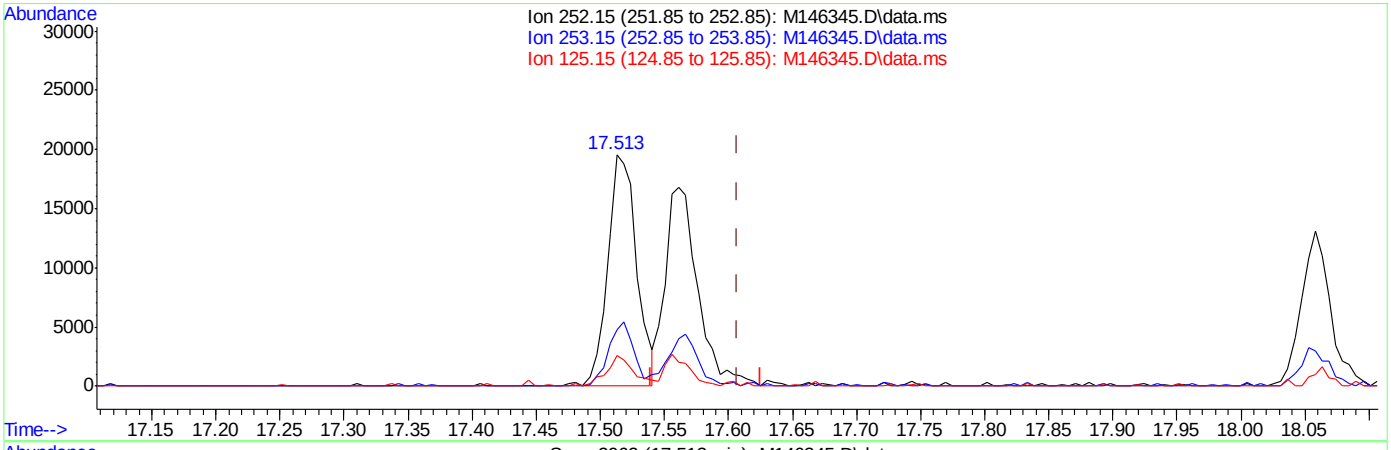
9.6.57.12

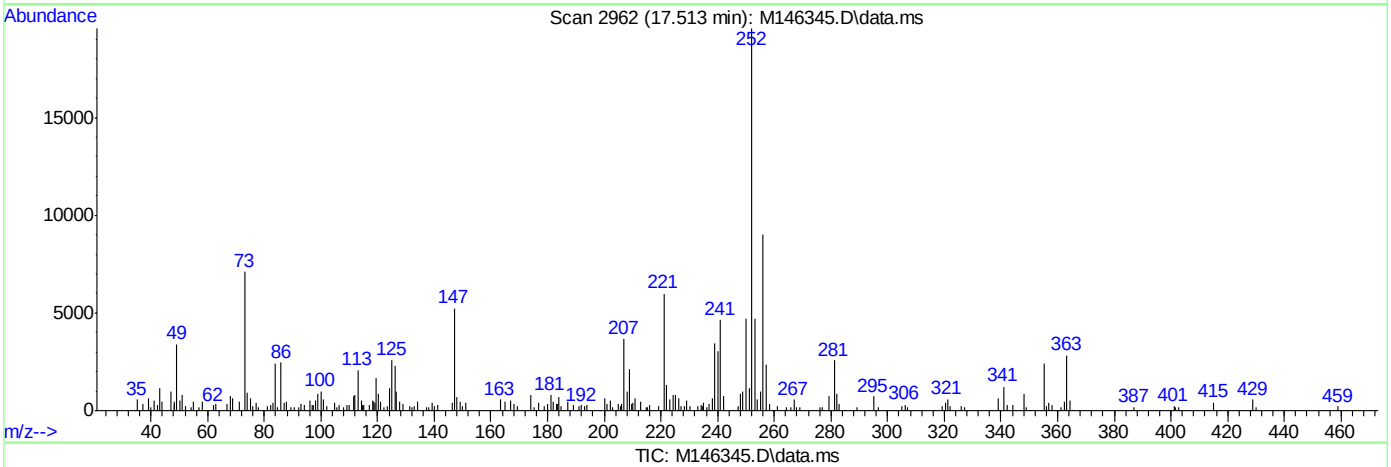
9

Quantitation Report (Qedit)

Data Path : D:\EM6221\
Data File : M146345.D
Acq On : 24 May 2018 12:57 pm
Operator : seanb1
Sample : ic6221-2
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 24 19:42:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Mon May 14 07:55:35 2018
Response via : Initial Calibration





TIC: M146345.D\data.ms

(93) Benzo[b]fluoranthene (t)

17.513min (-0.094) 2.61ppm m

response 30672

Ion	Exp%	Act%
252.15	100	100
253.15	22.10	24.18
125.15	11.00	13.30
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
05/25/18 18:23

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146346.D
Acq On : 24 May 2018 1:27 pm
Operator : seanb1
Sample : ic6221-1
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 19:44:19 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:36:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.482	152	127777	40.00	ppm	-0.02
24) Naphthalene-d8	5.561	136	472631	40.00	ppm	-0.02
47) Acenaphthene-d10	7.816	164	266028	40.00	ppm	-0.03
69) Phenanthrene-d10	10.396	188	520491	40.00	ppm	-0.04
83) Chrysene-d12	15.540	240	551154	40.00	ppm	-0.06
91) Perylene-d12	18.163	264	560812	40.00	ppm	-0.07
101) 1,4-Dichlorobenzene-d4a	4.482	152	127777	40.00	ppm	-0.02
103) Acenaphthene-d10a	7.816	164	266028	40.00	ppm	-0.03
106) Chrysene-d12a	15.540	240	551154	40.00	ppm	-0.06
109) Phenanthrene-d10a	10.396	188	520491	40.00	ppm	-0.04
112) Naphthalene-d8a	5.561	136	472631	40.00	ppm	-0.02
114) Chrysene-d12b	15.540	240	551154	40.00	ppm	-0.06
System Monitoring Compounds						
5) 2-Fluorophenol	3.520	112	2548	0.53	ppm	-0.01
Spiked Amount 50.000			Recovery	=	1.06%	
8) Phenol-d5	4.252	99	4338	0.76	ppm	0.02
Spiked Amount 50.000			Recovery	=	1.52%	
25) Nitrobenzene-d5	4.920	82	5614	1.22	ppm	0.00
Spiked Amount 50.000			Recovery	=	2.44%	
51) 2-Fluorobiphenyl	6.838	172	10749	1.04	ppm	0.02
Spiked Amount 50.000			Recovery	=	2.08%	
73) 2,4,6-Tribromophenol	9.151	330	1088	0.75	ppm	-0.05
Spiked Amount 50.000			Recovery	=	1.50%	
85) Terphenyl-d14	13.558	244	12141	0.92	ppm	-0.10
Spiked Amount 50.000			Recovery	=	1.84%	
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.971	88	2359	1.04	ppm	67
3) Pyridine	2.393	79	4248m	0.75	ppm	
4) N-Nitrosodimethylamine	2.313	42	2505m	1.36	ppm	
6) Indene	4.680	116	7915	1.23	ppm	95
7) Cumene	3.884	105	13761	1.25	ppm	85
9) Phenol	4.258	94	7728	1.23	ppm #	46
10) Aniline	4.247	93	7377	1.12	ppm	83
11) bis(2-Chloroethyl)ether	4.295	93	3741	0.91	ppm	82
12) 2-Chlorophenol	4.343	128	3678	0.81	ppm	74
13) Decane	4.364	43	4867	1.66	ppm #	78
14) 1,3-Dichlorobenzene	4.439	146	4892	0.92	ppm	74
15) 1,4-Dichlorobenzene	4.493	146	5151	1.03	ppm	89
16) Benzyl alcohol	4.610	108	1393	0.50	ppm #	35
17) 1,2-Dichlorobenzene	4.610	146	4629	0.99	ppm	84
18) Acetophenone	4.797	105	6772	1.28	ppm	72
19) 2-Methylphenol	4.696	108	3531	0.96	ppm	69
20) 2,2'-oxybis(1-Chloropr...	4.690	121	1298	1.12	ppm #	49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146346.D
Acq On : 24 May 2018 1:27 pm
Operator : seanb1
Sample : ic6221-1
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 19:44:19 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:36:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
21) 3&4-Methylphenol	4.824	108	3823	1.04	ppm	#	43
22) n-Nitroso-di-n-propyla...	4.797	70	3113	1.20	ppm		73
23) Hexachloroethane	4.872	201	1876	1.12	ppm	#	66
26) Nitrobenzene	4.936	77	6246	1.46	ppm		69
27) Quinoline	5.946	129	7295	0.83	ppm		86
28) Isophorone	5.134	82	8523	1.07	ppm		82
29) 2-Nitrophenol	5.214	139	1692	0.77	ppm	#	1
30) 2,4-Dimethylphenol	5.262	107	3555	0.94	ppm		90
31) Benzoic acid	5.363	105	1838	2.97	ppm	#	48
32) bis(2-Chloroethoxy)met...	5.331	93	5101	1.15	ppm		95
33) 2,4-Dichlorophenol	5.454	162	3293	0.98	ppm		95
34) 2,6-Dichlorophenol	5.663	162	2632	0.79	ppm		100
35) 1,3,5-Trichlorobenzene	5.219	180	4433	1.01	ppm		98
36) 1,2,4-Trichlorobenzene	5.513	180	4663	1.05	ppm		98
37) 1,2,3-Trichlorobenzene	5.737	180	4530	1.14	ppm		93
38) Naphthalene	5.582	128	13279	1.07	ppm		87
39) 4-Chloroaniline	5.657	127	4881	0.92	ppm		78
40) 2,3-Dichloroaniline	6.726	161	4933	1.06	ppm		90
42) Hexachlorobutadiene	5.716	225	2575	1.17	ppm		81
43) 4-Chloro-3-methylphenol	6.218	107	3378	0.91	ppm		71
44) 2-Methylnaphthalene	6.357	141	7540	1.01	ppm		80
45) 1-Methylnaphthalene	6.480	142	8293	0.92	ppm	#	64
46) Dimethylnaphthalene	7.201	156	7999	1.01	ppm		91
48) Hexachlorocyclopentadiene	6.565	237	1269	0.64	ppm		92
49) 2,4,6-Trichlorophenol	6.742	196	2632	1.07	ppm		100
50) 2,4,5-Trichlorophenol	6.811	196	2388	0.88	ppm		100
52) 2-Chloronaphthalene	6.993	162	8276	0.99	ppm		83
53) Biphenyl	6.977	154	11398	1.06	ppm		90
54) 2-Nitroaniline	7.164	65	2208	1.19	ppm	#	37
55) Dimethylphthalate	7.447	163	8226	0.87	ppm		90
56) Acenaphthylene	7.596	152	11890	0.92	ppm		93
57) 2,6-Dinitrotoluene	7.532	165	879m	0.50	ppm		
58) 3-Nitroaniline	7.810	138	1177	0.54	ppm	#	1
59) Acenaphthene	7.869	153	8656	1.06	ppm		90
62) Dibenzofuran	8.152	168	11292	0.95	ppm		66
63) 2,4-Dinitrotoluene	8.189	165	1224	1.20	ppm		71
64) 2,3,4,6-Tetrachlorophenol	8.398	232	1577	0.74	ppm		71
65) Diethylphthalate	8.617	149	8349	0.90	ppm		85
66) Fluorene	8.724	166	9332	0.98	ppm		98
67) 4-Chlorophenyl-phenyle...	8.761	204	4868	1.08	ppm		75
71) n-Nitrosodiphenylamine	8.975	169	5980	0.86	ppm		94
72) 1,2-Diphenylhydrazine	9.034	77	8214	0.88	ppm		94
74) 4-Bromophenyl-phenylether	9.616	248	2649	0.92	ppm		97
75) Hexachlorobenzene	9.712	284	4062	1.12	ppm		88
76) Pentachlorophenol	10.107	266	1440	0.74	ppm	#	56
77) Phenanthrene	10.438	178	14676	1.03	ppm		86
78) Anthracene	10.540	178	11310	0.79	ppm		92
79) Carbazole	10.893	167	11069	0.76	ppm		83
80) Di-n-butylphthalate	11.699	149	9670	0.62	ppm		83
81) Fluoranthene	12.720	202	12884	0.81	ppm		88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146346.D
Acq On : 24 May 2018 1:27 pm
Operator : seanb1
Sample : ic6221-1
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 19:44:19 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:36:18 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
82) Octadecane	10.406	57	4969	1.22 ppm		83
84) Pyrene	13.136	202	14517	0.74 ppm		94
86) Butylbenzylphthalate	14.621	149	3276	0.40 ppm	#	67
87) Benzo[a]anthracene	15.530	228	14827	0.92 ppm		98
88) 3,3'-Dichlorobenzidine	15.578	252	2872	1.20 ppm	#	56
89) Chrysene	15.588	228	15658	1.01 ppm		89
90) bis(2-Ethylhexyl)phtha...	15.850	149	3789	1.34 ppm		92
92) Di-n-octylphthalate	17.068	149	5852	1.79 ppm		94
93) Benzo[b]fluoranthene	17.517	252	13896	0.86 ppm		88
94) Benzo[k]fluoranthene	17.570	252	13998	0.92 ppm		86
95) Benzo[a]pyrene	18.062	252	10962	0.80 ppm		90
96) Indeno[1,2,3-cd]pyrene	19.819	276	10969m	0.84 ppm		
97) Dibenz(a,h)acridine	19.488	279	9511	0.76 ppm		68
98) Dibenz[a,h]anthracene	19.862	278	11703	0.84 ppm		94
99) 7,12-Dimethylbenz(a)an...	17.511	256	3769	0.59 ppm		84
100) Benzo[g,h,i]perylene	20.225	276	11319	0.82 ppm		83

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

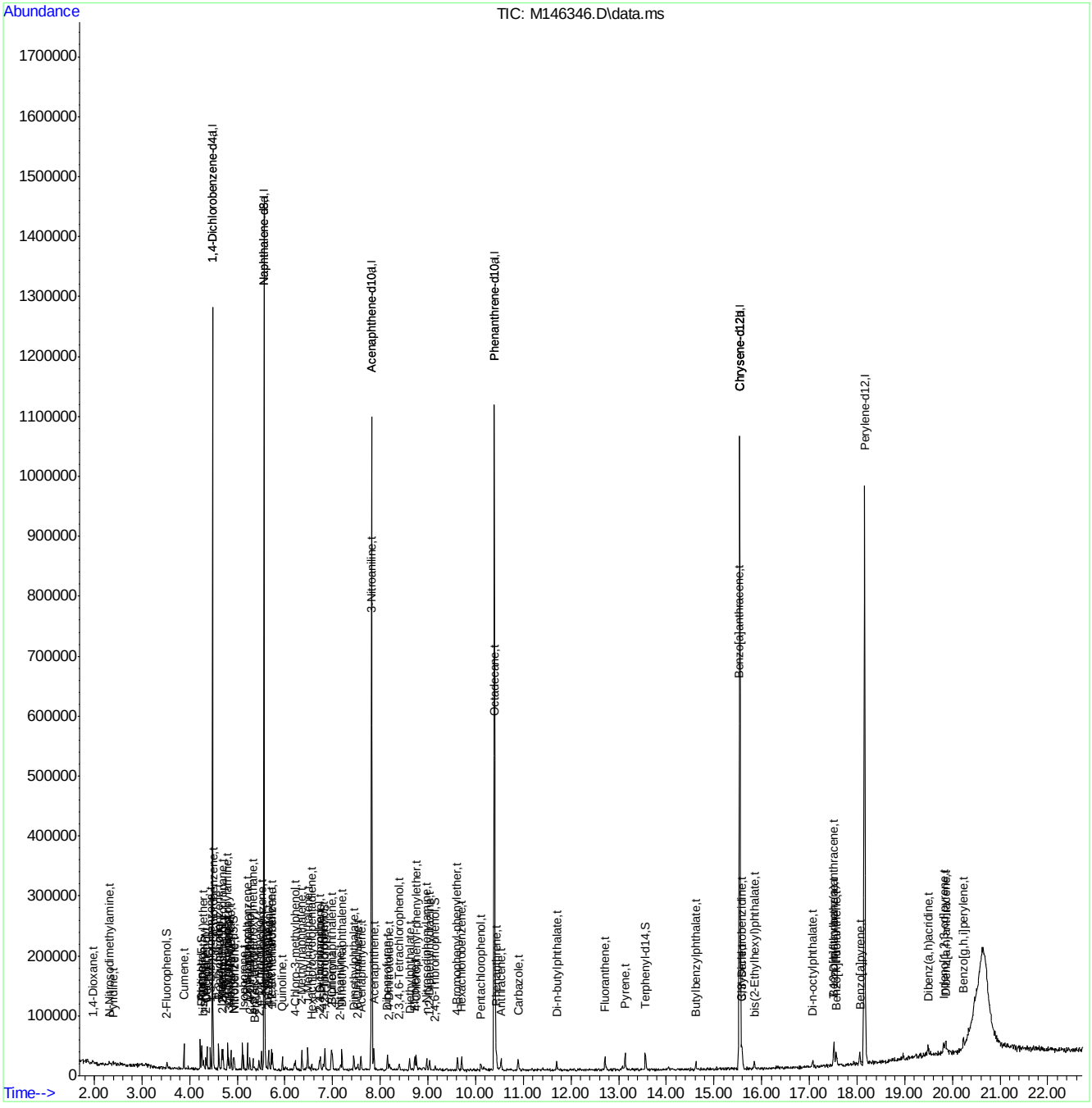
9.6.58

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146346.D
Acq On : 24 May 2018 1:27 pm
Operator : seanb1
Sample : ic6221-1
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 19:44:19 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:36:18 2018
Response via : Initial Calibration



MM6221.M Thu May 24 19:44:26 2018 MSM

Manual Integration Approval Summary

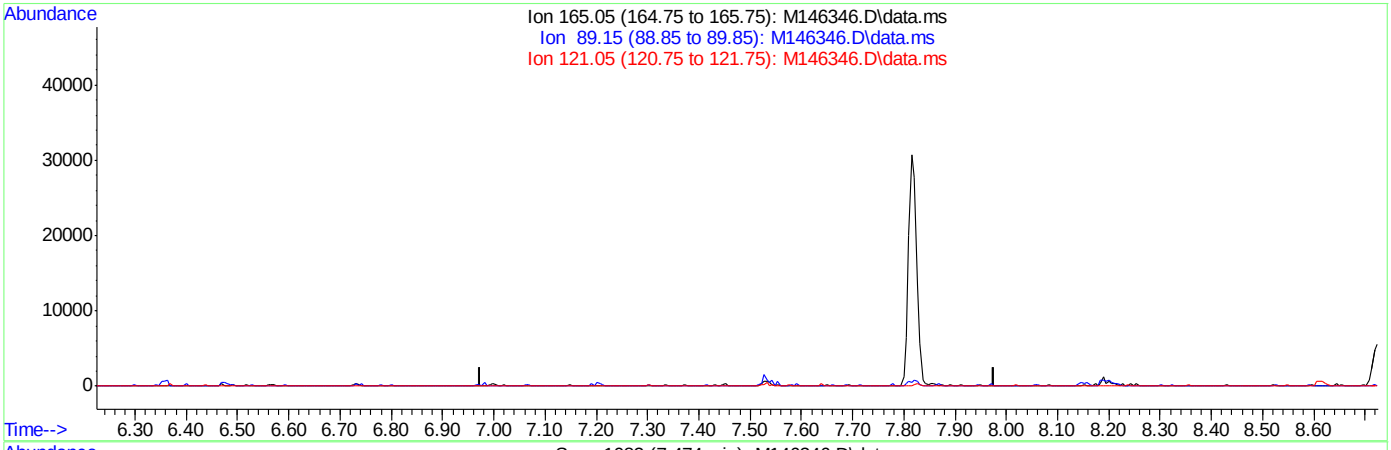
Sample Number:	EM6221-IC6221	**Method:**	SW846 8270D
Lab FileID:	M146346.D	**Analyst approved:**	05/25/18 13:03 Sean Block
Injection Time:	05/24/18 13:27	**Supervisor approved:**	05/25/18 18:23 Nina Pandya

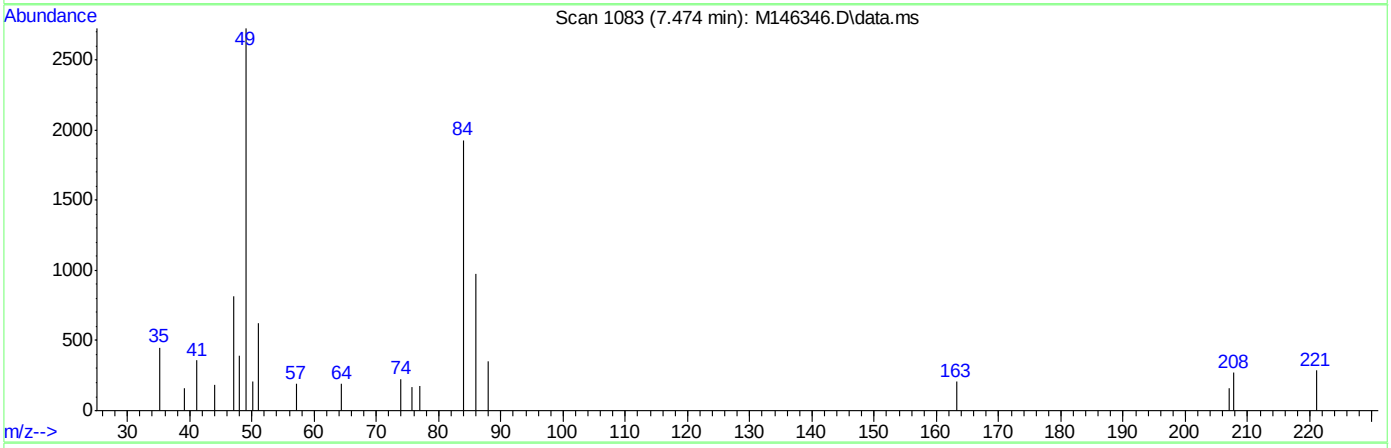
Parameter	CAS	Sig#	R.T. (min.)	Reason
n-Nitrosodimethylamine	62-75-9		2.31	Split peak
Pyridine	110-86-1		2.39	Split peak
2,6-Dinitrotoluene	606-20-2		7.53	Split peak
Indeno(1,2,3-cd)pyrene	193-39-5		19.82	Split peak

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146346.D
Acq On    : 24 May 2018   1:27 pm
Operator  : seanb1
Sample    : ic6221-1
Misc      : op10492,em6221,1000,,,1,1
ALS Vial  : 4   Sample Multiplier: 1

Quant Time: May 24 19:36:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title  : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:36:18 2018
Response via : Initial Calibration
```





TIC: M146346.D\data.ms

(57) 2,6-Dinitrotoluene (t)

7.476min (-7.476) 0.00ppm

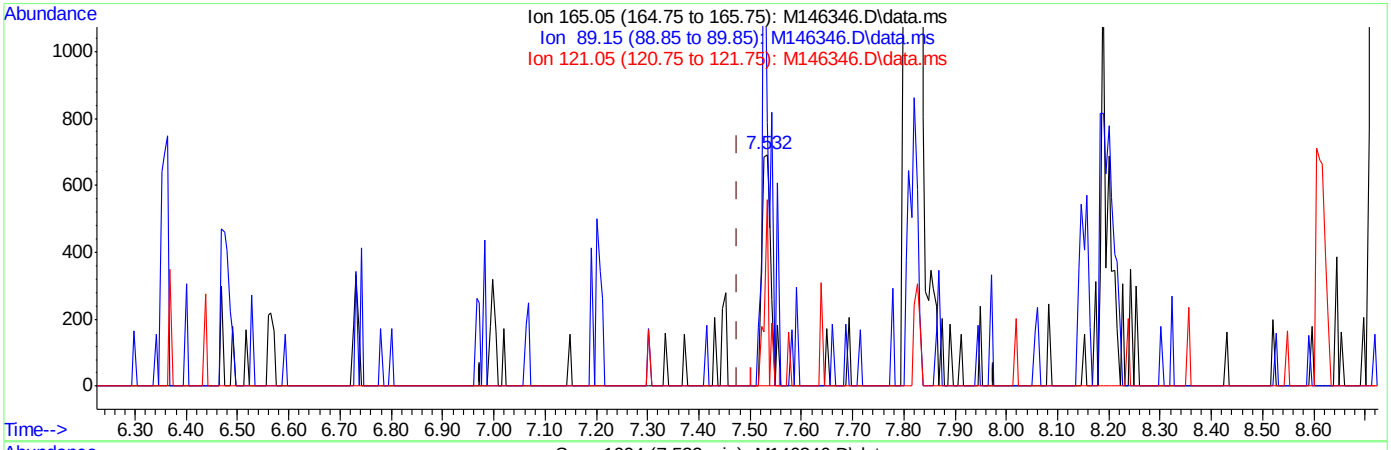
response 0

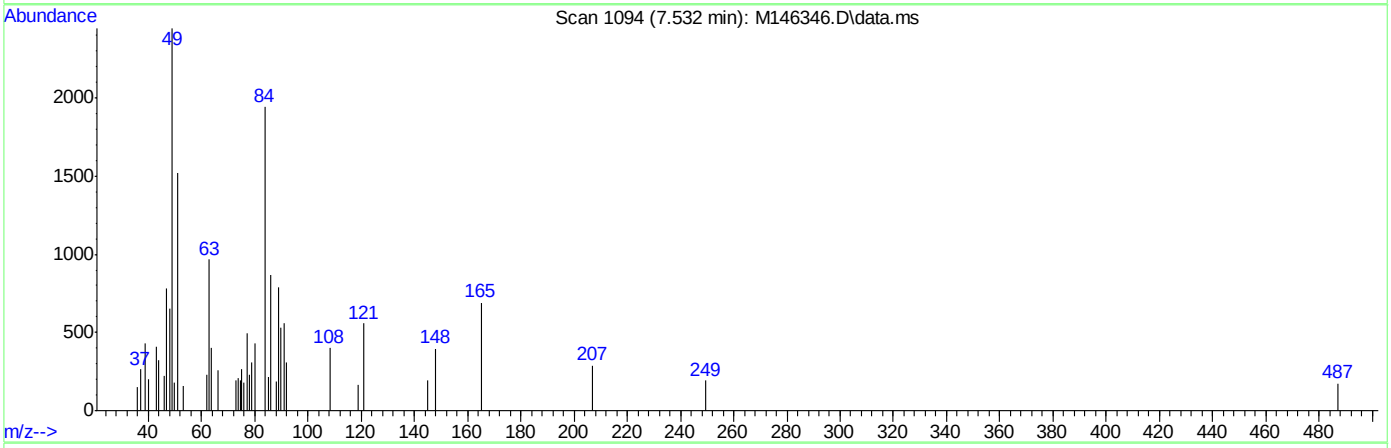
Ion	Exp%	Act%
165.05	100	0.00
89.15	53.60	0.00#
121.05	18.60	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146346.D
Acq On : 24 May 2018 1:27 pm
Operator : seanb1
Sample : ic6221-1
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 19:36:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:36:18 2018
Response via : Initial Calibration





TIC: M146346.D\data.ms

(57) 2,6-Dinitrotoluene (t)

7.532min (+0.057) 0.50ppm m

response 879

Ion	Exp%	Act%
165.05	100	100
89.15	53.60	113.87#
121.05	18.60	80.64#
0.00	0.00	0.00

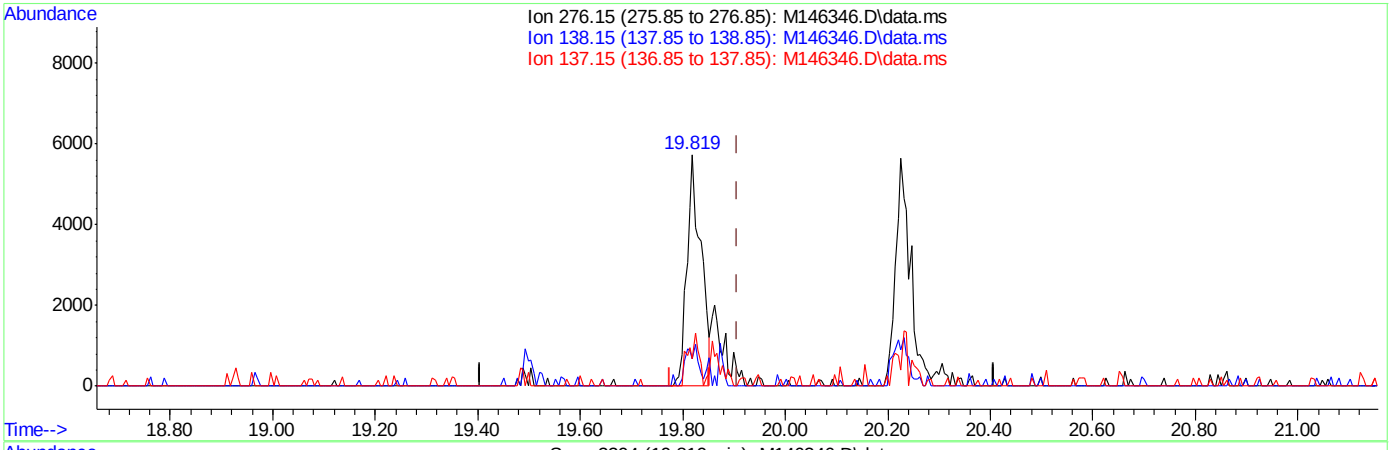
9.6.58.3

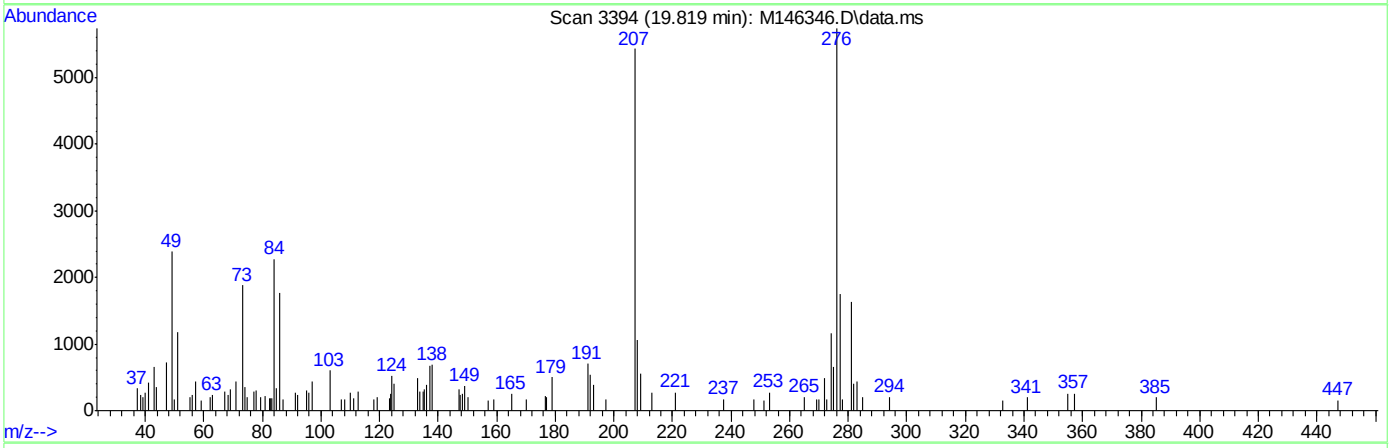
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146346.D
Acq On : 24 May 2018 1:27 pm
Operator : seanb1
Sample : ic6221-1
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 19:36:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:36:18 2018
Response via : Initial Calibration





(96) Indeno[1,2,3-cd]pyrene (t)

19.819min (-0.088) 0.84ppm

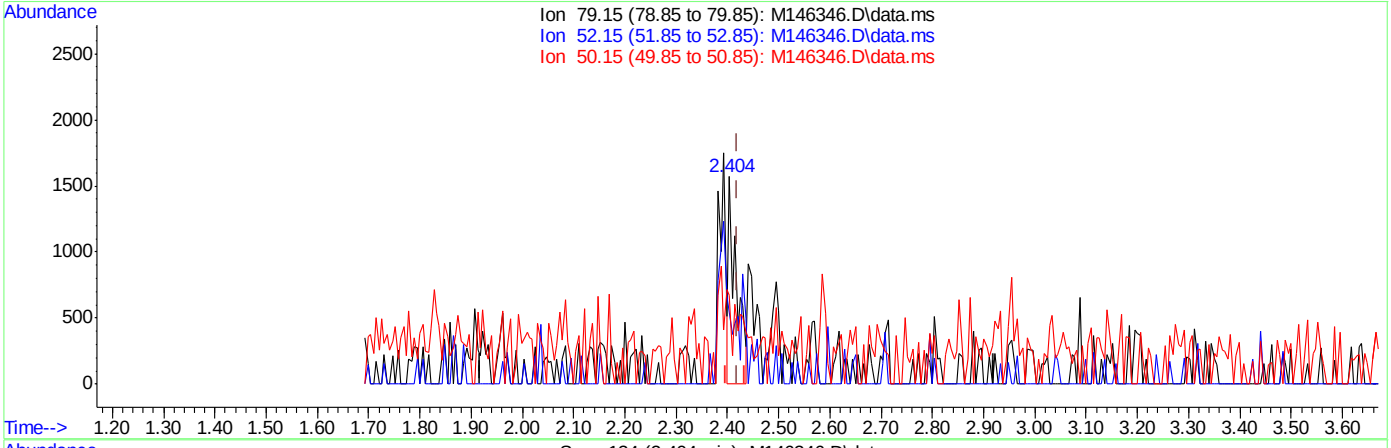
response 10969

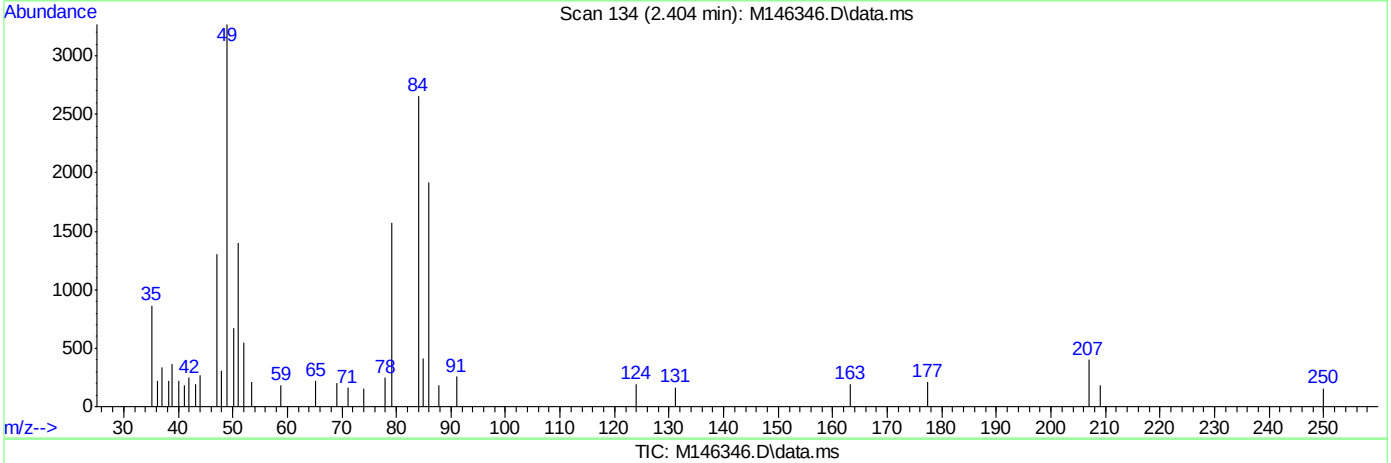
Ion	Exp%	Act%
276.15	100	100
138.15	22.40	6.55
137.15	15.70	10.26
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146346.D
Acq On : 24 May 2018 1:27 pm
Operator : seanb1
Sample : ic6221-1
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 19:36:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:36:18 2018
Response via : Initial Calibration





TIC: M146346.D\data.ms

(3) Pyridine (t)

2.404min (-0.016) 0.30ppm

response 1701

Ion	Exp%	Act%
79.15	100	100
52.15	52.00	0.00#
50.15	21.00	10.32
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146346.D
Acq On    : 24 May 2018   1:27 pm
Operator  : seanb1
Sample    : ic6221-1
Misc      : op10492,em6221,1000,,,1,1
ALS Vial  : 4   Sample Multiplier: 1

Quant Time: May 24 19:36:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title  : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:36:18 2018
Response via : Initial Calibration
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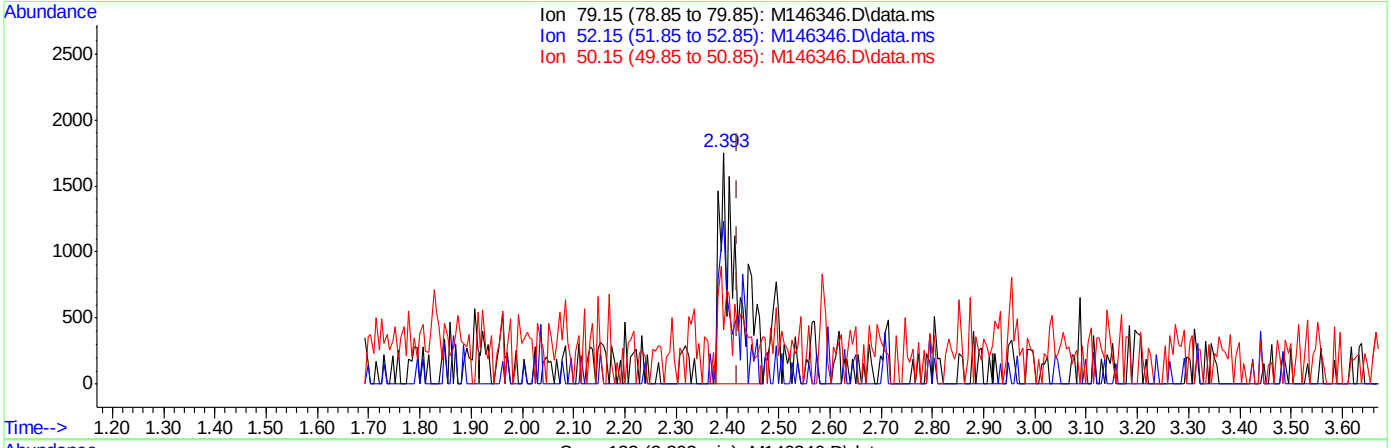

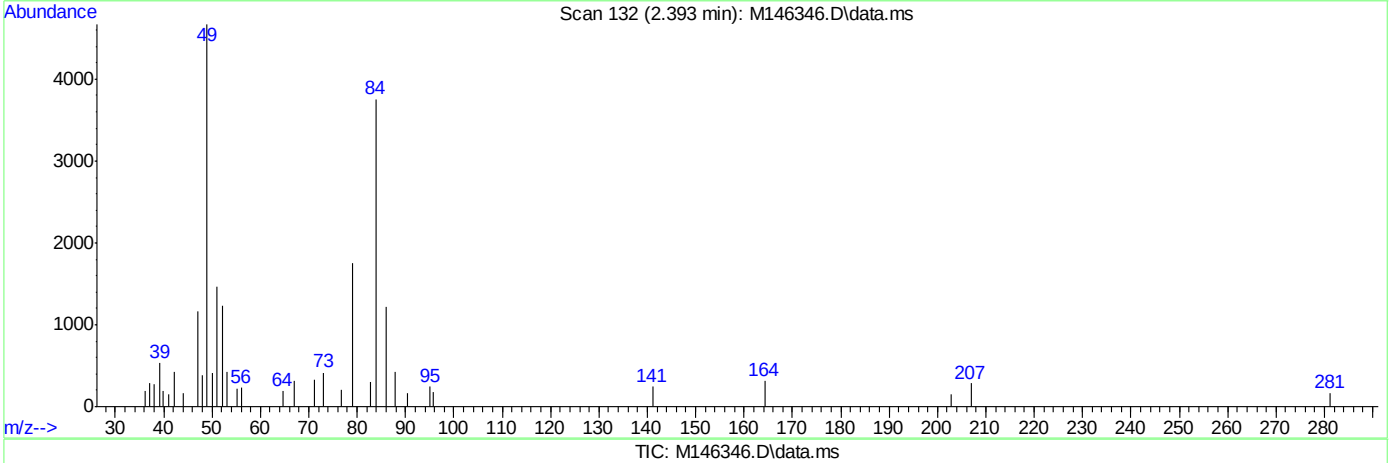

TIC: M146346.D\data.ms

(3) Pyridine (t)

2.393min (-0.027) 0.75ppm m

response 4248

Ion	Exp%	Act%
79.15	100	100
52.15	52.00	70.45
50.15	21.00	23.27
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146346.D
Acq On    : 24 May 2018   1:27 pm
Operator  : seanb1
Sample    : ic6221-1
Misc      : op10492,em6221,1000,,,1,1
ALS Vial  : 4   Sample Multiplier: 1

Quant Time: May 24 19:36:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title  : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:36:18 2018
Response via : Initial Calibration
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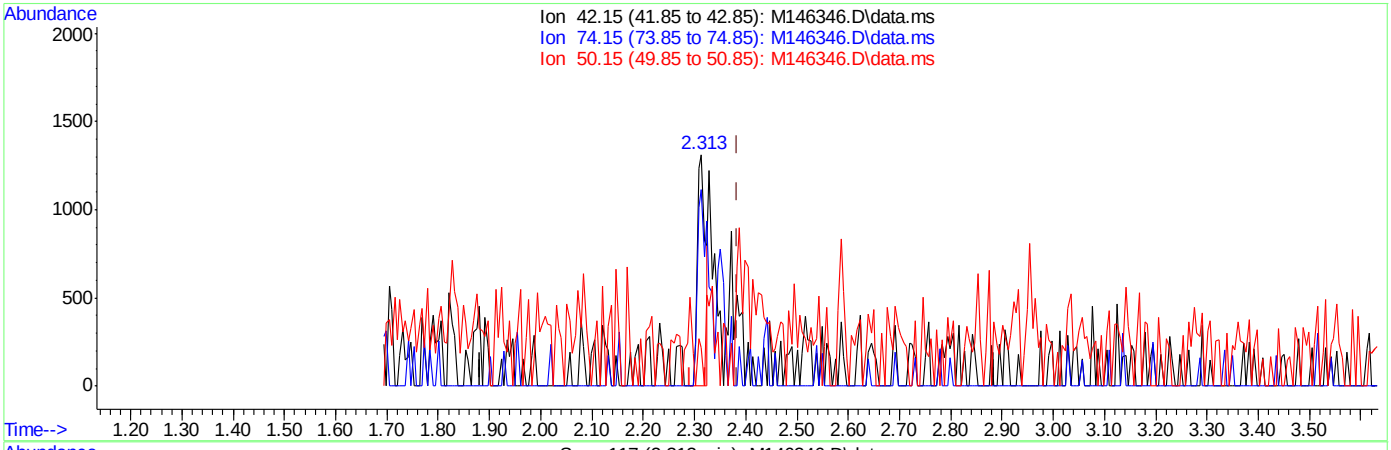
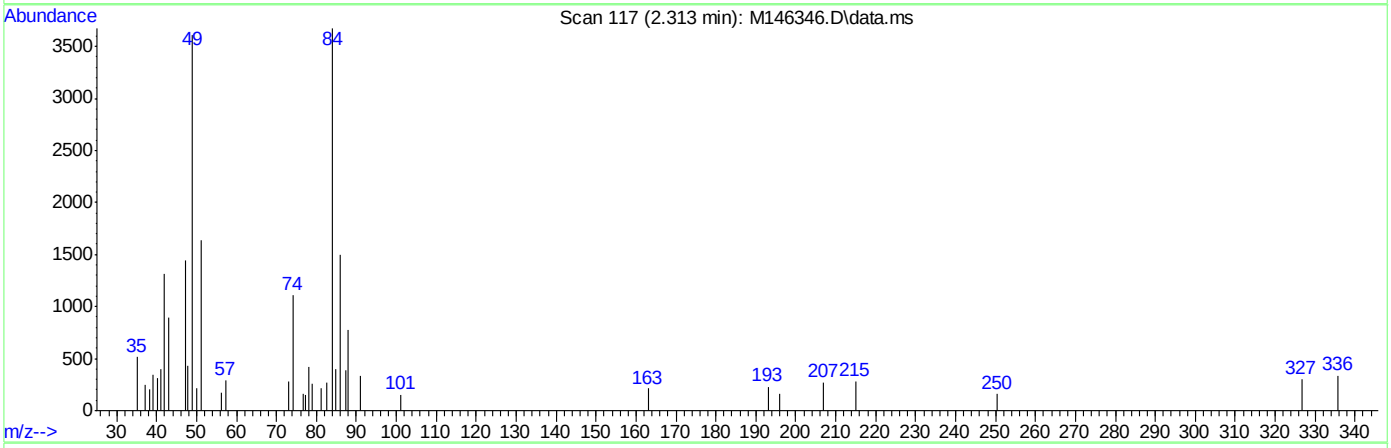




TIC: M146346.D\data.ms

(4) N-Nitrosodimethylamine (t)

2.313min (-0.071) 0.77ppm

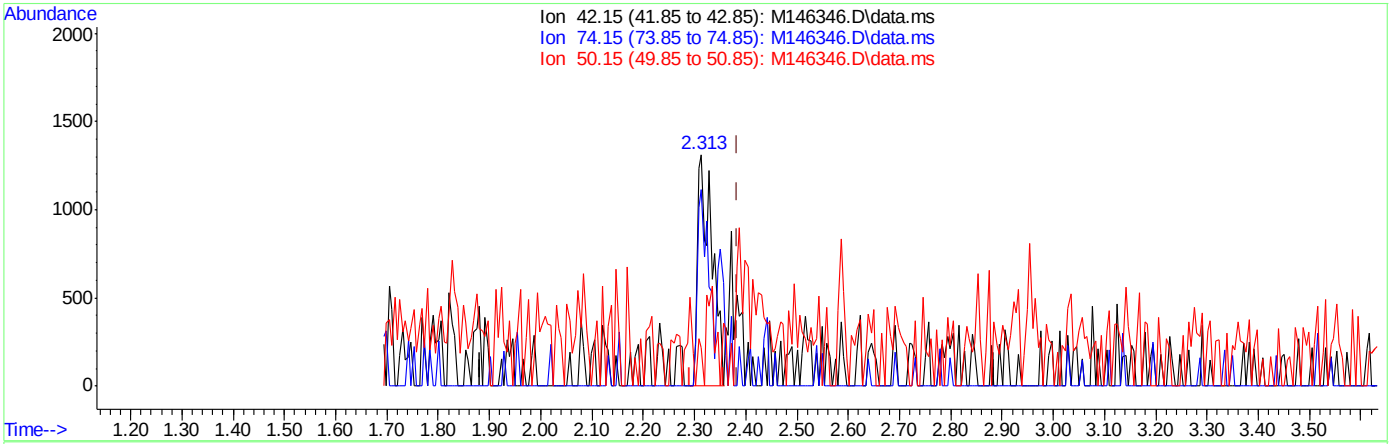
response 1415

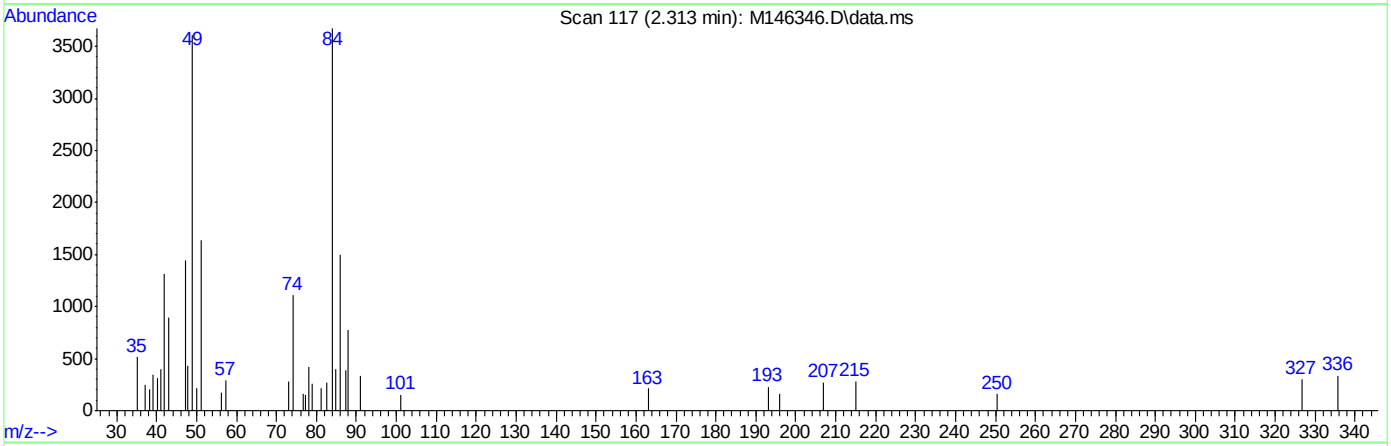
Ion	Exp%	Act%
42.15	100	100
74.15	172.70	70.31#
50.15	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146346.D
Acq On : 24 May 2018 1:27 pm
Operator : seanb1
Sample : ic6221-1
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 19:36:21 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:36:18 2018
Response via : Initial Calibration





TIC: M146346.D\data.ms

(4) N-Nitrosodimethylamine (t)

2.313min (-0.071) 1.36ppm m

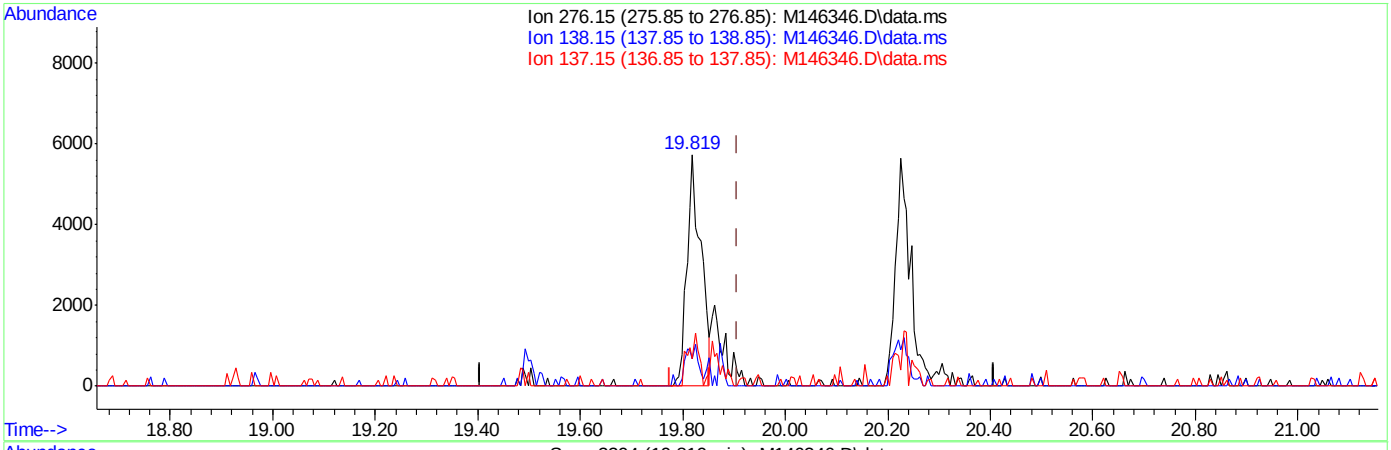
response 2505

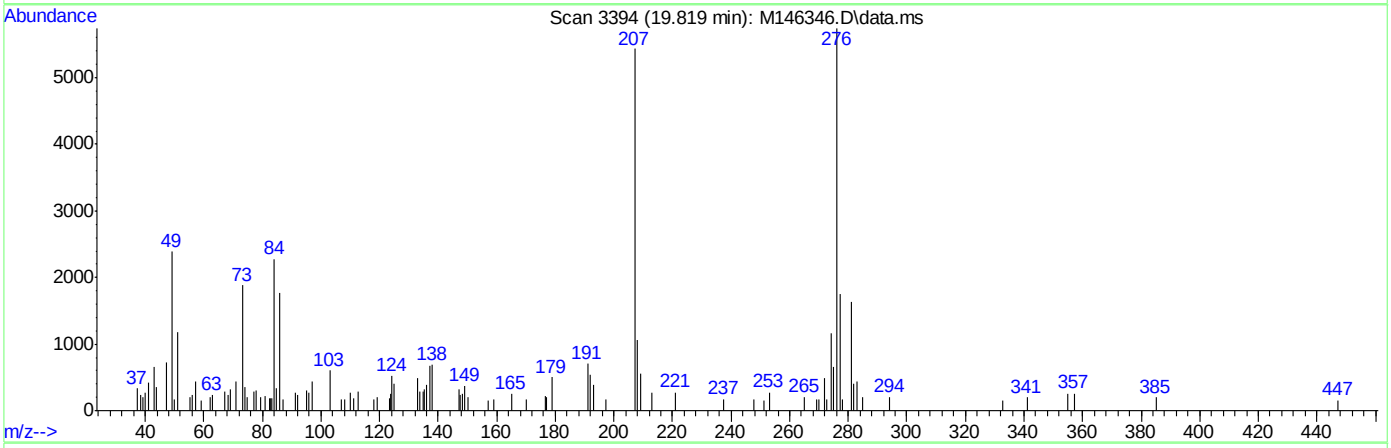
Ion	Exp%	Act%
42.15	100	100
74.15	172.70	84.62#
50.15	0.00	16.76
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146346.D
Acq On : 24 May 2018 1:27 pm
Operator : seanb1
Sample : ic6221-1
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 19:37:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:36:18 2018
Response via : Initial Calibration





(96) Indeno[1,2,3-cd]pyrene (t)

19.819min (-0.088) 0.84ppm m

response 10969

Ion	Exp%	Act%
276.15	100	100
138.15	22.40	11.89
137.15	15.70	11.72
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146347.D
Acq On : 24 May 2018 1:57 pm
Operator : seanb1
Sample : ic6221-100
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 19:41:50 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:41:15 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.484	152	98597	40.00	ppm	0.00
24) Naphthalene-d8	5.564	136	392610	40.00	ppm	0.00
47) Acenaphthene-d10	7.823	164	236613	40.00	ppm	0.00
69) Phenanthrene-d10	10.404	188	512797	40.00	ppm	0.00
83) Chrysene-d12	15.559	240	504850	40.00	ppm	0.00
91) Perylene-d12	18.166	264	517723	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.484	152	98597	40.00	ppm	0.00
103) Acenaphthene-d10a	7.823	164	236613	40.00	ppm	0.00
106) Chrysene-d12a	15.559	240	504850	40.00	ppm	0.00
109) Phenanthrene-d10a	10.404	188	512797	40.00	ppm	0.00
112) Naphthalene-d8a	5.564	136	392610	40.00	ppm	0.00
114) Chrysene-d12b	15.559	240	504850	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.512	112	406978	110.34	ppm	0.00
Spiked Amount 50.000			Recovery	=	220.68%	
8) Phenol-d5	4.244	99	519206	118.26	ppm	0.00
Spiked Amount 50.000			Recovery	=	236.52%	
25) Nitrobenzene-d5	4.923	82	496050	129.38	ppm	0.00
Spiked Amount 50.000			Recovery	=	258.76%	
51) 2-Fluorobiphenyl	6.846	172	797302	86.77	ppm	0.00
Spiked Amount 50.000			Recovery	=	173.54%	
73) 2,4,6-Tribromophenol	9.164	330	157234	109.32	ppm	0.00
Spiked Amount 50.000			Recovery	=	218.64%	
85) Terphenyl-d14	13.571	244	1147485	95.33	ppm	0.00
Spiked Amount 50.000			Recovery	=	190.66%	
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.958	88	169739	96.71	ppm	100
3) Pyridine	2.305	79	454762	104.26	ppm	100
4) N-Nitrosodimethylamine	2.273	42	278747	196.64	ppm	100
6) Indene	4.677	116	586863	117.92	ppm	100
7) Cumene	3.881	105	1058423	124.27	ppm	100
9) Phenol	4.255	94	552633	113.74	ppm	100
10) Aniline	4.244	93	571798	112.46	ppm	99
11) bis(2-Chloroethyl)ether	4.292	93	323300	102.38	ppm	100
12) 2-Chlorophenol	4.335	128	354408	101.69	ppm	100
13) Decane	4.367	43	310616	136.97	ppm	100
14) 1,3-Dichlorobenzene	4.442	146	384568	93.71	ppm	100
15) 1,4-Dichlorobenzene	4.495	146	376477	97.49	ppm	100
16) Benzyl alcohol	4.602	108	243091	113.78	ppm	100
17) 1,2-Dichlorobenzene	4.607	146	364456	101.14	ppm	100
18) Acetophenone	4.800	105	558110	136.39	ppm	100
19) 2-Methylphenol	4.698	108	320015	112.18	ppm	100
20) 2,2'-oxybis(1-Chloropr...	4.693	121	93449	104.47	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146347.D
Acq On : 24 May 2018 1:57 pm
Operator : seanb1
Sample : ic6221-100
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 19:41:50 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:41:15 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
21) 3&4-Methylphenol	4.821	108	337188	118.42 ppm	96
22) n-Nitroso-di-n-propyla...	4.805	70	315745	157.27 ppm	100
23) Hexachloroethane	4.874	201	145620	112.80 ppm	100
26) Nitrobenzene	4.939	77	476201	133.99 ppm	100
27) Quinoline	5.970	129	754246	103.78 ppm	100
28) Isophorone	5.147	82	849203	128.20 ppm	100
29) 2-Nitrophenol	5.211	139	207627	114.42 ppm	100
30) 2,4-Dimethylphenol	5.264	107	415177	132.79 ppm	99
31) Benzoic acid	5.435	105	340665	123.10 ppm	98
32) bis(2-Chloroethoxy)met...	5.334	93	397625	107.78 ppm	100
33) 2,4-Dichlorophenol	5.446	162	283448	101.16 ppm	100
34) 2,6-Dichlorophenol	5.665	162	276588	100.07 ppm	99
35) 1,3,5-Trichlorobenzene	5.222	180	347375	95.57 ppm	100
36) 1,2,4-Trichlorobenzene	5.516	180	338852	91.94 ppm	100
37) 1,2,3-Trichlorobenzene	5.740	180	317171	96.36 ppm	100
38) Naphthalene	5.590	128	1015147	98.46 ppm	100
39) 4-Chloroaniline	5.654	127	431138	97.99 ppm	100
40) 2,3-Dichloroaniline	6.728	161	390545	101.31 ppm	100
41) Caprolactam	6.071	55	164036	138.14 ppm	99
42) Hexachlorobutadiene	5.719	225	211314	115.19 ppm	100
43) 4-Chloro-3-methylphenol	6.226	107	410419	132.77 ppm	100
44) 2-Methylnaphthalene	6.360	141	639216	103.28 ppm	100
45) 1-Methylnaphthalene	6.482	142	754228	101.03 ppm	100
46) Dimethylnaphthalene	7.209	156	664974	101.37 ppm	100
48) Hexachlorocyclopentadiene	6.568	237	453270	255.19 ppm	100
49) 2,4,6-Trichlorophenol	6.750	196	225388	103.39 ppm	100
50) 2,4,5-Trichlorophenol	6.808	196	246790	102.36 ppm	100
52) 2-Chloronaphthalene	7.001	162	644892	87.10 ppm	100
53) Biphenyl	6.985	154	956090	100.08 ppm	100
54) 2-Nitroaniline	7.177	65	317421	191.67 ppm	100
55) Dimethylphthalate	7.460	163	864264	102.37 ppm	100
56) Acenaphthylene	7.604	152	1109802	96.11 ppm	100
57) 2,6-Dinitrotoluene	7.546	165	185409	118.53 ppm	99
58) 3-Nitroaniline	7.807	138	229188	117.70 ppm	100
59) Acenaphthene	7.877	153	724474	99.75 ppm	100
60) 2,4-Dinitrophenol	7.994	184	257616	229.74 ppm	100
61) 4-Nitrophenol	8.176	109	171174	141.43 ppm	100
62) Dibenzofuran	8.160	168	1047340	98.67 ppm	100
63) 2,4-Dinitrotoluene	8.203	165	243747	121.51 ppm	99
64) 2,3,4,6-Tetrachlorophenol	8.400	232	242288	127.68 ppm	100
65) Diethylphthalate	8.635	149	910845	110.55 ppm	100
66) Fluorene	8.737	166	834656	98.31 ppm	100
67) 4-Chlorophenyl-phenyle...	8.769	204	392841	98.31 ppm	100
68) 4-Nitroaniline	8.844	138	216478	116.55 ppm	100
70) 4,6-Dinitro-2-methylph...	8.908	198	176496	99.45 ppm	100
71) n-Nitrosodiphenylamine	8.993	169	612982	89.88 ppm	100
72) 1,2-Diphenylhydrazine	9.047	77	1050195	114.51 ppm	100
74) 4-Bromophenyl-phenylether	9.629	248	291534	102.54 ppm	100
75) Hexachlorobenzene	9.720	284	313641	87.74 ppm	100
76) Pentachlorophenol	10.115	266	426094	221.51 ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146347.D
Acq On : 24 May 2018 1:57 pm
Operator : seanb1
Sample : ic6221-100
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 19:41:50 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:41:15 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
77)	Phenanthrene	10.452	178	1207216	86.03	ppm	100
78)	Anthracene	10.548	178	1272487	90.77	ppm	100
79)	Carbazole	10.900	167	1236574	86.56	ppm	100
80)	Di-n-butylphthalate	11.707	149	1651454	107.91	ppm	100
81)	Fluoranthene	12.727	202	1565994	100.08	ppm	100
82)	Octadecane	10.420	57	521557	129.57	ppm	100
84)	Pyrene	13.149	202	1552150	86.72	ppm	100
86)	Butylbenzylphthalate	14.635	149	753463	101.31	ppm	100
87)	Benzo[a]anthracene	15.537	228	1504678	101.85	ppm	100
88)	3,3'-Dichlorobenzidine	15.580	252	535780	92.10	ppm	100
89)	Chrysene	15.612	228	1318367	92.52	ppm	100
90)	bis(2-Ethylhexyl)phtha...	15.858	149	971633	89.52	ppm	100
92)	Di-n-octylphthalate	17.081	149	1715107	96.65	ppm	100
93)	Benzo[b]fluoranthene	17.551	252	1606689	107.98	ppm	99
94)	Benzo[k]fluoranthene	17.599	252	1346235	95.72	ppm	100
95)	Benzo[a]pyrene	18.080	252	1401925	110.58	ppm	100
96)	Indeno[1,2,3-cd]pyrene	19.848	276	1238206	102.28	ppm	96
97)	Dibenz(a,h)acridine	19.512	279	1207723	103.93	ppm	88
98)	Dibenz[a,h]anthracene	19.891	278	1212886	93.83	ppm	100
99)	7,12-Dimethylbenz(a)an...	17.551	256	724857	122.84	ppm	100
100)	Benzo[g,h,i]perylene	20.265	276	1162203	91.65	ppm	100

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

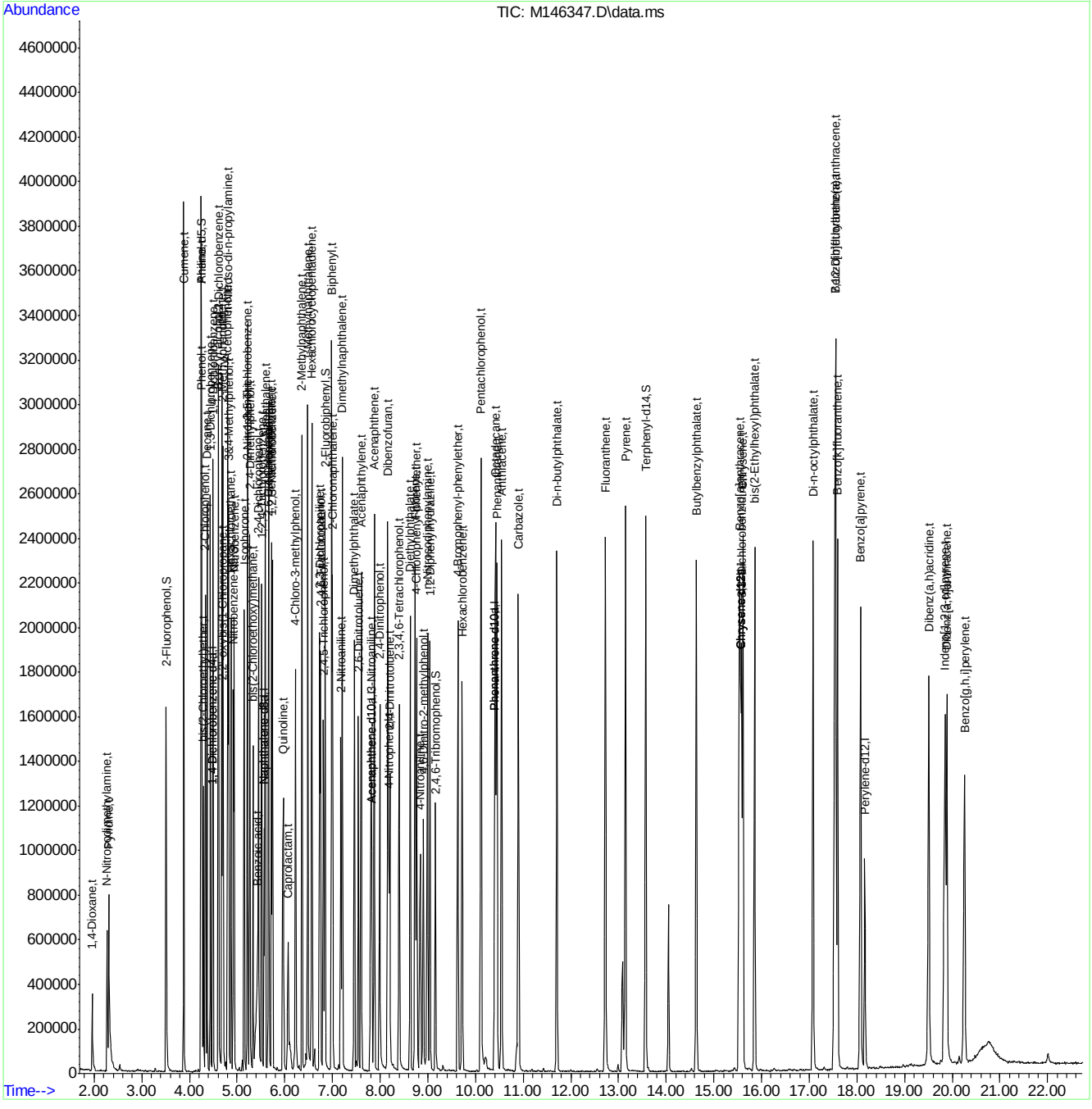
9.6.59

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146347.D
Acq On : 24 May 2018 1:57 pm
Operator : seanb1
Sample : ic6221-100
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 19:41:50 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:41:15 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146348.D
Acq On : 24 May 2018 2:26 pm
Operator : seanb1
Sample : ic6221-80
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 19:42:34 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:41:15 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.482	152	103451	40.00	ppm	0.00
24) Naphthalene-d8	5.566	136	407393	40.00	ppm	0.00
47) Acenaphthene-d10	7.821	164	234504	40.00	ppm	0.00
69) Phenanthrene-d10	10.401	188	495469	40.00	ppm	0.00
83) Chrysene-d12	15.556	240	488054	40.00	ppm	0.00
91) Perylene-d12	18.163	264	505897	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.482	152	103451	40.00	ppm	0.00
103) Acenaphthene-d10a	7.821	164	234504	40.00	ppm	0.00
106) Chrysene-d12a	15.556	240	488054	40.00	ppm	0.00
109) Phenanthrene-d10a	10.401	188	495469	40.00	ppm	0.00
112) Naphthalene-d8a	5.566	136	407393	40.00	ppm	0.00
114) Chrysene-d12b	15.556	240	488054	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.509	112	334922	86.54	ppm	0.00
Spiked Amount 50.000			Recovery	=	173.08%	
8) Phenol-d5	4.247	99	426258	92.54	ppm	0.00
Spiked Amount 50.000			Recovery	=	185.08%	
25) Nitrobenzene-d5	4.920	82	404726	101.73	ppm	0.00
Spiked Amount 50.000			Recovery	=	203.46%	
51) 2-Fluorobiphenyl	6.848	172	645279	70.86	ppm	0.00
Spiked Amount 50.000			Recovery	=	141.72%	
73) 2,4,6-Tribromophenol	9.161	330	125108	90.02	ppm	0.00
Spiked Amount 50.000			Recovery	=	180.04%	
85) Terphenyl-d14	13.569	244	917560	78.85	ppm	0.00
Spiked Amount 50.000			Recovery	=	157.70%	
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.960	88	150616	81.79	ppm	96
3) Pyridine	2.307	79	383076	83.70	ppm	97
4) N-Nitrosodimethylamine	2.275	42	225498	151.61	ppm	97
6) Indene	4.679	116	484643	92.81	ppm	98
7) Cumene	3.883	105	859979	96.23	ppm	99
9) Phenol	4.257	94	451309	88.53	ppm	92
10) Aniline	4.241	93	465967	87.35	ppm	97
11) bis(2-Chloroethyl)ether	4.289	93	275501	83.15	ppm	99
12) 2-Chlorophenol	4.337	128	291407	79.69	ppm	92
13) Decane	4.370	43	248495	104.44	ppm	98
14) 1,3-Dichlorobenzene	4.439	146	315134	73.19	ppm	97
15) 1,4-Dichlorobenzene	4.492	146	306211	75.57	ppm	99
16) Benzyl alcohol	4.599	108	198159	88.40	ppm	98
17) 1,2-Dichlorobenzene	4.610	146	289897	76.68	ppm	97
18) Acetophenone	4.797	105	460618	107.28	ppm	97
19) 2-Methylphenol	4.701	108	259851	86.81	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.695	121	75920	80.89	ppm	91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146348.D
Acq On : 24 May 2018 2:26 pm
Operator : seanb1
Sample : ic6221-80
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 19:42:34 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:41:15 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
21) 3&4-Methylphenol	4.818	108	279922	93.69	ppm	#	85
22) n-Nitroso-di-n-propyla...	4.802	70	260210	123.53	ppm		95
23) Hexachloroethane	4.872	201	117963	87.09	ppm		89
26) Nitrobenzene	4.936	77	389315	105.57	ppm		99
27) Quinoline	5.961	129	625962	83.00	ppm		99
28) Isophorone	5.144	82	692259	100.71	ppm		99
29) 2-Nitrophenol	5.214	139	175666	93.29	ppm		82
30) 2,4-Dimethylphenol	5.262	107	329955	101.71	ppm		99
31) Benzoic acid	5.422	105	284322	103.33	ppm		96
32) bis(2-Chloroethoxy)met...	5.336	93	320308	83.68	ppm		98
33) 2,4-Dichlorophenol	5.443	162	235309	80.93	ppm		99
34) 2,6-Dichlorophenol	5.662	162	223683	77.99	ppm		97
35) 1,3,5-Trichlorobenzene	5.219	180	282010	74.77	ppm		99
36) 1,2,4-Trichlorobenzene	5.513	180	270449	70.72	ppm		96
37) 1,2,3-Trichlorobenzene	5.737	180	252617	73.96	ppm		98
38) Naphthalene	5.588	128	829936	77.57	ppm		100
39) 4-Chloroaniline	5.652	127	354931	77.74	ppm		98
40) 2,3-Dichloroaniline	6.731	161	310648	77.66	ppm		97
41) Caprolactam	6.063	55	130526	105.93	ppm		97
42) Hexachlorobutadiene	5.721	225	171990	90.35	ppm		99
43) 4-Chloro-3-methylphenol	6.223	107	330798	103.13	ppm		98
44) 2-Methylnaphthalene	6.362	141	517057	80.51	ppm		98
45) 1-Methylnaphthalene	6.480	142	615187	79.42	ppm		99
46) Dimethylnaphthalene	7.206	156	534449	78.51	ppm		100
48) Hexachlorocyclopentadiene	6.565	237	353373	200.74	ppm		98
49) 2,4,6-Trichlorophenol	6.747	196	180053	83.34	ppm		100
50) 2,4,5-Trichlorophenol	6.806	196	201547	84.34	ppm		97
52) 2-Chloronaphthalene	7.003	162	525709	71.64	ppm		98
53) Biphenyl	6.982	154	770316	81.36	ppm		97
54) 2-Nitroaniline	7.169	65	241599	147.20	ppm		96
55) Dimethylphthalate	7.457	163	697718	83.38	ppm		99
56) Acenaphthylene	7.602	152	899840	78.63	ppm		99
57) 2,6-Dinitrotoluene	7.543	165	149660	96.54	ppm		97
58) 3-Nitroaniline	7.805	138	184541	95.62	ppm		96
59) Acenaphthene	7.874	153	579972	80.57	ppm		99
60) 2,4-Dinitrophenol	7.992	184	198746	189.15	ppm		96
61) 4-Nitrophenol	8.168	109	137944	116.94	ppm	#	45
62) Dibenzofuran	8.157	168	846193	80.43	ppm		97
63) 2,4-Dinitrotoluene	8.200	165	200500	96.77	ppm		96
64) 2,3,4,6-Tetrachlorophenol	8.398	232	194103	103.21	ppm		97
65) Diethylphthalate	8.633	149	732944	89.76	ppm		99
66) Fluorene	8.734	166	676215	80.37	ppm		97
67) 4-Chlorophenyl-phenyle...	8.766	204	312400	78.88	ppm		99
68) 4-Nitroaniline	8.836	138	174063	94.56	ppm		95
70) 4,6-Dinitro-2-methylph...	8.905	198	140463	83.74	ppm		98
71) n-Nitrosodiphenylamine	8.990	169	493502	74.89	ppm		97
72) 1,2-Diphenylhydrazine	9.044	77	840230	94.82	ppm		99
74) 4-Bromophenyl-phenylether	9.626	248	232453	84.62	ppm		95
75) Hexachlorobenzene	9.717	284	242446	70.19	ppm		93
76) Pentachlorophenol	10.112	266	321759	173.12	ppm		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146348.D
Acq On : 24 May 2018 2:26 pm
Operator : seanb1
Sample : ic6221-80
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 19:42:34 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:41:15 2018
Response via : Initial Calibration

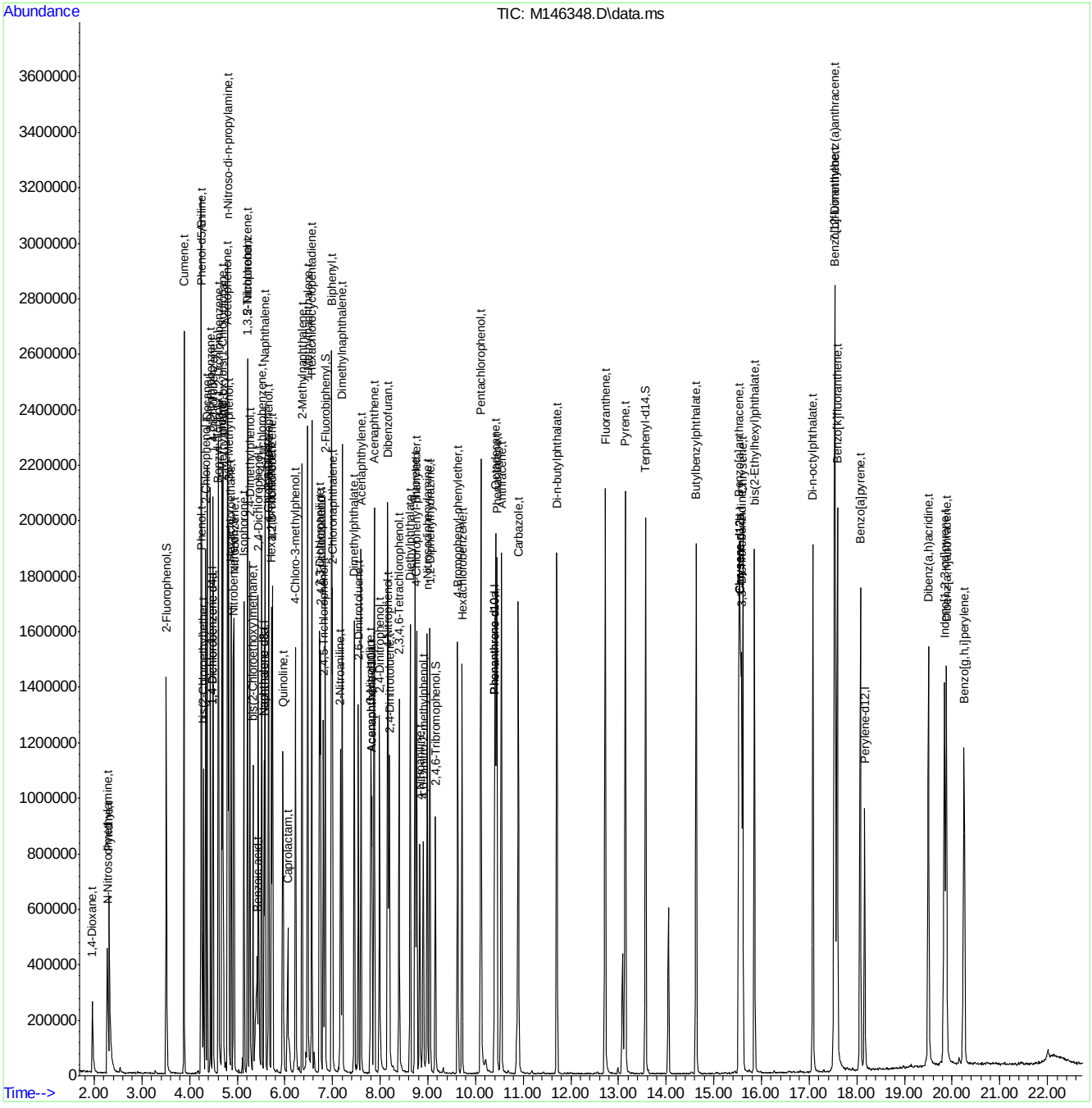
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
77)	Phenanthrene	10.449	178	972396	71.72	ppm	99
78)	Anthracene	10.545	178	1021344	75.40	ppm	99
79)	Carbazole	10.898	167	980868	71.06	ppm	100
80)	Di-n-butylphthalate	11.704	149	1322251	89.42	ppm	100
81)	Fluoranthene	12.725	202	1254231	82.96	ppm	99
82)	Octadecane	10.422	57	408334	104.99	ppm	97
84)	Pyrene	13.147	202	1227501	70.95	ppm	99
86)	Butylbenzylphthalate	14.632	149	604351	84.05	ppm	100
87)	Benzo[a]anthracene	15.535	228	1208994	84.65	ppm	99
88)	3,3'-Dichlorobenzidine	15.577	252	424769	76.54	ppm	99
89)	Chrysene	15.609	228	1033671	75.04	ppm	98
90)	bis(2-Ethylhexyl)phtha...	15.855	149	770170	74.36	ppm	98
92)	Di-n-octylphthalate	17.078	149	1384333	80.09	ppm	99
93)	Benzo[b]fluoranthene	17.538	252	1251072	86.04	ppm	100
94)	Benzo[k]fluoranthene	17.591	252	1073266	78.09	ppm	99
95)	Benzo[a]pyrene	18.077	252	1117451	90.20	ppm	99
96)	Indeno[1,2,3-cd]pyrene	19.840	276	1016311	85.91	ppm	96
97)	Dibenz(a,h)acridine	19.504	279	965570	85.03	ppm	84
98)	Dibenz[a,h]anthracene	19.883	278	978211	77.44	ppm	98
99)	7,12-Dimethylbenz(a)an...	17.543	256	561708	97.41	ppm	94
100)	Benzo[g,h,i]perylene	20.252	276	945987	76.34	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146348.D
Acq On : 24 May 2018 2:26 pm
Operator : seanb1
Sample : ic6221-80
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 19:42:34 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:41:15 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146349.D
Acq On : 24 May 2018 2:56 pm
Operator : seanb1
Sample : ic6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 19:45:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:41:15 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.481	152	106946	40.00	ppm	0.00
24) Naphthalene-d8	5.566	136	408825	40.00	ppm	0.00
47) Acenaphthene-d10	7.820	164	233793	40.00	ppm	0.00
69) Phenanthrene-d10	10.400	188	488803	40.00	ppm	0.00
83) Chrysene-d12	15.550	240	499584	40.00	ppm	0.00
91) Perylene-d12	18.162	264	511816	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.481	152	106946	40.00	ppm	0.00
103) Acenaphthene-d10a	7.820	164	233793	40.00	ppm	0.00
106) Chrysene-d12a	15.550	240	499584	40.00	ppm	0.00
109) Phenanthrene-d10a	10.400	188	488803	40.00	ppm	0.00
112) Naphthalene-d8a	5.566	136	408825	40.00	ppm	0.00
114) Chrysene-d12b	15.550	240	499584	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.509	112	215719	53.92	ppm	0.00
Spiked Amount 50.000			Recovery	=	107.84%	
8) Phenol-d5	4.241	99	279012	58.59	ppm	0.00
Spiked Amount 50.000			Recovery	=	117.18%	
25) Nitrobenzene-d5	4.919	82	265680	66.55	ppm	0.00
Spiked Amount 50.000			Recovery	=	133.10%	
51) 2-Fluorobiphenyl	6.842	172	420511	46.32	ppm	0.00
Spiked Amount 50.000			Recovery	=	92.64%	
73) 2,4,6-Tribromophenol	9.155	330	84027	61.29	ppm	0.00
Spiked Amount 50.000			Recovery	=	122.58%	
85) Terphenyl-d14	13.568	244	589549	49.49	ppm	0.00
Spiked Amount 50.000			Recovery	=	98.98%	
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.960	88	103210	54.21	ppm	95
3) Pyridine	2.307	79	262109	55.40	ppm	98
4) N-Nitrosodimethylamine	2.275	42	148367	96.49	ppm	90
6) Indene	4.679	116	320907	59.45	ppm	98
7) Cumene	3.883	105	577894	62.55	ppm	98
9) Phenol	4.251	94	303177	57.53	ppm	98
10) Aniline	4.241	93	304979	55.30	ppm	98
11) bis(2-Chloroethyl)ether	4.289	93	180728	52.76	ppm	99
12) 2-Chlorophenol	4.337	128	194332	51.41	ppm	91
13) Decane	4.369	43	165815	67.41	ppm	98
14) 1,3-Dichlorobenzene	4.438	146	204918	46.03	ppm	98
15) 1,4-Dichlorobenzene	4.492	146	203572	48.60	ppm	98
16) Benzyl alcohol	4.599	108	128767	55.57	ppm	98
17) 1,2-Dichlorobenzene	4.609	146	194358	49.73	ppm	99
18) Acetophenone	4.796	105	294561	66.36	ppm	97
19) 2-Methylphenol	4.695	108	166024	53.65	ppm	95
20) 2,2'-oxybis(1-Chloropr...	4.695	121	50912	52.47	ppm #	87

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146349.D
Acq On : 24 May 2018 2:56 pm
Operator : seanb1
Sample : ic6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 19:45:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:41:15 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
21) 3&4-Methylphenol	4.818	108	179480	58.11	ppm	#	74
22) n-Nitroso-di-n-propyla...	4.802	70	170639	78.36	ppm		94
23) Hexachloroethane	4.871	201	79757	56.96	ppm		92
26) Nitrobenzene	4.935	77	256614	69.34	ppm		97
27) Quinoline	5.950	129	399765	52.82	ppm		99
28) Isophorone	5.138	82	447939	64.94	ppm		99
29) 2-Nitrophenol	5.208	139	111684	59.10	ppm		93
30) 2,4-Dimethylphenol	5.261	107	209630	64.39	ppm		96
31) Benzoic acid	5.405	105	176233	69.29	ppm		97
32) bis(2-Chloroethoxy)met...	5.330	93	207632	54.05	ppm		98
33) 2,4-Dichlorophenol	5.443	162	150763	51.67	ppm		95
34) 2,6-Dichlorophenol	5.662	162	143716	49.93	ppm		99
35) 1,3,5-Trichlorobenzene	5.218	180	183166	48.39	ppm		99
36) 1,2,4-Trichlorobenzene	5.512	180	176290	45.94	ppm		98
37) 1,2,3-Trichlorobenzene	5.737	180	167581	48.89	ppm		94
38) Naphthalene	5.587	128	534310	49.77	ppm		100
39) 4-Chloroaniline	5.651	127	228946	49.97	ppm		99
40) 2,3-Dichloroaniline	6.730	161	203861	50.78	ppm		97
41) Caprolactam	6.046	55	81672	66.05	ppm		95
42) Hexachlorobutadiene	5.715	225	111506	58.37	ppm		97
43) 4-Chloro-3-methylphenol	6.217	107	218468	67.87	ppm		96
44) 2-Methylnaphthalene	6.356	141	340529	52.84	ppm		99
45) 1-Methylnaphthalene	6.479	142	394734	50.78	ppm		97
46) Dimethylnaphthalene	7.200	156	343885	50.34	ppm		99
48) Hexachlorocyclopentadiene	6.565	237	220125	125.42	ppm		98
49) 2,4,6-Trichlorophenol	6.746	196	118814	55.16	ppm		99
50) 2,4,5-Trichlorophenol	6.805	196	131671	55.27	ppm		98
52) 2-Chloronaphthalene	6.997	162	333963	45.65	ppm		98
53) Biphenyl	6.976	154	493733	52.30	ppm		98
54) 2-Nitroaniline	7.168	65	153272	93.67	ppm		99
55) Dimethylphthalate	7.451	163	444380	53.27	ppm		99
56) Acenaphthylene	7.596	152	588531	51.58	ppm		99
57) 2,6-Dinitrotoluene	7.537	165	94991	61.46	ppm		97
58) 3-Nitroaniline	7.799	138	116846	60.73	ppm		96
59) Acenaphthene	7.873	153	376881	52.52	ppm		99
60) 2,4-Dinitrophenol	7.980	184	114975	122.24	ppm		92
61) 4-Nitrophenol	8.167	109	86262	75.66	ppm	#	65
62) Dibenzofuran	8.156	168	537066	51.21	ppm		96
63) 2,4-Dinitrotoluene	8.189	165	130925	59.94	ppm		81
64) 2,3,4,6-Tetrachlorophenol	8.397	232	123339	65.78	ppm		98
65) Diethylphthalate	8.627	149	471503	57.92	ppm		100
66) Fluorene	8.728	166	438654	52.29	ppm		99
67) 4-Chlorophenyl-phenyle...	8.760	204	204950	51.91	ppm		94
68) 4-Nitroaniline	8.824	138	107984	58.84	ppm		95
70) 4,6-Dinitro-2-methylph...	8.894	198	86780	55.09	ppm		96
71) n-Nitrosodiphenylamine	8.985	169	323574	49.77	ppm		98
72) 1,2-Diphenylhydrazine	9.038	77	554333	63.41	ppm		98
74) 4-Bromophenyl-phenylether	9.626	248	150887	55.68	ppm		95
75) Hexachlorobenzene	9.716	284	162255	47.62	ppm		95
76) Pentachlorophenol	10.112	266	204935	111.77	ppm		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146349.D
Acq On : 24 May 2018 2:56 pm
Operator : seanb1
Sample : ic6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 19:45:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:41:15 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
77)	Phenanthrene	10.443	178	616461	46.09	ppm	99
78)	Anthracene	10.539	178	650412	48.67	ppm	100
79)	Carbazole	10.892	167	625761	45.95	ppm	100
80)	Di-n-butylphthalate	11.704	149	843632	57.83	ppm	100
81)	Fluoranthene	12.719	202	809917	54.30	ppm	99
82)	Octadecane	10.416	57	261972	68.27	ppm	97
84)	Pyrene	13.141	202	793288	44.79	ppm	99
86)	Butylbenzylphthalate	14.626	149	380453	51.69	ppm	96
87)	Benzo[a]anthracene	15.529	228	768434	52.56	ppm	99
88)	3,3'-Dichlorobenzidine	15.571	252	273822	49.46	ppm	98
89)	Chrysene	15.598	228	667597	47.34	ppm	96
90)	bis(2-Ethylhexyl)phtha...	15.849	149	478762	46.44	ppm	98
92)	Di-n-octylphthalate	17.078	149	858856	49.69	ppm	99
93)	Benzo[b]fluoranthene	17.532	252	797655	54.22	ppm	100
94)	Benzo[k]fluoranthene	17.580	252	708246	50.94	ppm	99
95)	Benzo[a]pyrene	18.066	252	715647	57.10	ppm	97
96)	Indeno[1,2,3-cd]pyrene	19.834	276	638177	53.32	ppm	92
97)	Dibenz(a,h)acridine	19.498	279	615315	53.56	ppm	99
98)	Dibenz[a,h]anthracene	19.872	278	636158	49.78	ppm	98
99)	7,12-Dimethylbenz(a)an...	17.532	256	358098	61.38	ppm	95
100)	Benzo[g,h,i]perylene	20.246	276	616356	49.16	ppm	98

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

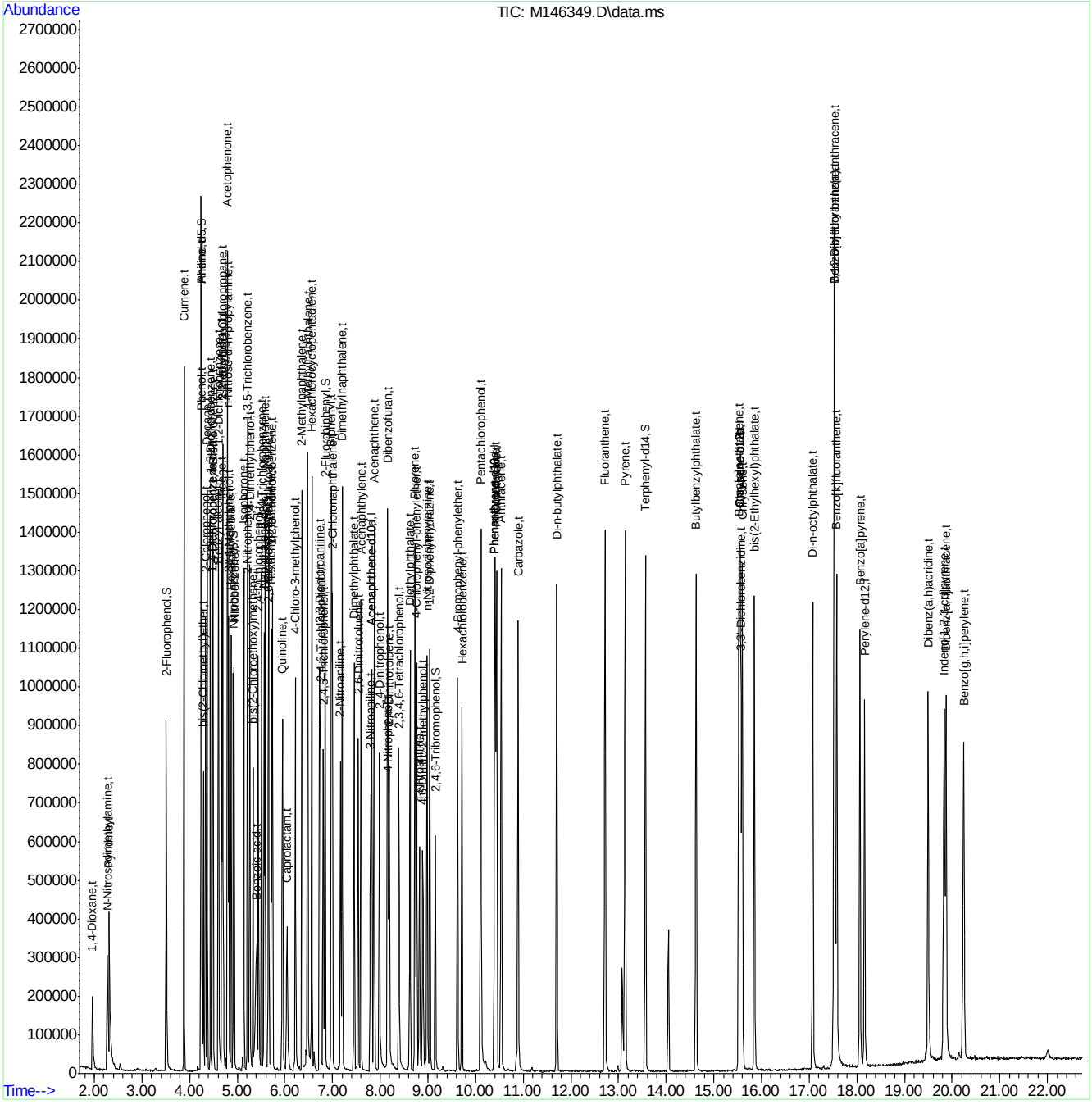
9.6.61

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146349.D
Acq On : 24 May 2018 2:56 pm
Operator : seanb1
Sample : ic6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 19:45:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:41:15 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146350.D
Acq On : 24 May 2018 3:26 pm
Operator : seanb1
Sample : ic6221-25
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:46:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:46:01 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.483	152	110978	40.00	ppm	0.00
24) Naphthalene-d8	5.562	136	415214	40.00	ppm	0.00
47) Acenaphthene-d10	7.821	164	237040	40.00	ppm	0.00
69) Phenanthrene-d10	10.396	188	487785	40.00	ppm	0.00
83) Chrysene-d12	15.546	240	515520	40.00	ppm	-0.01
91) Perylene-d12	18.164	264	510935	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.483	152	110978	40.00	ppm	0.00
103) Acenaphthene-d10a	7.821	164	237040	40.00	ppm	0.00
106) Chrysene-d12a	15.546	240	515520	40.00	ppm	-0.01
109) Phenanthrene-d10a	10.396	188	487785	40.00	ppm	0.00
112) Naphthalene-d8a	5.562	136	415214	40.00	ppm	0.00
114) Chrysene-d12b	15.546	240	515520	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.510	112	106386	25.62	ppm	0.00
Spiked Amount 50.000			Recovery	=	51.24%	
8) Phenol-d5	4.242	99	140027	28.34	ppm	0.00
Spiked Amount 50.000			Recovery	=	56.68%	
25) Nitrobenzene-d5	4.915	82	138007	34.04	ppm	0.00
Spiked Amount 50.000			Recovery	=	68.08%	
51) 2-Fluorobiphenyl	6.844	172	215766	23.44	ppm	0.00
Spiked Amount 50.000			Recovery	=	46.88%	
73) 2,4,6-Tribromophenol	9.157	330	42664	31.18	ppm	0.00
Spiked Amount 50.000			Recovery	=	62.36%	
85) Terphenyl-d14	13.564	244	294825	23.99	ppm	0.00
Spiked Amount 50.000			Recovery	=	47.98%	
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.966	88	50811	25.72	ppm	90
3) Pyridine	2.319	79	131280	26.74	ppm	93
4) N-Nitrosodimethylamine	2.276	42	70251	44.03	ppm	99
6) Indene	4.675	116	163985	29.27	ppm	99
7) Cumene	3.879	105	295400	30.81	ppm	97
9) Phenol	4.253	94	160692	29.38	ppm	96
10) Aniline	4.242	93	164600	28.76	ppm	95
11) bis(2-Chloroethyl)ether	4.290	93	97128	27.33	ppm	98
12) 2-Chlorophenol	4.333	128	99506	25.37	ppm	99
13) Decane	4.365	43	88471	34.66	ppm	99
14) 1,3-Dichlorobenzene	4.440	146	108784	23.55	ppm	96
15) 1,4-Dichlorobenzene	4.493	146	104033	23.93	ppm	98
16) Benzyl alcohol	4.595	108	65410	27.20	ppm	86
17) 1,2-Dichlorobenzene	4.611	146	102471	25.26	ppm	96
18) Acetophenone	4.792	105	151797	32.96	ppm	96
19) 2-Methylphenol	4.696	108	89744	27.95	ppm	94
20) 2,2'-oxybis(1-Chloropr...	4.696	121	28113	27.92	ppm #	70

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146350.D
Acq On : 24 May 2018 3:26 pm
Operator : seanb1
Sample : ic6221-25
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:46:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:46:01 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
21) 3&4-Methylphenol	4.814	108	92650	28.91	ppm		89
22) n-Nitroso-di-n-propyla...	4.798	70	88889	39.34	ppm		97
23) Hexachloroethane	4.873	201	40437	27.83	ppm		90
26) Nitrobenzene	4.931	77	133739	35.58	ppm		99
27) Quinoline	5.941	129	202540	26.35	ppm		98
28) Isophorone	5.134	82	230538	32.91	ppm		98
29) 2-Nitrophenol	5.209	139	54835	28.57	ppm		91
30) 2,4-Dimethylphenol	5.257	107	108315	32.76	ppm		99
31) Benzoic acid	5.380	105	86197	36.97	ppm		97
32) bis(2-Chloroethoxy)met...	5.332	93	109279	28.01	ppm		97
33) 2,4-Dichlorophenol	5.444	162	75817	25.59	ppm		96
34) 2,6-Dichlorophenol	5.658	162	72818	24.91	ppm		99
35) 1,3,5-Trichlorobenzene	5.214	180	95425	24.82	ppm		96
36) 1,2,4-Trichlorobenzene	5.514	180	91795	23.55	ppm		99
37) 1,2,3-Trichlorobenzene	5.738	180	86761	24.92	ppm		96
38) Naphthalene	5.583	128	270375	24.80	ppm		99
39) 4-Chloroaniline	5.647	127	114904	24.69	ppm		98
40) 2,3-Dichloroaniline	6.726	161	99115	24.31	ppm		99
41) Caprolactam	6.026	55	42439	33.79	ppm		93
42) Hexachlorobutadiene	5.717	225	57774	29.78	ppm		97
43) 4-Chloro-3-methylphenol	6.213	107	109769	33.58	ppm		96
44) 2-Methylnaphthalene	6.358	141	174291	26.63	ppm		93
45) 1-Methylnaphthalene	6.481	142	199344	25.25	ppm		94
46) Dimethylnaphthalene	7.202	156	175509	25.30	ppm		98
48) Hexachlorocyclopentadiene	6.566	237	99438	55.88	ppm		96
49) 2,4,6-Trichlorophenol	6.742	196	59482	27.24	ppm		95
50) 2,4,5-Trichlorophenol	6.801	196	63030	26.09	ppm		97
52) 2-Chloronaphthalene	6.993	162	175235	23.62	ppm		93
53) Biphenyl	6.977	154	249443	26.06	ppm		97
54) 2-Nitroaniline	7.164	65	74890	45.14	ppm		93
55) Dimethylphthalate	7.453	163	225612	26.67	ppm		99
56) Acenaphthylene	7.597	152	298489	25.80	ppm		100
57) 2,6-Dinitrotoluene	7.533	165	49046	31.30	ppm		100
58) 3-Nitroaniline	7.789	138	55278	28.34	ppm		95
59) Acenaphthene	7.870	153	186086	25.58	ppm		98
60) 2,4-Dinitrophenol	7.982	184	53548	64.28	ppm		98
61) 4-Nitrophenol	8.163	109	43248	38.82	ppm	#	29
62) Dibenzofuran	8.153	168	268217	25.22	ppm		97
63) 2,4-Dinitrotoluene	8.185	165	67061	29.26	ppm		99
64) 2,3,4,6-Tetrachlorophenol	8.393	232	57193	30.08	ppm		96
65) Diethylphthalate	8.623	149	239193	28.98	ppm		99
66) Fluorene	8.724	166	218446	25.68	ppm		96
67) 4-Chlorophenyl-phenyle...	8.762	204	108183	27.02	ppm		99
68) 4-Nitroaniline	8.810	138	55585	29.87	ppm		95
70) 4,6-Dinitro-2-methylph...	8.890	198	41167	28.41	ppm		96
71) n-Nitrosodiphenylamine	8.981	169	160213	24.70	ppm		94
72) 1,2-Diphenylhydrazine	9.034	77	285027	32.67	ppm		97
74) 4-Bromophenyl-phenylether	9.622	248	74748	27.64	ppm		94
75) Hexachlorobenzene	9.713	284	83693	24.61	ppm		99
76) Pentachlorophenol	10.108	266	94141	51.45	ppm		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146350.D
Acq On : 24 May 2018 3:26 pm
Operator : seanb1
Sample : ic6221-25
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:46:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:46:01 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
77)	Phenanthrene	10.439	178	324719	24.33 ppm	97
78)	Anthracene	10.535	178	335424	25.15 ppm	99
79)	Carbazole	10.888	167	314087	23.11 ppm	100
80)	Di-n-butylphthalate	11.700	149	420927	28.91 ppm	99
81)	Fluoranthene	12.715	202	409345	27.50 ppm	97
82)	Octadecane	10.418	57	129036	33.70 ppm	92
84)	Pyrene	13.137	202	411550	22.52 ppm	99
86)	Butylbenzylphthalate	14.627	149	187521	24.69 ppm	95
87)	Benzo[a]anthracene	15.525	228	385645	25.56 ppm	99
88)	3,3'-Dichlorobenzidine	15.568	252	138193	25.02 ppm	94
89)	Chrysene	15.594	228	352349	24.22 ppm	96
90)	bis(2-Ethylhexyl)phtha...	15.851	149	237958	23.26 ppm	99
92)	Di-n-octylphthalate	17.074	149	404181	24.21 ppm	100
93)	Benzo[b]fluoranthene	17.523	252	397465	27.07 ppm	100
94)	Benzo[k]fluoranthene	17.571	252	377541	27.20 ppm	100
95)	Benzo[a]pyrene	18.062	252	354039	28.30 ppm	100
96)	Indeno[1,2,3-cd]pyrene	19.825	276	326839	27.36 ppm	96
97)	Dibenz(a,h)acridine	19.494	279	305262	26.62 ppm	100
98)	Dibenz[a,h]anthracene	19.868	278	329960	25.86 ppm	100
99)	7,12-Dimethylbenz(a)an...	17.523	256	183000	31.42 ppm	100
100)	Benzo[g,h,i]perylene	20.237	276	316155	25.26 ppm	100

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

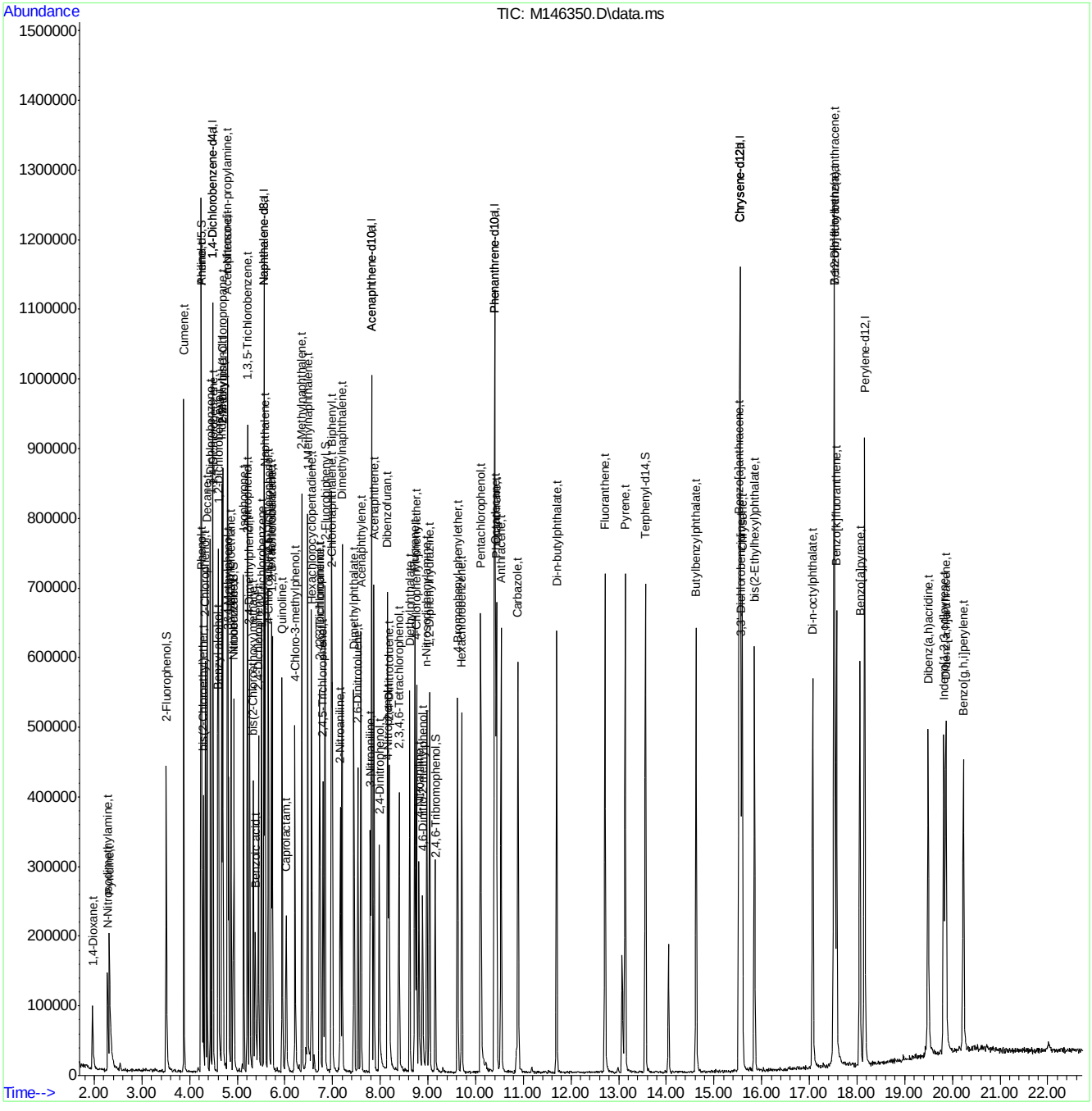
9.6.62

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146350.D
Acq On : 24 May 2018 3:26 pm
Operator : seanb1
Sample : ic6221-25
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:46:31 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:46:01 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146351.D
Acq On : 24 May 2018 3:56 pm
Operator : seanb1
Sample : ic6221-10
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 19:47:08 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:46:01 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.484	152	114699	40.00	ppm	0.00
24) Naphthalene-d8	5.563	136	426212	40.00	ppm	0.00
47) Acenaphthene-d10	7.817	164	242839	40.00	ppm	0.00
69) Phenanthrene-d10	10.397	188	492381	40.00	ppm	0.00
83) Chrysene-d12	15.542	240	535792	40.00	ppm	-0.02
91) Perylene-d12	18.159	264	544714	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.484	152	114699	40.00	ppm	0.00
103) Acenaphthene-d10a	7.817	164	242839	40.00	ppm	0.00
106) Chrysene-d12a	15.542	240	535792	40.00	ppm	-0.02
109) Phenanthrene-d10a	10.397	188	492381	40.00	ppm	0.00
112) Naphthalene-d8a	5.563	136	426212	40.00	ppm	0.00
114) Chrysene-d12b	15.542	240	535792	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.517	112	41326	9.63	ppm	0.00
Spiked Amount 50.000			Recovery	=	19.26%	
8) Phenol-d5	4.243	99	58322	11.42	ppm	0.00
Spiked Amount 50.000			Recovery	=	22.84%	
25) Nitrobenzene-d5	4.916	82	60093	14.44	ppm	0.00
Spiked Amount 50.000			Recovery	=	28.88%	
51) 2-Fluorobiphenyl	6.839	172	93436	9.91	ppm	0.00
Spiked Amount 50.000			Recovery	=	19.82%	
73) 2,4,6-Tribromophenol	9.153	330	17341	12.56	ppm	-0.01
Spiked Amount 50.000			Recovery	=	25.12%	
85) Terphenyl-d14	13.560	244	128415	10.05	ppm	-0.01
Spiked Amount 50.000			Recovery	=	20.10%	
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.973	88	20302	9.94	ppm	92
3) Pyridine	2.336	79	44913	8.85	ppm	91
4) N-Nitrosodimethylamine	2.288	42	28384	17.21	ppm	99
6) Indene	4.676	116	67913	11.73	ppm	96
7) Cumene	3.880	105	121777	12.29	ppm	96
9) Phenol	4.254	94	67866	12.01	ppm	92
10) Aniline	4.243	93	72966	12.34	ppm	92
11) bis(2-Chloroethyl)ether	4.291	93	42009	11.44	ppm	97
12) 2-Chlorophenol	4.334	128	43530	10.74	ppm	95
13) Decane	4.366	43	38568	14.62	ppm	99
14) 1,3-Dichlorobenzene	4.441	146	48076	10.07	ppm	96
15) 1,4-Dichlorobenzene	4.494	146	46206	10.28	ppm	95
16) Benzyl alcohol	4.596	108	25980	10.45	ppm #	76
17) 1,2-Dichlorobenzene	4.612	146	44665	10.66	ppm	99
18) Acetophenone	4.793	105	66345	13.94	ppm	99
19) 2-Methylphenol	4.697	108	41407	12.48	ppm	95
20) 2,2'-oxybis(1-Chloropr...	4.692	121	12063	11.59	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146351.D
Acq On : 24 May 2018 3:56 pm
Operator : seanb1
Sample : ic6221-10
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 19:47:08 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:46:01 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
21) 3&4-Methylphenol	4.815	108	39034	11.78 ppm #	77
22) n-Nitroso-di-n-propyla...	4.793	70	41552	17.79 ppm	93
23) Hexachloroethane	4.874	201	18055	12.02 ppm	89
26) Nitrobenzene	4.932	77	58452	15.15 ppm	100
27) Quinoline	5.942	129	82862	10.50 ppm	98
28) Isophorone	5.135	82	102639	14.27 ppm	98
29) 2-Nitrophenol	5.210	139	23210	11.78 ppm	86
30) 2,4-Dimethylphenol	5.258	107	45242	13.33 ppm	97
31) Benzoic acid	5.360	105	33844	16.21 ppm	92
32) bis(2-Chloroethoxy)met...	5.328	93	46117	11.52 ppm	98
33) 2,4-Dichlorophenol	5.445	162	33781	11.11 ppm	100
34) 2,6-Dichlorophenol	5.659	162	30728	10.24 ppm	95
35) 1,3,5-Trichlorobenzene	5.215	180	41430	10.50 ppm	92
36) 1,2,4-Trichlorobenzene	5.509	180	38526	9.63 ppm	95
37) 1,2,3-Trichlorobenzene	5.734	180	38596	10.80 ppm	97
38) Naphthalene	5.584	128	117281	10.48 ppm	100
39) 4-Chloroaniline	5.648	127	52429	10.98 ppm	94
40) 2,3-Dichloroaniline	6.727	161	42705	10.20 ppm	97
41) Caprolactam	6.011	55	17478	13.56 ppm	91
42) Hexachlorobutadiene	5.718	225	23950	12.03 ppm	97
43) 4-Chloro-3-methylphenol	6.214	107	44471	13.25 ppm	94
44) 2-Methylnaphthalene	6.353	141	74393	11.07 ppm	93
45) 1-Methylnaphthalene	6.476	142	88458	10.92 ppm	91
46) Dimethylnaphthalene	7.197	156	77823	10.93 ppm	98
48) Hexachlorocyclopentadiene	6.562	237	35205	19.31 ppm	96
49) 2,4,6-Trichlorophenol	6.743	196	27580	12.33 ppm	90
50) 2,4,5-Trichlorophenol	6.797	196	26609	10.75 ppm	95
52) 2-Chloronaphthalene	6.994	162	76231	10.03 ppm	97
53) Biphenyl	6.973	154	102957	10.50 ppm	96
54) 2-Nitroaniline	7.160	65	34717	20.43 ppm	84
55) Dimethylphthalate	7.448	163	95975	11.08 ppm	98
56) Acenaphthylene	7.593	152	127248	10.74 ppm	98
57) 2,6-Dinitrotoluene	7.534	165	20475	12.75 ppm	96
58) 3-Nitroaniline	7.790	138	23027	11.52 ppm	92
59) Acenaphthene	7.865	153	80723	10.83 ppm	95
60) 2,4-Dinitrophenol	7.983	184	16006	24.45 ppm	85
61) 4-Nitrophenol	8.170	109	16145	15.02 ppm	85
62) Dibenzofuran	8.148	168	115272	10.58 ppm	95
63) 2,4-Dinitrotoluene	8.186	165	28052	12.10 ppm	92
64) 2,3,4,6-Tetrachlorophenol	8.389	232	26590	13.65 ppm	91
65) Diethylphthalate	8.618	149	101402	11.99 ppm	99
66) Fluorene	8.725	166	94780	10.88 ppm	97
67) 4-Chlorophenyl-phenyle...	8.763	204	46591	11.36 ppm	92
68) 4-Nitroaniline	8.805	138	22334	11.72 ppm	92
70) 4,6-Dinitro-2-methylph...	8.886	198	14807	12.08 ppm	90
71) n-Nitrosodiphenylamine	8.976	169	67887	10.37 ppm	97
72) 1,2-Diphenylhydrazine	9.035	77	123353	14.01 ppm	99
74) 4-Bromophenyl-phenylether	9.623	248	32112	11.76 ppm	91
75) Hexachlorobenzene	9.708	284	37017	10.78 ppm	95
76) Pentachlorophenol	10.109	266	37407	20.25 ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146351.D
Acq On : 24 May 2018 3:56 pm
Operator : seanb1
Sample : ic6221-10
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 19:47:08 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:46:01 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
77)	Phenanthrene	10.435	178	137029	10.17	ppm	98
78)	Anthracene	10.531	178	141529	10.51	ppm	99
79)	Carbazole	10.889	167	130872	9.54	ppm	100
80)	Di-n-butylphthalate	11.701	149	162020	11.03	ppm	98
81)	Fluoranthene	12.716	202	168361	11.21	ppm	99
82)	Octadecane	10.419	57	57240	14.81	ppm	91
84)	Pyrene	13.133	202	177605	9.35	ppm	96
86)	Butylbenzylphthalate	14.623	149	73387	9.30	ppm	95
87)	Benzo[a]anthracene	15.526	228	163222	10.41	ppm	96
88)	3,3'-Dichlorobenzidine	15.563	252	57303	10.53	ppm	95
89)	Chrysene	15.590	228	151578	10.02	ppm	97
90)	bis(2-Ethylhexyl)phtha...	15.852	149	91680	9.34	ppm	96
92)	Di-n-octylphthalate	17.070	149	149435	9.37	ppm	98
93)	Benzo[b]fluoranthene	17.518	252	182606	11.66	ppm	100
94)	Benzo[k]fluoranthene	17.566	252	158391	10.70	ppm	95
95)	Benzo[a]pyrene	18.058	252	149557	11.21	ppm	98
96)	Indeno[1,2,3-cd]pyrene	19.821	276	133745	10.50	ppm	97
97)	Dibenz(a,h)acridine	19.490	279	121567	9.94	ppm	99
98)	Dibenz[a,h]anthracene	19.858	278	143343	10.54	ppm	99
99)	7,12-Dimethylbenz(a)an...	17.518	256	76967	12.40	ppm	94
100)	Benzo[g,h,i]perylene	20.227	276	137341	10.29	ppm	99

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

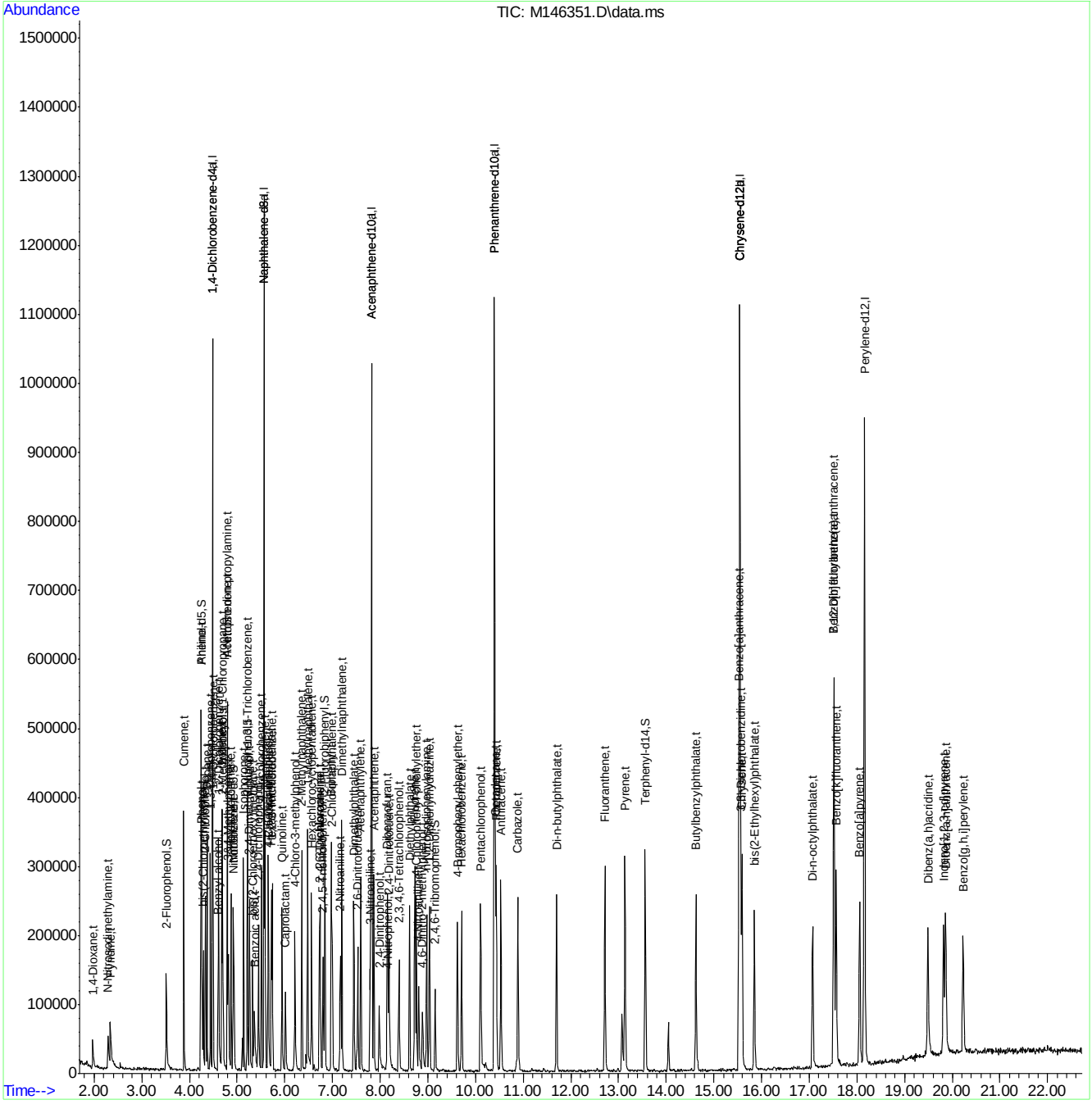
9.6.63

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146351.D
Acq On : 24 May 2018 3:56 pm
Operator : seanb1
Sample : ic6221-10
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 19:47:08 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:46:01 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146352.D
Acq On : 24 May 2018 4:26 pm
Operator : seanb1
Sample : ic6221-5
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 19:47:50 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:46:01 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.483	152	130128	40.00	ppm	0.00
24) Naphthalene-d8	5.562	136	478737	40.00	ppm	0.00
47) Acenaphthene-d10	7.822	164	271989	40.00	ppm	0.00
69) Phenanthrene-d10	10.396	188	544706	40.00	ppm	0.00
83) Chrysene-d12	15.541	240	603338	40.00	ppm	-0.02
91) Perylene-d12	18.159	264	607646	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.483	152	130128	40.00	ppm	0.00
103) Acenaphthene-d10a	7.822	164	271989	40.00	ppm	0.00
106) Chrysene-d12a	15.541	240	603338	40.00	ppm	-0.02
109) Phenanthrene-d10a	10.396	188	544706	40.00	ppm	0.00
112) Naphthalene-d8a	5.562	136	478737	40.00	ppm	0.00
114) Chrysene-d12b	15.541	240	603338	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.516	112	20489	4.21	ppm	0.00
Spiked Amount 50.000			Recovery	=	8.42%	
8) Phenol-d5	4.242	99	30029	5.18	ppm	0.00
Spiked Amount 50.000			Recovery	=	10.36%	
25) Nitrobenzene-d5	4.915	82	31975	6.84	ppm	0.00
Spiked Amount 50.000			Recovery	=	13.68%	
51) 2-Fluorobiphenyl	6.839	172	52072	4.93	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.86%	
73) 2,4,6-Tribromophenol	9.152	330	8309	5.44	ppm	-0.01
Spiked Amount 50.000			Recovery	=	10.88%	
85) Terphenyl-d14	13.559	244	67356	4.68	ppm	-0.01
Spiked Amount 50.000			Recovery	=	9.36%	
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.967	88	10951	4.73	ppm	79
3) Pyridine	2.346	79	24961	4.34	ppm	92
4) N-Nitrosodimethylamine	2.292	42	14903	7.97	ppm	97
6) Indene	4.675	116	37677	5.74	ppm	94
7) Cumene	3.884	105	71225	6.34	ppm	100
9) Phenol	4.253	94	36129	5.63	ppm	76
10) Aniline	4.242	93	38840	5.79	ppm	94
11) bis(2-Chloroethyl)ether	4.290	93	24101	5.78	ppm	99
12) 2-Chlorophenol	4.338	128	22112	4.81	ppm	96
13) Decane	4.365	43	22743	7.60	ppm	86
14) 1,3-Dichlorobenzene	4.440	146	25183	4.65	ppm	95
15) 1,4-Dichlorobenzene	4.493	146	24114	4.73	ppm	95
16) Benzyl alcohol	4.606	108	14106	5.00	ppm #	76
17) 1,2-Dichlorobenzene	4.611	146	24654	5.18	ppm	96
18) Acetophenone	4.798	105	33958	6.29	ppm	98
19) 2-Methylphenol	4.696	108	20647	5.48	ppm	94
20) 2,2'-oxybis(1-Chloropr...	4.691	121	7114	6.03	ppm	87

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146352.D
Acq On : 24 May 2018 4:26 pm
Operator : seanb1
Sample : ic6221-5
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 19:47:50 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:46:01 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
21) 3&4-Methylphenol	4.819	108	21600	5.75	ppm	#	70
22) n-Nitroso-di-n-propyla...	4.798	70	21018	7.93	ppm		95
23) Hexachloroethane	4.873	201	9801	5.75	ppm		98
26) Nitrobenzene	4.931	77	31357	7.24	ppm		94
27) Quinoline	5.941	129	44309	5.00	ppm		92
28) Isophorone	5.134	82	53372	6.61	ppm		97
29) 2-Nitrophenol	5.209	139	12173	5.50	ppm		90
30) 2,4-Dimethylphenol	5.263	107	21021	5.51	ppm		91
31) Benzoic acid	5.353	105	14187	7.58	ppm		97
32) bis(2-Chloroethoxy)met...	5.332	93	26552	5.90	ppm		94
33) 2,4-Dichlorophenol	5.444	162	16819	4.92	ppm		97
34) 2,6-Dichlorophenol	5.663	162	15926	4.73	ppm		86
35) 1,3,5-Trichlorobenzene	5.215	180	23458	5.29	ppm		96
36) 1,2,4-Trichlorobenzene	5.508	180	20918	4.65	ppm		93
37) 1,2,3-Trichlorobenzene	5.738	180	21109	5.26	ppm		99
38) Naphthalene	5.583	128	63044	5.01	ppm		96
39) 4-Chloroaniline	5.653	127	25515	4.76	ppm		95
40) 2,3-Dichloroaniline	6.726	161	22871	4.87	ppm		94
41) Caprolactam	6.011	55	9697	6.70	ppm		93
42) Hexachlorobutadiene	5.717	225	14044	6.28	ppm		98
43) 4-Chloro-3-methylphenol	6.214	107	22422	5.95	ppm		89
44) 2-Methylnaphthalene	6.358	141	38919	5.16	ppm		94
45) 1-Methylnaphthalene	6.475	142	47554	5.22	ppm		97
46) Dimethylnaphthalene	7.197	156	40128	5.02	ppm		96
48) Hexachlorocyclopentadiene	6.561	237	15267	7.48	ppm		94
49) 2,4,6-Trichlorophenol	6.742	196	14178	5.66	ppm		81
50) 2,4,5-Trichlorophenol	6.801	196	15108	5.45	ppm		83
52) 2-Chloronaphthalene	6.994	162	41501	4.88	ppm		95
53) Biphenyl	6.972	154	55446	5.05	ppm		95
54) 2-Nitroaniline	7.164	65	16439	8.64	ppm		89
55) Dimethylphthalate	7.448	163	49949	5.15	ppm		97
56) Acenaphthylene	7.592	152	65279	4.92	ppm		99
57) 2,6-Dinitrotoluene	7.533	165	10098	5.62	ppm		92
58) 3-Nitroaniline	7.789	138	12821	5.73	ppm		83
59) Acenaphthene	7.864	153	41642	4.99	ppm		91
60) 2,4-Dinitrophenol	7.982	184	6961	13.62	ppm	#	67
61) 4-Nitrophenol	8.179	109	4620	4.63	ppm	#	37
62) Dibenzofuran	8.153	168	63824	5.23	ppm		92
63) 2,4-Dinitrotoluene	8.190	165	14880	6.08	ppm		94
64) 2,3,4,6-Tetrachlorophenol	8.393	232	12091	5.54	ppm		87
65) Diethylphthalate	8.618	149	52514	5.54	ppm		95
66) Fluorene	8.724	166	49788	5.10	ppm		97
67) 4-Chlorophenyl-phenyle...	8.756	204	26066	5.67	ppm		86
68) 4-Nitroaniline	8.810	138	12034	5.64	ppm		94
70) 4,6-Dinitro-2-methylph...	8.895	198	6076	6.25	ppm		90
71) n-Nitrosodiphenylamine	8.975	169	35602	4.91	ppm		94
72) 1,2-Diphenylhydrazine	9.034	77	67377	6.92	ppm		100
74) 4-Bromophenyl-phenylether	9.622	248	16602	5.50	ppm		96
75) Hexachlorobenzene	9.707	284	19848	5.23	ppm		95
76) Pentachlorophenol	10.103	266	16657	8.15	ppm		82

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146352.D
Acq On : 24 May 2018 4:26 pm
Operator : seanb1
Sample : ic6221-5
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 19:47:50 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:46:01 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
77) Phenanthrene	10.439	178	72386	4.86	ppm	99
78) Anthracene	10.535	178	74769	5.02	ppm	96
79) Carbazole	10.888	167	68324	4.50	ppm	98
80) Di-n-butylphthalate	11.700	149	85768	5.28	ppm	98
81) Fluoranthene	12.715	202	89725	5.40	ppm	94
82) Octadecane	10.412	57	28913	6.76	ppm	96
84) Pyrene	13.137	202	92710	4.33	ppm	96
86) Butylbenzylphthalate	14.622	149	38870	4.37	ppm	99
87) Benzo[a]anthracene	15.525	228	82489	4.67	ppm	96
88) 3,3'-Dichlorobenzidine	15.562	252	28643	5.09	ppm	98
89) Chrysene	15.589	228	83407	4.90	ppm	98
90) bis(2-Ethylhexyl)phtha...	15.845	149	44825	4.63	ppm	92
92) Di-n-octylphthalate	17.069	149	76841	5.12	ppm	98
93) Benzo[b]fluoranthene	17.512	252	89881	5.15	ppm	99
94) Benzo[k]fluoranthene	17.560	252	91681	5.55	ppm	97
95) Benzo[a]pyrene	18.057	252	75548	5.08	ppm	98
96) Indeno[1,2,3-cd]pyrene	19.815	276	67618	4.76	ppm	92
97) Dibenz(a,h)acridine	19.489	279	59268	4.35	ppm	90
98) Dibenz[a,h]anthracene	19.857	278	74732	4.93	ppm	94
99) 7,12-Dimethylbenz(a)an...	17.518	256	30431	4.39	ppm	94
100) Benzo[g,h,i]perylene	20.226	276	69690	4.68	ppm	99

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

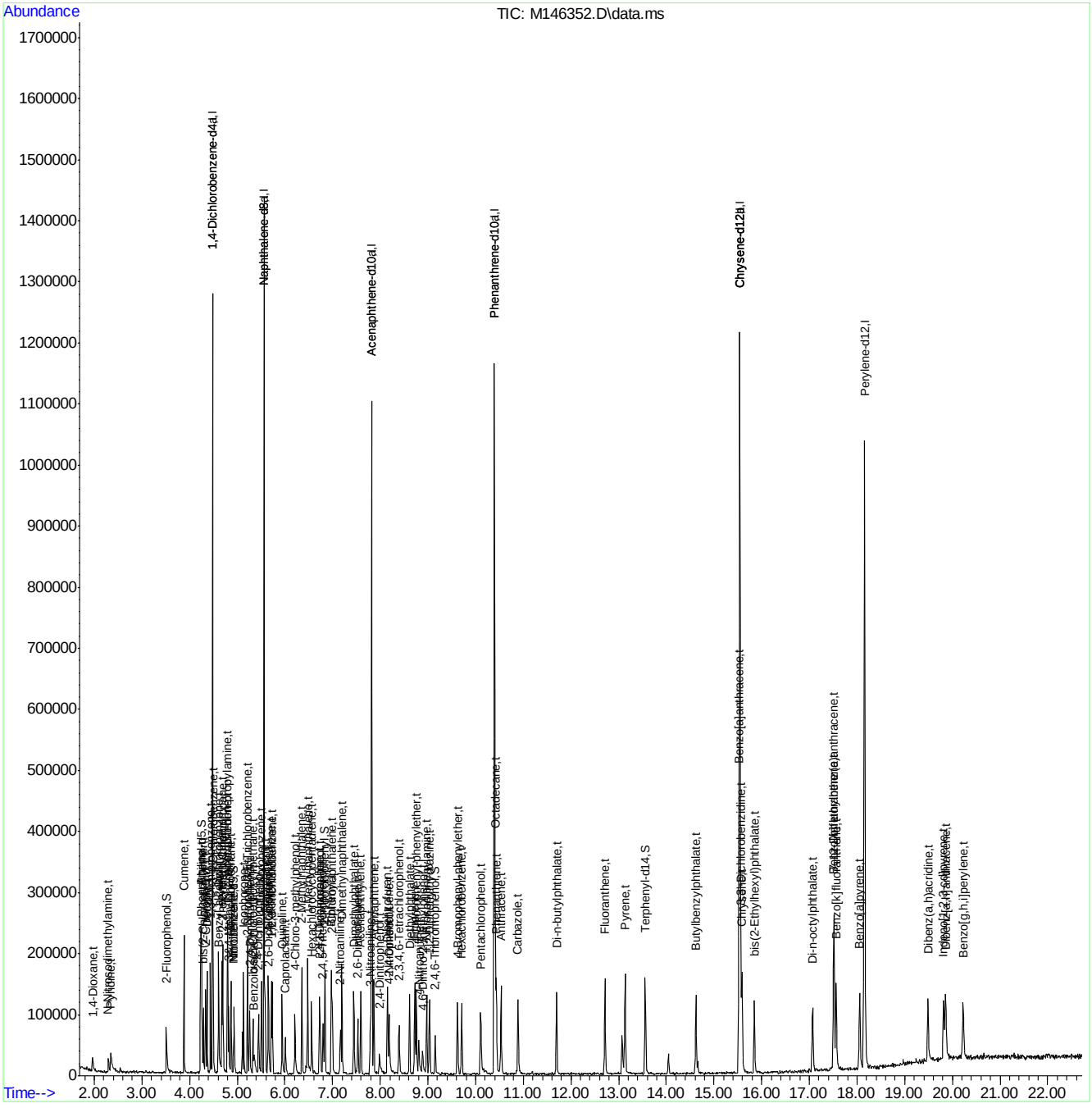
9.6.64

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146352.D
Acq On : 24 May 2018 4:26 pm
Operator : seanb1
Sample : ic6221-5
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 19:47:50 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:46:01 2018
Response via : Initial Calibration



MM6221.M Thu May 24 19:47:53 2018 MSM Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146353.D
Acq On : 24 May 2018 4:56 pm
Operator : seanb1
Sample : icv6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 24 19:57:20 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:56:16 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.483	152	132930	40.00	ppm	0.00
24) Naphthalene-d8	5.562	136	503167	40.00	ppm	0.00
47) Acenaphthene-d10	7.816	164	289155	40.00	ppm	0.00
69) Phenanthrene-d10	10.397	188	524527	40.00	ppm	0.00
83) Chrysene-d12	15.541	240	552677	40.00	ppm	-0.02
91) Perylene-d12	18.159	264	538190	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.483	152	132930	40.00	ppm	0.00
103) Acenaphthene-d10a	7.816	164	289155	40.00	ppm	0.00
106) Chrysene-d12a	15.541	240	552677	40.00	ppm	-0.02
109) Phenanthrene-d10a	10.397	188	524527	40.00	ppm	0.00
112) Naphthalene-d8a	5.562	136	503167	40.00	ppm	0.00
114) Chrysene-d12b	15.541	240	552677	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.511	112	251618	52.09	ppm	0.00
Spiked Amount 50.000			Recovery = 104.18%			
8) Phenol-d5	4.243	99	302664	47.73	ppm	0.00
Spiked Amount 50.000			Recovery = 95.46%			
25) Nitrobenzene-d5	4.916	82	334504	51.90	ppm	0.00
Spiked Amount 50.000			Recovery = 103.80%			
51) 2-Fluorobiphenyl	6.844	172	503541	46.98	ppm	0.00
Spiked Amount 50.000			Recovery = 93.96%			
73) 2,4,6-Tribromophenol	9.152	330	92281	58.08	ppm	-0.01
Spiked Amount 50.000			Recovery = 116.16%			
85) Terphenyl-d14	13.565	244	661757	52.49	ppm	0.00
Spiked Amount 50.000			Recovery = 104.98%			
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			

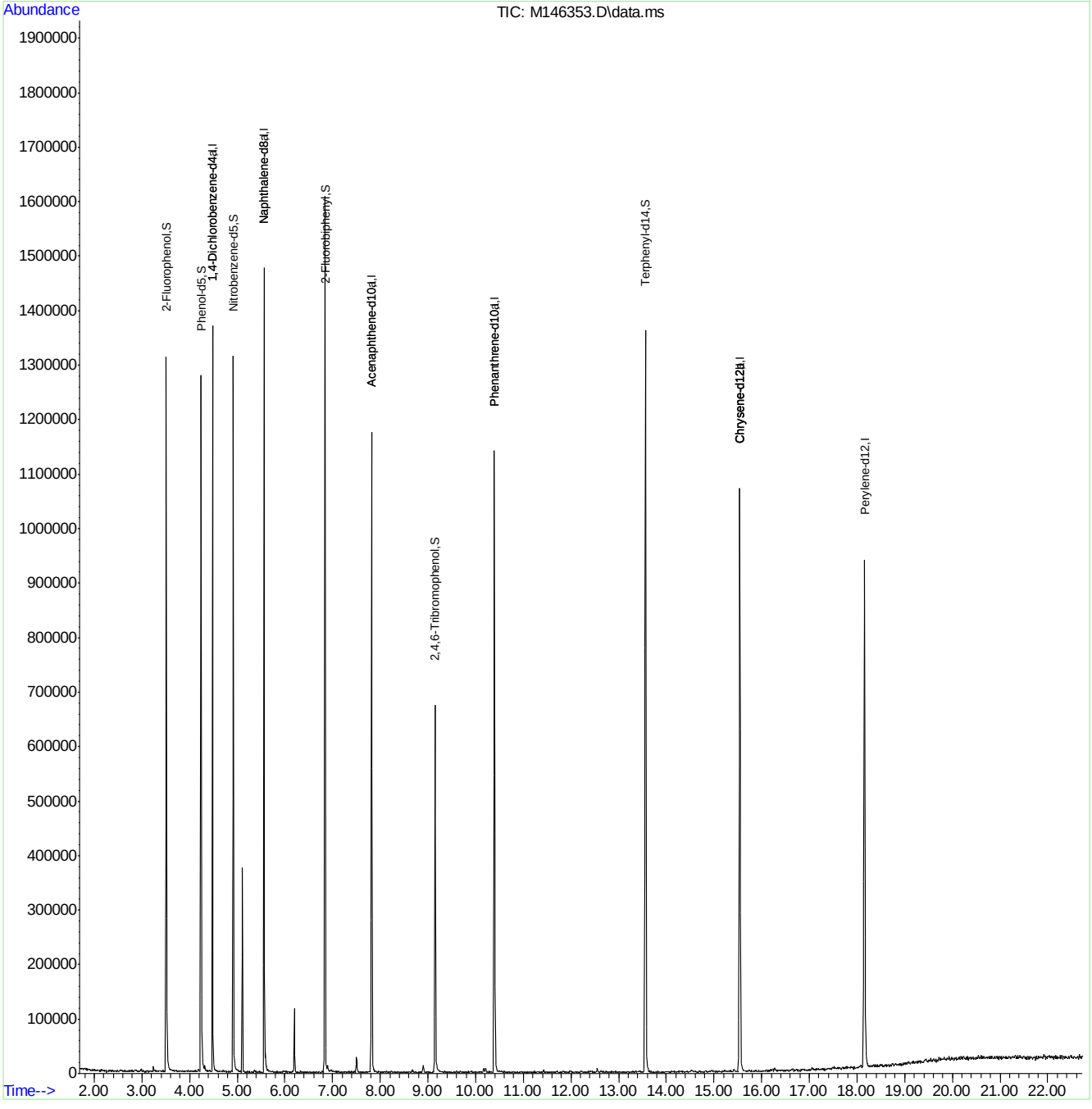
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146353.D
Acq On : 24 May 2018 4:56 pm
Operator : seanb1
Sample : icv6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 24 19:57:20 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:56:16 2018
Response via : Initial Calibration



MM6221.M Thu May 24 19:57:27 2018 MSM

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146354.D
Acq On : 24 May 2018 5:26 pm
Operator : seanb1
Sample : icv6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 24 19:58:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:56:16 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.479	152	122631	40.00	ppm	0.00
24) Naphthalene-d8	5.564	136	415315	40.00	ppm	0.00
47) Acenaphthene-d10	7.818	164	227339	40.00	ppm	0.00
69) Phenanthrene-d10	10.399	188	440850	40.00	ppm	0.00
83) Chrysene-d12	15.543	240	473137	40.00	ppm	-0.02
91) Perylene-d12	18.161	264	484078	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.479	152	122631	40.00	ppm	0.00
103) Acenaphthene-d10a	7.818	164	227339	40.00	ppm	0.00
106) Chrysene-d12a	15.543	240	473137	40.00	ppm	-0.02
109) Phenanthrene-d10a	10.399	188	440850	40.00	ppm	0.00
112) Naphthalene-d8a	5.564	136	415315	40.00	ppm	0.00
114) Chrysene-d12b	15.543	240	473137	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
9) Phenol	4.250	94	311325	45.17	ppm	95
12) 2-Chlorophenol	4.335	128	223447	51.85	ppm	93
19) 2-Methylphenol	4.693	108	199817	51.44	ppm	98
21) 3&4-Methylphenol	4.816	108	212349	52.12	ppm	100
29) 2-Nitrophenol	5.211	139	109651	52.59	ppm	89
30) 2,4-Dimethylphenol	5.259	107	223747	55.59	ppm	100
31) Benzoic acid	5.404	105	173084	51.88	ppm	95
33) 2,4-Dichlorophenol	5.441	162	151196	50.30	ppm	98
34) 2,6-Dichlorophenol	5.660	162	155740	55.31	ppm	95
43) 4-Chloro-3-methylphenol	6.210	107	206219	51.37	ppm	96
49) 2,4,6-Trichlorophenol	6.739	196	129983	57.07	ppm	98
50) 2,4,5-Trichlorophenol	6.793	196	129347	54.22	ppm	97
60) 2,4-Dinitrophenol	7.979	184	48081	47.34	ppm	96
61) 4-Nitrophenol	8.160	109	83774	49.74	ppm	84
64) 2,3,4,6-Tetrachlorophenol	8.390	232	120005	57.30	ppm	95
70) 4,6-Dinitro-2-methylph...	8.887	198	84164	53.86	ppm	99
76) Pentachlorophenol	10.105	266	110051	62.02	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146354.D
Acq On : 24 May 2018 5:26 pm
Operator : seanb1
Sample : icv6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 24 19:58:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:56:16 2018
Response via : Initial Calibration

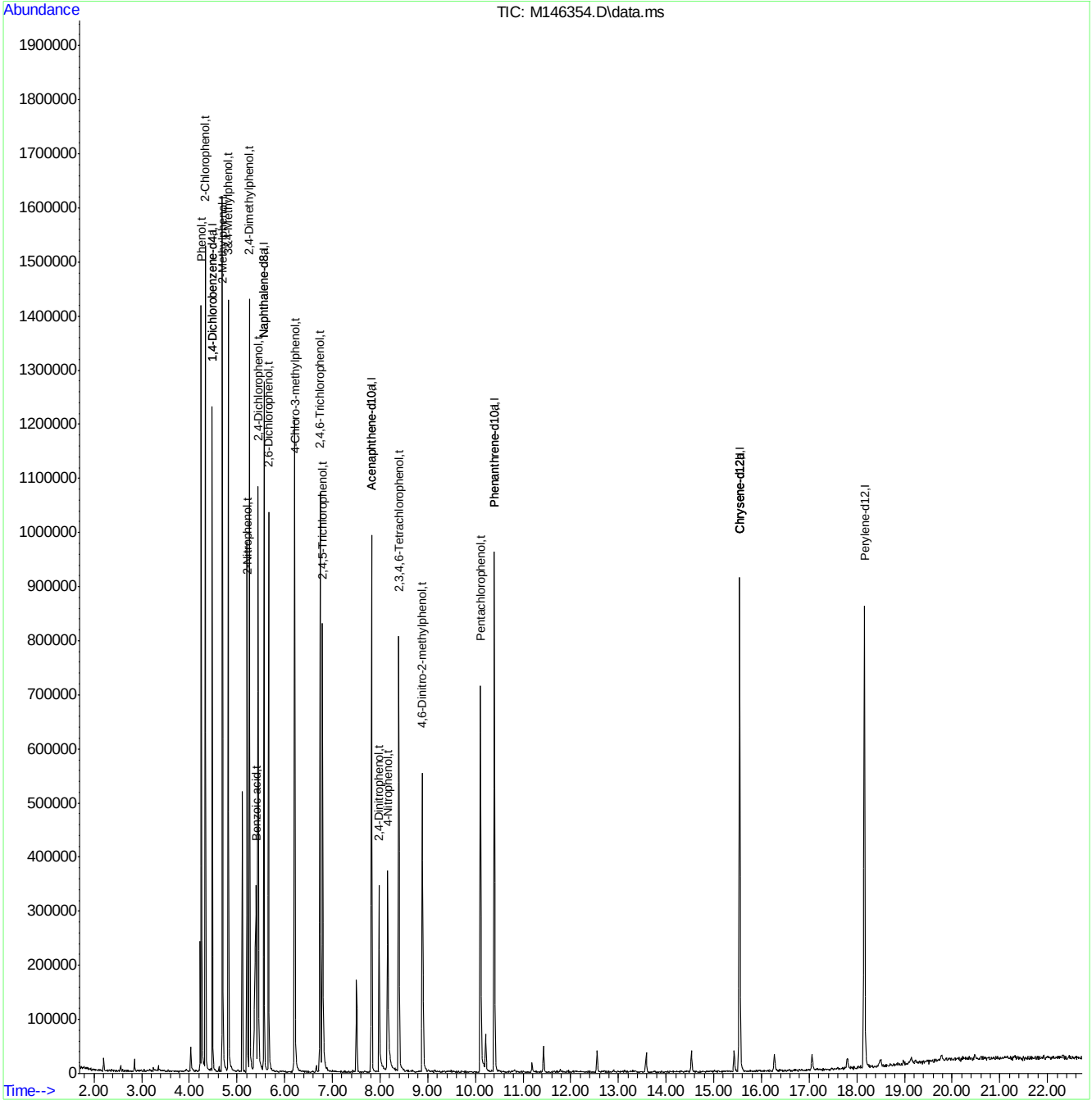
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146354.D
Acq On : 24 May 2018 5:26 pm
Operator : seanb1
Sample : icv6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 24 19:58:10 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:56:16 2018
Response via : Initial Calibration



MM6221.M Thu May 24 19:58:18 2018 MSM

Quantitation Report (QT Reviewed)

Data Path : D:\EM6221\
Data File : M146355.D
Acq On : 24 May 2018 5:56 pm
Operator : seanb1
Sample : icv6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 18:09:50 2018
Quant Method : D:\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:56:16 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.482	152	157802	40.00	ppm	0.00
24) Naphthalene-d8	5.566	136	537751	40.00	ppm	0.00
47) Acenaphthene-d10	7.820	164	261459	40.00	ppm	0.00
69) Phenanthrene-d10	10.401	188	512047	40.00	ppm	0.00
83) Chrysene-d12	15.545	240	441193	40.00	ppm	-0.01
91) Perylene-d12	18.157	264	428011	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.482	152	157802	40.00	ppm	0.00
103) Acenaphthene-d10a	7.820	164	261459	40.00	ppm	0.00
106) Chrysene-d12a	15.545	240	441193	40.00	ppm	-0.01
109) Phenanthrene-d10a	10.401	188	512047	40.00	ppm	0.00
112) Naphthalene-d8a	5.566	136	537751	40.00	ppm	0.00
114) Chrysene-d12b	15.545	240	441193	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%	
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
4) N-Nitrosodimethylamine	2.291	42	149582	38.24	ppm	90
11) bis(2-Chloroethyl)ether	4.289	93	295348	55.33	ppm	94
14) 1,3-Dichlorobenzene	4.439	146	319249	51.73	ppm	98
15) 1,4-Dichlorobenzene	4.492	146	289655	47.81	ppm	99
17) 1,2-Dichlorobenzene	4.610	146	279028	47.70	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.695	121	80059	50.68	ppm #	60
22) n-Nitroso-di-n-propyla...	4.797	70	215117	43.09	ppm	90
23) Hexachloroethane	4.872	201	108677	46.45	ppm	87
26) Nitrobenzene	4.930	77	316621	45.39	ppm	98
28) Isophorone	5.133	82	555956	48.29	ppm	98
32) bis(2-Chloroethoxy)met...	5.331	93	296998	53.22	ppm	97
36) 1,2,4-Trichlorobenzene	5.513	180	241661	50.68	ppm	98
38) Naphthalene	5.587	128	687941	48.63	ppm	100
42) Hexachlorobutadiene	5.716	225	149212	50.49	ppm	99
48) Hexachlorocyclopentadiene	6.565	237	124993	54.12	ppm	96
52) 2-Chloronaphthalene	6.998	162	458132	58.94	ppm	99
55) Dimethylphthalate	7.452	163	536196	55.86	ppm	99

Quantitation Report (QT Reviewed)

Data Path : D:\EM6221\
Data File : M146355.D
Acq On : 24 May 2018 5:56 pm
Operator : seanb1
Sample : icv6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 18:09:50 2018
Quant Method : D:\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:56:16 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
56)	Acenaphthylene	7.596	152	688144	54.48	ppm	99
57)	2,6-Dinitrotoluene	7.537	165	107710	50.50	ppm	93
59)	Acenaphthene	7.874	153	438152	52.84	ppm	99
63)	2,4-Dinitrotoluene	8.189	165	144800	49.51	ppm	96
65)	Diethylphthalate	8.622	149	552081	54.84	ppm	99
66)	Fluorene	8.729	166	490462	52.01	ppm	100
67)	4-Chlorophenyl-phenyle...	8.761	204	220646	46.70	ppm	89
71)	n-Nitrosodiphenylamine	8.980	169	322959	49.71	ppm	97
72)	1,2-Diphenylhydrazine	9.038	77	606617	54.44	ppm	99
74)	4-Bromophenyl-phenylether	9.626	248	154498	51.06	ppm	93
75)	Hexachlorobenzene	9.717	284	159336	44.68	ppm	97
77)	Phenanthrene	10.443	178	714261	52.77	ppm	99
78)	Anthracene	10.540	178	695484	52.24	ppm	100
80)	Di-n-butylphthalate	11.704	149	894277	57.19	ppm	99
81)	Fluoranthene	12.719	202	800230	50.03	ppm	98
84)	Pyrene	13.141	202	752814	55.55	ppm	99
86)	Butylbenzylphthalate	14.626	149	384851	63.91	ppm	99
87)	Benzo[a]anthracene	15.529	228	711129	55.47	ppm	99
88)	3,3'-Dichlorobenzidine	15.567	252	268774	60.12	ppm	97
89)	Chrysene	15.599	228	599938	49.98	ppm	99
90)	bis(2-Ethylhexyl)phtha...	15.850	149	466319	61.75	ppm	96
92)	Di-n-octylphthalate	17.073	149	807594	63.73	ppm	99
93)	Benzo[b]fluoranthene	17.527	252	671521	50.29	ppm	96
94)	Benzo[k]fluoranthene	17.575	252	642699	52.07	ppm	99
95)	Benzo[a]pyrene	18.067	252	628852	56.58	ppm	99
96)	Indeno[1,2,3-cd]pyrene	19.824	276	561930	55.45	ppm	95
98)	Dibenz[a,h]anthracene	19.867	278	548817	52.34	ppm	94
100)	Benzo[g,h,i]perylene	20.236	276	583604	57.02	ppm	96

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

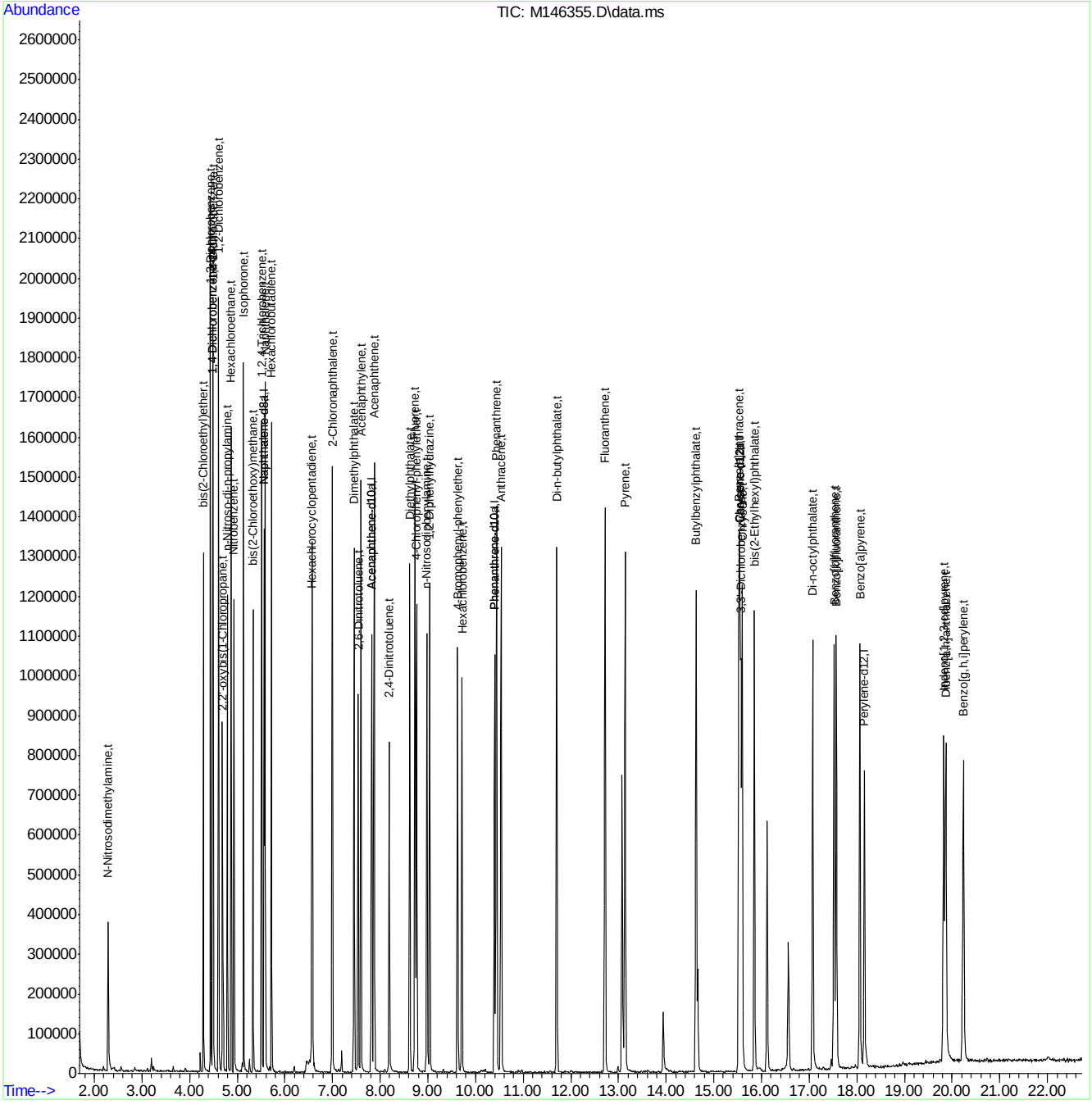
9.6.67

9

Quantitation Report (QT Reviewed)

Data Path : D:\EM6221\
Data File : M146355.D
Acq On : 24 May 2018 5:56 pm
Operator : seanb1
Sample : icv6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 18:09:50 2018
Quant Method : D:\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:56:16 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146356.D
Acq On : 24 May 2018 6:26 pm
Operator : seanb1
Sample : icv6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 24 20:00:59 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:56:16 2018
Response via : Initial Calibration

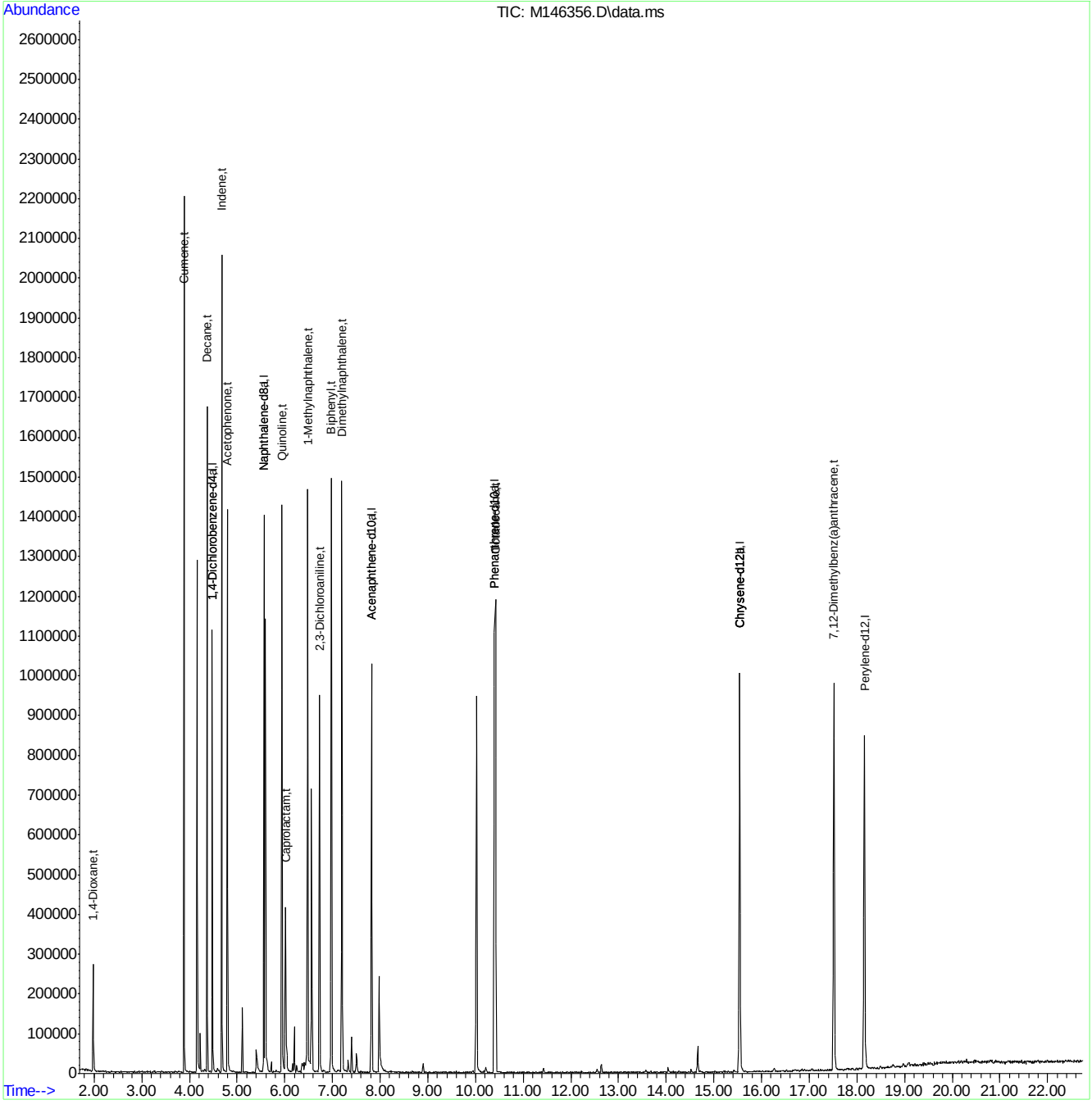
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.484	152	121229	40.00	ppm	0.00
24) Naphthalene-d8	5.563	136	480551	40.00	ppm	0.00
47) Acenaphthene-d10	7.818	164	233838	40.00	ppm	0.00
69) Phenanthrene-d10	10.398	188	478209	40.00	ppm	0.00
83) Chrysene-d12	15.542	240	502768	40.00	ppm	-0.02
91) Perylene-d12	18.160	264	473951	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.484	152	121229	40.00	ppm	0.00
103) Acenaphthene-d10a	7.818	164	233838	40.00	ppm	0.00
106) Chrysene-d12a	15.542	240	502768	40.00	ppm	-0.02
109) Phenanthrene-d10a	10.398	188	478209	40.00	ppm	0.00
112) Naphthalene-d8a	5.563	136	480551	40.00	ppm	0.00
114) Chrysene-d12b	15.542	240	502768	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	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%	
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.979	88	102919	49.85	ppm	96
6) Indene	4.676	116	394221	55.03	ppm	100
7) Cumene	3.886	105	631691	49.24	ppm	99
13) Decane	4.367	43	190235	46.41	ppm	96
18) Acetophenone	4.794	105	316028	47.47	ppm	94
27) Quinoline	5.937	129	424817	47.71	ppm	98
40) 2,3-Dichloroaniline	6.728	161	178891	37.94	ppm	95
41) Caprolactam	6.017	55	79886	42.56	ppm	93
45) 1-Methylnaphthalene	6.477	142	383877	41.38	ppm	99
46) Dimethylnaphthalene	7.198	156	349726	42.84	ppm	98
53) Biphenyl	6.974	154	488604	50.02	ppm	98
82) Octadecane	10.419	57	254330	51.04	ppm	96
99) 7,12-Dimethylbenz(a)an...	17.519	256	272698	41.08	ppm	92

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146356.D
Acq On : 24 May 2018 6:26 pm
Operator : seanb1
Sample : icv6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 24 20:00:59 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:56:16 2018
Response via : Initial Calibration



MM6221.M Thu May 24 20:01:04 2018 MSM

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146357.D
Acq On : 24 May 2018 6:56 pm
Operator : seanb1
Sample : icv6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 24 20:01:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:56:16 2018
Response via : Initial Calibration

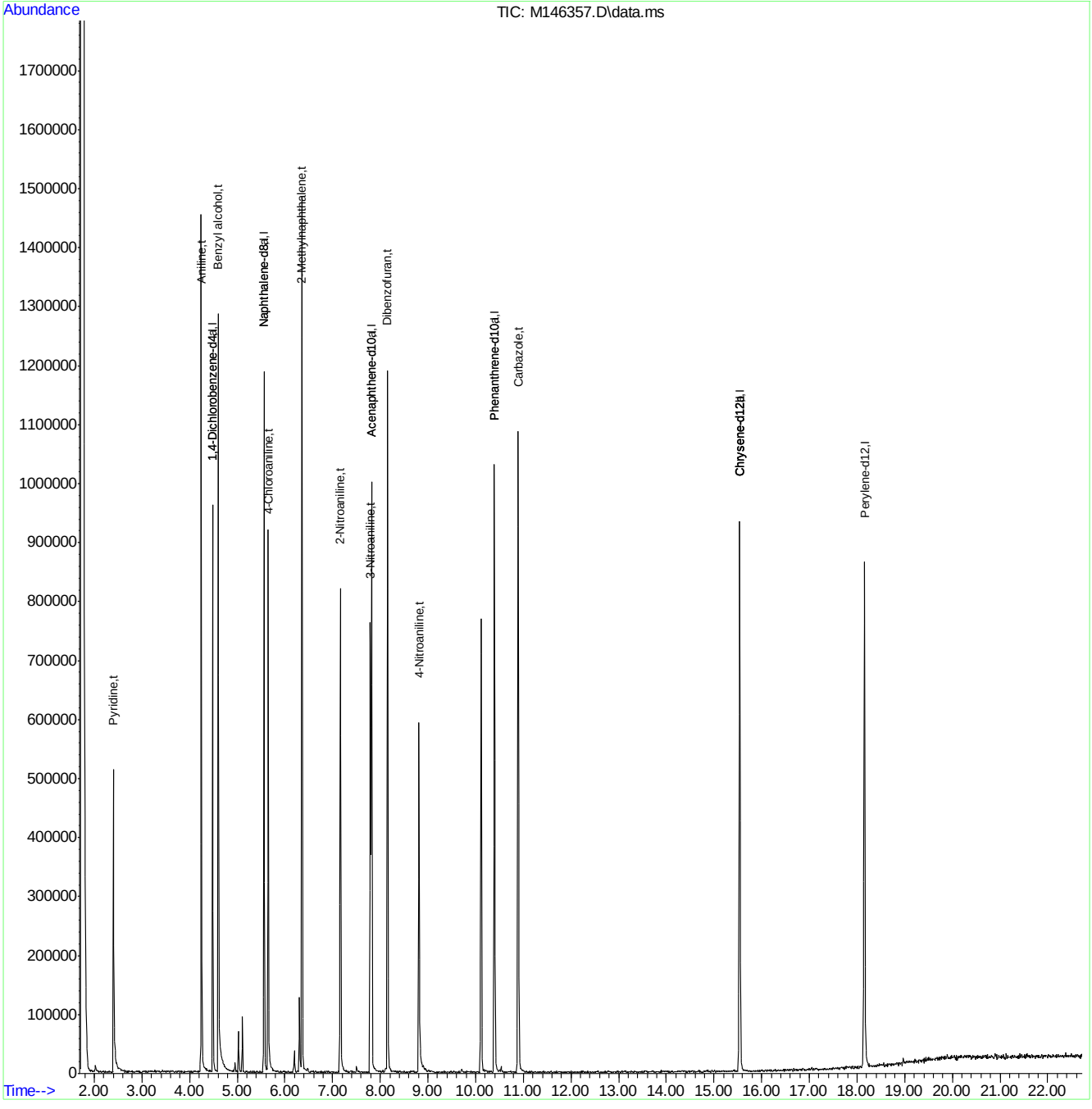
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.487	152	109868	40.00	ppm	0.00
24) Naphthalene-d8	5.561	136	451374	40.00	ppm	0.00
47) Acenaphthene-d10	7.821	164	230084	40.00	ppm	0.00
69) Phenanthrene-d10	10.396	188	464374	40.00	ppm	0.00
83) Chrysene-d12	15.540	240	487137	40.00	ppm	-0.02
91) Perylene-d12	18.158	264	470782	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.487	152	109868	40.00	ppm	0.00
103) Acenaphthene-d10a	7.821	164	230084	40.00	ppm	0.00
106) Chrysene-d12a	15.540	240	487137	40.00	ppm	-0.02
109) Phenanthrene-d10a	10.396	188	464374	40.00	ppm	0.00
112) Naphthalene-d8a	5.561	136	451374	40.00	ppm	0.00
114) Chrysene-d12b	15.540	240	487137	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	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%			
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
3) Pyridine	2.399	79	227325	48.36	ppm	97
10) Aniline	4.247	93	350751	54.26	ppm	94
16) Benzyl alcohol	4.600	108	126770	49.77	ppm	92
39) 4-Chloroaniline	5.652	127	224973	45.19	ppm	96
44) 2-Methylnaphthalene	6.357	141	329248	44.67	ppm	99
54) 2-Nitroaniline	7.164	65	158168	57.55	ppm	95
58) 3-Nitroaniline	7.794	138	108043	51.60	ppm	98
62) Dibenzofuran	8.152	168	514392	49.85	ppm	99
68) 4-Nitroaniline	8.815	138	107661	54.58	ppm	97
79) Carbazole	10.893	167	579956	51.36	ppm	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146357.D
Acq On : 24 May 2018 6:56 pm
Operator : seanb1
Sample : icv6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 24 20:01:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:56:16 2018
Response via : Initial Calibration



MM6221.M Thu May 24 20:01:55 2018 MSM

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146358.D
Acq On : 24 May 2018 7:26 pm
Operator : seanb1
Sample : icv6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 24 20:02:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:56:16 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.484	152	127515	40.00	ppm	0.00
24) Naphthalene-d8	5.563	136	486763	40.00	ppm	0.00
47) Acenaphthene-d10	7.818	164	269448	40.00	ppm	0.00
69) Phenanthrene-d10	10.398	188	527524	40.00	ppm	0.00
83) Chrysene-d12	15.542	240	566607	40.00	ppm	-0.02
91) Perylene-d12	18.160	264	581070	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4a	4.484	152	127515	40.00	ppm	0.00
103) Acenaphthene-d10a	7.818	164	269448	40.00	ppm	0.00
106) Chrysene-d12a	15.542	240	566607	40.00	ppm	-0.02
109) Phenanthrene-d10a	10.398	188	527524	40.00	ppm	0.00
112) Naphthalene-d8a	5.563	136	486763	40.00	ppm	0.00
114) Chrysene-d12b	15.542	240	566607	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
25) Nitrobenzene-d5	0.000	82	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%			
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery = 0.00%			
Target Compounds						Qvalue
88) 3,3'-Dichlorobenzidine	15.569	252	294633	51.32	ppm	94

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

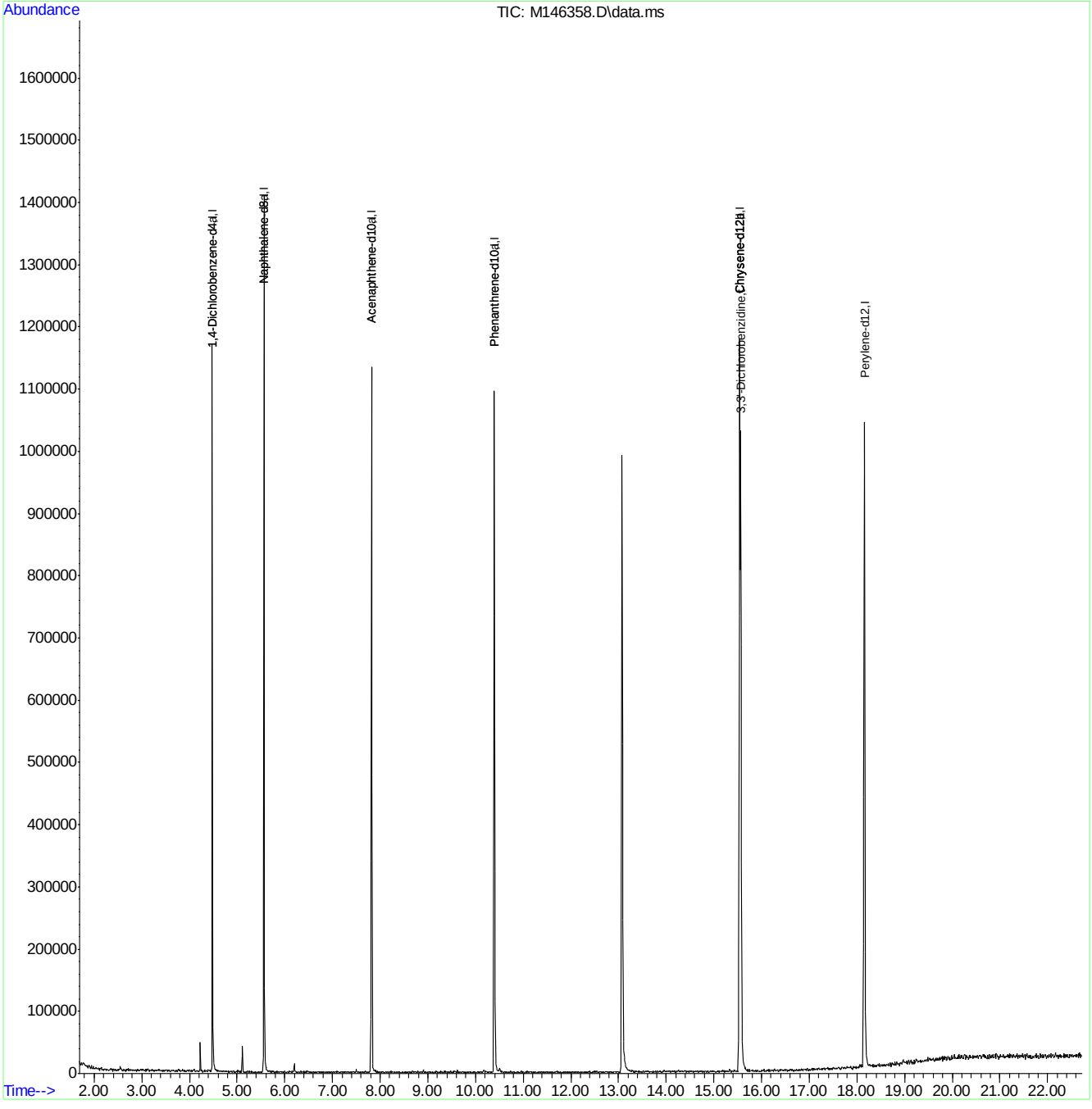
9.6.70

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6221\
Data File : M146358.D
Acq On : 24 May 2018 7:26 pm
Operator : seanb1
Sample : icv6221-50
Misc : op10492,em6221,1000,,,1,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 24 20:02:18 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Thu May 24 19:56:16 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6235\
Data File : M146678.D
Acq On : 6 Jun 2018 9:13 am
Operator : johnb1
Sample : cc6221-50
Misc : op10492,em6235,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 06 15:13:37 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Wed Jun 06 08:45:57 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.404	152	90323	40.00	ppm	-0.08
24) Naphthalene-d8	5.466	136	354859	40.00	ppm	-0.10
47) Acenaphthene-d10	7.688	164	214914	40.00	ppm	-0.14
69) Phenanthrene-d10	10.252	188	488805	40.00	ppm	-0.15
83) Chrysene-d12	15.395	240	485275	40.00	ppm	-0.16
91) Perylene-d12	18.013	264	410076	40.00	ppm	-0.15
101) 1,4-Dichlorobenzene-d4a	4.404	152	90323	40.00	ppm	0.00
103) Acenaphthene-d10a	7.688	164	214914	40.00	ppm	-0.14
106) Chrysene-d12a	15.395	240	485275	40.00	ppm	-0.16
109) Phenanthrene-d10a	10.252	188	488805	40.00	ppm	-0.15
112) Naphthalene-d8a	5.466	136	354859	40.00	ppm	-0.10
114) Chrysene-d12b	15.395	240	485275	40.00	ppm	-0.16
System Monitoring Compounds						
5) 2-Fluorophenol	3.442	112	171681	52.31	ppm	-0.07
Spiked Amount 50.000			Recovery	=	104.62%	
8) Phenol-d5	4.179	99	243202	56.44	ppm	-0.04
Spiked Amount 50.000			Recovery	=	112.88%	
25) Nitrobenzene-d5	4.836	82	266853	58.71	ppm	-0.09
Spiked Amount 50.000			Recovery	=	117.42%	
51) 2-Fluorobiphenyl	6.727	172	415513	52.16	ppm	-0.12
Spiked Amount 50.000			Recovery	=	104.32%	
73) 2,4,6-Tribromophenol	9.018	330	78021	52.70	ppm	-0.15
Spiked Amount 50.000			Recovery	=	105.40%	
85) Terphenyl-d14	13.419	244	601447	54.33	ppm	-0.15
Spiked Amount 50.000			Recovery	=	108.66%	
108) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
110) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.856	88	71031	46.18	ppm	80
3) Pyridine	2.208	79	175602	45.44	ppm	83
4) N-Nitrosodimethylamine	2.171	42	104695	46.76	ppm	90
6) Indene	4.596	116	274131	51.36	ppm	96
7) Cumene	3.800	105	546282	57.15	ppm	95
9) Phenol	4.190	94	268760	52.94	ppm	96
10) Aniline	4.169	93	286193	53.86	ppm	87
11) bis(2-Chloroethyl)ether	4.217	93	158607	51.91	ppm	92
12) 2-Chlorophenol	4.265	128	163568	51.53	ppm	96
13) Decane	4.291	43	101978	33.39	ppm	78
14) 1,3-Dichlorobenzene	4.361	146	188831	53.46	ppm	96
15) 1,4-Dichlorobenzene	4.420	146	184662	53.25	ppm	98
16) Benzyl alcohol	4.526	108	108535	51.83	ppm	88
17) 1,2-Dichlorobenzene	4.532	146	186139	55.59	ppm	99
18) Acetophenone	4.719	105	283917	57.23	ppm	96
19) 2-Methylphenol	4.633	108	153573	53.68	ppm	89
20) 2,2'-oxybis(1-Chloropr...	4.617	121	45793	50.65	ppm #	35

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6235\
Data File : M146678.D
Acq On : 6 Jun 2018 9:13 am
Operator : johnb1
Sample : cc6221-50
Misc : op10492,em6235,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 06 15:13:37 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Wed Jun 06 08:45:57 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
21) 3&4-Methylphenol	4.751	108	156893	52.28	ppm	#	73
22) n-Nitroso-di-n-propyla...	4.724	70	169044	59.16	ppm		82
23) Hexachloroethane	4.788	201	74827	55.88	ppm		95
26) Nitrobenzene	4.852	77	252036	54.76	ppm		95
27) Quinoline	5.851	129	335407	51.02	ppm		95
28) Isophorone	5.050	82	440623	58.00	ppm		95
29) 2-Nitrophenol	5.125	139	105048	58.97	ppm	#	73
30) 2,4-Dimethylphenol	5.183	107	221083	64.29	ppm		94
31) Benzoic acid	5.333	105	165702	58.13	ppm		93
32) bis(2-Chloroethoxy)met...	5.242	93	182159	49.47	ppm		97
33) 2,4-Dichlorophenol	5.360	162	147989	57.62	ppm		97
34) 2,6-Dichlorophenol	5.568	162	146407	60.86	ppm		98
35) 1,3,5-Trichlorobenzene	5.130	180	180817	54.97	ppm		99
36) 1,2,4-Trichlorobenzene	5.418	180	169668	53.92	ppm		97
37) 1,2,3-Trichlorobenzene	5.637	180	158713	51.92	ppm		89
38) Naphthalene	5.488	128	462986	49.59	ppm		99
39) 4-Chloroaniline	5.557	127	198872	50.82	ppm		94
40) 2,3-Dichloroaniline	6.615	161	200179	57.49	ppm		99
41) Caprolactam	5.958	55	60523	43.66	ppm		88
42) Hexachlorobutadiene	5.616	225	111225	57.04	ppm		98
43) 4-Chloro-3-methylphenol	6.129	107	215532	62.83	ppm		96
44) 2-Methylnaphthalene	6.246	141	305917	52.79	ppm		93
45) 1-Methylnaphthalene	6.369	142	356042	51.97	ppm		90
46) Dimethylnaphthalene	7.079	156	330772	54.87	ppm		98
48) Hexachlorocyclopentadiene	6.449	237	207956	104.96	ppm		99
49) 2,4,6-Trichlorophenol	6.636	196	124755	57.94	ppm		95
50) 2,4,5-Trichlorophenol	6.700	196	136798	60.66	ppm		98
52) 2-Chloronaphthalene	6.876	162	332364	52.02	ppm		98
53) Biphenyl	6.860	154	469817	52.34	ppm		96
54) 2-Nitroaniline	7.053	65	167353	65.18	ppm		92
55) Dimethylphthalate	7.330	163	450435	57.09	ppm		98
56) Acenaphthylene	7.469	152	549292	52.91	ppm		99
57) 2,6-Dinitrotoluene	7.416	165	94375	53.96	ppm		78
58) 3-Nitroaniline	7.678	138	101582	51.94	ppm		86
59) Acenaphthene	7.742	153	359584	52.75	ppm		99
60) 2,4-Dinitrophenol	7.865	184	85145	82.35	ppm		95
61) 4-Nitrophenol	8.068	109	90108	56.64	ppm	#	81
62) Dibenzofuran	8.025	168	546556	56.71	ppm		96
63) 2,4-Dinitrotoluene	8.068	165	136969	57.65	ppm		88
64) 2,3,4,6-Tetrachlorophenol	8.265	232	120053	60.64	ppm		98
65) Diethylphthalate	8.495	149	488728	59.06	ppm		97
66) Fluorene	8.591	166	438967	56.64	ppm		99
67) 4-Chlorophenyl-phenyle...	8.623	204	218087	56.16	ppm		95
68) 4-Nitroaniline	8.698	138	91773	49.81	ppm		81
70) 4,6-Dinitro-2-methylph...	8.767	198	78939	45.54	ppm		87
71) n-Nitrosodiphenylamine	8.847	169	316332	51.00	ppm		98
72) 1,2-Diphenylhydrazine	8.901	77	572450	53.82	ppm		95
74) 4-Bromophenyl-phenylether	9.483	248	151135	52.33	ppm		90
75) Hexachlorobenzene	9.574	284	168956	49.63	ppm		96
76) Pentachlorophenol	9.974	266	203822	102.12	ppm		97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6235\
Data File : M146678.D
Acq On : 6 Jun 2018 9:13 am
Operator : johnb1
Sample : cc6221-50
Misc : op10492,em6235,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 06 15:13:37 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Wed Jun 06 08:45:57 2018
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
77)	Phenanthrene	10.300	178	614301	47.54	ppm	98
78)	Anthracene	10.391	178	638635	50.25	ppm	99
79)	Carbazole	10.754	167	623566	52.46	ppm	99
80)	Di-n-butylphthalate	11.561	149	889986	59.62	ppm	98
81)	Fluoranthene	12.570	202	847160	55.48	ppm	97
82)	Octadecane	10.279	57	208028	40.84	ppm	78
84)	Pyrene	12.987	202	841434	56.45	ppm	99
86)	Butylbenzylphthalate	14.482	149	400047	60.40	ppm	87
87)	Benzo[a]anthracene	15.379	228	759579	53.87	ppm	99
88)	3,3'-Dichlorobenzidine	15.422	252	274298	55.78	ppm	95
89)	Chrysene	15.449	228	665009	50.37	ppm	97
90)	bis(2-Ethylhexyl)phtha...	15.705	149	518633	62.44	ppm	99
92)	Di-n-octylphthalate	16.934	149	884406	72.85	ppm	96
93)	Benzo[b]fluoranthene	17.382	252	723202	56.69	ppm	99
94)	Benzo[k]fluoranthene	17.430	252	601180	50.84	ppm	99
95)	Benzo[a]pyrene	17.916	252	620070	58.23	ppm	96
96)	Indeno[1,2,3-cd]pyrene	19.668	276	457394	47.11	ppm	96
97)	Dibenz(a,h)acridine	19.348	279	437426	48.83	ppm	97
98)	Dibenz[a,h]anthracene	19.711	278	464382	46.22	ppm	98
99)	7,12-Dimethylbenz(a)an...	17.382	256	351133	61.13	ppm	97
100)	Benzo[g,h,i]perylene	20.069	276	445127	45.39	ppm	97

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

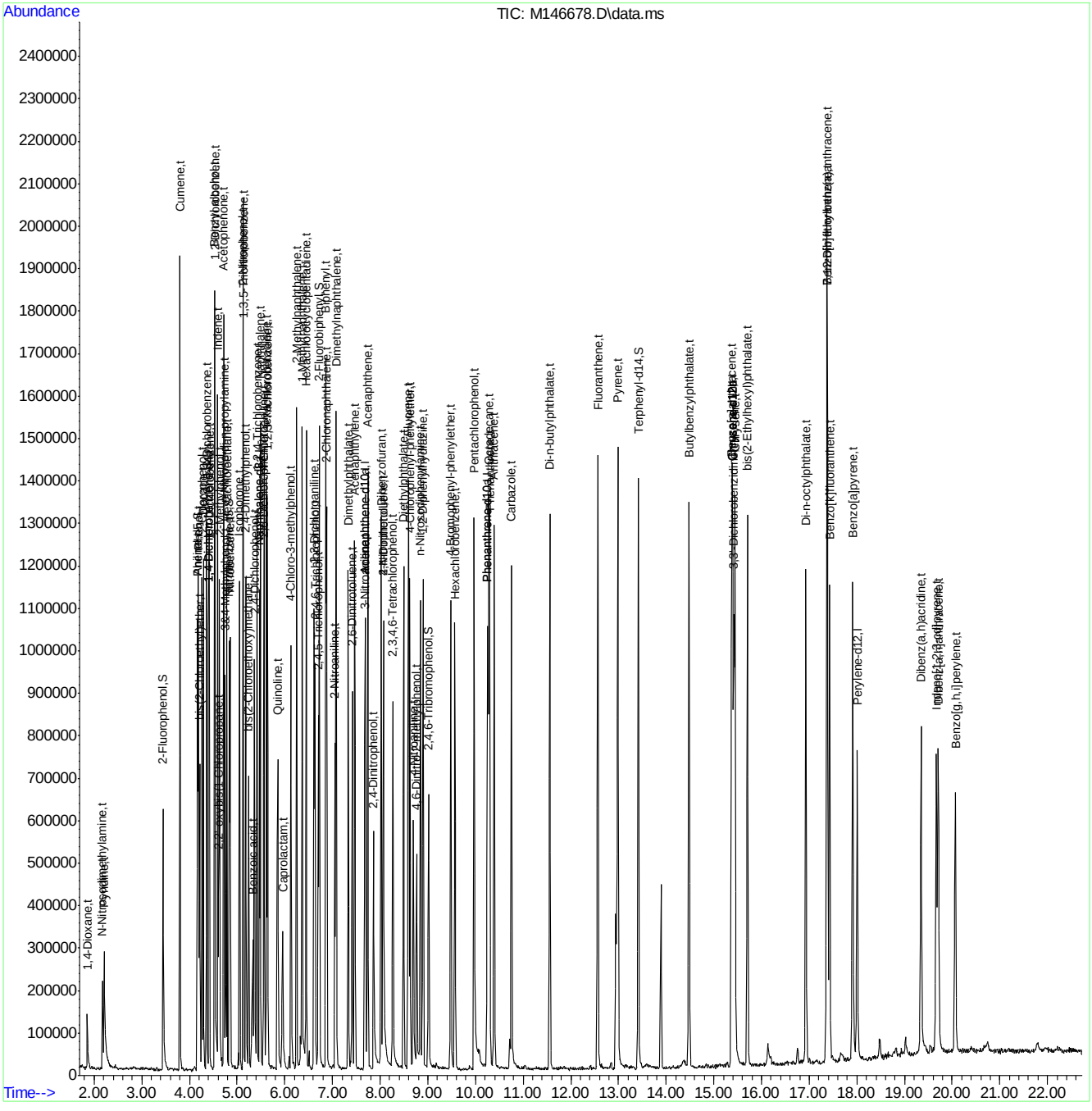
9.6.71

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6235\
Data File : M146678.D
Acq On : 6 Jun 2018 9:13 am
Operator : johnb1
Sample : cc6221-50
Misc : op10492,em6235,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 06 15:13:37 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Wed Jun 06 08:45:57 2018
Response via : Initial Calibration



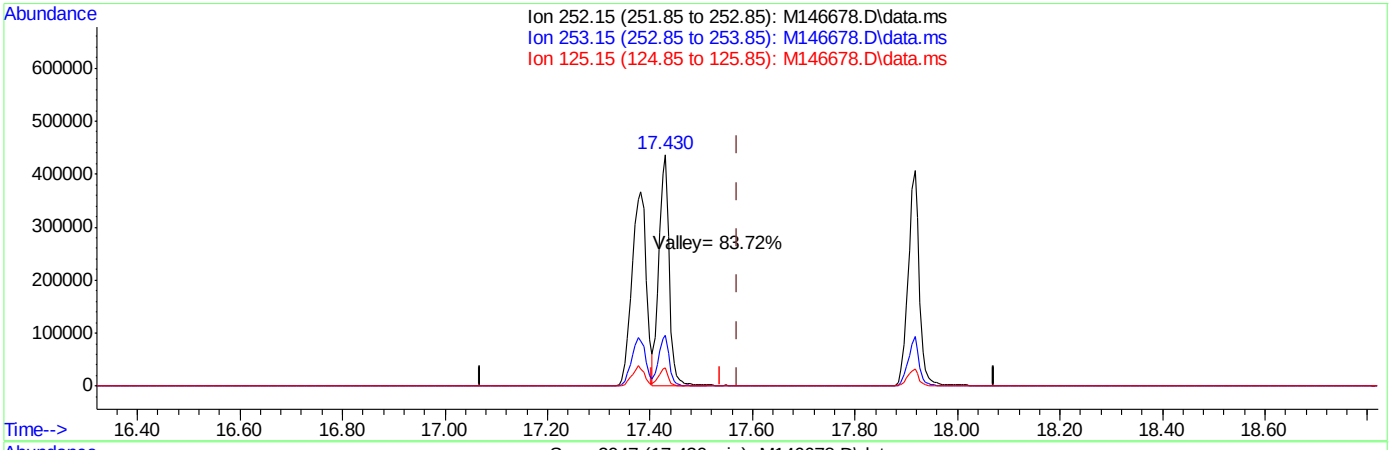
MM6221.M Thu Jun 07 14:35:32 2018 MSM

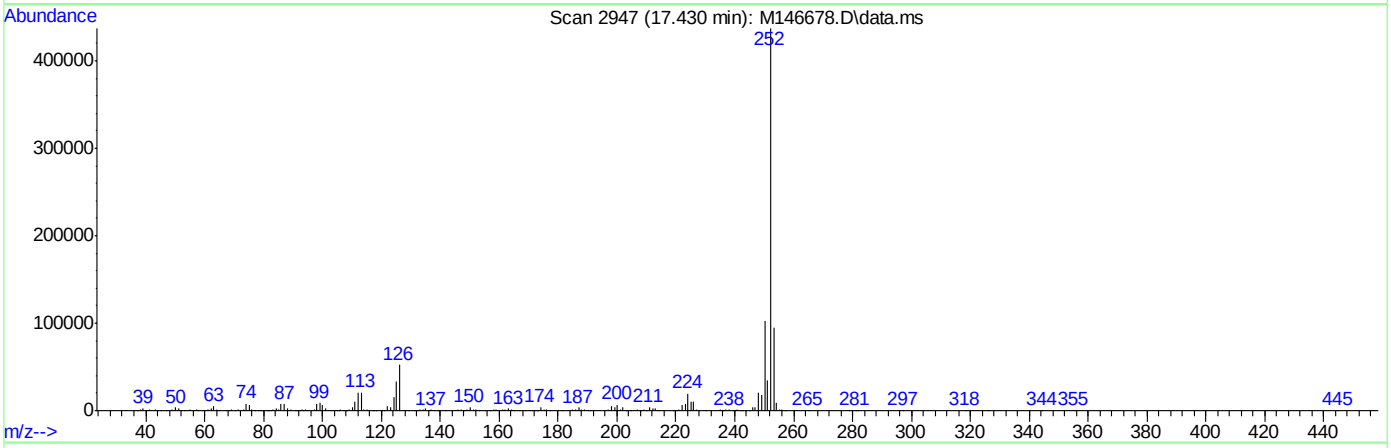
Page: 4

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\EM6235\
Data File : M146678.D
Acq On : 6 Jun 2018 9:13 am
Operator : johnb1
Sample : cc6221-50
Misc : op10492,em6235,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 06 09:36:34 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Wed Jun 06 08:45:57 2018
Response via : Initial Calibration





TIC: M146678.D\data.ms

(94) Benzo[k]fluoranthene (t)

17.430min (-0.140) 50.84ppm

response 601180

Ion	Exp%	Act%
252.15	100	100
253.15	20.80	21.55
125.15	8.00	7.73
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6235\
Data File : M146679.D
Acq On : 6 Jun 2018 9:43 am
Operator : johnb1
Sample : cc6169-50
Misc : op10492,em6235,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 06 15:15:41 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Wed Jun 06 08:45:57 2018
Response via : Initial Calibration

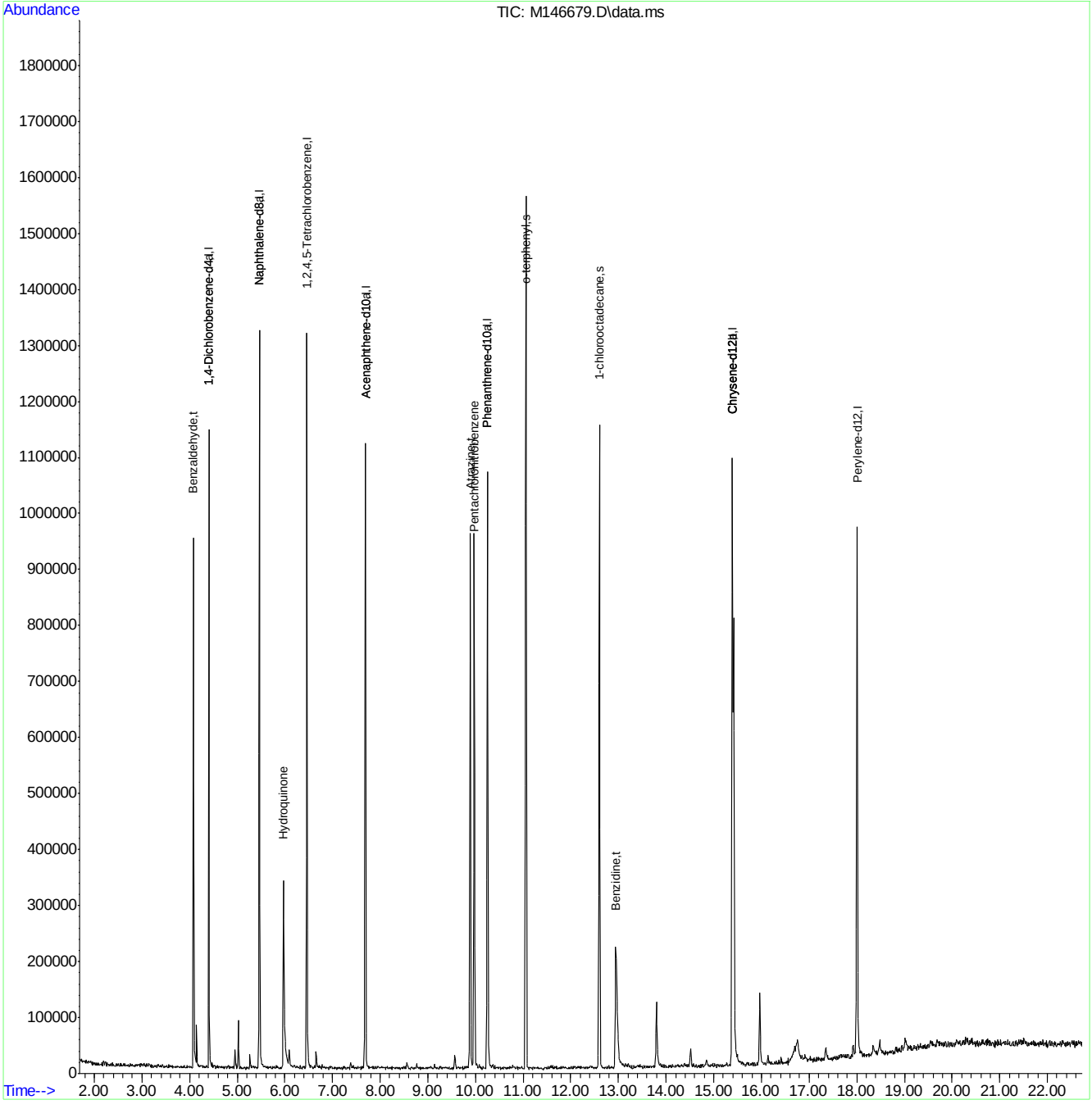
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.406	152	122093	40.00	ppm	-0.08
24) Naphthalene-d8	5.464	136	417104	40.00	ppm	-0.10
47) Acenaphthene-d10	7.691	164	253894	40.00	ppm	-0.13
69) Phenanthrene-d10	10.255	188	495022	40.00	ppm	-0.15
83) Chrysene-d12	15.393	240	561320	40.00	ppm	-0.17
91) Perylene-d12	18.010	264	525021	40.00	ppm	-0.16
101) 1,4-Dichlorobenzene-d4a	4.406	152	122093	40.00	ppm	0.00
103) Acenaphthene-d10a	7.691	164	253894	40.00	ppm	-0.13
106) Chrysene-d12a	15.393	240	561320	40.00	ppm	-0.17
109) Phenanthrene-d10a	10.255	188	495022	40.00	ppm	-0.15
112) Naphthalene-d8a	5.464	136	417104	40.00	ppm	-0.10
114) Chrysene-d12b	15.393	240	561320	40.00	ppm	-0.17
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%	
108) 1-chlorooctadecane	12.599	57	150925	44.68	ppm	-0.22
Spiked Amount 50.000			Recovery	=	89.36%	
110) o-terphenyl	11.061	230	390858	57.03	ppm	-0.14
Spiked Amount 50.000			Recovery	=	114.06%	
Target Compounds						Qvalue
102) Benzaldehyde	4.080	105	127491	36.46	ppm #	85
104) 1,2,4,5-Tetrachloroben...	6.463	216	211670	50.15	ppm	96
105) Atrazine	9.892	215	79596	59.88	ppm #	84
107) Benzidine	12.952	184	222015	24.53	ppm	96
111) Pentachloronitrobenzene	9.977	295	32855	65.10	ppm #	84
113) Hydroquinone	5.971	110	189925	55.03	ppm	62

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\EM6235\
Data File : M146679.D
Acq On : 6 Jun 2018 9:43 am
Operator : johnb1
Sample : cc6169-50
Misc : op10492,em6235,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 06 15:15:41 2018
Quant Method : C:\MSDCHEM\1\METHODS\MM6221.M
Quant Title : Semi Volatile GC/MS, rtx-5ms 30mx0.25mmx0.25um
QLast Update : Wed Jun 06 08:45:57 2018
Response via : Initial Calibration



MM6221.M Wed Jun 06 15:15:49 2018 MSM

SEMI-VOLATILE by GCMS ANALYSIS

SGS

Batch ID: E2M4618

Print Analyst Name: Christina Chang

Analyst Signature: [signature]

Date: 5/9/2018

Columns: Rxi 5Sil ms 30m x .25mm x .25u

Method: 8270D 1625

Initial Cal. Method: M2M4618

Injection Volume: 1 µl

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
SV172354-161	DF100	Spike
A0136190	D3TD	400µg
181954	DCM	—

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: 5/11/18

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	L+	IS	SU	Status (Data)	Comments
	2M103893	DF100				1					a	10:22 am
	103894	IC4618-100		BNA Test		2					~~a~~	SV182451-1A
	103895	IC4618-100		BNA		2					a	SV182451-1A
	103896	-50				3					a	-1B
	103897	IC4618-50				4					a	-1C
	103898	IC4618-25				5					a	-1D
	103899	-10				6					a	-1E
	103900	-5				7					a	-1G
	103901	-2				8					a	-1H
	103902	-1				9					a	-1I 2:25

MTX = Matrix. Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.

All strikeouts must be initialed, dated, and reason applied if not transcription error

Sample volume/weight used and final volumes refer to extraction log.

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Form: OR015-08
Rev. Date: 5/25/17

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SEMI-VOLATILE by GCMS ANALYSIS

SGS

Batch ID: E2M4619

Print Analyst Name: Sufiyan Ahmed

Analyst Signature:

Date: 5/9/18

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
SV172359-61	DFTPP	50ppm
136190	STD	40ppm
181959	DCM	

Columns: Rxi5Sltms 30mx.25m x.25mm

Method 8270D/625

Initial Cal. Method M2M4618

Injection Volume: 1 uL

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature:

Date: 5/11/18

Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution.	L+	IS	SU	Status (Data)	Comments
2M1039.D3	DFTPP				1					ai	6:30pm
904	ic4618-100		TCLP		2					ai	SV182451-3A
905	-80				3					ai	-3B
906	ic4618-50				4					ai	-3C
907	ic4618-25				5					ai	-3D
908	-10				6					ai	-3E
909	-5				7					ai	-3G
910	-2				8					ai	-3H
911	-1				9					ai	-3I
912	ICV4618-50		ABN Surr		10					ai	op182158-02
913	ICV4618-50	S.A.S	~~TCLP~~ Acid Spike		11					ai	op182158-32
914	ICV4618-50		Aniline		12					ai	op172606-124
915	-50		BN1		13					ai	op182158-29
916	-50		BN2		14					ai	-10
917	-50		B2D 3rd		15					ai	SV172359-37
1039.18	ICV4619-50		4th		16					ai	op182158-41 7.14

MTX = Matrix. Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.

All strikeouts must be initialed, dated, and reason applied if not transcription error

Sample volume/weight used and final volumes refer to extraction log.

Form: OR015-08

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SGS

SEMI-VOLATILE by GCMS ANALYSIS

Batch ID: E2M4620

Print Analyst Name: Christine Chang

Analyst Signature:

Date: 5/11/2017

Columns: Rxi 5Sil MS 30m x .3 mm x .25

Method: 8270D/625

Initial Cal. Method: M2M4618

Injection Volume: 1 µl

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
SV182451-61	DFTPP	50 ng
136190	SRM	400 µg
189961	DCM Chkd	—

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature:

Date: 5/11/17

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	L+	IS	SU	Status (Data)	Comments
	2M103919	DFTPP				1					OK	Bakeout run
	103920	DFTPP				1					OK	1:43 pm
	103921	ICV 4hr-50		8270Line		2					OK	1:55 pm

X = Matrix. Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.

Bakeouts must be initialed, dated, and reason applied if not transcription error

Sample volume/weight used and final volumes refer to extraction log.

Form: OR015-08
Date: 5/25/17

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GCMS Semi Volatile Run Log

Instrument ID: GCMS2M

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	SV172359-61	50ppm	Internal Standard	A0136190	4000ppm
BNA	sv182451-23b	50ppm	DCM-fisher	182955	---
TCL42	sv182451-3P	25ppm			
TCL42 verification	sv172359-74c	5ppm			

Column	Isilms 30mX0.25mmX0.2	Initial Calib Date	5/9/2018	Sequence Loaded By:	christc2	Quant Method/s	M2M4618
Batch ID	E2M4654	Analysis Date	6/5/2018	Data Processed By:		Injection Volume	1 uL
Approved By:		Approved Date					

☐ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
2M	104764	DFTPP				1					ok	11:58am
2M	104765	CC4618-50				2					ok	
2M	104766a	OP12498-MB	OP12498		AQ	3		X		y	ok	system froze RR as A file
2M	104767	OP12498-BS	OP12498		AQ	4		X		y	ok	
2M	104768	OP12498-BSD	OP12498		AQ	5		X		y	ok	
2M	104769	JC67121-2	OP12498	AB8270SL	AQ	6				y	ok	
2M	104770	JC67121-5	OP12498	AB8270SL	AQ	7			n	y	ok	#2 low
2M	104771	JC67240-16	OP12501	B8270PAH	AQ	8	10			y	ok	
2M	104772	JC67240-3	OP12501	B8270PAH	AQ	9	10		Y	y	NOT ok	RR 25x; CORR: NEEDS DILUTION
2M	104773	JC67240-4	OP12501	B8270PAH	AQ	10	10		Y	Y	NOT OK	CORR: NEEDS DILUTION

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
2M	104774	JC67039-2	OP12478	B8270PAH	SO	11			Y	Y	OK	
2M	104775	JC67039-1	OP12478	B8270PAH	SO	12			Y	Y	OK	
2M	104776	JC66683-2	OP12440	B8270PAH	SO	13	2		Y	Y	OK	
2M	104777	DCM CLEANUP				14						
	104778	JC67185-1	OP12498	B8270MNAP	AQ	15			Y	Y	OK	
	104779	JC67185-2	OP12498	B8270MNAP	AQ	16			Y	Y	OK	
	104780	JC67185-4	OP12498	B8270MNAP	AQ	17			Y	Y	OK	
	104781	JC67185-5	OP12498	B8270MNAP	AQ	18			Y	Y	OK	
	104782	JC67185-3	OP12498	B8270MNAP	AQ	19			Y	Y	OK	08:48PM

SGS

Batch ID: ESP2386

Print Analyst Name: John Boudreau

Analyst Signature: [signature]

Date: 05-07-18

Columns: Rtx-5Silms 30m x .25mm x .25u

Method: 8270D/625

Initial Cal. Method: MSP2385

Injection Volume: 1uL

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
1723941	DFTPP	50ppm
A0136190	ISTD	4000ppm
181959	DCM - Fisher	—

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [signature] Date: 5/8/18

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	L+	IS	SU	Status (Data)	Comments
	5P49973	DFTPP				1					Ca	2:10pm
	49974	IC2386-100		TCL42		2					Ca	SV182451-3A
	49975	-80				3					Ca	-3B
	49976	IC2386-50				4					Ca	-3C
	49977	IC2386-25				5					Ca	-3D
	49978	-10				6					Ca	-3E
	49979	-5				7					Ca	-3G
	49980	-2				8					Ca	-3H
	49981	-1				9					Ca	-3I
	49982	ICV2385-50		ABN Surr		10					Ca	OP182158-02
	49983	-50		Acid Spike		11					Ca	-32
	49984	-50		Aniline 3rd		12					Ca	OP172106-124
	49985	-50		BN1		13					Ca	OP182158-29
	49986	-50		BN2		14					Ca	-24
	49987	-50		Bzd 3rd		15					Ca	SV172359-37
	49988	ICV2386-50		HQ		16					Ca	OP182158-42 8.13

MTX = Matrix. Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.

All strikeouts must be initialed, dated, and reason applied if not transcription error

Sample volume/weight used and final volumes refer to extraction log.

Form: OR015-08
Rev. Date: 5/25/17

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GCMS Semi Volatile Run Log

Instrument ID: GCMS5P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv172359-61	50ppm			
ISTD	A0136190	4000ppm			
DCM Fisher	181961	---			

Column	MS30mx0.25mm0.25mic	Initial Calib Date	5/15/2018	Sequence Loaded By:	seanb1	Quant Method/s	M5P2399
Batch ID	E5P2399	Analysis Date	5/15/2018	Data Processed By:	seanb1	Injection Volume	1microliter
Approved By:	NINAP	Approved Date	16/2018 8:34:24 A				

☐ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
5P	50524	DFTPP				1					OK	1:18am
5P	50525	IC2399-100		BNA		2					OK	SV182451-1A
5P	50526	IC2399-80				3					OK	SV182451-1B
5P	50527	ICC2399-50				4					OK	SV182451-1C
5P	50528	IC2399-25				5					OK	SV182451-1D
5P	50529	IC2399-10				6					OK	SV182451-1E
5P	50530	IC2399-5				7					OK	SV182451-1G
5P	50531	IC2399-2				8					OK	SV182451-1H
5P	50532	IC2399-1				9					OK	SV182451-1I
5P	50533	ICV2399-50		ABN Surrogate		10					OK	OP182158-02

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
5P	50534	ICV2399-50		Acids		11					OK	OP182158-32
5P	50535	ICV2399-50		Anilines		12					OK	OP182158-96
5P	50536	ICV2399-50		BN1		13					OK	OP182158-101
5P	50537	ICV2399-50		BN2		14					RR	Run Method Error
5P	50538	ICV2399-50		BN2		15					OK	OP182158-77
5P	50539	ICV2399-50		Benzidine 3rd		16					OK	SV172359-37; 10:55am

GCMS Semi Volatile Run Log

Instrument ID: GCMS5P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv172359-61	50ppm			
BNA	SV182451-23d	25ppm			
TCL42	SV182451-3q	25ppm			
ISTD	A0136190	4000ppm			
DCM Fisher	182955	---			

Column	MS30mx0.25mm0.25mic	Initial Calib Date	5/15/2018	Sequence Loaded By:	christc2	Quant Method/s	M5P2399
Batch ID	E5P2426	Analysis Date	6/5/2018	Data Processed By:	aimeel	Injection Volume	1uL
Approved By:	NINAP	Approved Date	8/2018 3:47:36 P				

☐ SW846 8270 D
☐ EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
5P	50912	DFTPP				1					no	441 low RR
5P	50913	DFTPP				1					no	8:50am
5P	50914	CC2399-25				2					no	areas out reinstall
5P	50915	DFTPP				1					no	bad injection
5P	50916	DFTPP				1					no	wrong vial
5P	50917	DFTPP				1					no	68, 275 high, 441 low RR
5P	50918	DFTPP				1					no	441 low lowered flow
5P	50919	DFTPP				1					no	441 out; lowered 414, raised 502
5P	50920	DFTPP				1					no	441 out, raise split
5P	50921	DFTPP				1					no	pcp tailing up; raise flow

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
5P	50922	DFTPP				1					no	441 out; lower flow
5P	50923	DFTPP				1					no	441 out; calibrate mass axis and peak widths
5P	50924	DFTPP				1					no	441 out; raise EM volts
5P	50925	DFTPP				1					no	12:24pm
5P	50926	CC2399-25				2					OK	High: #13,54,61,82
5P	50927	CC2386-25				3					OK	High: #104,106,109,110,111,113
	50928	OP12498-MB	OP12498		AQ	4		X	ok	ok	ok	
	50929	OP12498-BS	OP12498		AQ	5		X	ok	ok	ok	
	50930	OP12498-BSD	OP12498		AQ	6		X	ok	ok	ok	
	50931	OP12498-BS13	OP12498		AQ	7		X	ok	ok	ok	
	50932	JC67070-4	OP12475	B8270NAP+2MNAP	AQ	8	10	X	not ok	ok	ok	CORR: Surrout #8
5P	50933	JC66980-4	OP12420	AB625PPL	AQ	9	2		ok	ok	ok	
5P	50934	JC66983-1	OP12420	AB625PPL	AQ	10			not ok	ok	ok ok	CORR: Surrout #5,8,25,51,73,85 / Needs Dilution
	50935	OP12498-MS	OP12498		AQ	11		X	ok	ok	ok	
	50936	OP12498-MSD	OP12498		AQ	12		X	ok	ok	ok	
5P	50937	JC67110-3	OP12498	AB8270TCL20-14DX	AQ	13			ok	ok	ok	
5P	50938	JC67110-4	OP12498	AB8270TCL20-14DX	AQ	14			ok	ok	ok	
5P	50939	JC67110-5	OP12498	AB8270TCL20-14DX	AQ	15			ok	ok	ok	
5P	50940	JC67071-1	OP12498	B8270PAH	AQ	16			ok	ok	ok	

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
5P	50941	JC67071-2	OP12498	B8270PAH	AQ	17			ok	ok	ok	
5P	50942	JC67071-3	OP12498	B8270PAH	AQ	18			ok	ok	ok	
5P	50943	JC67235-2	OP12498	B8270PAH	AQ	19			ok	ok	ok	
5P	50944	JC67235-4	OP12498	B8270PAH	AQ	20			ok	ok	ok	
5P	50945	JC67235-6	OP12498	B8270PAH	AQ	21			ok	ok	ok	
5P	50946	JC67235-9	OP12498	B8270PAH	AQ	22			ok	ok	ok	
5P	50947	JC67235-11	OP12498	B8270PAH	AQ	23			ok	ok	ok	
5P	50948	JC67235-12	OP12498	B8270PAH	AQ	24			ok	ok	ok	
	50949	LA44463-1	OP12498	AB8270SL,BMS+HQ	AQ	25		X	not ok	ok	ok	CORR: SurrOut #8 / Needs Dilution; 12:06am
5P	50950	OP12509-MB	OP12509	AB8270MCP,B8270BAPYRN,B8270CP51FO,B8270PAH	SO	26					no	Not using / not needed; ran after 5p50934
5P	50951	JC66780-1	OP12509	AB8270STD+	SO	27		X			no	Not using / not needed
5P	50952	DCM CLEANUP				28					ok	

SGS

SEMI-VOLATILE by GCMS ANALYSIS

Batch ID: EM 6169 9 4/17/18

Print Analyst Name: Christopher Sm

Analyst Signature:

Date: 4/17/18

Columns: Rtx-5Sil MS 30m x 0.25mm x 0.25µ

Method 8270D 1625

Initial Cal. Method 6168

Injection Volume: 1µ

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
SU173359-61	d-Phe	50µg
A0133754	F590	400µg
181398	Acr Cmb	

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: 4/17/18

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	L+	IS	SU	Status (Data)	Comments
	195288	d-Phe				1					ok	
	195289	ICC 6169-100		TCL42		16					ok	SU173359-79A
	195290	-80				17					ok	->88
	195291	ICC 6169-50				18					ok	->86
	195292	ICC 6169-25				19					ok	->90
	195293	-10				20					ok	->96
	195294	-5				21					ok	->90
	195295	-2				22					ok	->94
	195296	-1				23					ok	->92
	195297	ICV 6169-50		HQ2		24					ok	0A18215892
	195298	-50		Aniline		12					ok	0A172106-14
	195299	-50		BN1		13					ok	0A18215823
	195300	-50		BN2		14					ok	0A18215825
	195301	-50		Bzd3		15					ok	SU172287252 5:1
	Ts 4/17/18											

MTX = Matrix . Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.

All strikeouts must be initialed, dated, and reason applied if not transcription error

Sample volume/weight used and final volumes refer to extraction log.

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Rev. Date: 5/25/17

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GCMS Semi Volatile Run Log

Instrument ID: GCMSM

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
dftpp	sv172359-61	50ppm			
bna	sv182451-1N	50ppm			
ISTD	A0136190	4000ppm			
DCM-Fisher	181961	--			

Column	i5silms30mx.25mmx.25u	Initial Calib Date	5/24/18	Sequence Loaded By:	seanb1	Quant Method/s	MM6221
Batch ID	EM6221	Analysis Date	5/24/2018	Data Processed By:	seanb1	Injection Volume	1uL
Approved By:	NINAP	Approved Date	29/2018 9:39:33 A				

- [x] SW846 8270 D
- [ ] EPA 625

Data File		Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	146343	DFTPP				1					OK	12:16pm
M	146344	CC6168-50				2					NO	Recalibrate
M	146345	IC6221-2				3					OK	SV182451-1H
M	146346	IC6221-1				4					OK	SV182451-1I
M	146347	IC6221-100				5					OK	SV182451-1A
M	146348	IC6221-80				6					OK	SV182451-1B
M	146349	ICC6221-50				7					OK	SV182451-1C
M	146350	IC6221-25				8					OK	SV182451-1D
M	146351	IC6221-10				9					OK	SV182451-1E
M	146352	IC6221-5				10					OK	SV182451-1G

GCMS Semi Volatile Run Log

Data File		Sample ID	OP Batch ID	Test	MTX	A L S	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	146353	ICV6221-50		ABN Surrogate		11					OK	OP182158-02
M	146354	ICV6221-50		Acids		12					OK	OP182158-32
M	146355	ICV6221-50		BN1		13					OK	OP182158-101
M	146356	ICV6221-50		BN2		14					OK	OP182158-77
M	146357	ICV6221-50		Anilines		15					OK	OP182158-96
M	146358	ICV6221-50		Benzidine 3rd		16					OK	SV172359-37; 7:26pm

GCMS Semi Volatile Run Log

Instrument ID: GCMSM

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
dftpp	sv172359-61	50ppm			
bna	sv182451-23c	50ppm			
tcl42	sv182451-3k	50ppm			
TCL42 ver	sv182451-3y	2ppm			
ISTD	A0136190	4000ppm			
DCM	182955	---			

Column	i5silms30mx.25mmx.25u	Initial Calib Date	5/24/18	Sequence Loaded By:	johnb1	Quant Method/s	MM6221
Batch ID	EM6235	Analysis Date	6/6/2018	Data Processed By:		Injection Volume	1uL
Approved By:		Approved Date					

☑ SW846 8270 D
☐ EPA 625

	Data File	Sample ID	OP Batch ID	Test	MTX	ALS	Dil	L+	Surr OK?	IS OK?	Data OK?	Comment
M	146676	DFTPP				1					no	275 high
M	146677	DFTPP				1					ok	9:01am
M	146678	CC6221-50		bna		2					ok	13 low 30 34 43 50 54 64 86 90 92 99 high
M	146679	CC6169-50		tcl42		3					ok	102,107 low
M	146680	TCL42 2PPM VER				4						
M	146681	OP12498-MB	OP12498		AQ	5		X				
	146682	LA44463-1	OP12498	AB8270SL,BMS+HQ	AQ	6	50	X				
M	146683A	JC67069-4	OP12474	AB8270NJTCL20+,BMS+MNAP	AQ	7	25	X				software shutdown, RR as "A" file
M	146684	DA5707-1	OP12324	AB8270TCLP	AQ	8	5					
	146685	OP12509-MS	OP12509	AB8270MCP,B8270BAPYRN,B8270CP51FO,B8270PAH	SO	9						

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
	146686	OP12474-MSD	OP12474	AB8270NJTCL20+,B8270MNAP,B8270XH,BMS+MNAP	AQ	10		X				
	146687	JC67069-3	OP12474	AB8270NJTCL20+,BMS+MNAP	AQ	11		X				
M	146688	JC66944-13R	OP12474	B8270TCL20+AO	AQ	12		X				
M	146689	JC66950-4	OP12479	AB8270TCL20+	SO	13		X	y	y	ok	
M	146690	JC66950-1	OP12479	AB8270TCL20+	SO	14		X	y	y	ok	
M	146691	JC67053-6	OP12479	AB8270TCL20+	SO	15		X				
M	146692	JC67053-3	OP12479	AB8270TCL20+	SO	16		X				
M	146693	JC67053-8	OP12479	AB8270TCL20+	SO	17		X				
M	146694	JC67053-7	OP12479	B8270PAH	SO	18			Y	Y	OK	
M	146695	JC67053-5	OP12479	B8270PAH	SO	19			Y	Y	OK	
	146696	OP12479-MS	OP12479	AB8270TCL20,AB8270TCL20+,B8270PAH	SO	20		X	Y	Y	OK	
	146697	OP12479-MSD	OP12479	AB8270TCL20,AB8270TCL20+,B8270PAH	SO	21		X	Y	Y	OK	
M	146698	JC66948-2	OP12479	AB8270TCL20+	SO	22		X	Y	Y	OK	

Acid Base/Neutrals Extraction Log - Aqueous (MS)

Date Started: 6/4/2018 **Time Started:** 13:10

Date Finished: 06/04/2018 **Time Finished:** 1708

Batch # OP12498	**Rack #** Green S1 A
Set-up by:	YB
Extracted By:	YB
Concentrated By:	Js
Final Vol. Top-up:	
Vialed By:	Js
Supervisor Review:	AY 6/4/18

Extraction Method:

Seperatory Funnel: SW846 3510C/CLP/other ☑ 3510C SIM ☐

Continuous Liquid Liquid: SW846 3520C/CLP/other ☐ EPA 625 ☐

Special Client Spike Instructions

QC ID # for Special Spike	Amt to Spike	Spike ID	Lot #	Conc.	Amt Spiked
BS13	50uL	HQ	OP18215842	1000ppm	50uL

Sample #	Analysis Type	Samp Bot #	Sample Description	Sample Vol (mL)	Res. Chlorine '+' or '-')	pH Adjust (mL) <2 H2SO4	pH Adjust (mL) >11 NaOH	Final extract Color	Final extract Vol (ml)	Misc. Cleanup	Misc. Comments
JC67071-2	ABN 8270	2	Brown	1000		1	4	brown	1.0		
JC67110-5	ABN 8270	1	Yellow	800		1	4	Lt yellow	1.0		

Sample #	Analysis Type	Samp Bot #	Sample Description	Sample Vol (mL)	Res. Chlorine '+' or '-')	pH Adjust (mL) <2 H2SO4	pH Adjust (mL) >11 NaOH	Final extract Color	Final extract Vol (ml)	Misc. Cleanup	Misc. Comments
OP12498-MB	ABN 8270		DI H2O	1000		1	4	Clear	1.0		
OP12498-BS	ABN 8270		DI H2O	1000		1	4	Yellow	1.0		
OP12498-BSD	ABN 8270		DI H2O	1000		1	4	Yellow	1.0		

Acid Base/Neutrals Extraction Log - Aqueous (MS)

Sample #	Analysis Type	Samp Bot #	Sample Description	Sample Vol (mL)	Res. Chlorine ("+" or "-")	pH Adjust (mL)		Final extract		Misc.	
						<2 H2SO4	>11 NaOH	Color	Vol (ml)	Cleanup	Comments
OP12498-MS	ABN 8270	2	Yellow	900		1	4	yellow	1.0		
OP12498-MSD	ABN 8270	3	Yellow	900		1	4	yellow	1.0		
OP12498A-BS1	ABN 8270		DI H2O	1000		1	4	Lt yellow	1.0		
OP12498A-BSD	ABN 8270		DI H2O	1000		1	4	Lt yellow	1.0		
OP12498-BS13	ABN 8270		DI H2O	1000		1	4	Clear	1.0		
JC67071-1	ABN 8270	2	Yellow	800		1	4	tan	1.0		
JC67071-3	ABN 8270	1	Yellow	900		1	4	Lt yellow	1.0		
JC67110-3	ABN 8270	2	Yellow	850		1	4	tan	1.0		
JC67110-4	ABN 8270	1	Yellow	850		1	4	Lt yellow	1.0		
JC67121-2	ABN 8270	1	Clear	1040		1	4	clear	1.0		
JC67121-5	ABN 8270	4	Clear	800		1	4	clear	1.0		
JC67185-1	ABN 8270	2	Yellow	1040		1	4	clear	1.0		
JC67185-2	ABN 8270	1	Yellow	1050		1	4	clear	1.0		
JC67185-3	ABN 8270	2	Yellow	1050		1	4	yellow	1.0		
JC67185-4	ABN 8270	2	Yellow	1050		1	4	clear	1.0		
JC67185-5	ABN 8270	1	Clear	1050		1	4	clear	1.0		
JC67235-2	ABN 8270	1	Yellow	1000		1	4	clear	1.0		
JC67235-4	ABN 8270	1	Yellow	800		1	4	clear	1.0		
JC67235-6	ABN 8270	2	Yellow	1000		1	4	brown	1.0		
JC67235-9	ABN 8270	2	Yellow	1000		1	4	Lt yellow	1.0		
JC67235-11	ABN 8270	2	Yellow	1040		1	4	Lt yellow	1.0		
JC67235-12	ABN 8270	2	Yellow	1000		1	4	clear	1.0		

Acid Base/Neutrals Extraction Log - Aqueous (MS)

Sample #	Analysis Type	Samp Bot #	Sample Description	Sample Vol (mL)	Sgs. Chlorine + ' or " ( )	pH Adjust (mL)		Final extract		Misc.	
						<2 H2SO4	>11 NaOH	Color	Vol (ml)	Cleanup	Comments
LA44463-1	ABN 8270	1	Yellow	1050		1	4	Orange	1.0		

Acid Base/Neutrals Extraction Log - Aqueous (MS)

Equipment/Range	ID	Observed Temp (°C)	Correction Factor (°C)	Corrected Temp (°C)	Pressure/Flowrate
Buchi (65-71°C)					
Buchi Chiller					
Waterbath (70-80°C)	3,6	72, 74	4, 1	76, 74	N/A
Waterbath Chiller (GPM)	F3	0	-	-	2
NEVAP (32-38°C, LPM)	4	34	1	35	10

SURROGATE	LOT #	CONC (ppm)	AMT (mL)
ABN	OP182158123	50	1.0
ABN DOD SIM			
WITNESS SIGN:		SPIKE SIGN:	

Reagent	LOT #		Brand
NaOH	172020		FISHER
H2SO4	2802876		RICCA
Sodium Sulfate	181892	5/25/18A	FISHER
Glass Wool	303R17-2		LAB
Filter Paper			
pH Strips	212713		HYDRION
Chlorine Strips			

MATRIX SPIKE	LOT #	CONC (ppm)	AMT (mL)
Acid	OP182158102	50	1.0
Acid (for SIM)	OP182158102	50	0.1
Base #1	OP182158116	50	1.0
Base #2	OP182158128	50	1.0
Aniline	OP182158115	50	1.0
BSIM	OP182158138	1	1.0
WITNESS SIGN:		SPIKE SIGN:	

SOLVENT	LOT #	Brand	AMT (mL)
METH CHLOR	182955	FISHER	60X6

Special Processing Instructions

Rx Reason:

1.0

Spiking:

Weights/Volumes:

Required MS/MSD:

Final Volume:

Other:

Batch Comments:

SGS

Form: OP022A-15 Rev Date: 04/26/2018

Acid Base/Neutrals Extraction Log - Aqueous (MS)

Approved By: _____ Approval Date: _____

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: JC67110
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

JC67110-3, JC67110-4, JC67110-5

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: JC67110
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

JC67110-3, JC67110-4, JC67110-5

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: JC67110
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

JC67110-3, JC67110-4, JC67110-5

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

Job Number: JC67110
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

JC67110-3, JC67110-4, JC67110-5

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: JC67110
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

JC67110-3, JC67110-4, JC67110-5

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.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC67110
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

JC67110-3, JC67110-4, JC67110-5

CAS No.	Compound	JC67110-4 ug/l	Q	Spike 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: JC67110
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

JC67110-3, JC67110-4, JC67110-5

CAS No.	Compound	JC67110-4 ug/l	Q	Spike 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.

Internal Standard Area Summary

Job Number: JC67110
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 AREA	RT	IS 2 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	RT	IS 2 AREA	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
ZZZZZZ	272284231	2.14	1051501975	2.01
ZZZZZZ	270967588	2.14	349239917	1.94
ZZZZZZ	243779920	2.13	354226492	1.94
ZZZZZZ	252916074	2.14	300416120	1.94
ZZZZZZ	263165780	2.14	372005853	1.94
JC67110-3	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
JC67110-5	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.

Internal Standard Area Summary

Job Number: JC67110
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 AREA	RT	IS 2 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	RT	IS 2 AREA	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
ZZZZZZ	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.

DDT/Endrin Breakdown Check

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: G6G1671-DDT
Lab File ID: 6G55778.D
Instrument ID: GC6G
Injection Date: 04/30/18
Injection Time: 10:46

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 %
Endrin aldehyde	0	0
Endrin ketone	3648777	6453656
Endrin	397383387	243111166
Endrin Breakdown [b]	0.9 %	2.6 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
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: JC67110
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 %
Endrin aldehyde	2591023	1454611
Endrin ketone	3375620	2361375
Endrin	366782301	241078839
Endrin Breakdown [b]	1.6 %	1.6 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
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
ZZZZZZ	6G56983.D	06/06/18	11:41	02:05	(unrelated sample)
ZZZZZZ	6G56984.D	06/06/18	11:59	02:23	(unrelated sample)
ZZZZZZ	6G56985.D	06/06/18	12:17	02:41	(unrelated sample)
ZZZZZZ	6G56986.D	06/06/18	12:35	02:59	(unrelated sample)
ZZZZZZ	6G56987.D	06/06/18	12:53	03:17	(unrelated sample)
JC67110-3	6G56988.D	06/06/18	13:11	03:34	MW-102
JC67110-4	6G56989.D	06/06/18	13:28	03:52	MW-103
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
JC67110-5	6G56992.D	06/06/18	14:22	04:46	DUP-05312018
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: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: G8G511-DDT
Lab File ID: 8G15805.D
Instrument ID: GC8G
Injection Date: 06/11/18
Injection Time: 11:20

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 %
Endrin aldehyde	586825	1941265
Endrin ketone	1936459	2752330
Endrin	213794709	405059351
Endrin Breakdown [b]	1.2 %	1.1 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
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: JC67110
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 %
Endrin aldehyde	632249	1361496
Endrin ketone	5022410	3258753
Endrin	196554671	413069338
Endrin Breakdown [b]	2.8 %	1.1 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
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
ZZZZZZ	8G15850.D	06/12/18	13:27	04:56	(unrelated sample)

GC Identification Summary

Job Number: JC67110
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	0.0
alpha-BHC	2	3.53	3.53	0.13		ug/l	
beta-BHC	1 [a]	3.34	3.34	0.13		ug/l	0.0
beta-BHC	2	4.02	4.02	0.13		ug/l	
delta-BHC	1 [a]	3.52	3.52	0.086		ug/l	7.8
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	7.4
alpha-Chlordane	2	6.20	6.20	0.14		ug/l	
gamma-Chlordane	1 [a]	4.94	4.93	0.12		ug/l	22.2
gamma-Chlordane	2	5.98	5.98	0.15		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	0.13		ug/l	7.4
4,4'-DDD	2	7.39	7.39	0.14		ug/l	
4,4'-DDE	1 [a]	5.21	5.21	0.13		ug/l	7.4
4,4'-DDE	2	6.46	6.46	0.14		ug/l	
4,4'-DDT	1	6.45	6.45	0.13		ug/l	0.0
4,4'-DDT	2 [a]	7.91	7.91	0.13		ug/l	
Endrin	1	5.92	5.92	0.14		ug/l	0.0
Endrin	2 [a]	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	6.85	6.85	0.14		ug/l	7.4
Endrin aldehyde	2 [a]	8.11	8.11	0.13		ug/l	
Endrin ketone	1	7.96	7.96	0.13		ug/l	8.0
Endrin ketone	2 [a]	9.52	9.52	0.12		ug/l	
Endosulfan-I	1 [a]	5.28	5.28	0.13		ug/l	0.0
Endosulfan-I	2	6.29	6.29	0.13		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	3.75	3.75	0.13		ug/l	0.0
Heptachlor	2 [a]	4.49	4.49	0.13		ug/l	
Heptachlor epoxide	1 [a]	4.77	4.77	0.12		ug/l	8.0
Heptachlor epoxide	2	5.71	5.71	0.13		ug/l	
Methoxychlor	1	7.23	7.23	0.13		ug/l	8.0
Methoxychlor	2 [a]	9.14	9.14	0.12		ug/l	

(a) QC results reported from this column.

GC Identification Summary

Job Number: JC67110
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.

GC Identification Summary

Job Number: JC67110
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.

GC Identification Summary

Job Number: JC67110
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.

GC Identification Summary

Job Number: JC67110
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.

GC Identification Summary

Job Number: JC67110
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.

GC Identification Summary

Job Number: JC67110
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.

GC Identification Summary

Job Number: JC67110
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.

Surrogate Recovery Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Method: SW846 8081B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
JC67110-3	6G56988.D	56	65	36	41
JC67110-4	6G56989.D	51	56	39	43
JC67110-5	6G56992.D	63	72	40	43
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
S1 = Tetrachloro-m-xylene	13-153%
S2 = Decachlorobiphenyl	10-138%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

Surrogate Recovery Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Method: SW846 8082A **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
JC67110-3	XX229861.D	73	79	48	49
JC67110-4	XX229842.D	55	63	43	44
JC67110-5	XX229862.D	72	76	44	46
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

GC Surrogate Retention Time Summary

Job Number: JC67110
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

GC Surrogate Retention Time Summary

Job Number: JC67110
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
ZZZZZZ	6G56983.D	06/06/18	11:41	2.52	2.91	9.77	11.65
ZZZZZZ	6G56984.D	06/06/18	11:59	2.52	2.91	9.77	11.65
ZZZZZZ	6G56985.D	06/06/18	12:17	2.52	2.91	9.77	11.65
ZZZZZZ	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
JC67110-3	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
JC67110-5	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

GC Surrogate Retention Time Summary

Job Number: JC67110
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
ZZZZZZ	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

GC Surrogate Retention Time Summary

Job Number: JC67110
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
ZZZZZZ	XX229852.D	06/03/18	05:02	2.82	3.55	9.93	11.94
ZZZZZZ	XX229853.D	06/03/18	05:18	2.82	3.55	9.93	11.94
ZZZZZZ	XX229854.D	06/03/18	05:35	2.82	3.55	9.93	11.93
ZZZZZZ	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

GC Surrogate Retention Time Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Check Std:	GXX6375-CC6349	**Injection Date:**	06/03/18
Lab File ID:	XX229858.D	**Injection Time:**	06:42
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	XX229860.D	06/03/18	07:15	2.82	3.55	9.93	11.94
JC67110-3	XX229861.D	06/03/18	07:32	2.82	3.55	9.93	11.94
JC67110-5	XX229862.D	06/03/18	07:48	2.82	3.55	9.93	11.94
JC66947-1	XX229863.D	06/03/18	08:05	2.83	3.55	9.93	11.94
OP12456-MS	XX229864.D	06/03/18	08:22	2.82	3.55	9.92	11.94
OP12456-MSD	XX229865.D	06/03/18	08:38	2.82	3.55	9.92	11.96
ZZZZZZ	XX229866.D	06/03/18	08:55	2.83	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

Initial Calibration Summary

Job Number: JC67110
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										

Initial Calibration Summary

Job Number: JC67110 **Sample:** G6G1671-ICC1671
Account: BBLNYS Arcadis **Lab FileID:** 6G55784.D
Project: National Grid, Philly Coke, Philadelphia PA

```
          0.516 0.458 0.468 0.480 0.473 0.552 0.487 0.482          0.490    6.24
 24)  Mirex
          0.833 0.792 0.774 0.785 0.773 1.050 0.798 0.858          0.833   11.13
 25)  Endrin Ketone
          0.924 0.912 0.956 1.006 1.005 1.086 1.029 0.931          0.981    6.17
 26)  Decachlorobiphenyl
          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
```

Initial Calibration Summary

Job Number: JC67110 **Sample:** G6G1671-ICC1671
Account: BBLNYS Arcadis **Lab FileID:** 6G55784.D
Project: National Grid, Philly Coke, Philadelphia PA

```
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: JC67110
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: JC67110
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 SPCC's out = 0 CCC's out = 0
6g55784.d 6PST1671.M Mon Apr 30 17:38:40 2018

10.9.2

10

Initial Calibration Verification

Job Number: JC67110
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: JC67110
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

Initial Calibration Verification

Job Number: JC67110
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: JC67110
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

10.9.6

10

Continuing Calibration Summary

Job Number: JC67110
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

Continuing Calibration Summary

Job Number: JC67110 **Sample:** G6G1701-CC1671
Account: BBLNYS Arcadis **Lab FileID:** 6G56977.D
Project: National Grid, Philly Coke, Philadelphia PA

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 SPCC's out = 0 CCC's out = 0
6g56894.d 6PST1671.M Wed Jun 06 16:35:06 2018

10.9.7

10

Continuing Calibration Summary

Job Number: JC67110
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

Continuing Calibration Summary

Job Number: JC67110 **Sample:** G6G1701-CC1671
Account: BBLNYS Arcadis **Lab FileID:** 6G57000.D
Project: National Grid, Philly Coke, Philadelphia PA

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 SPCC's out = 0 CCC's out = 0
6g55784.d 6PST1671.M Thu Jun 07 15:24:53 2018

Initial Calibration Summary

Job Number: JC67110
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

Initial Calibration Summary

Job Number: JC67110 **Sample:** G8G511-ICC511
Account: BBLNYS Arcadis **Lab FileID:** 8G15811.D
Project: National Grid, Philly Coke, Philadelphia PA

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

10.9.9 10

Initial Calibration Verification

Job Number: JC67110
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      : 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	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: JC67110
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 SPCC's out = 0 CCC's out = 0
8g15811.d 8PST511.M Tue Jun 12 07:24:54 2018

10.9.10

10

Initial Calibration Verification

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: G8G511-ICV511
Lab FileID: 8G15818.D

Evaluate Continuing Calibration Report

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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 SPCC's out = 0 CCC's out = 0
8g15812.d 8PST511.M Tue Jun 12 07:25:20 2018

Initial Calibration Verification

Job Number: JC67110
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      : 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	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              SPCC's out = 0  CCC's out = 0
 8g15812.d  8PST511.M        Tue Jun 12 07:25:22 2018
```

Initial Calibration Verification

Job Number: JC67110
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 SPCC's out = 0 CCC's out = 0
8g15812.d 8PST511.M Tue Jun 12 07:25:24 2018

Initial Calibration Verification

Job Number: JC67110
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
```

Continuing Calibration Summary

Job Number: JC67110
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      : op12466,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

Continuing Calibration Summary

Job Number: JC67110 **Sample:** G8G513-CC511
Account: BBLNYS Arcadis **Lab FileID:** 8G15833.D
Project: National Grid, Philly Coke, Philadelphia PA

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 SPCC's out = 0 CCC's out = 0
8g15812.d 8PST511.M Wed Jun 13 08:29:42 2018

10.9.15
10

Initial Calibration Summary

Job Number: JC67110
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

Initial Calibration Summary

Job Number: JC67110 **Sample:** GXX6349-ICC6349
Account: BBLNYS Arcadis **Lab FileID:** XX228516.D
Project: National Grid, Philly Coke, Philadelphia PA

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: JC67110
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

Initial Calibration Verification

Job Number: JC67110
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\gxx6349\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 SPCC's out = 0 CCC's out = 0
xx228516.D PCB6349.M Tue May 15 08:42:33 2018

10.9.17 10

Initial Calibration Verification

Job Number: JC67110
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\gxx6349\xx228524.D\ECD2B.CH
Acq On    : 14 May 2018   8:12 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
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 SPCC's out = 0 CCC's out = 0
xx228516.D PCB6349.M Tue May 15 08:42:34 2018

10.9.18 10

Initial Calibration Verification

Job Number: JC67110
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\gxx6349\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 SPCC's out = 0 CCC's out = 0
xx228516.D PCB6349.M Tue May 15 08:42:35 2018

10.9.19 10

Initial Calibration Verification

Job Number: JC67110
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\gxx6349\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 SPCC's out = 0 CCC's out = 0
xx228516.D PCB6349.M Tue May 15 08:42:36 2018

Initial Calibration Verification

Job Number: JC67110
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\gxx6349\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 SPCC's out = 0 CCC's out = 0
xx228516.D PCB6349.M Tue May 15 08:42:37 2018

Continuing Calibration Summary

Job Number: JC67110
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

Continuing Calibration Summary

Job Number: JC67110 **Sample:** GXX6375-CC6349
Account: BBLNYS Arcadis **Lab FileID:** XX229836.D
Project: National Grid, Philly Coke, Philadelphia PA

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

Continuing Calibration Summary

Job Number: JC67110 **Sample:** GXX6375-CC6349
Account: BBLNYS Arcadis **Lab FileID:** XX229836.D
Project: National Grid, Philly Coke, Philadelphia PA

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 SPCC's out = 0 CCC's out = 0
xx228515.D PCB6349.M Mon Jun 04 09:12:48 2018

10.9.22
10

Continuing Calibration Summary

Job Number: JC67110
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: JC67110 **Sample:** GXX6375-CC6349
Account: BBLNYS Arcadis **Lab FileID:** XX229847.D
Project: National Grid, Philly Coke, Philadelphia PA

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

Continuing Calibration Summary

Job Number: JC67110
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 SPCC's out = 0 CCC's out = 0
xx230003.D PCB6349.M Thu Jun 07 09:03:26 2018

Continuing Calibration Summary

Job Number: JC67110
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

Continuing Calibration Summary

Job Number: JC67110 **Sample:** GXX6375-CC6349
Account: BBLNYS Arcadis **Lab FileID:** XX229858.D
Project: National Grid, Philly Coke, Philadelphia PA

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

Continuing Calibration Summary

Job Number: JC67110
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 SPCC's out = 0 CCC's out = 0
xx229992.D PCB6349.M Thu Jun 07 09:03:47 2018

10.9.24
10

Continuing Calibration Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA
Sample: GXX6375-CC6349
Lab FileID: XX229869.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\msdchem\1\DATA\gx...5\xx229869.D\ECD1A.CH Vial: 33
Signal #2 : C:\msdchem\1\DATA\gxx6375\xx229869.D\ECD2B.CH
Acq On    : 03 Jun 2018   9:45 am                    Operator: edouarda
Sample    : cc6349-1000                              Inst    : HP G1530A
Misc      : op12456,GXX6375,15.0,,,10,1              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	11.967 E6	-11.1	108	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	213.064 E3	-11.2	108	0.03	3.16- 3.22

Continuing Calibration Summary

Job Number: JC67110 **Sample:** GXX6375-CC6349
Account: BBLNYS Arcadis **Lab FileID:** XX229869.D
Project: National Grid, Philly Coke, Philadelphia PA

42		AR1016-B	357.258	384.431	E3	-7.6	108	0.02	3.54- 3.60
43		AR1016-C	839.914	878.670	E3	-4.6	104	0.02	4.09- 4.15
44		AR1016-D	307.649	331.448	E3	-7.7	107	0.02	4.25- 4.31
45		AR1016-E	319.093	347.208	E3	-8.8	108	0.01	4.73- 4.80
46		AR1260-A	948.136	888.631	E3	6.3	99	0.00	7.07- 7.13
47		AR1260-B	424.911	469.910	E3	-10.6	102	0.00	7.22- 7.28
48		AR1260-C	434.730	459.836	E3	-5.8	98	0.00	7.55- 7.62
49		AR1260-D	1.230	1.344	E6	-9.3	98	0.00	7.99- 8.05
50		AR1260-E	1.175	1.099	E6	6.5	87	0.00	8.38- 8.44
51	S	Decachlorobiphenyl	12.518	11.747	E6	6.2	94	0.00	9.90- 9.97

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	10.040	11.585	E6	-15.4	111	0.02	3.53- 3.59
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	181.945	E3	-9.1	108	0.02	4.18- 4.24
42		AR1016-B	328.484	349.014	E3	-6.2	107	0.00	4.72- 4.78
43		AR1016-C	755.277	765.450	E3	-1.3	102	0.00	5.36- 5.42
44		AR1016-D	314.241	320.717	E3	-2.1	103	0.00	5.54- 5.60
45		AR1016-E	220.231	217.377	E3	1.3	99	0.00	6.20- 6.26
46		AR1260-A	0.992	0.857	E6	13.6	94	0.00	8.80- 8.86
47		AR1260-B	552.387	551.055	E3	0.2	96	0.00	8.91- 8.97

Continuing Calibration Summary

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Sample: GXX6375-CC6349
Lab FileID: XX229869.D

48		AR1260-C	507.378	501.445	E3	1.2	95	0.00	9.35- 9.41
49		AR1260-D	1.336	1.341	E6	-0.4	93	0.00	9.70- 9.76
50		AR1260-E	1.197	1.157	E6	3.3	90	0.00	10.24-10.30
51	S	Decachlorobiphenyl	11.436	10.471	E6	8.4	95	0.00	11.91-11.97

(#) = Out of Range SPCC's out = 0 CCC's out = 0
xx228516.D PCB6349.M Mon Jun 04 09:12:04 2018

10.9.25
10

GC/LC Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
Data File : 6g56988.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Jun-18, 13:11:03
Operator : rebeccak
Sample : jc67110-3
Misc : OP12449,g6g1701,300,,,2,1
ALS Vial : 59 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 07 12:42:06 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	2.134	398.1E6	272.7E6	50.000	50.000
27) I 1-bromo-2...	1.939	2.134	398.1E6	272.7E6	50.000	50.000
33) I 1-bromo-2...	1.939	2.134	398.1E6	272.7E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.521	2.913	173.9E6	131.2E6	22.476	25.837
Spiked Amount	40.000	Range	30 - 150	Recovery	= 56.19%	64.59%
26) SA Decachlor...	9.768	11.654	114.9E6	82289276	14.572	16.243
Spiked Amount	40.000		Recovery		= 36.43%	40.61%
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.

11.1.1

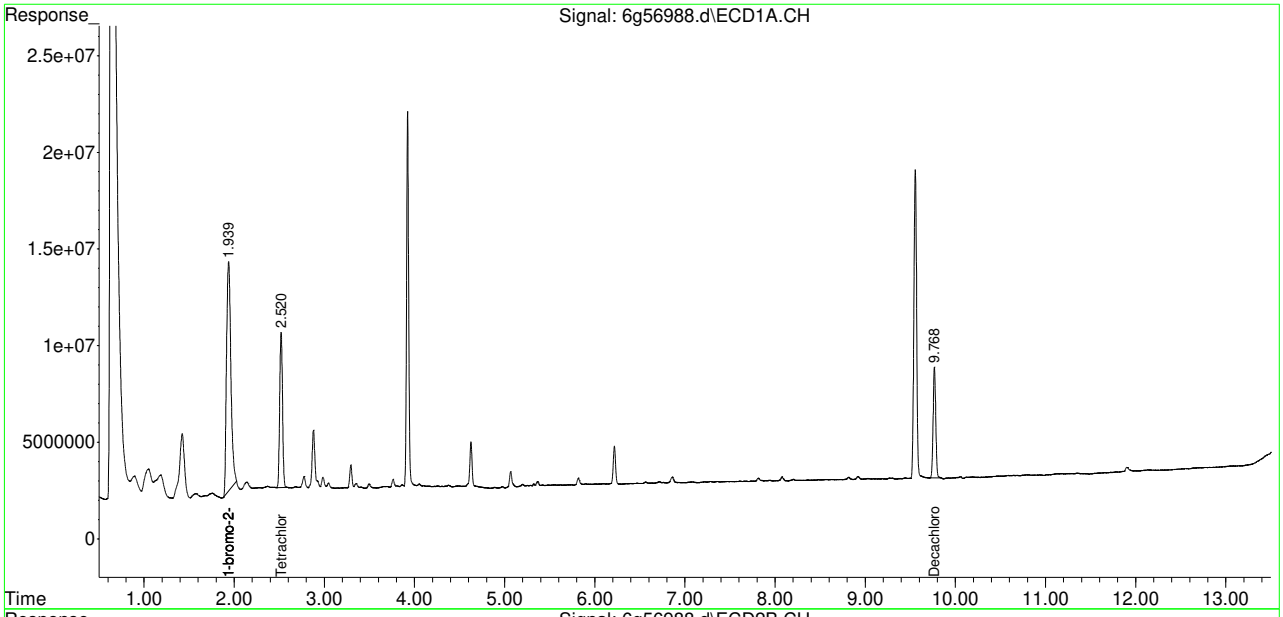
11

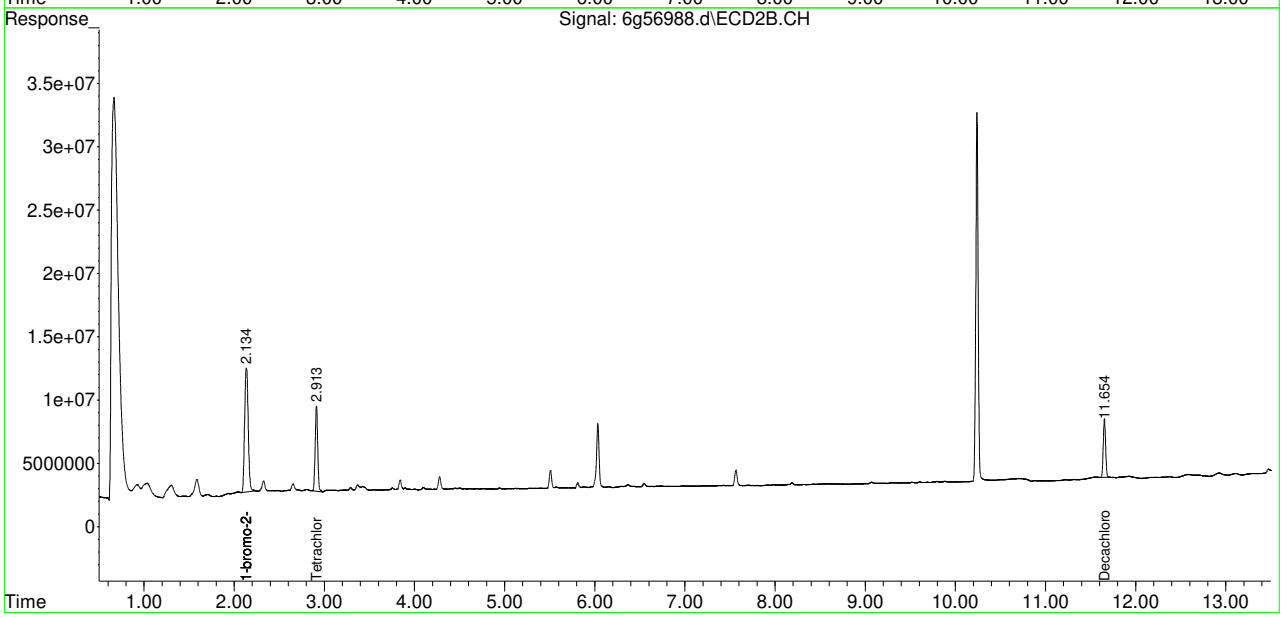
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
Data File : 6g56988.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Jun-18, 13:11:03
Operator : rebeccak
Sample : jc67110-3
Misc : OP12449,g6g1701,300,,,2,1
ALS Vial : 59 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 07 12:42:06 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 : 6g56989.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Jun-18, 13:28:55
Operator : rebeccak
Sample : jc67110-4
Misc : OP12449,g6g1701,300,,,2,1
ALS Vial : 60 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 07 12:52:22 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	2.137	361.4E6	254.9E6	50.000	50.000
27) I 1-bromo-2...	1.939	2.137	361.4E6	254.9E6	50.000	50.000
33) I 1-bromo-2...	1.939	2.137	361.4E6	254.9E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.520	2.912	142.3E6	105.7E6	20.257	22.268
Spiked Amount	40.000 Range	30 - 150	Recovery	=	50.64%	55.67%
26) SA Decachlor...	9.768	11.653	110.8E6	80910823	15.472	17.087
Spiked Amount	40.000		Recovery	=	38.68%	42.72%
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

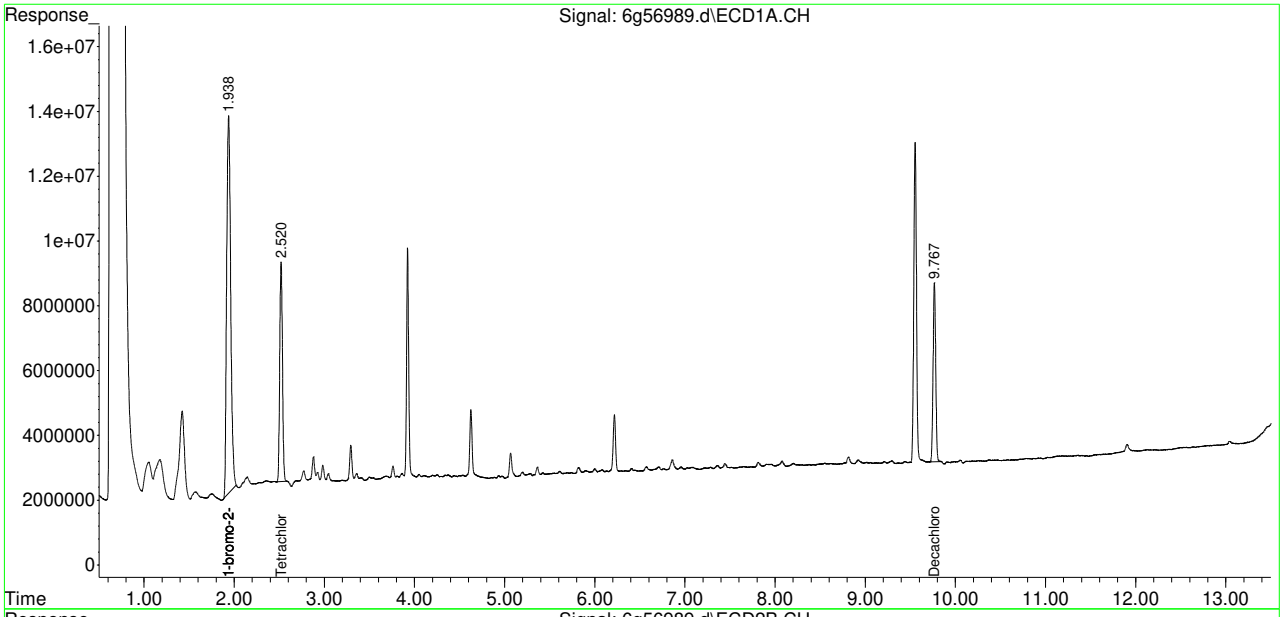
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

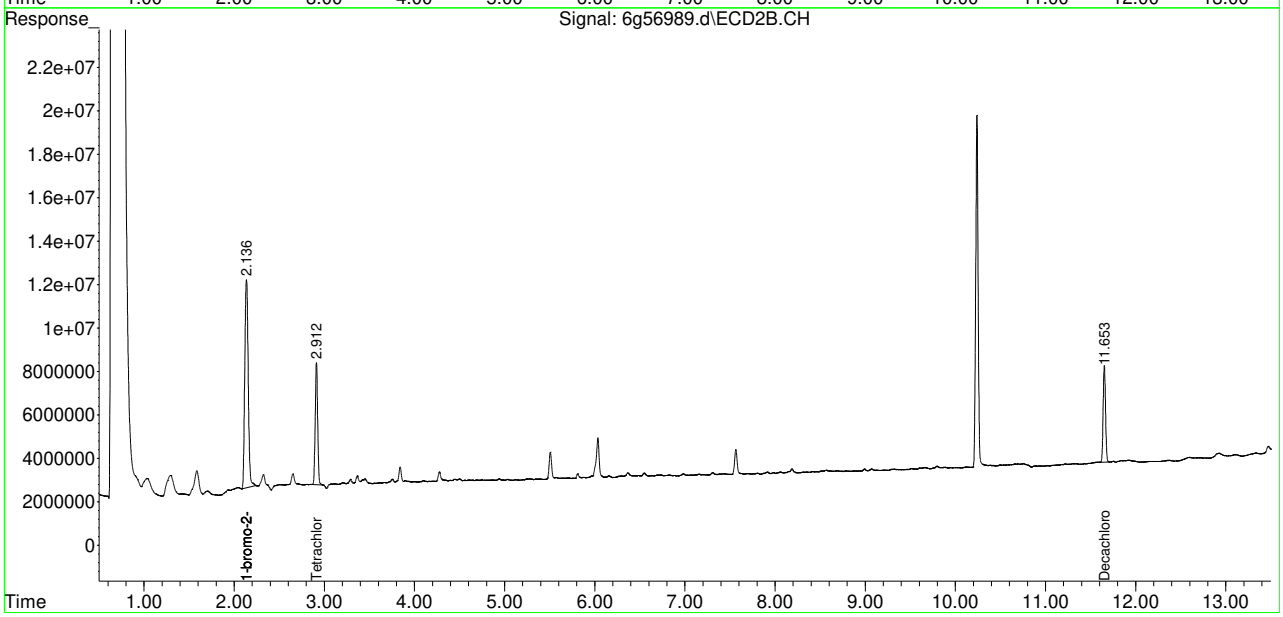
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
Data File : 6g56989.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Jun-18, 13:28:55
Operator : rebeccak
Sample : jc67110-4
Misc : OP12449,g6g1701,300,,,2,1
ALS Vial : 60 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 07 12:52:22 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 : 6g56992.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Jun-18, 14:22:37
Operator : rebeccak
Sample : jc67110-5
Misc : OP12449,g6g1701,300,,,2,1
ALS Vial : 63 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 07 14:14:09 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	385.4E6	261.7E6	50.000	50.000
27) I 1-bromo-2...	1.942	2.139	385.4E6	261.7E6	50.000	50.000
33) I 1-bromo-2...	1.942	2.139	385.4E6	261.7E6	50.000	50.000
System Monitoring Compounds						
2) SAB Tetrachlo...	2.523	2.913	187.5E6	140.5E6	25.030	28.825
Spiked Amount 40.000 Range 30 - 150 Recovery = 62.58% 72.06%						
26) SA Decachlor...	9.768	11.654	123.5E6	83623416	16.177	17.198
Spiked Amount 40.000 Recovery = 40.44% 42.99%						
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

SemiQuant Compounds - Not Calibrated on this Instrument

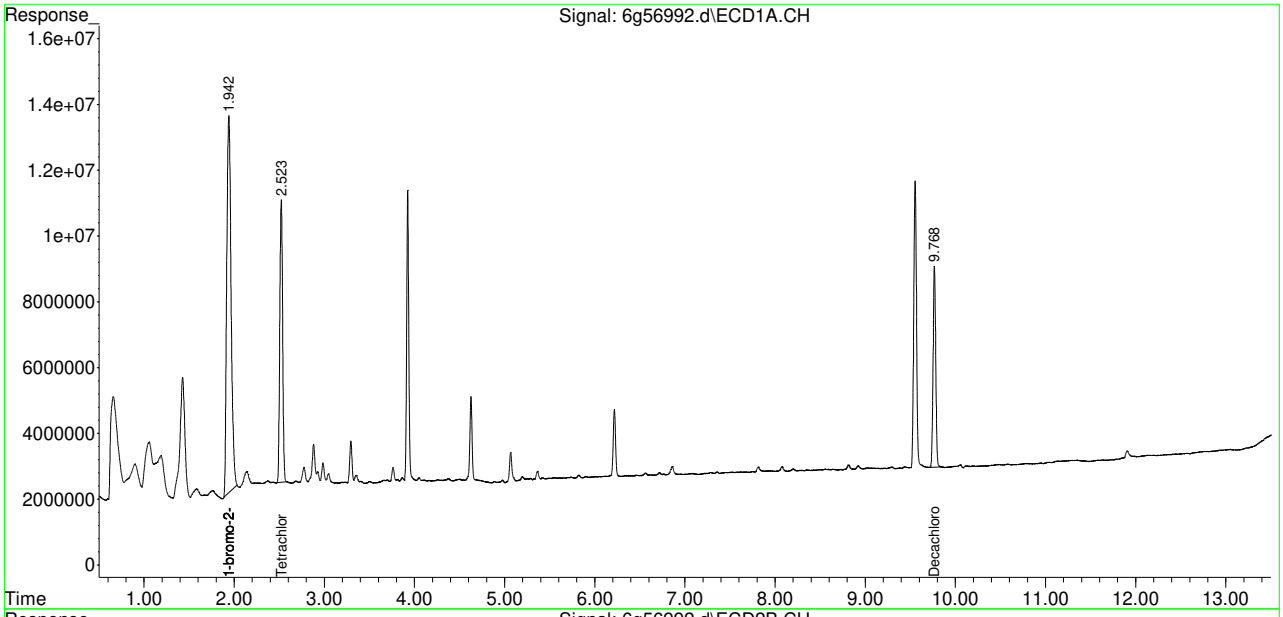
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

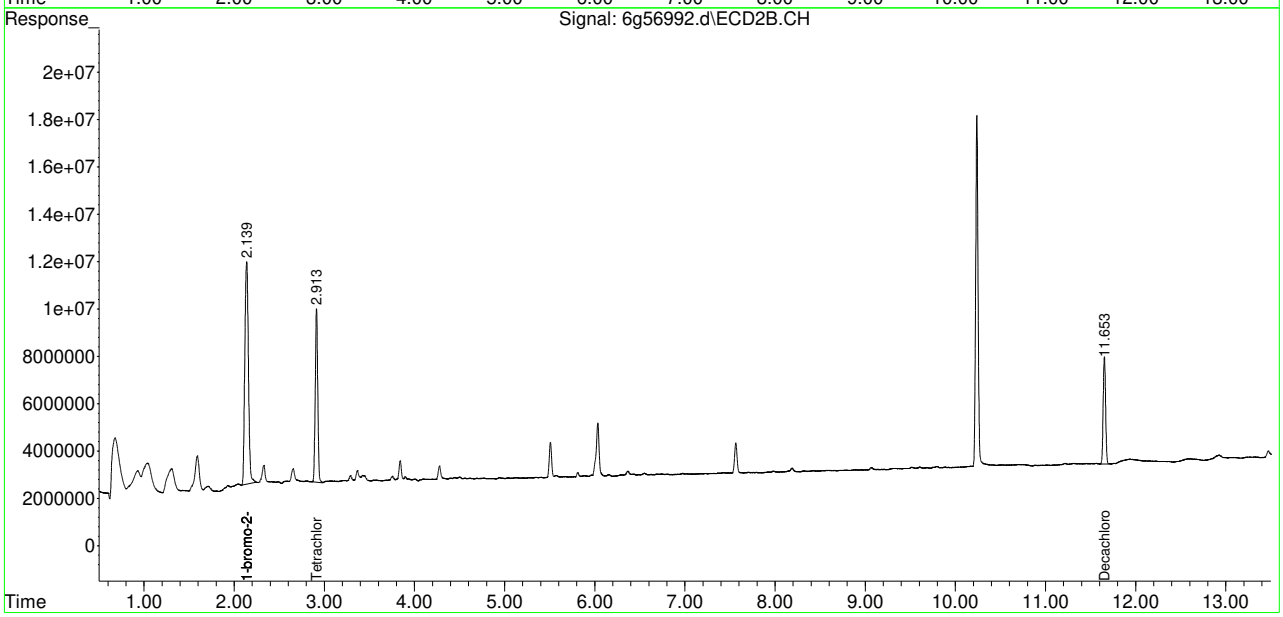
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\G6G1701\
Data File : 6g56992.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 06-Jun-18, 14:22:37
Operator : rebeccak
Sample : jc67110-5
Misc : OP12449,g6g1701,300,,,2,1
ALS Vial : 63 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 07 14:14:09 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\gxx6375\
Data File : xx229861.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03 Jun 2018 7:32 am
Operator : edouarda
Sample : jc67110-3
Misc : op12448,GXX6375,300,,,2,1
ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 05 09:11:09 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	3.550	315.1E6	316.1E6	29.257	31.487
Spiked Amount 40.000			Recovery	=	73.14%	78.72%
51) S Decachlor...	9.927	11.935	240.4E6	225.0E6	19.208	19.676
Spiked Amount 40.000			Recovery	=	48.02%	49.19%
Target Compounds						

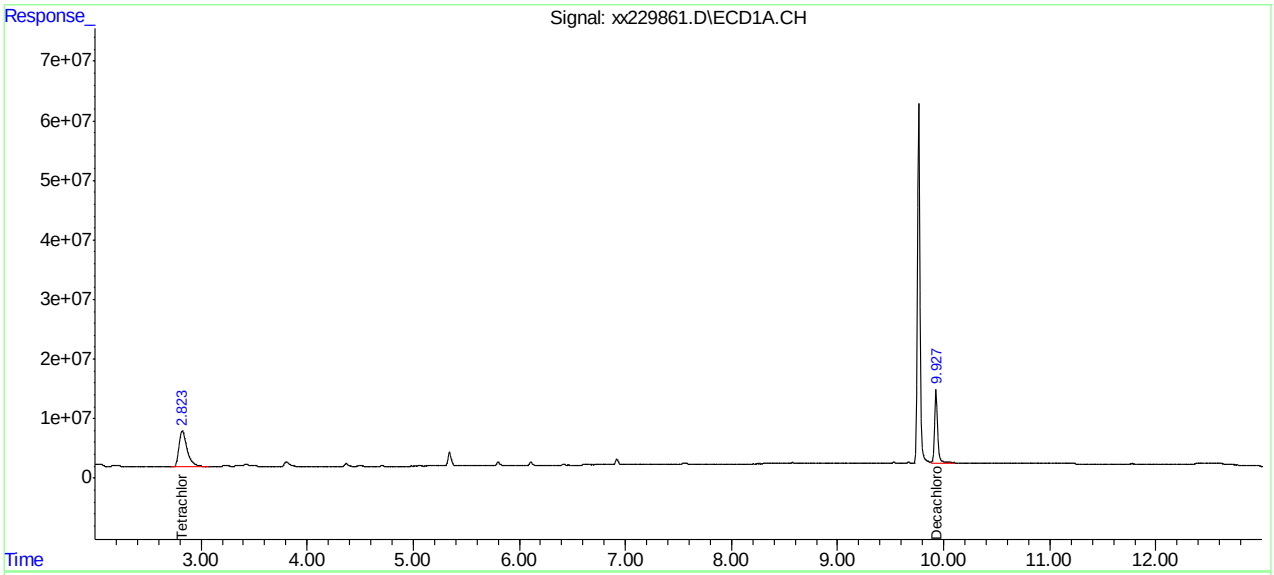
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

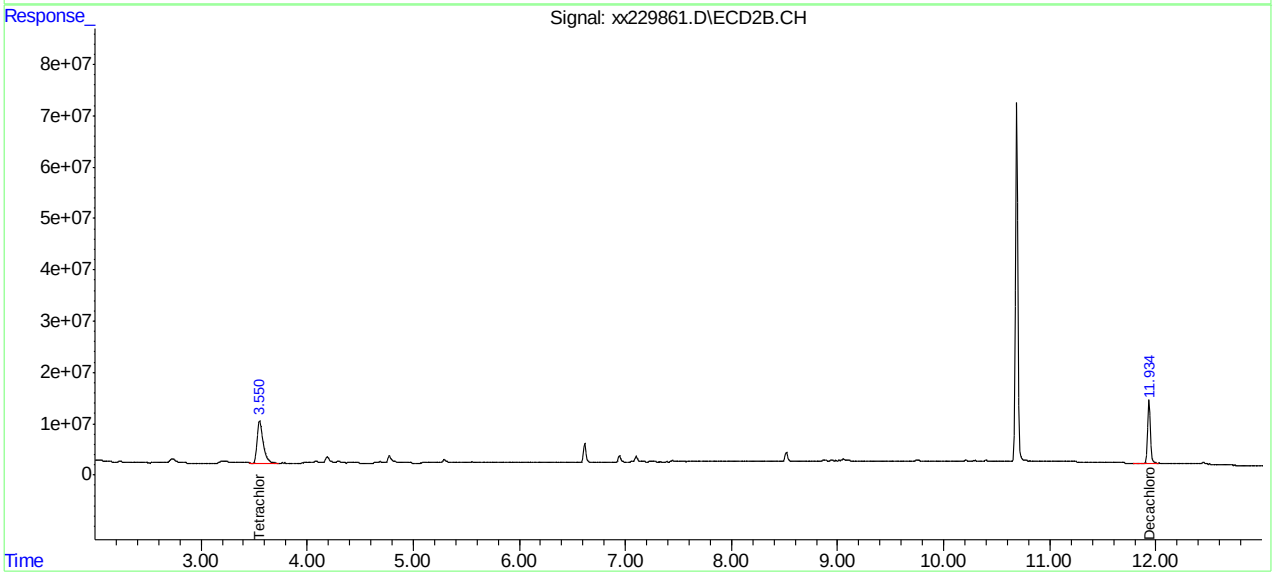
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
Data File : xx229861.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03 Jun 2018 7:32 am
Operator : edouarda
Sample : jc67110-3
Misc : op12448,GXX6375,300,,,2,1
ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 05 09:11:09 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 : xx229842.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03 Jun 2018 2:15 am
Operator : edouarda
Sample : jc67110-4
Misc : op12448,GXX6375,300,,,2,1
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 05 09:01:42 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	238.8E6	251.2E6	22.171	25.015
Spiked Amount 40.000			Recovery	=	55.43%	62.54%
51) S Decachlor...	9.929	11.937	215.9E6	200.1E6	17.249	17.500
Spiked Amount 40.000			Recovery	=	43.12%	43.75%
Target Compounds						

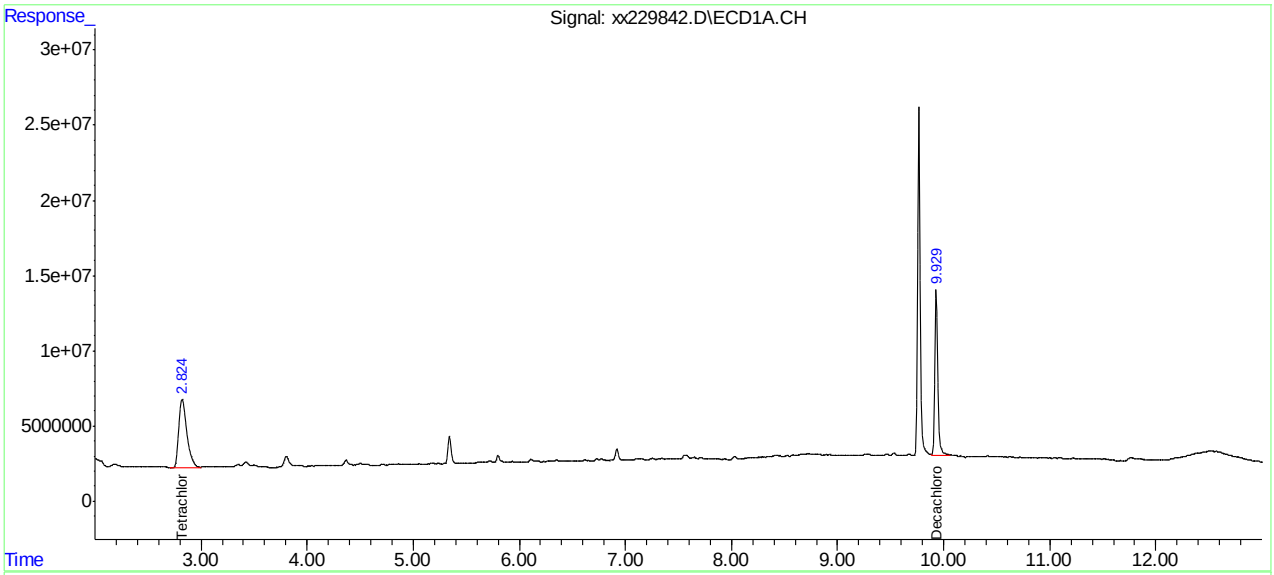
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

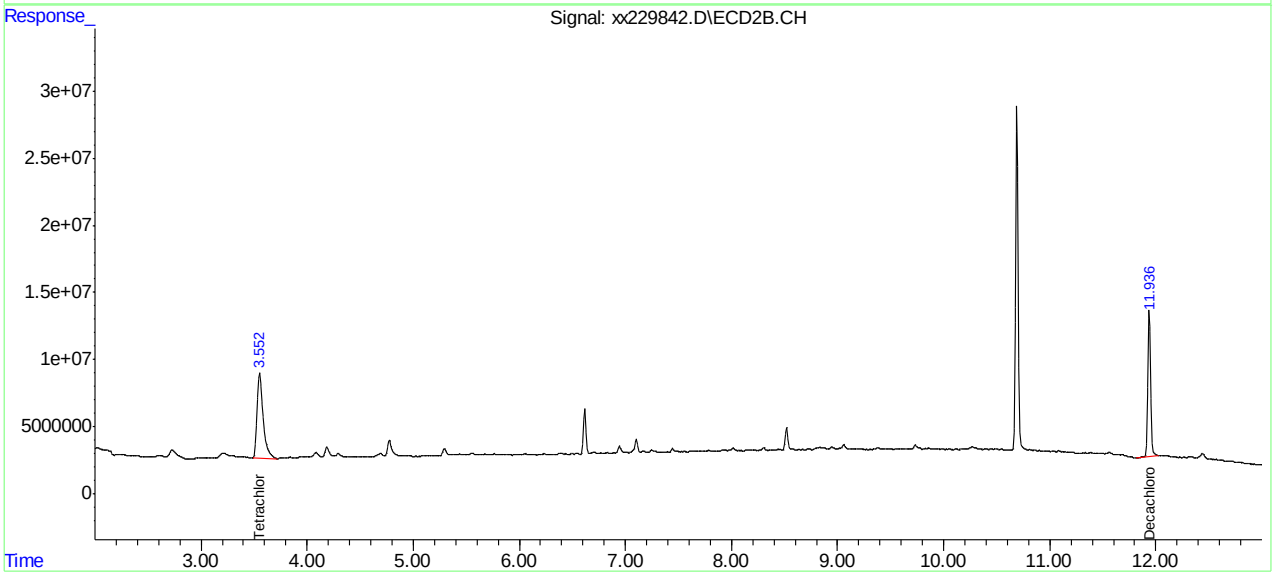
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
Data File : xx229842.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03 Jun 2018 2:15 am
Operator : edouarda
Sample : jc67110-4
Misc : op12448,GXX6375,300,,,2,1
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 05 09:01:42 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 : xx229862.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03 Jun 2018 7:48 am
Operator : edouarda
Sample : jc67110-5
Misc : op12448,GXX6375,300,,,2,1
ALS Vial : 28 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 05 09:11:31 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	310.0E6	306.1E6	28.786	30.488
Spiked Amount 40.000			Recovery	=	71.97%	76.22%
51) S Decachlor...	9.927	11.936	221.4E6	209.4E6	17.691	18.310
Spiked Amount 40.000			Recovery	=	44.23%	45.77%
Target Compounds						

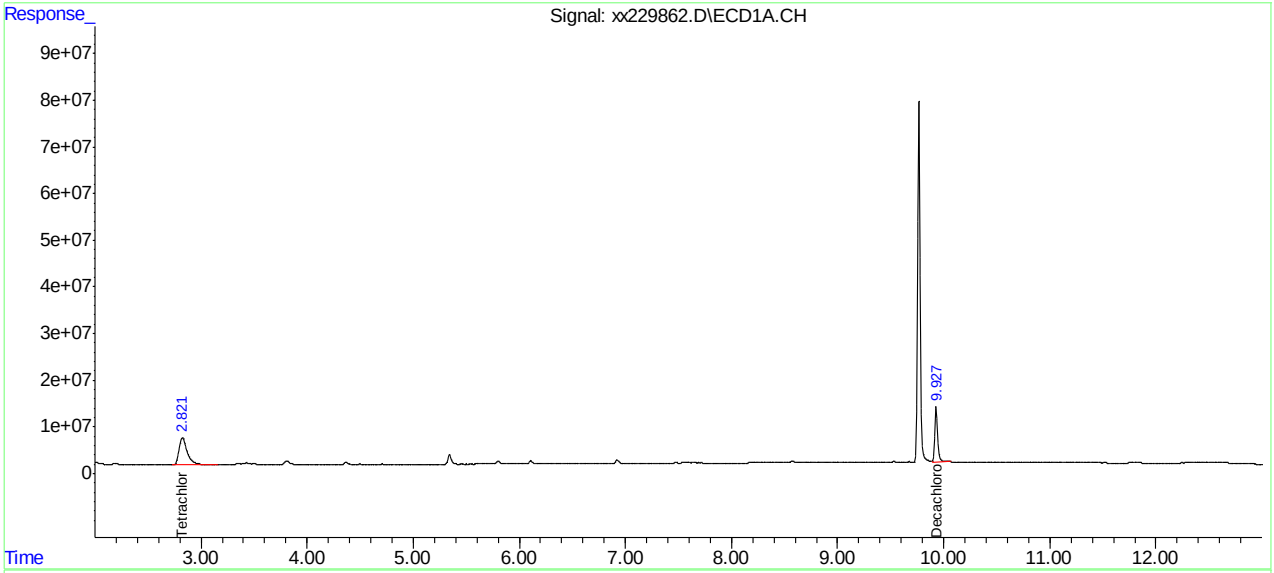
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

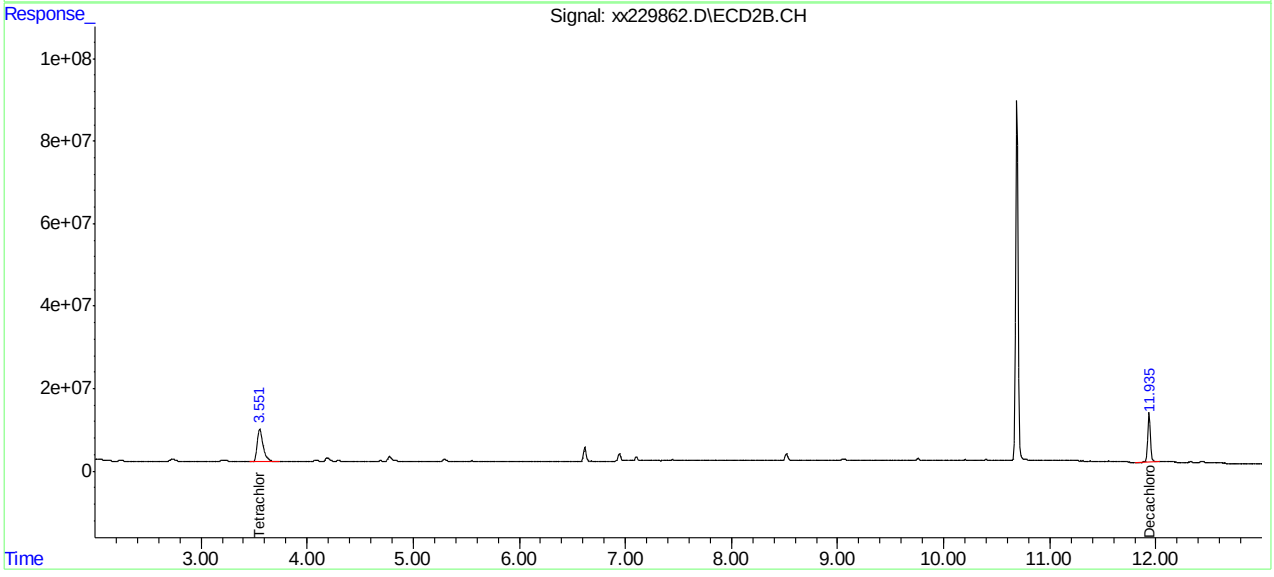
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
Data File : xx229862.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03 Jun 2018 7:48 am
Operator : edouarda
Sample : jc67110-5
Misc : op12448,GXX6375,300,,,2,1
ALS Vial : 28 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 05 09:11:31 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 : 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

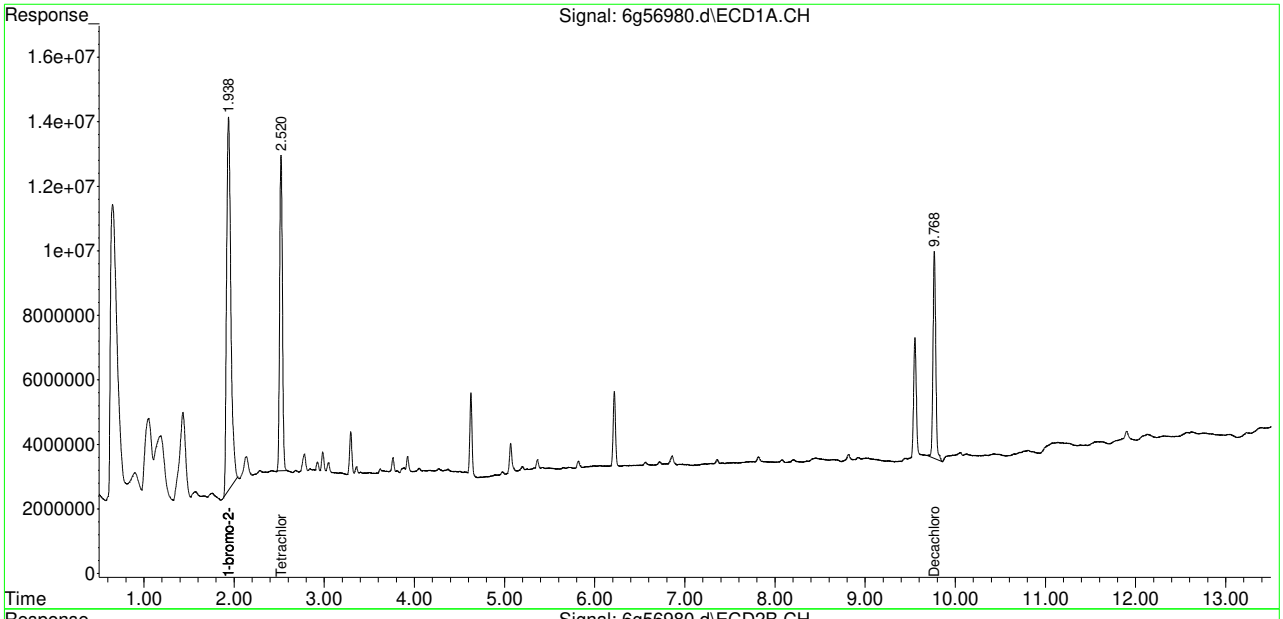
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

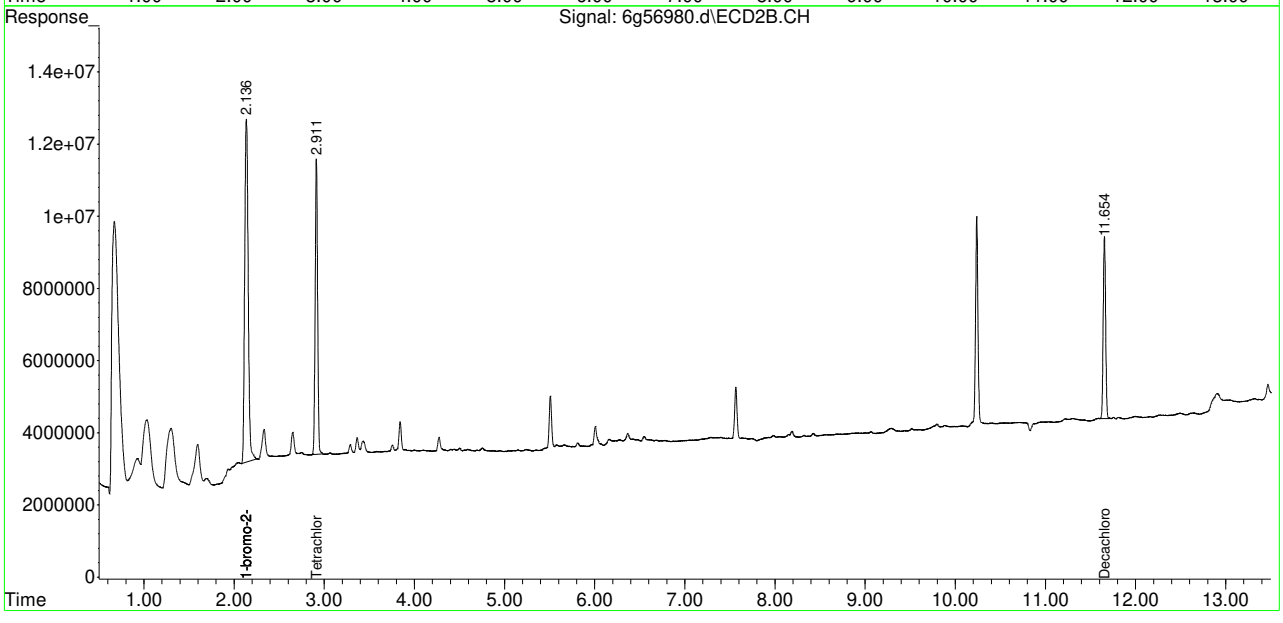
Quantitation Report (QT Reviewed)

```
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
```





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

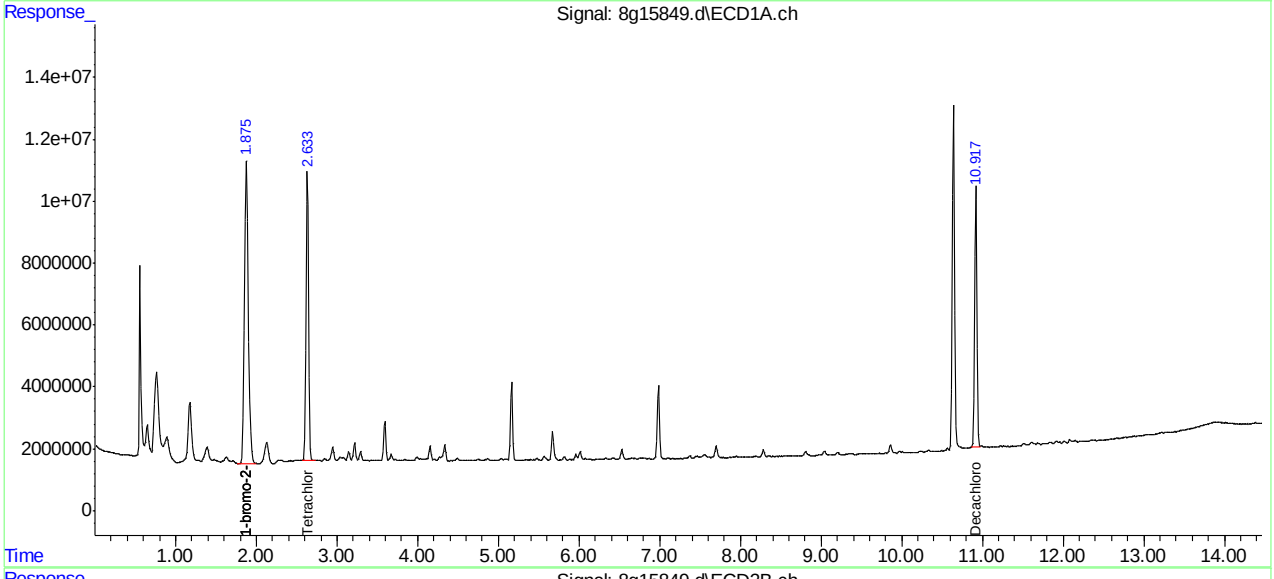
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

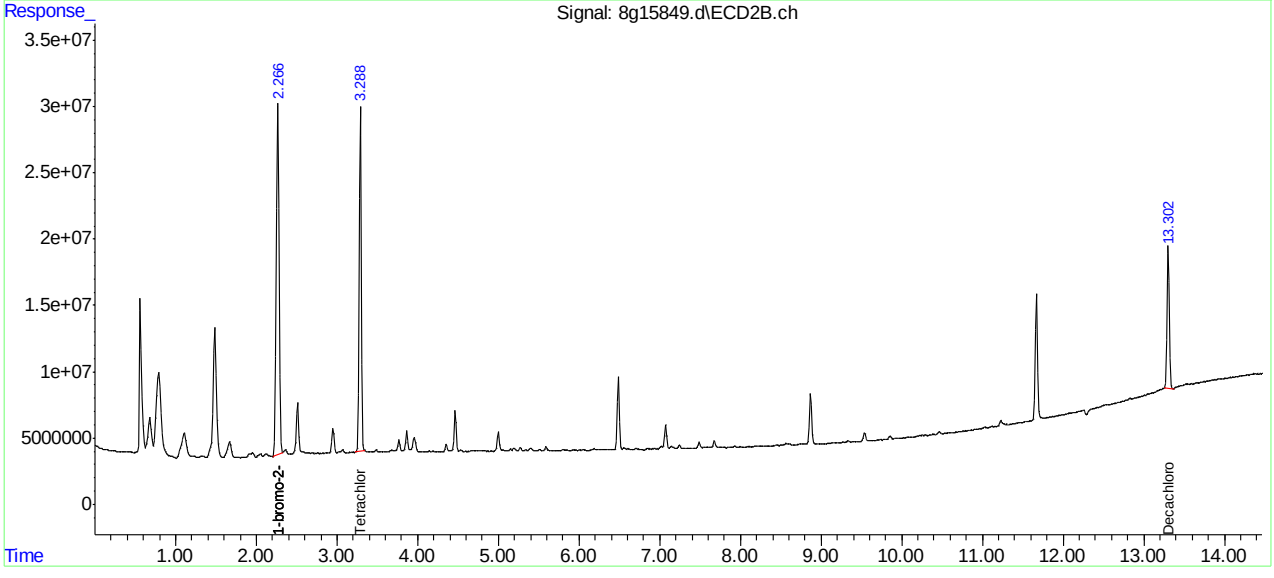
Quantitation Report (QT Reviewed)

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						

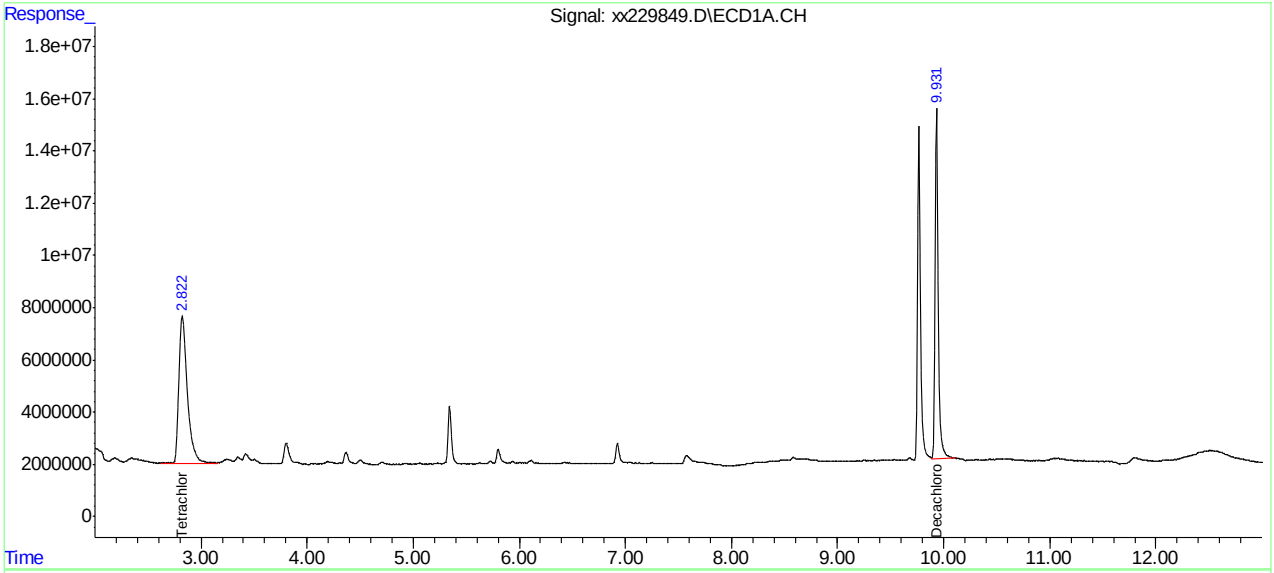
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

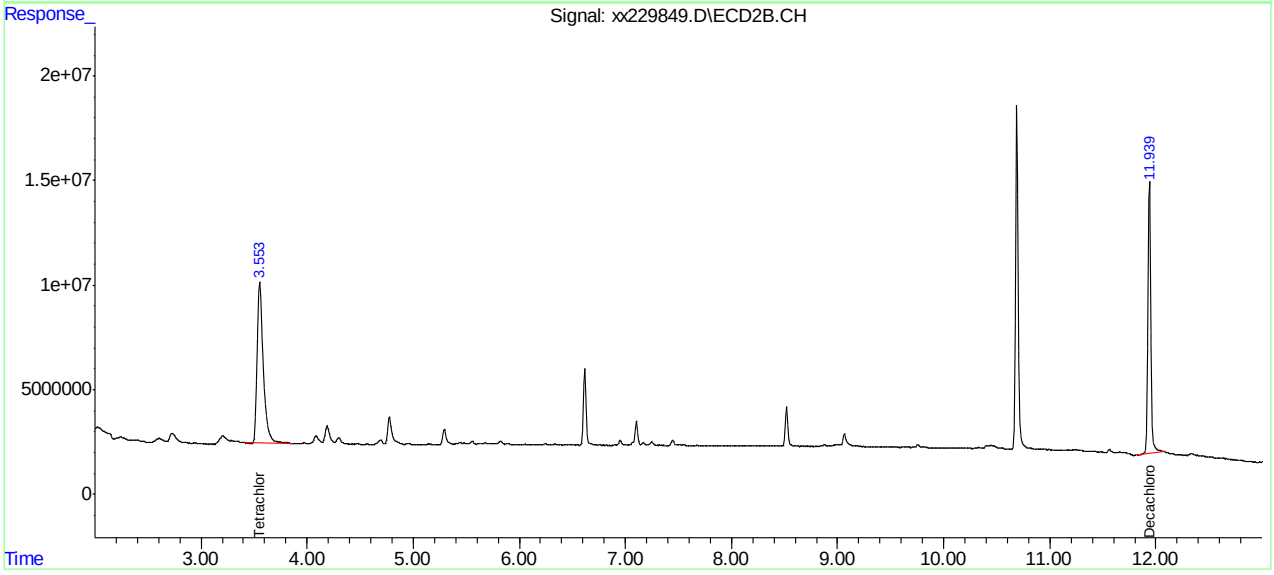
Quantitation Report (QT Reviewed)

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)





Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 06/12/18 09:25

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

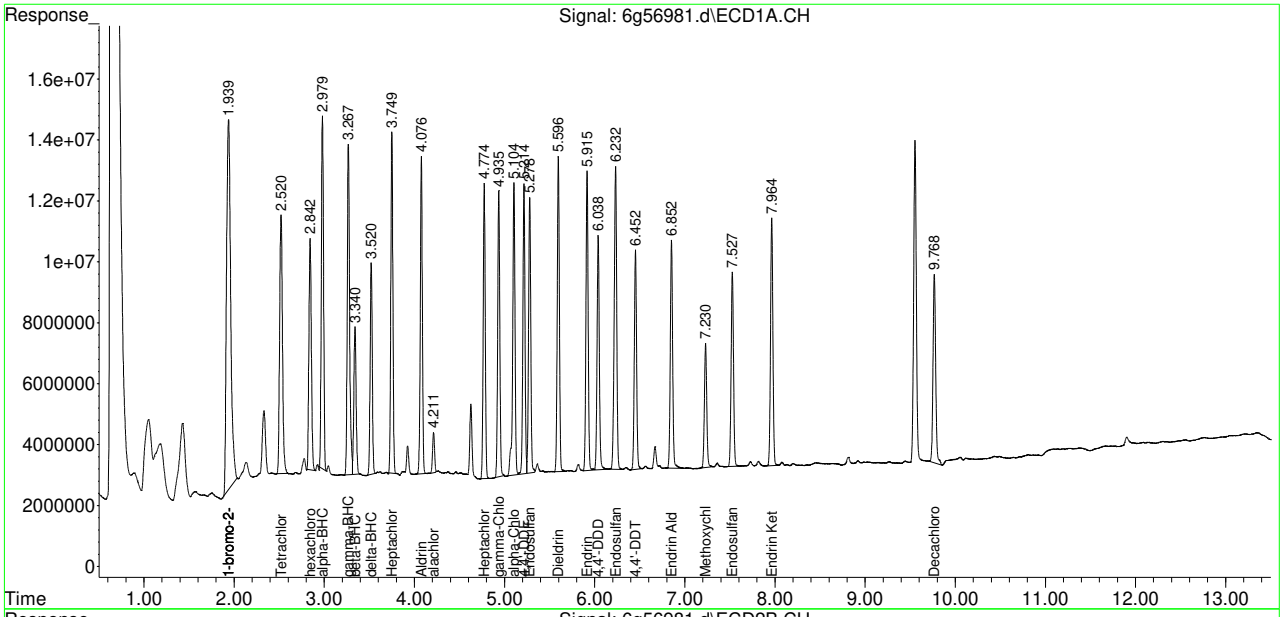
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

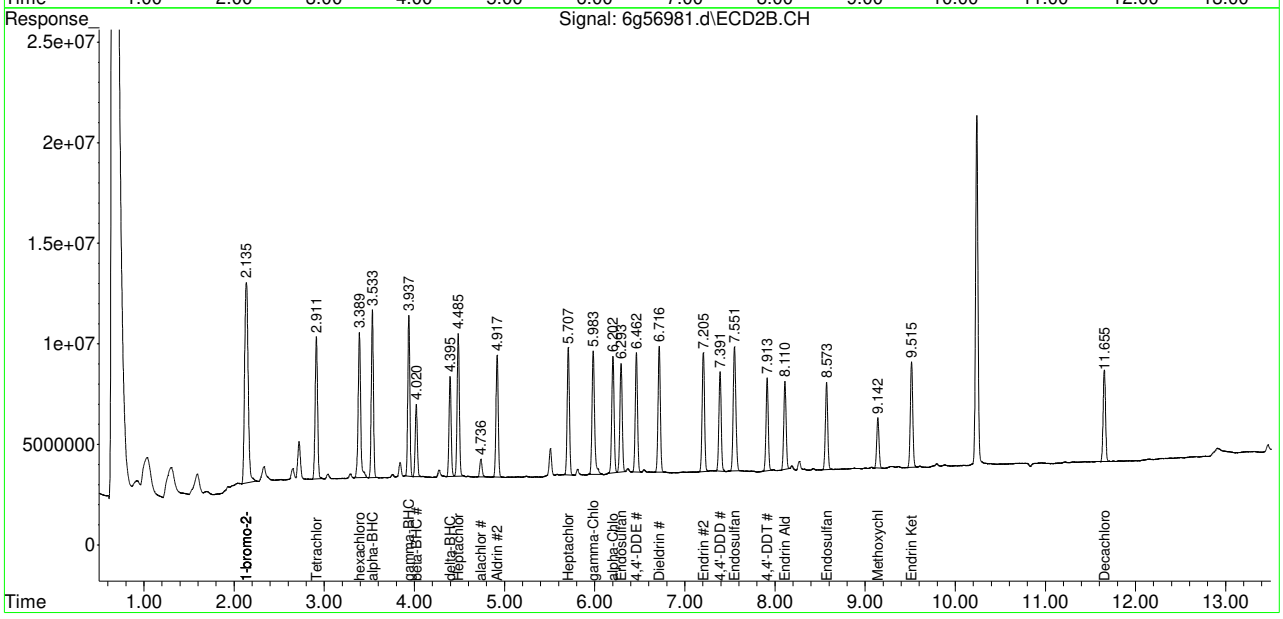
Quantitation Report (QT Reviewed)

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





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

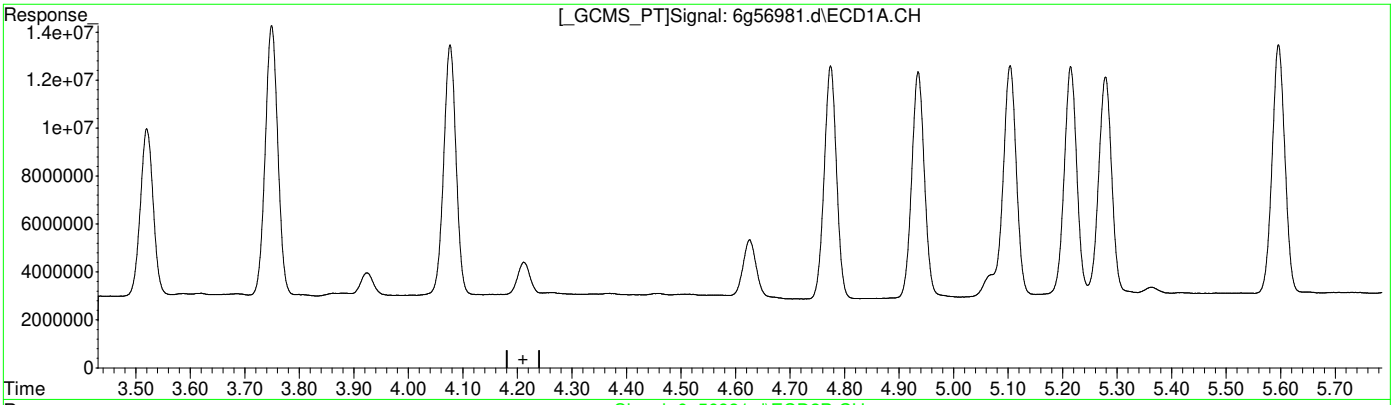
Parameter	CAS	Sig#	R.T. (min.)	Reason
Alachlor	15972-60-8	1	4.21	Poorly defined baseline

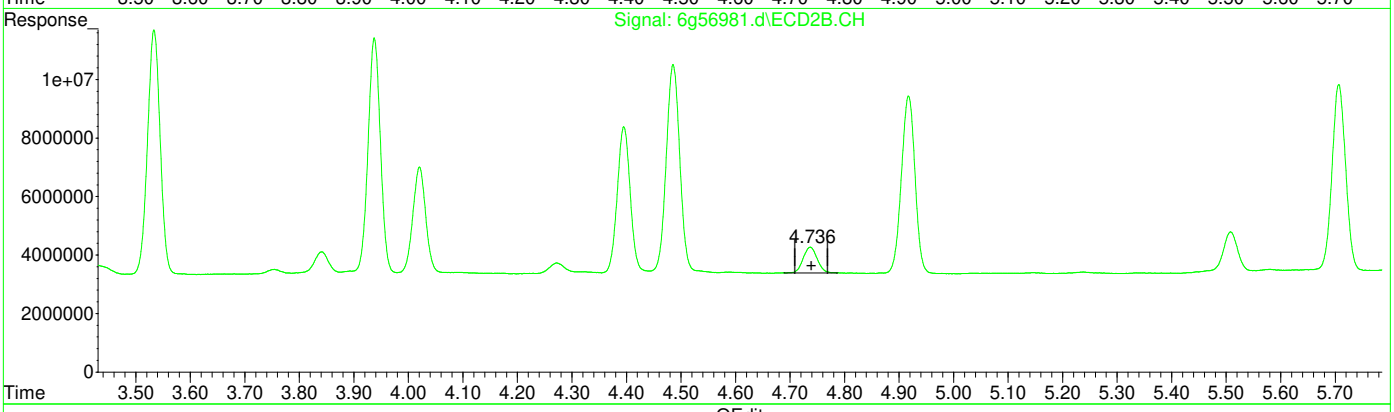
Quantitation Report (Qedit)

```
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

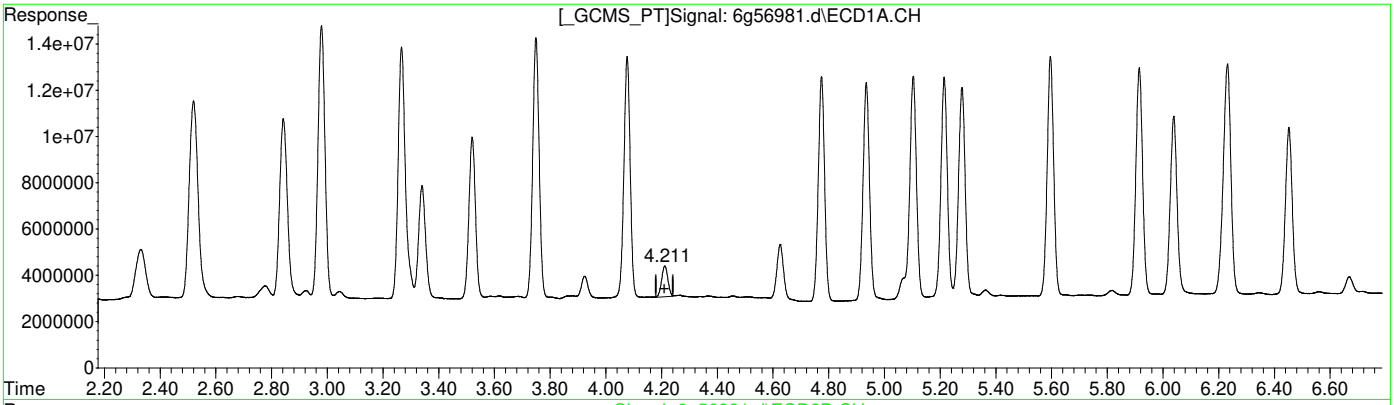
6PST1671.M Thu Jun 07 12:25:04 2018

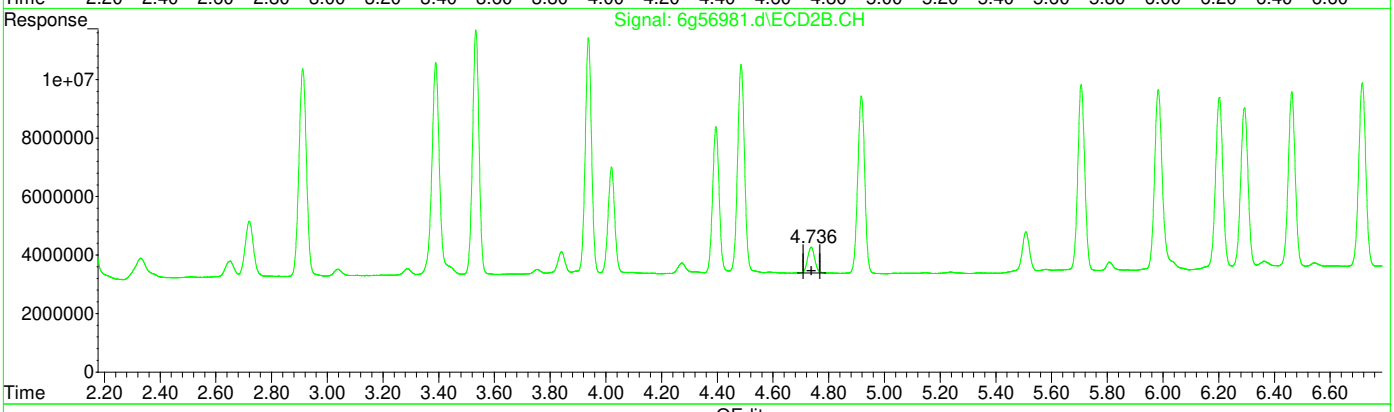
Quantitation Report (Qedit)

```
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
```





QEdit

(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

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 06/11/18 08:17

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.

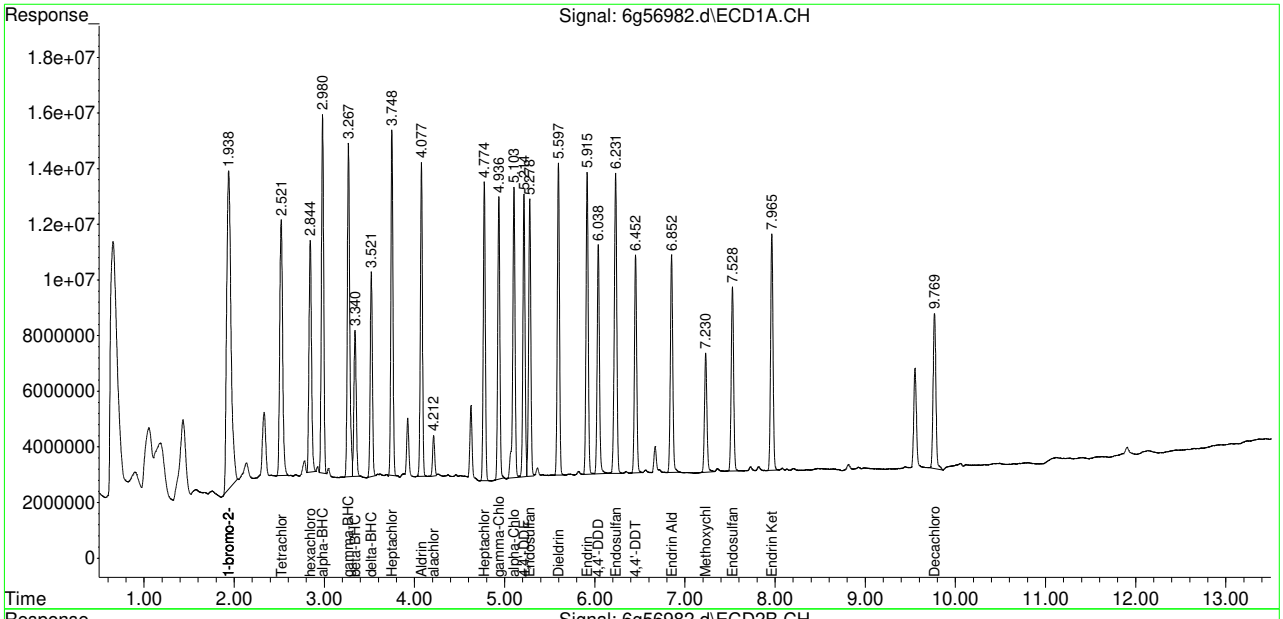
11.3.2 11

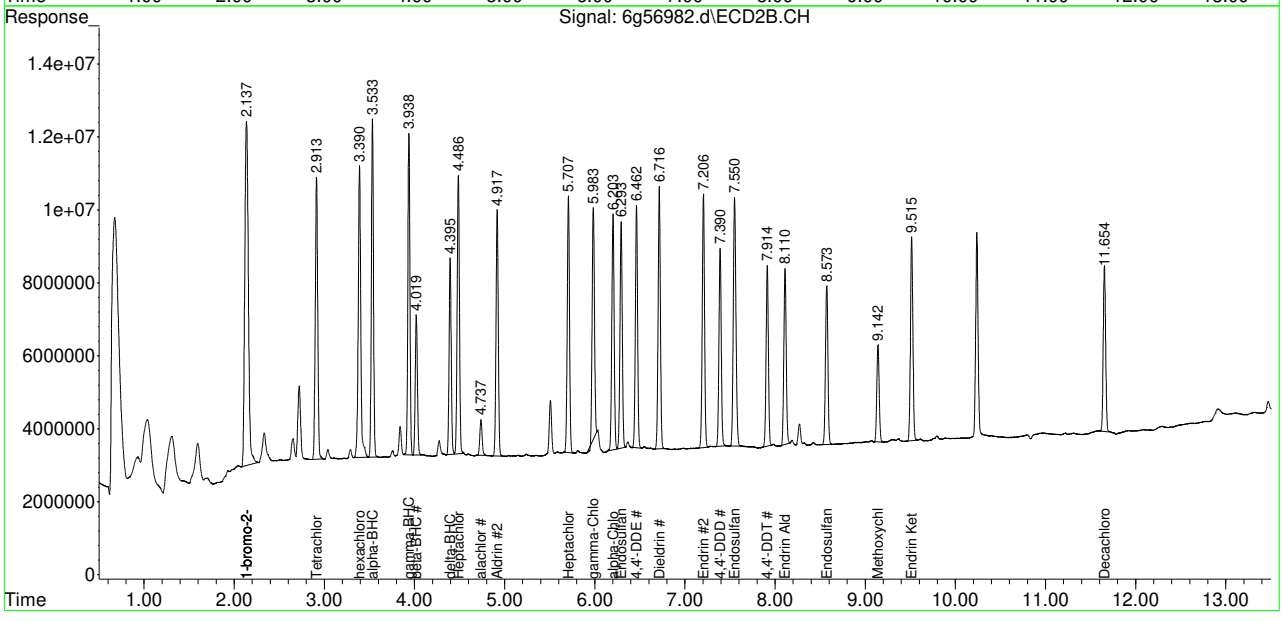
Quantitation Report (QT Reviewed)

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





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

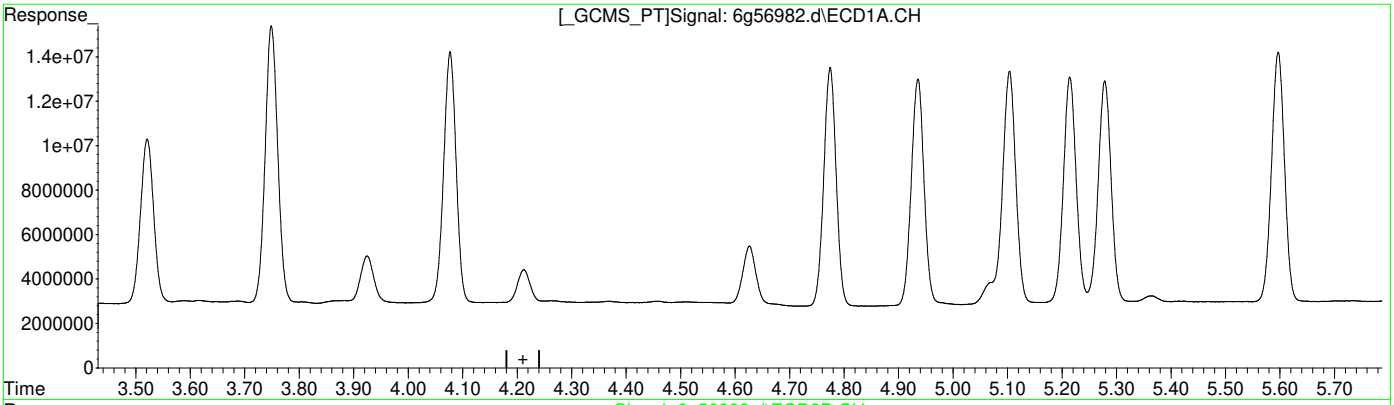
Parameter	CAS	Sig#	R.T. (min.)	Reason
Alachlor	15972-60-8	1	4.21	Poorly defined baseline

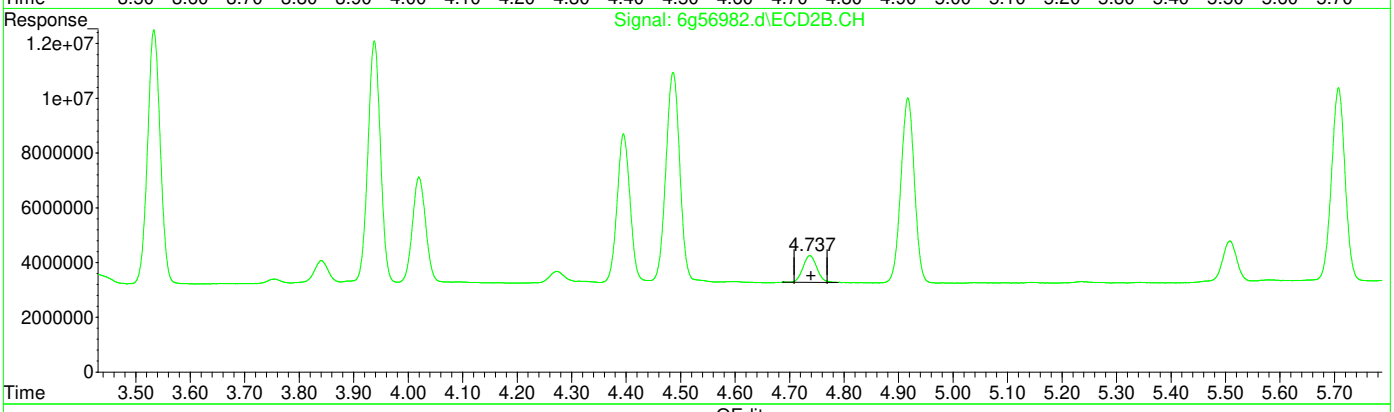
Quantitation Report (Qedit)

```
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
```





QEdit

(10) alachlor

0.000min 0.000 PPB

response 0

(10) alachlor #2

4.737min 24.006 PPB

response 17352016

(+) = Expected Retention Time

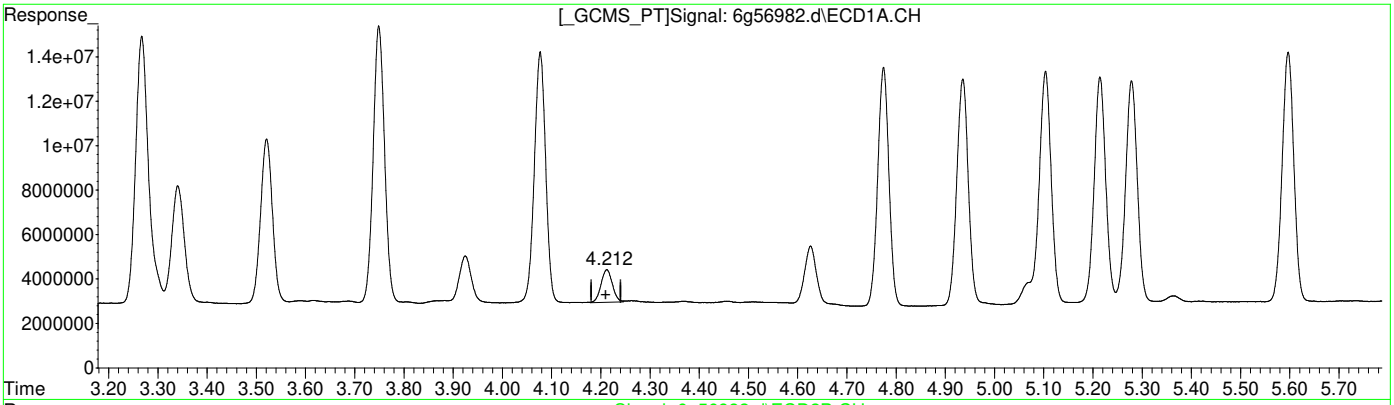
6PST1671.M Thu Jun 07 12:27:06 2018

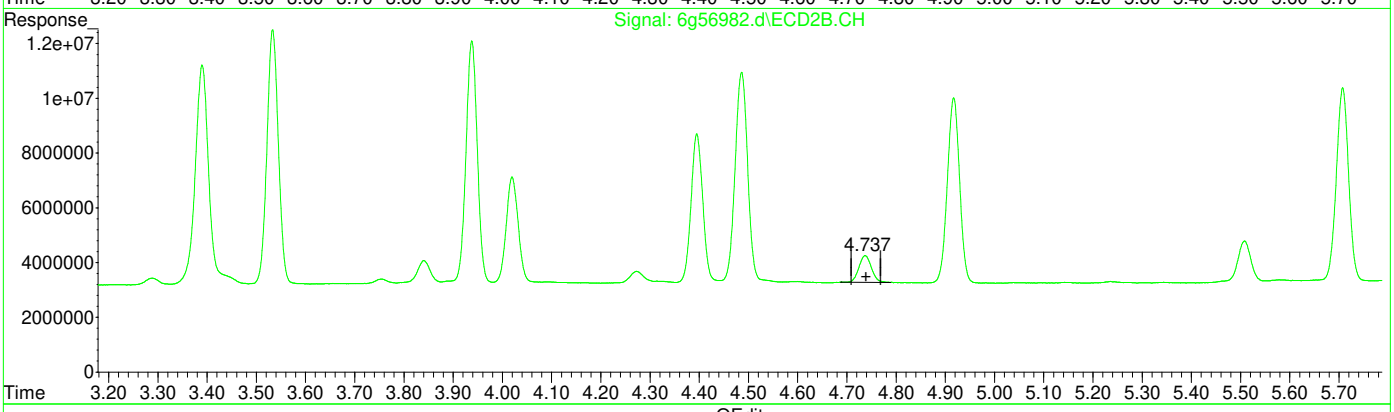
Quantitation Report (Qedit)

```
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
```





QEdit

(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

Manual Integrations
APPROVED
(compounds with "m" flag)
Gwendolyn Burns
06/05/18 13:54

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.

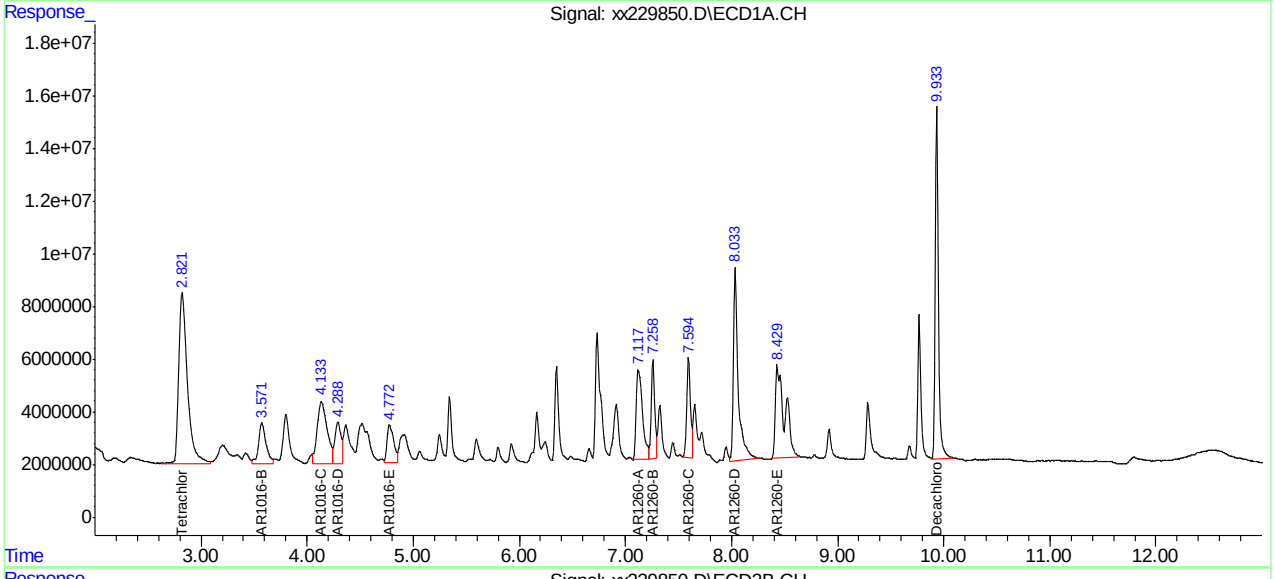
11.3.3 11

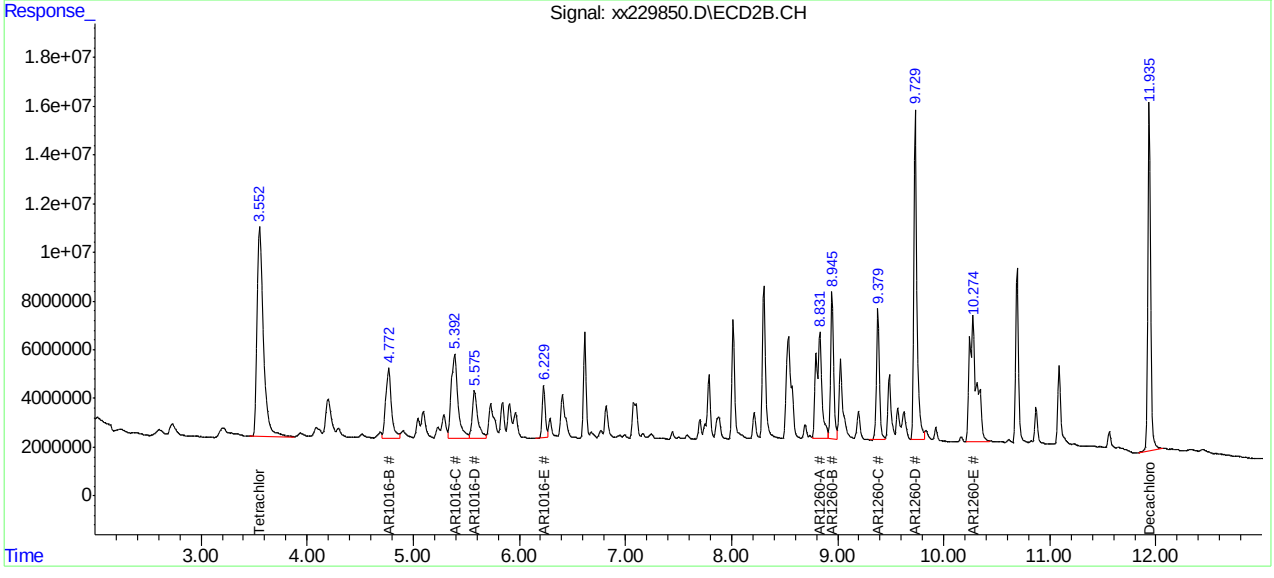
Quantitation Report (QT Reviewed)

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

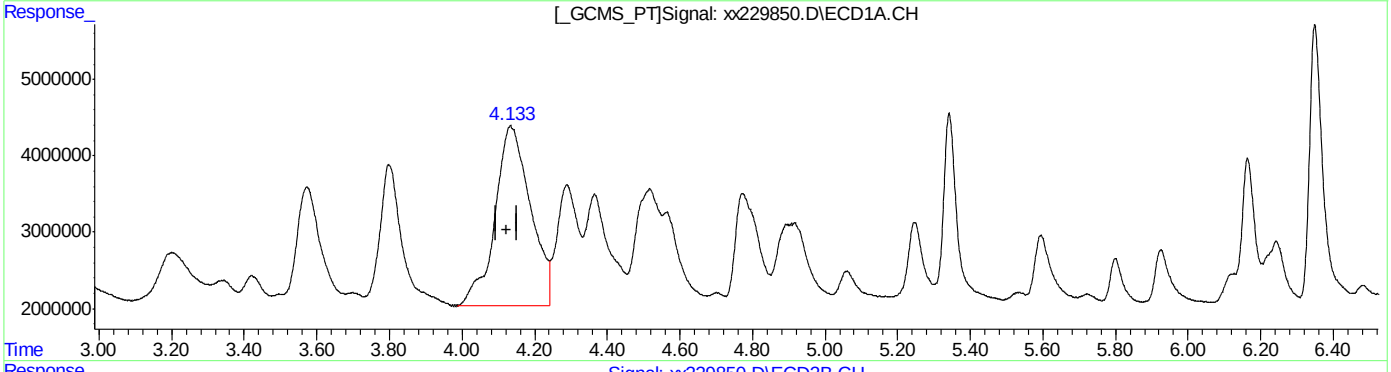
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		1	4.13	Split peak
AR1260-E		1	8.43	Split peak
AR1260-A		2	8.83	Split peak
AR1260-D		2	9.73	Split peak
AR1260-E		2	10.27	Split peak

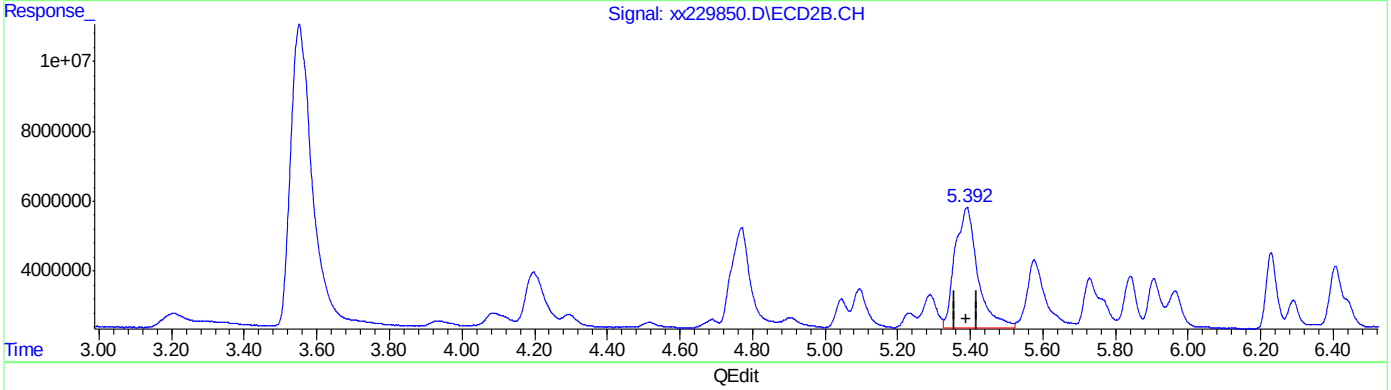
Quantitation Report (Qedit)

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)





QEdit

(43) AR1016-C
4.133min 190.860PPB
response 160305873

(43) AR1016-C #2
5.391min 199.164PPB
response 150423999

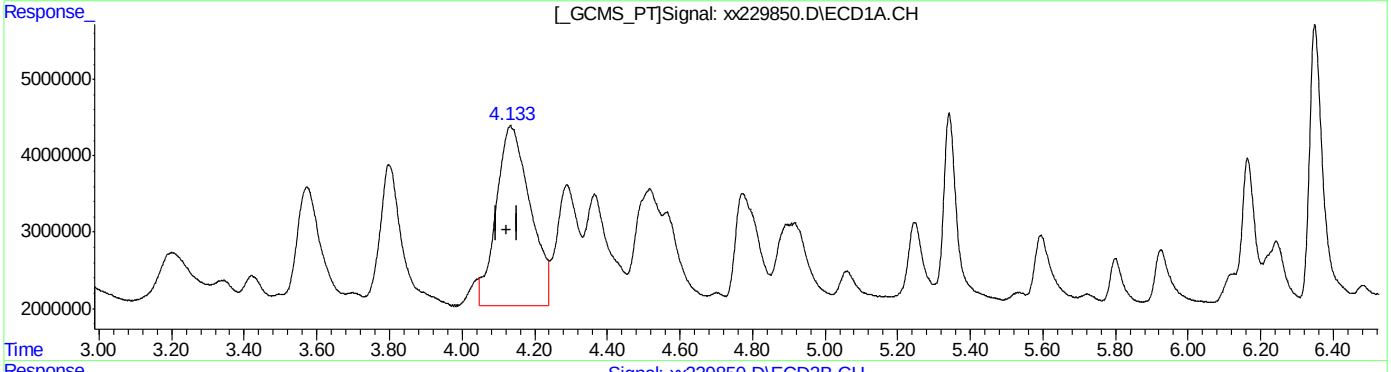
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:06:45 2018

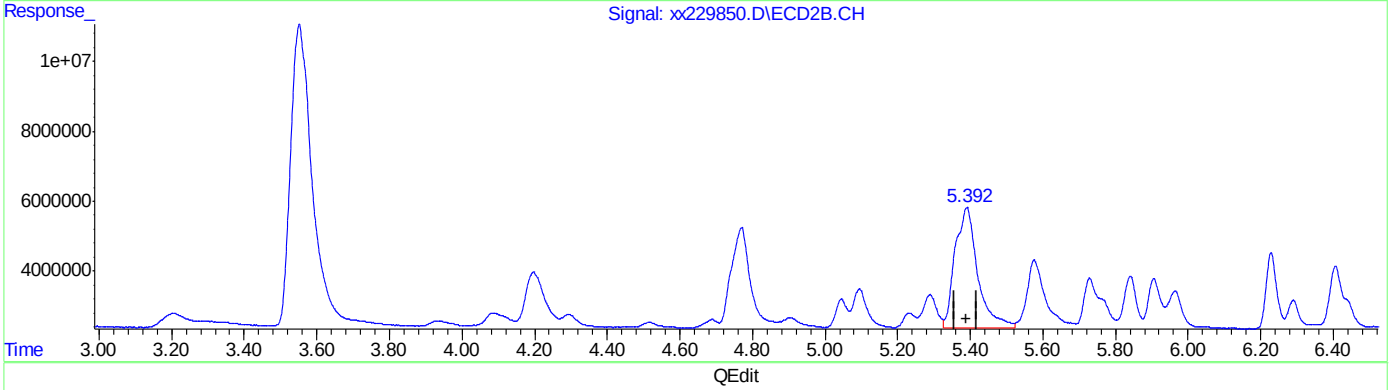
Quantitation Report (Qedit)

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)





QEdit

(43) AR1016-C
4.133min 183.281PPB m
response 153939947

(43) AR1016-C #2
5.391min 199.164PPB
response 150423999

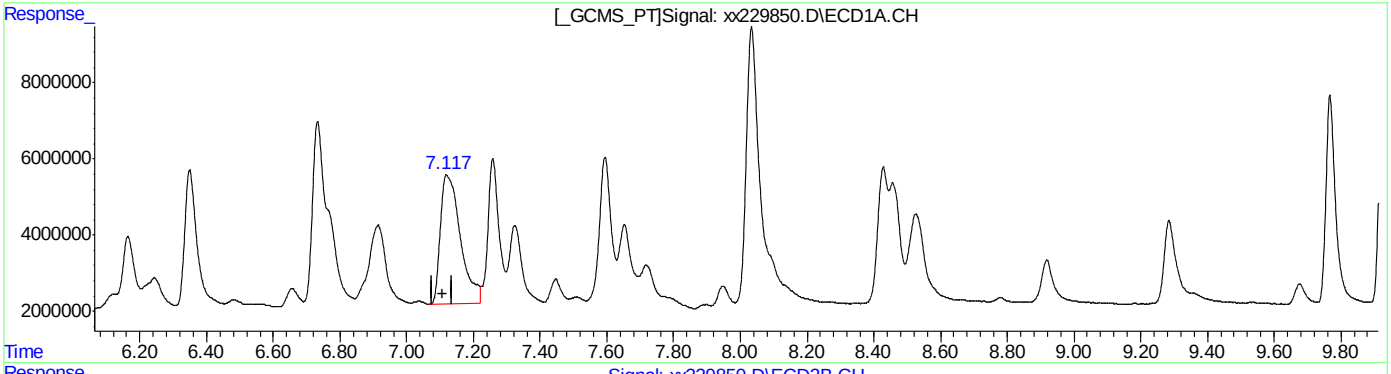
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:06:50 2018

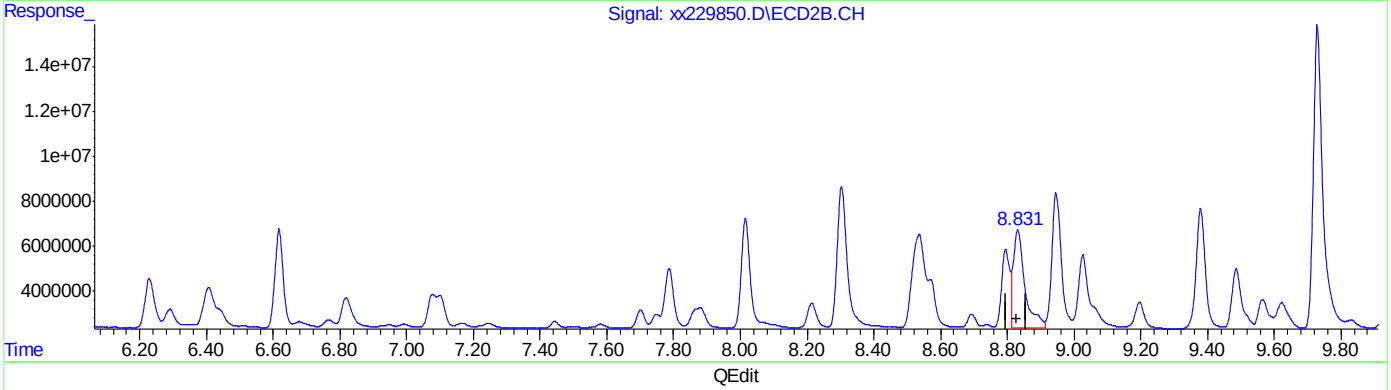
Quantitation Report (Qedit)

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)





QEdit

(46) AR1260-A
7.118min 149.354PPB
response 141607534

(46) AR1260-A #2
8.832min 107.830PPB
response 106969967

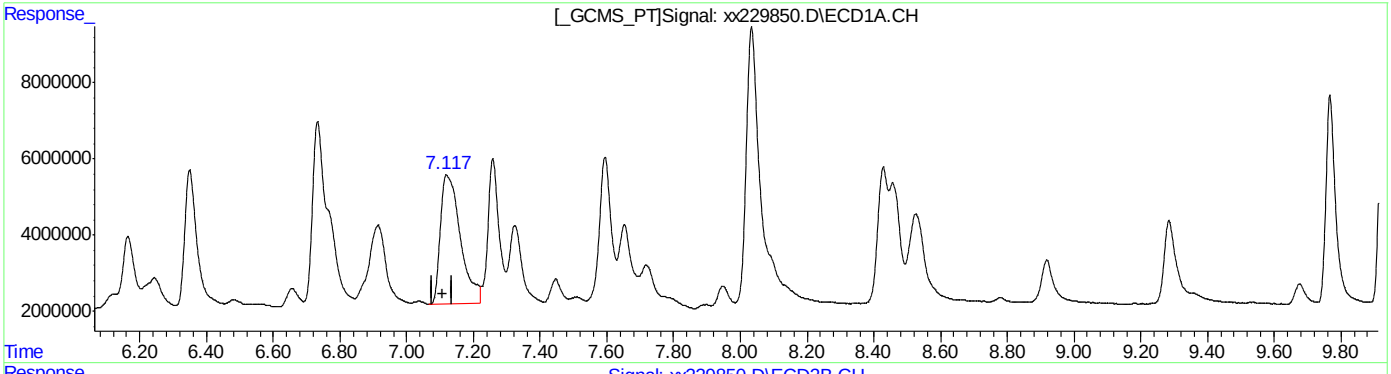
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:06:54 2018

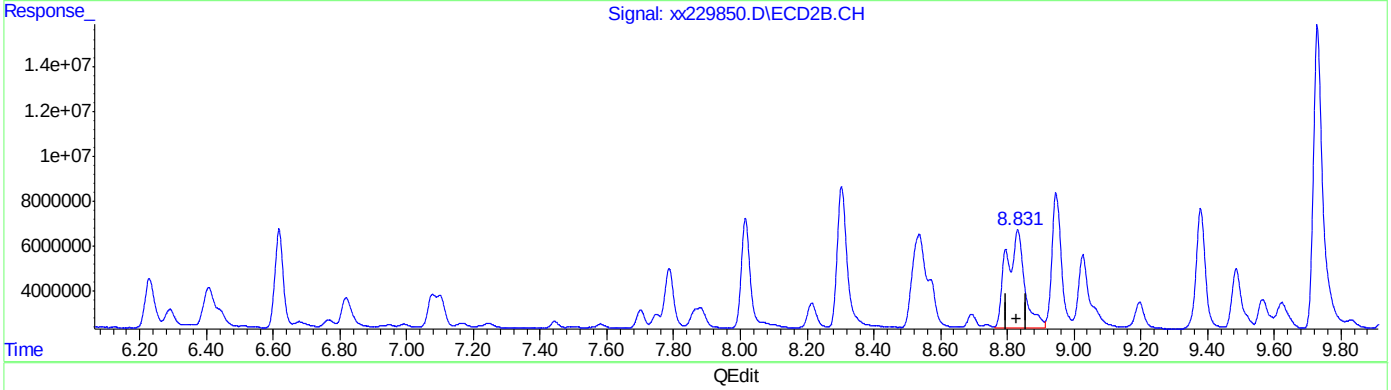
Quantitation Report (Qedit)

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)





QEdit

(46) AR1260-A
7.118min 149.354PPB
response 141607534

(46) AR1260-A #2
8.831min 166.592PPB m
response 165264169

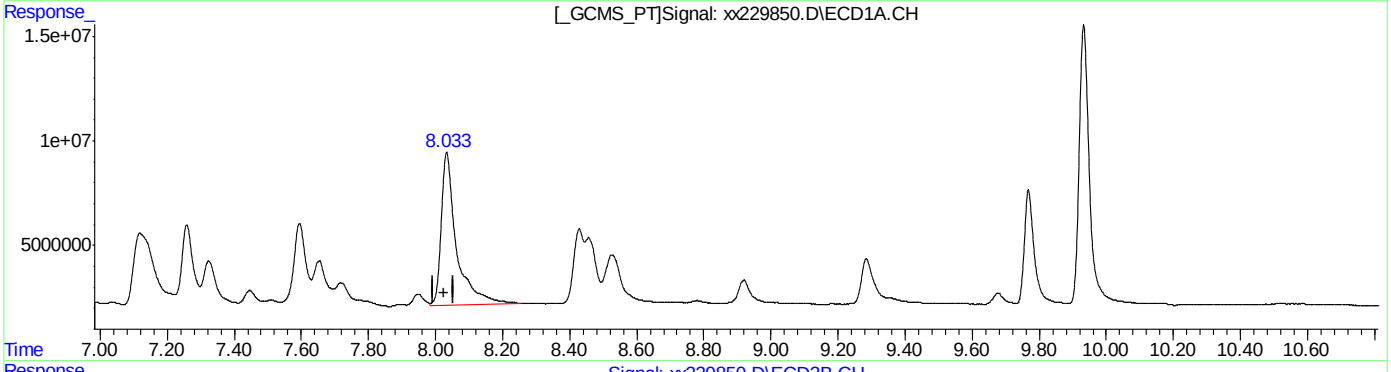
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:06:59 2018

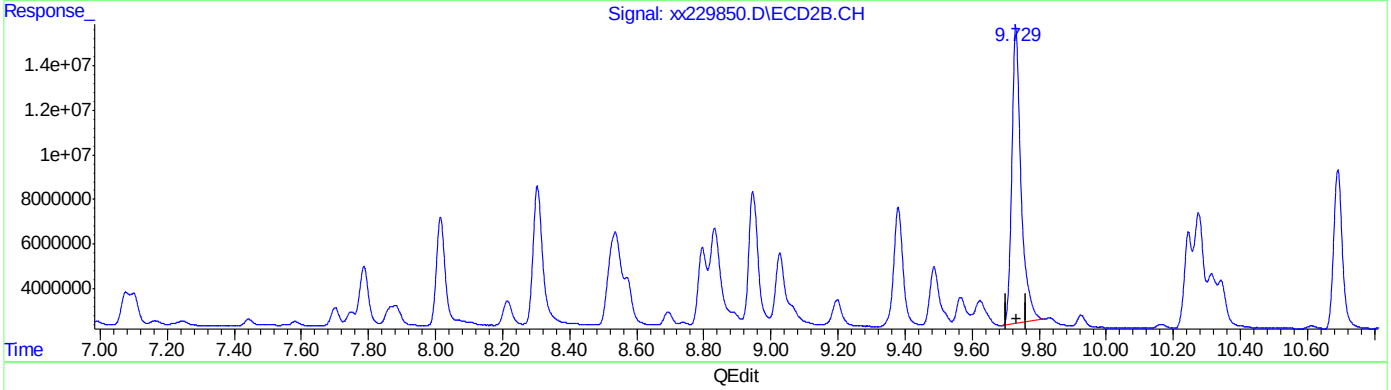
Quantitation Report (Qedit)

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)





QEdit

(49) AR1260-D
8.033min 186.160PPB
response 229054554

(49) AR1260-D #2
9.730min 191.039PPB
response 255267500

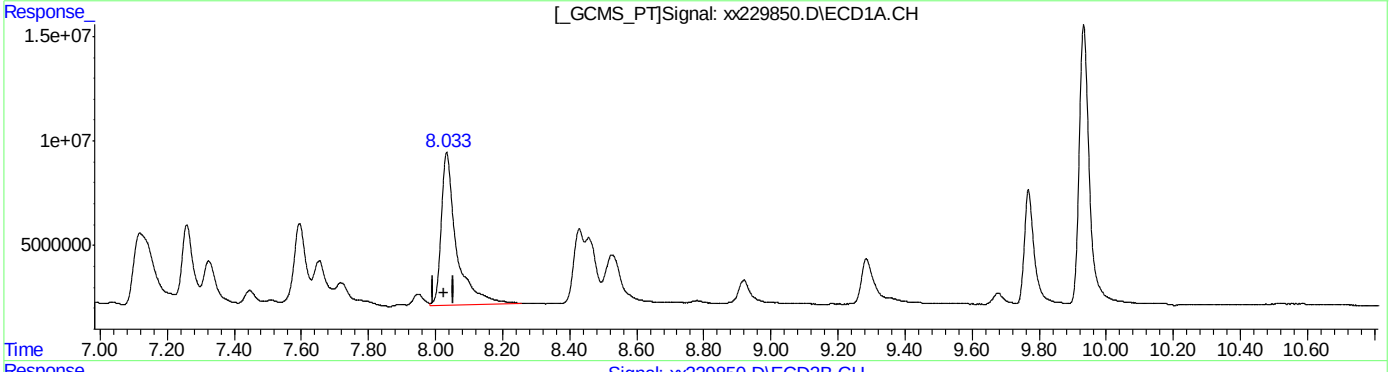
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:07:06 2018

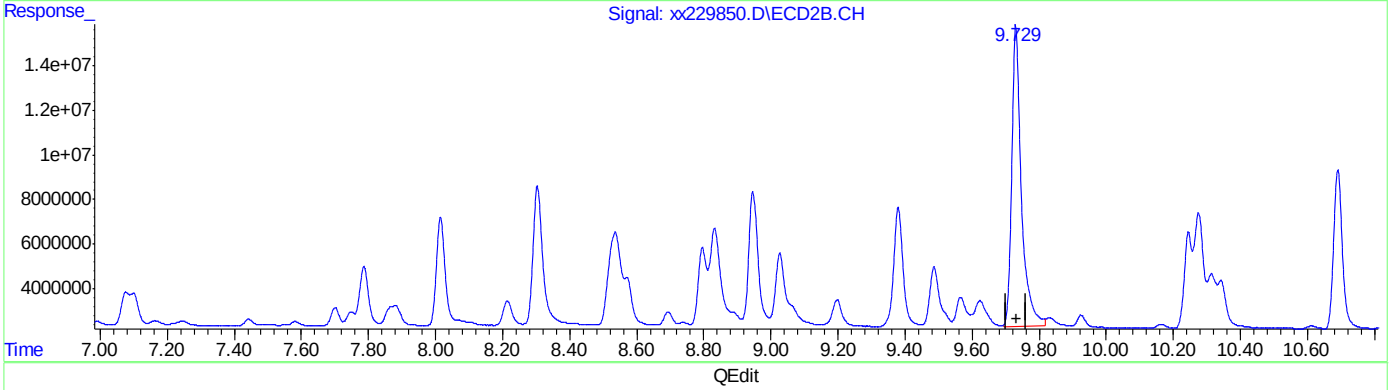
Quantitation Report (Qedit)

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)





QEdit

(49) AR1260-D
8.033min 186.160PPB
response 229054554

(49) AR1260-D #2
9.729min 201.133PPB m
response 268756068

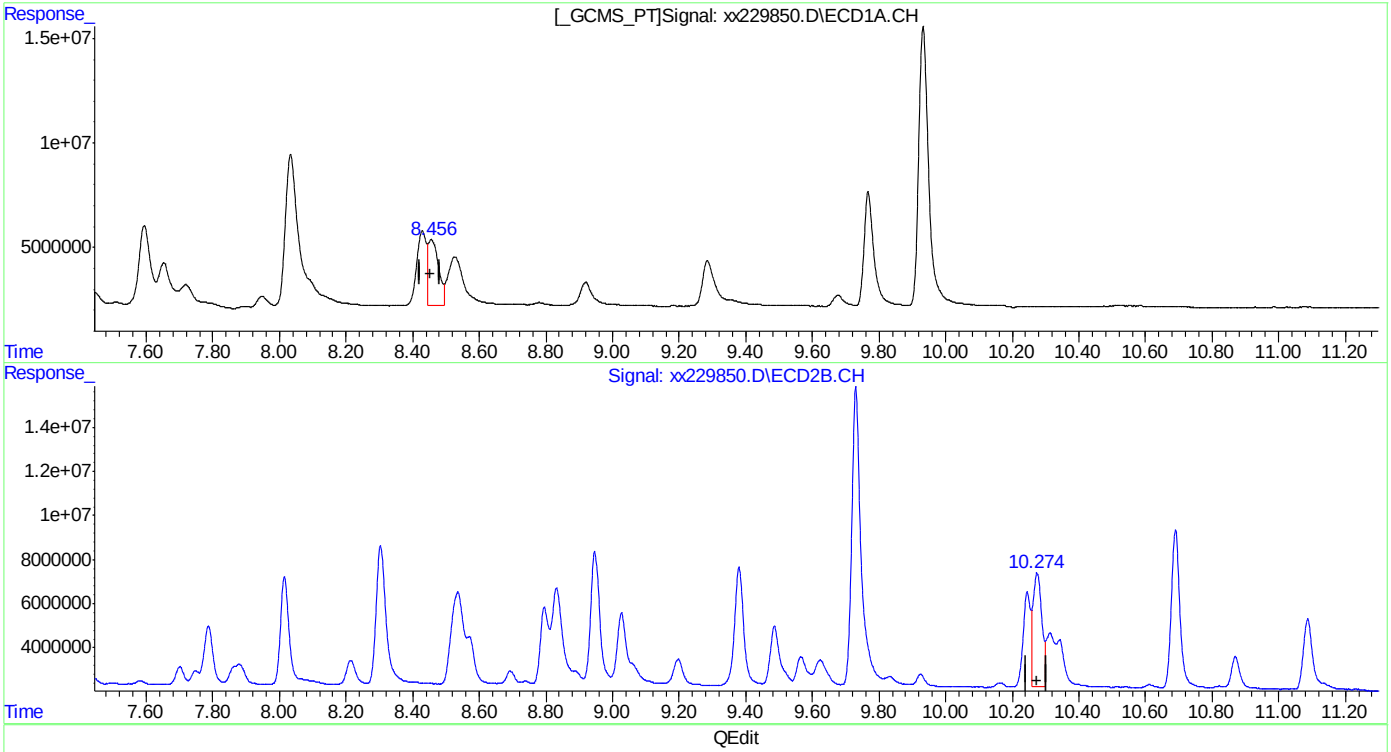
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:07:10 2018

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)



QEdit

(50) AR1260-E
8.457min 57.528PPB
response 67609109

(50) AR1260-E #2
10.275min 81.933PPB
response 98092425

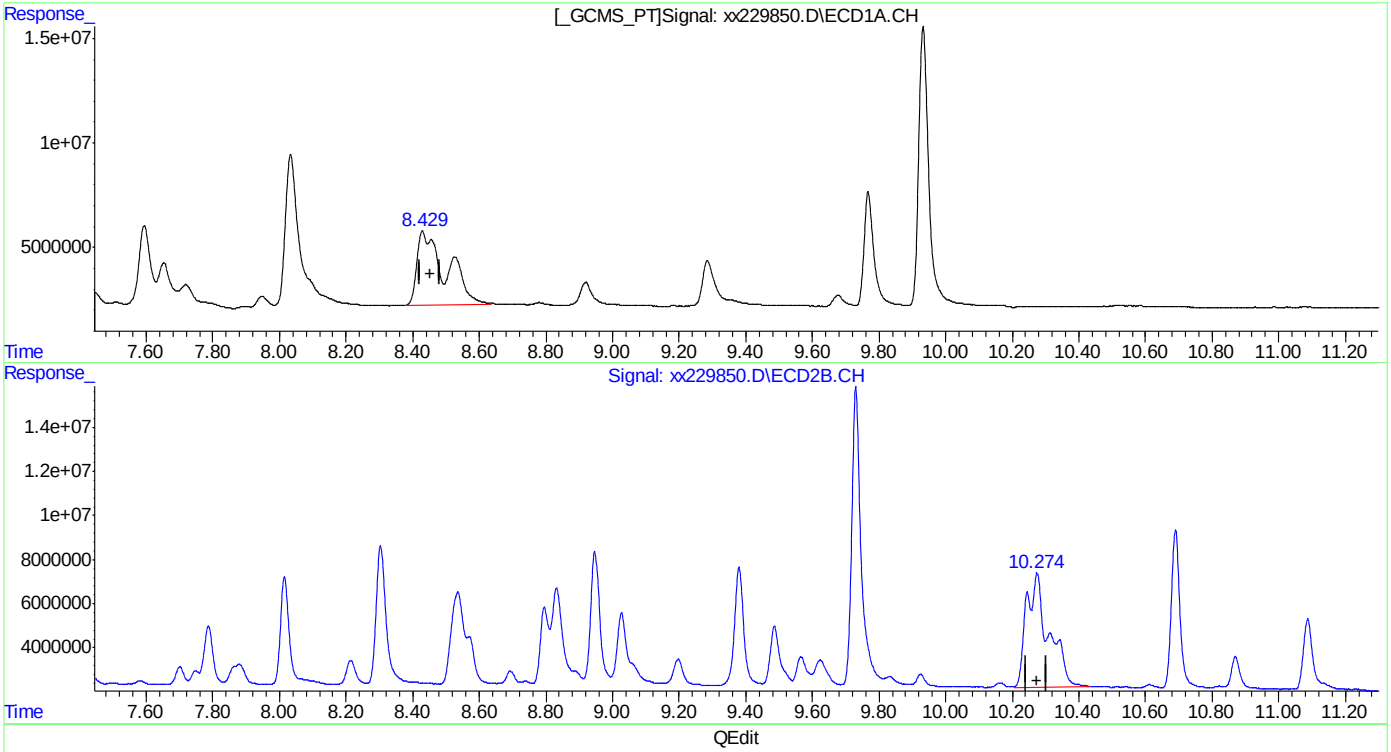
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:07:12 2018

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)
```



QEdit

(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

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 06/05/18 13:54

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.

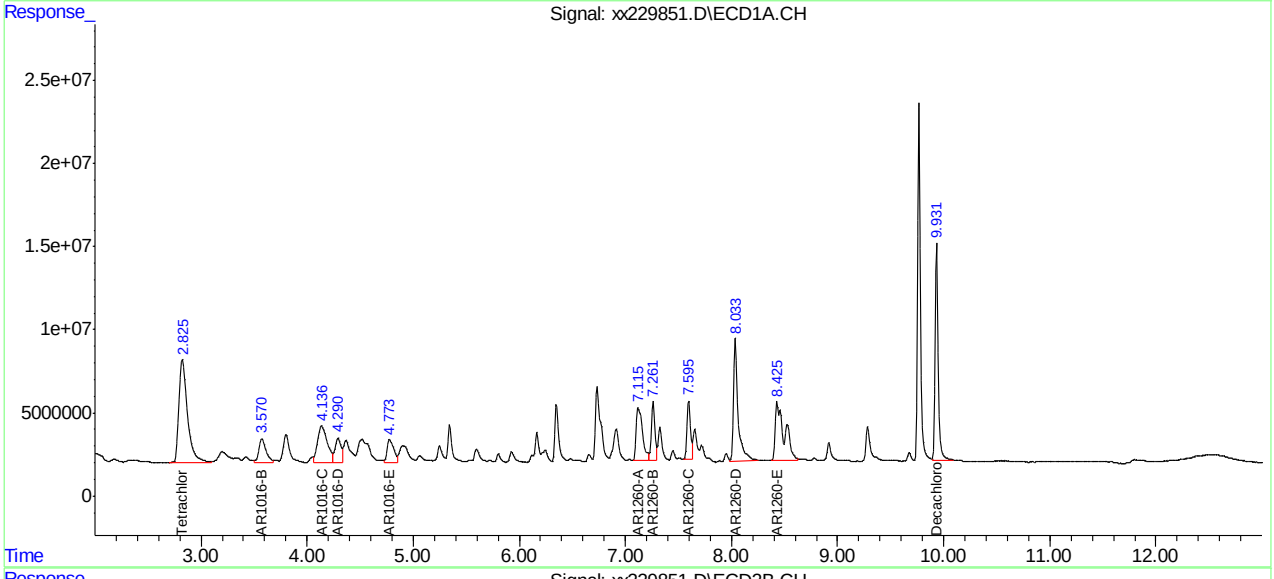
11.3.4 11

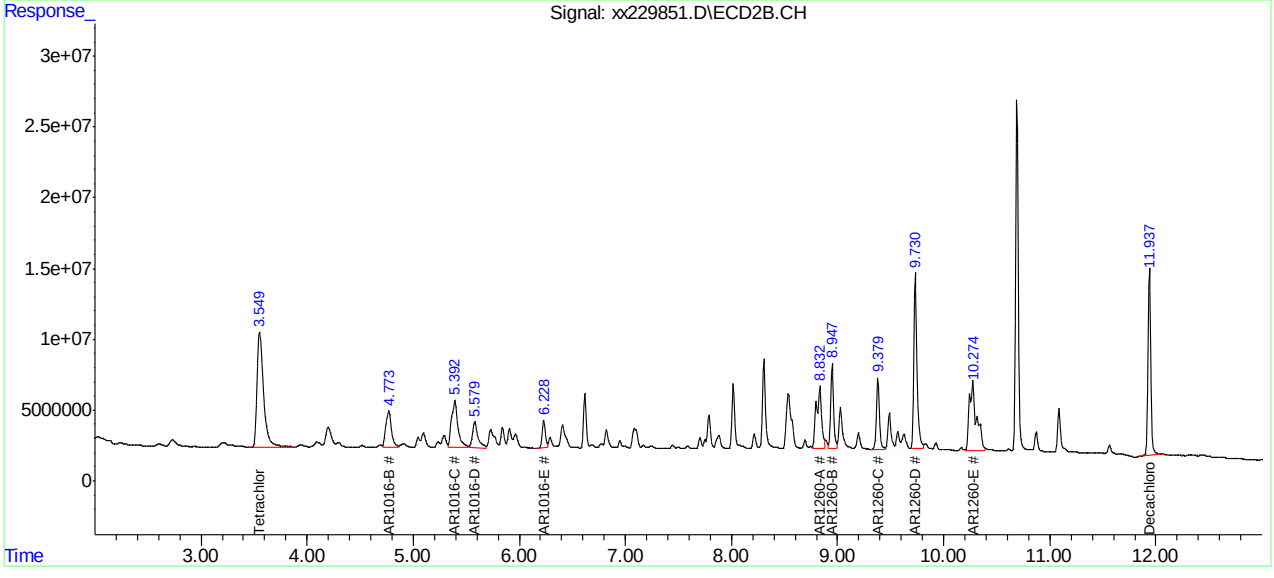
Quantitation Report (QT Reviewed)

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

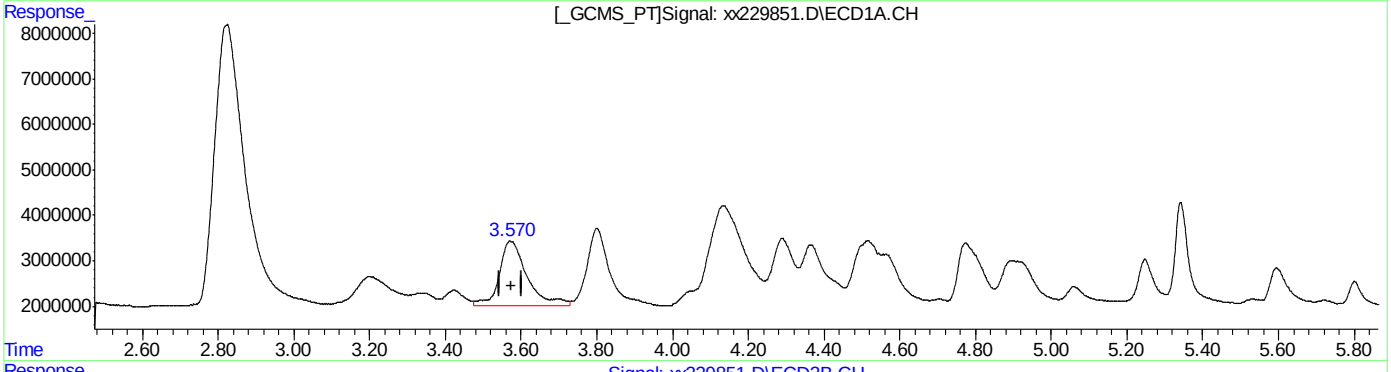
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-B		1	3.57	Split peak
AR1016-C		1	4.14	Split peak
AR1016-B		2	4.77	Split peak
AR1260-E		1	8.43	Split peak
AR1260-A		2	8.83	Split peak
AR1260-D		2	9.73	Split peak
AR1260-E		2	10.27	Split peak

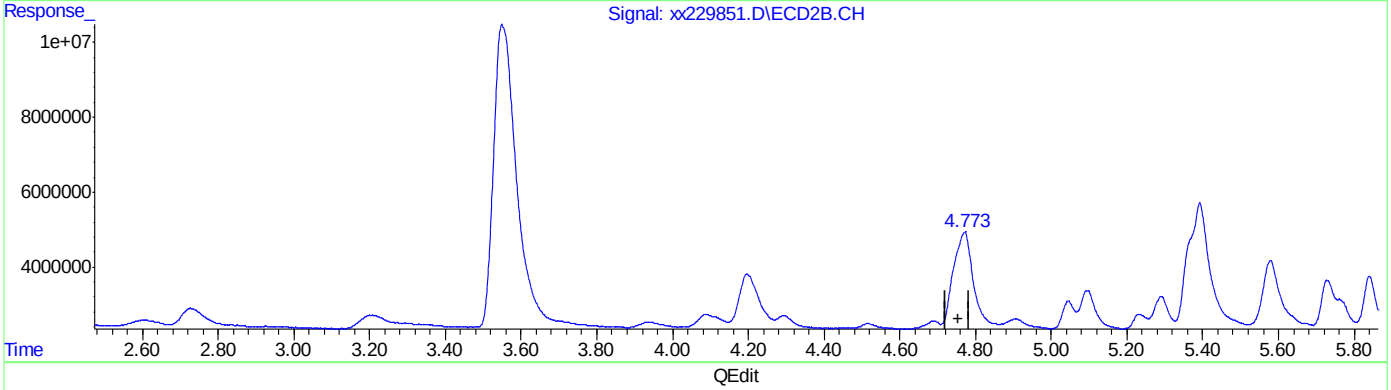
Quantitation Report (Qedit)

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)





QEdit

(42) AR1016-B
3.571min 205.600PPB
response 73452322

(42) AR1016-B #2
4.772min 295.587PPB
response 97095655

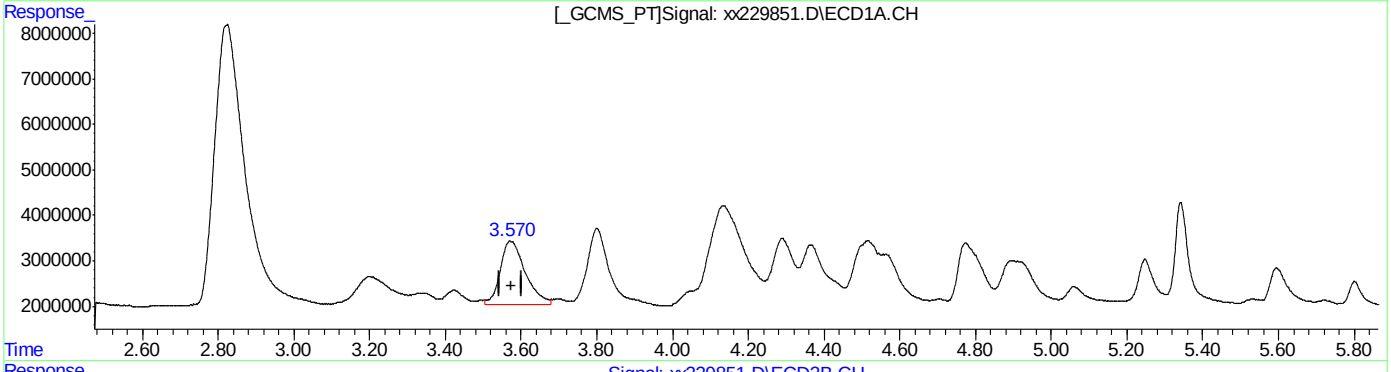
(+) = Expected Retention Time

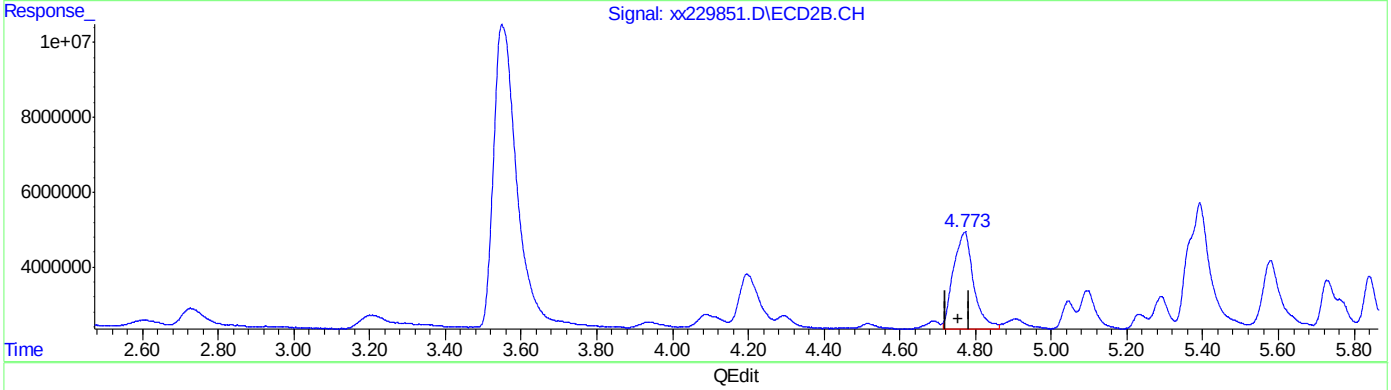
Quantitation Report (Qedit)

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)





QEdit

(42) AR1016-B
3.570min 181.305PPB m
response 64772536

(42) AR1016-B #2
4.773min 289.478PPB m
response 95088845

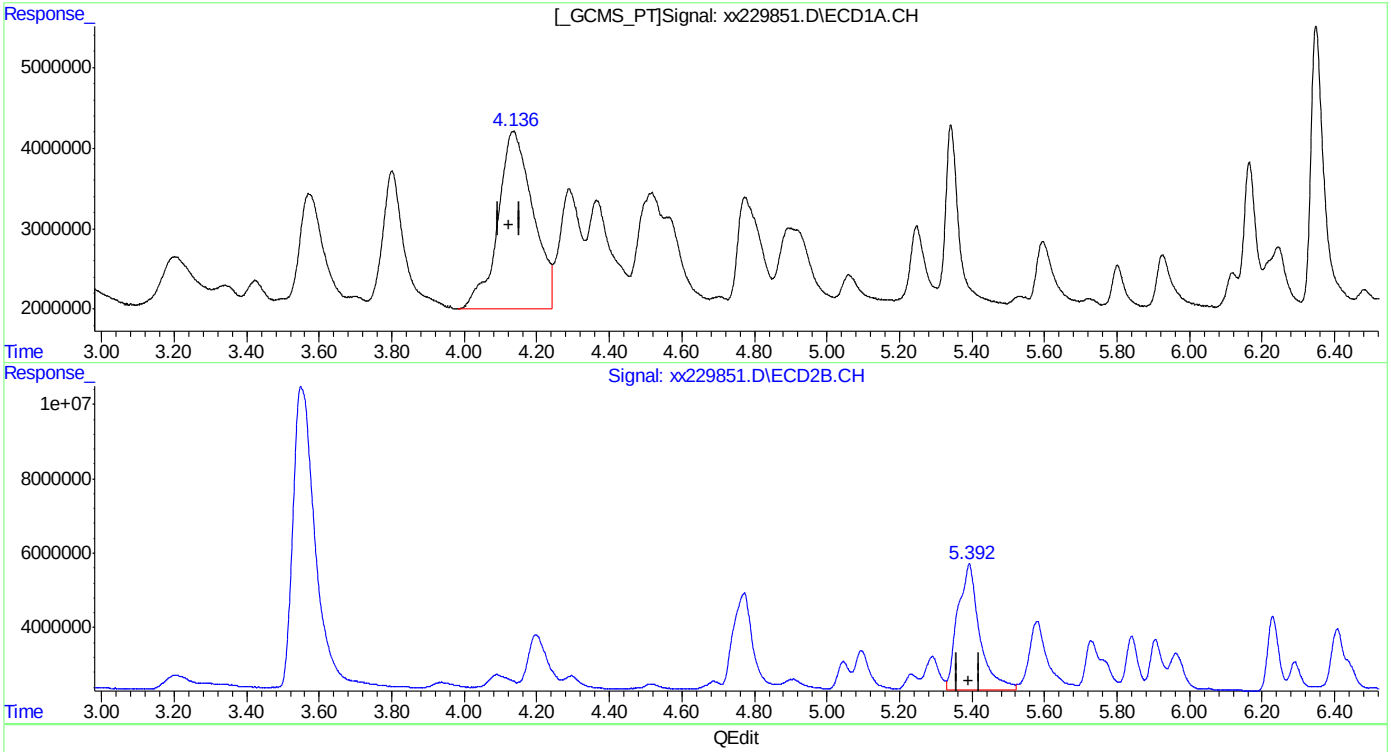
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:08:03 2018

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)



QEdit

(43) AR1016-C
4.136min 177.015PPB
response 148677352

(43) AR1016-C #2
5.392min 188.024PPB
response 142010034

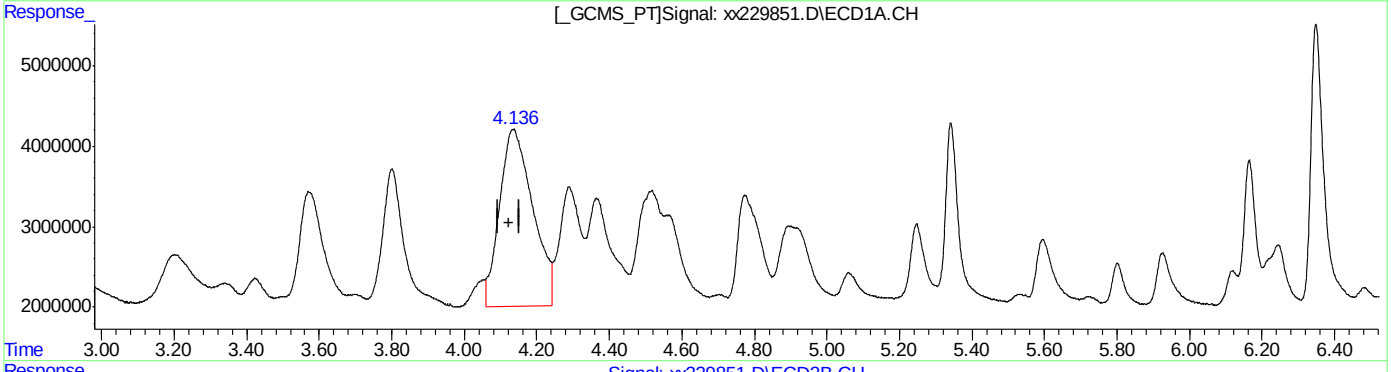
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:08:05 2018

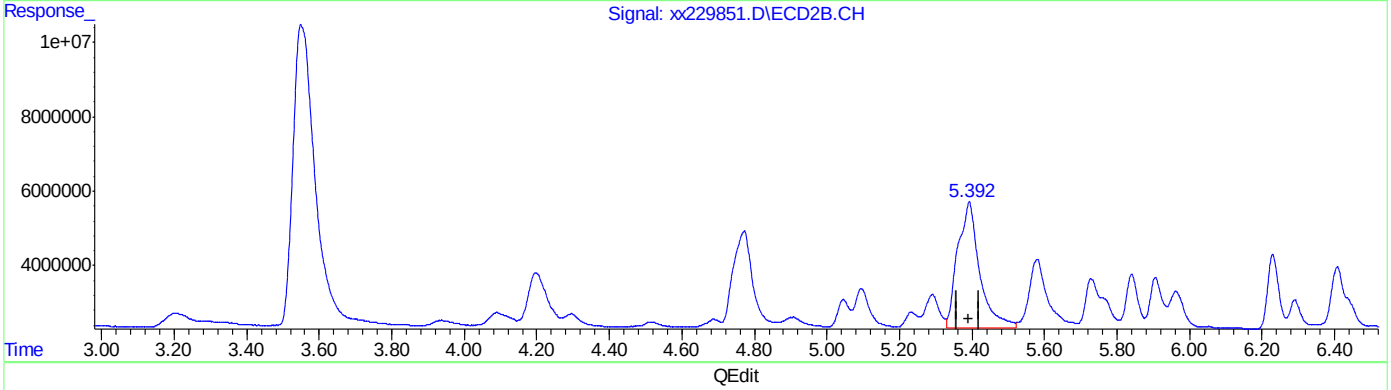
Quantitation Report (Qedit)

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)





QEdit

(43) AR1016-C
4.136min 167.581PPB m
response 140753311

(43) AR1016-C #2
5.392min 188.024PPB
response 142010034

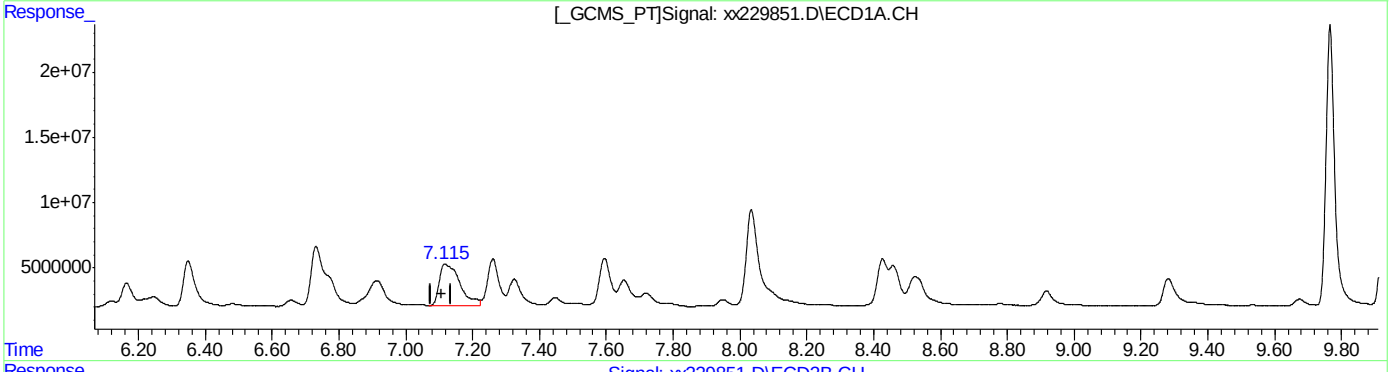
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:08:09 2018

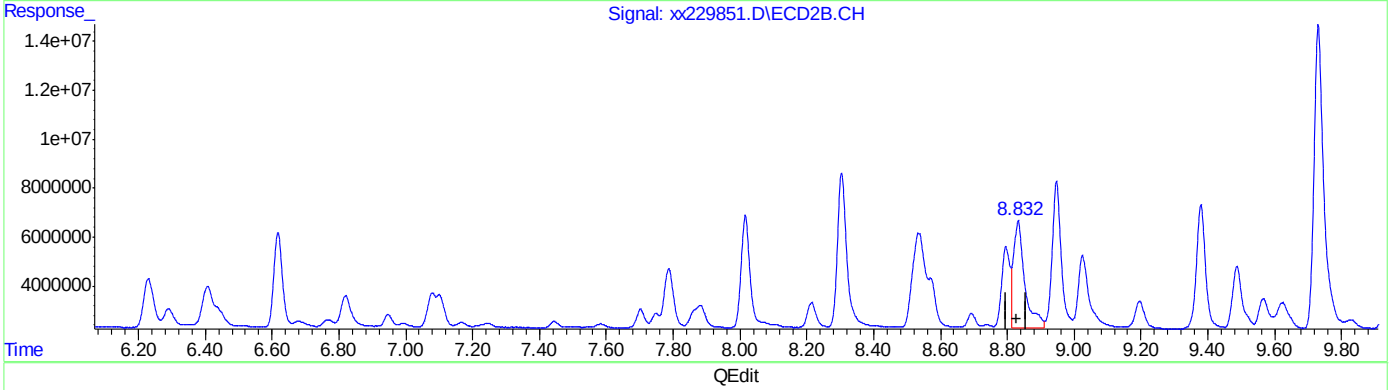
Quantitation Report (Qedit)

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)





QEdit

(46) AR1260-A
7.116min 141.151PPB
response 133830762

(46) AR1260-A #2
8.832min 105.993PPB
response 105147703

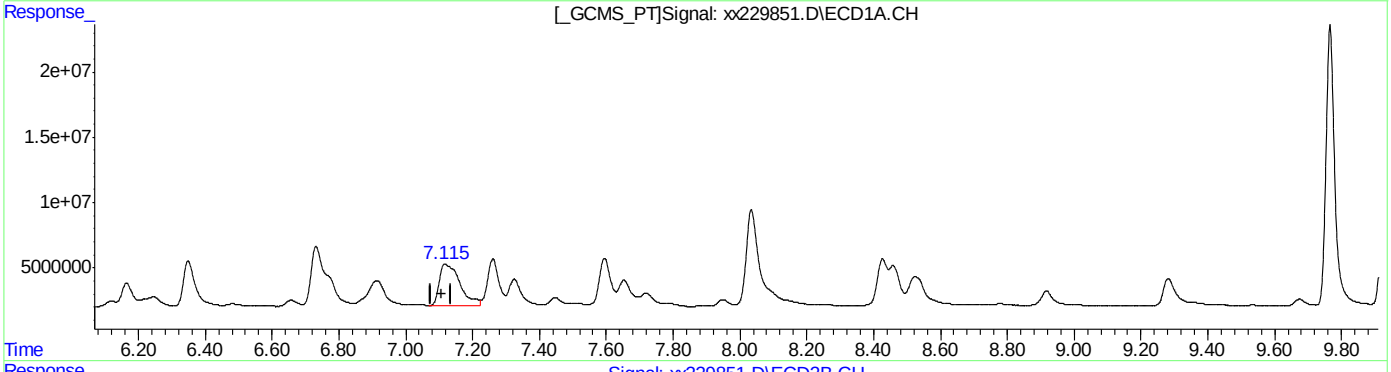
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:08:13 2018

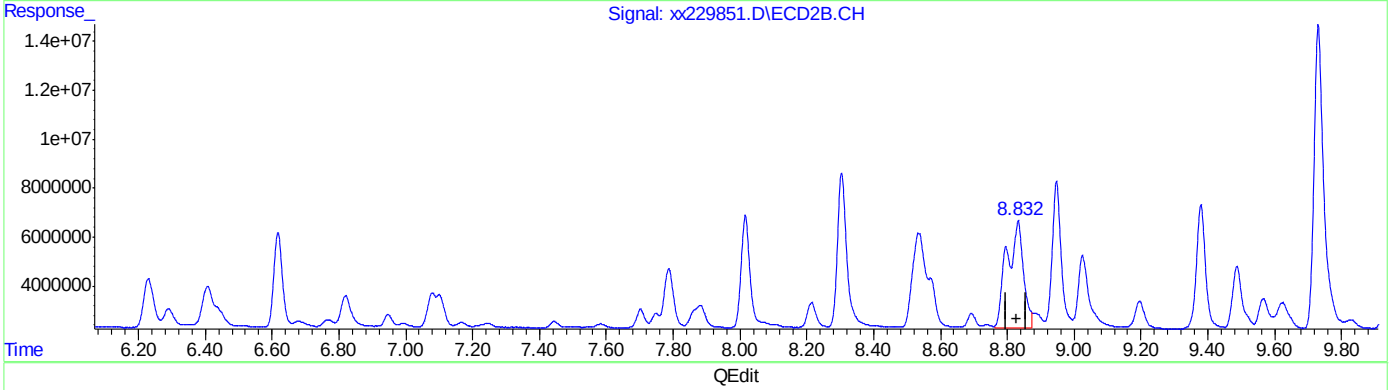
Quantitation Report (Qedit)

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)





QEdit

(46) AR1260-A
7.116min 141.151PPB
response 133830762

(46) AR1260-A #2
8.832min 149.491PPB m
response 148299225

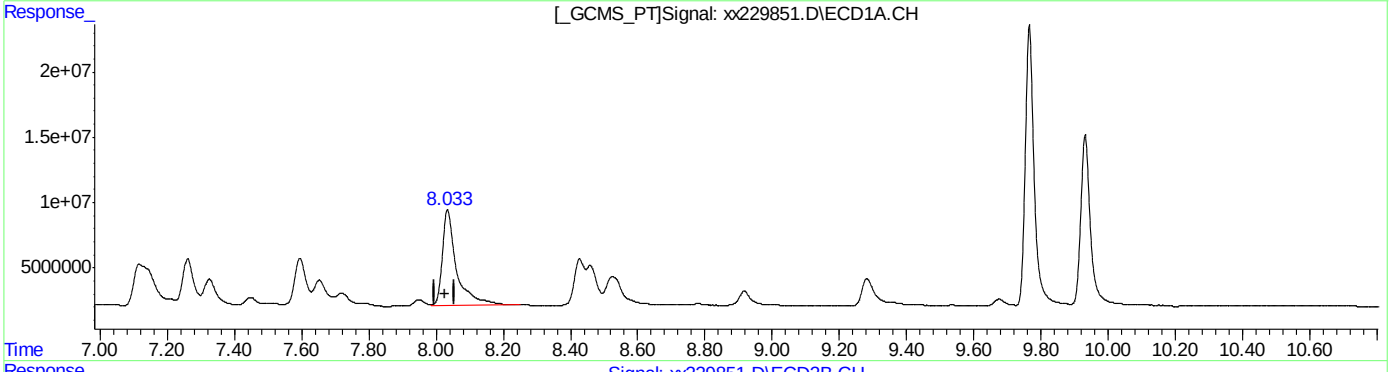
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:08:18 2018

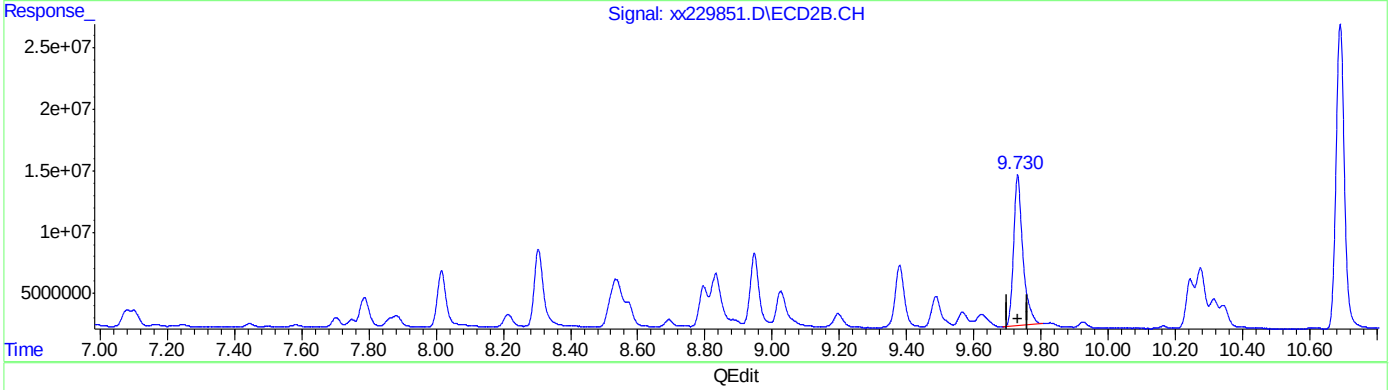
Quantitation Report (Qedit)

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)





QEdit

(49) AR1260-D
8.034min 175.869PPB
response 216392557

(49) AR1260-D #2
9.731min 181.389PPB
response 242373624

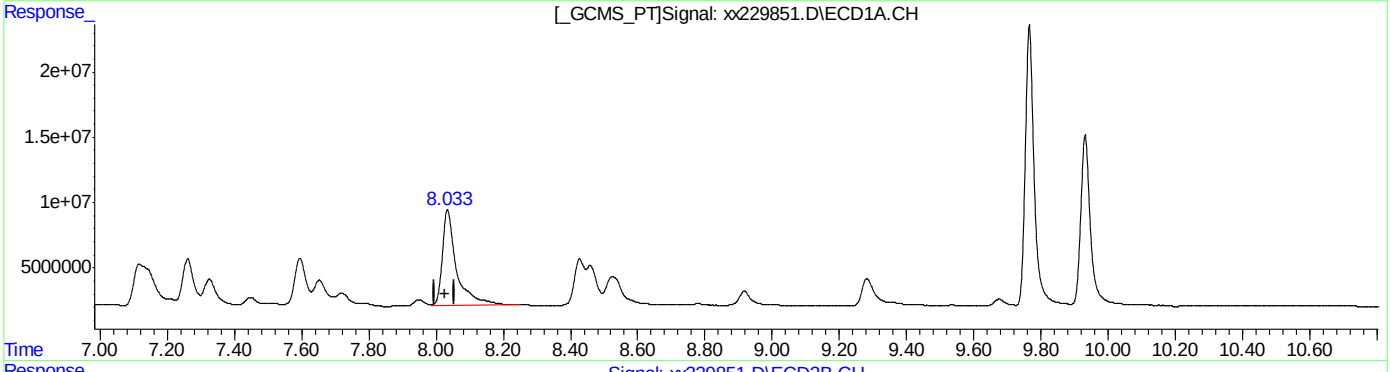
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:08:21 2018

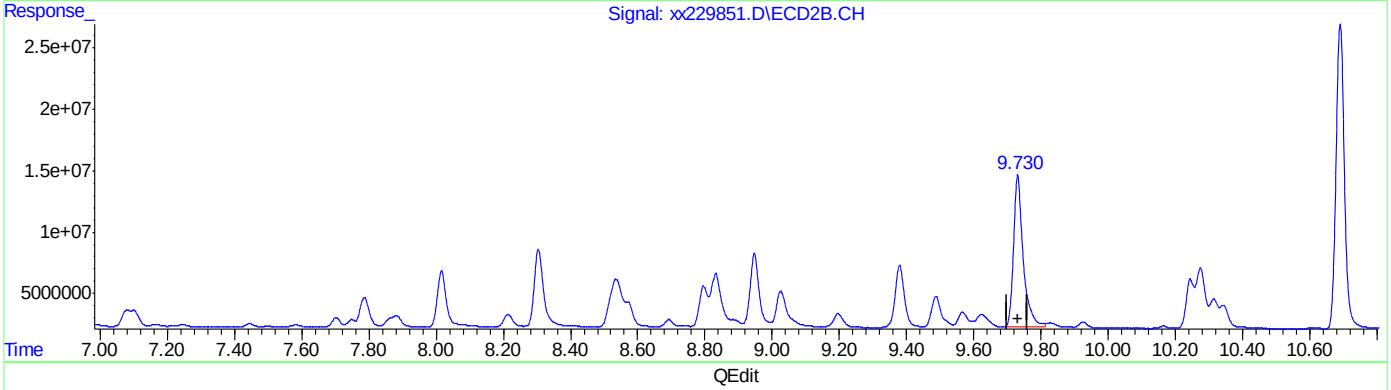
Quantitation Report (Qedit)

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)





QEdit

(49) AR1260-D
8.034min 175.869PPB
response 216392557

(49) AR1260-D #2
9.730min 189.688PPB m
response 253462812

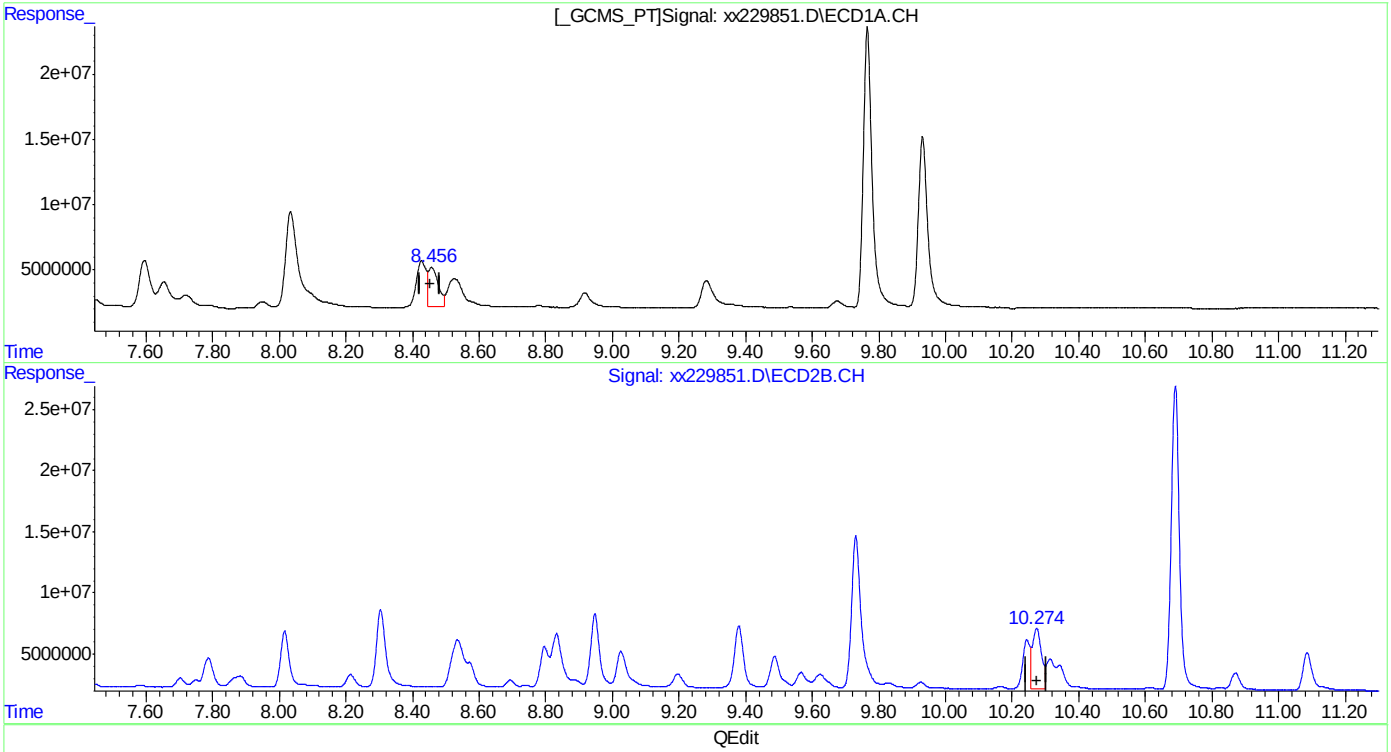
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:08:25 2018

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)



QEdit

(50) AR1260-E
8.457min 53.284PPB
response 62621692

(50) AR1260-E #2
10.274min 77.220PPB
response 92449512

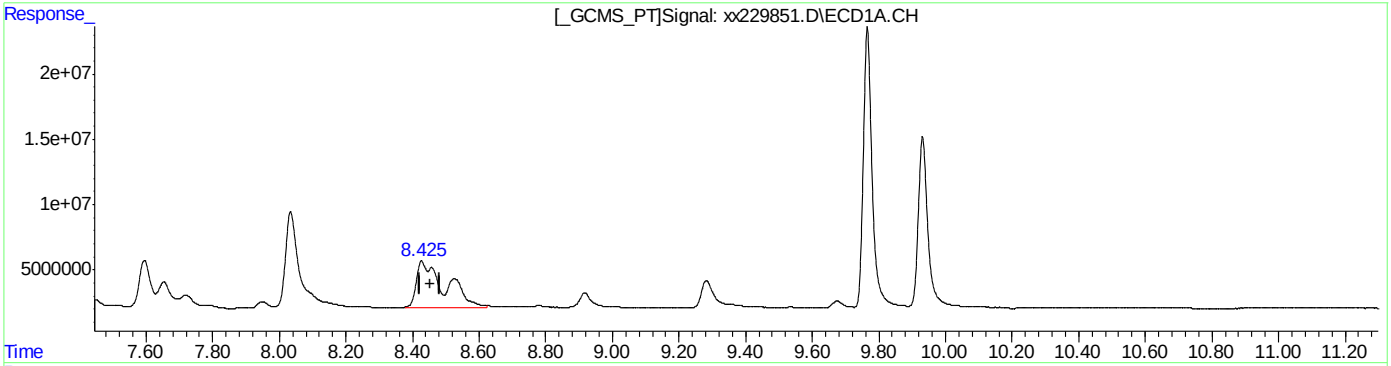
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:08:27 2018

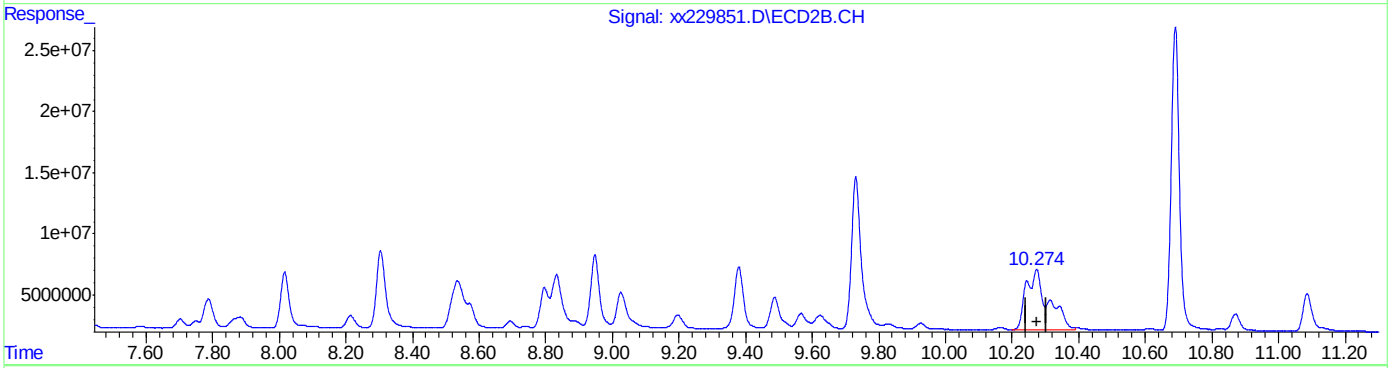
Quantitation Report (Qedit)

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)





QEdit

(50) AR1260-E
8.425min 179.229PPB m
response 210636559

(50) AR1260-E #2
10.274min 190.739PPB m
response 228356770

(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:08:33 2018

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 06/11/18 08:17

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

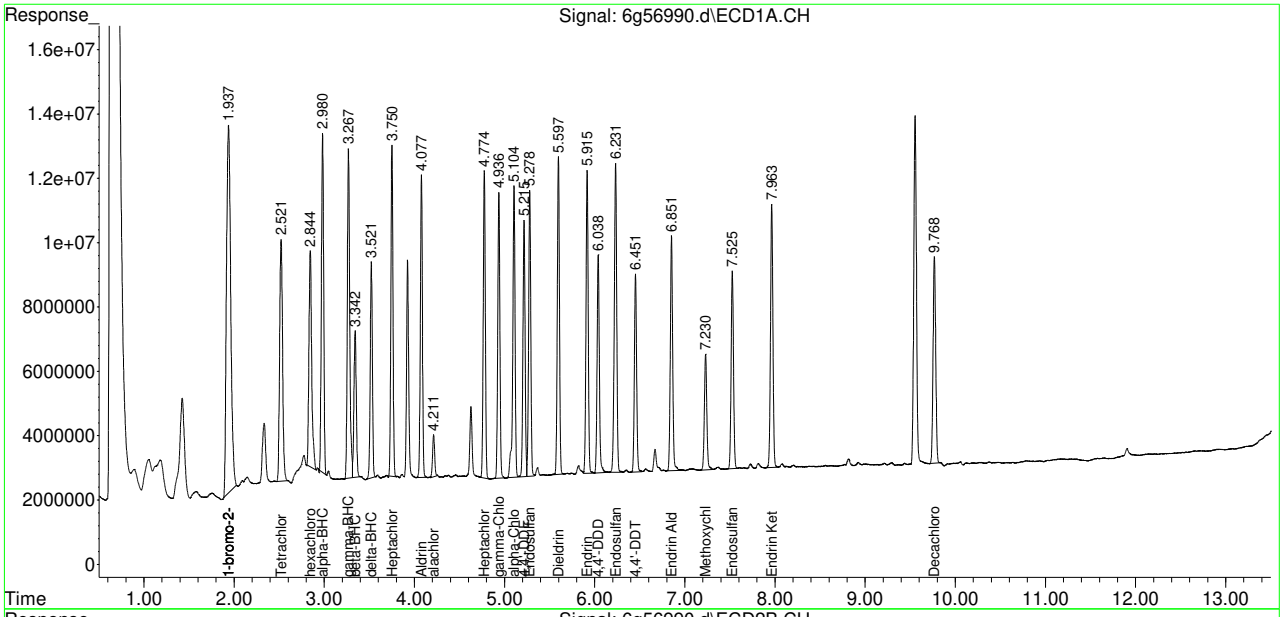
11

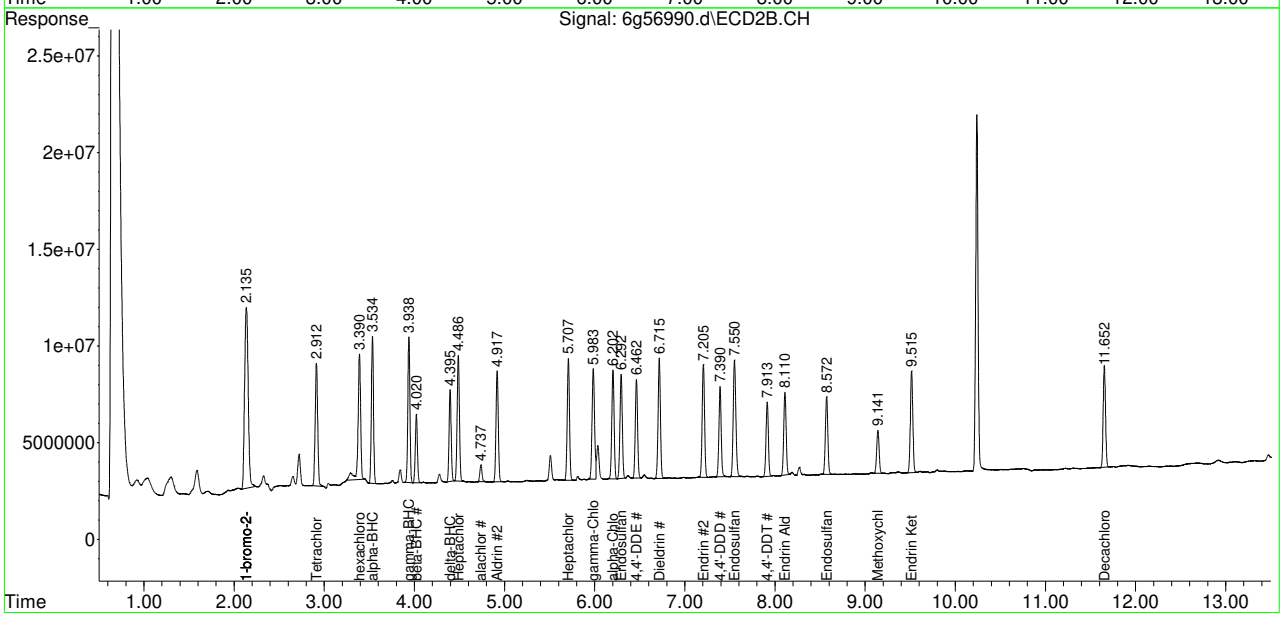
Quantitation Report (QT Reviewed)

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





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

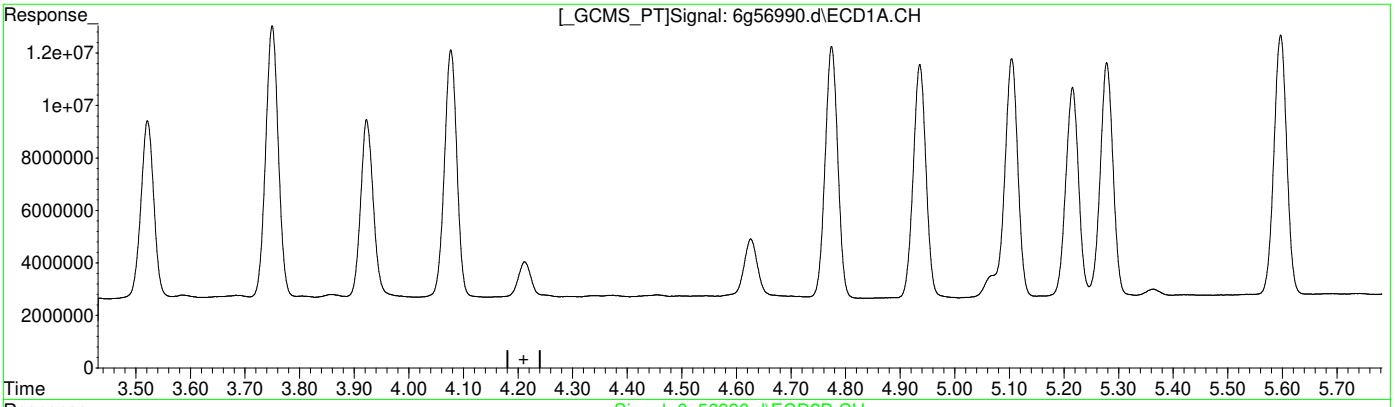
Parameter	CAS	Sig#	R.T. (min.)	Reason
Alachlor	15972-60-8	1	4.21	Poorly defined baseline

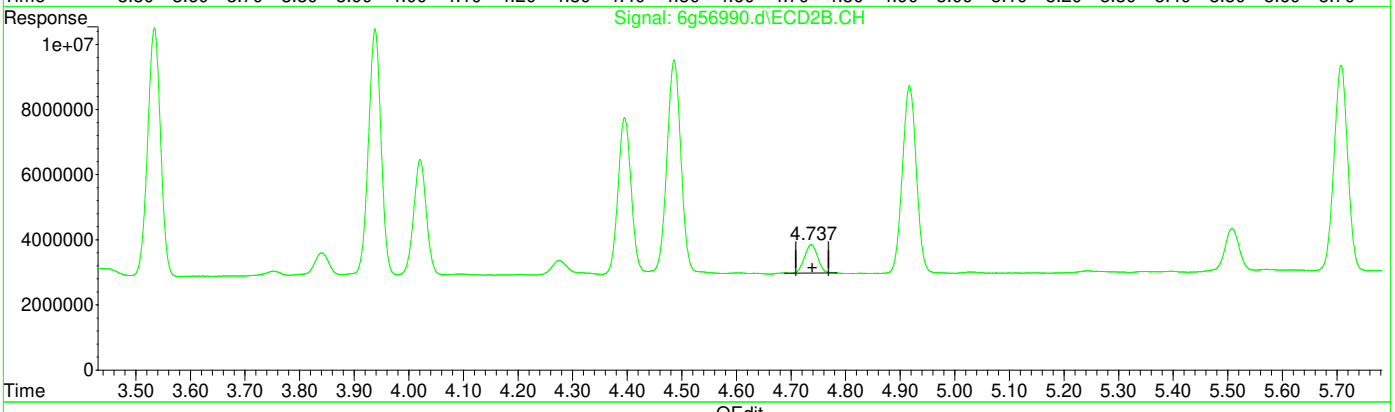
Quantitation Report (Qedit)

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

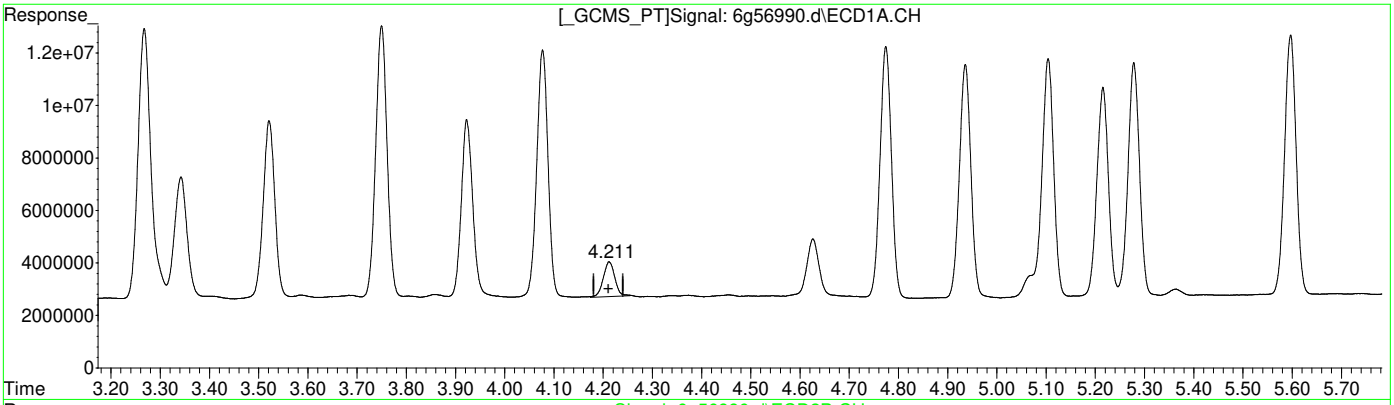
6PST1671.M Thu Jun 07 14:10:46 2018

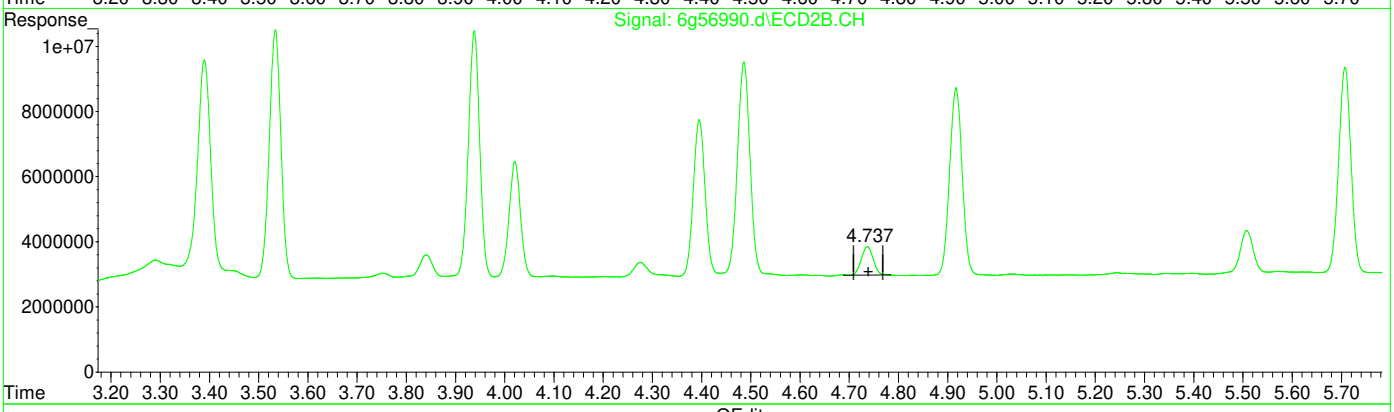
Quantitation Report (Qedit)

```
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
```





QEdit

(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

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 06/11/18 08:17

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.

11.4.2

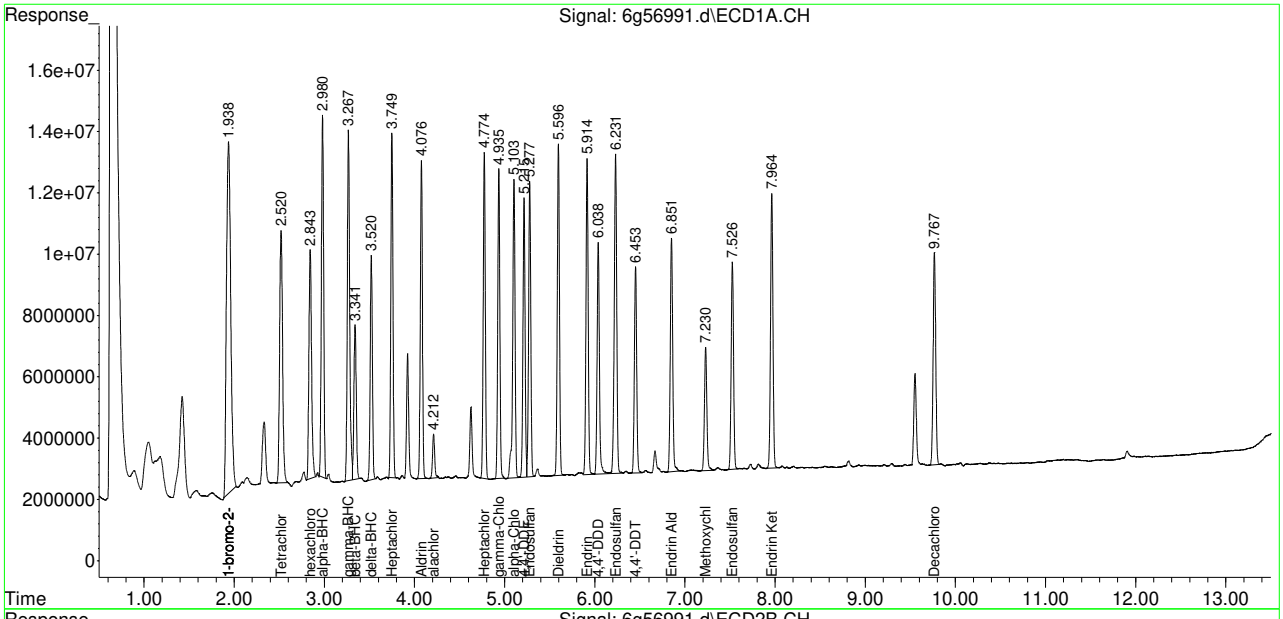
11

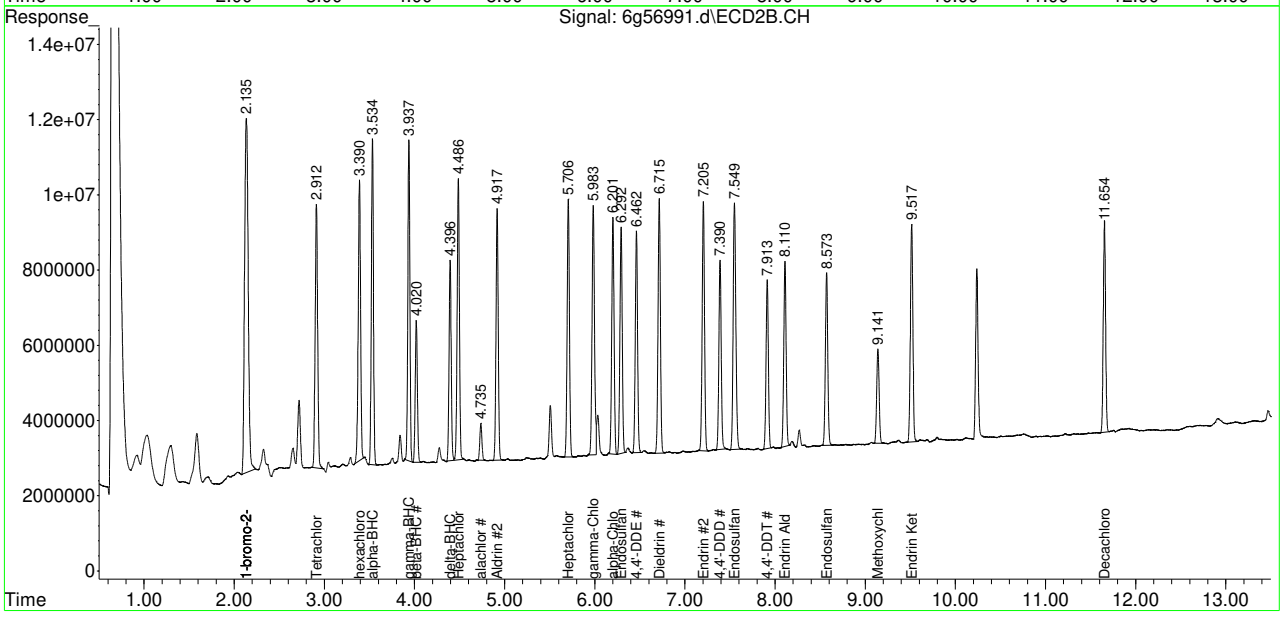
Quantitation Report (QT Reviewed)

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





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

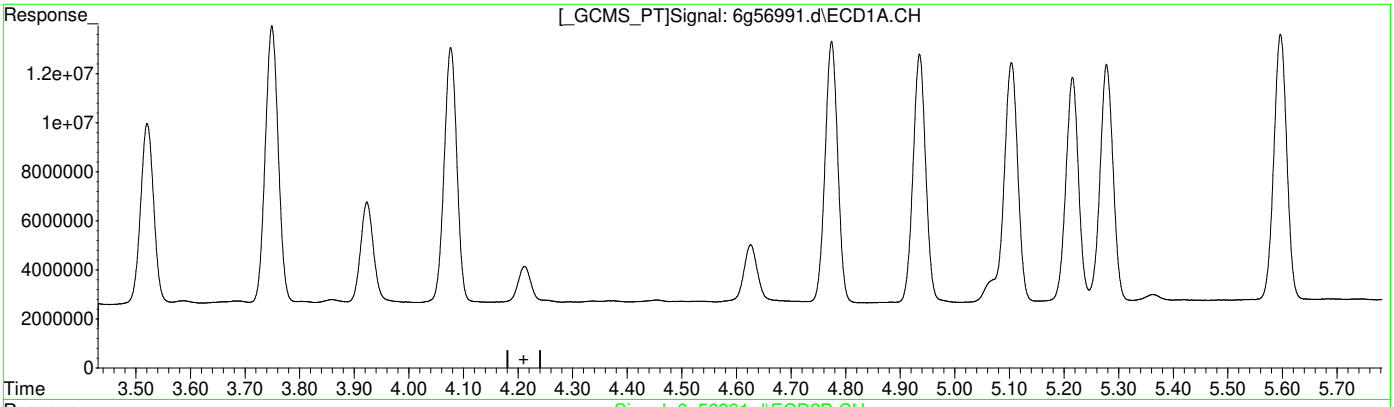
Parameter	CAS	Sig#	R.T. (min.)	Reason
Alachlor	15972-60-8	1	4.21	Poorly defined baseline

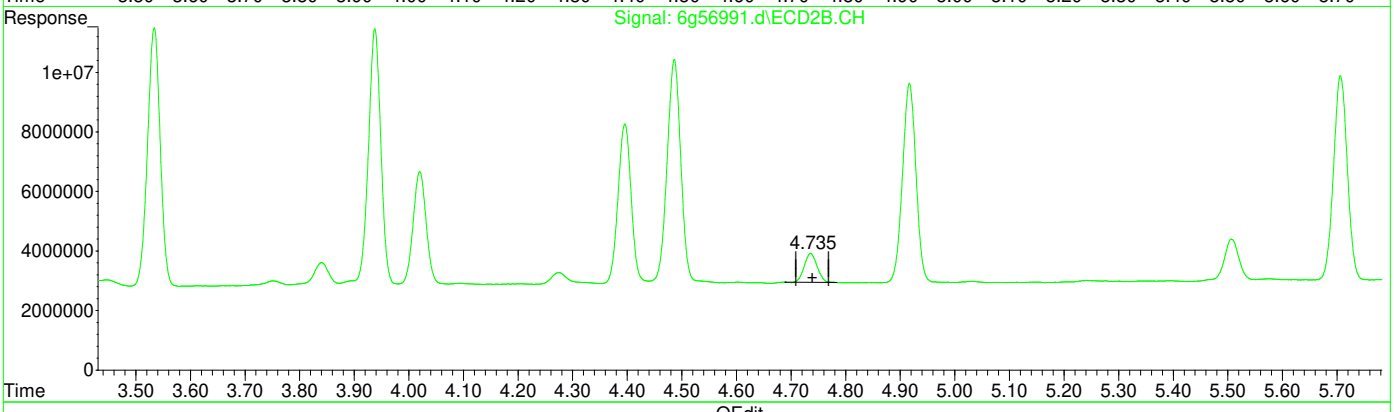
Quantitation Report (Qedit)

```
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

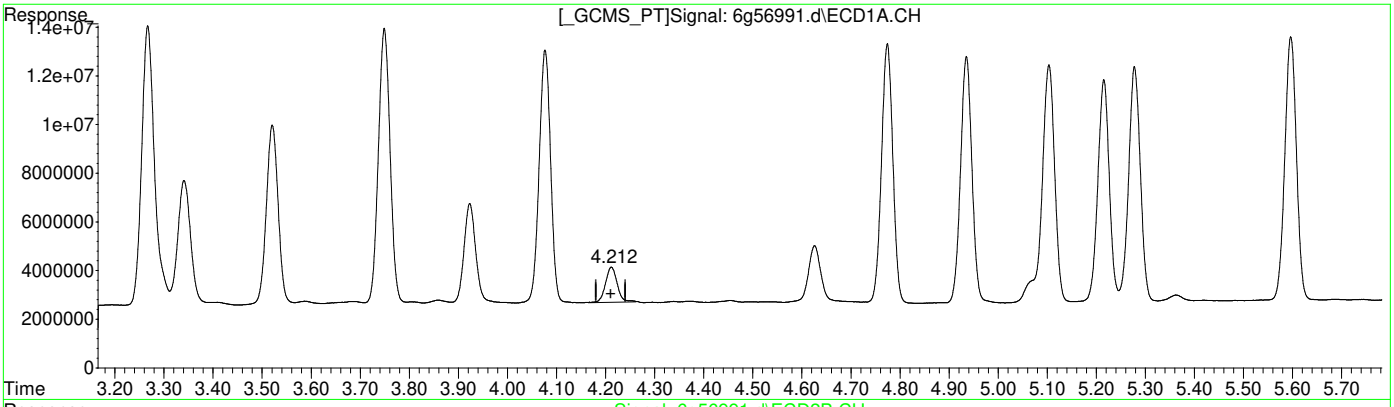
6PST1671.M Thu Jun 07 14:12:45 2018

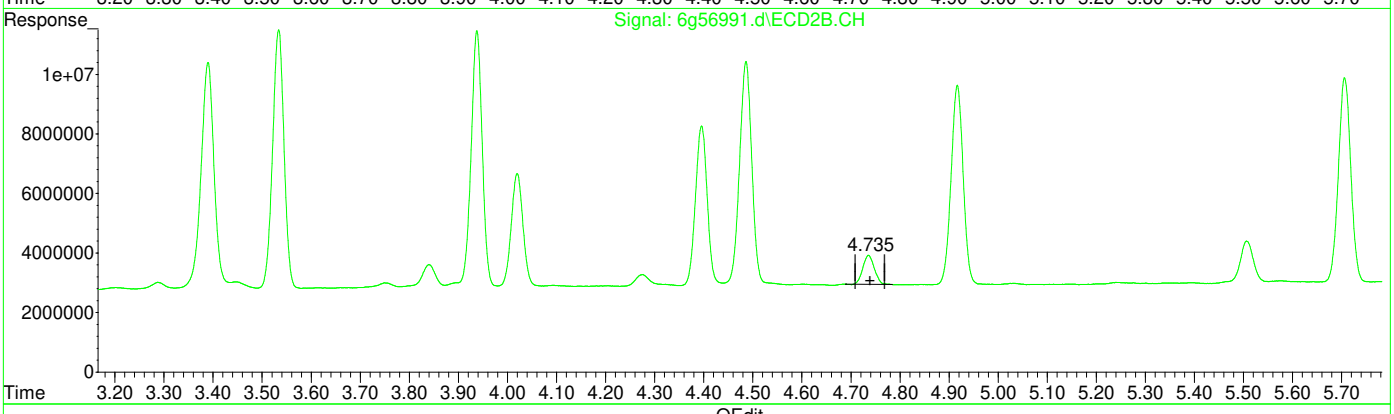
Quantitation Report (Qedit)

```
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
```





QEdit

(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

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns
06/05/18 13:54

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.

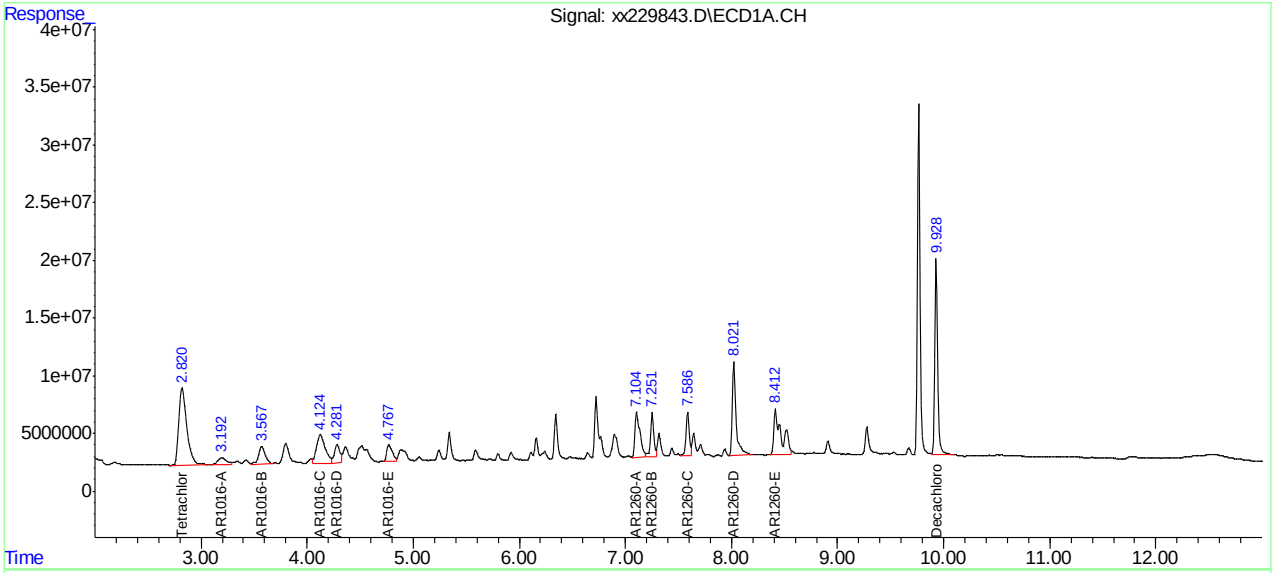
11.4.3 11

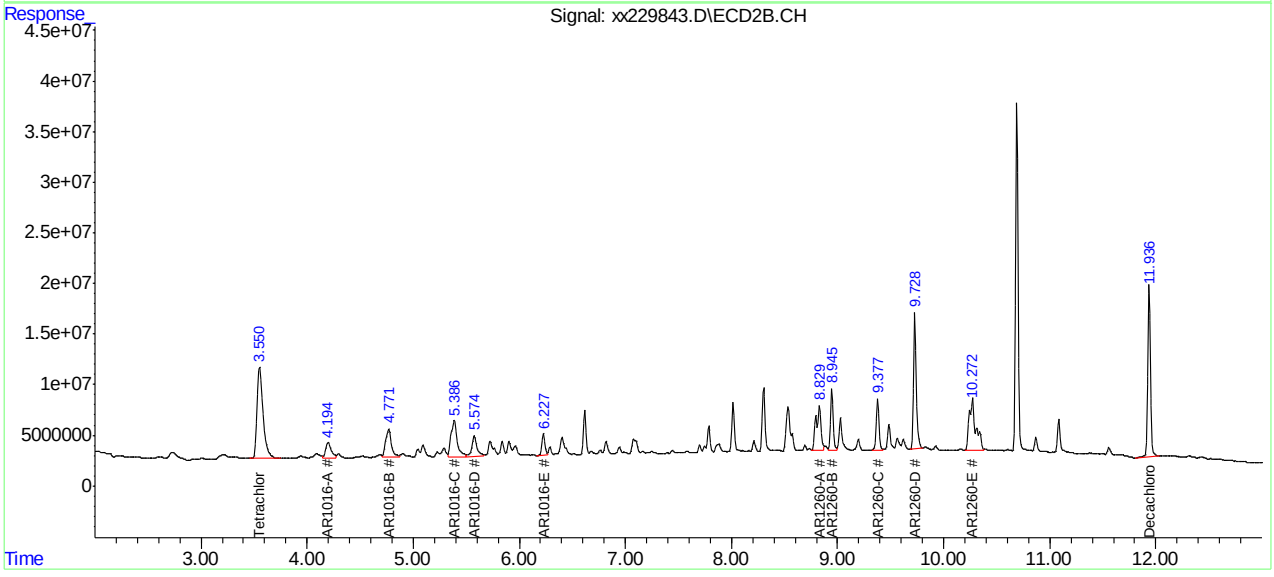
Quantitation Report (QT Reviewed)

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)





PCB6349.M Tue Jun 05 09:02:29 2018 Page: 2

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

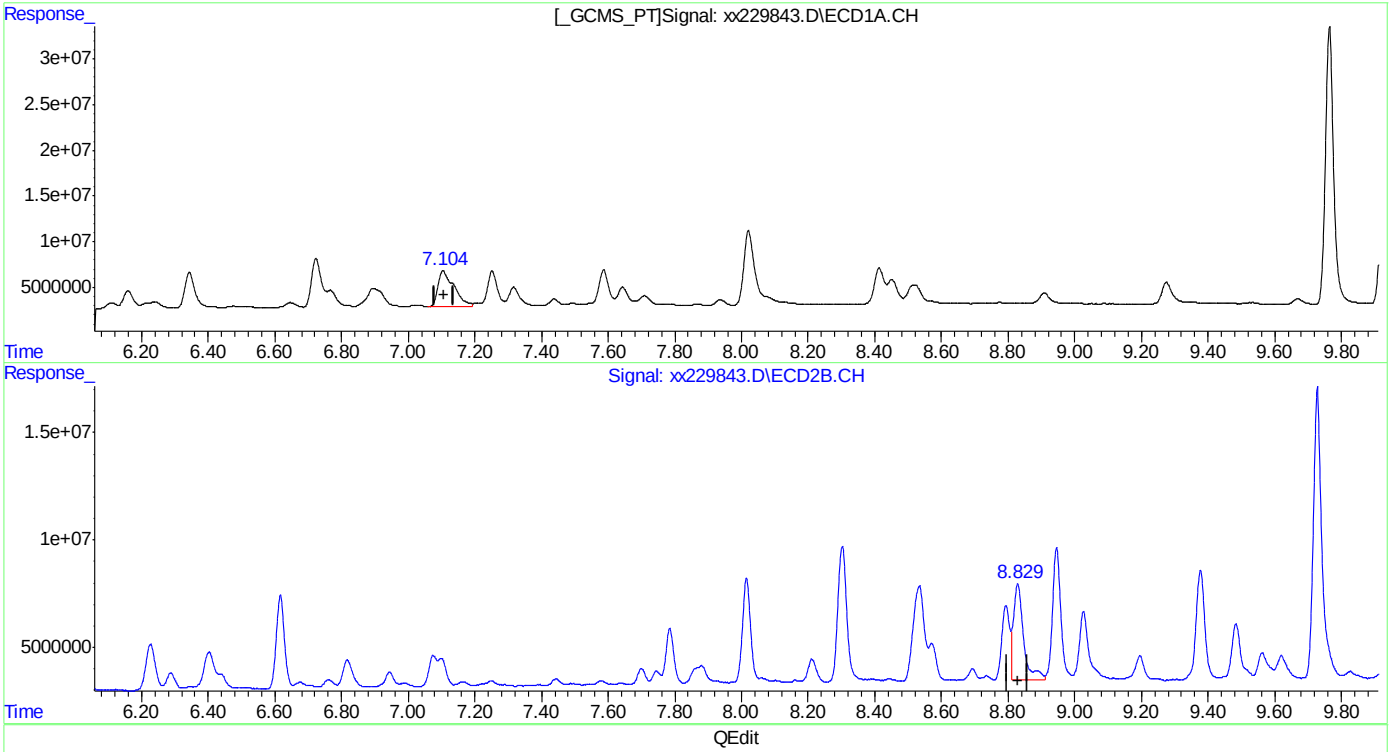
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1260-E		1	8.41	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.27	Split peak

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

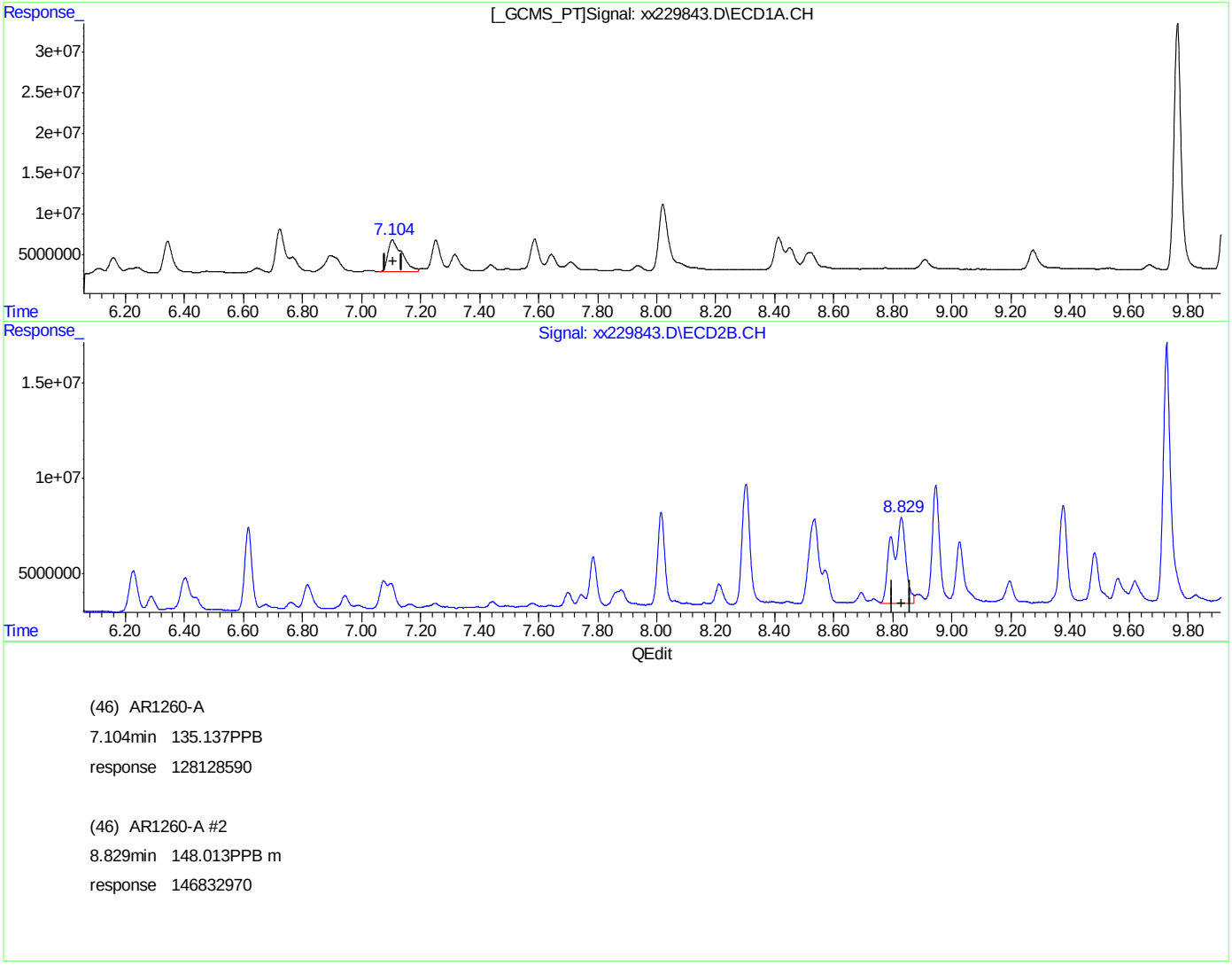
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:02:06 2018

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

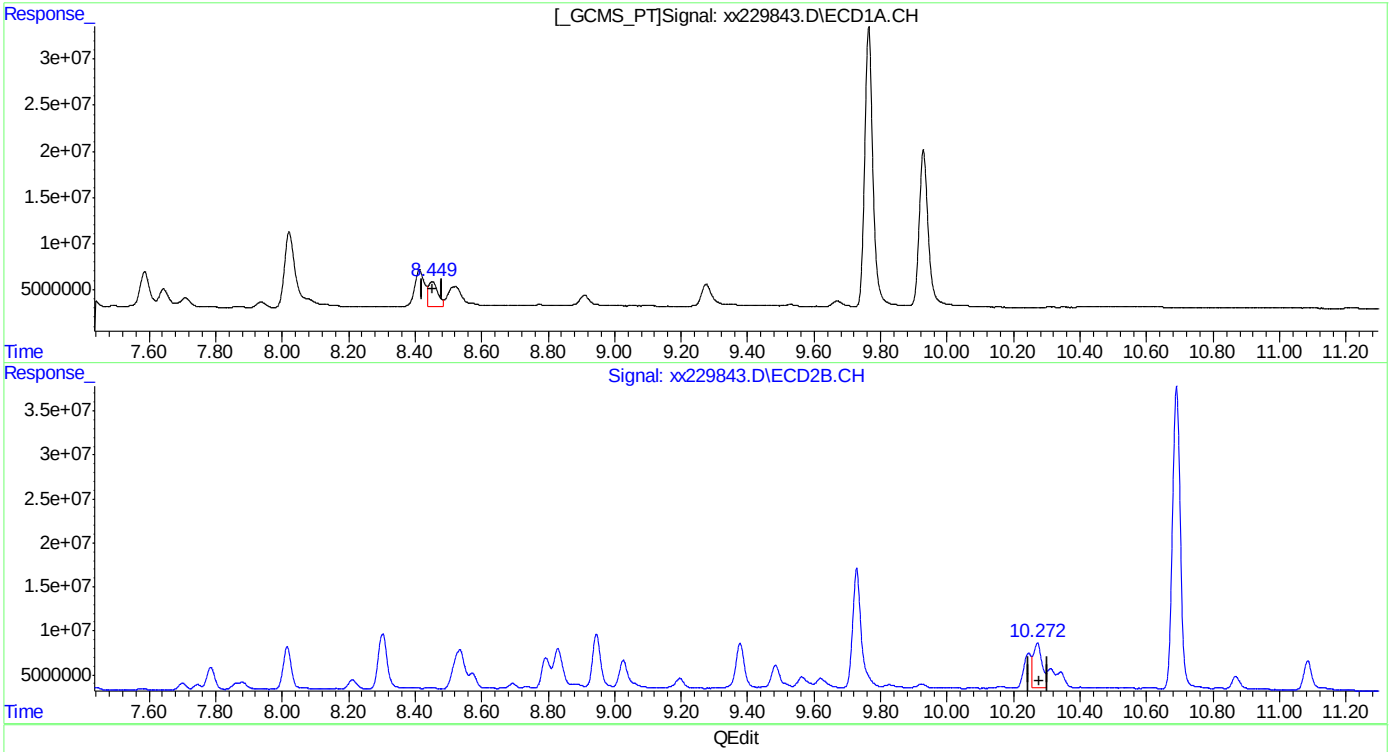
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:02:10 2018

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

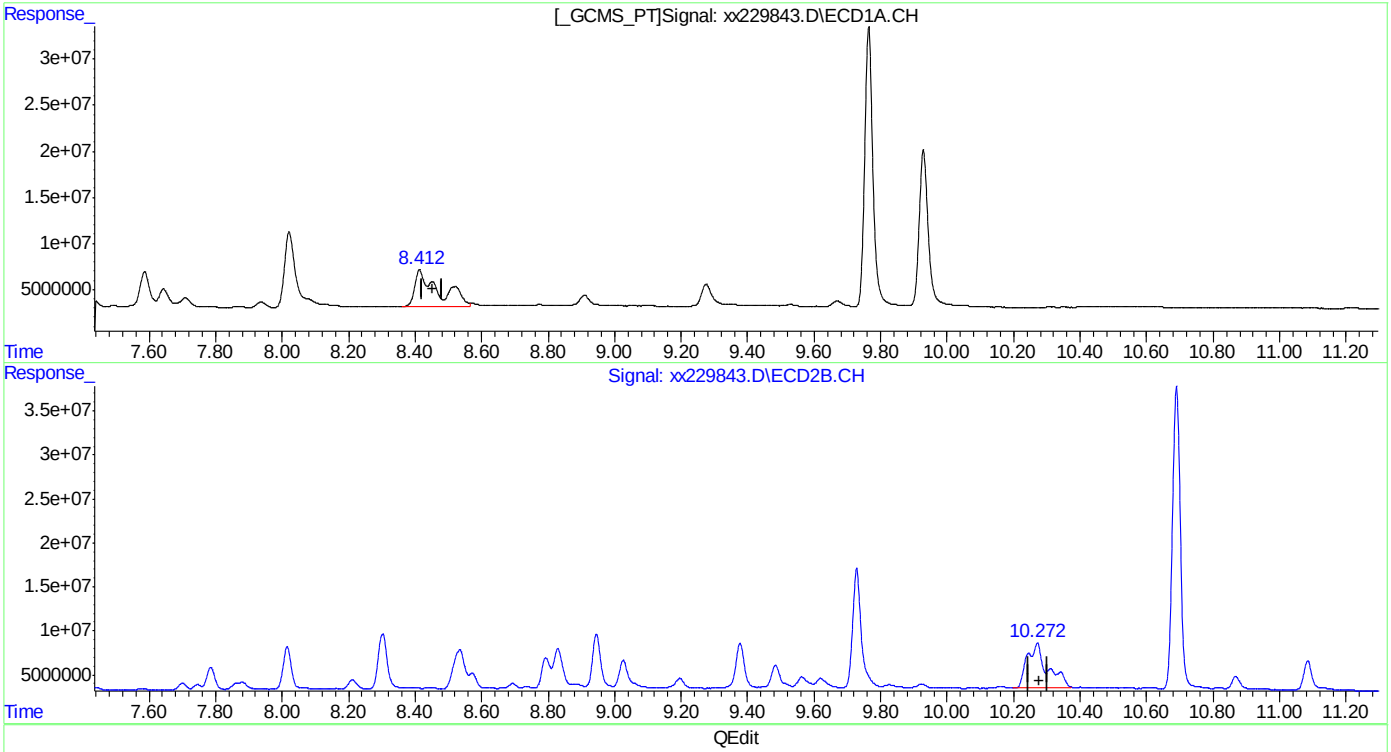
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:02:14 2018

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
8.412min 166.007PPB m
response 195097353

(50) AR1260-E #2
10.272min 184.042PPB m
response 220338694

(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:02:23 2018

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 06/05/18 13:54

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.

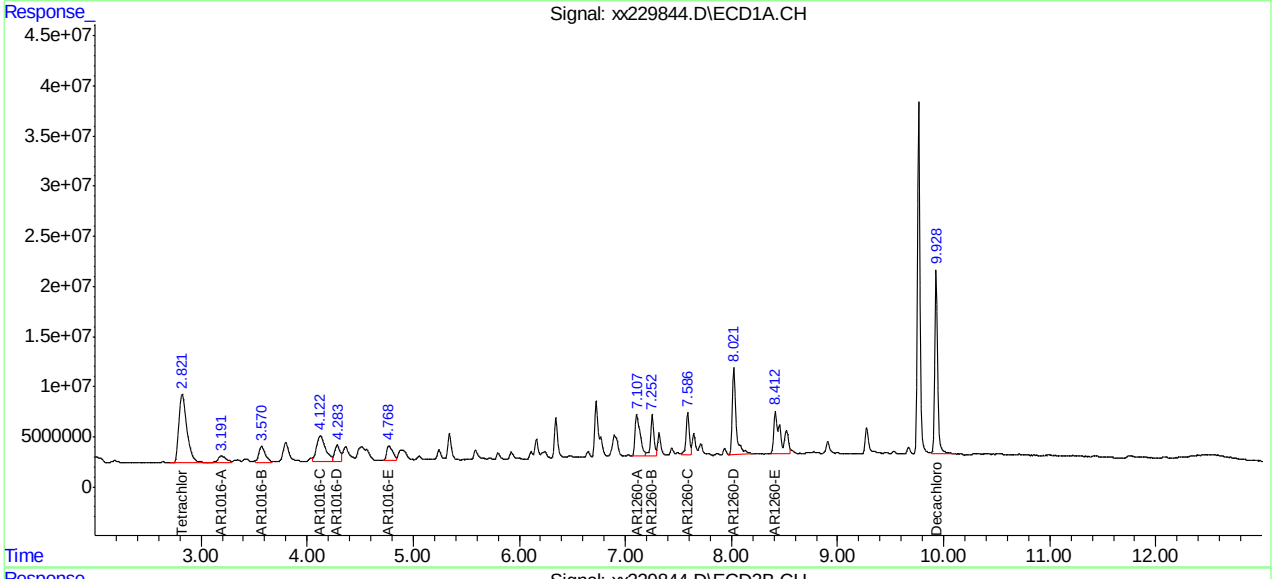
11.4.4 11

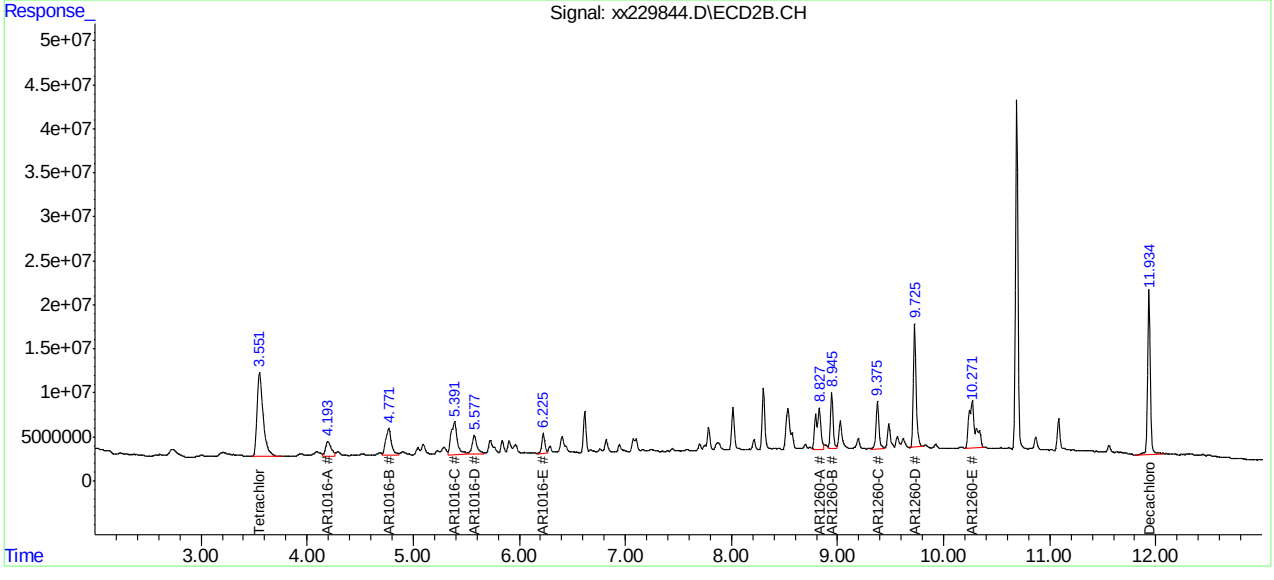
Quantitation Report (QT Reviewed)

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

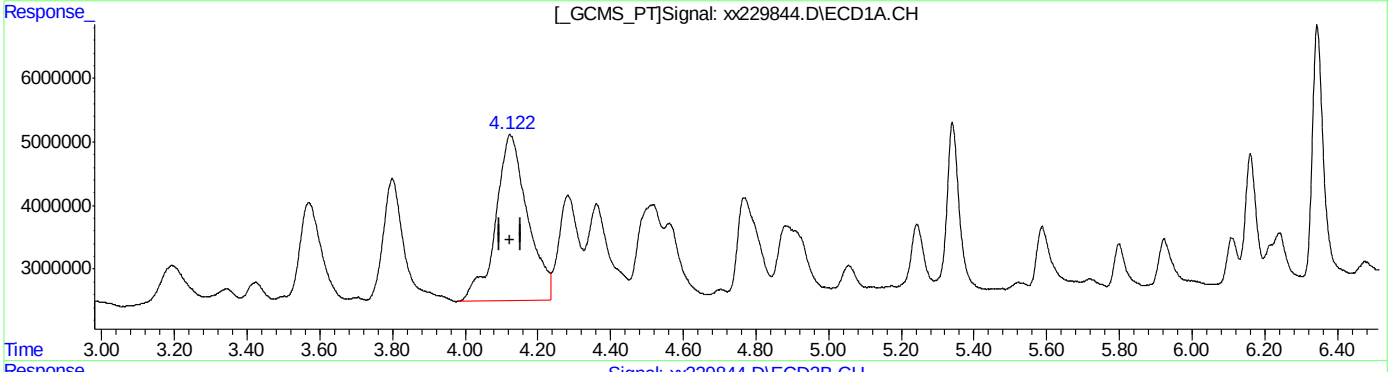
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		1	4.12	Split peak
AR1260-E		1	8.41	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.27	Split peak

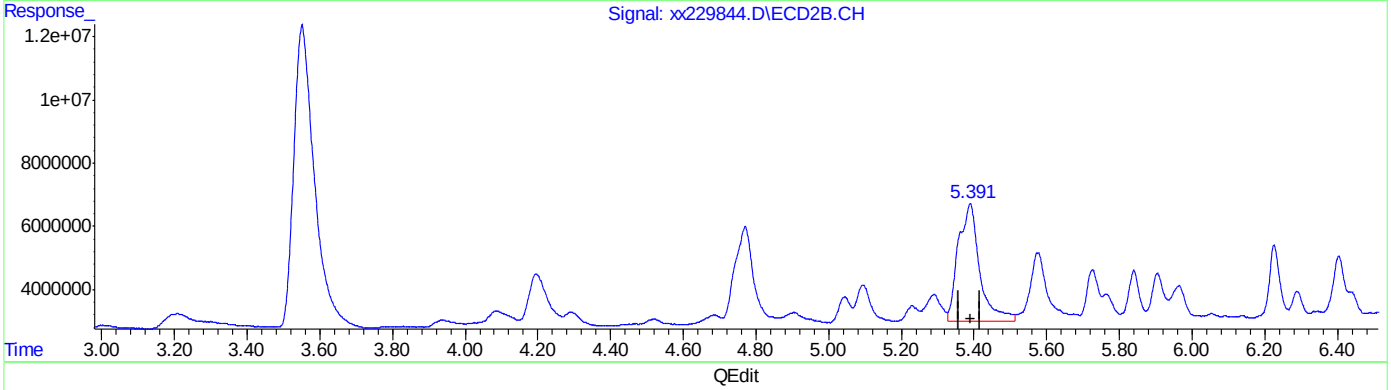
Quantitation Report (Qedit)

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)





QEdit

(43) AR1016-C
4.123min 189.849PPB
response 159457188

(43) AR1016-C #2
5.390min 202.934PPB
response 153271285

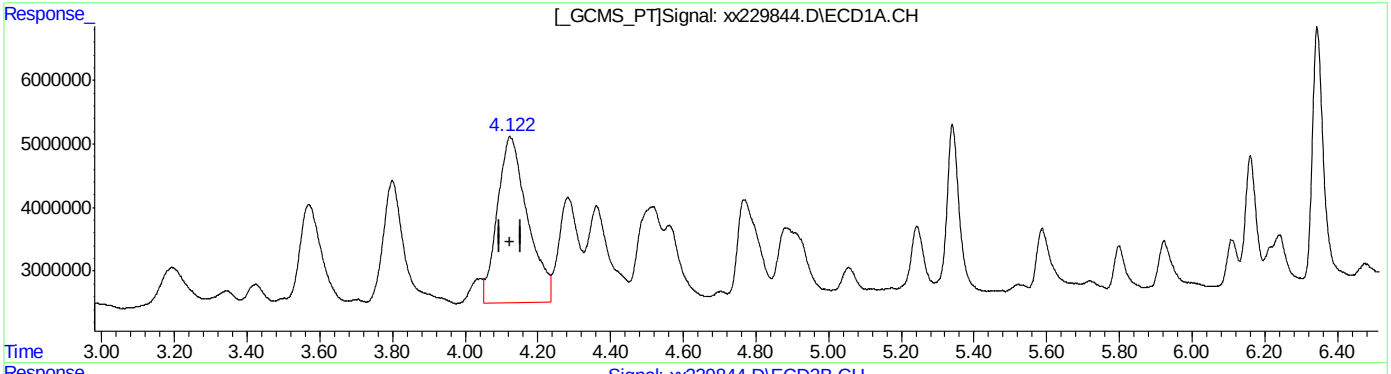
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:02:47 2018

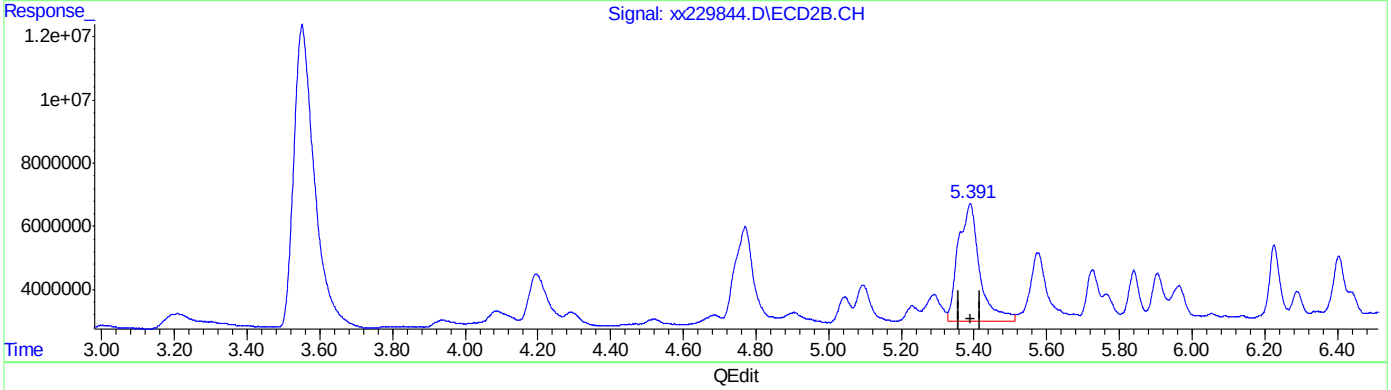
Quantitation Report (Qedit)

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)





QEdit

(43) AR1016-C
4.122min 179.880PPB m
response 151083490

(43) AR1016-C #2
5.390min 202.934PPB
response 153271285

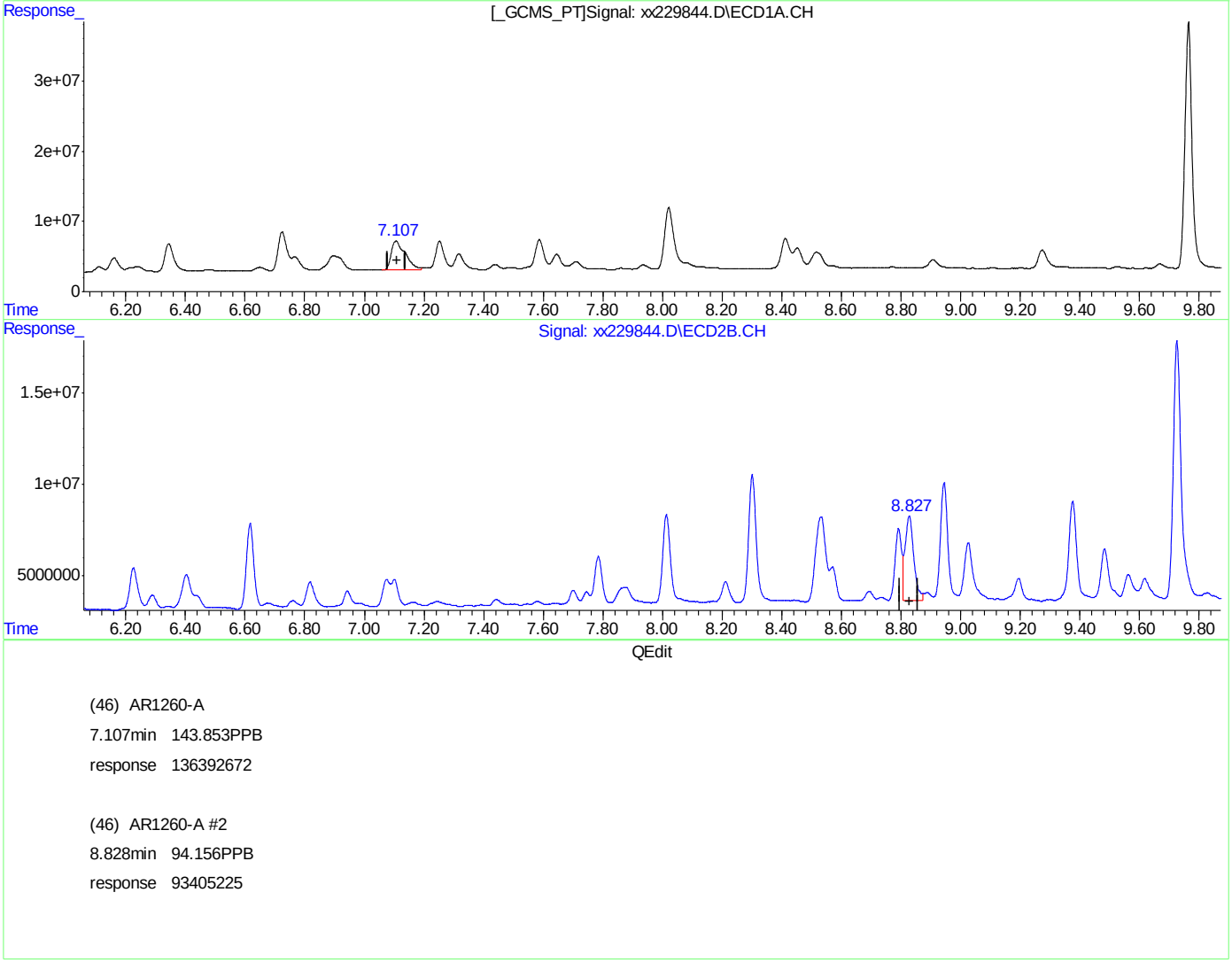
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:02:50 2018

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

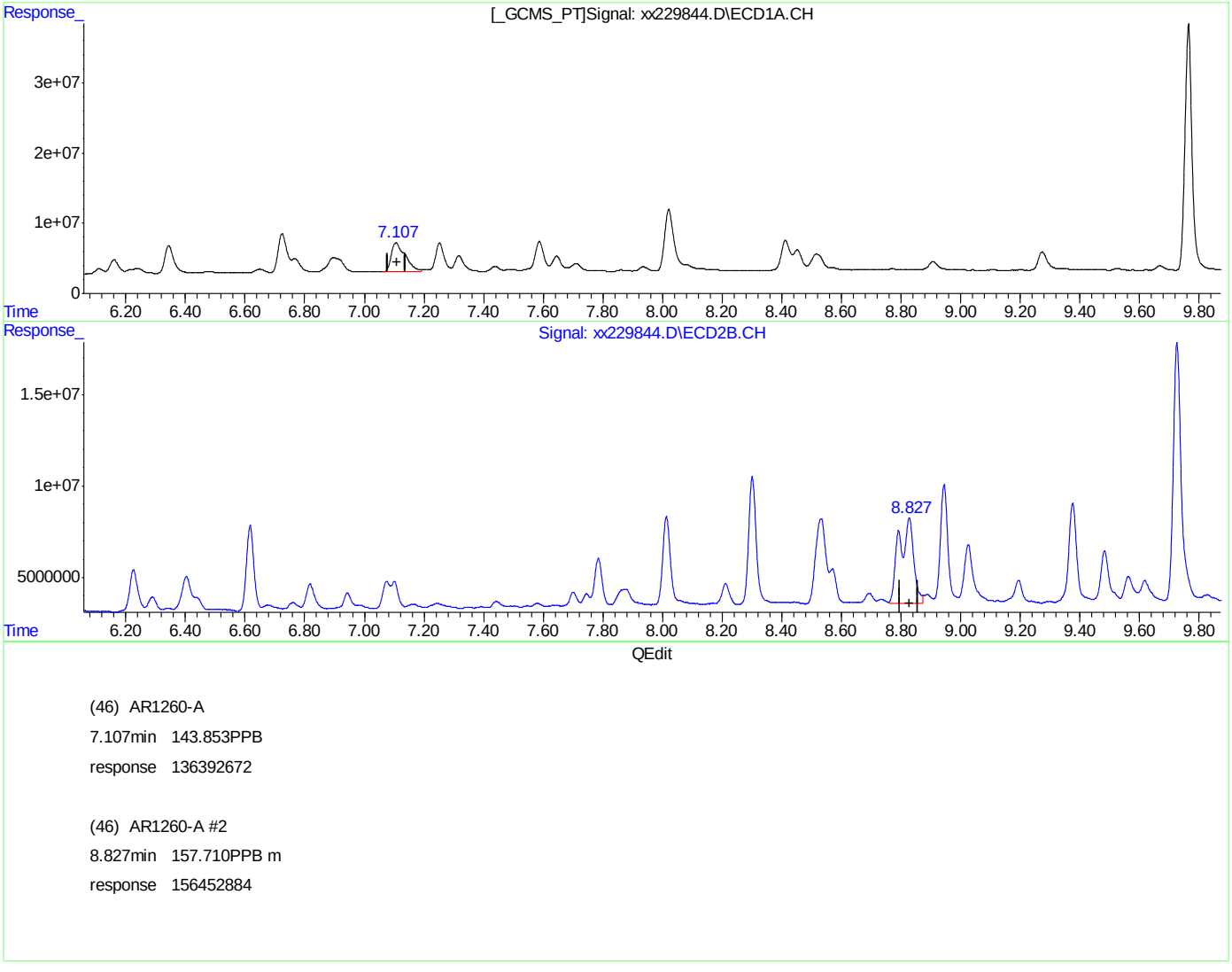
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:02:54 2018

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

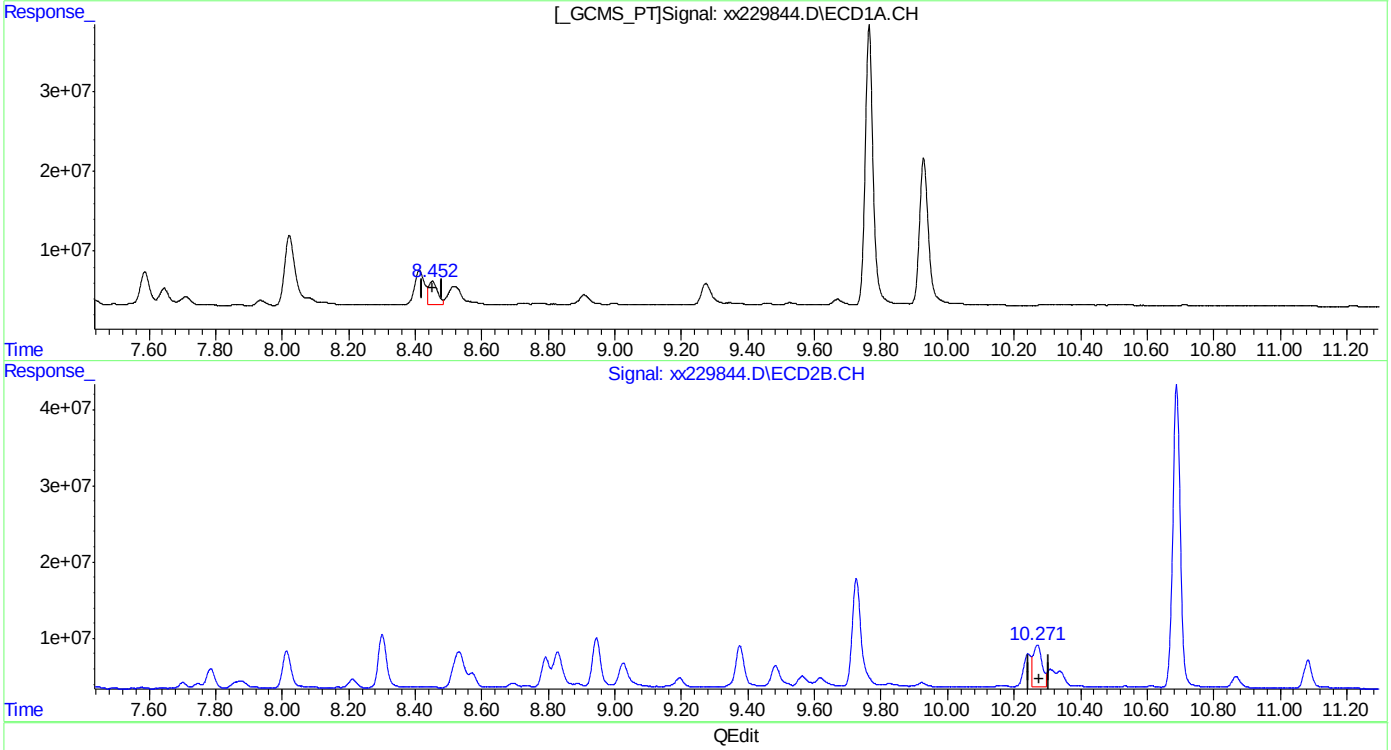
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:02:58 2018

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)



QEdit

(50) AR1260-E
8.452min 47.566PPB
response 55901029

(50) AR1260-E #2
10.271min 85.542PPB
response 102412697

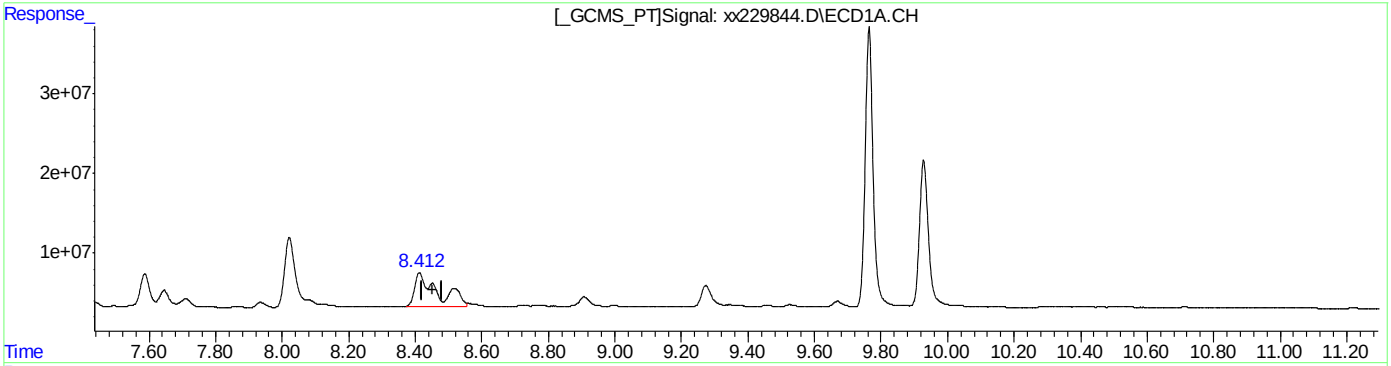
(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:03:01 2018

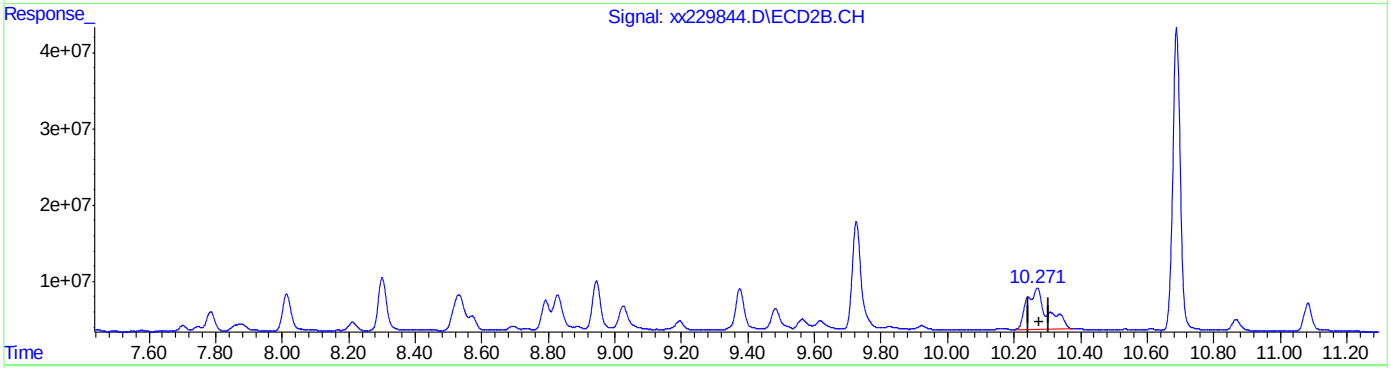
Quantitation Report (Qedit)

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)





QEdit

(50) AR1260-E
8.412min 176.304PPB m
response 207198897

(50) AR1260-E #2
10.271min 194.263PPB m
response 232575386

(+) = Expected Retention Time
PCB6349.M Tue Jun 05 09:03:07 2018

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns
05/01/18 08:39

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.

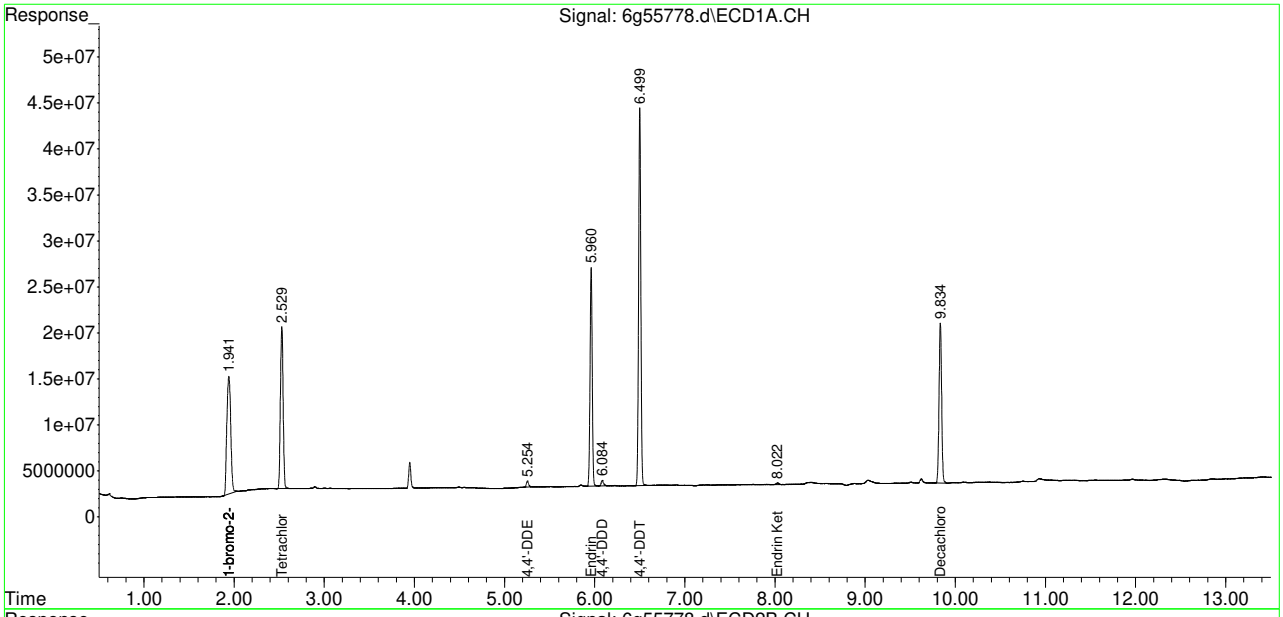
11.5.1 11

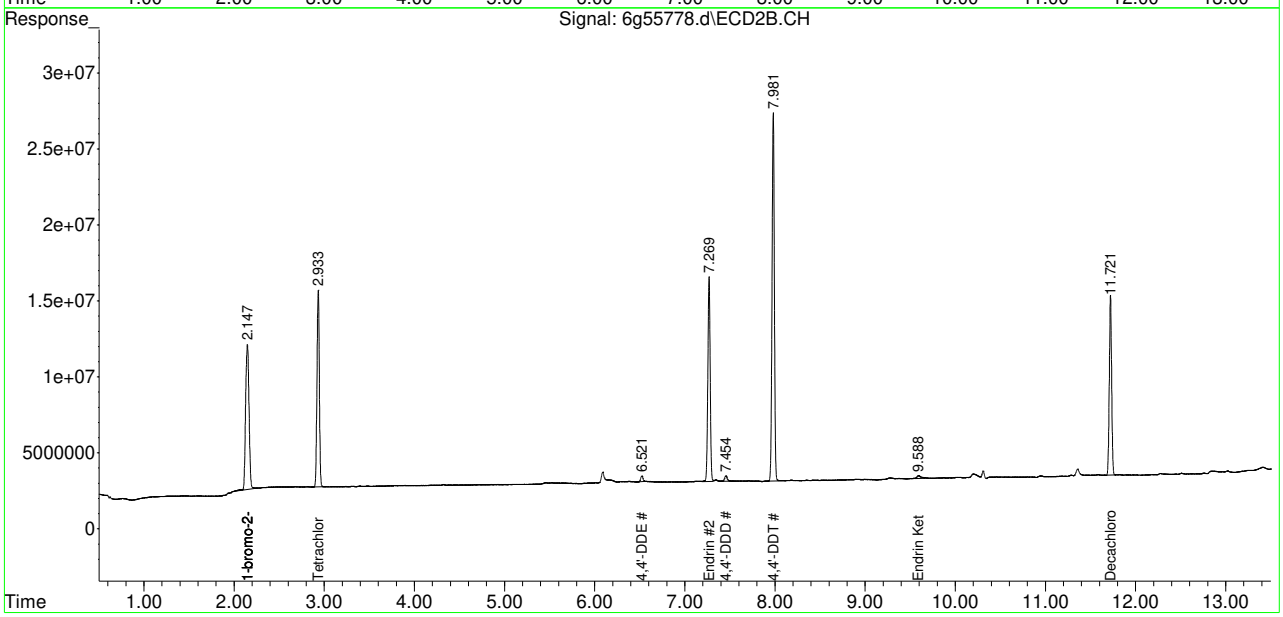
Quantitation Report (QT Reviewed)

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

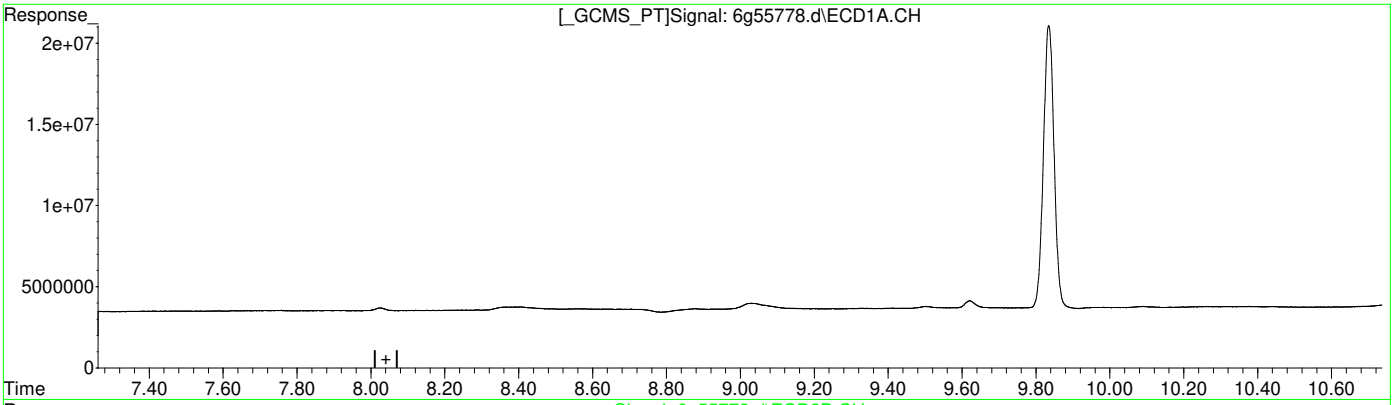
Parameter	CAS	Sig#	R.T. (min.)	Reason
Endrin ketone	53494-70-5	1	8.02	Poorly defined baseline
Endrin ketone	53494-70-5	2	9.59	Poorly defined baseline

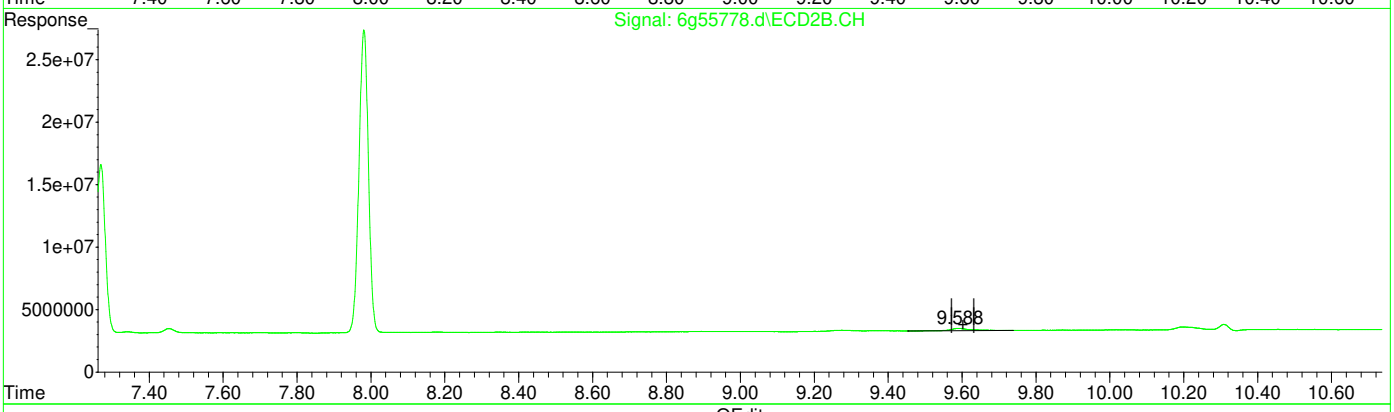
Quantitation Report (Qedit)

```
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

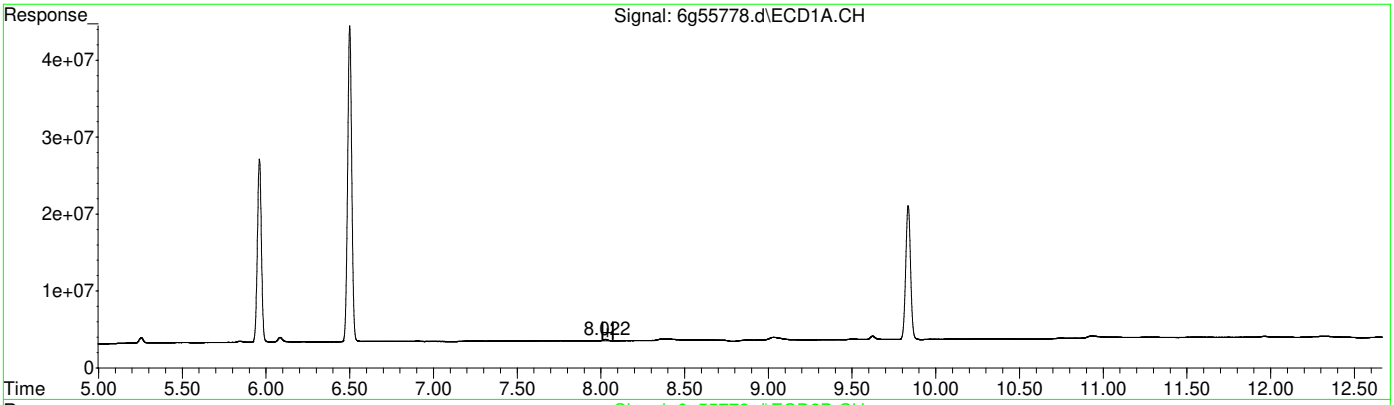
6PST1671.M Mon Apr 30 17:42:24 2018

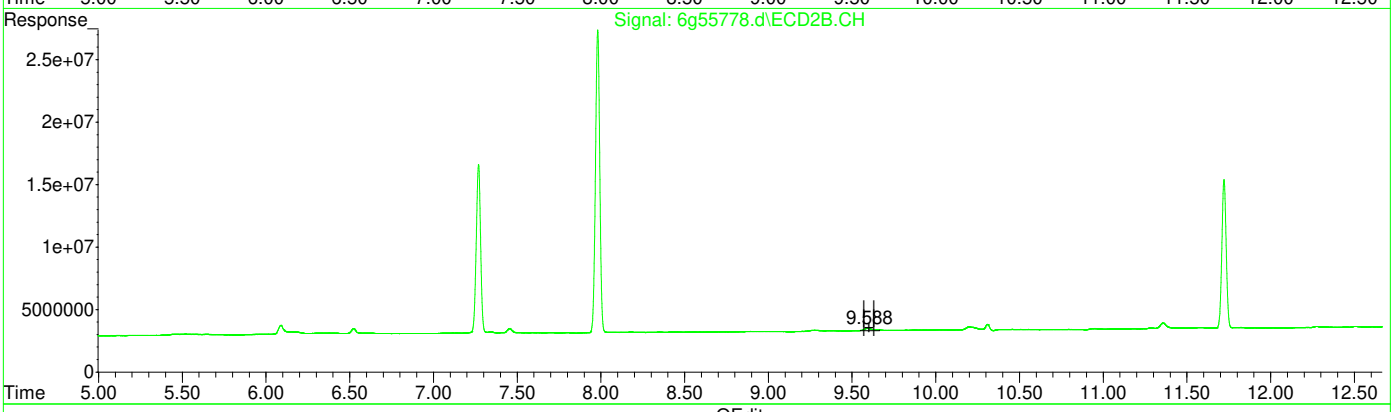
Quantitation Report (Qedit)

```
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
```





QEdit

(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

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 06/06/18 17:04

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.

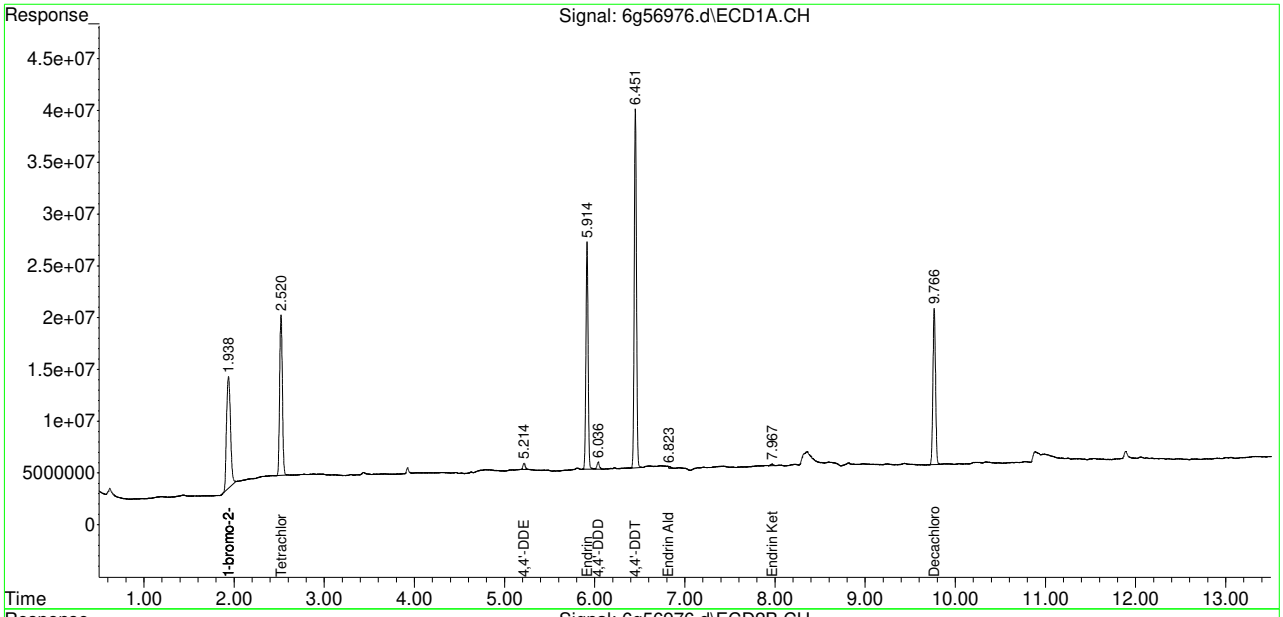
11.5.2 11

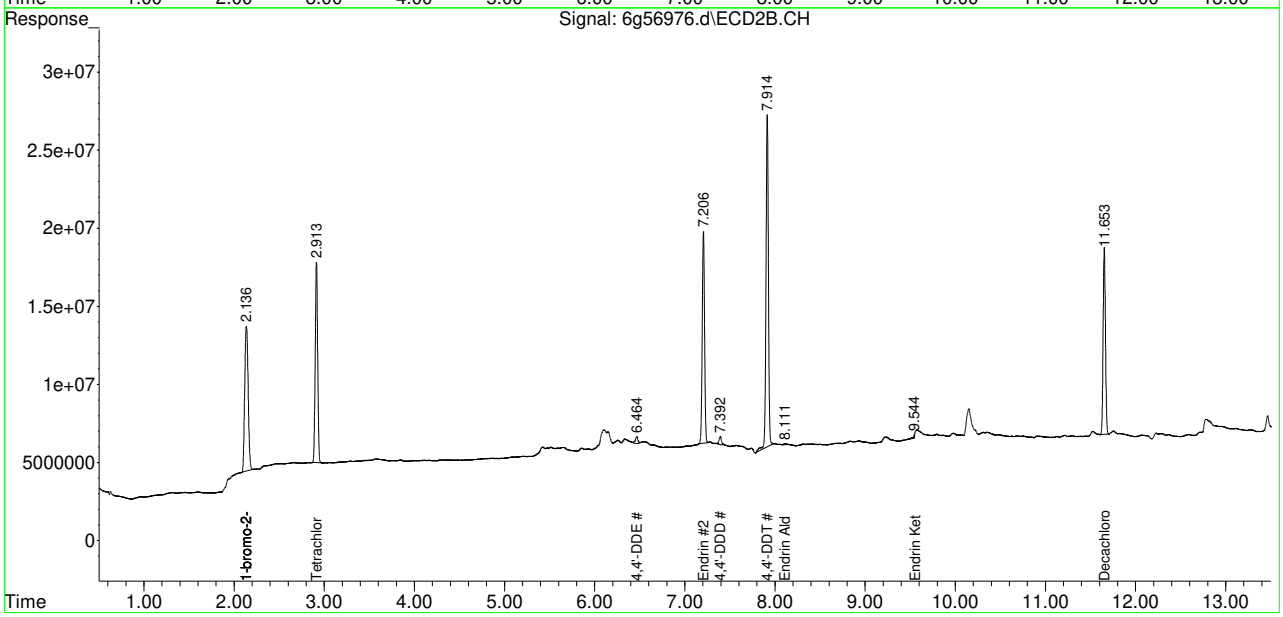
Quantitation Report (QT Reviewed)

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

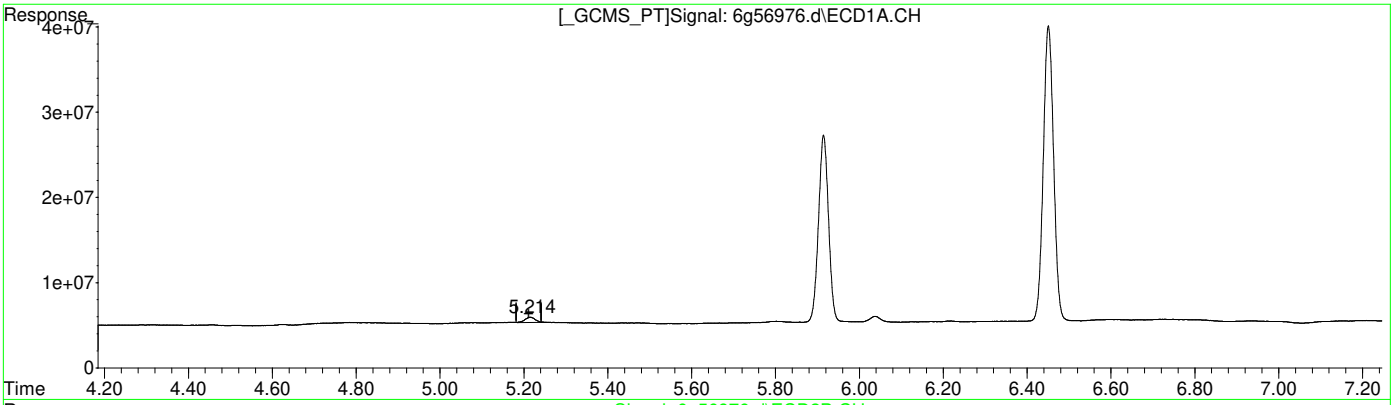
Parameter	CAS	Sig#	R.T. (min.)	Reason
4,4'-DDE	72-55-9	2	6.46	Poorly defined baseline
Endrin aldehyde	7421-93-4	1	6.82	Poorly defined baseline
4,4'-DDD	72-54-8	2	7.39	Poorly defined baseline
Endrin aldehyde	7421-93-4	2	8.11	Poorly defined baseline
Endrin ketone	53494-70-5	2	9.54	Poorly defined baseline

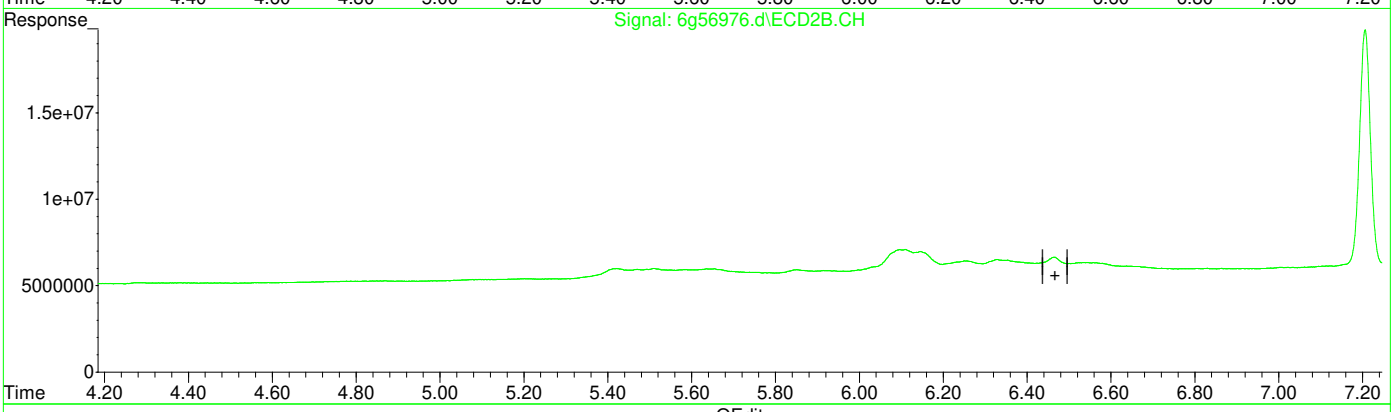
Quantitation Report (Qedit)

```
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
```





QEdit

(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

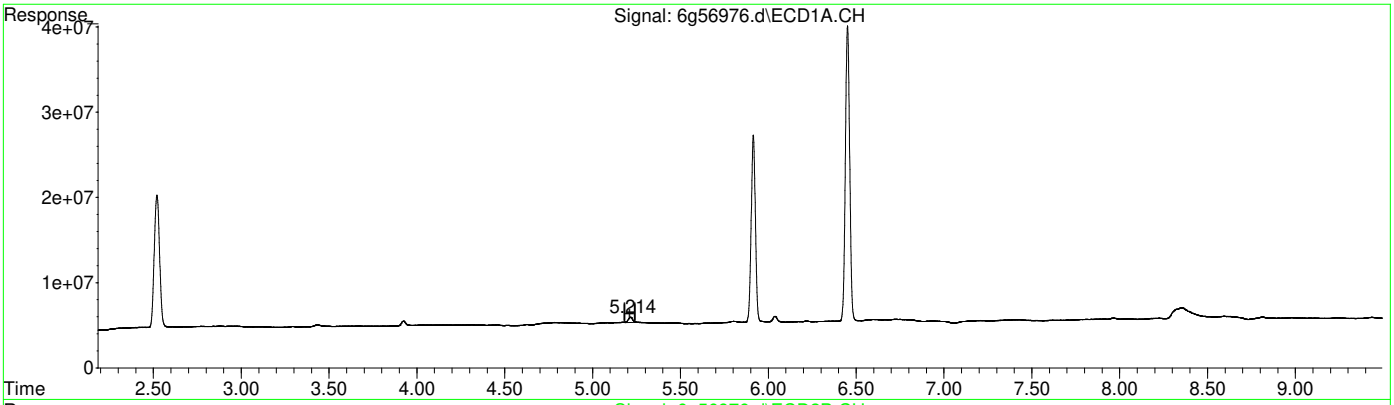
6PST1671.M Wed Jun 06 16:31:05 2018

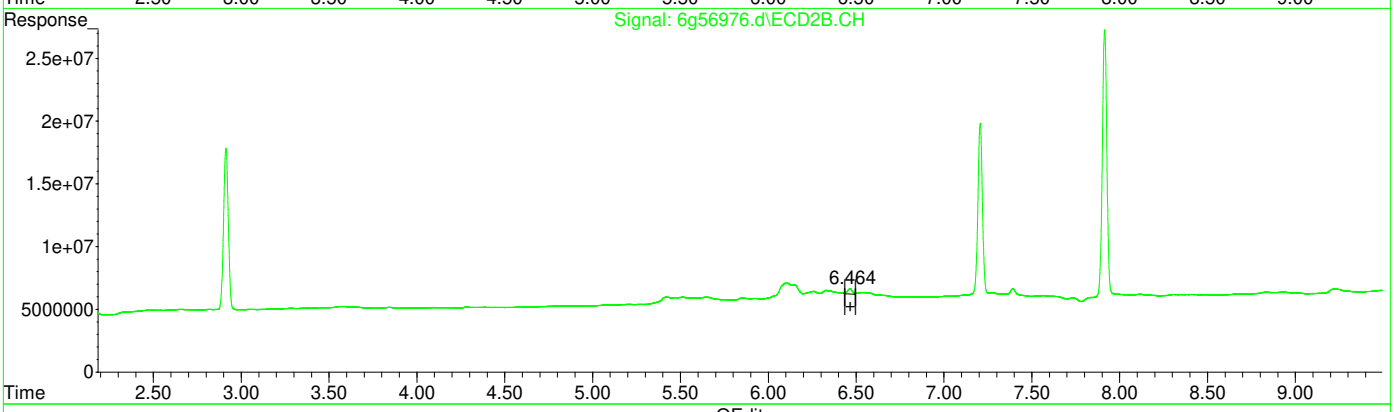
Quantitation Report (Qedit)

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





QEdit

(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

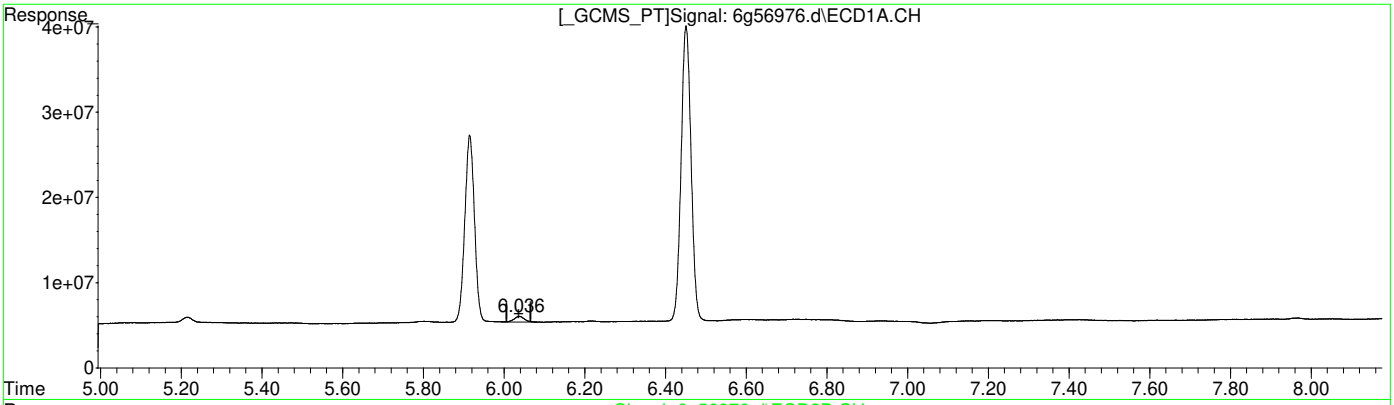
6PST1671.M Wed Jun 06 16:31:19 2018

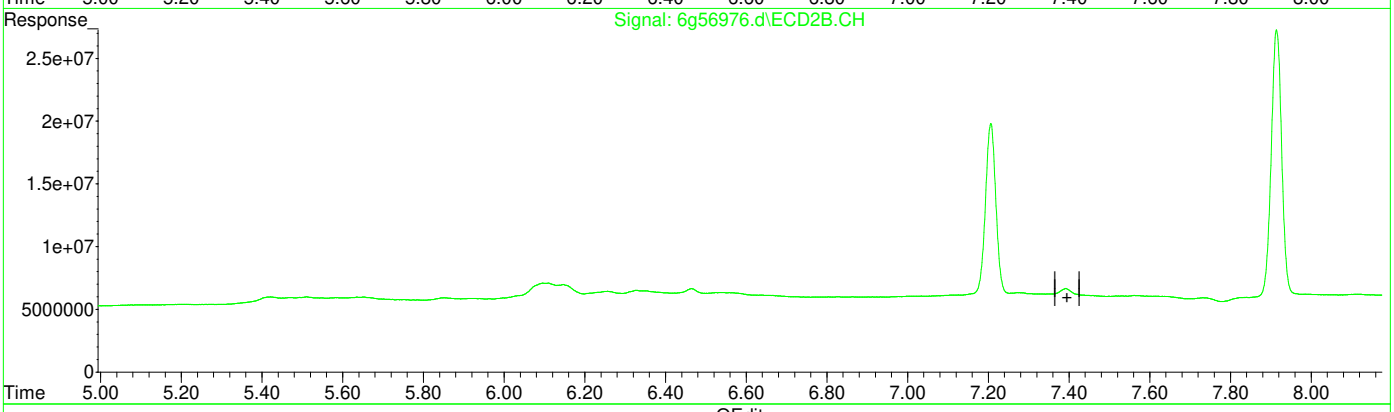
Quantitation Report (Qedit)

```
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
```





QEdit

(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

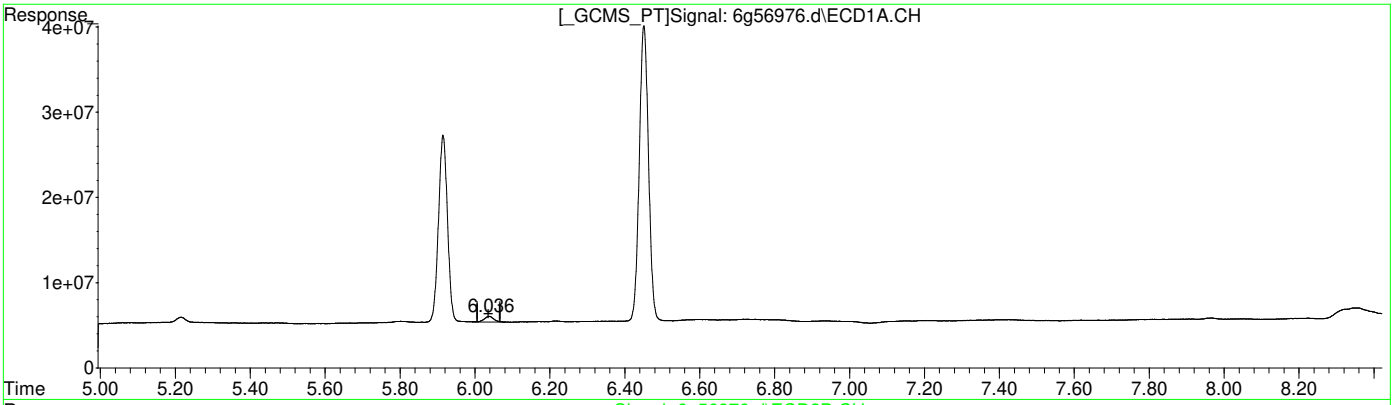
6PST1671.M Wed Jun 06 16:31:31 2018

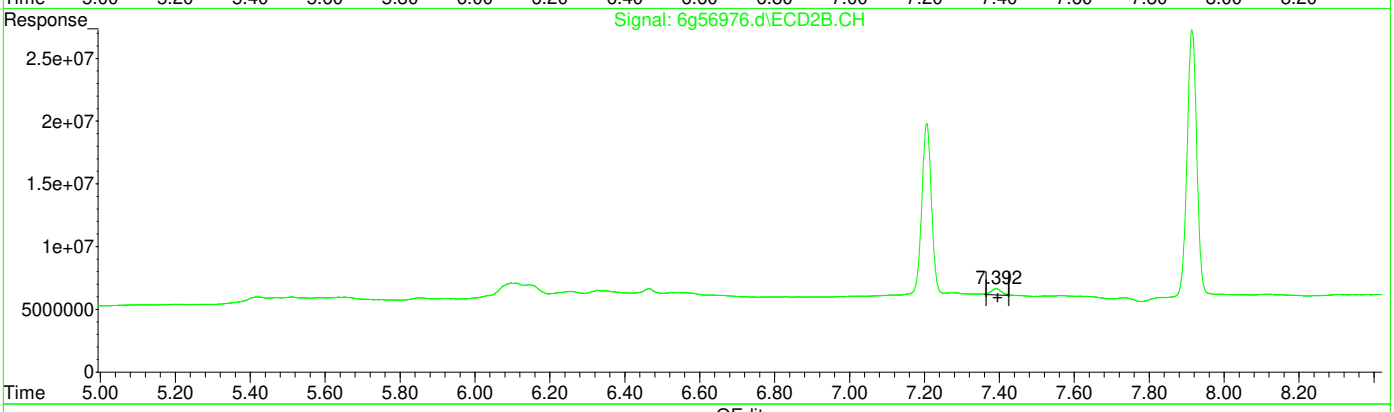
Quantitation Report (Qedit)

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





QEdit

(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

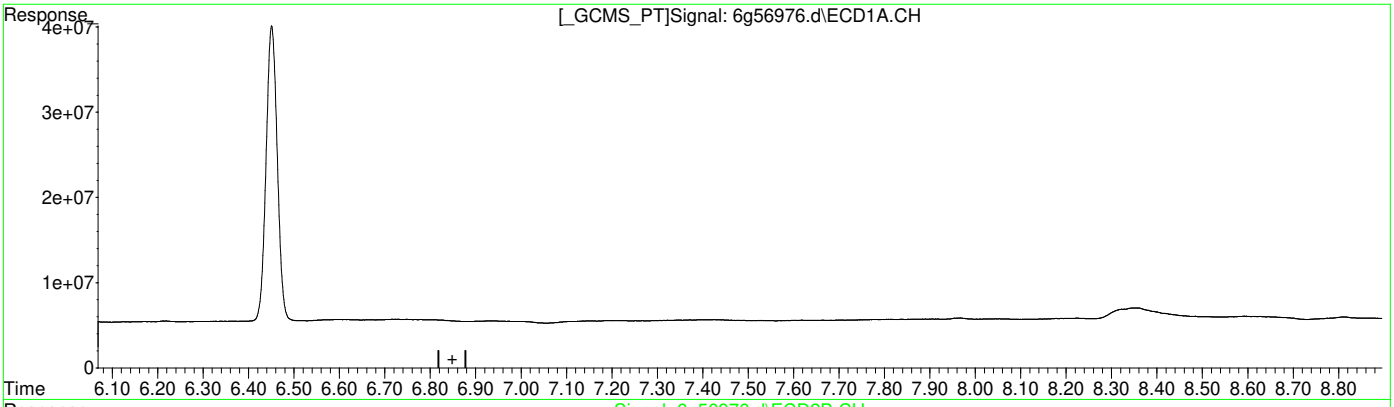
6PST1671.M Wed Jun 06 16:31:43 2018

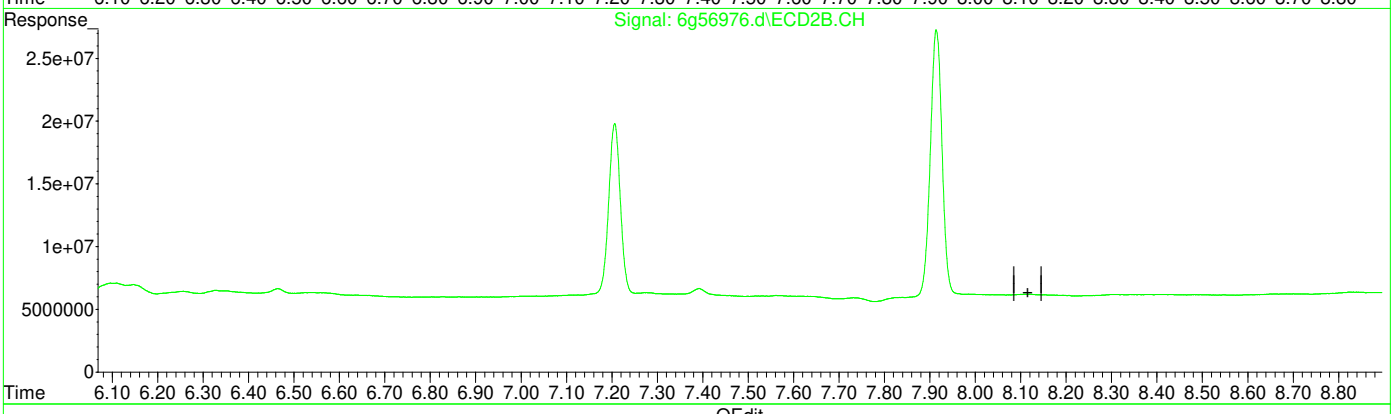
Quantitation Report (Qedit)

```
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
```





QEdit

(21) Endrin Aldehyde (B)

0.000min 0.000 PPB

response 0

(21) Endrin Aldehyde #2 (B)

0.000min 0.000 PPB

response 0

(+) = Expected Retention Time

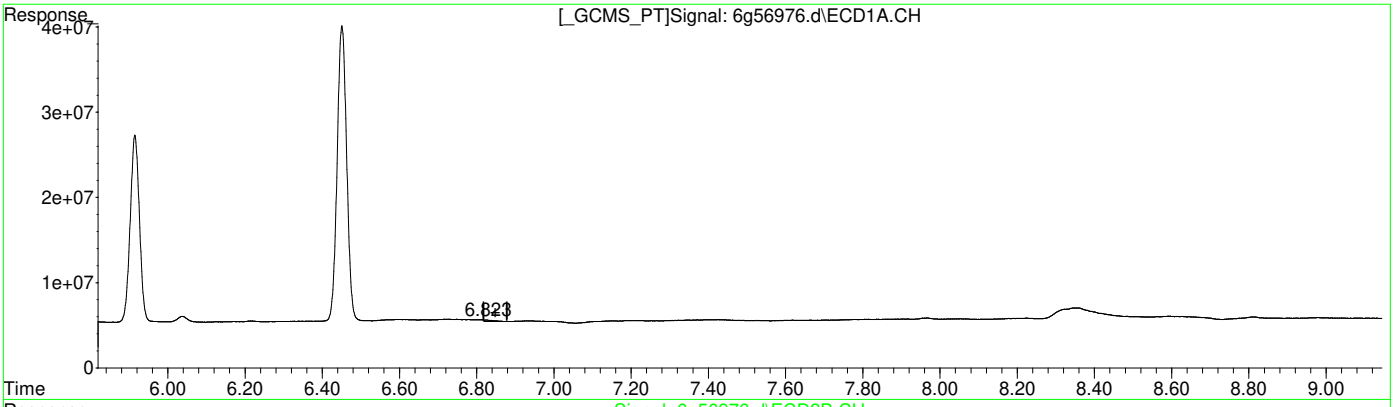
6PST1671.M Wed Jun 06 16:31:53 2018

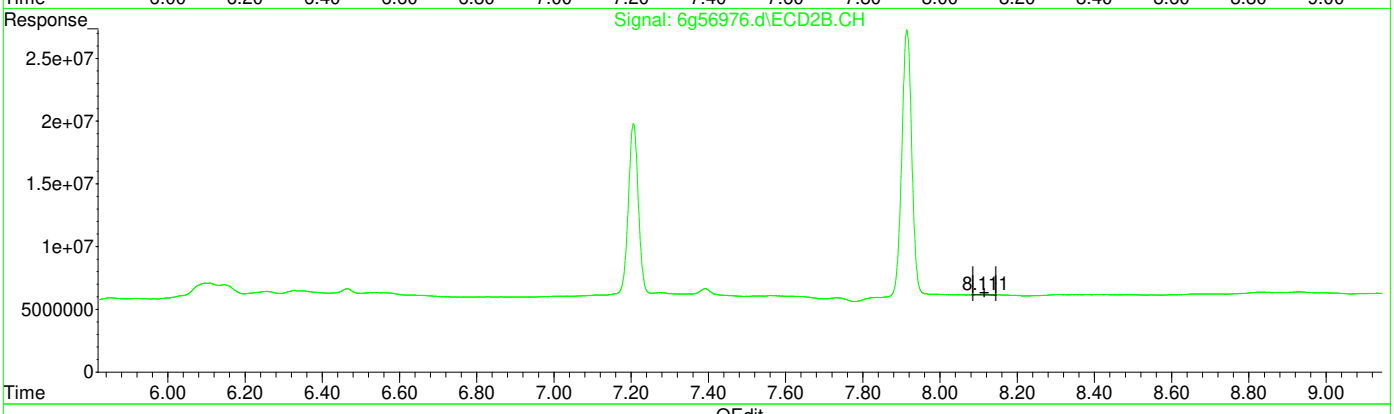
Quantitation Report (Qedit)

```
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
```





QEdit

(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

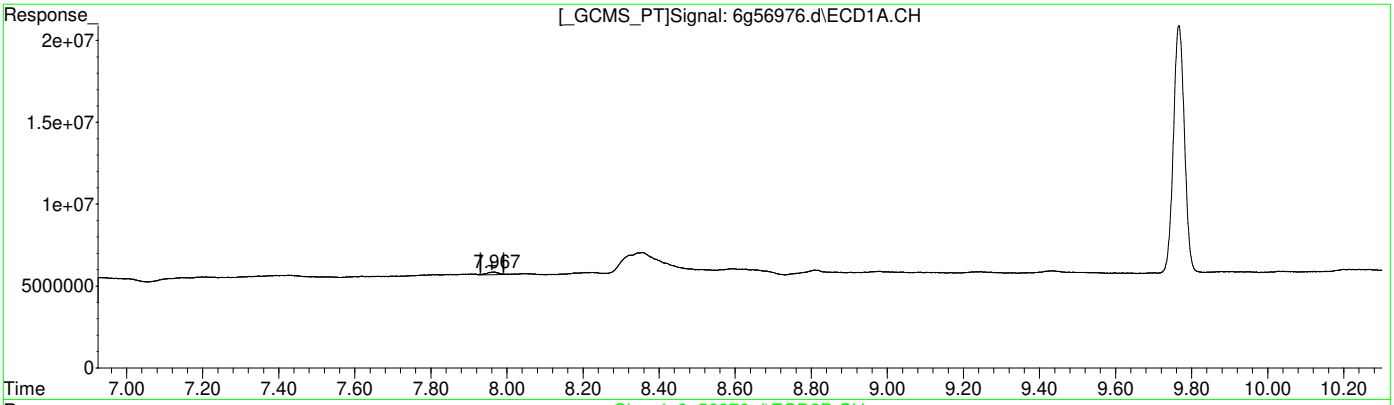
6PST1671.M Wed Jun 06 16:32:23 2018

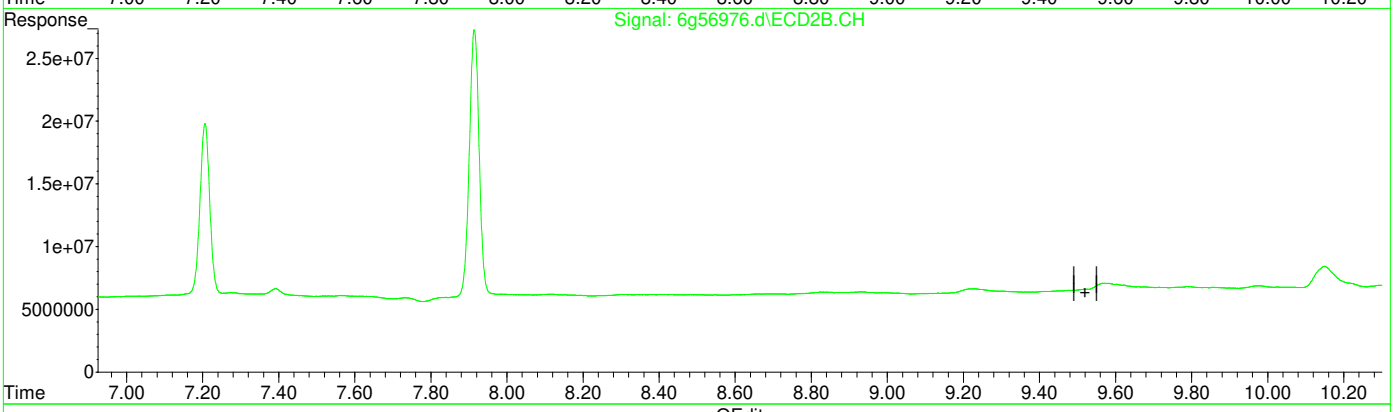
Quantitation Report (Qedit)

```
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
```





QEdit

(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

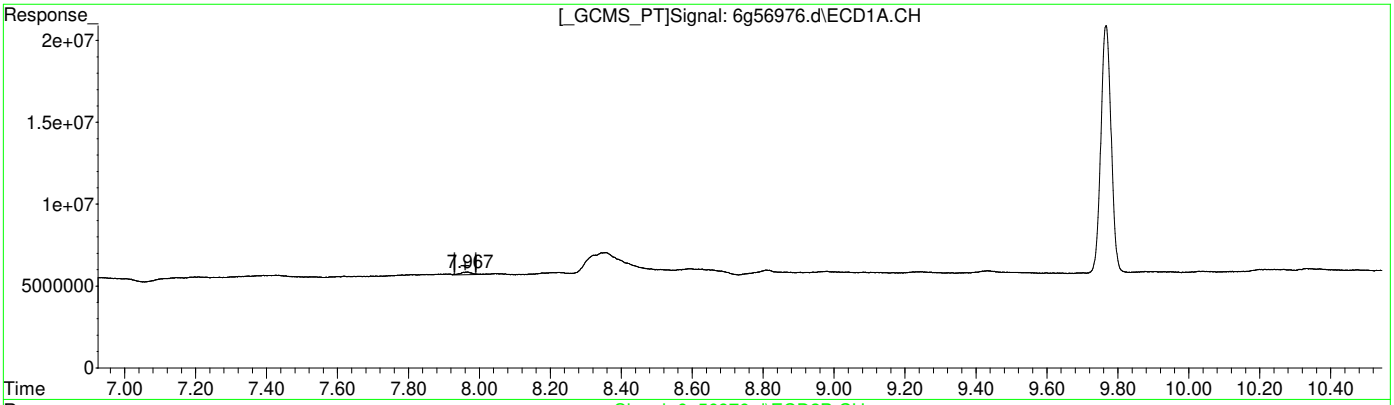
6PST1671.M Wed Jun 06 16:32:36 2018

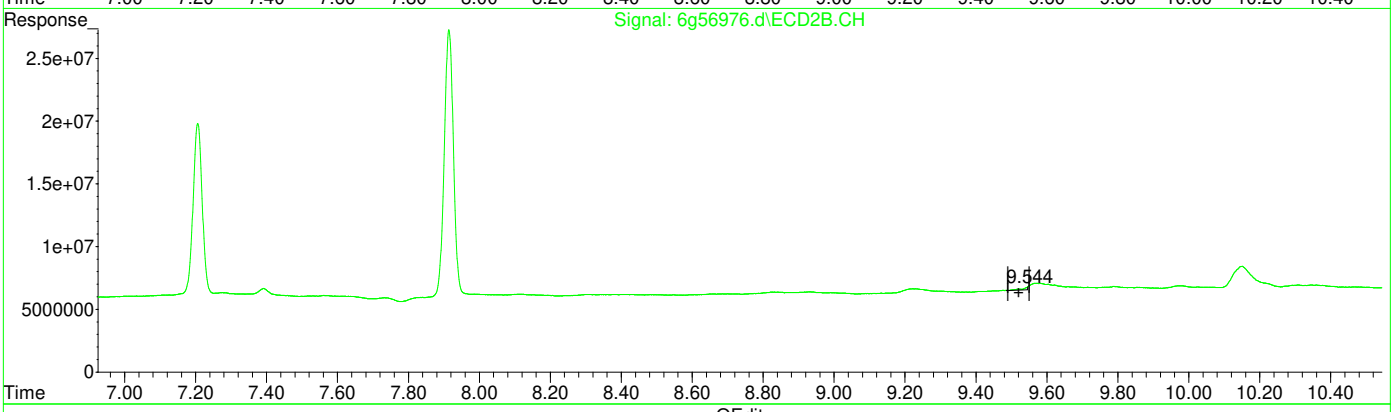
Quantitation Report (Qedit)

```
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
```





QEdit

(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

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns
06/13/18 10:11

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

	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						

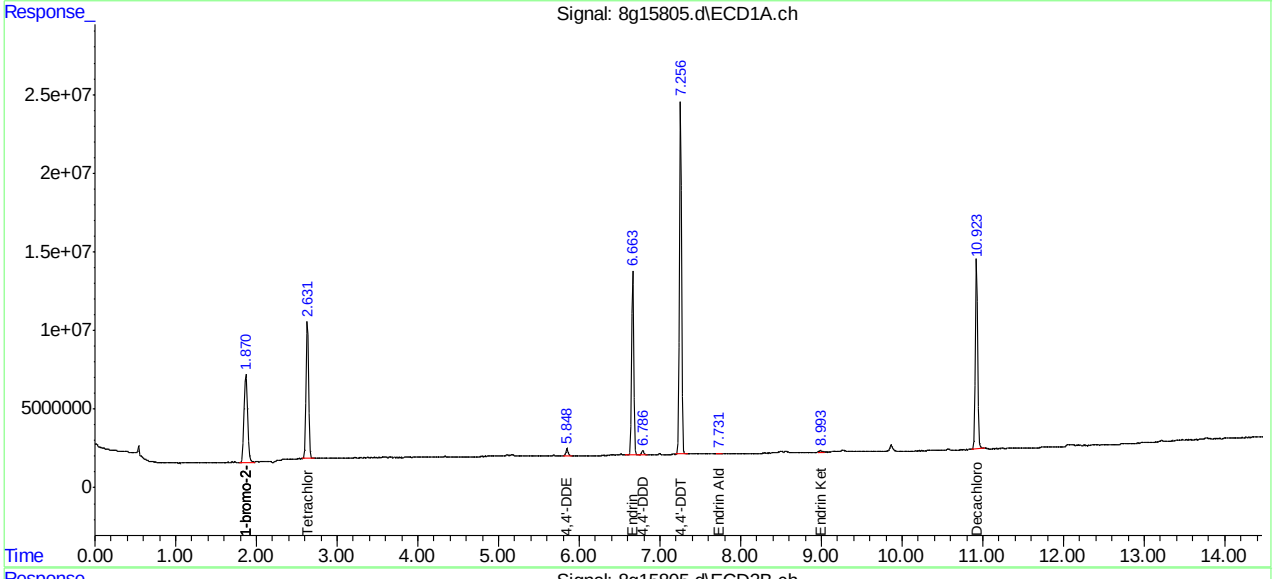
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

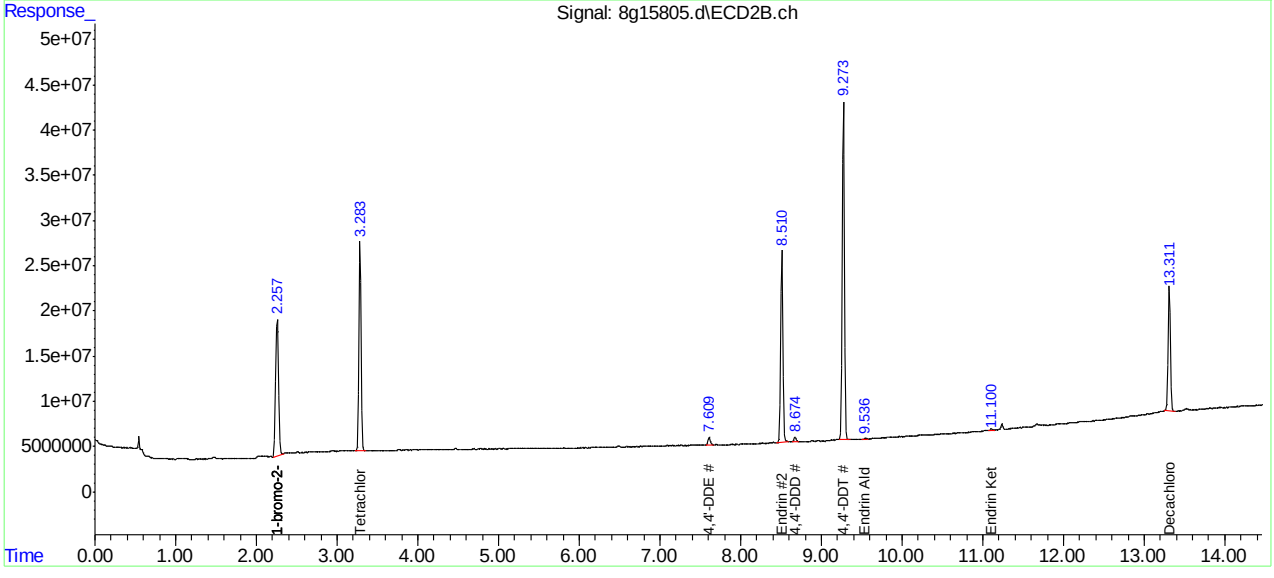
Quantitation Report (QT Reviewed)

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

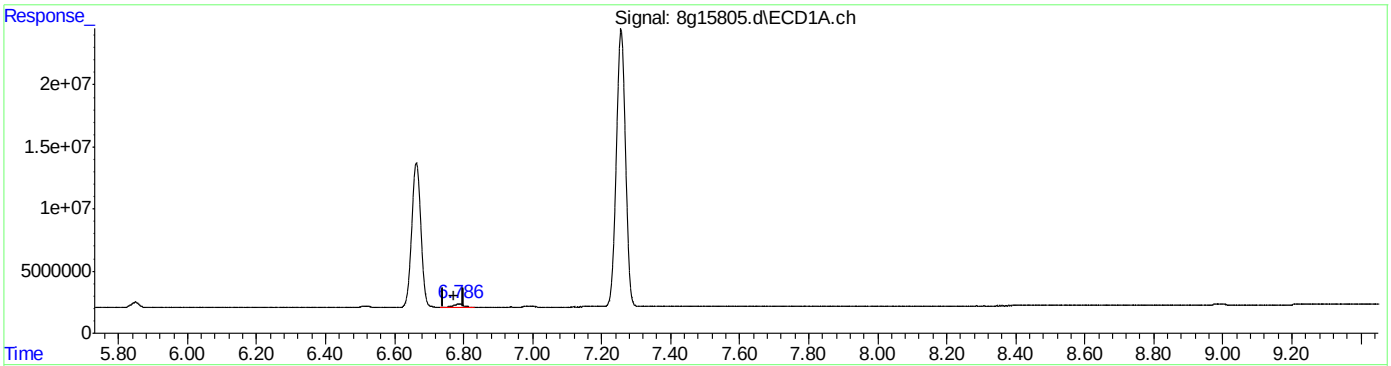
Parameter	CAS	Sig#	R.T. (min.)	Reason
Endrin aldehyde	7421-93-4	1	7.73	Poorly defined baseline
4,4'-DDD	72-54-8	2	8.67	Poorly defined baseline
Endrin ketone	53494-70-5	1	8.99	Poorly defined baseline
Endrin aldehyde	7421-93-4	2	9.54	Poorly defined baseline
Endrin ketone	53494-70-5	2	11.10	Poorly defined baseline

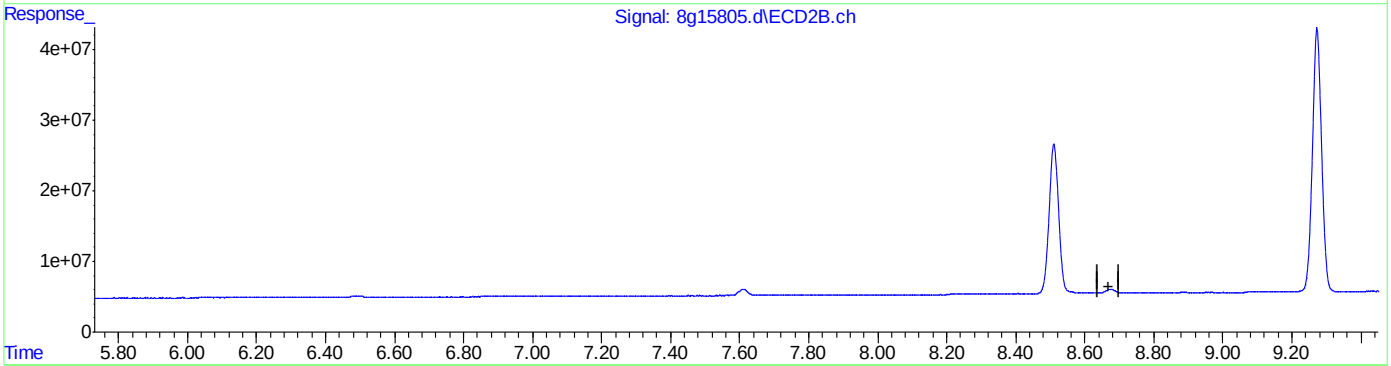
Quantitation Report (Qedit)

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

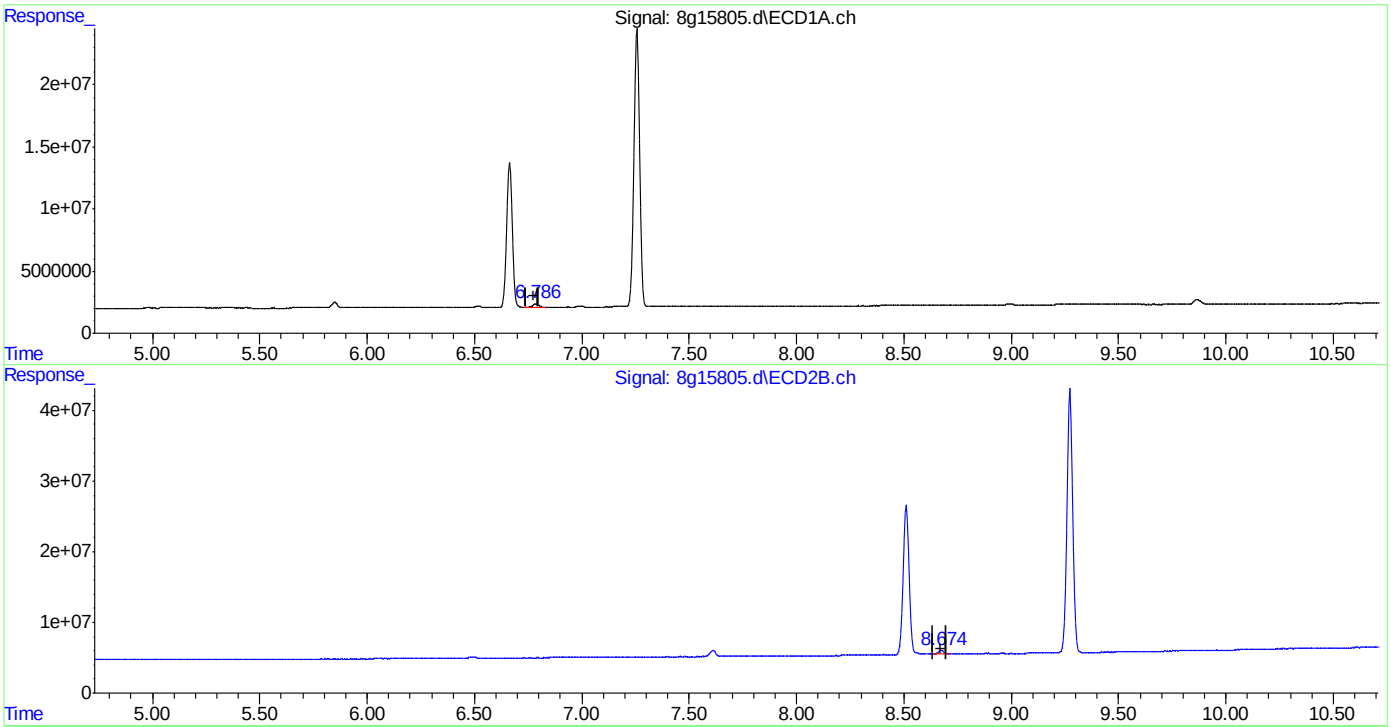
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:51:58 2018

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)
8.674min 1.547 PPB m
response 10304193

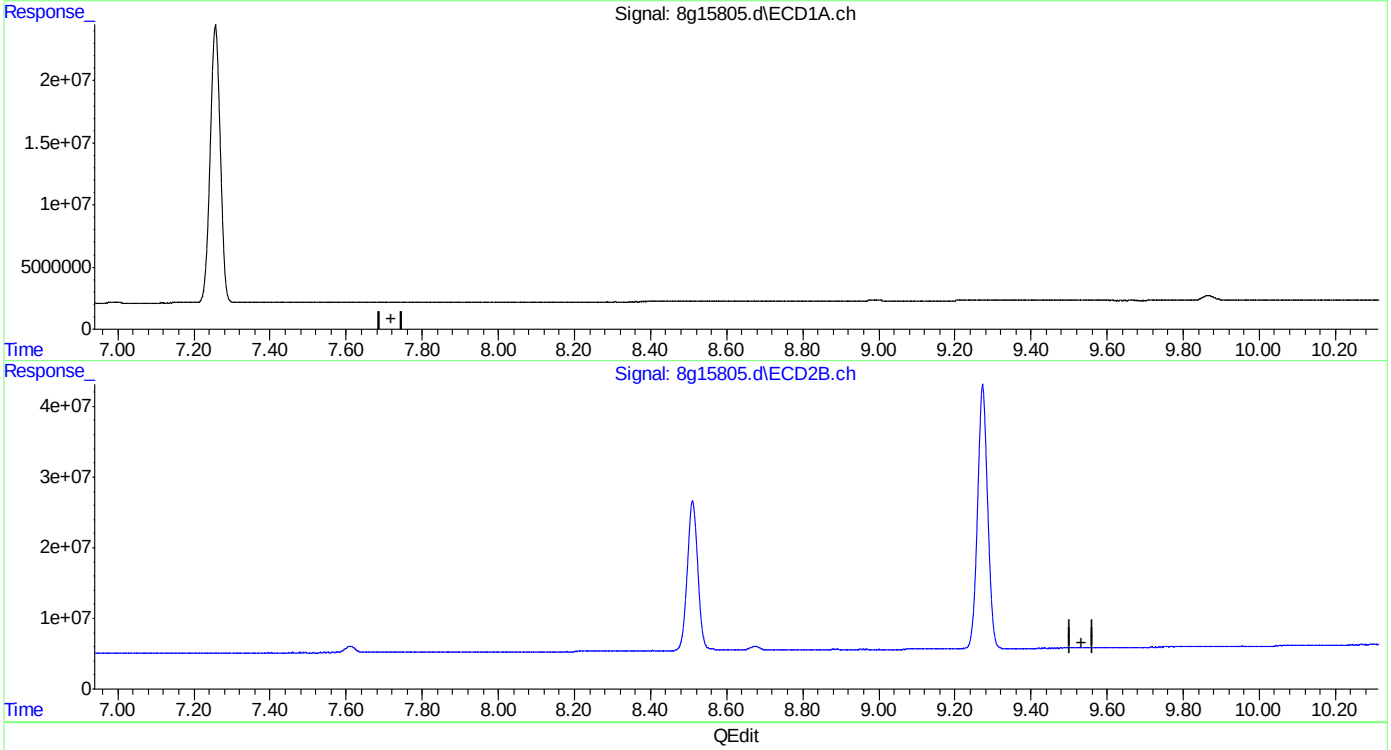
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:52:05 2018

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



QEdit

(21) Endrin Aldehyde (B)
0.000min 0.000 PPB
response 0

(21) Endrin Aldehyde #2 (B)
0.000min 0.000 PPB
response 0

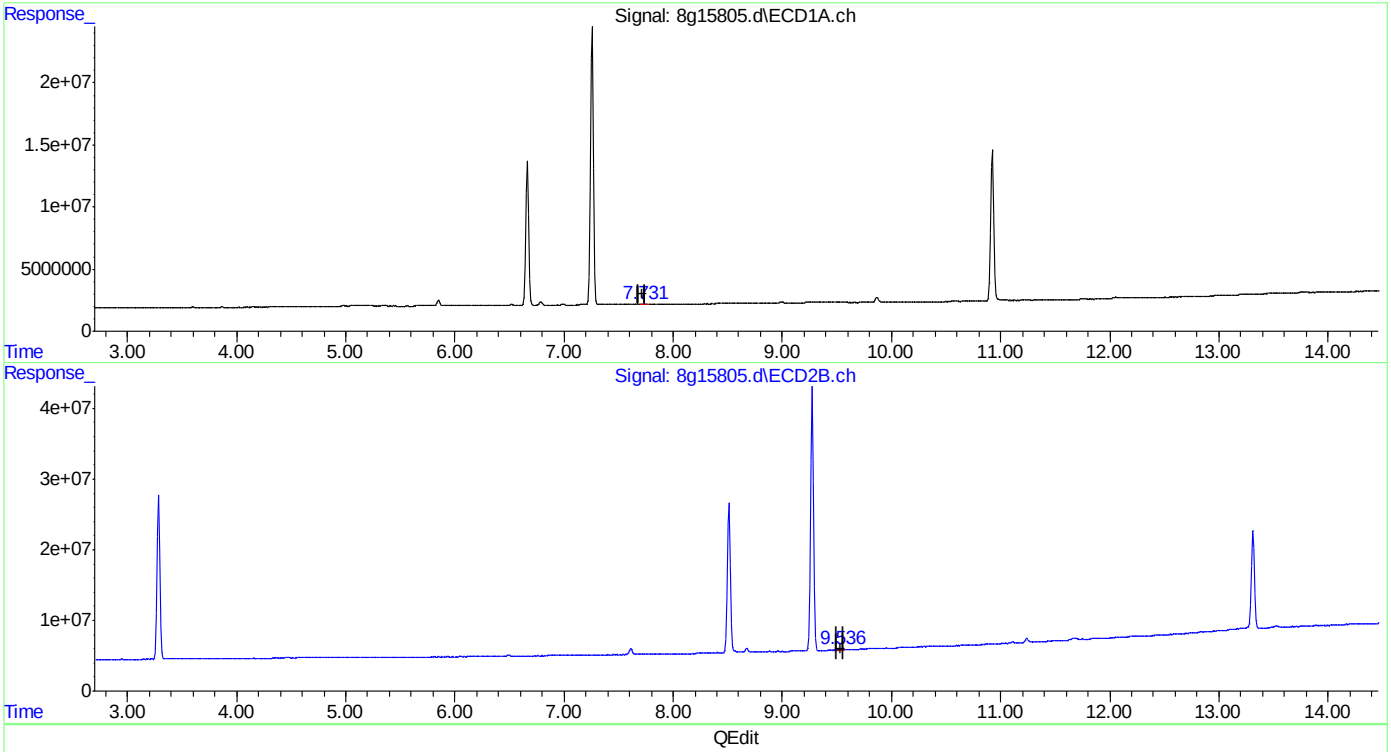
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:52:12 2018

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



QEdit

(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

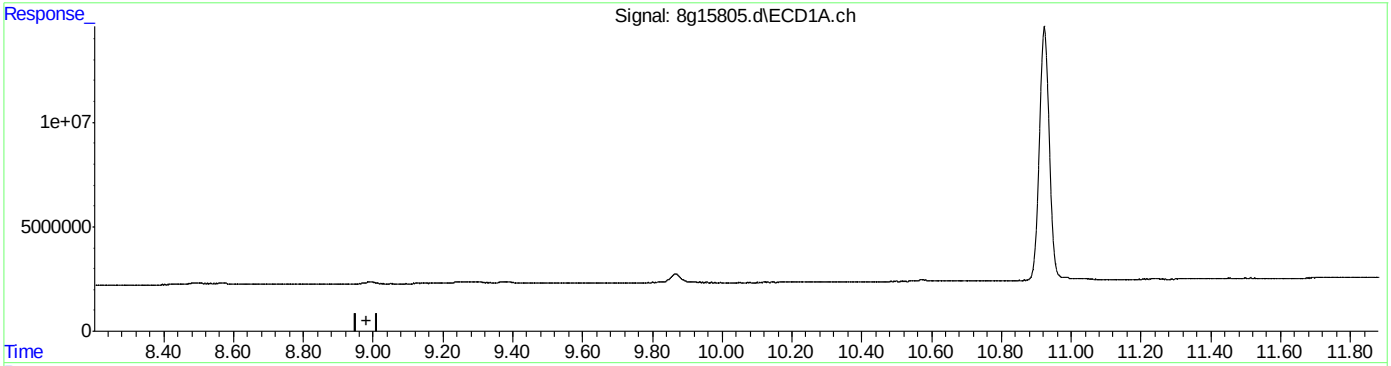
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:52:31 2018

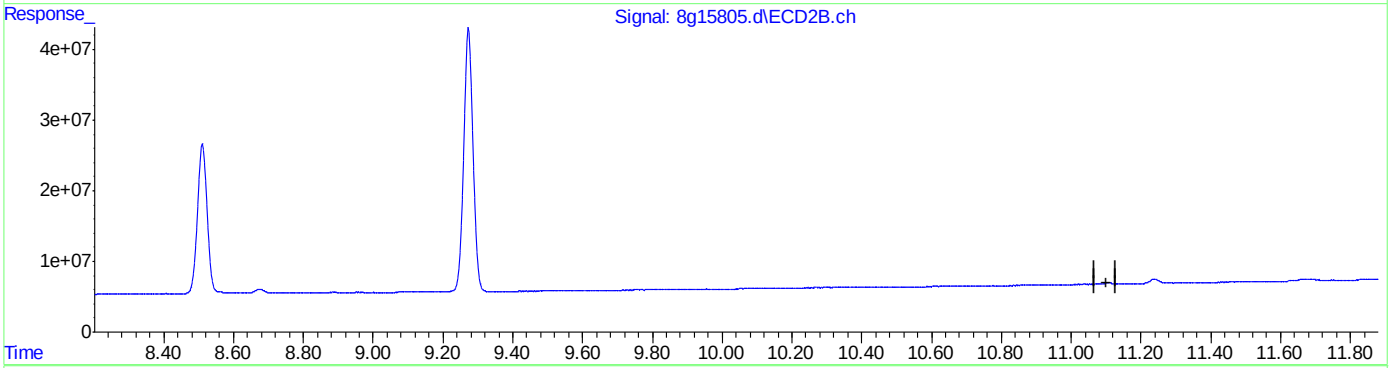
Quantitation Report (Qedit)

```
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
```





QEdit

(25) Endrin Ketone (B)
0.000min 0.000 PPB
response 0

(25) Endrin Ketone #2 (B)
0.000min 0.000 PPB
response 0

(+) = Expected Retention Time

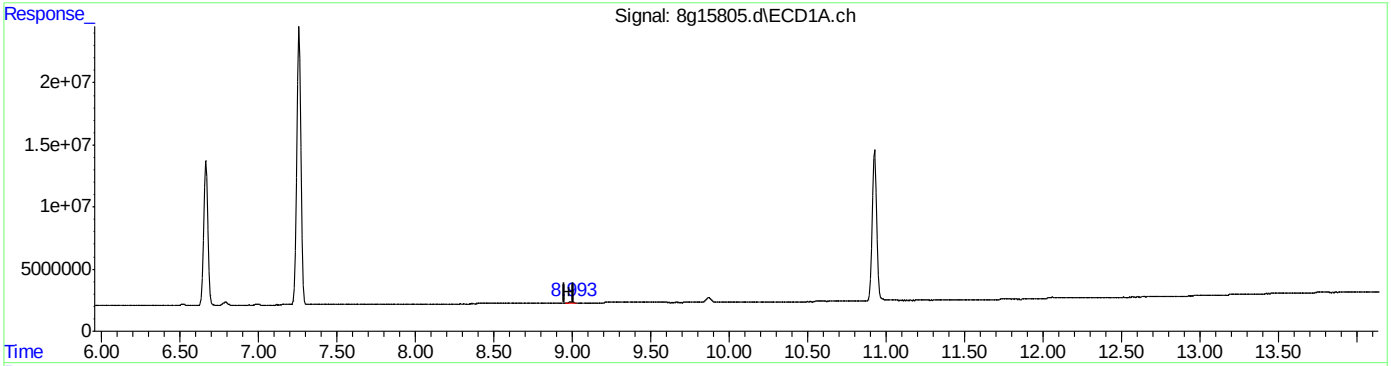
8PST511.M Mon Jun 11 14:52:38 2018

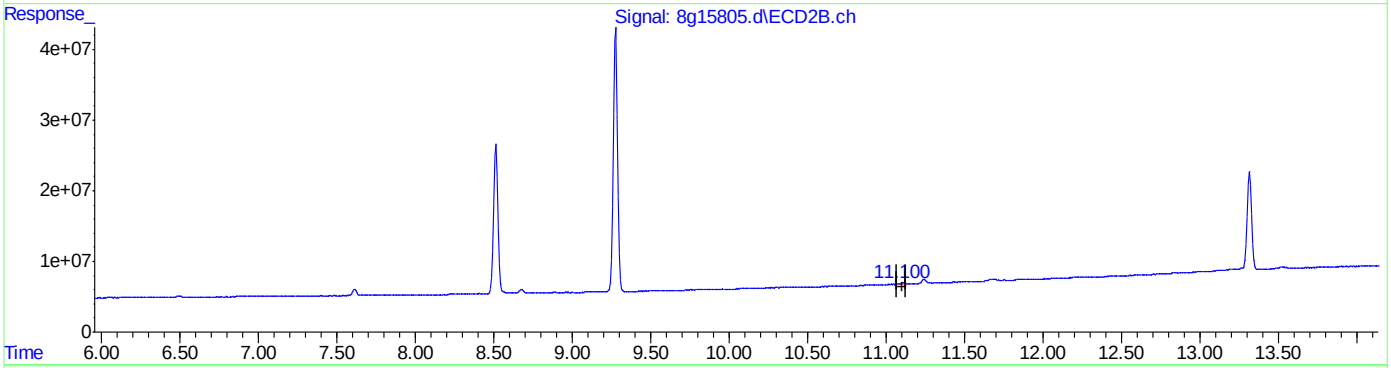
Quantitation Report (Qedit)

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





QEdit

(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

(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:52:50 2018

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns
06/13/18 10:12

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.

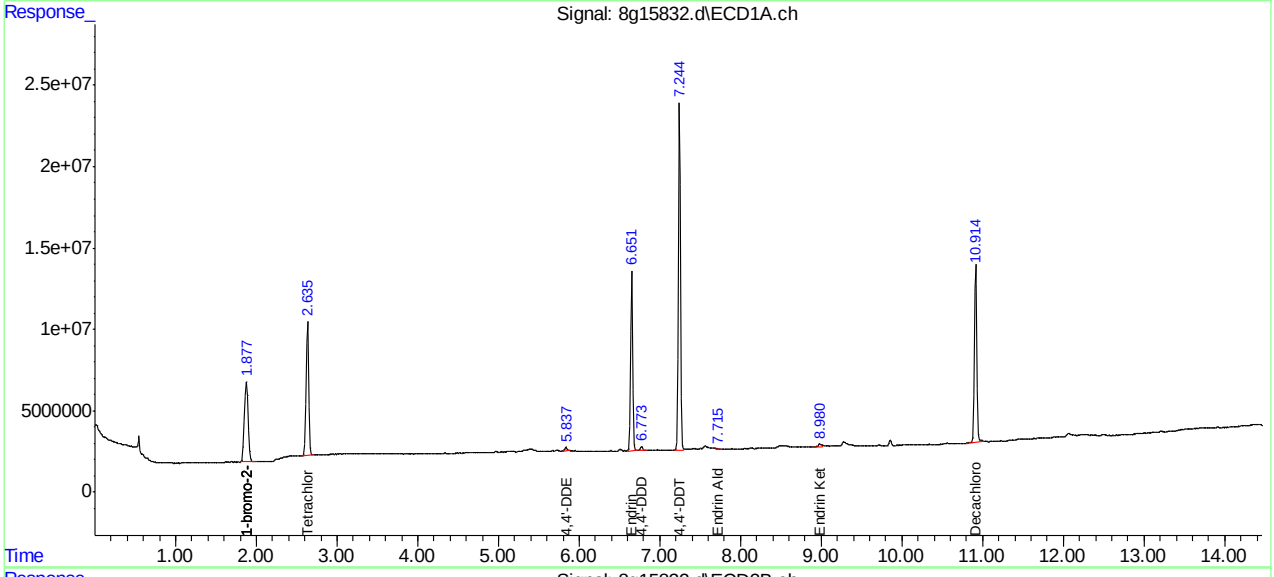
11.5.4 11

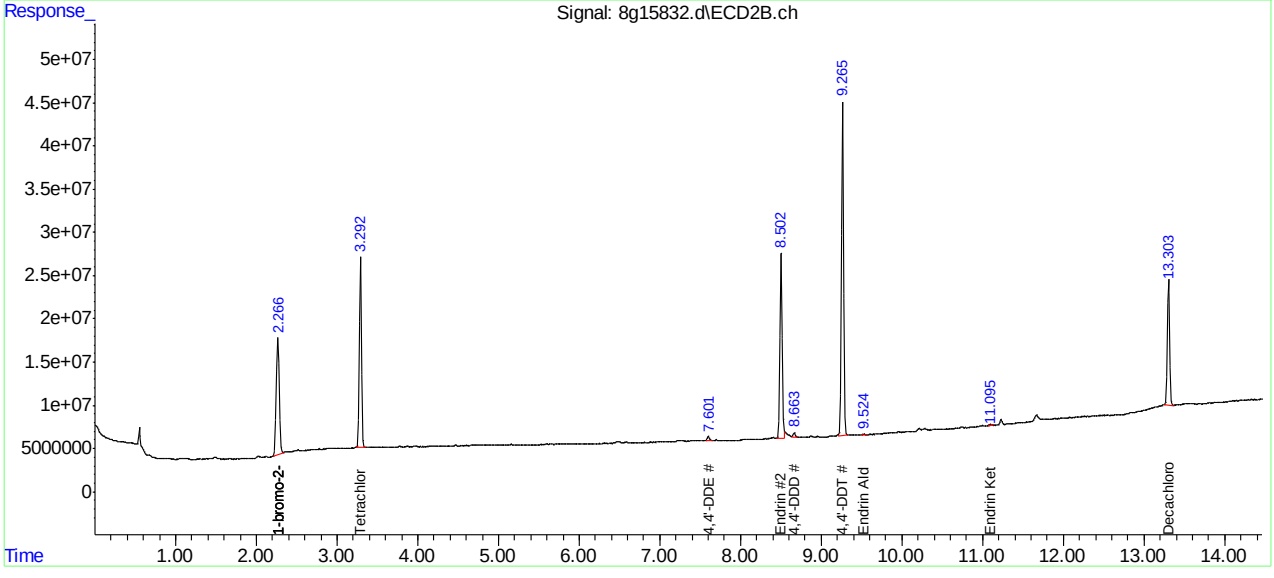
Quantitation Report (QT Reviewed)

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





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

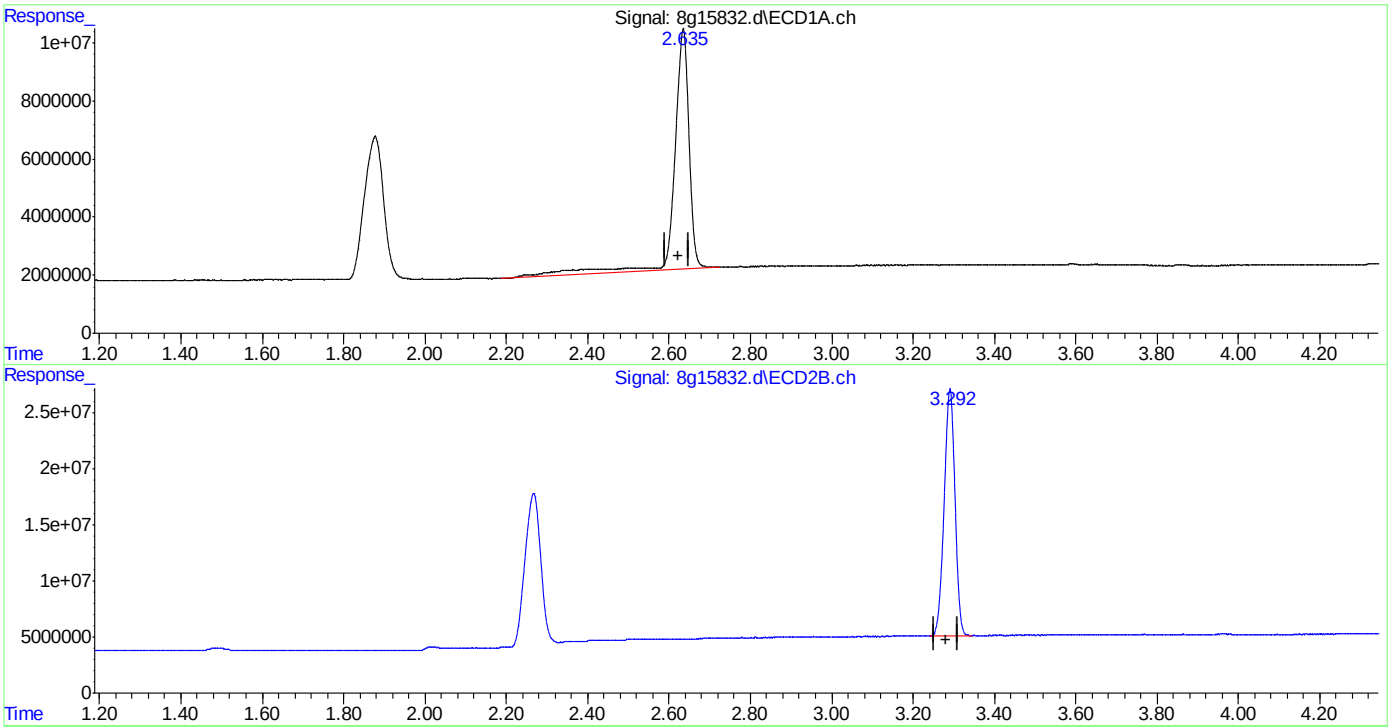
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrachloro-m-xylene	877-09-8	1	2.63	Poorly defined baseline
Endrin aldehyde	7421-93-4	1	7.71	Poorly defined baseline
Endrin aldehyde	7421-93-4	2	9.52	Poorly defined baseline
Endrin ketone	53494-70-5	2	11.10	Poorly defined baseline

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

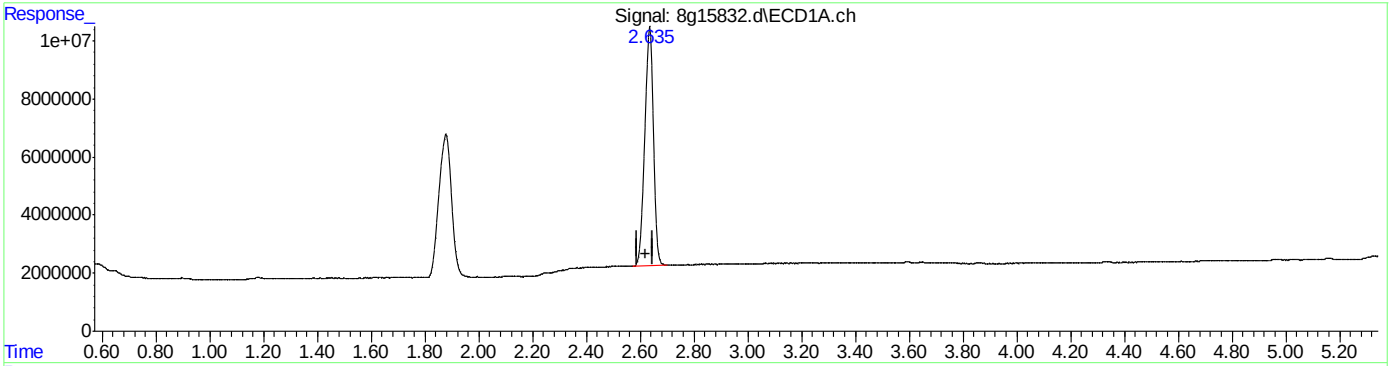
(+) = Expected Retention Time
8PST511.M Wed Jun 13 08:25:02 2018

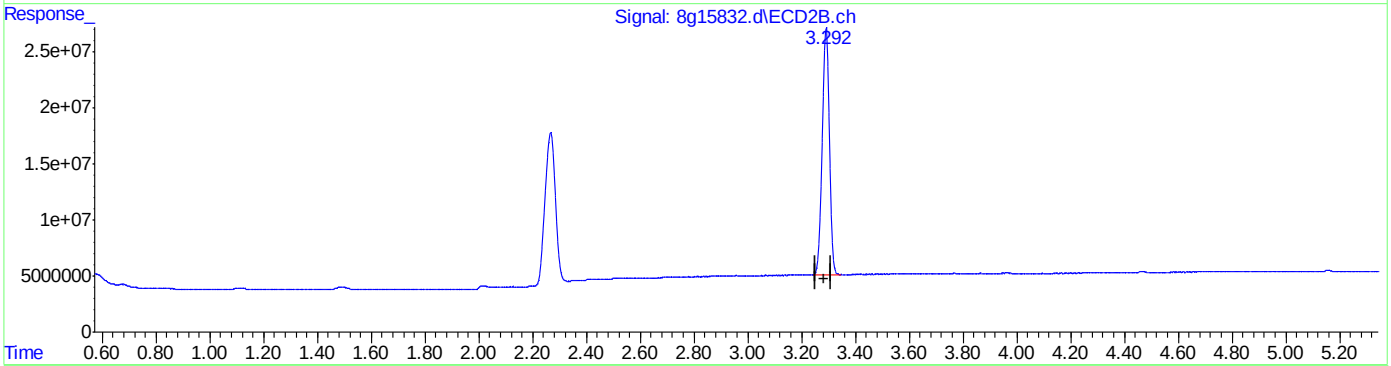
Quantitation Report (Qedit)

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





QEdit

(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

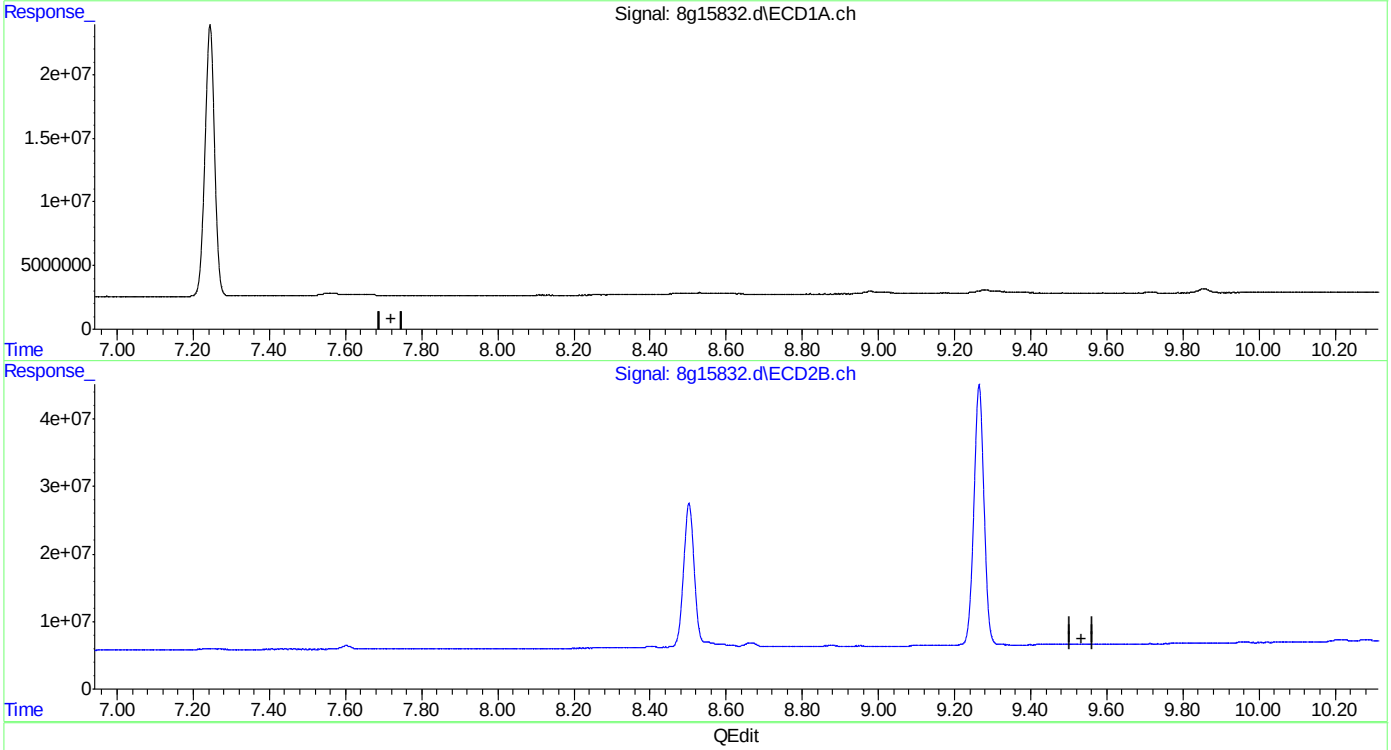
(+) = Expected Retention Time
8PST511.M Wed Jun 13 08:25:13 2018

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



QEdit

(21) Endrin Aldehyde (B)
0.000min 0.000 PPB
response 0

(21) Endrin Aldehyde #2 (B)
0.000min 0.000 PPB
response 0

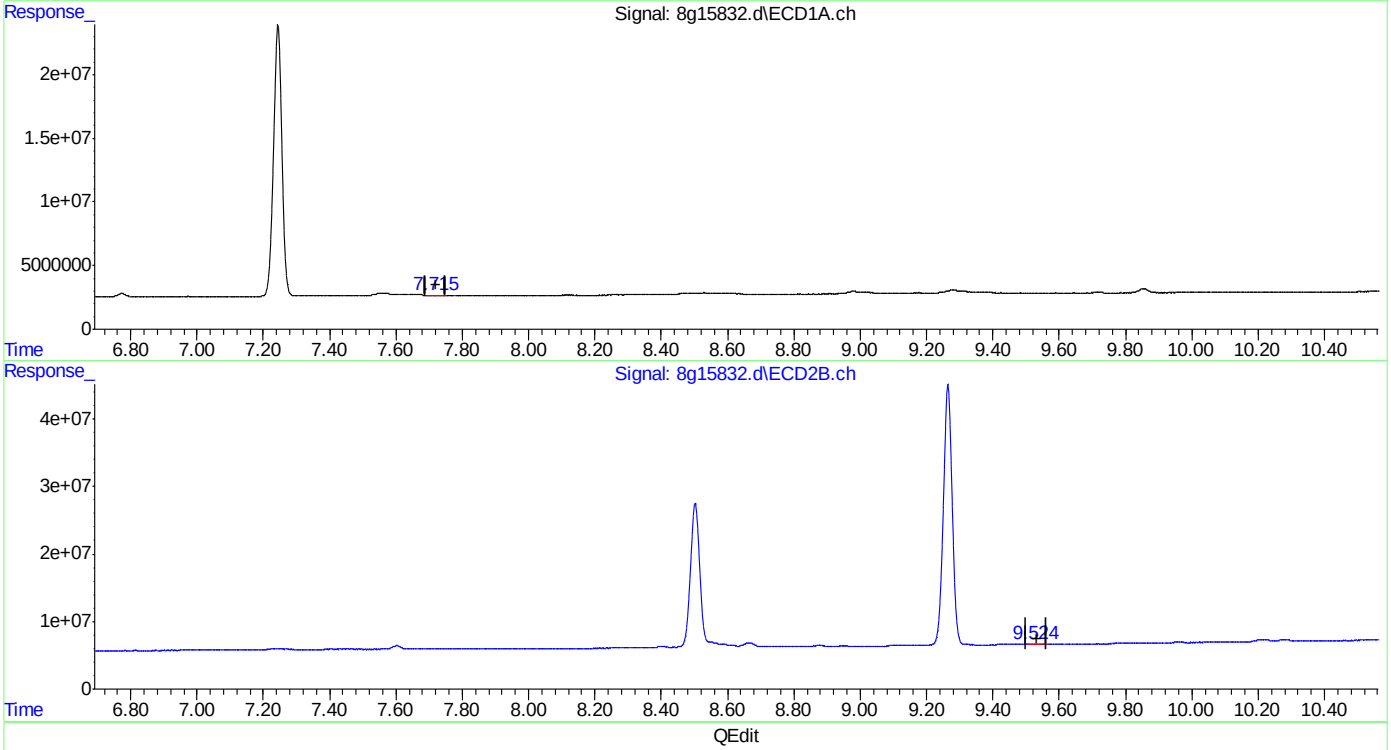
(+) = Expected Retention Time
8PST511.M Wed Jun 13 08:25:46 2018

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



QEdit

(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

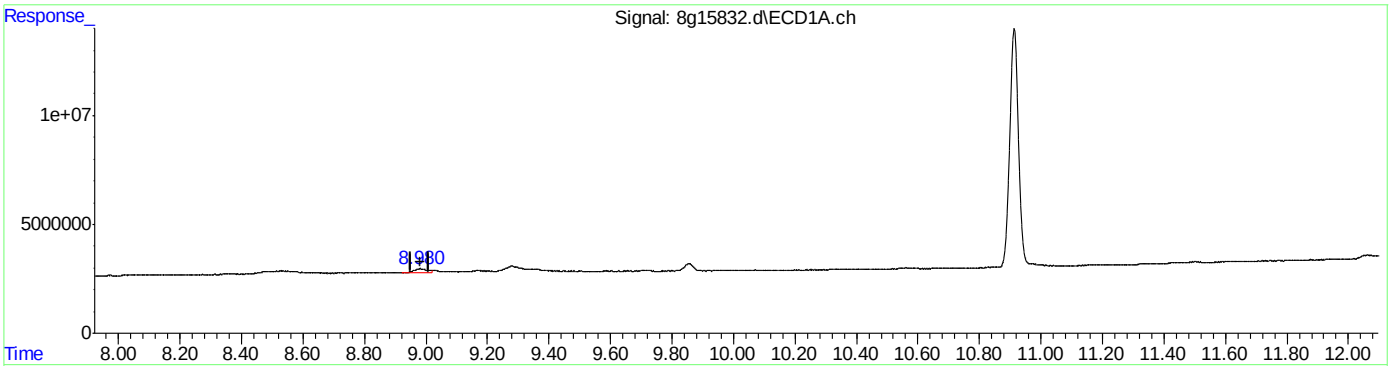
(+) = Expected Retention Time
8PST511.M Wed Jun 13 08:26:14 2018

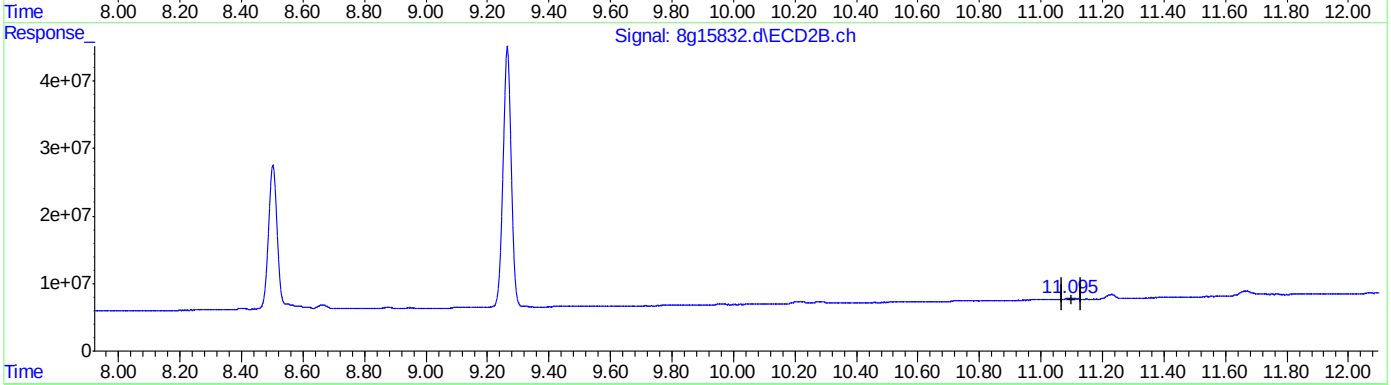
Quantitation Report (Qedit)

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





QEdit

(25) Endrin Ketone (B)
8.979min 1.444 PPB
response 5022410

(25) Endrin Ketone #2 (B)
11.095min 0.007 PPB
response 41660

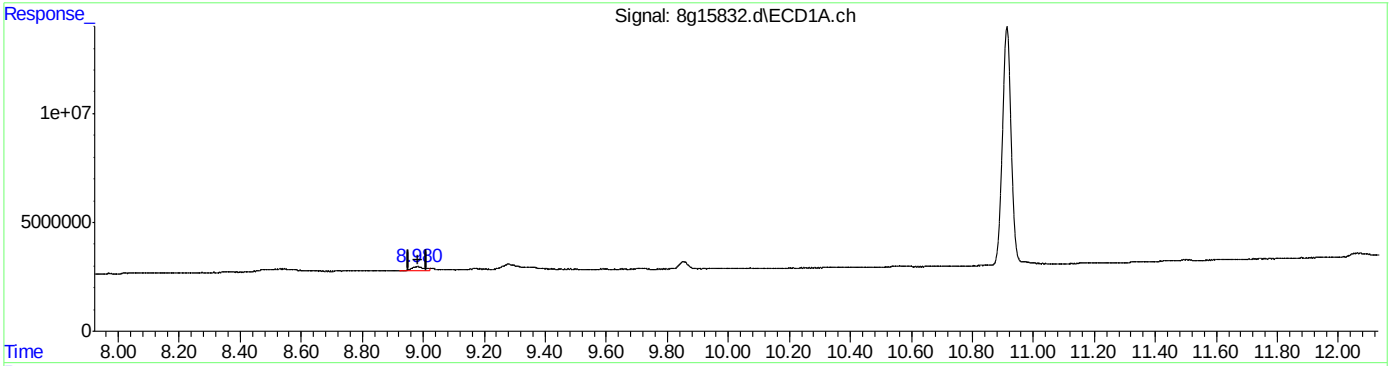
(+) = Expected Retention Time
8PST511.M Wed Jun 13 08:26:27 2018

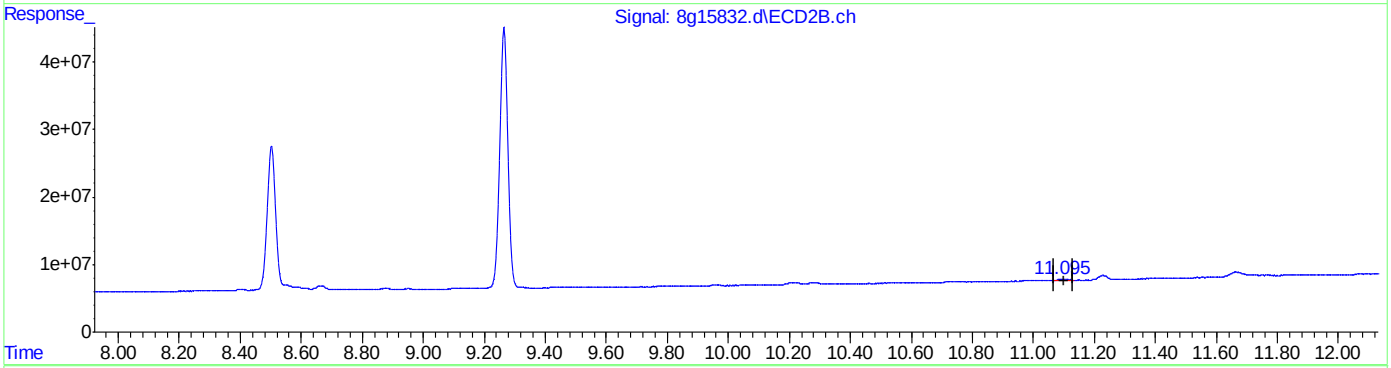
Quantitation Report (Qedit)

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





QEdit

(25) Endrin Ketone (B)
8.979min 1.444 PPB
response 5022410

(25) Endrin Ketone #2 (B)
11.095min 0.552 PPB m
response 3258753

(+) = Expected Retention Time
8PST511.M Wed Jun 13 08:26:46 2018

Manual Integrations
APPROVED
(compounds with "m" flag)
Gwendolyn Burns
05/01/18 08:39

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

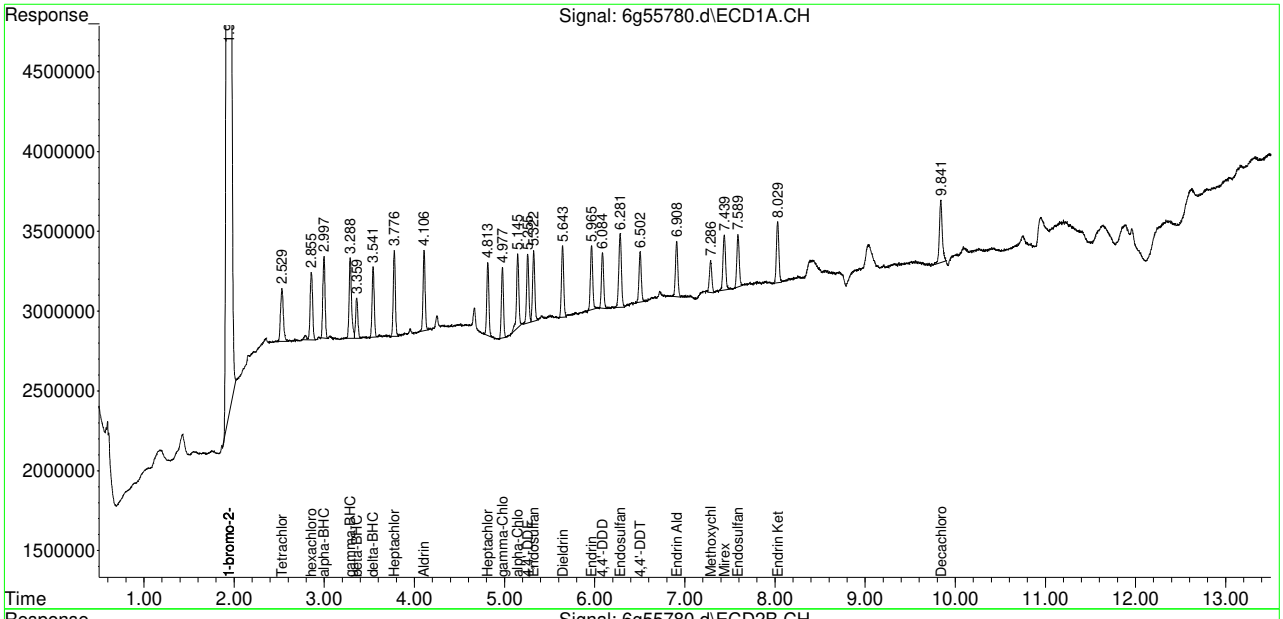
11

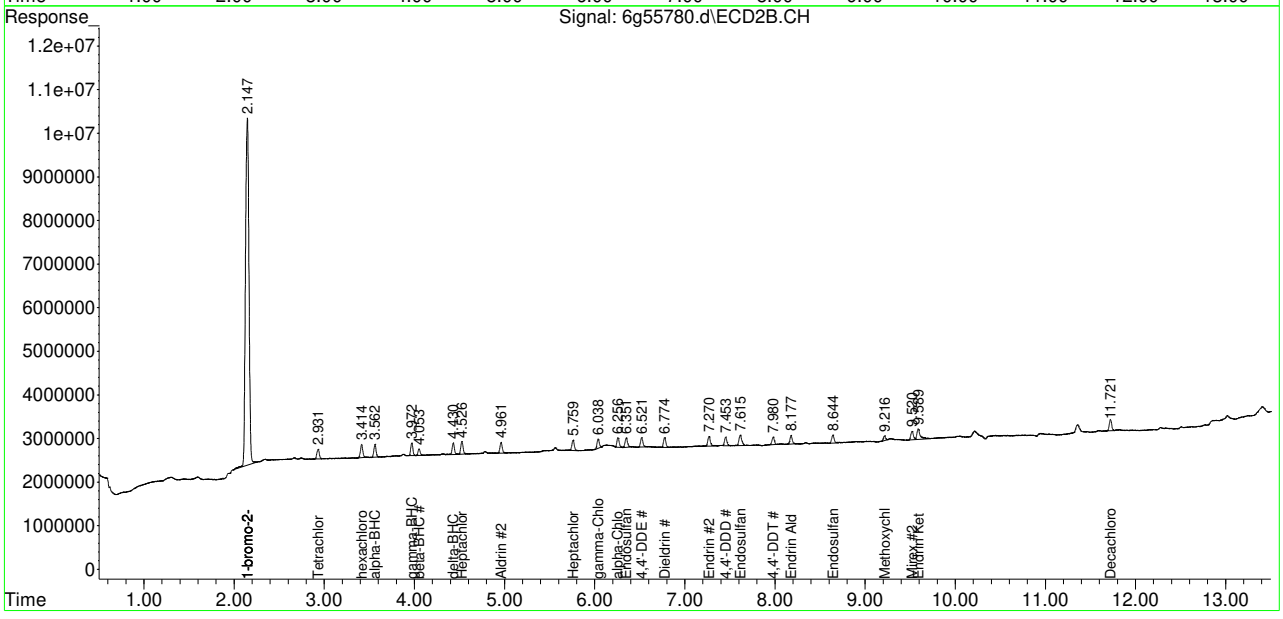
Quantitation Report (QT Reviewed)

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





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

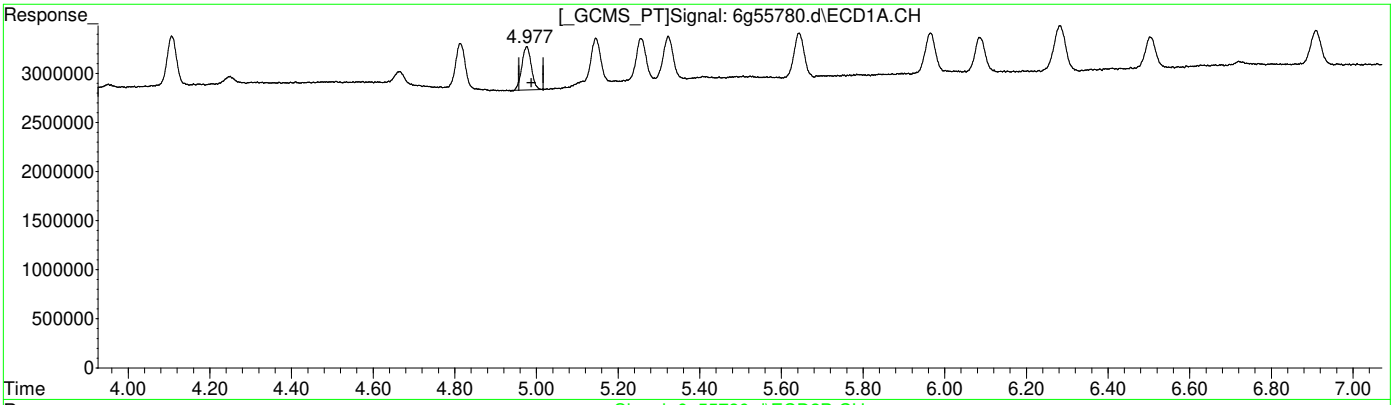
Parameter	CAS	Sig#	R.T. (min.)	Reason
gamma-Chlordane	5103-74-2	2	6.04	Poorly defined baseline
alpha-Chlordane	5103-71-9	2	6.26	Poorly defined baseline
Methoxychlor	72-43-5	1	7.29	Poorly defined baseline
4,4'-DDT	50-29-3	2	7.98	Poorly defined baseline
Methoxychlor	72-43-5	2	9.22	Poorly defined baseline
Decachlorobiphenyl	2051-24-3	1	9.84	Poorly defined baseline

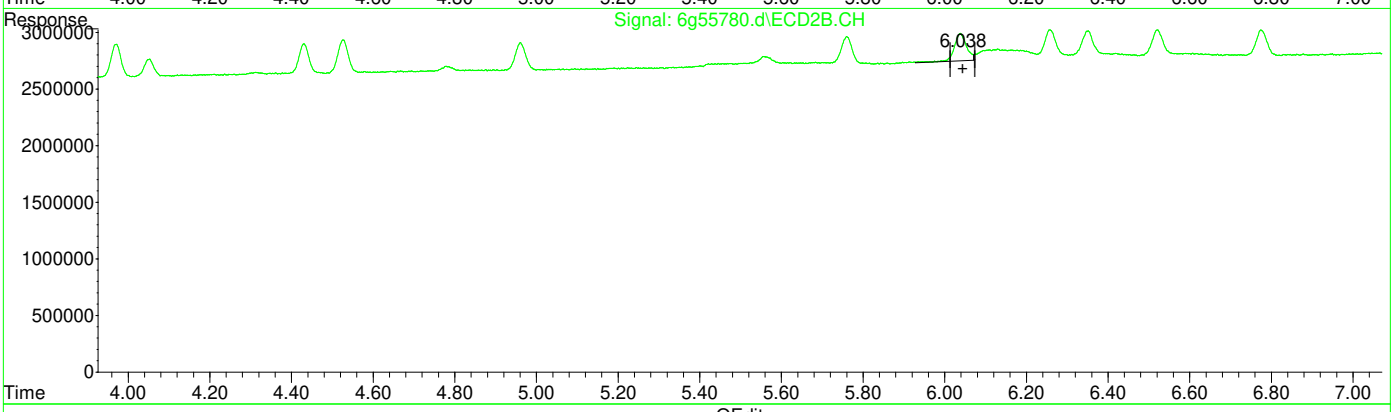
Quantitation Report (Qedit)

```
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

(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

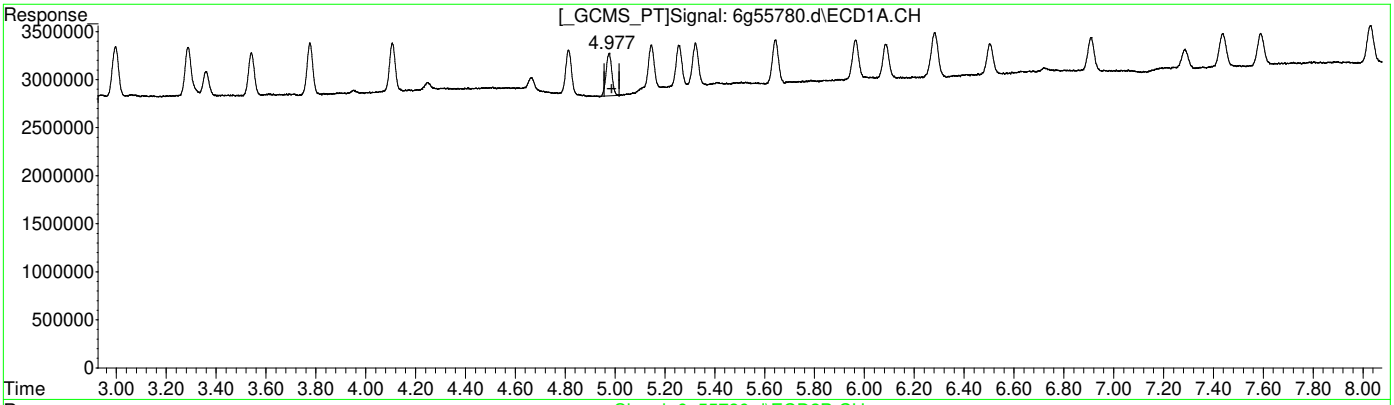
6PST1671.M Mon Apr 30 17:23:47 2018

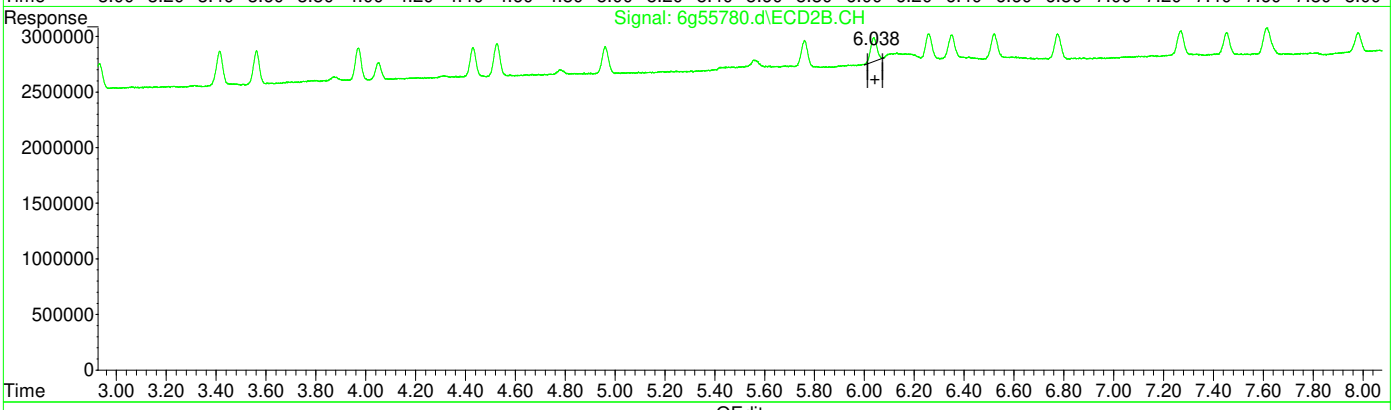
Quantitation Report (Qedit)

```
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
```





QEdit

(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

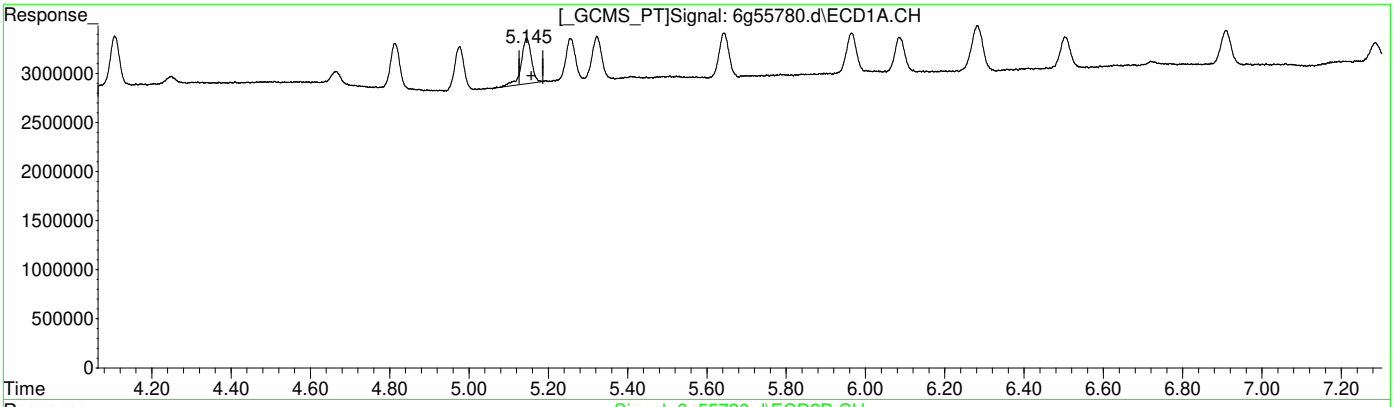
6PST1671.M Mon Apr 30 17:23:53 2018

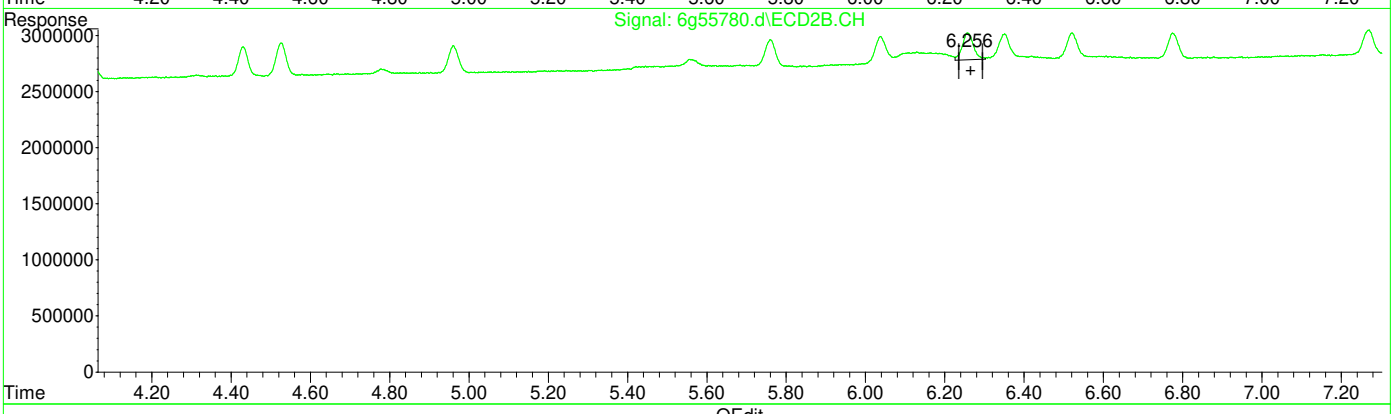
Quantitation Report (Qedit)

```
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

(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

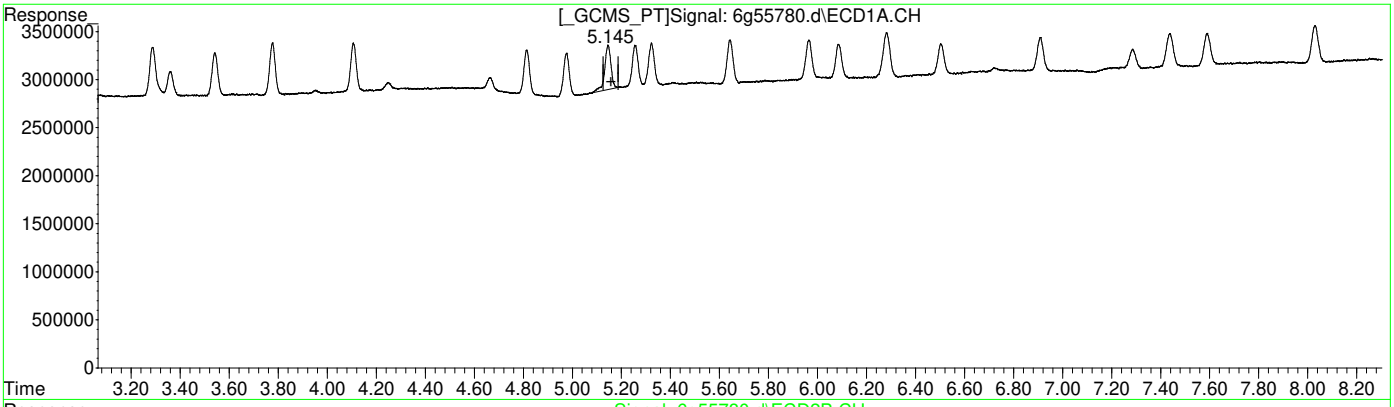
6PST1671.M Mon Apr 30 17:23:57 2018

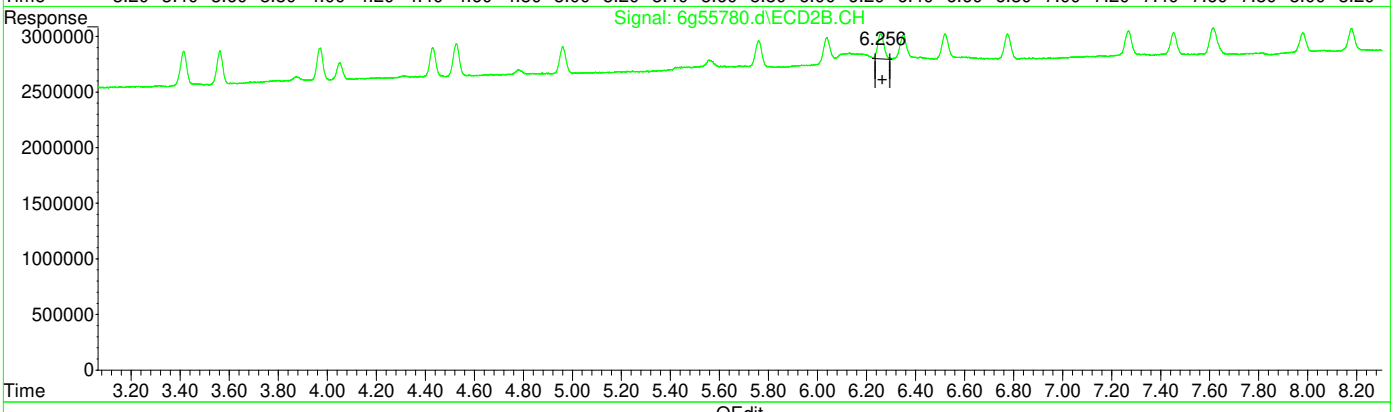
Quantitation Report (Qedit)

```
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

(13) alpha-Chlordane (B)

5.146min 1.179 PPB

response 8190133

(13) alpha-Chlordane #2 (B)

6.256min 0.992 PPB m

response 3993779

(+) = Expected Retention Time

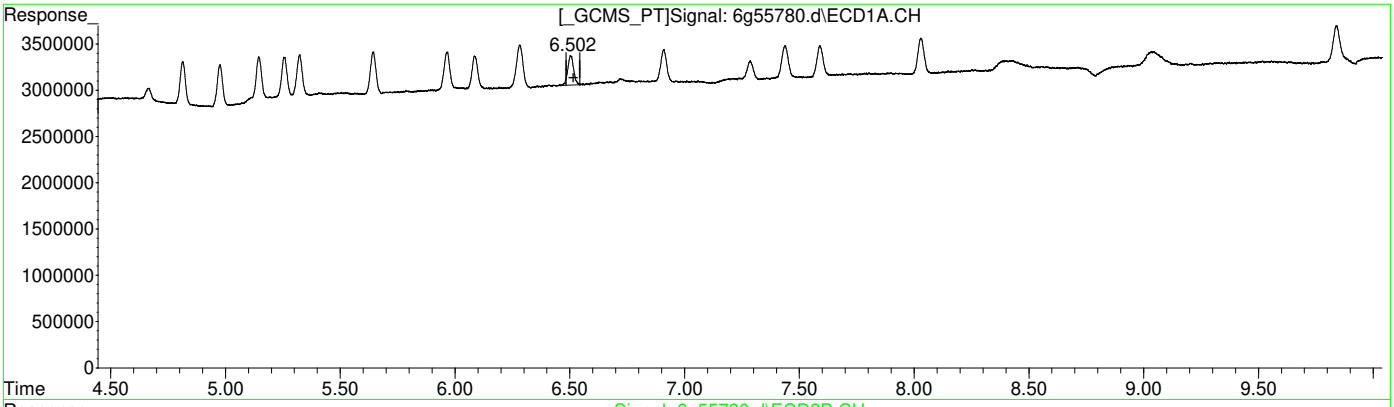
6PST1671.M Mon Apr 30 17:24:04 2018

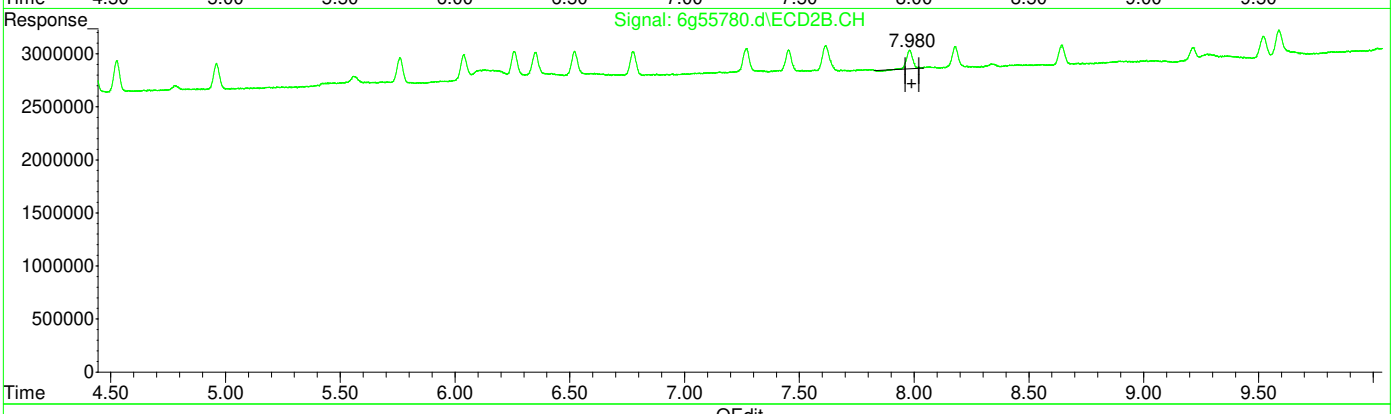
Quantitation Report (Qedit)

```
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

(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

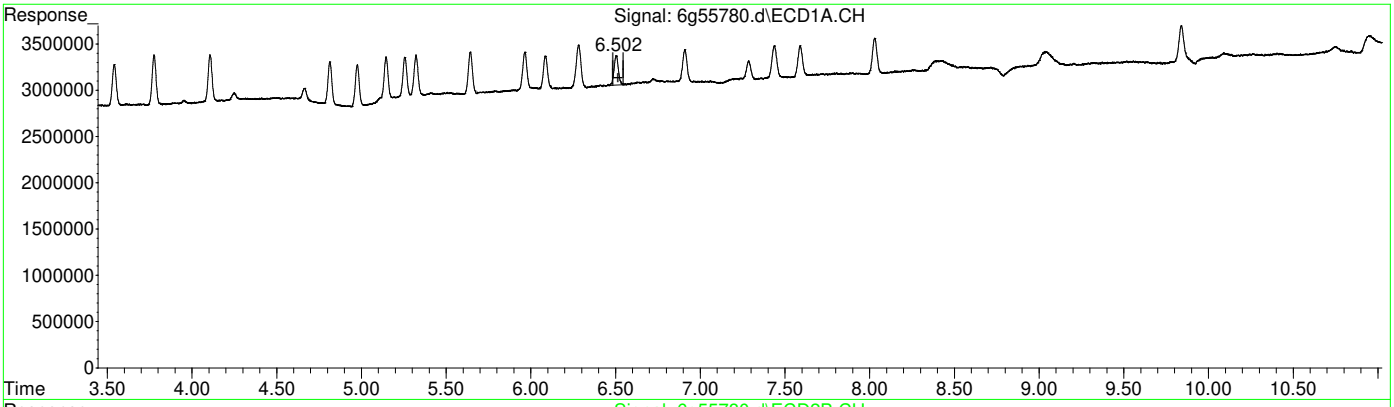
6PST1671.M Mon Apr 30 17:24:18 2018

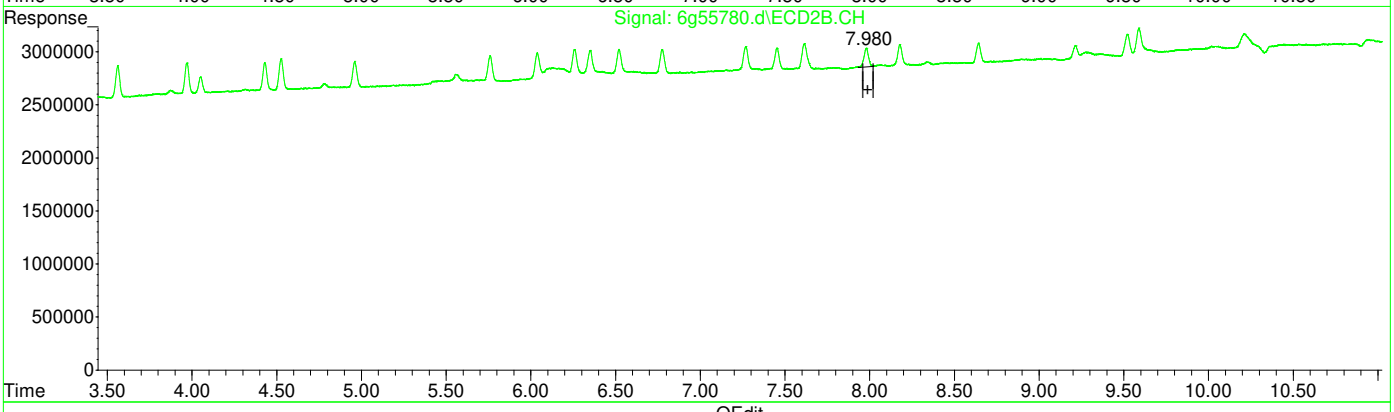
Quantitation Report (Qedit)

```
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
```





QEdit

(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

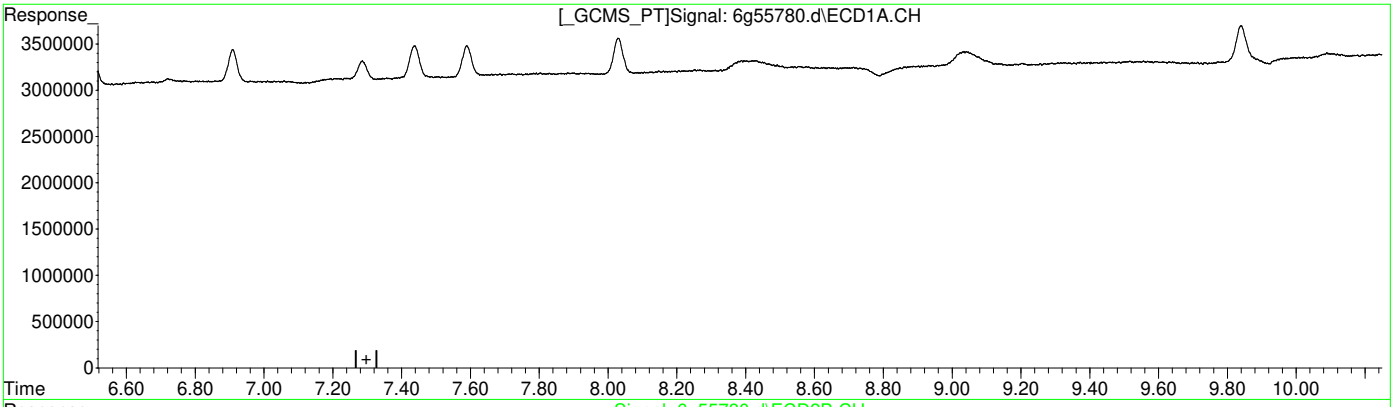
6PST1671.M Mon Apr 30 17:24:24 2018

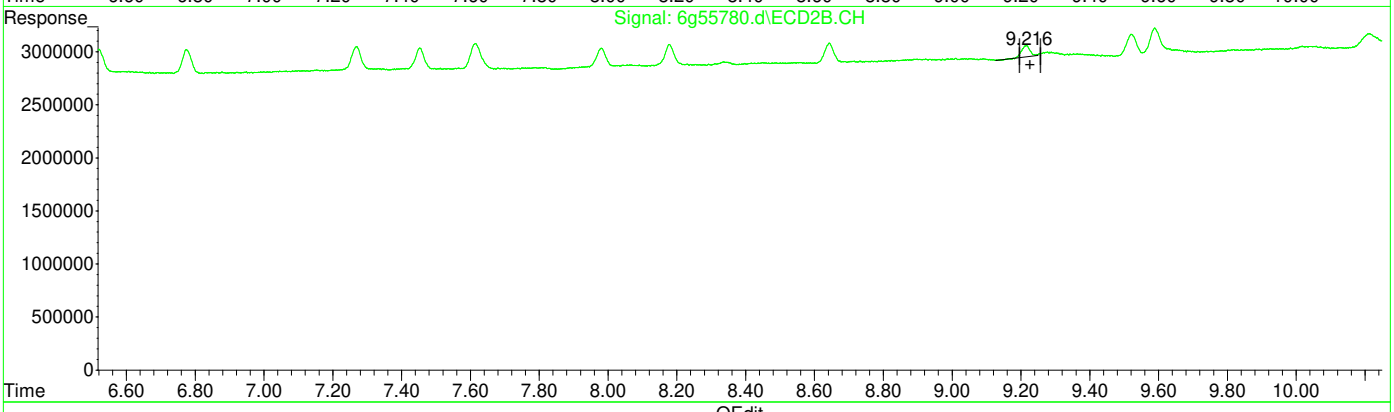
Quantitation Report (Qedit)

```
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
```





QEdit

(23) Methoxychlor (A)

0.000min 0.000 PPB

response 0

(23) Methoxychlor #2 (A)

9.216min 1.067 PPB

response 1816913

(+) = Expected Retention Time

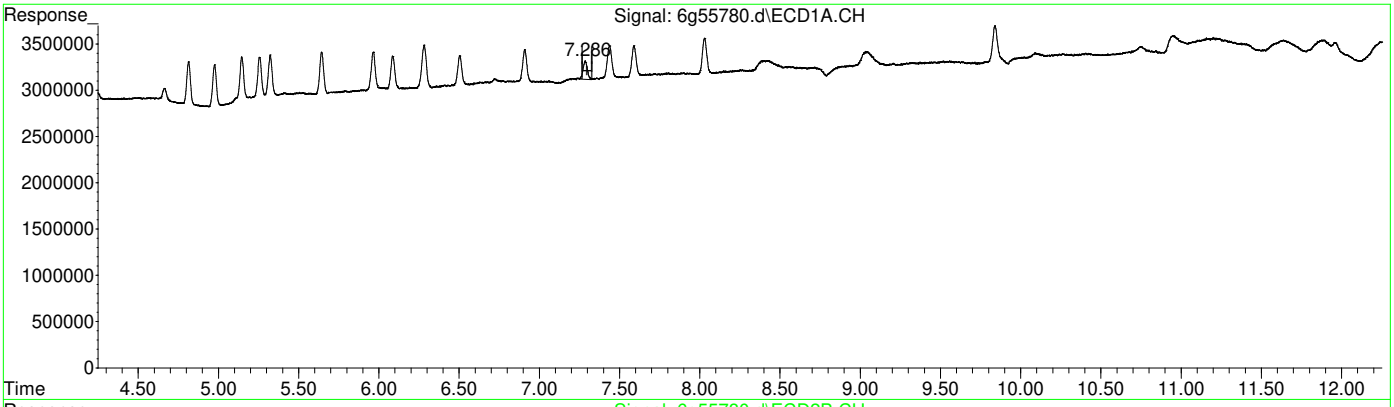
6PST1671.M Mon Apr 30 17:24:29 2018

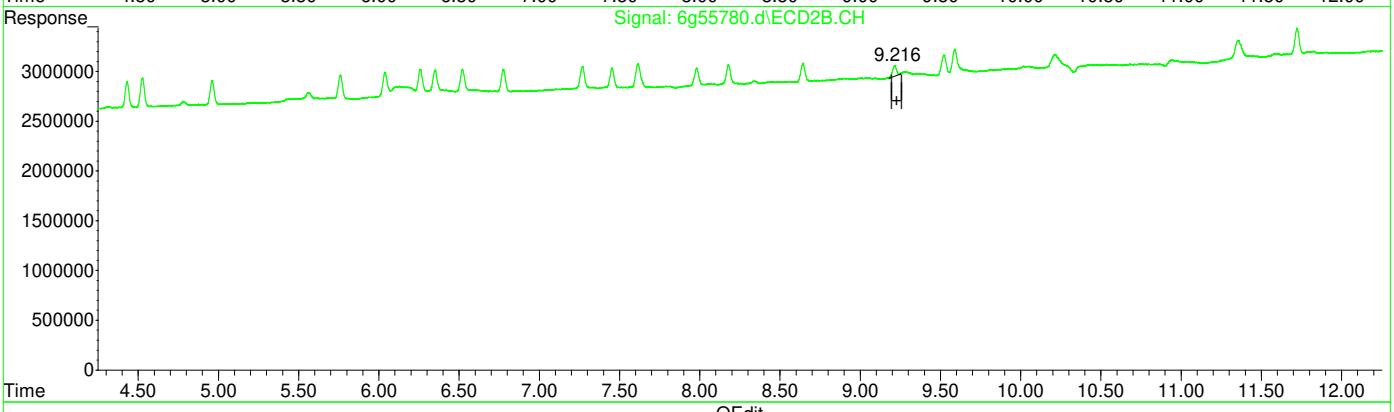
Quantitation Report (Qedit)

```
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

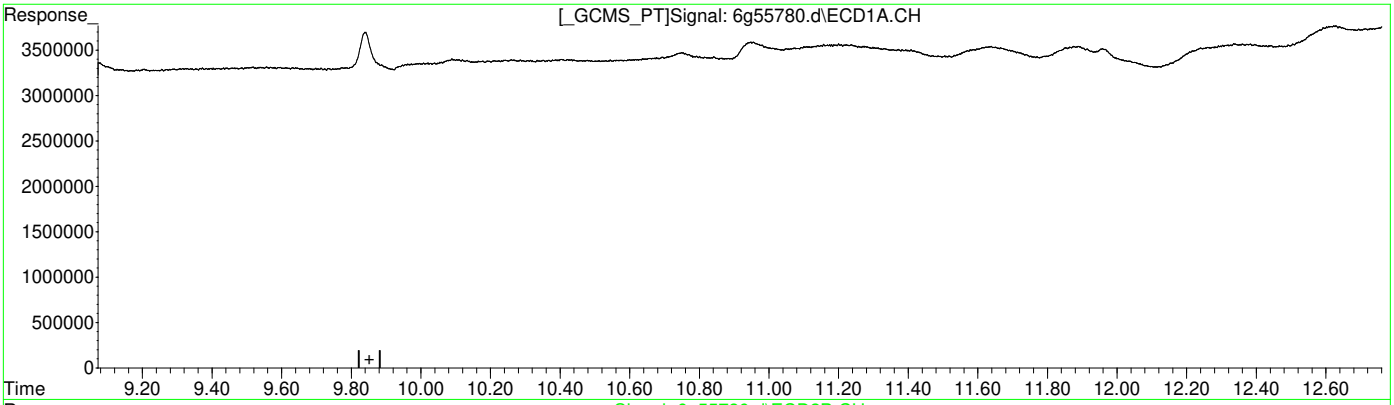
6PST1671.M Mon Apr 30 17:24:40 2018

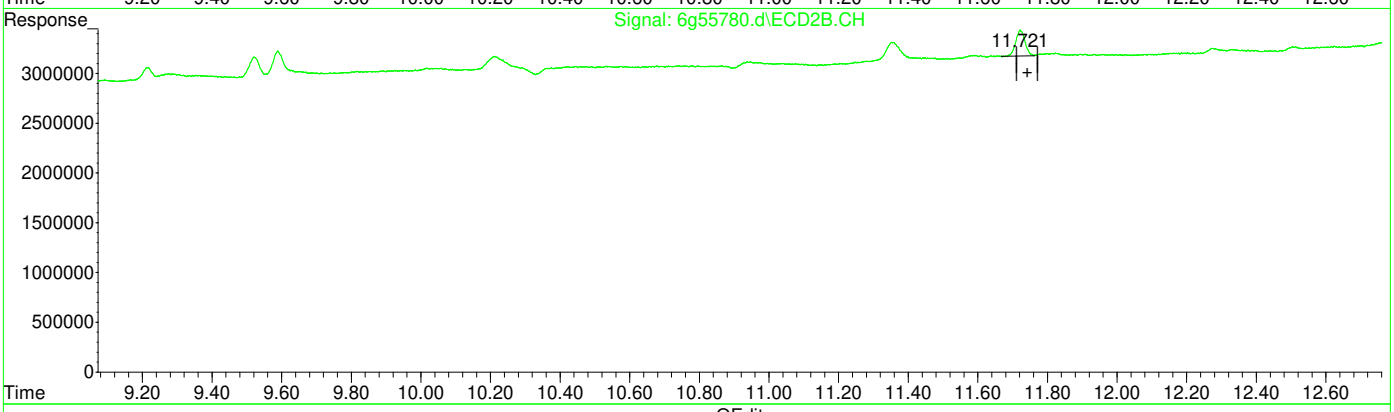
Quantitation Report (Qedit)

```
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
```





QEdit

(26) Decachlorobiphenyl (SA)

0.000min 0.000 PPB

response 0

(26) Decachlorobiphenyl #2 (SA)

11.722min 1.337 PPB

response 4796545

(+) = Expected Retention Time

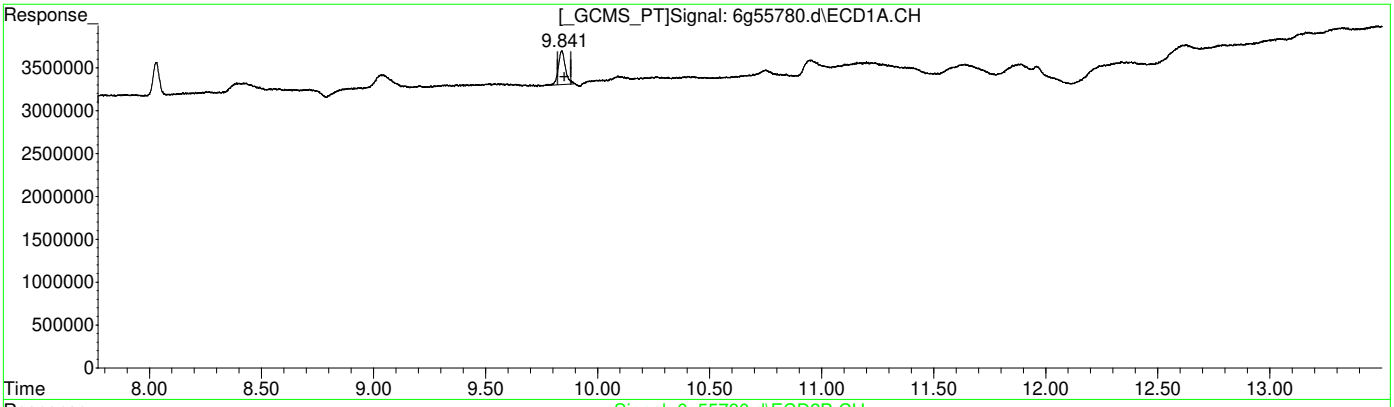
6PST1671.M Mon Apr 30 17:24:45 2018

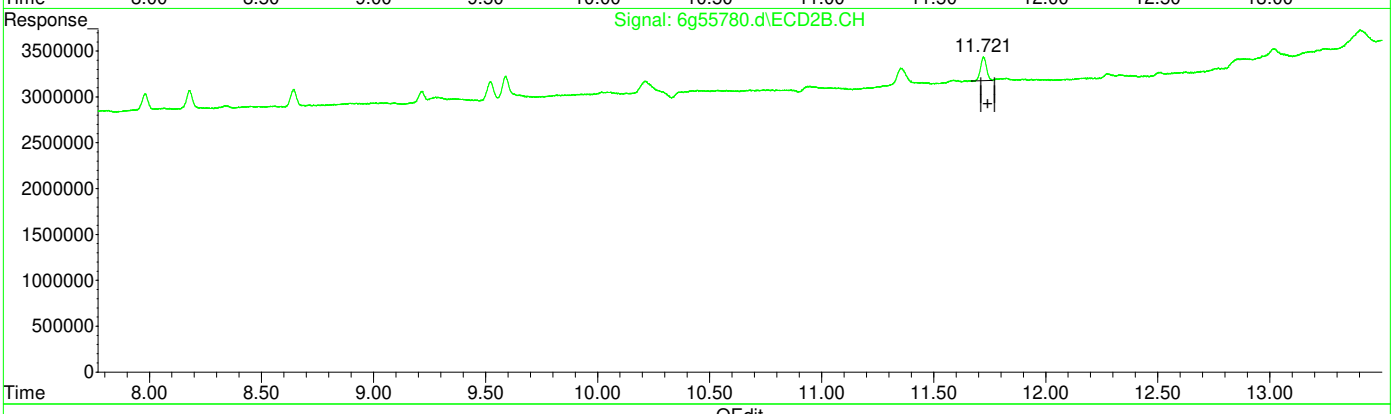
Quantitation Report (Qedit)

```
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

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 05/01/18 08:39

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.

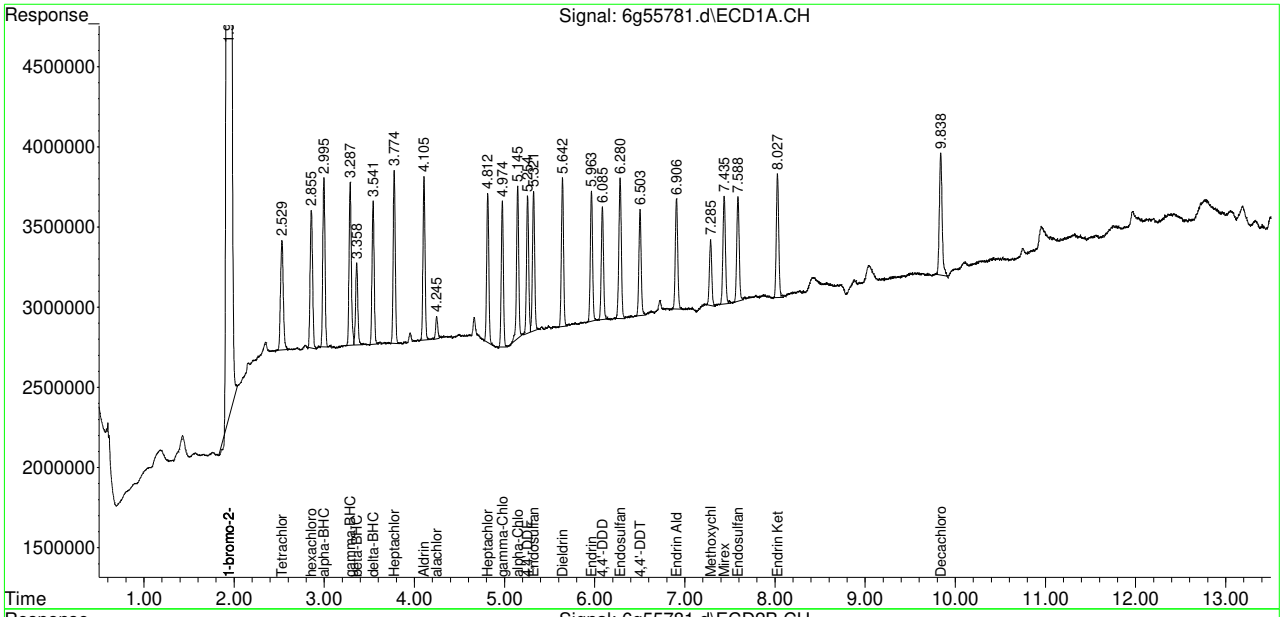
11.6.2 11

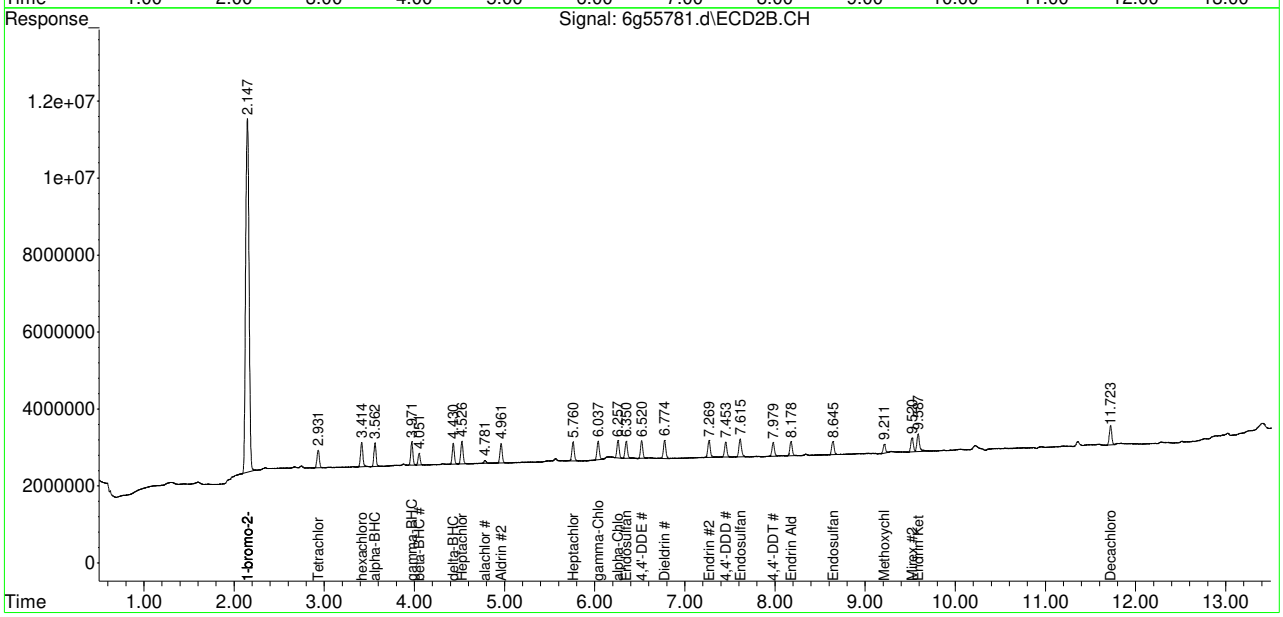
Quantitation Report (QT Reviewed)

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





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

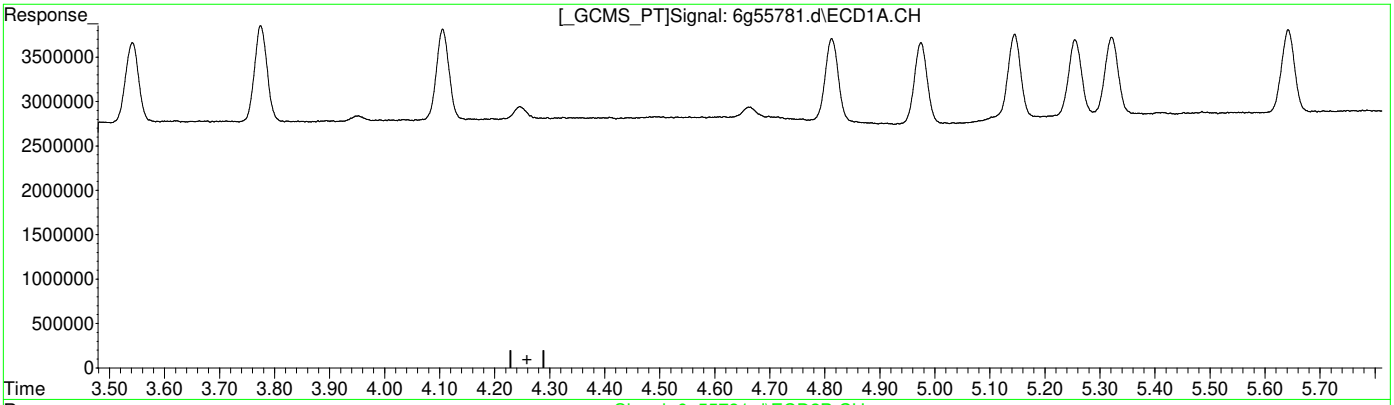
Parameter	CAS	Sig#	R.T. (min.)	Reason
Methoxychlor	72-43-5	2	9.21	Poorly defined baseline

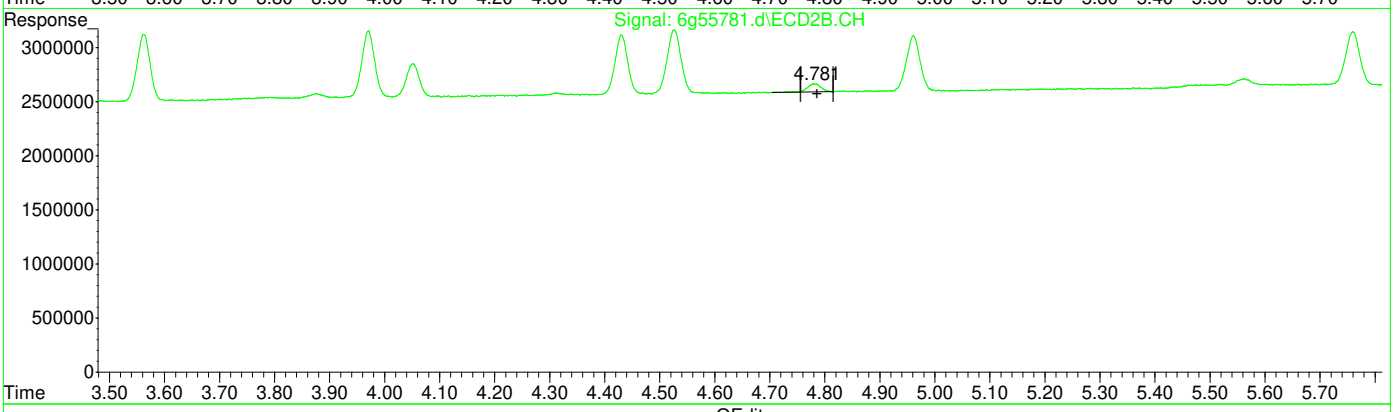
Quantitation Report (Qedit)

```
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
```





QEdit

(10) alachlor

0.000min 0.000 PPB

response 0

(10) alachlor #2

4.781min 1.890 PPB

response 1308957

(+) = Expected Retention Time

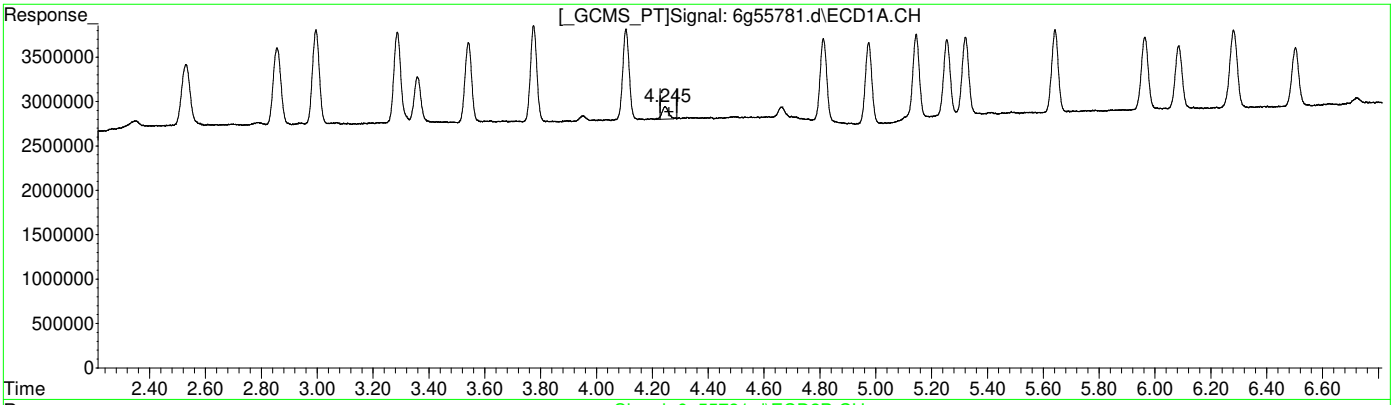
6PST1671.M Mon Apr 30 17:20:14 2018

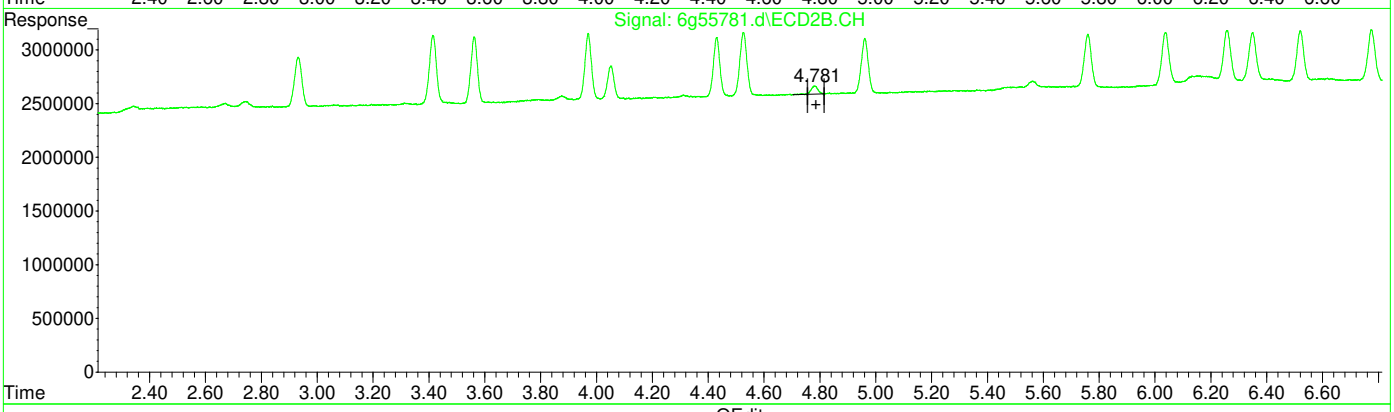
Quantitation Report (Qedit)

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





QEdit

(10) alachlor

4.245min 1.959 PPB m

response 2244634

(10) alachlor #2

4.781min 1.890 PPB

response 1308957

(+) = Expected Retention Time

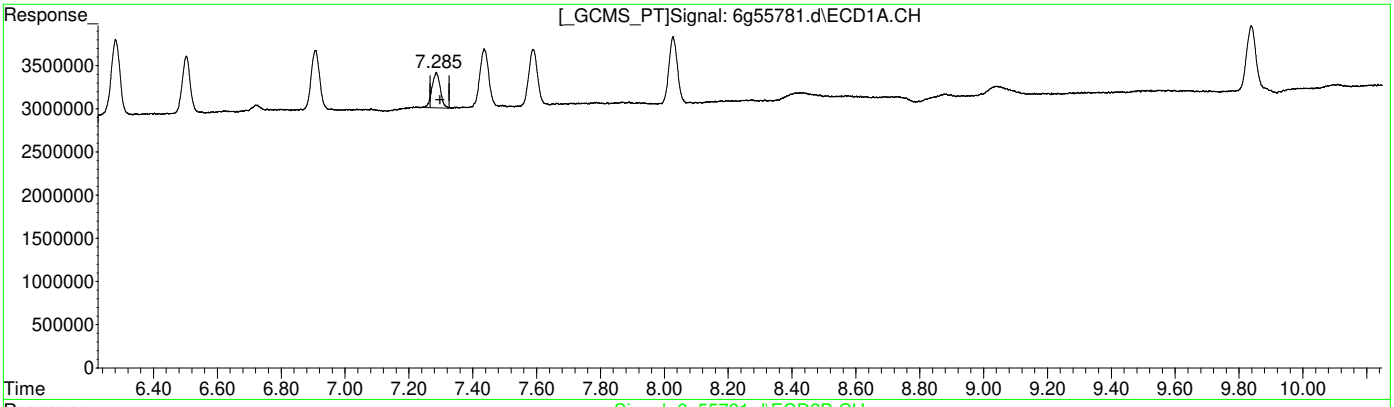
6PST1671.M Mon Apr 30 17:20:22 2018

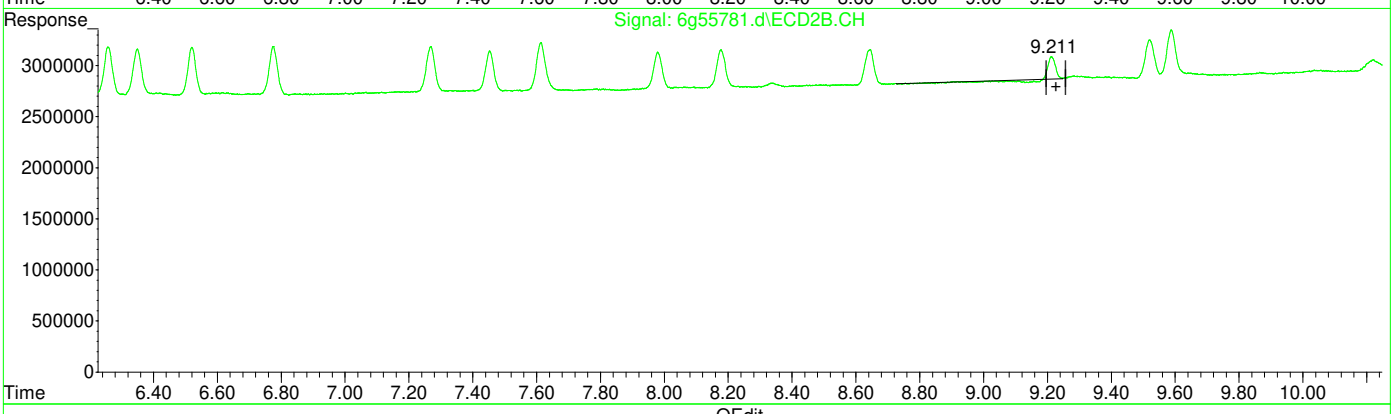
Quantitation Report (Qedit)

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





QEdit

(23) Methoxychlor (A)

7.286min 2.161 PPB

response 7461816

(23) Methoxychlor #2 (A)

9.213min 0.820 PPB

response 1582778

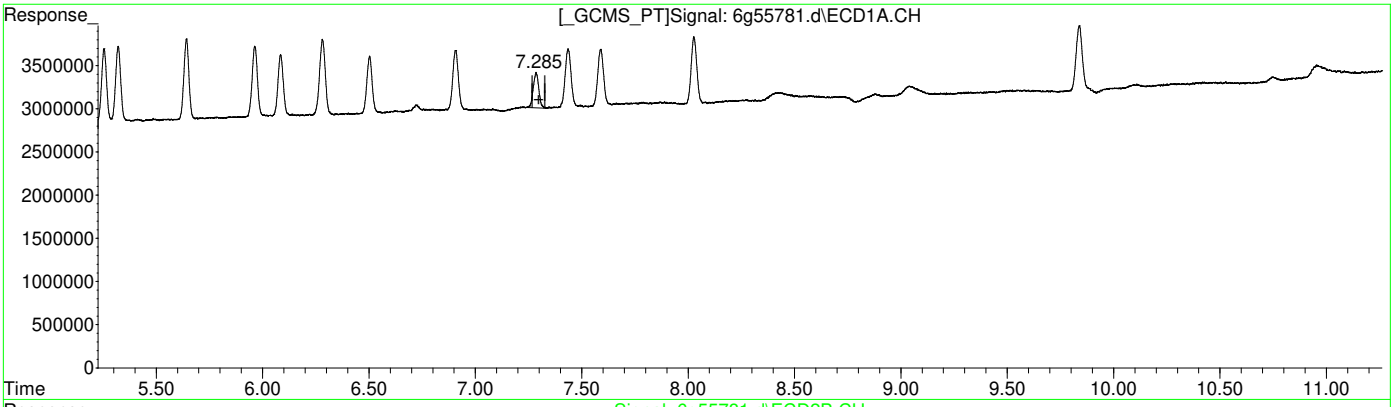
(+) = Expected Retention Time
6PST1671.M Mon Apr 30 17:20:34 2018

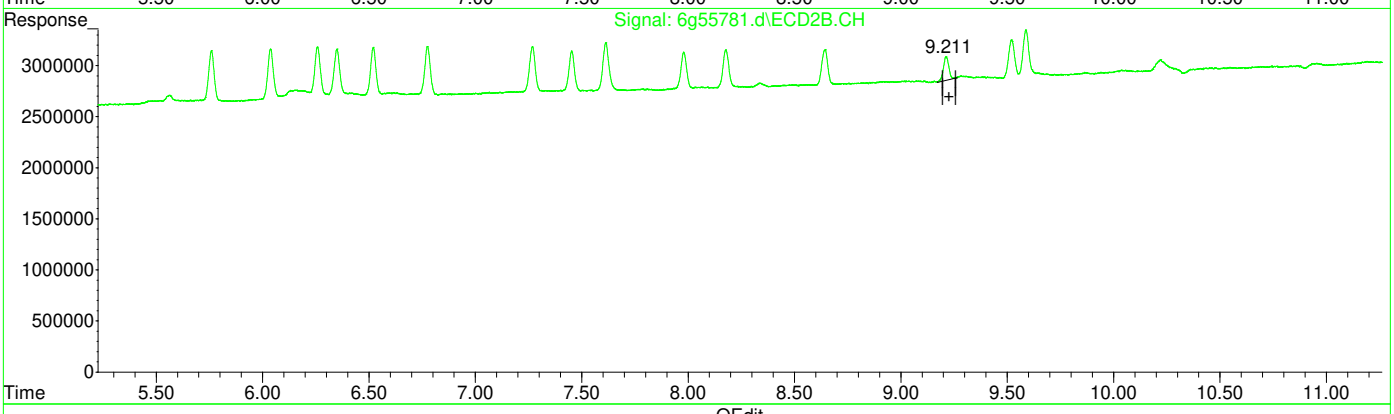
Quantitation Report (Qedit)

```
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
```





QEdit

(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

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns
05/01/18 08:39

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.

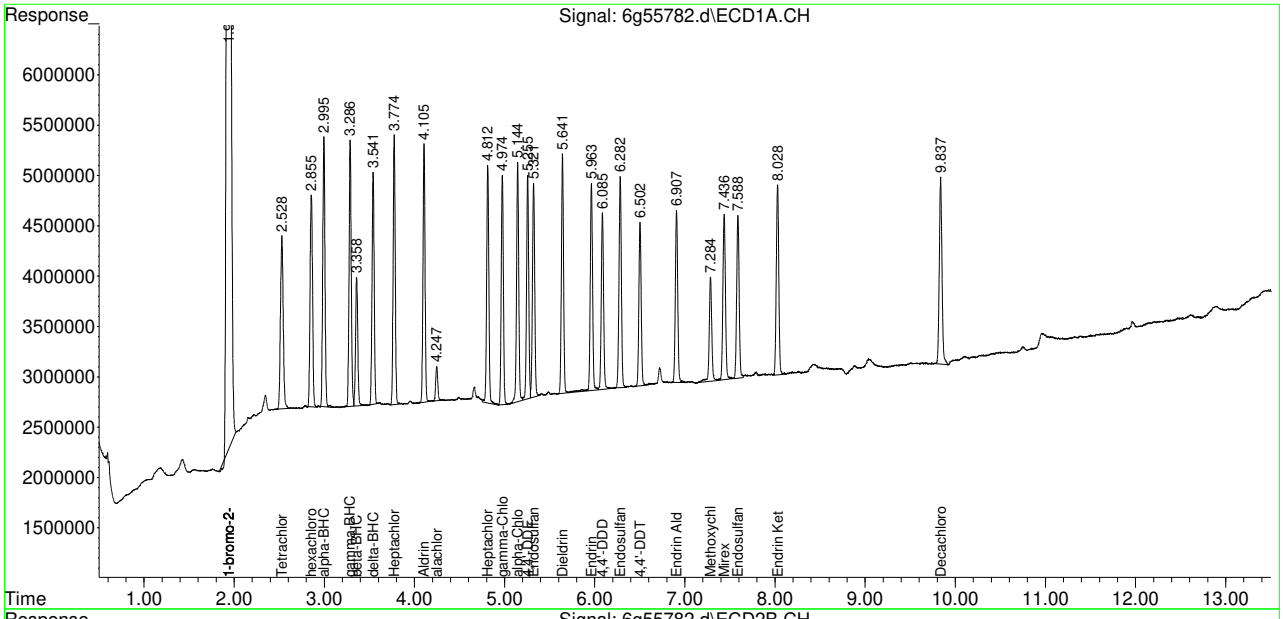
11.6.3 11

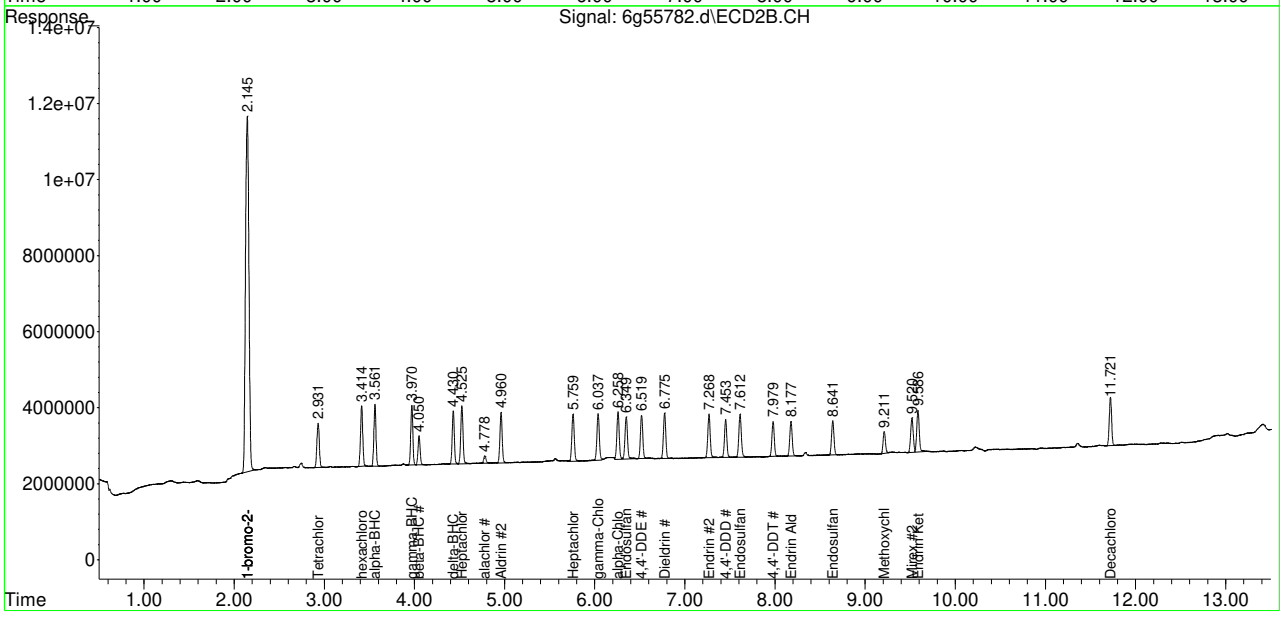
Quantitation Report (QT Reviewed)

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





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

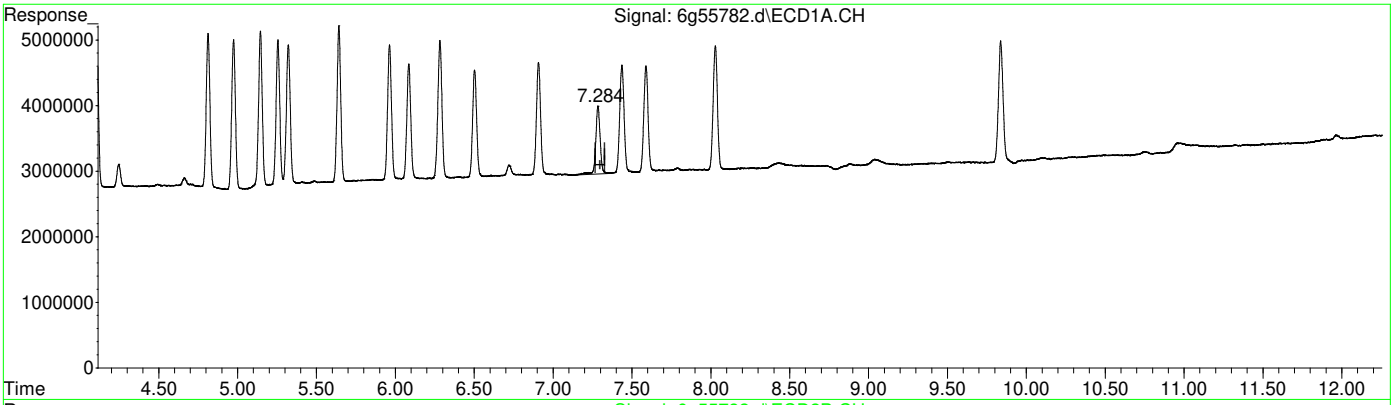
Parameter	CAS	Sig#	R.T. (min.)	Reason
Methoxychlor	72-43-5	2	9.21	Poorly defined baseline

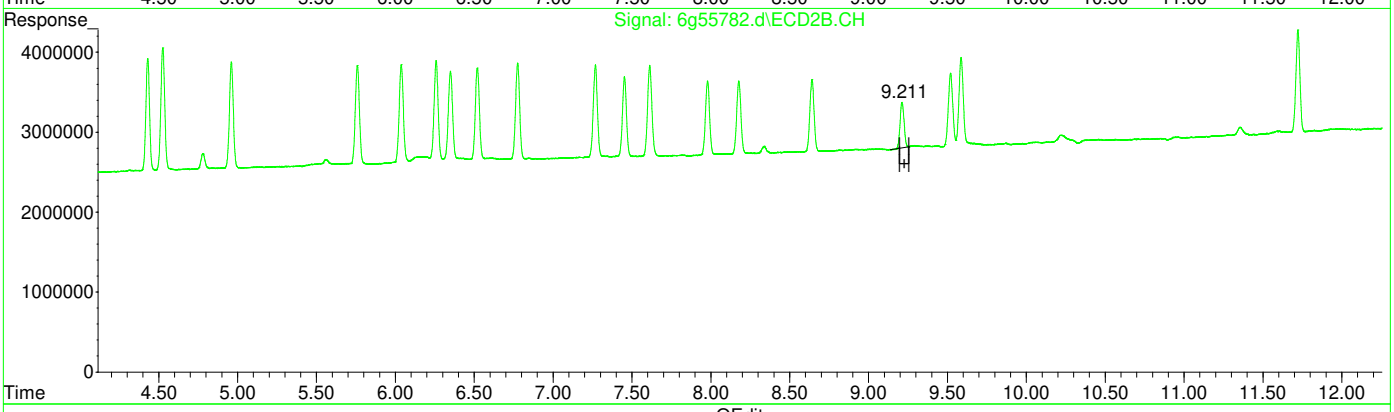
Quantitation Report (Qedit)

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

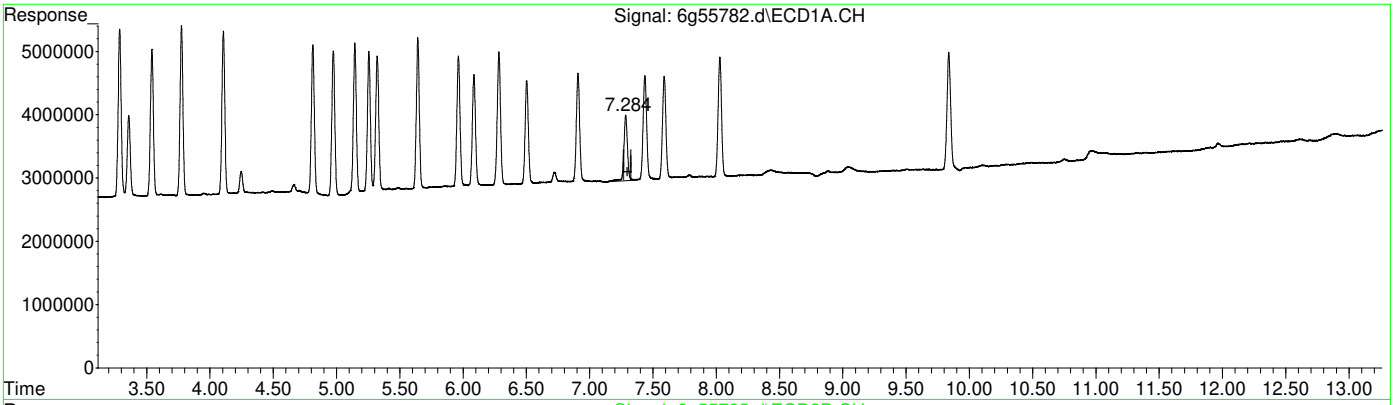
(+) = Expected Retention Time
6PST1671.M Mon Apr 30 17:18:49 2018

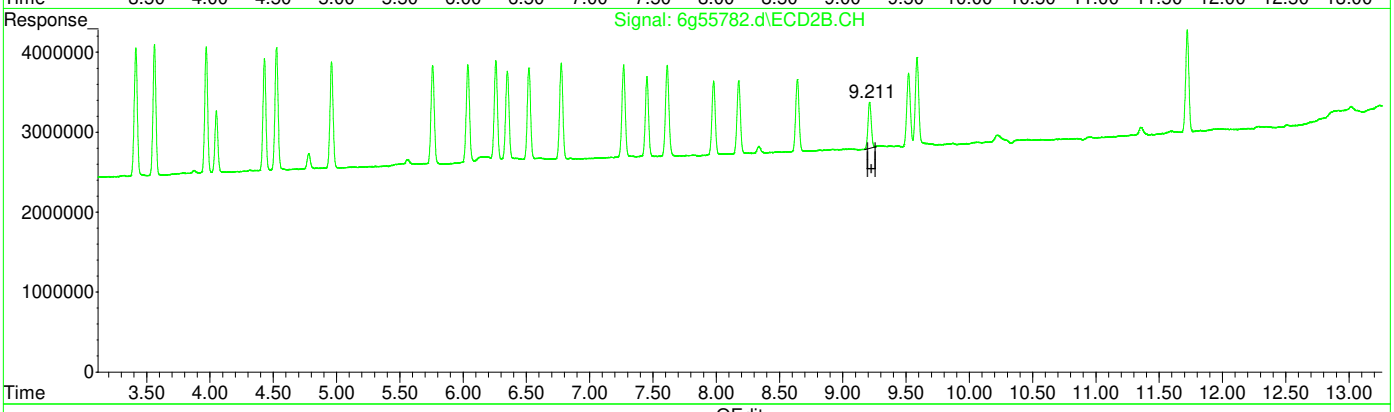
Quantitation Report (Qedit)

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





QEdit

(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

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

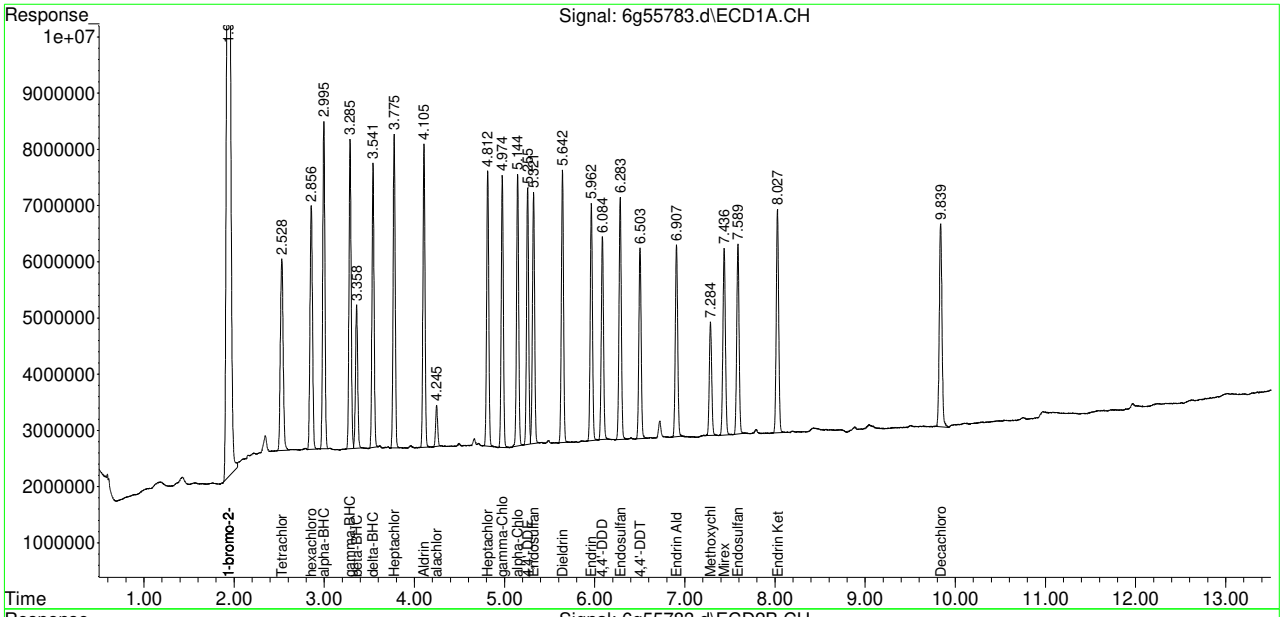
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

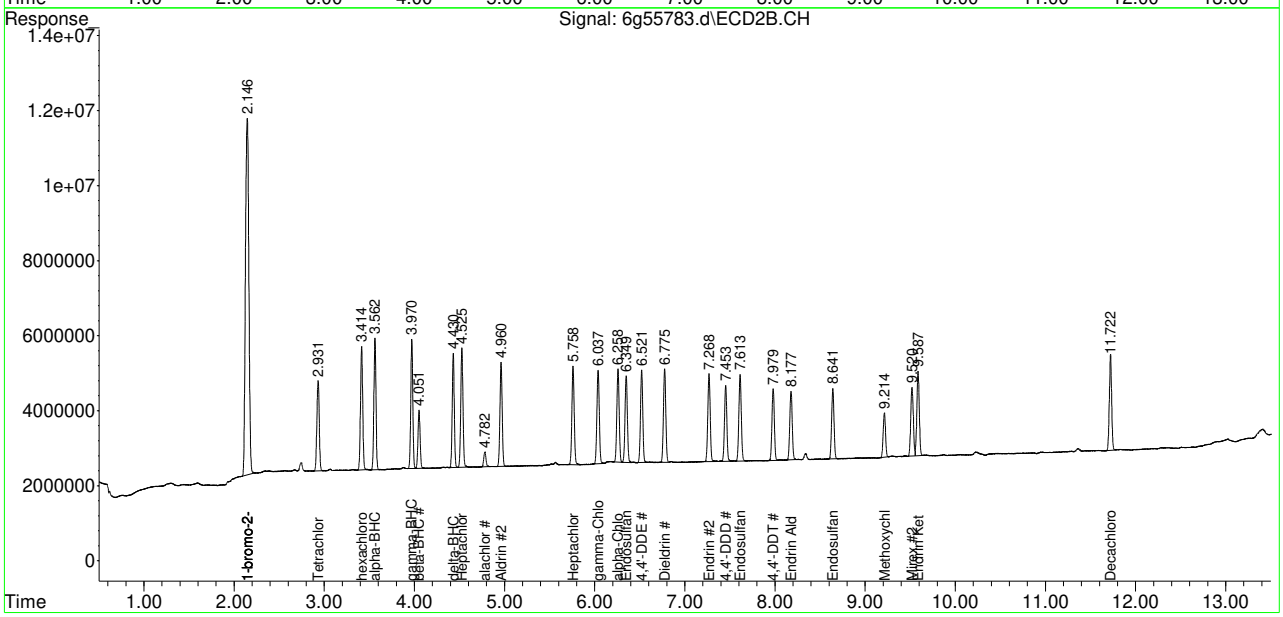
Quantitation Report (QT Reviewed)

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





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

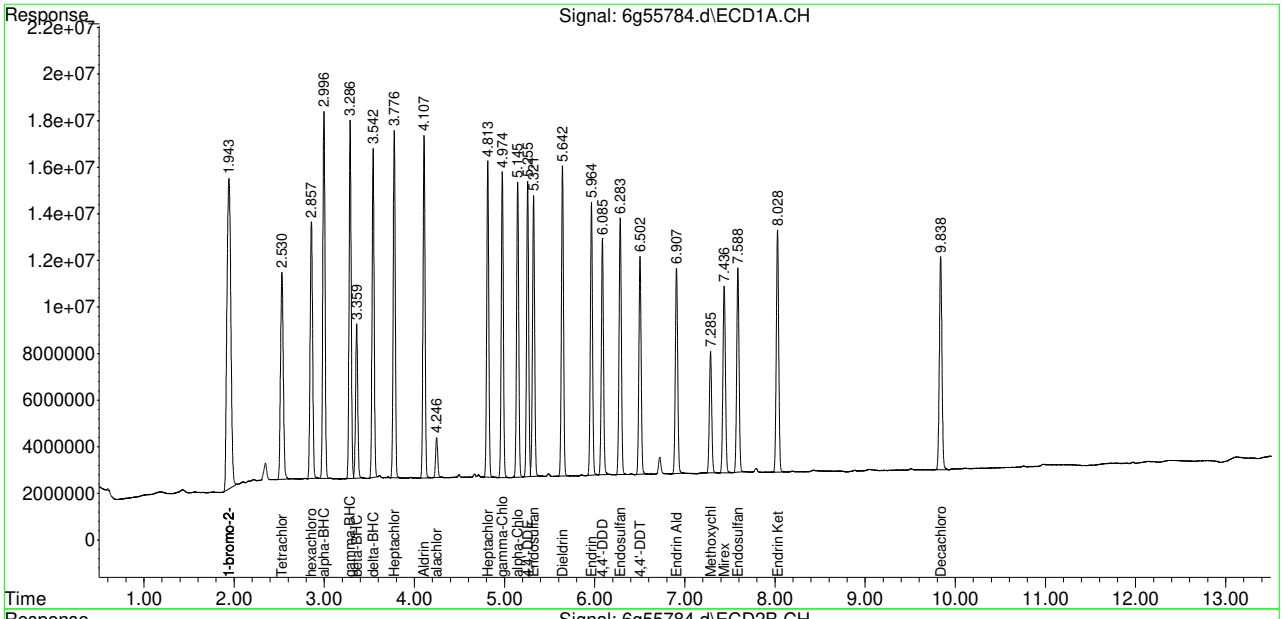
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

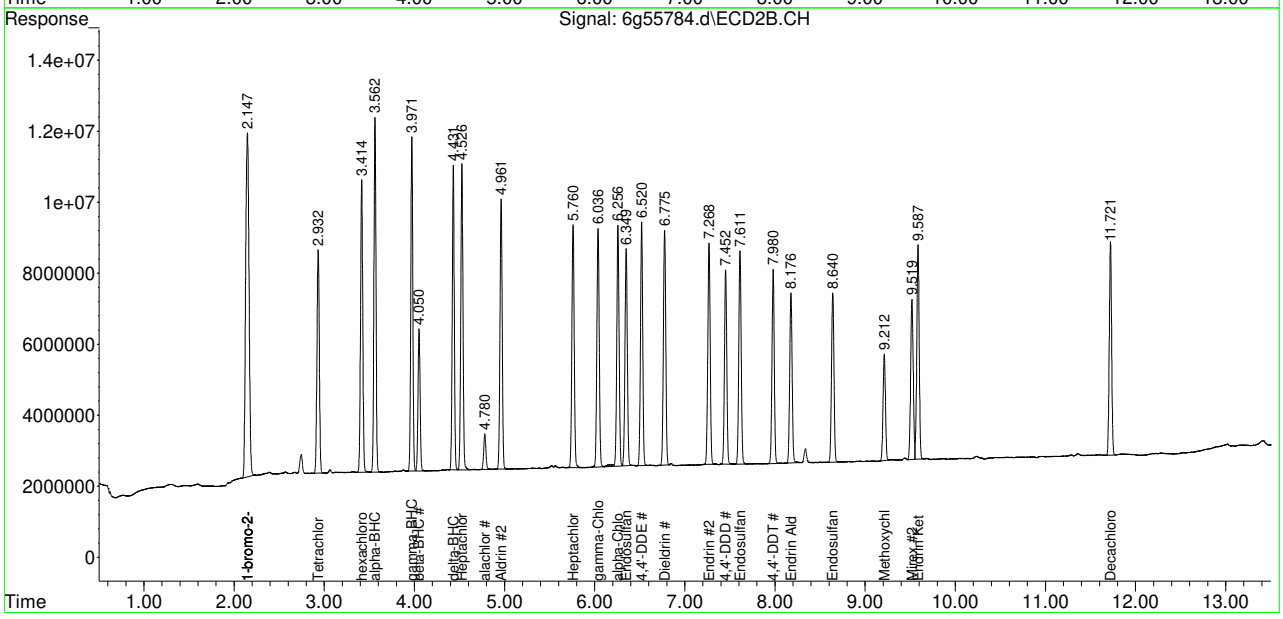
Quantitation Report (QT Reviewed)

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





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.

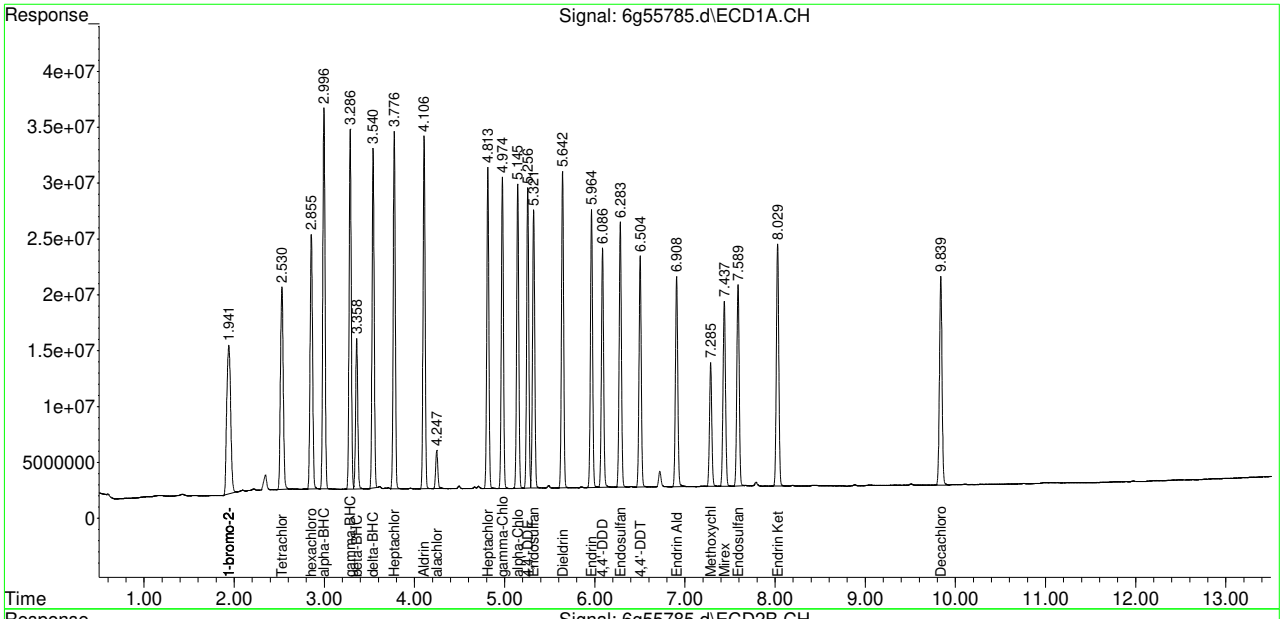
11.6.6 11

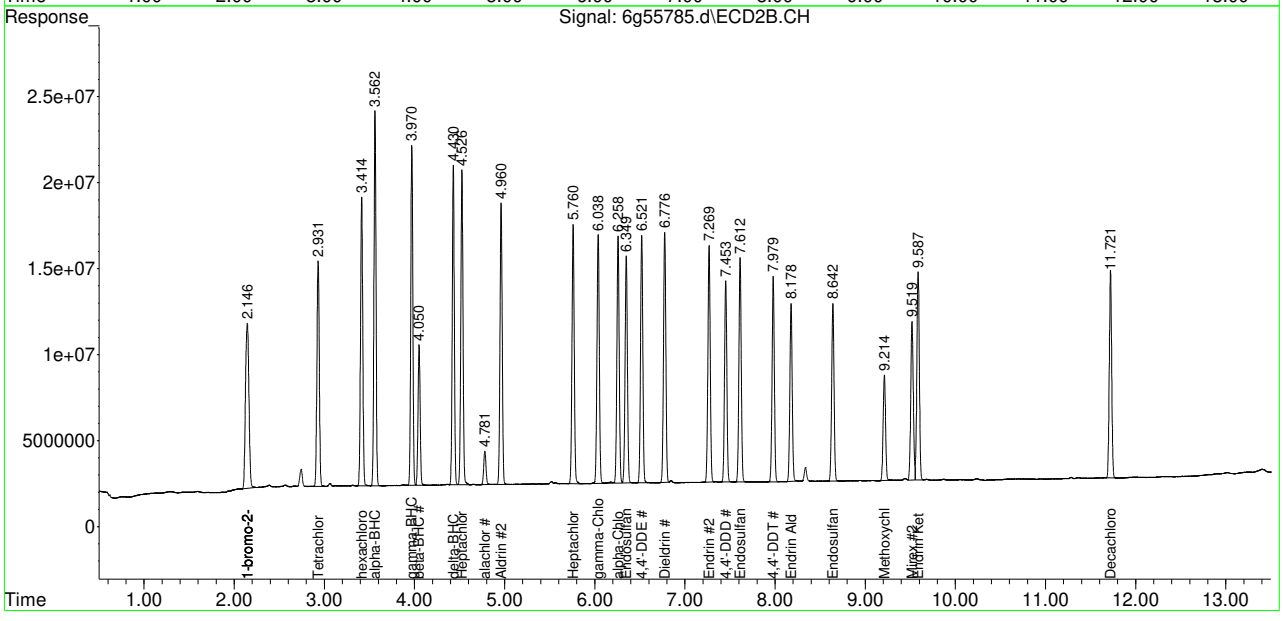
Quantitation Report (QT Reviewed)

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





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.

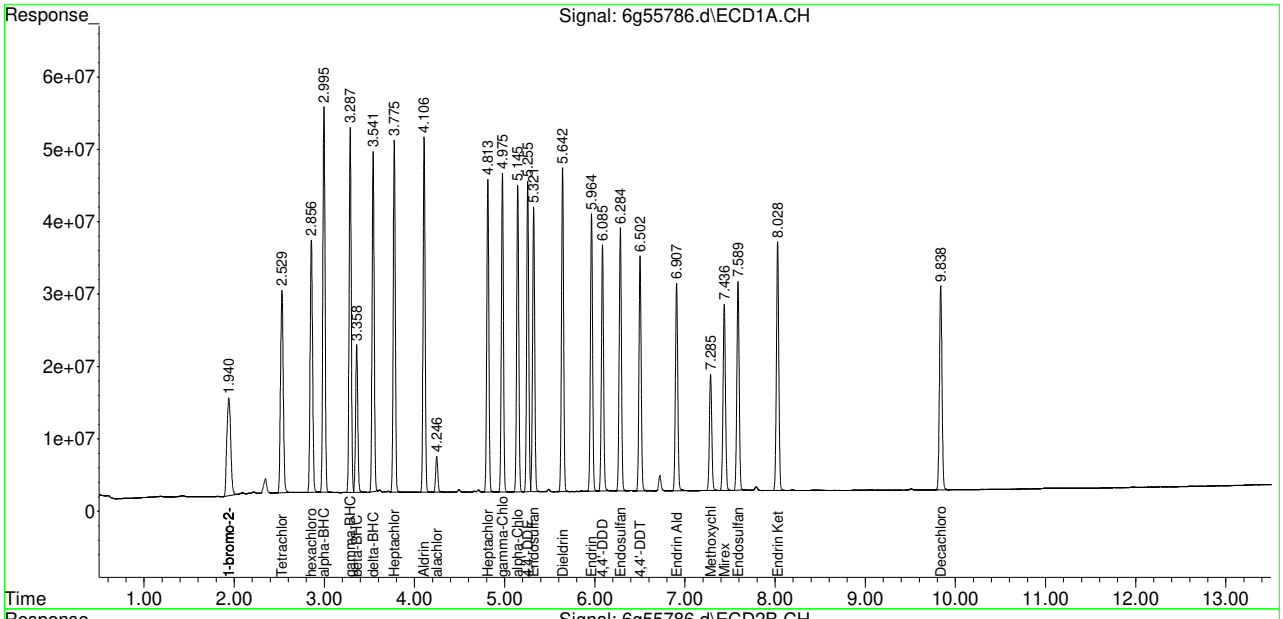
11.6.7 11

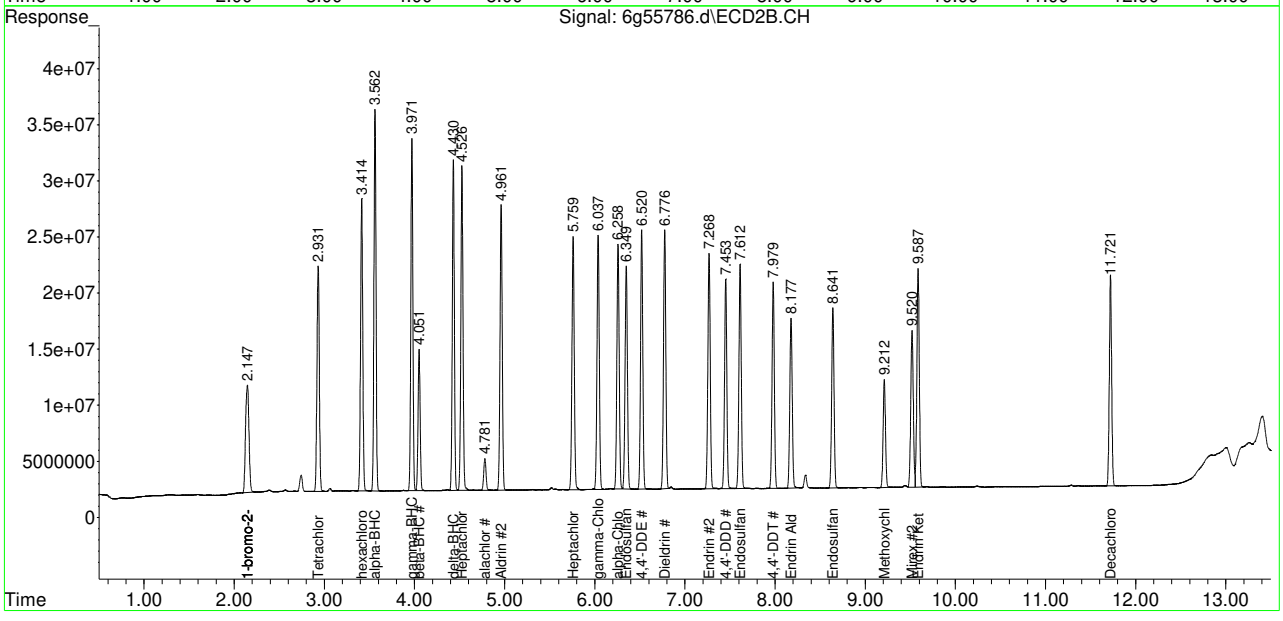
Quantitation Report (QT Reviewed)

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





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.

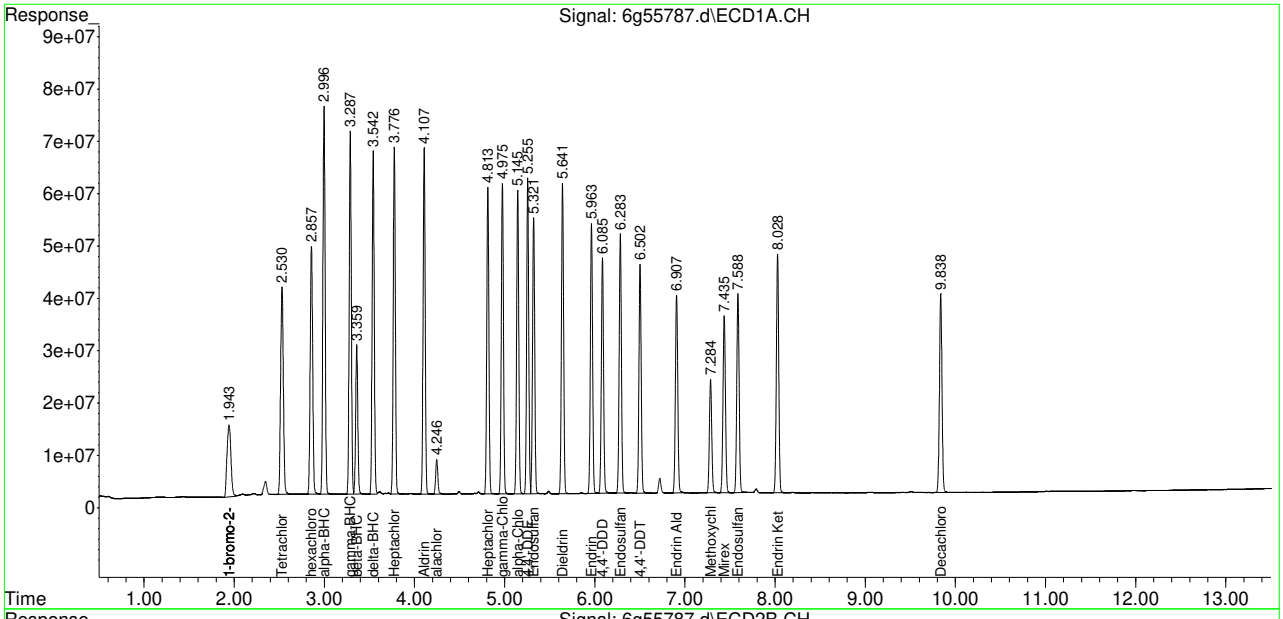
11.6.8 11

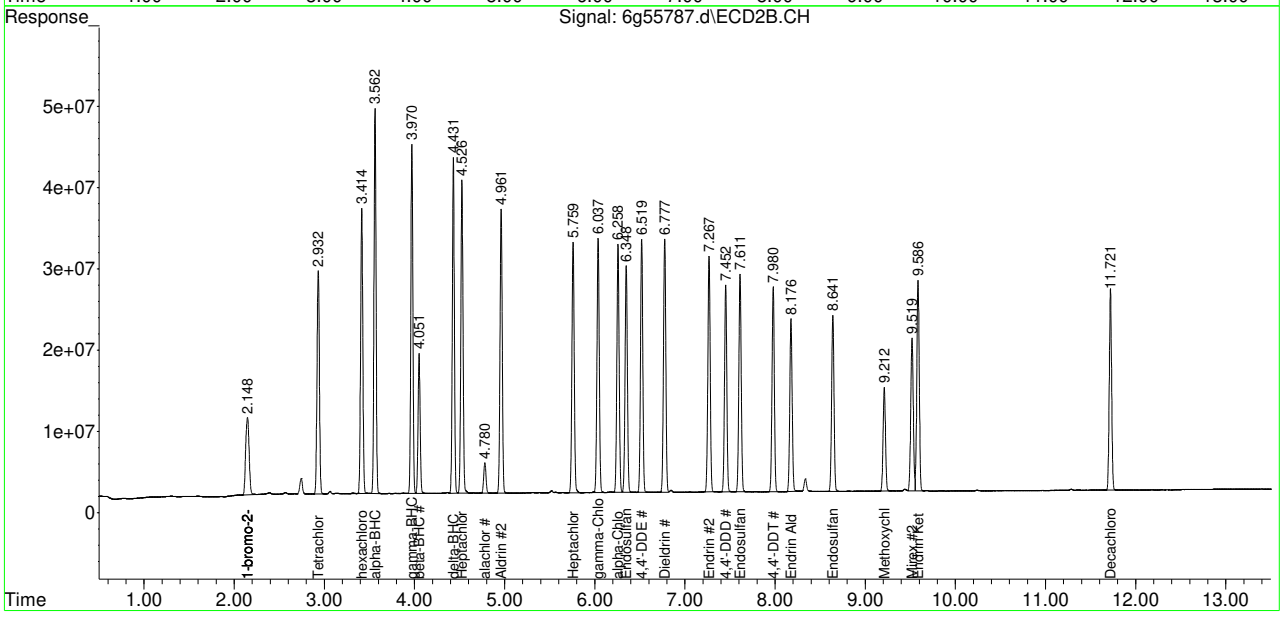
Quantitation Report (QT Reviewed)

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





Manual Integrations
APPROVED
(compounds with "m" flag)
Gwendolyn Burns
05/01/18 08:39

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.

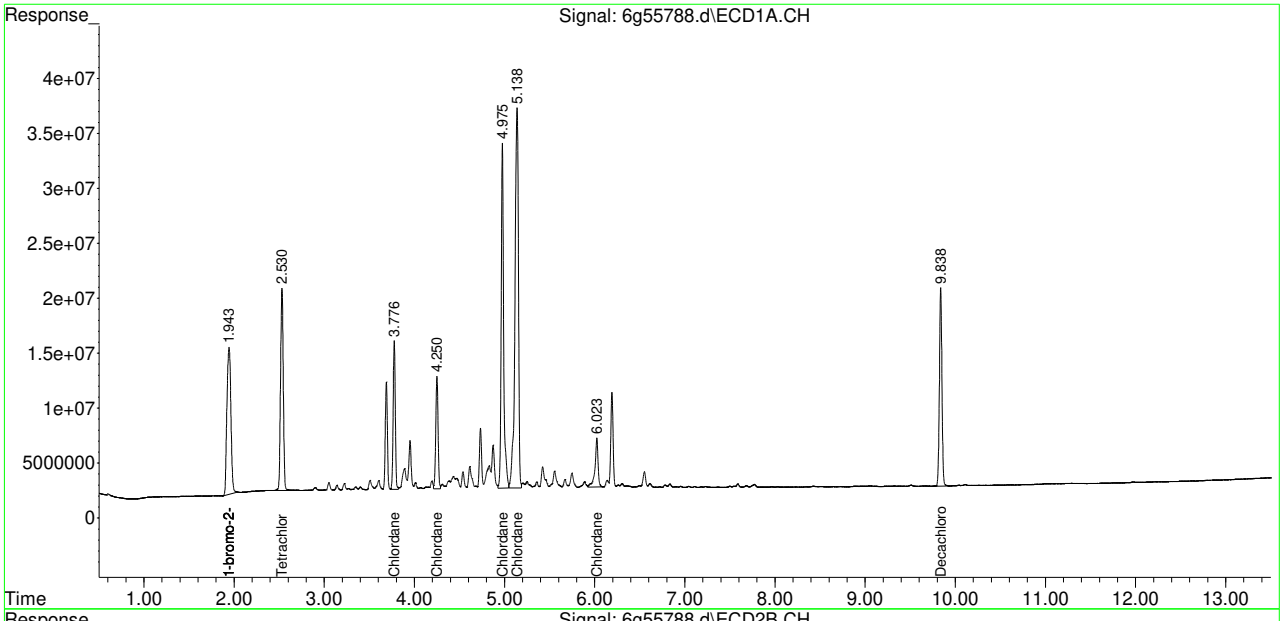
11.6.9
11

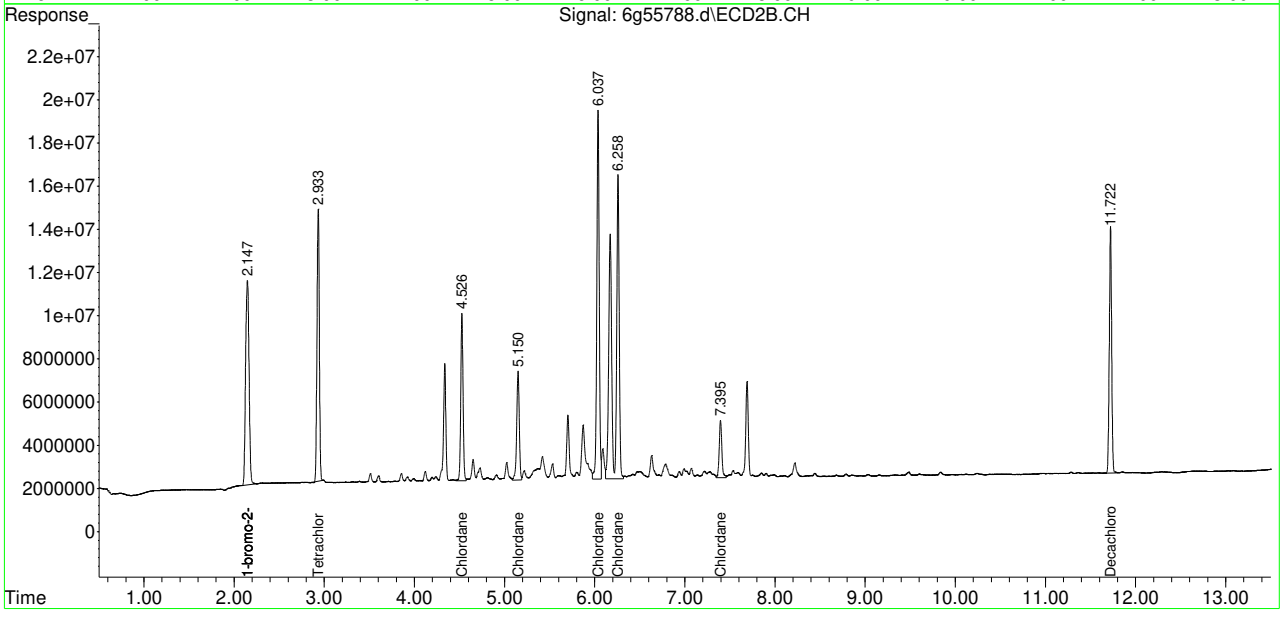
Quantitation Report (QT Reviewed)

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





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

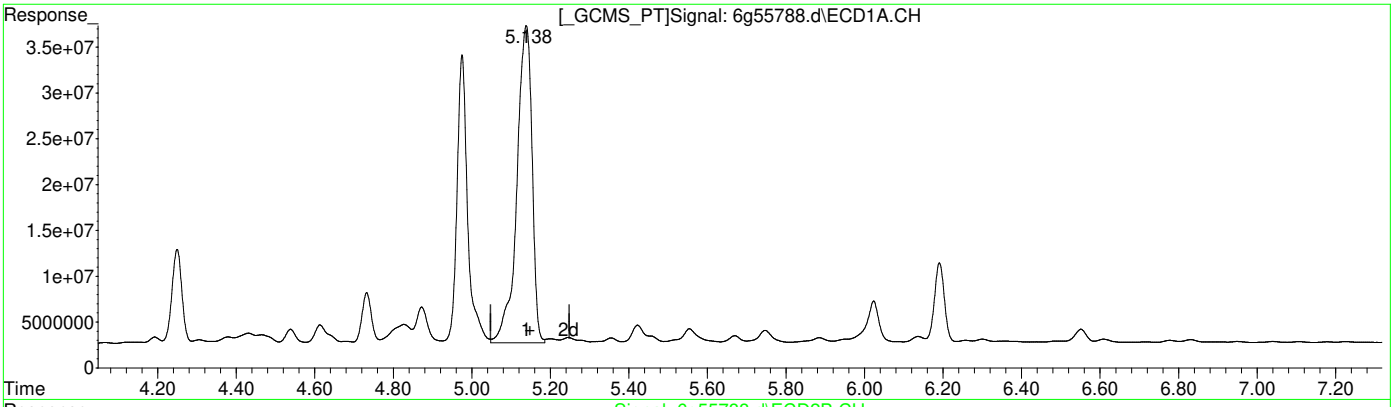
Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlordane-D		2	6.26	Split peak

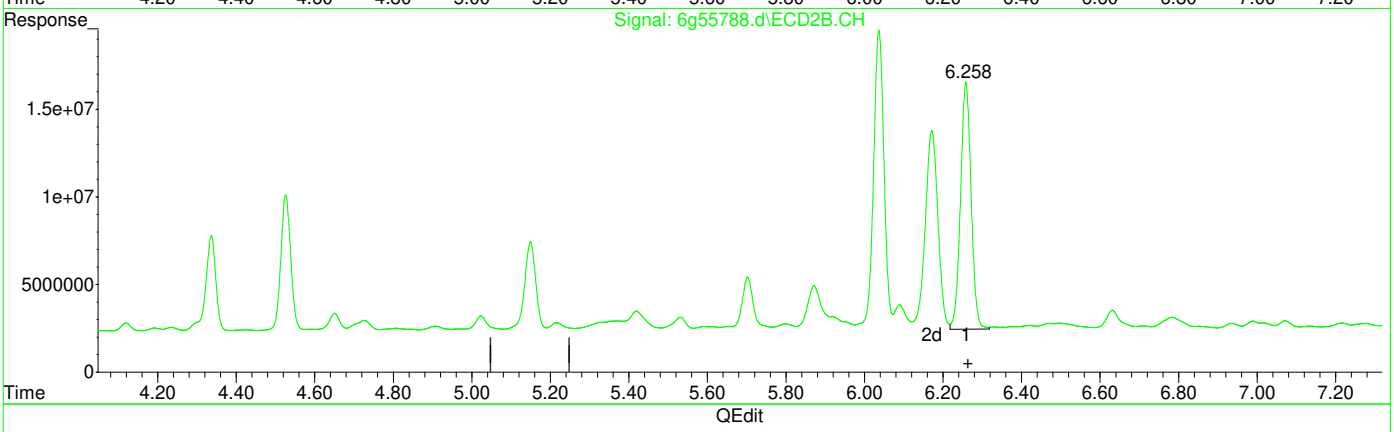
Quantitation Report (Qedit)

```
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

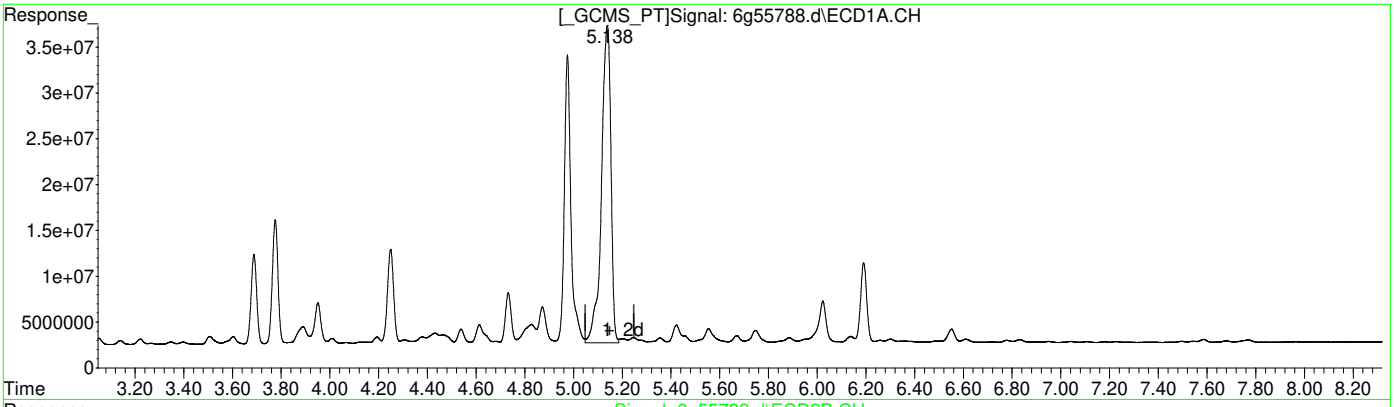
6PST1671.M Mon Apr 30 17:25:39 2018

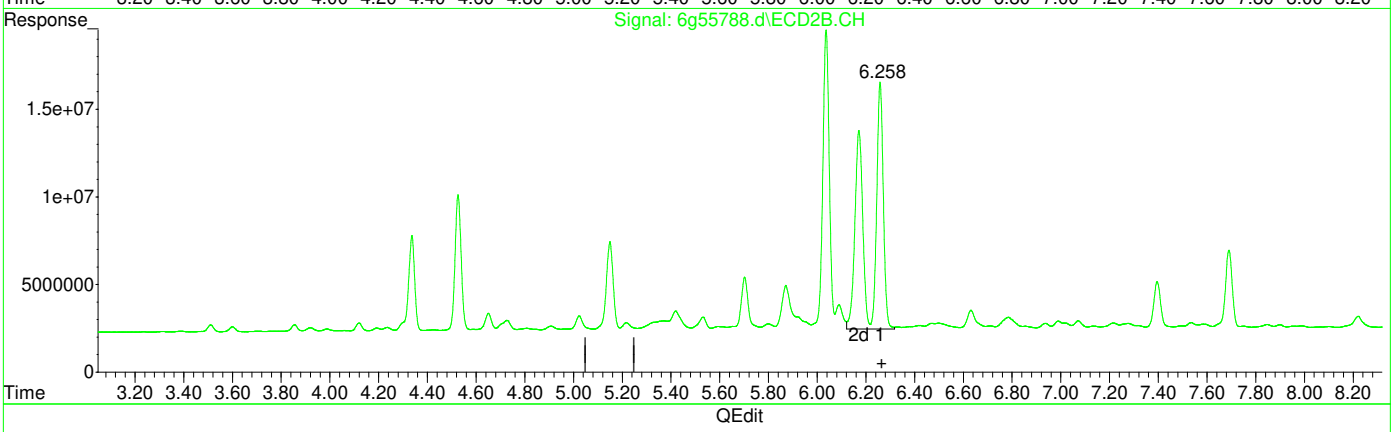
Quantitation Report (Qedit)

```
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

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

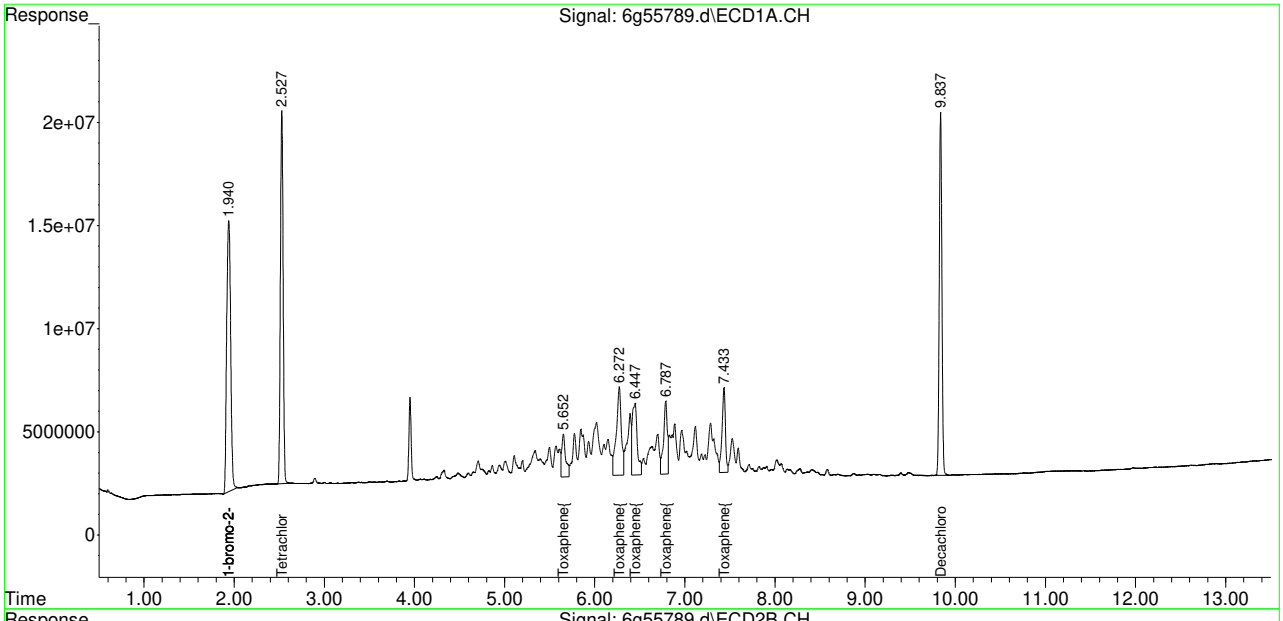
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

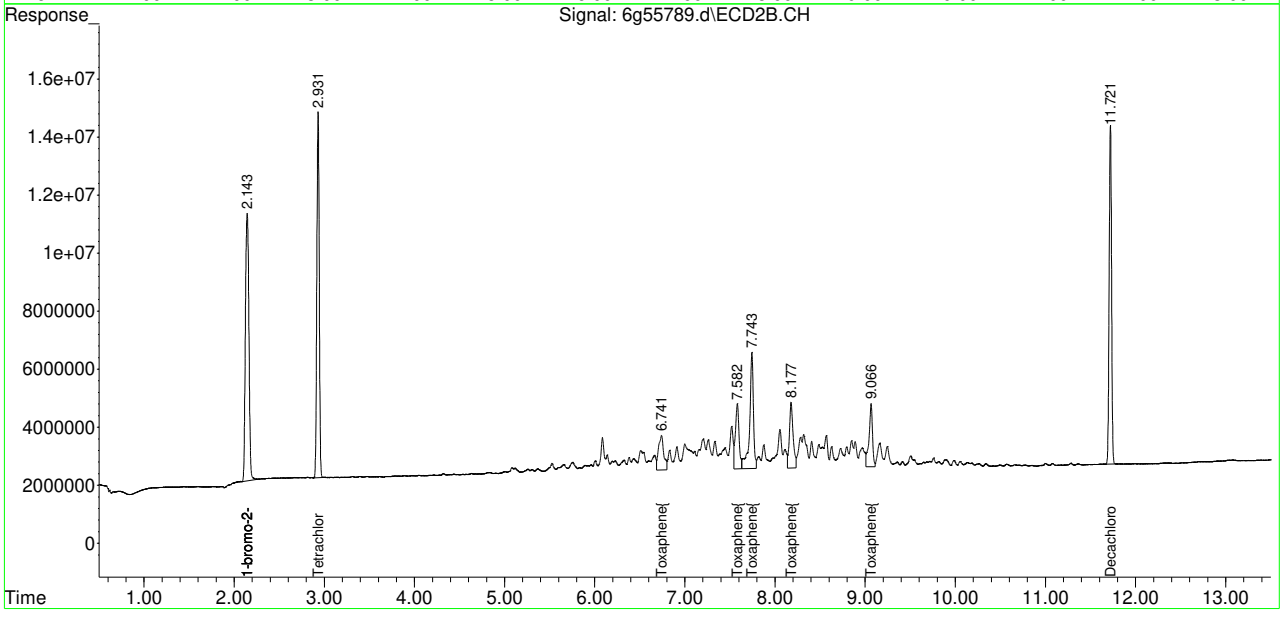
Quantitation Report (QT Reviewed)

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.

11.6.11

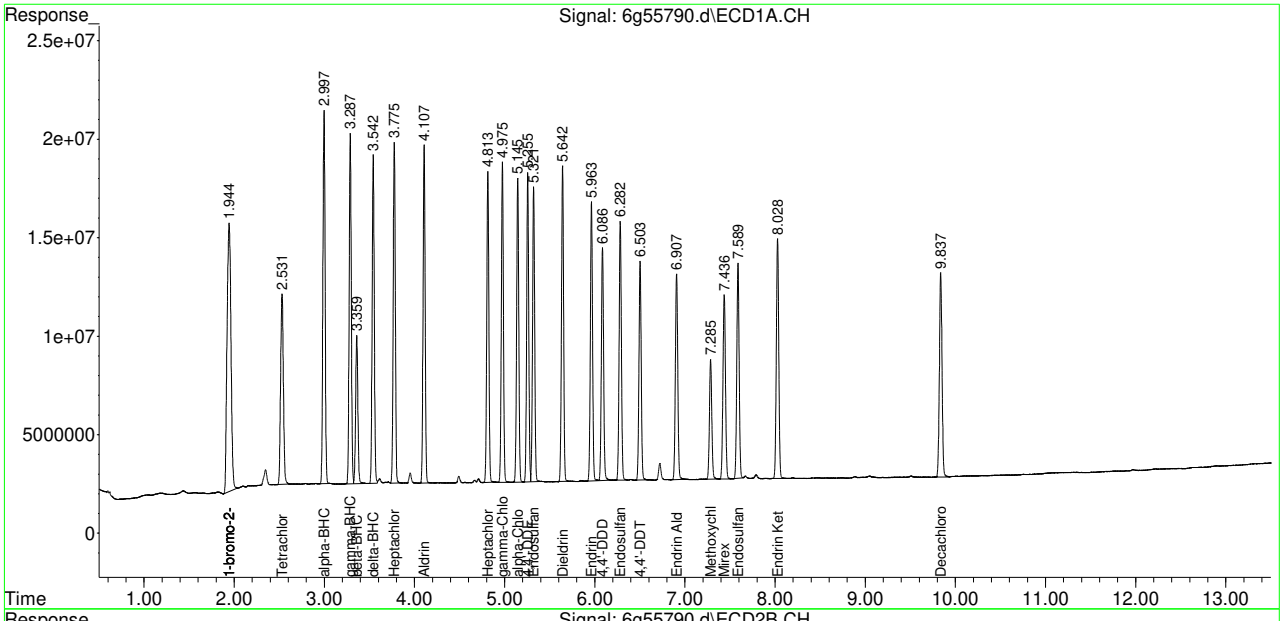
11

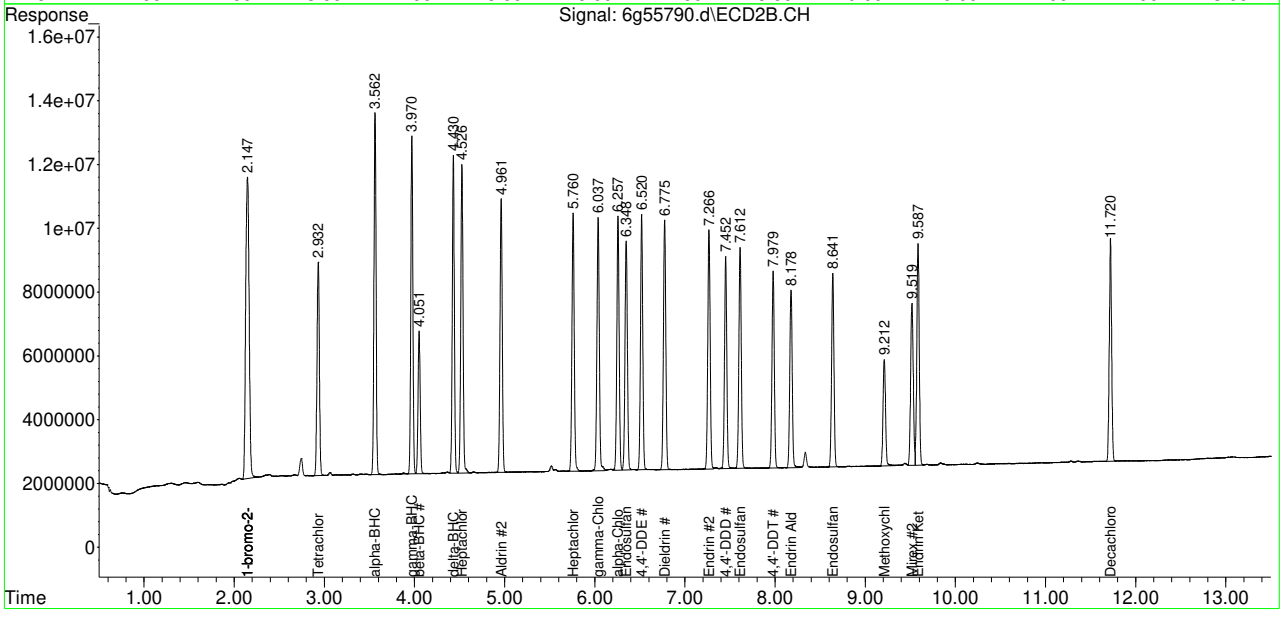
Quantitation Report (QT Reviewed)

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





Manual Integrations
APPROVED
(compounds with "m" flag)
Gwendolyn Burns
05/01/18 08:39

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.

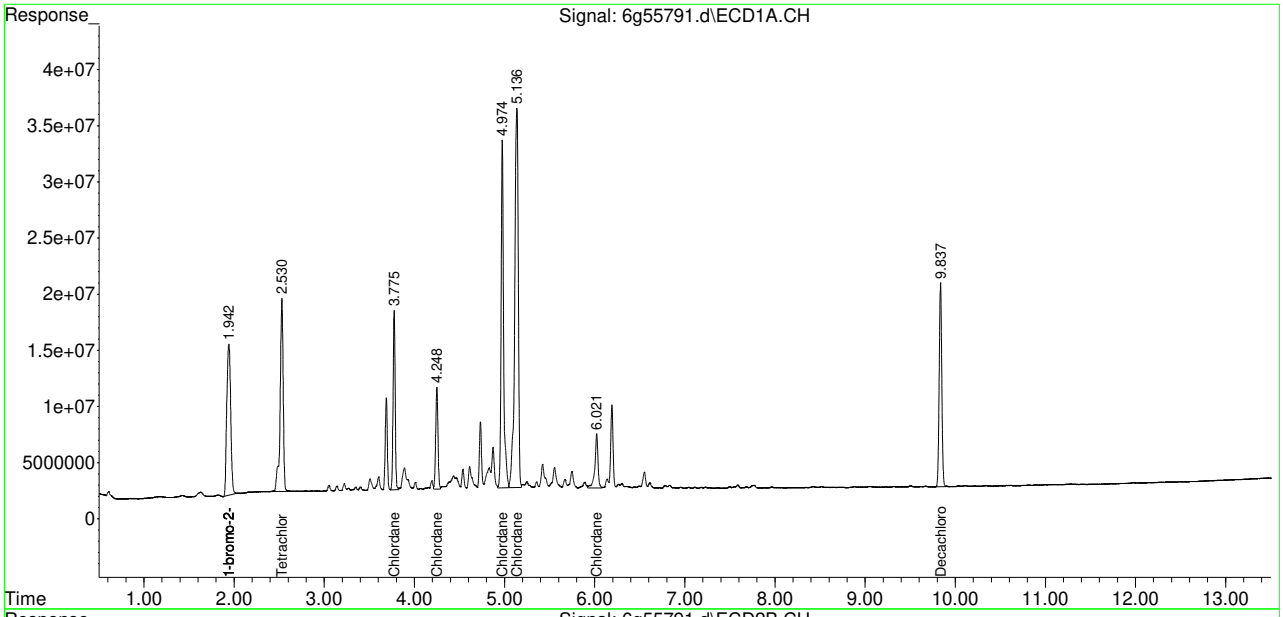
11.6.12
11

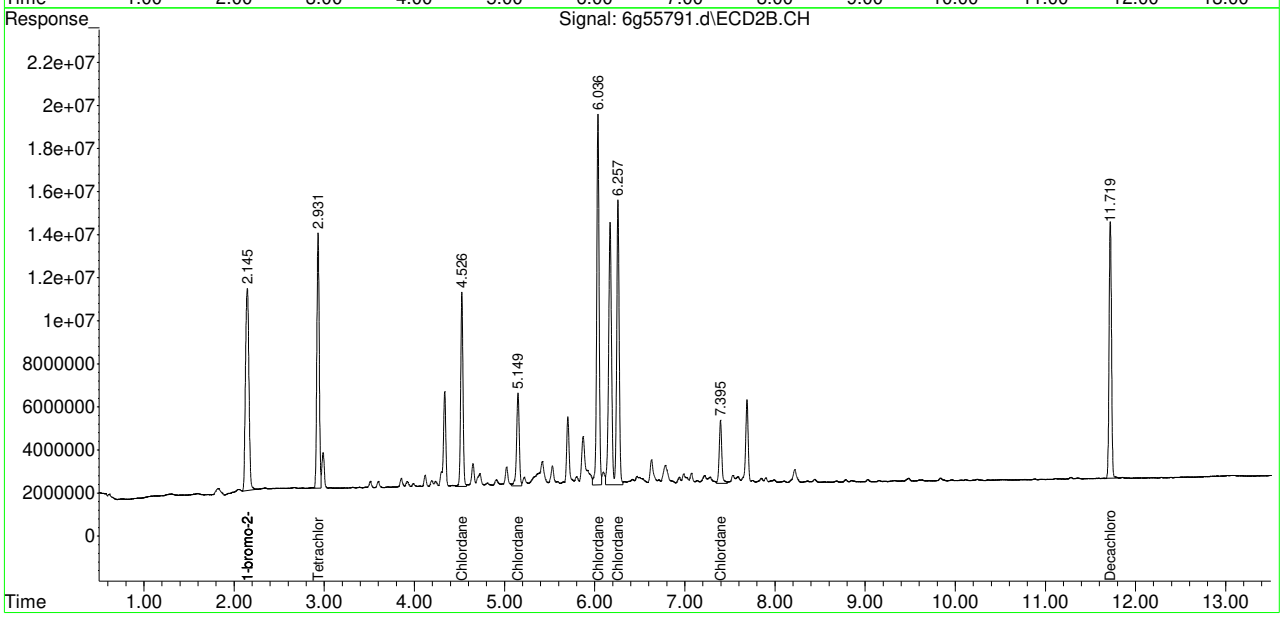
Quantitation Report (QT Reviewed)

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





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

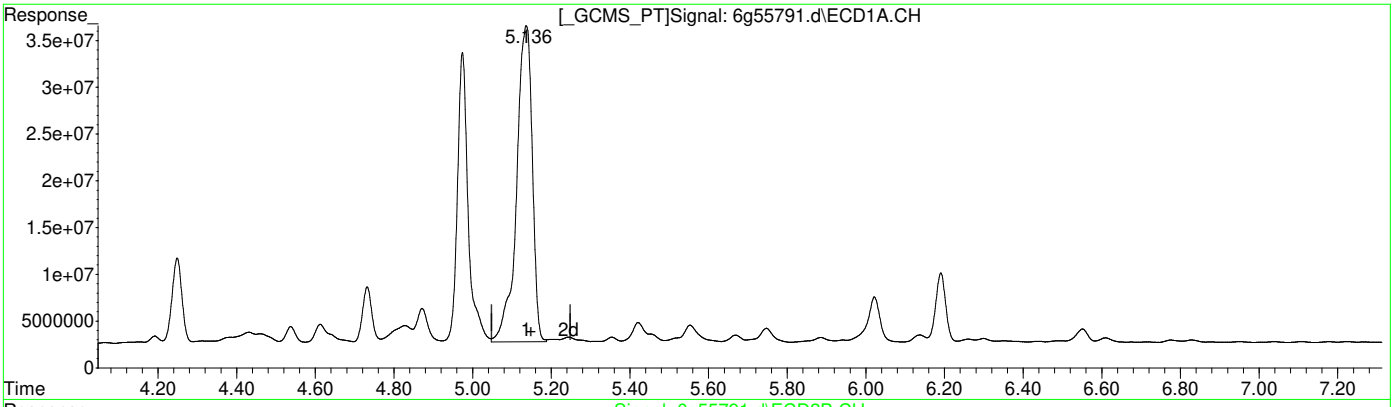
Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlordane-D		2	6.26	Split peak

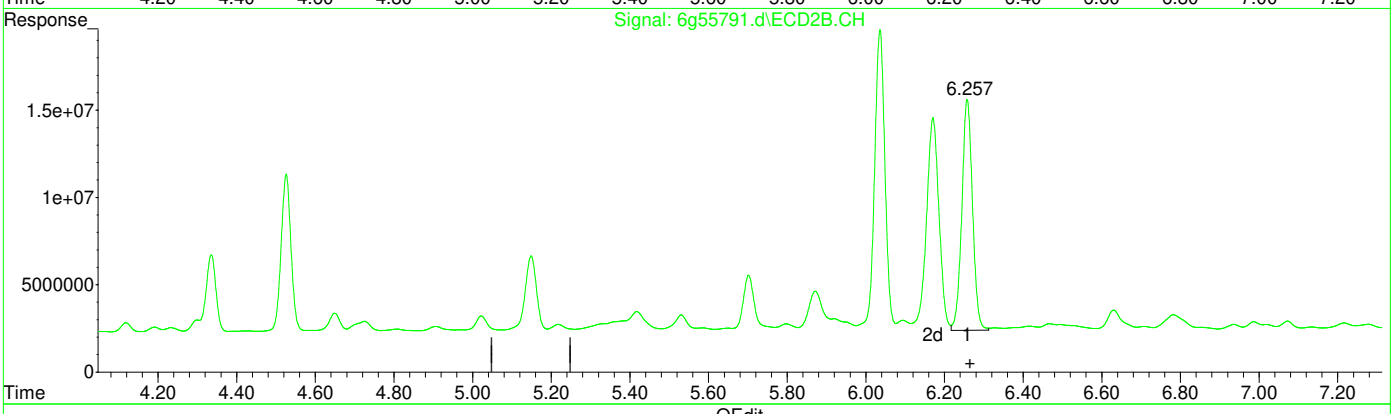
Quantitation Report (Qedit)

```
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

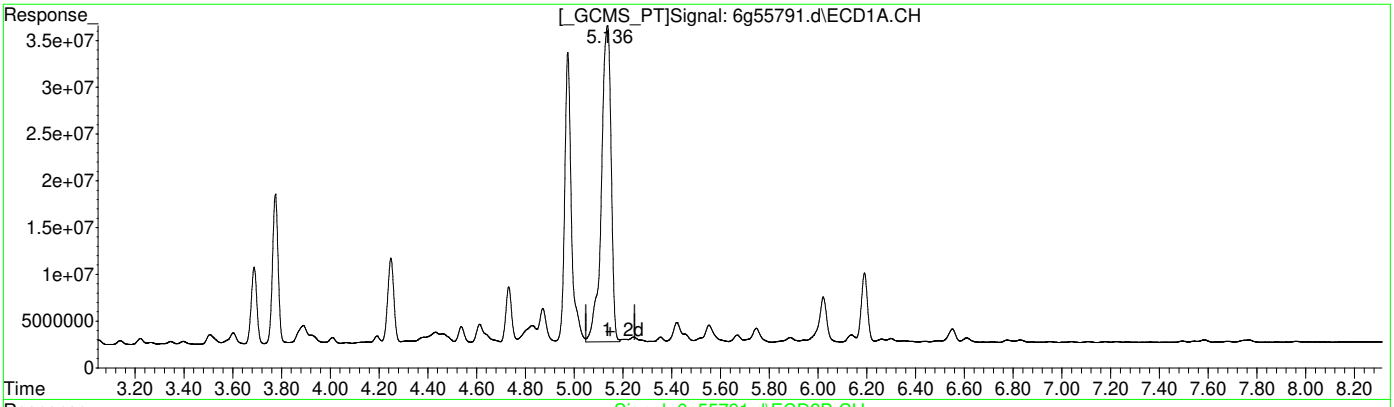
6PST1671.M Mon Apr 30 17:36:36 2018

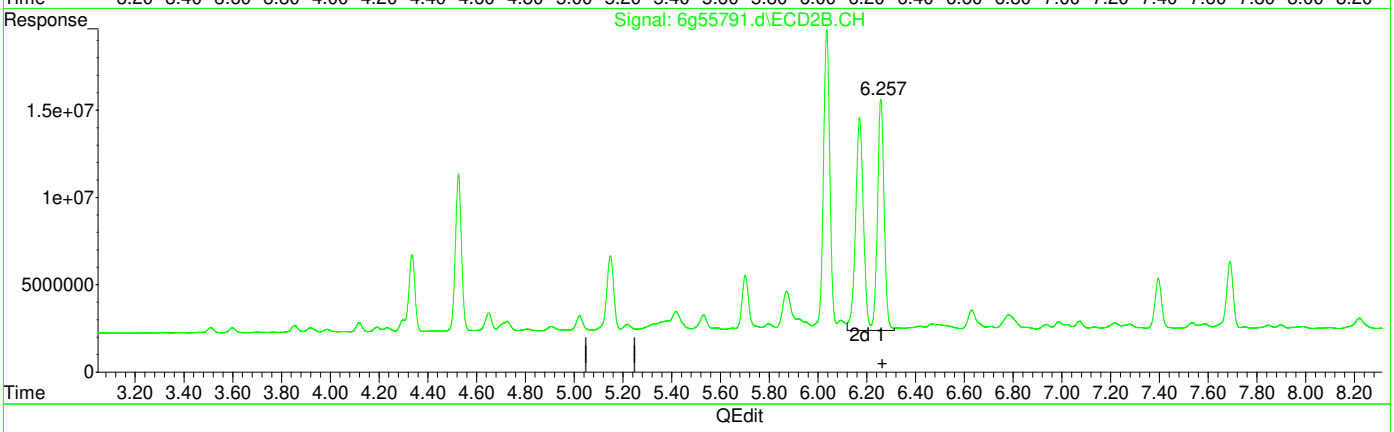
Quantitation Report (Qedit)

```
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

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.

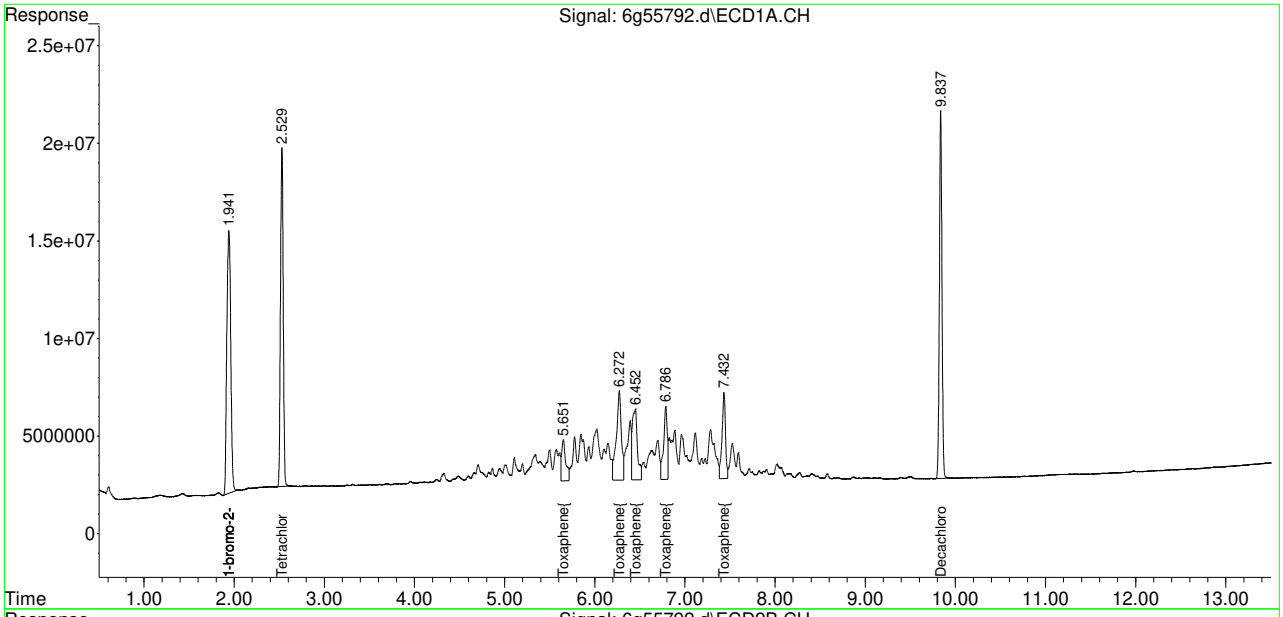
11.6.13 11

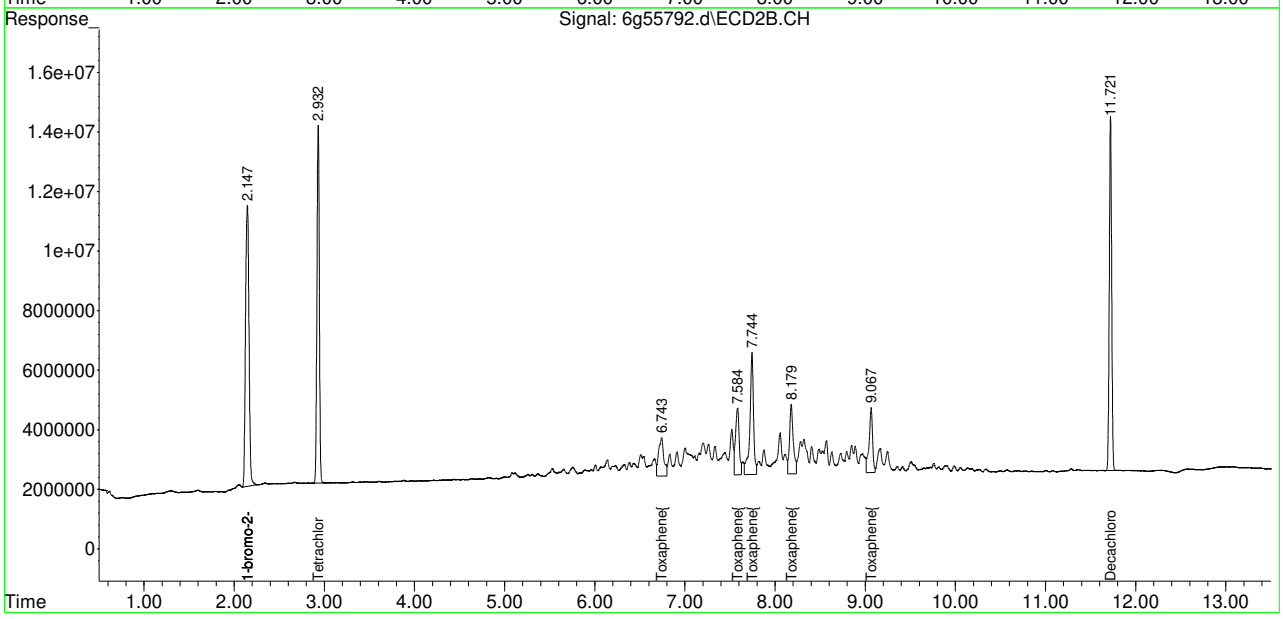
Quantitation Report (QT Reviewed)

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





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						
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						

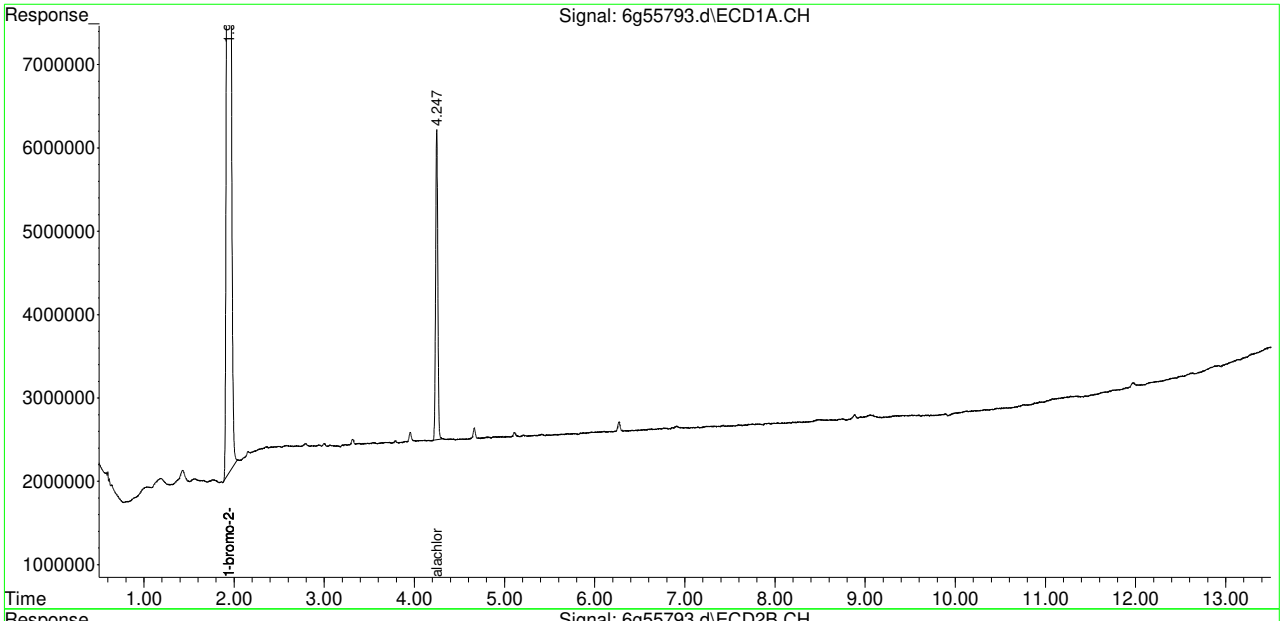
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

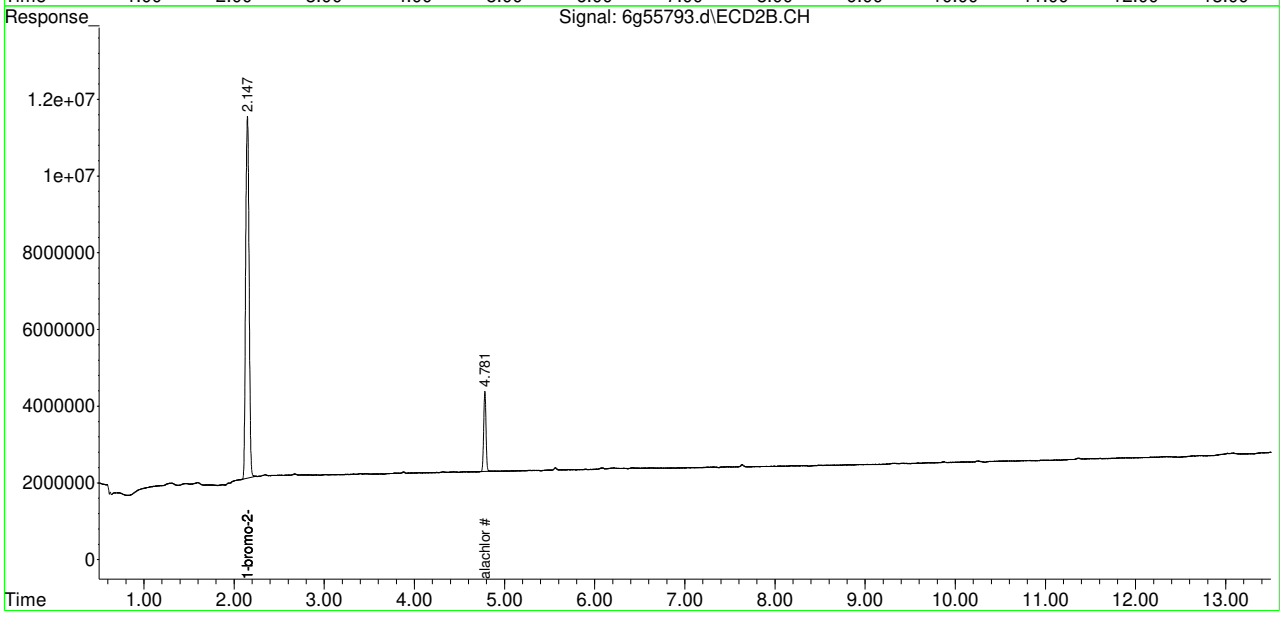
Quantitation Report (QT Reviewed)

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





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						
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						

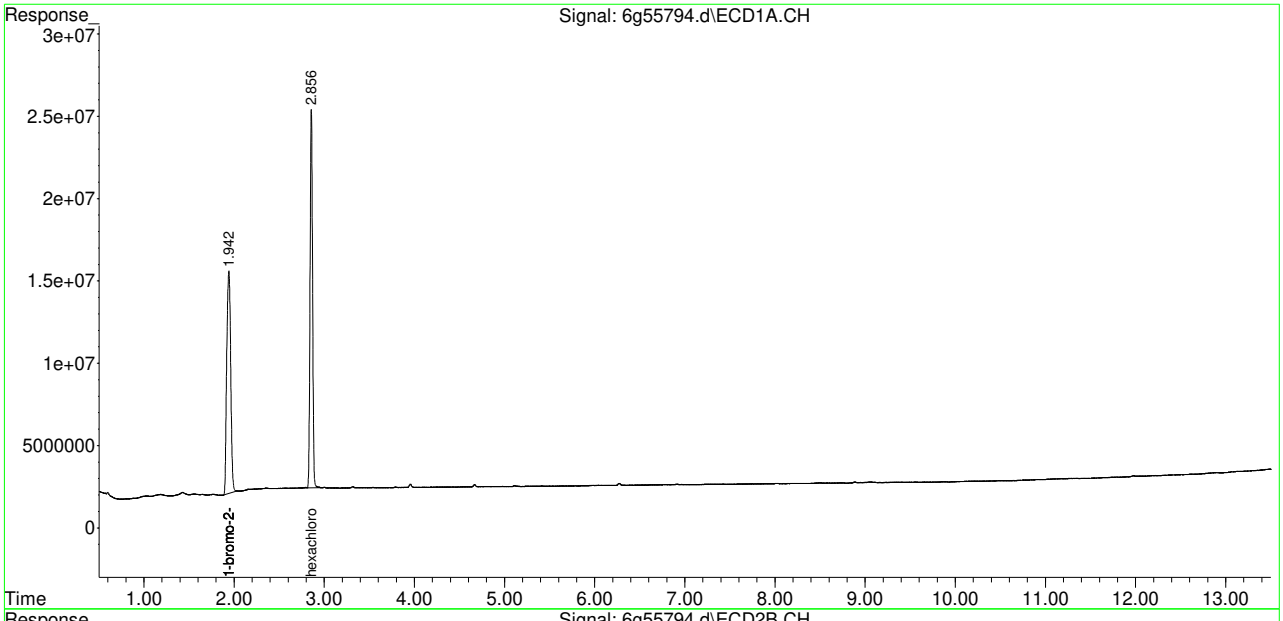
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

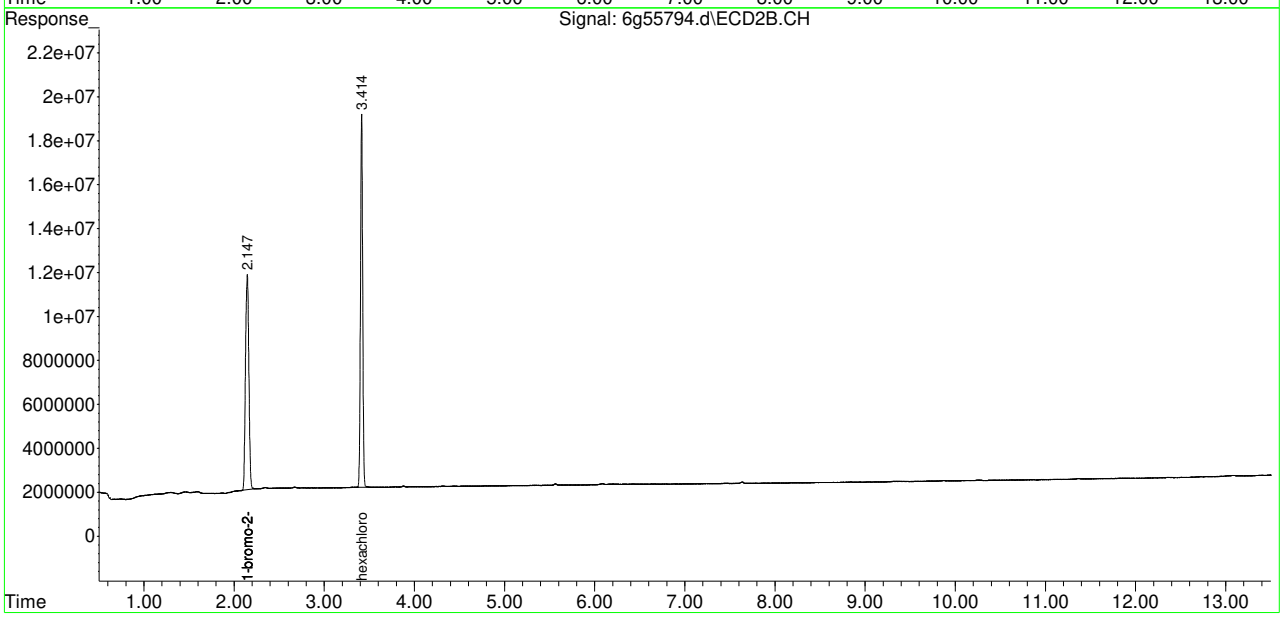
Quantitation Report (QT Reviewed)

```
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
```





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.

11.6.16

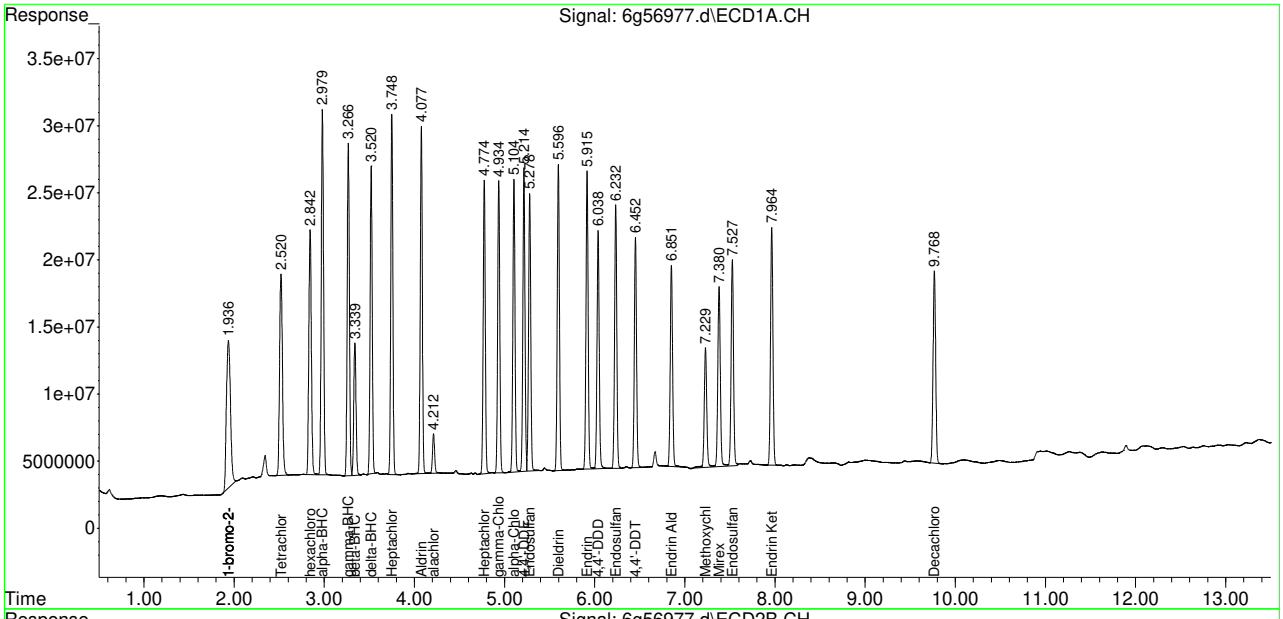
11

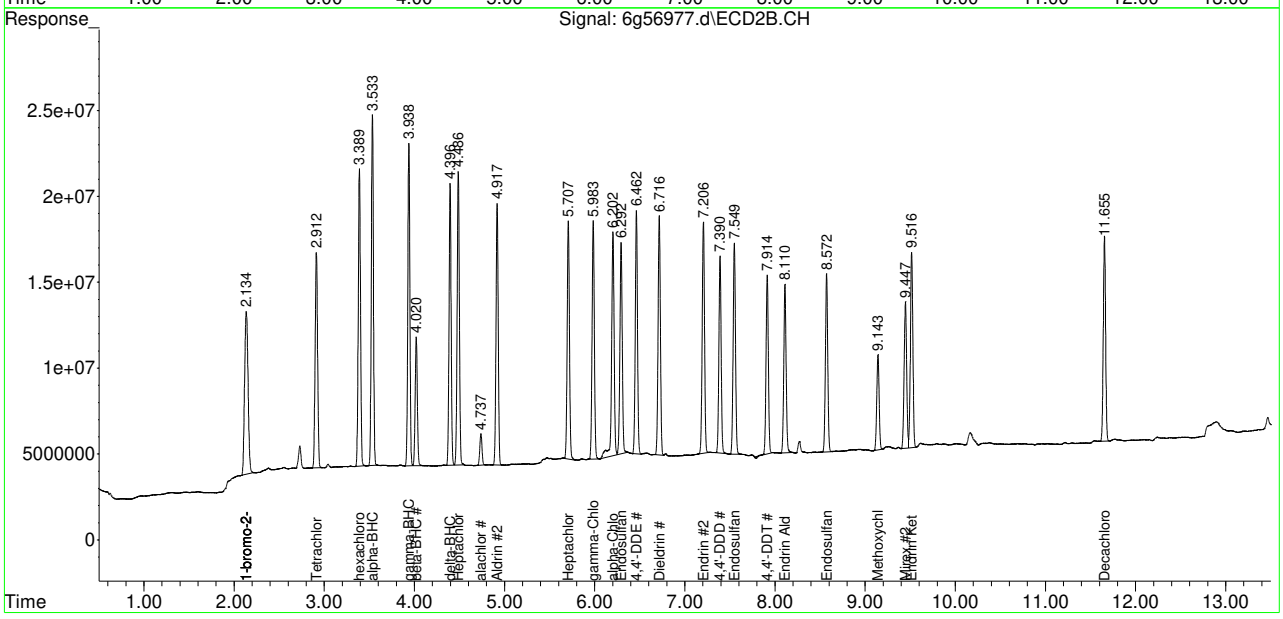
Quantitation Report (QT Reviewed)

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





Manual Integrations
APPROVED
(compounds with "m" flag)
Gwendolyn Burns
06/08/18 12:08

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.

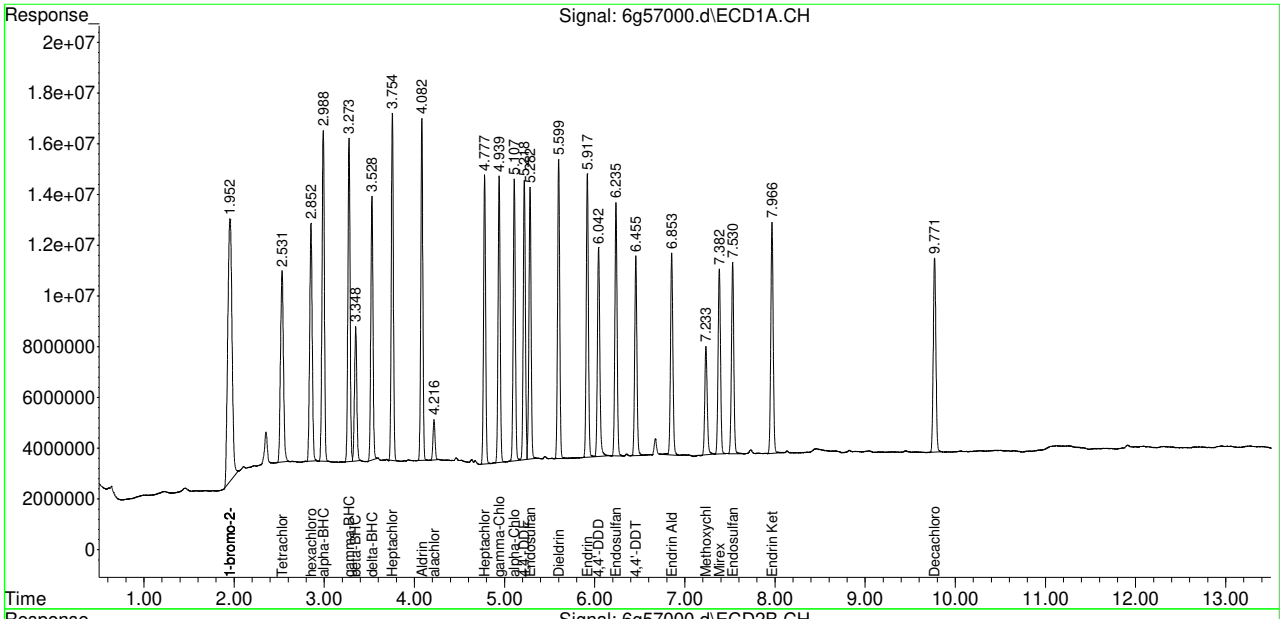
11.6.17
11

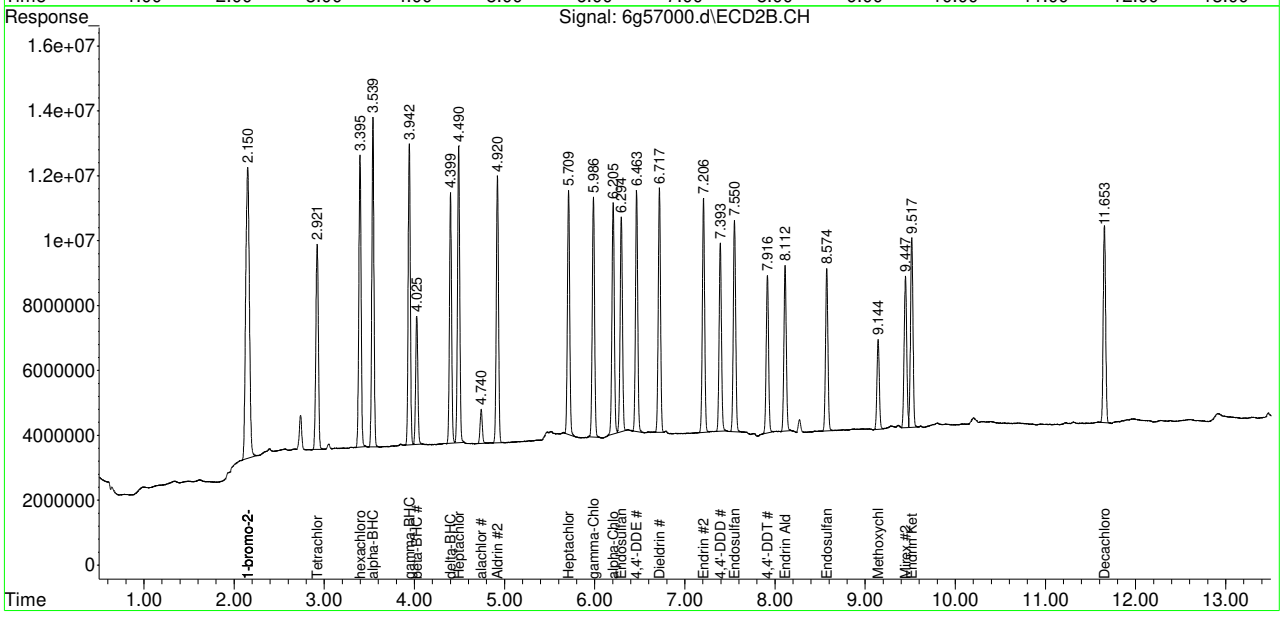
Quantitation Report (QT Reviewed)

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

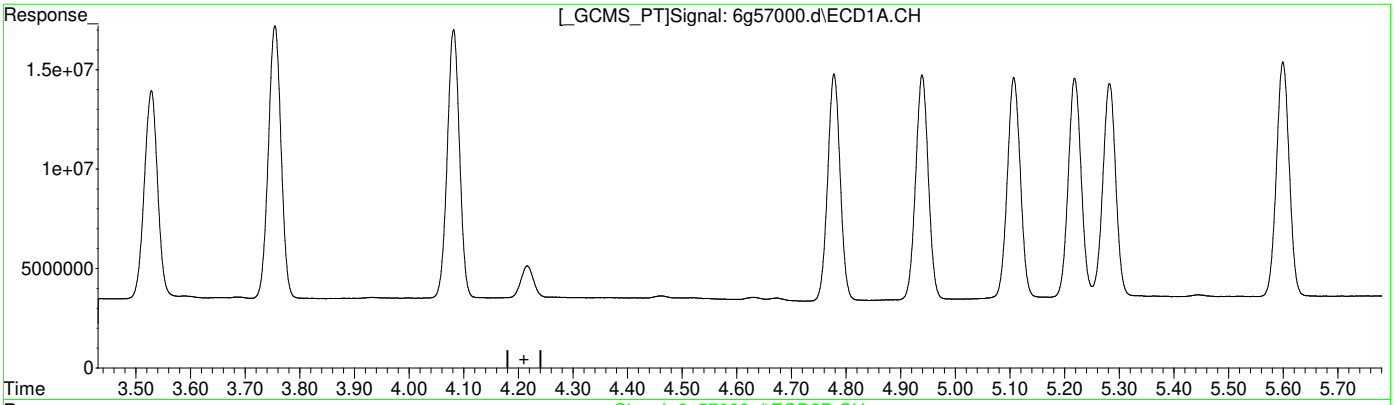
Parameter	CAS	Sig#	R.T. (min.)	Reason
Alachlor	15972-60-8	1	4.22	Poorly defined baseline

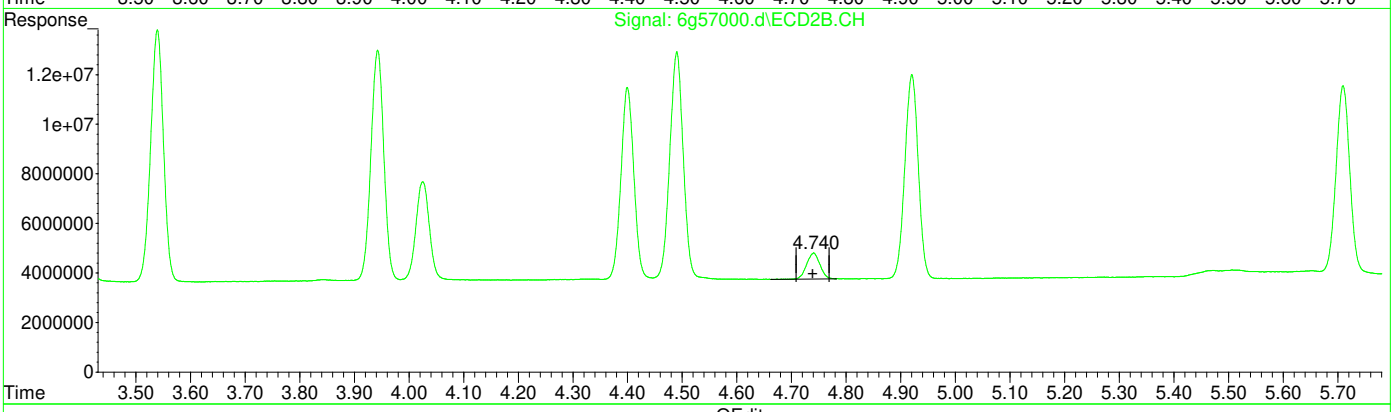
Quantitation Report (Qedit)

```
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
```





QEdit

(10) alachlor

0.000min 0.000 PPB

response 0

(10) alachlor #2

4.741min 25.160 PPB

response 17632408

(+) = Expected Retention Time

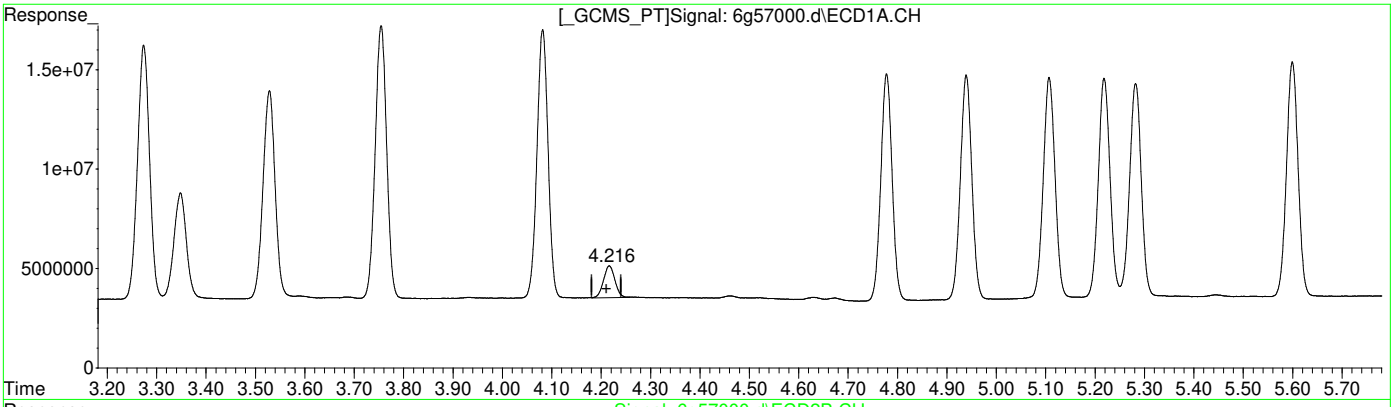
6PST1671.M Thu Jun 07 00:04:24 2018

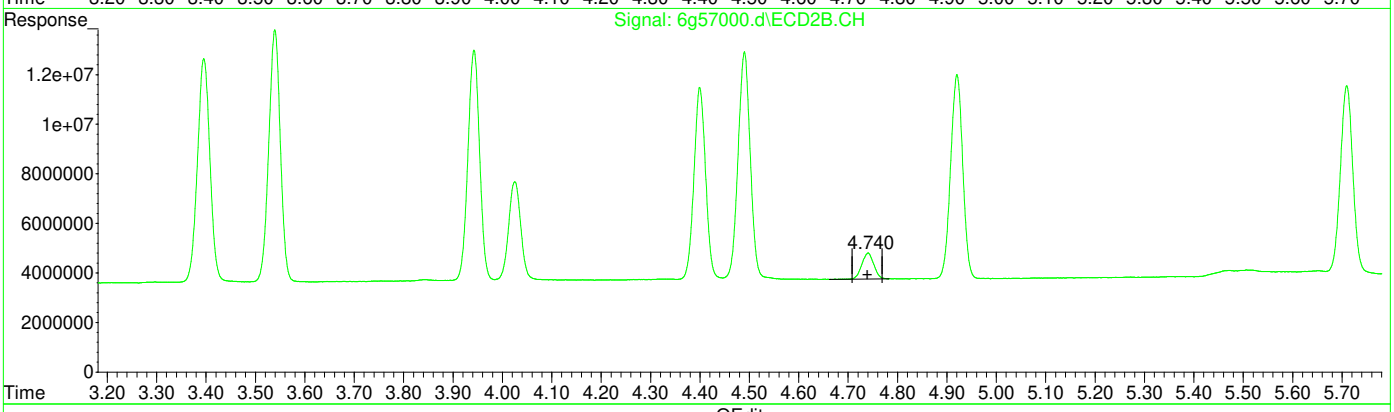
Quantitation Report (Qedit)

```
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
```





QEdit

(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

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 06/13/18 10:11

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.

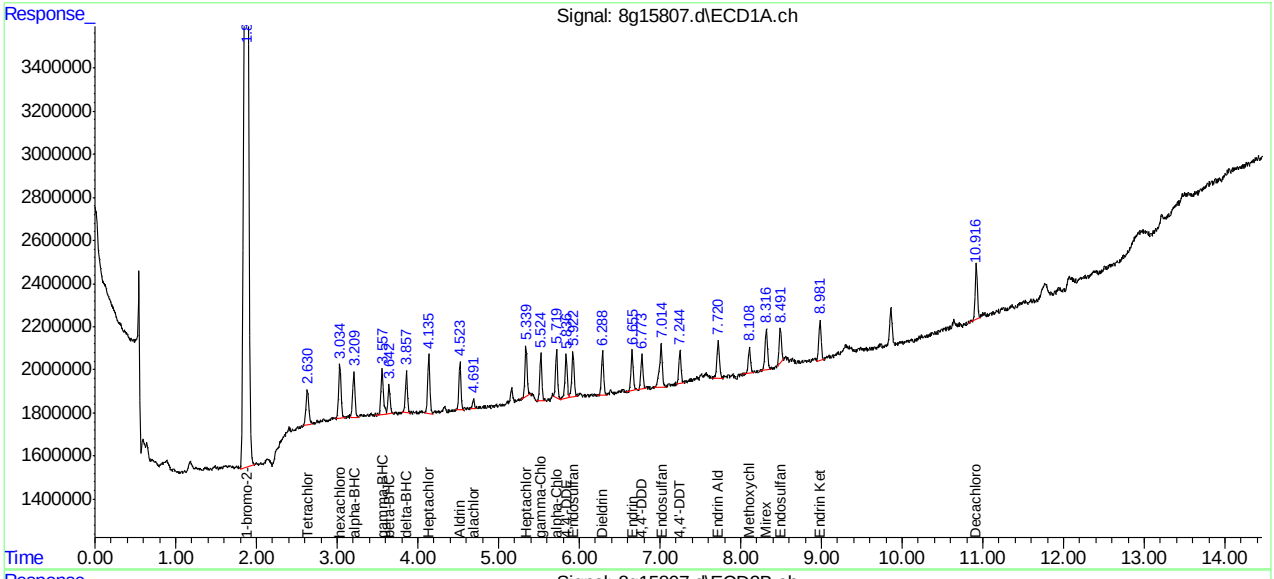
11.6.18 11

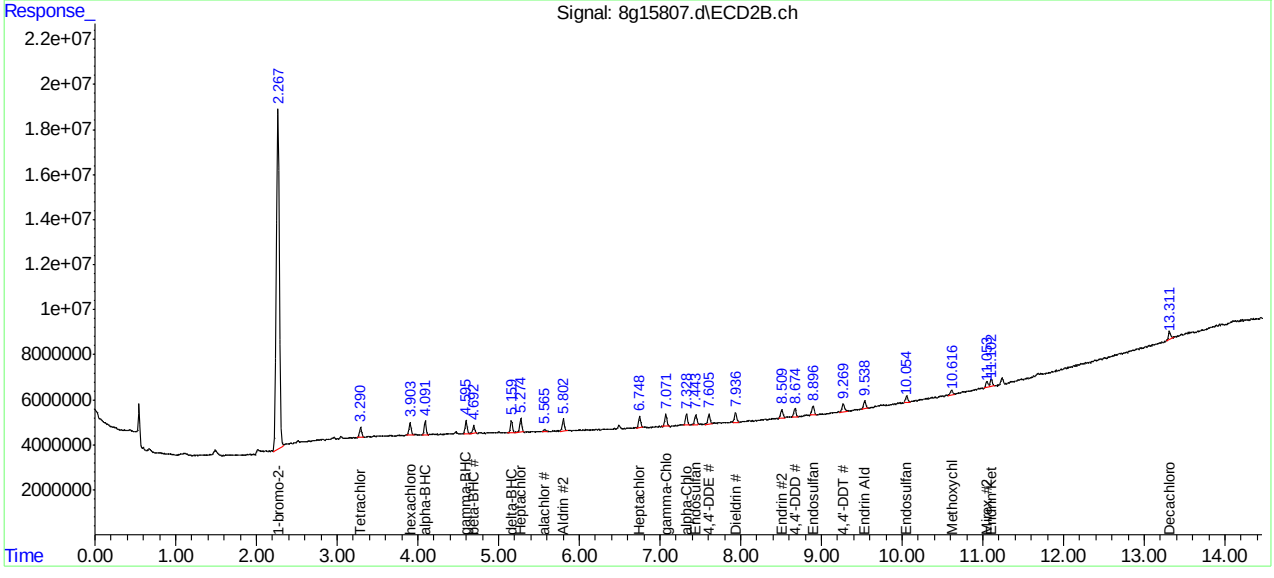
Quantitation Report (QT Reviewed)

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





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

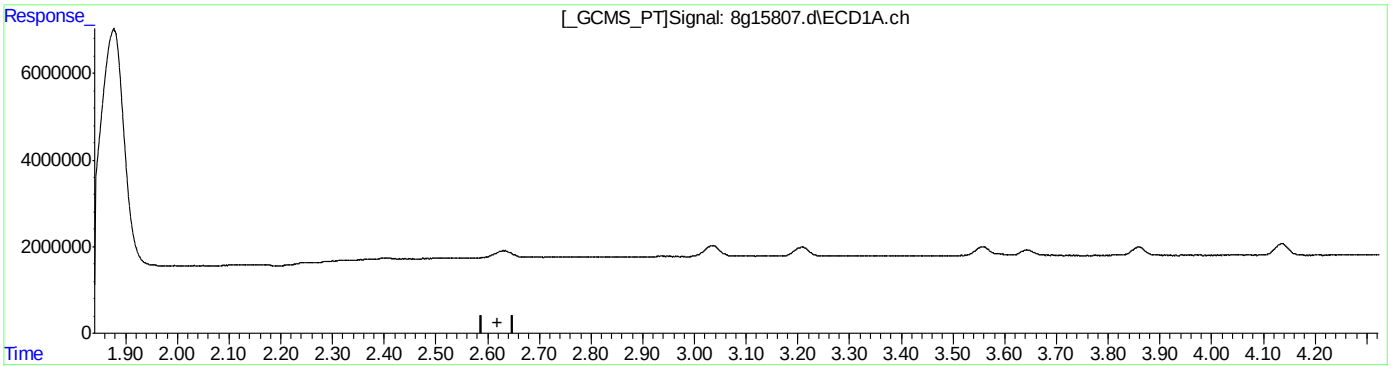
Parameter	CAS	Sig#	R.T. (min.)	Reason
Tetrachloro-m-xylene	877-09-8	1	2.63	Poorly defined baseline
Alachlor	15972-60-8	1	4.69	Poorly defined baseline
Alachlor	15972-60-8	2	5.56	Poorly defined baseline
Endrin	72-20-8	2	8.51	Poorly defined baseline
4,4'-DDD	72-54-8	2	8.67	Poorly defined baseline
4,4'-DDT	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

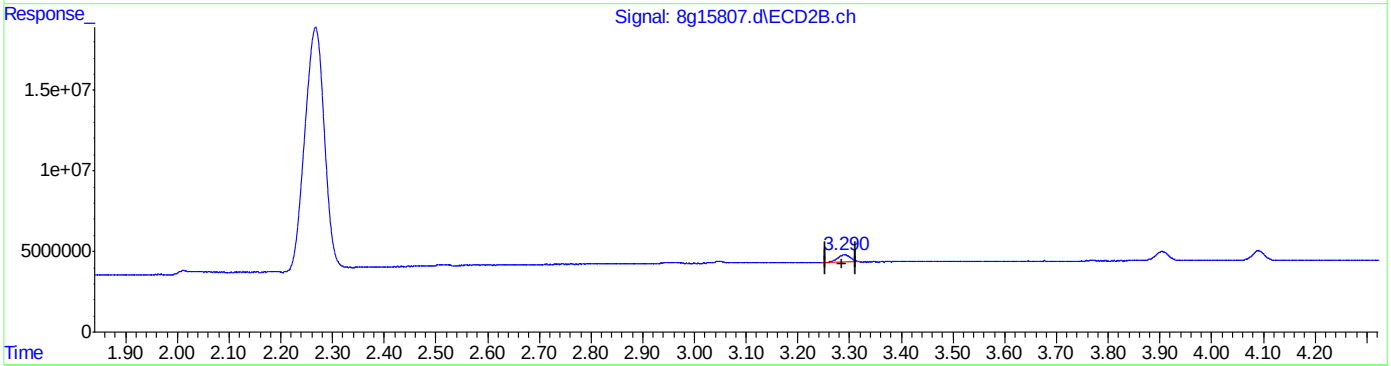
Quantitation Report (Qedit)

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

(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

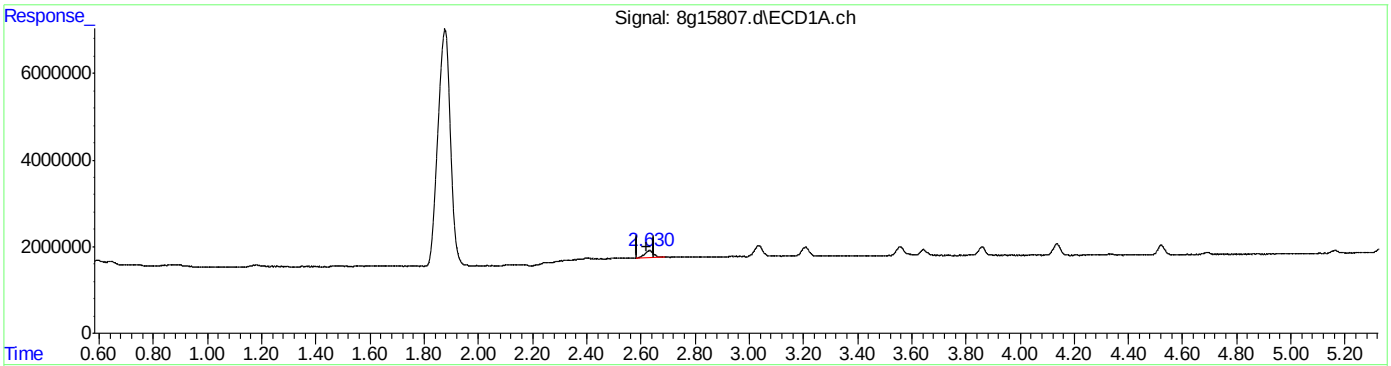
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:32:47 2018

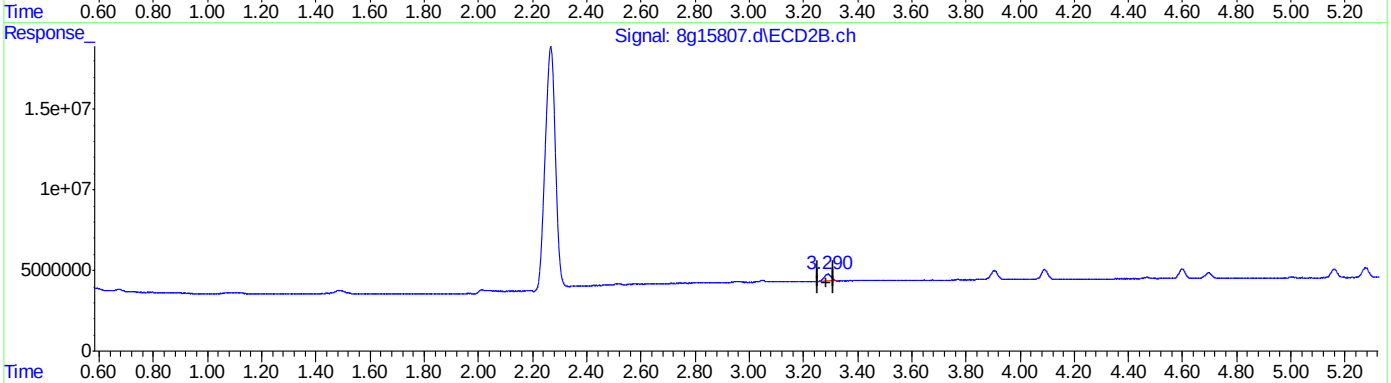
Quantitation Report (Qedit)

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

(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

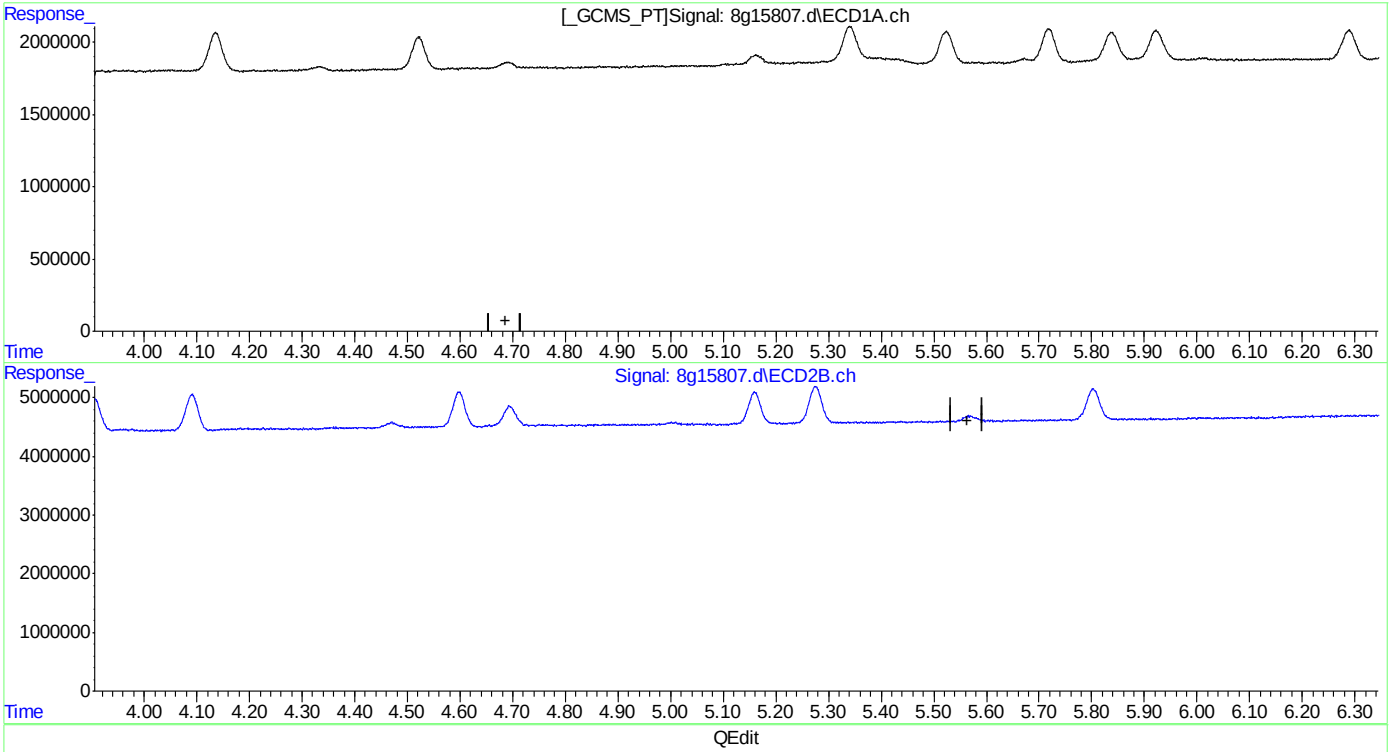
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:32:55 2018

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



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

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

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Quant Title : PEST/PCB
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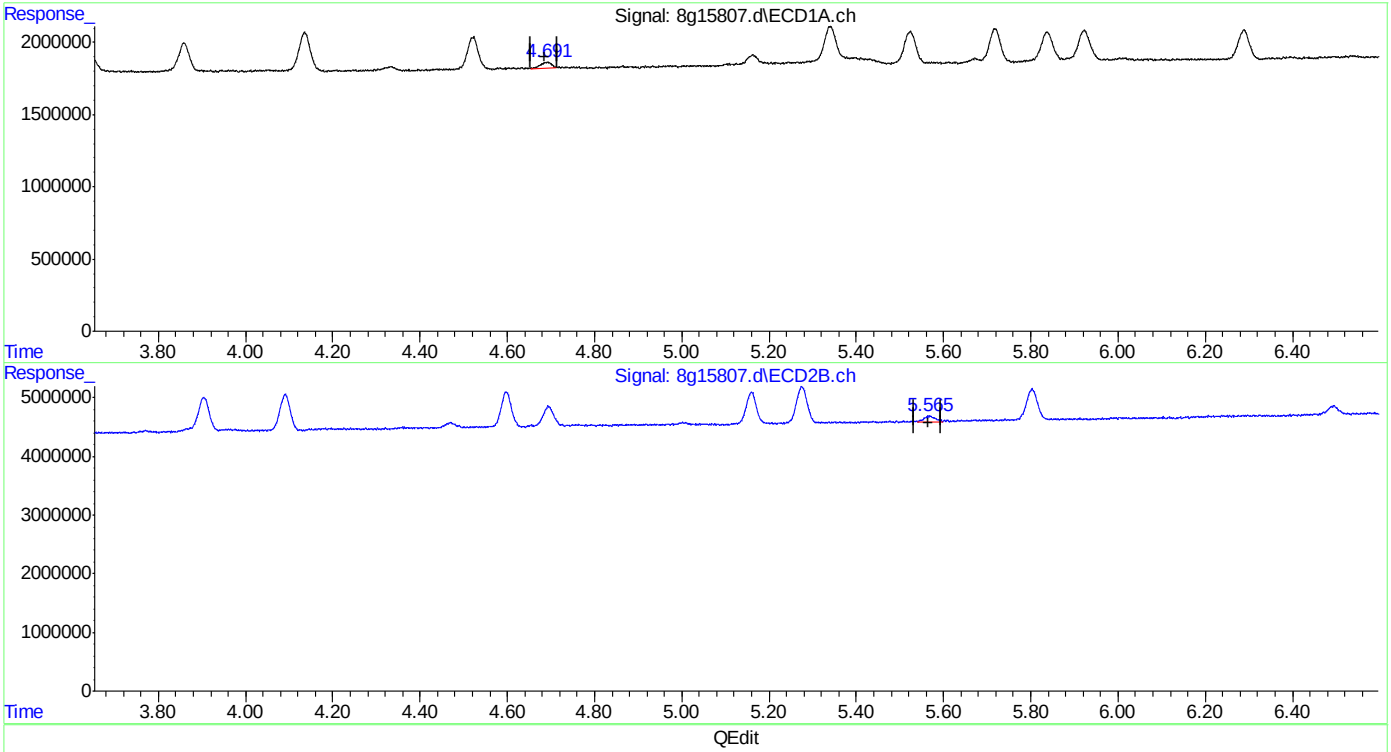
Response via : Initial Calibration
Integrator: ChemStation

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
4.691min 1.493 PPB m
response 753324

(10) alachlor #2
5.565min 1.655 PPB m
response 1750647

(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:33:55 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
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Volume Inj. : 1ul/column
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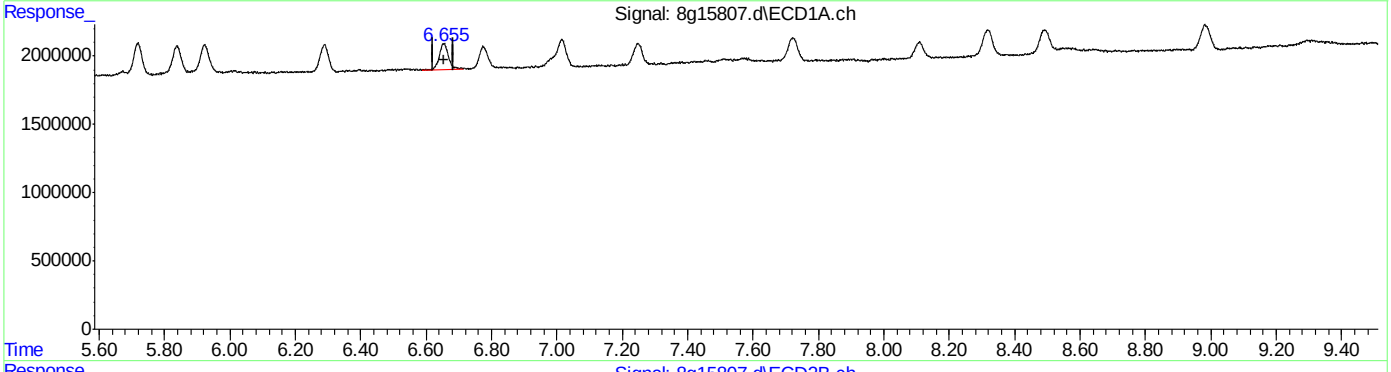

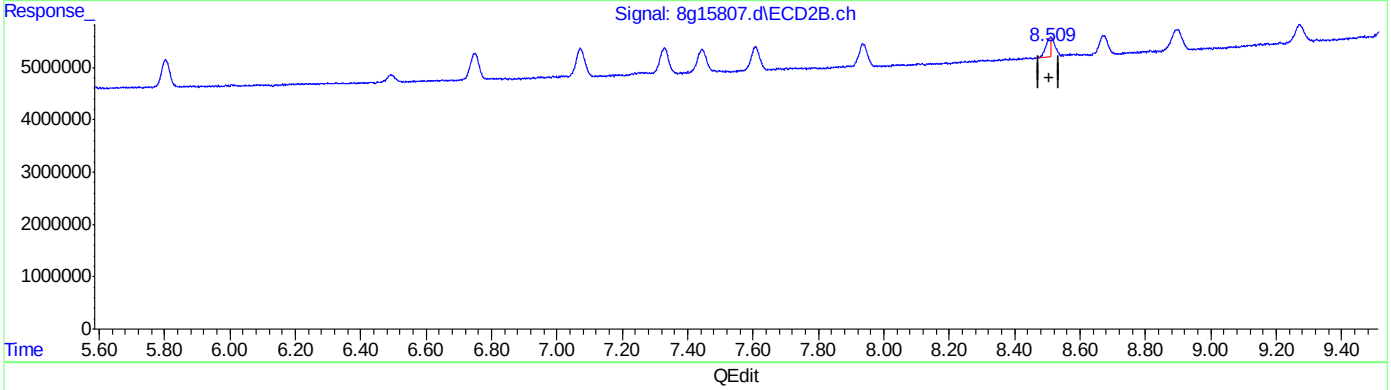

QEdit

(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

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Quant Time: Jun 11 14:32:07 2018
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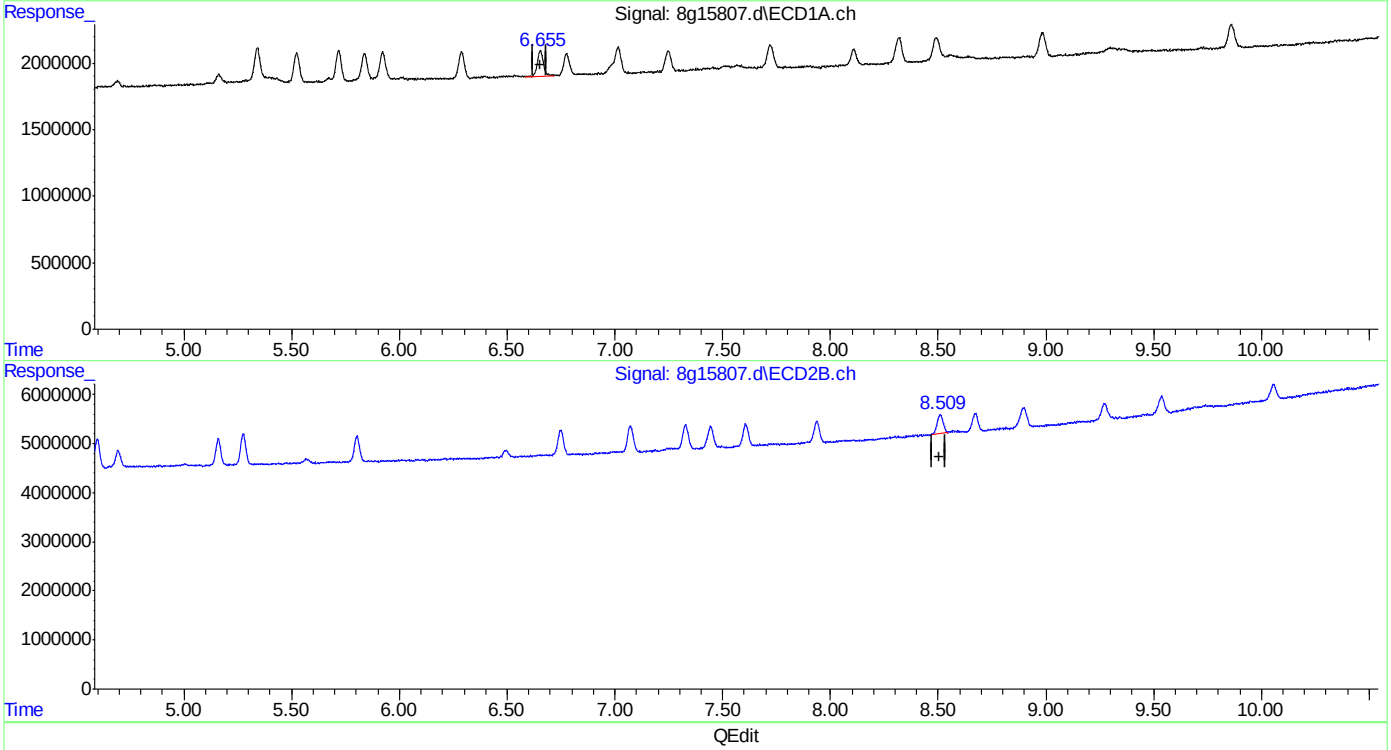
Quant Title : PEST/PCB
QLast Update : Mon Jun 11 14:08:49 2018
Response via : Initial Calibration
Integrator: ChemStation

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



(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

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
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Sample : ic511-1
Misc : op12386,g8g511,15.1,,,10,1
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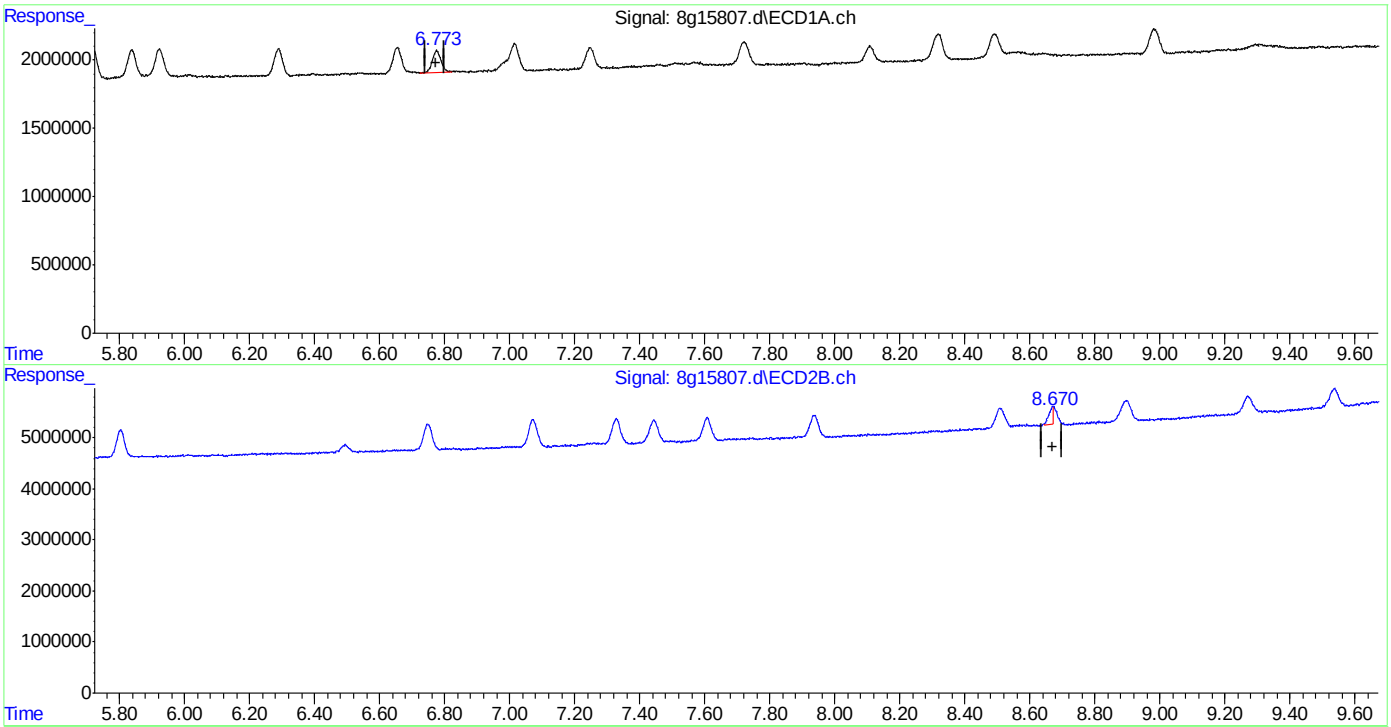
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\8G511\
Data File : 8g15807.d
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
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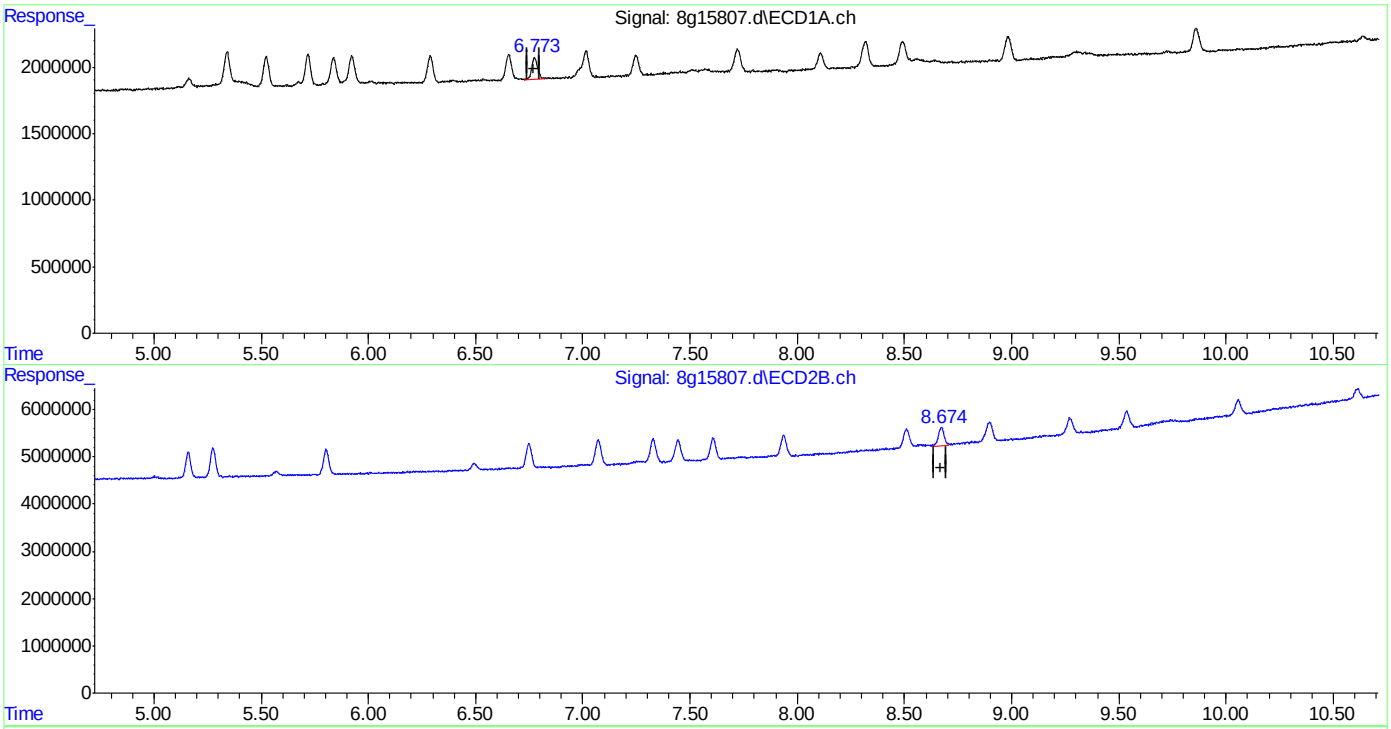
Volume Inj. : 1ul/column
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



(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

(+) = Expected Retention Time

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
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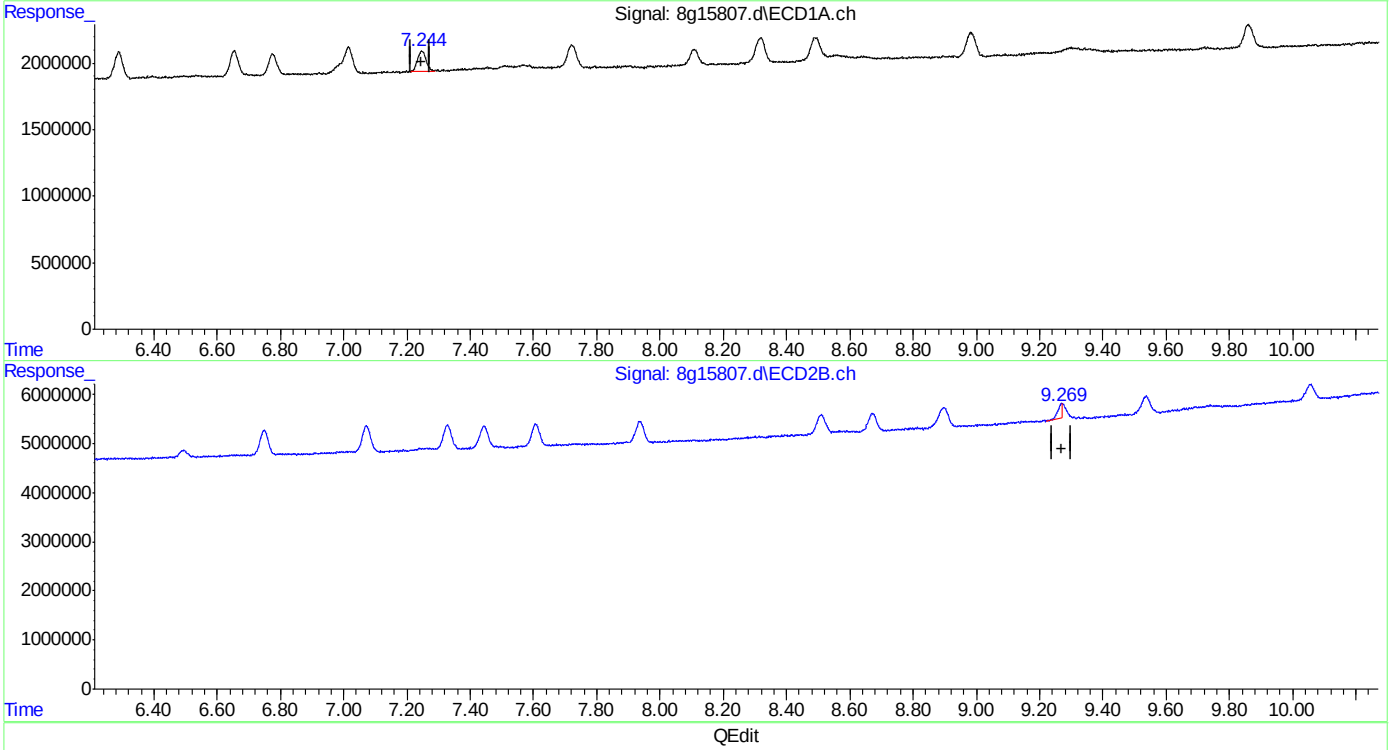

QEdit

(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

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
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Quant Method : C:\MSDCHEM\1\METHODS\8PST511.M
Quant Title : PEST/PCB
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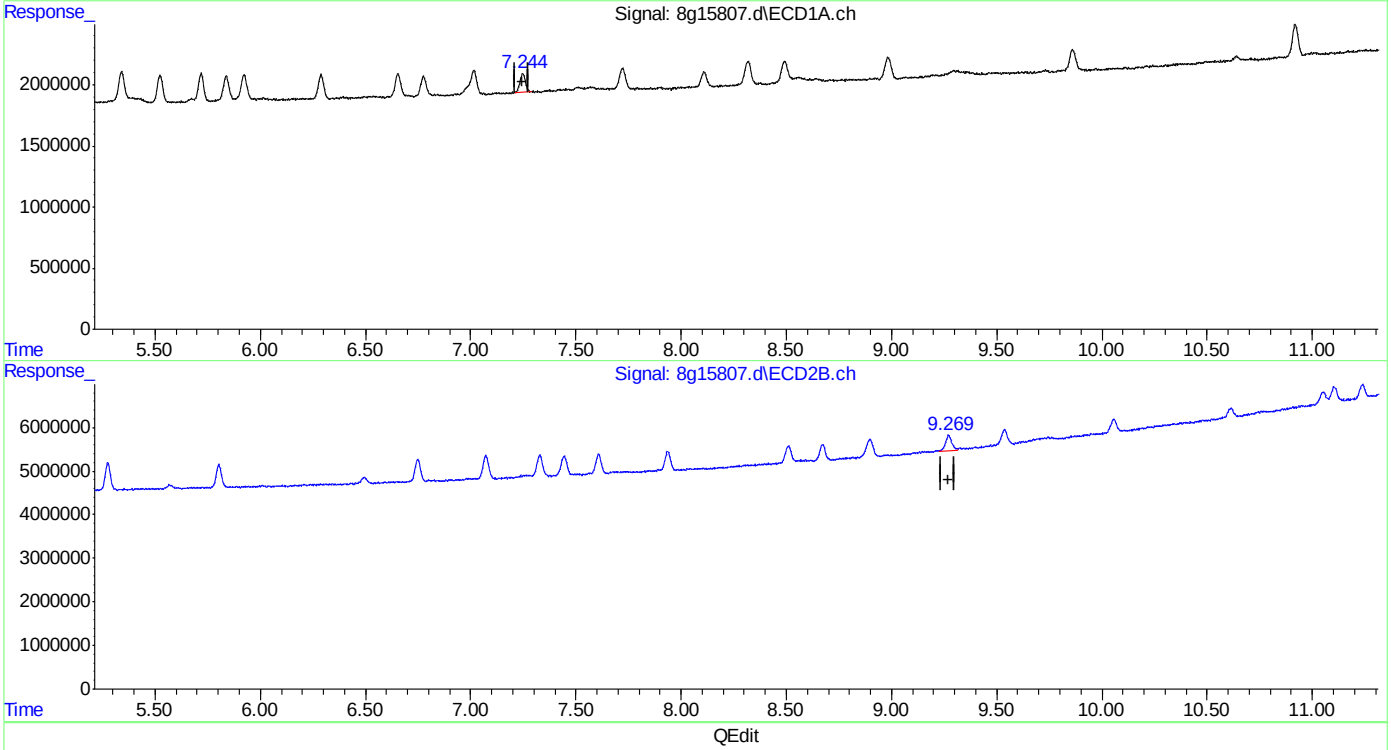
Volume Inj. : 1ul/column
Signal #1 Phase : RTXCLP I Signal #2 Phase: RTX-CLP II
Signal #1 Info : 30mx.32mmx.32um Signal #2 Info : 30m x .32mm x .25um



QEdit

(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

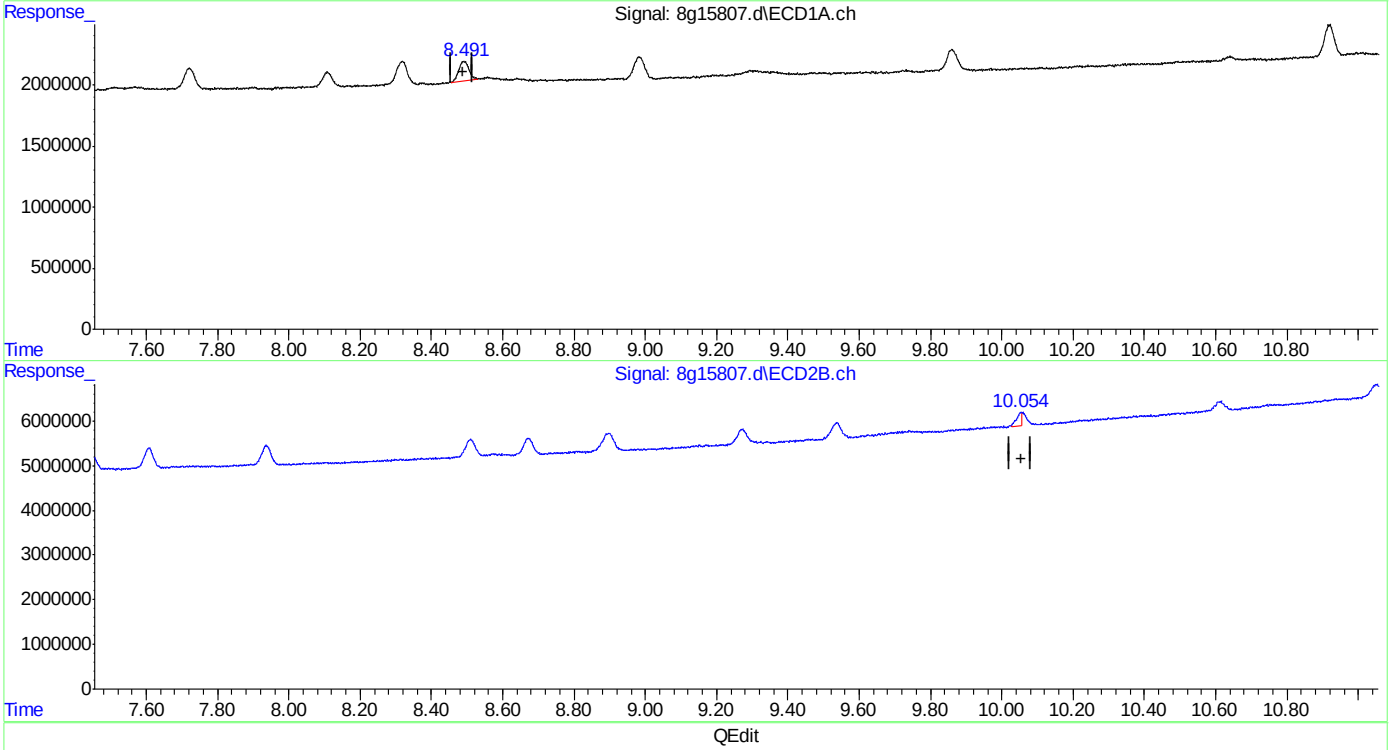
(+) = Expected Retention Time

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



(22) Endosulfan Sulfate (B)
8.491min 1.348 PPB
response 3223150

(22) Endosulfan Sulfate #2 (B)
10.054min 0.499 PPB
response 2996566

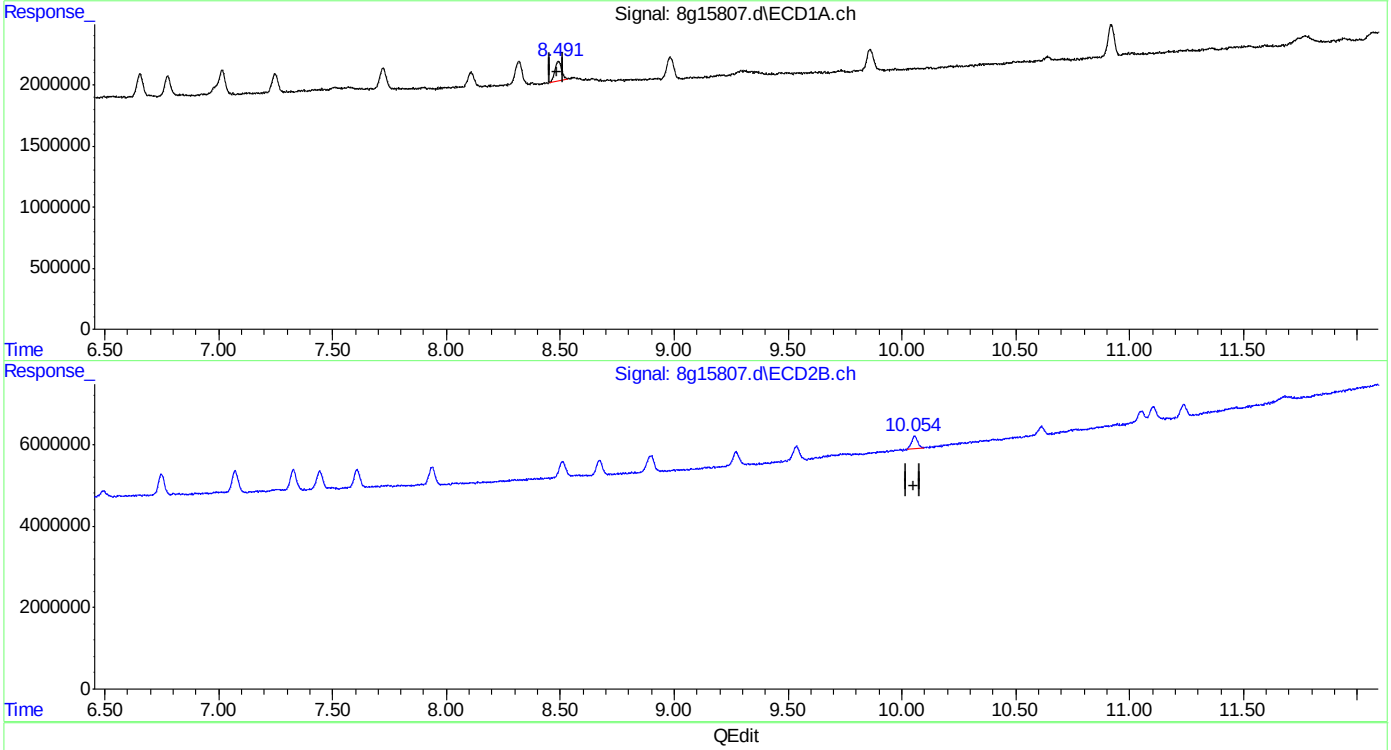
(+) = Expected Retention Time

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

(22) Endosulfan Sulfate (B)
8.491min 1.348 PPB
response 3223150

(22) Endosulfan Sulfate #2 (B)
10.054min 0.981 PPB m
response 5889813

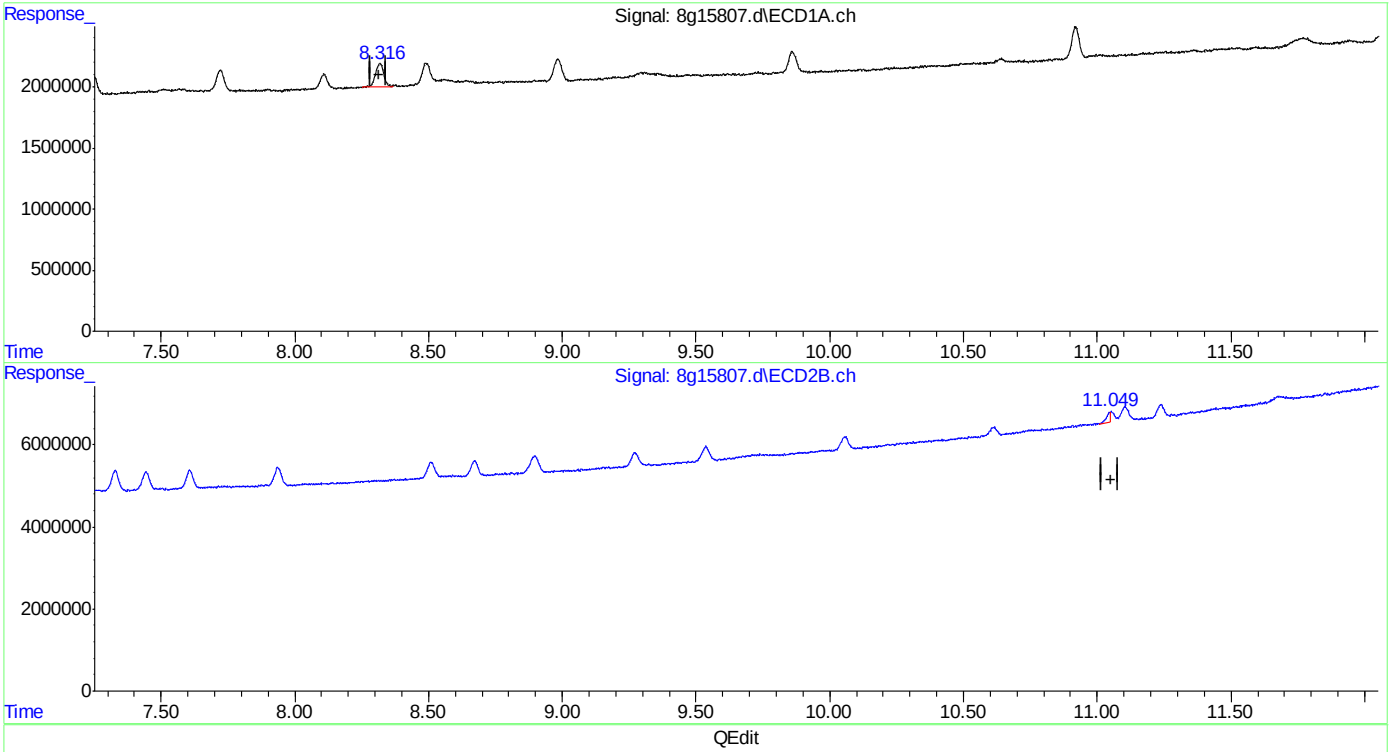
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:35:20 2018

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



QEdit

(24) Mirex
8.319min 1.464 PPB
response 4110558

(24) Mirex #2
11.049min 0.526 PPB
response 2890590

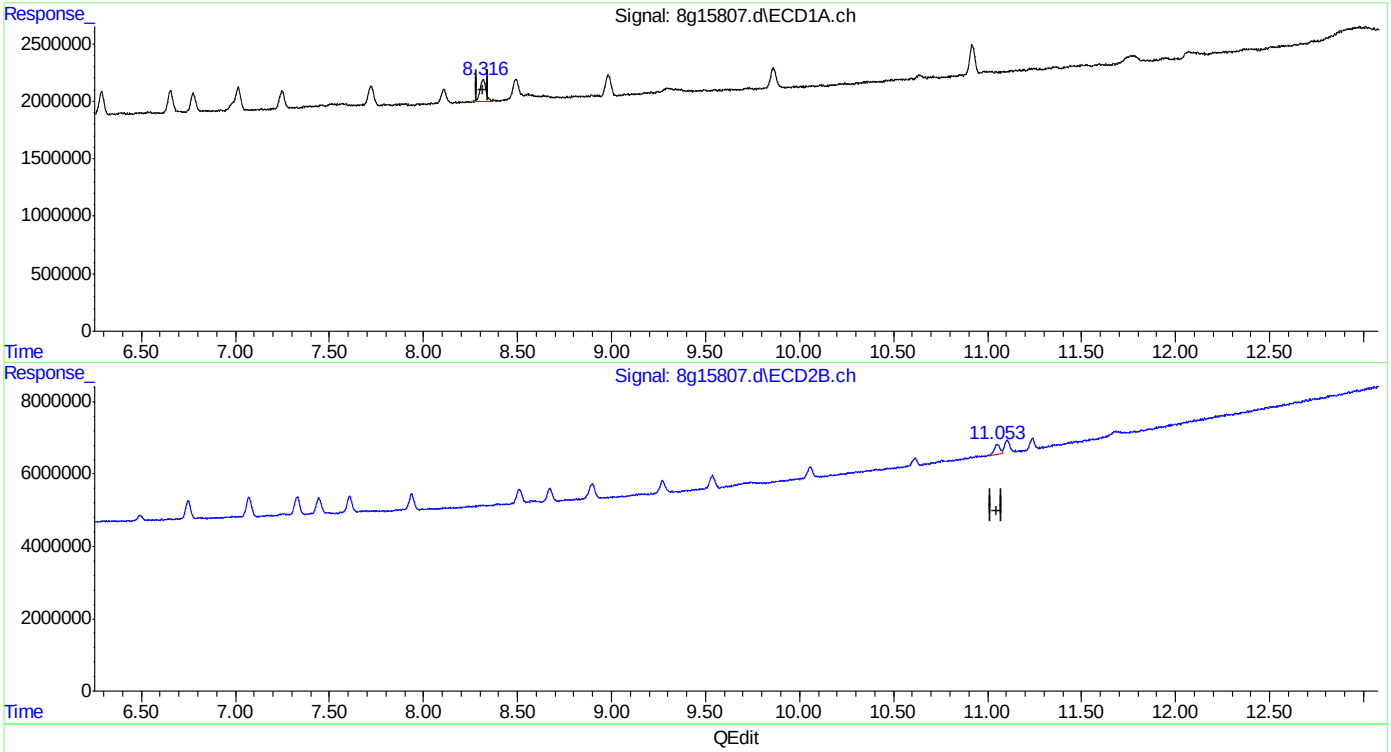
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:35:27 2018

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



(24) Mirex
8.319min 1.464 PPB
response 4110558

(24) Mirex #2
11.053min 1.013 PPB m
response 5567435

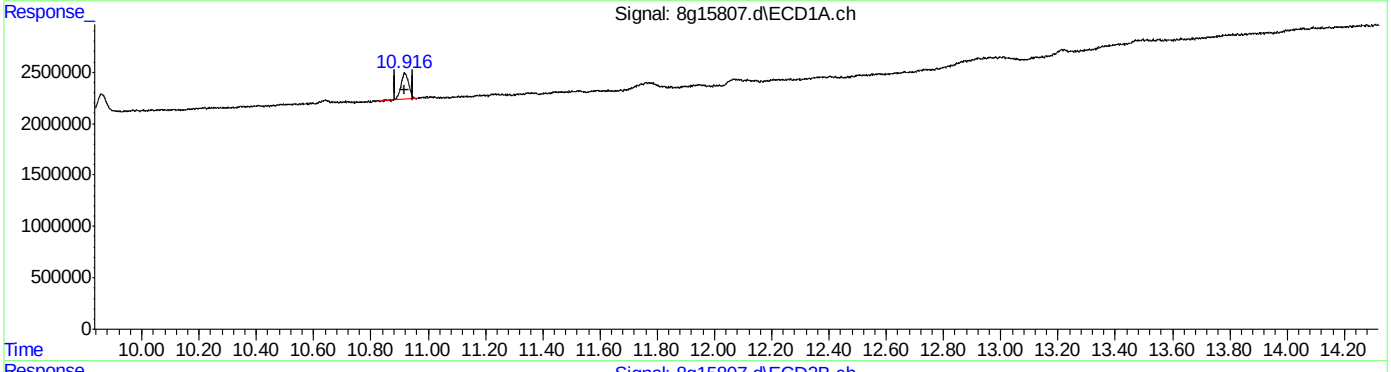
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:35:38 2018

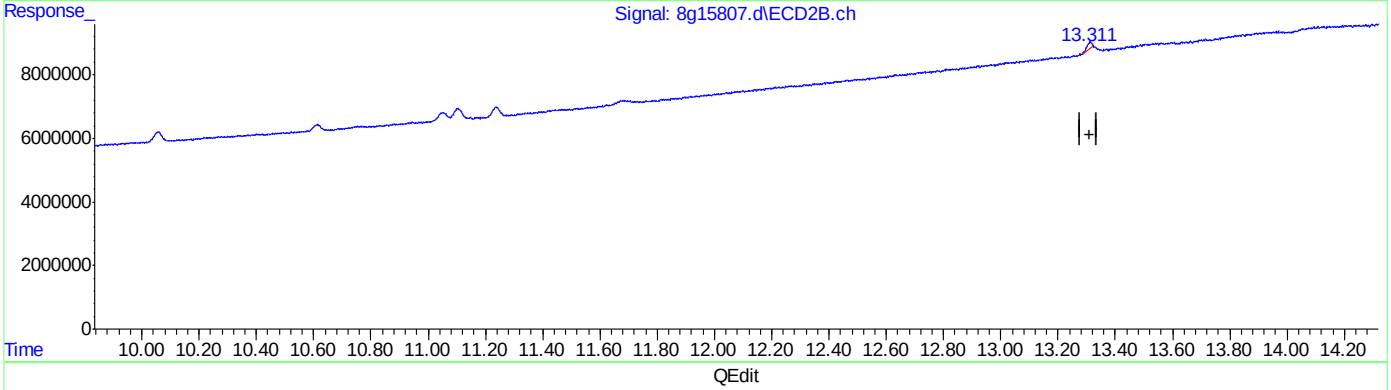
Quantitation Report (Qedit)

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





QEdit

(26) Decachlorobiphenyl (SA)
10.921min 1.320 PPB
response 4907154

(26) Decachlorobiphenyl #2 (SA)
13.312min 0.318 PPB
response 2228902

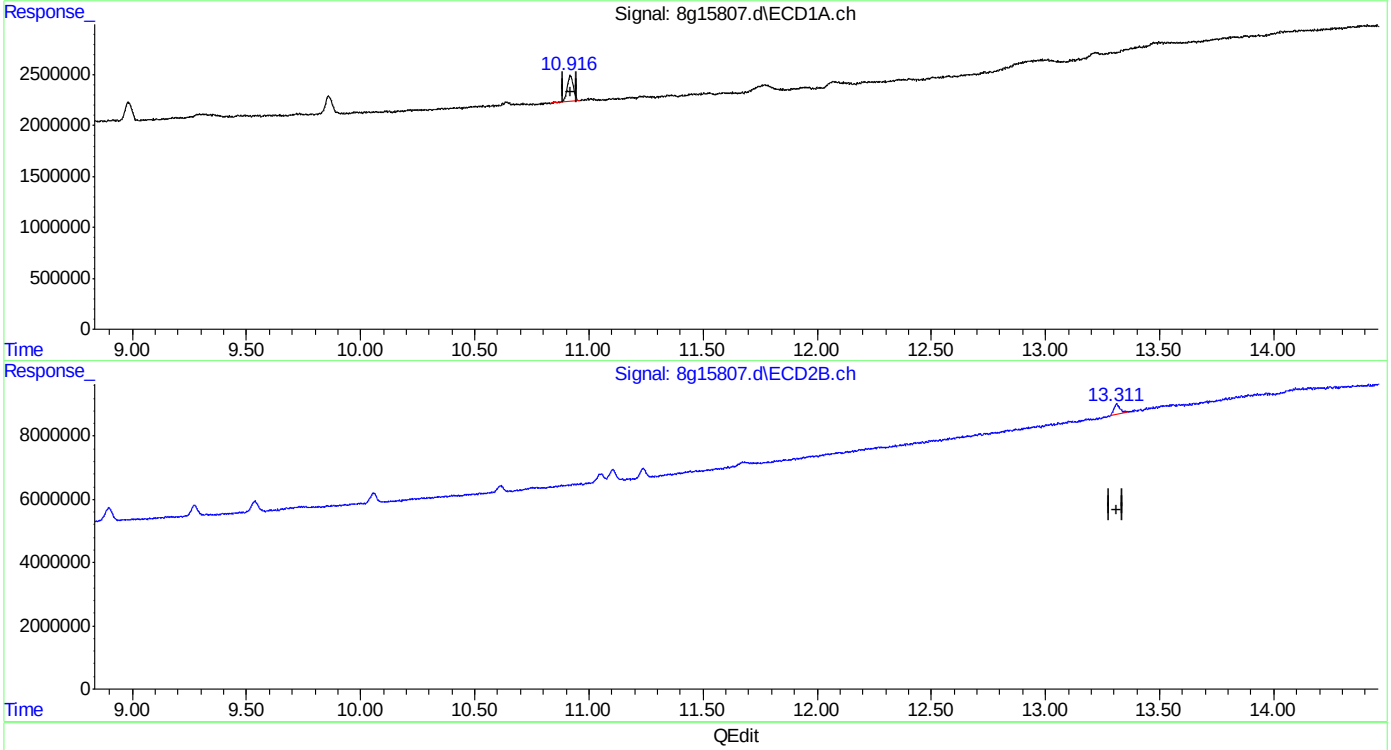
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:35:43 2018

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
```



(26) Decachlorobiphenyl (SA)

10.921min 1.320 PPB

response 4907154

(26) Decachlorobiphenyl #2 (SA)

13.311min 0.929 PPB m

response 6500440

(+) = Expected Retention Time

8PST511.M Mon Jun 11 14:35:54 2018

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 06/13/18 10:11

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.

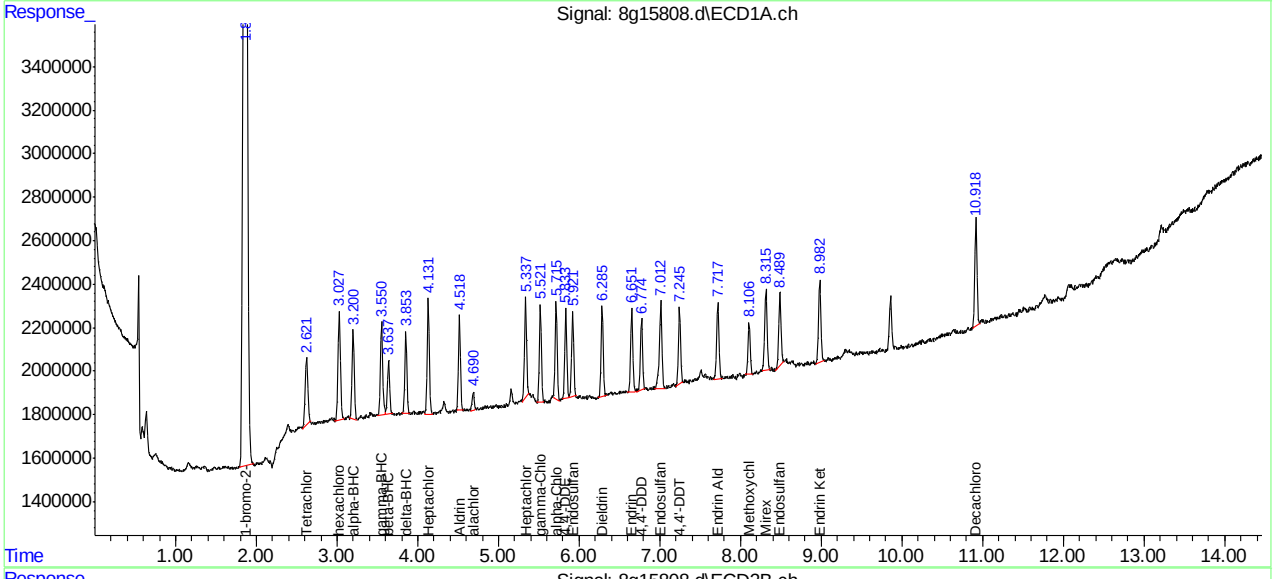
11.6.19 11

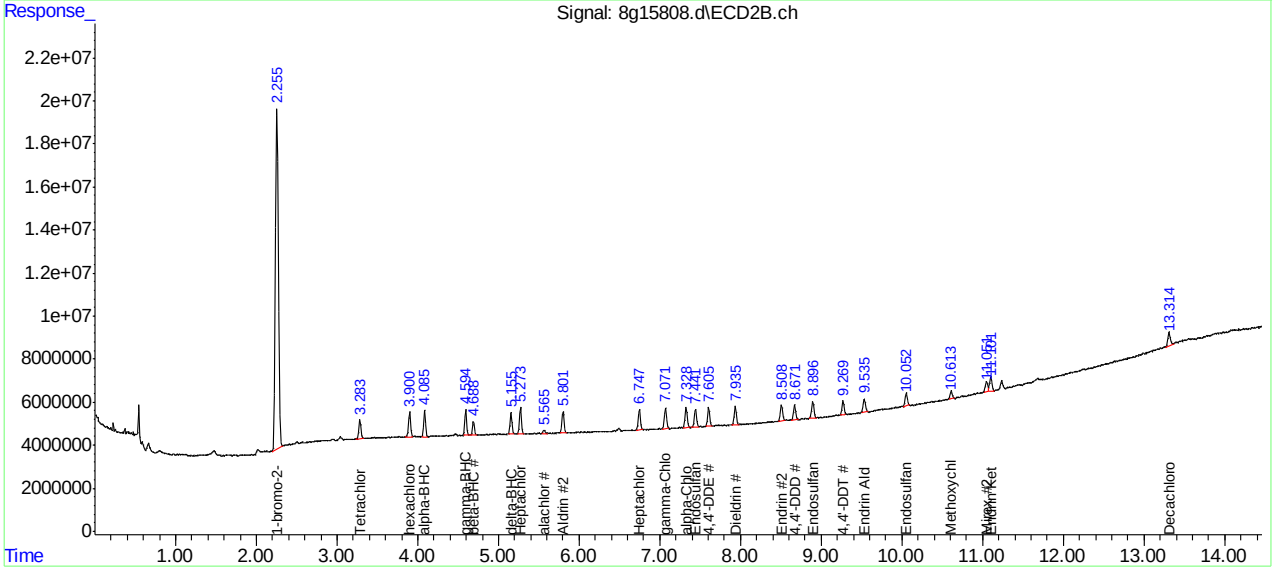
Quantitation Report (QT Reviewed)

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

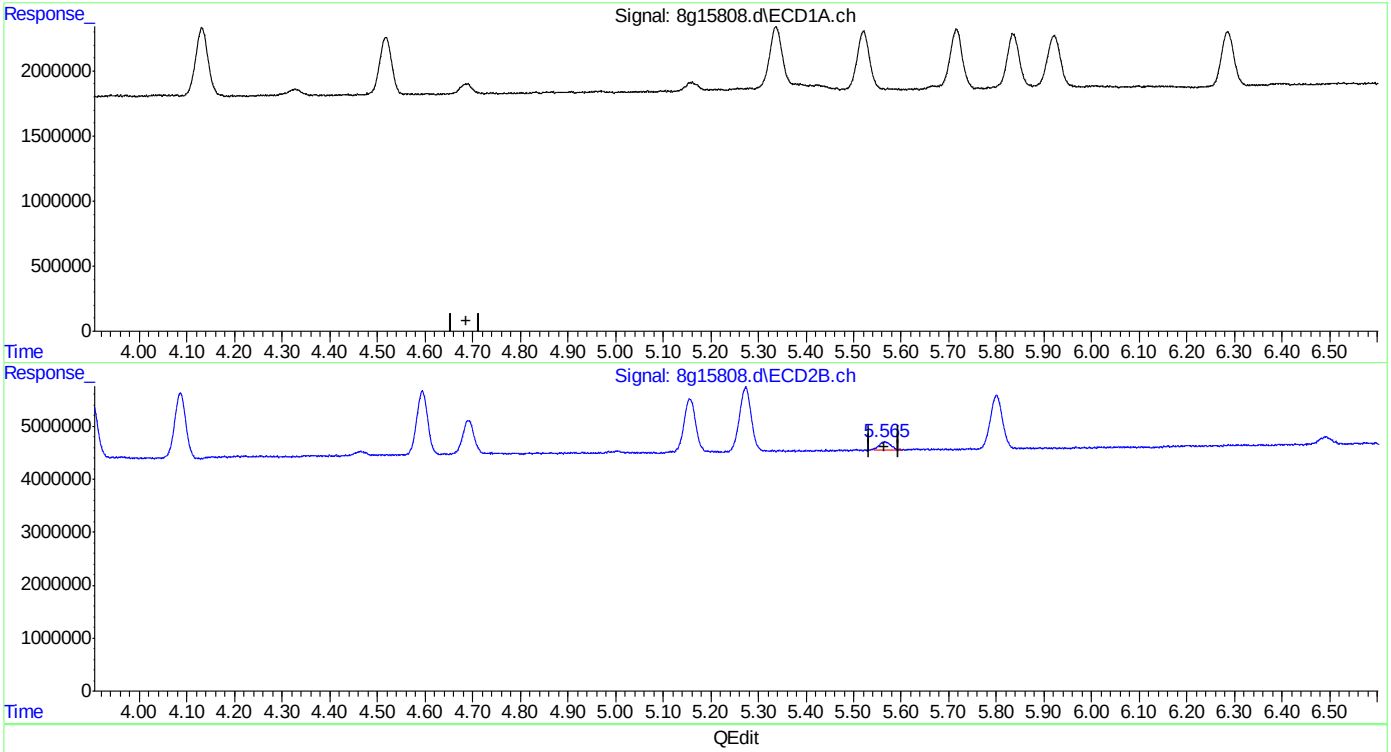
Parameter	CAS	Sig#	R.T. (min.)	Reason
Alachlor	15972-60-8	1	4.69	Poorly defined baseline
Mirex	2385-85-5	2	11.05	Poorly defined baseline
Decachlorobiphenyl	2051-24-3	2	13.31	Poorly defined baseline

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



QEdit

(10) alachlor
0.000min 0.000 PPB
response 0

(10) alachlor #2
5.565min 2.543 PPB
response 2822961

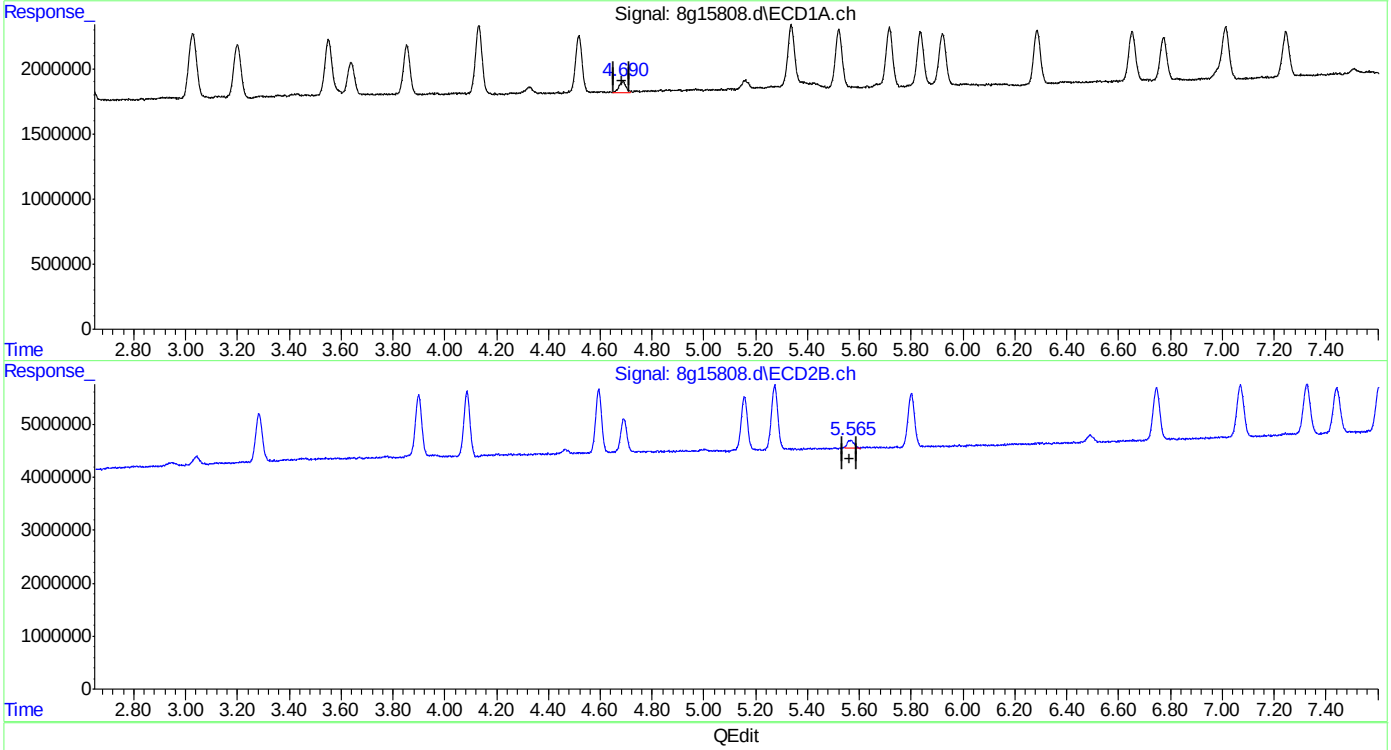
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:26:44 2018

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



QEdit

(10) alachlor
4.690min 2.858 PPB m
response 1535043

(10) alachlor #2
5.565min 2.543 PPB
response 2822961

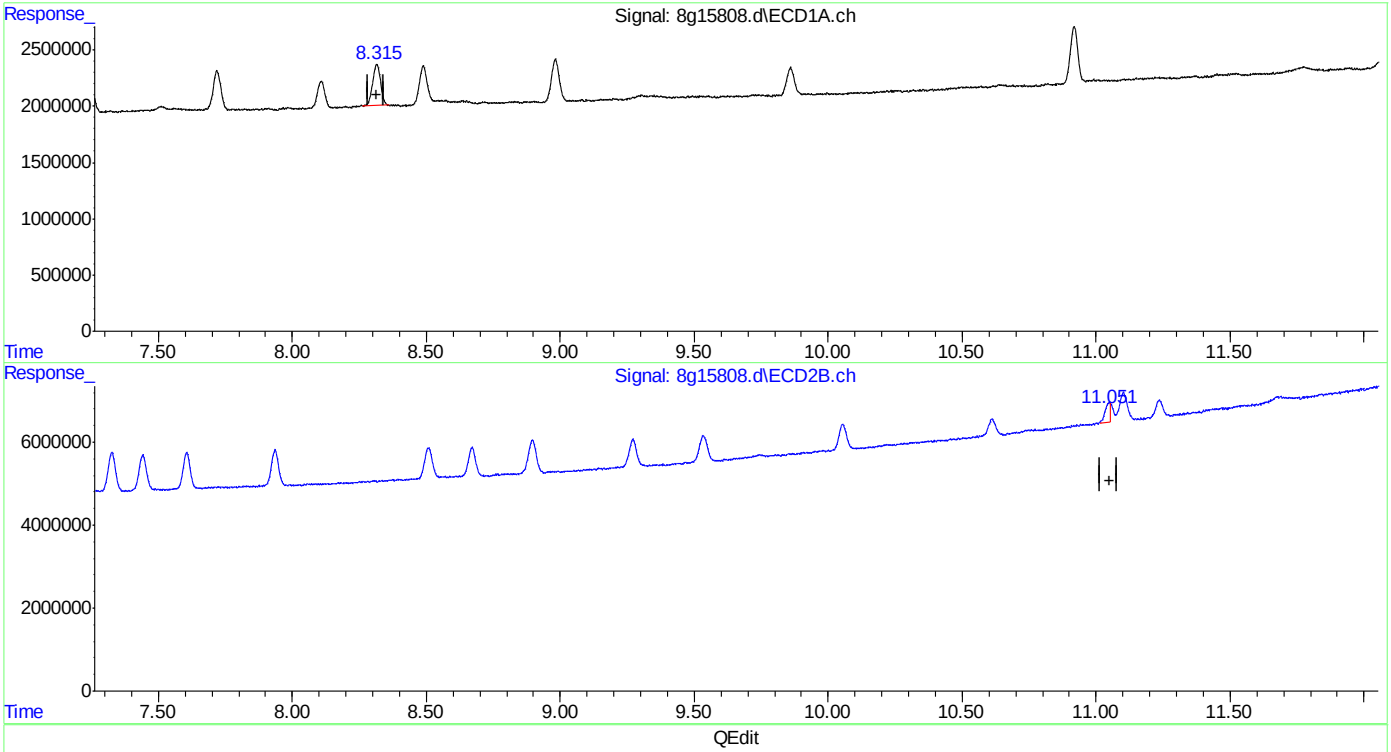
(+) = Expected Retention Time

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

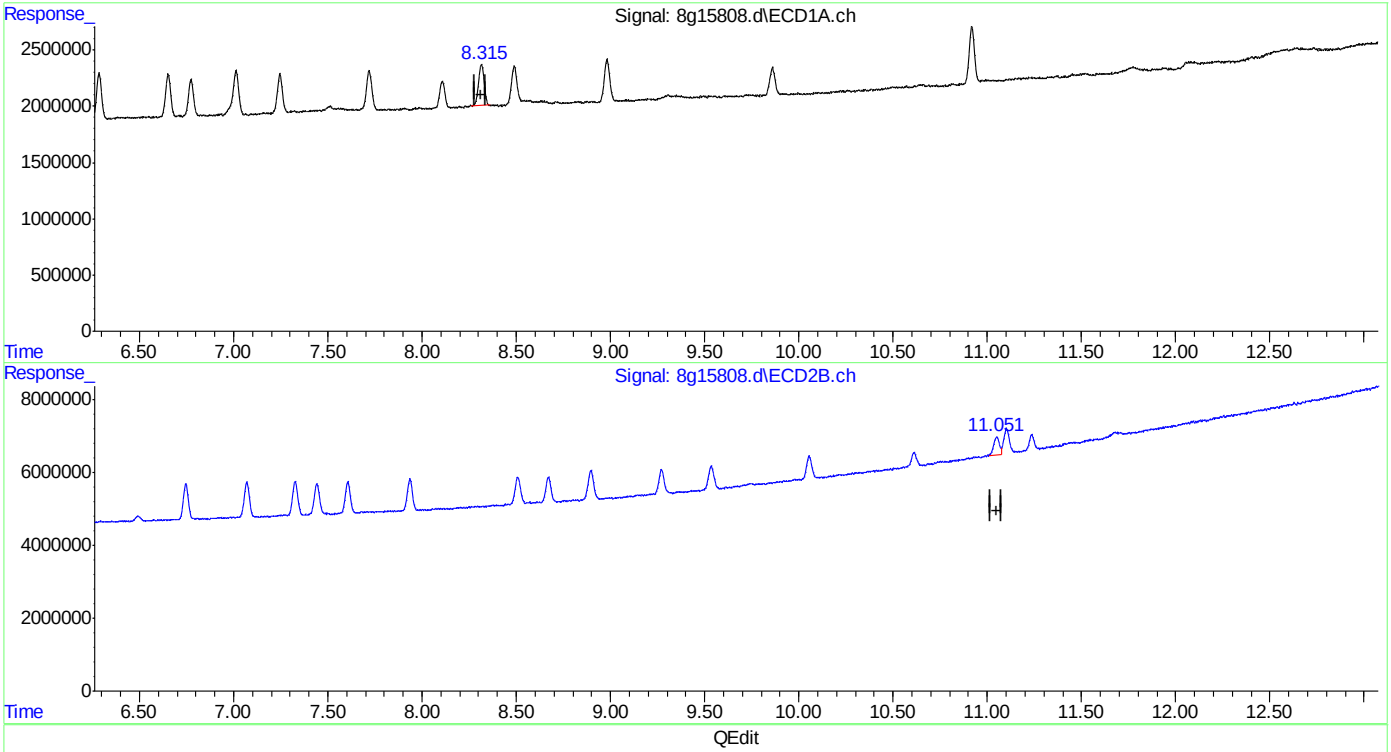
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:28:58 2018

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

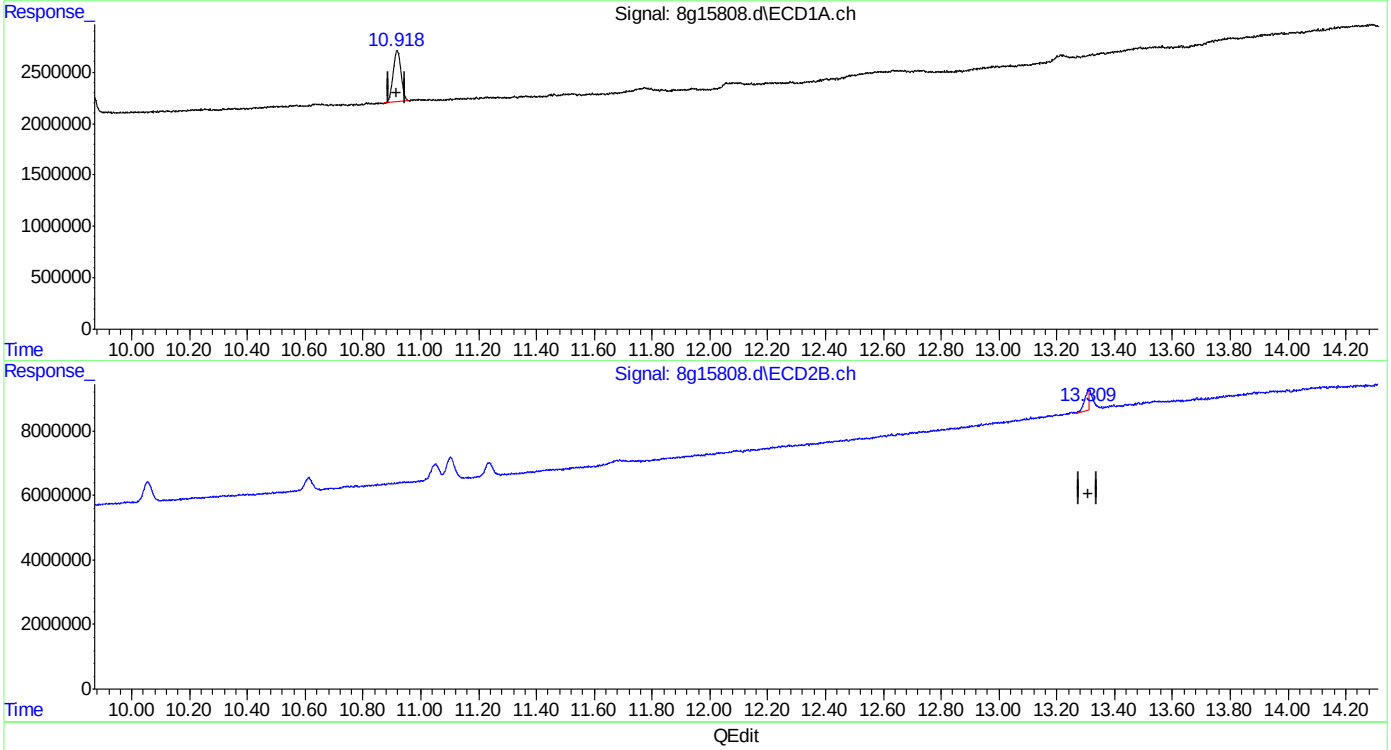
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:29:14 2018

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



QEdit

(26) Decachlorobiphenyl (SA)
10.918min 2.420 PPB
response 9576981

(26) Decachlorobiphenyl #2 (SA)
13.309min 0.918 PPB
response 6744447

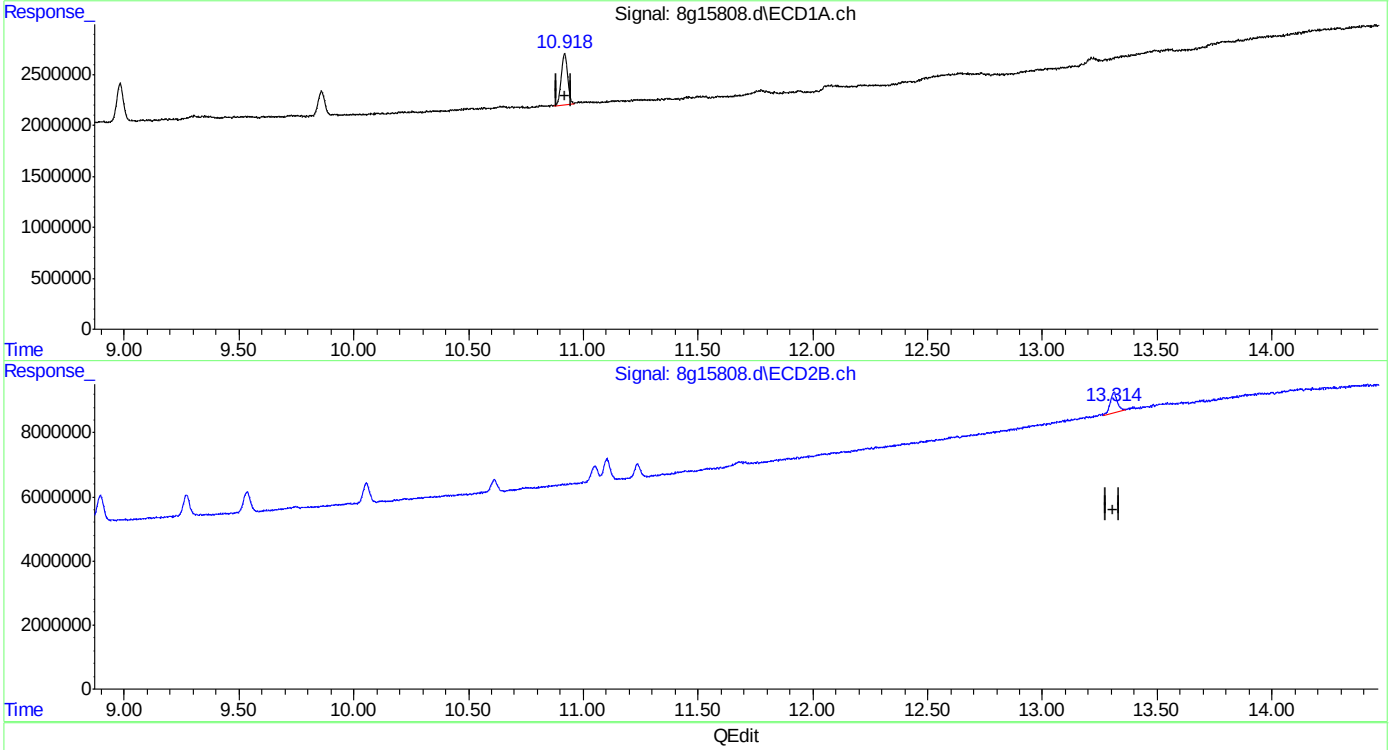
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:29:19 2018

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



QEdit

(26) Decachlorobiphenyl (SA)
10.918min 2.420 PPB
response 9576981

(26) Decachlorobiphenyl #2 (SA)
13.314min 1.822 PPB m
response 13389707

(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:29:26 2018

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 06/13/18 10:11

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.

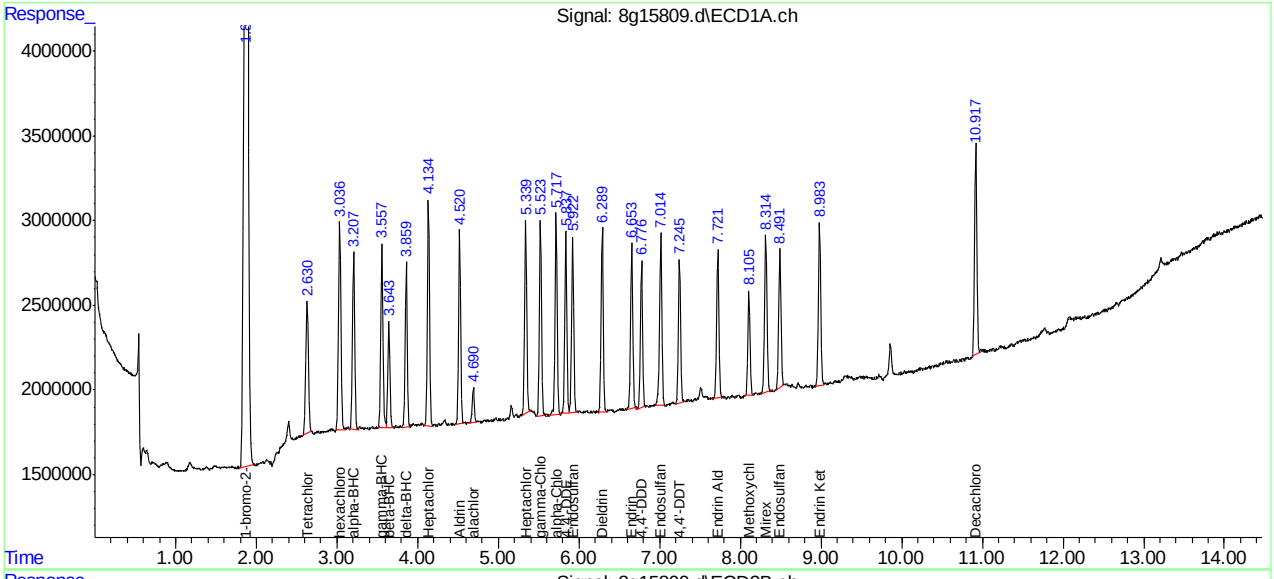
11.6.20 11

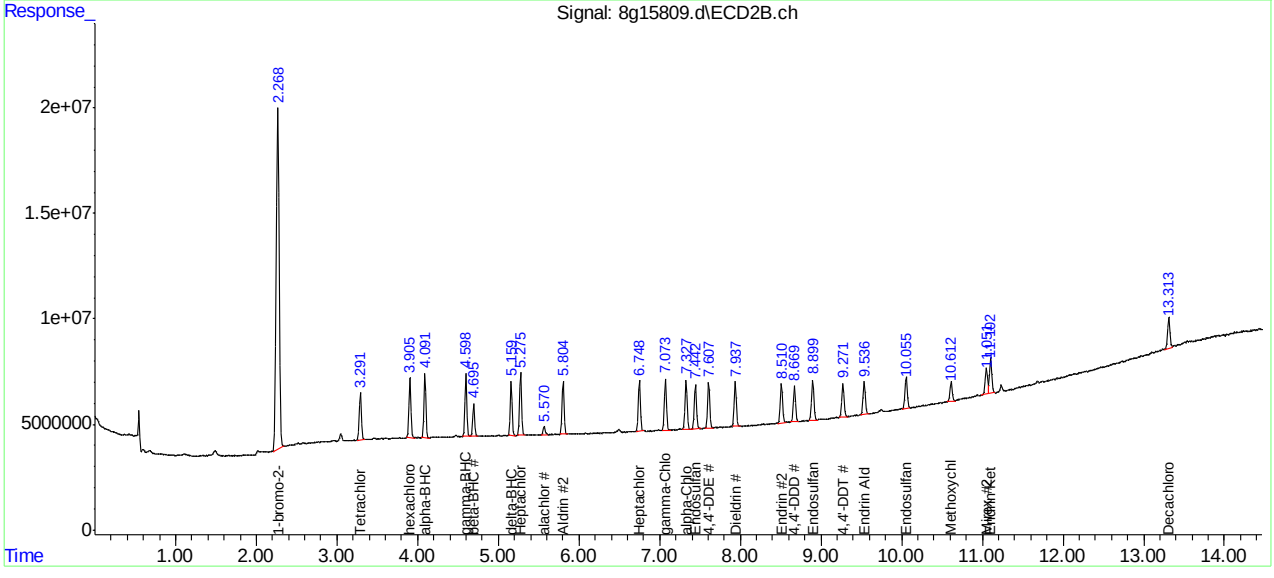
Quantitation Report (QT Reviewed)

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

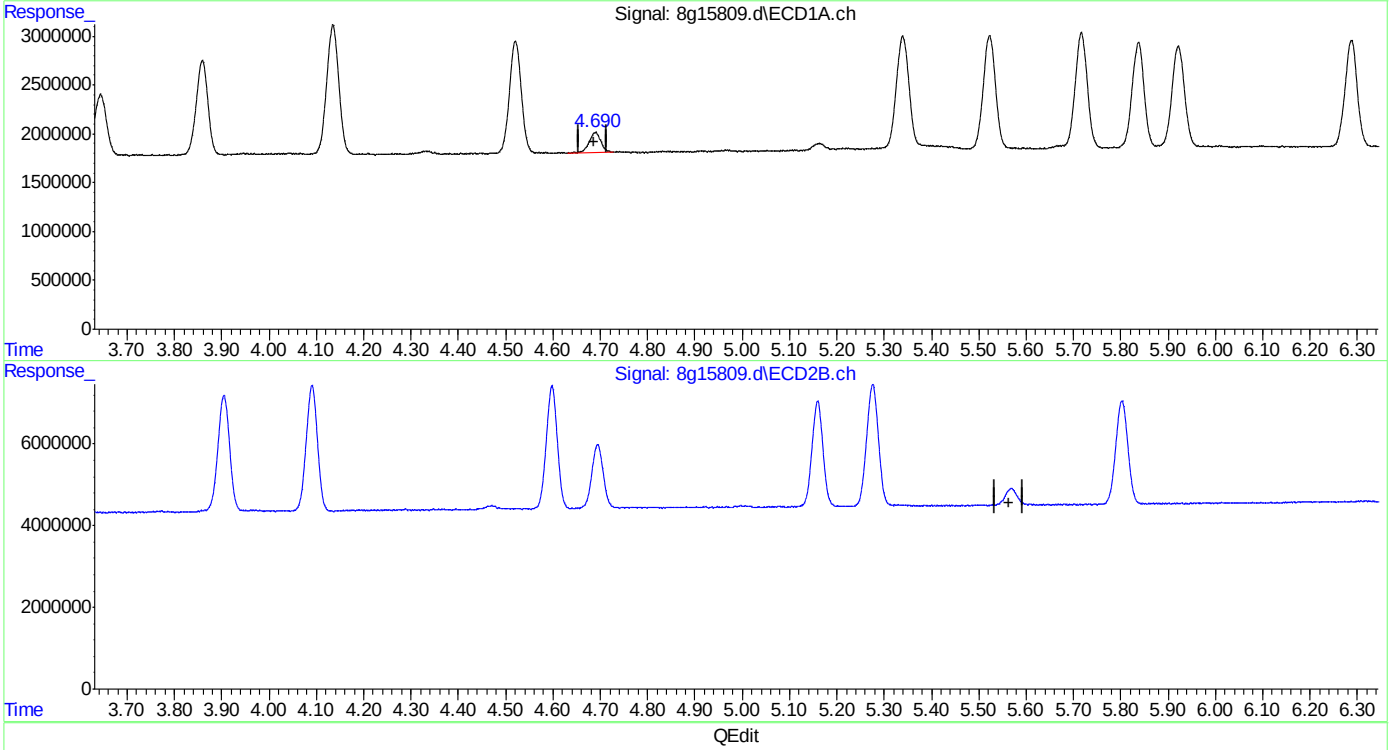
Parameter	CAS	Sig#	R.T. (min.)	Reason
Alachlor	15972-60-8	2	5.57	Poorly defined baseline
Decachlorobiphenyl	2051-24-3	2	13.31	Poorly defined baseline

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



QEdit

(10) alachlor
4.690min 6.284 PPB
response 3508503

(10) alachlor #2
0.000min 0.000 PPB
response 0

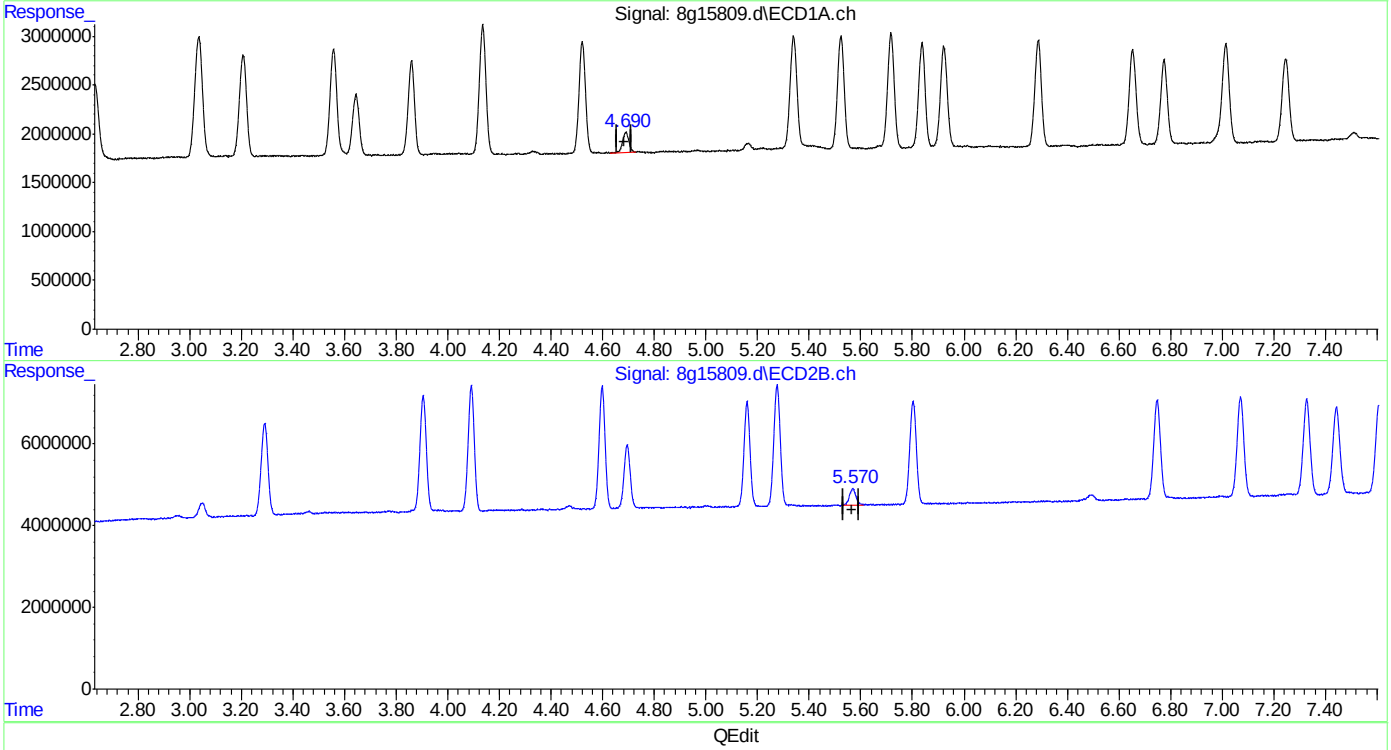
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:16:19 2018

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

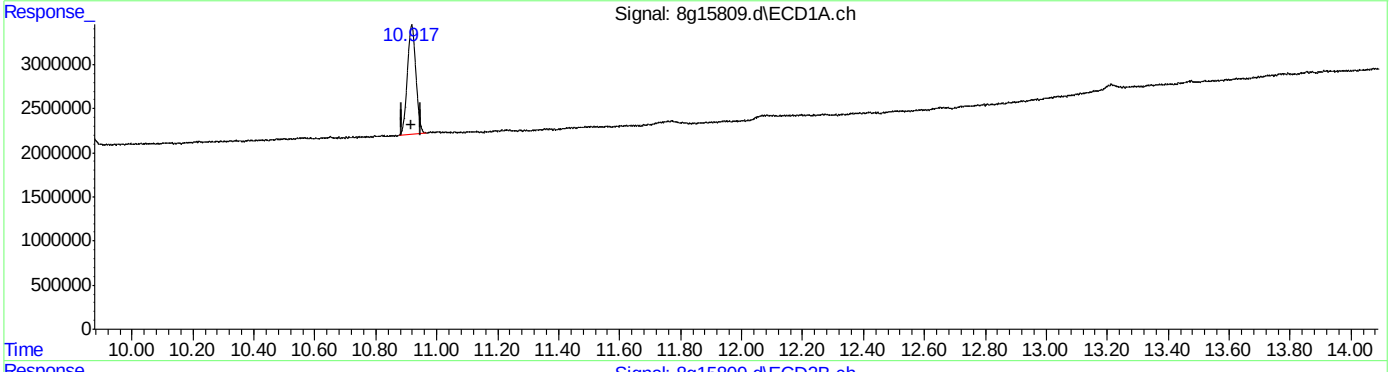
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:16:27 2018

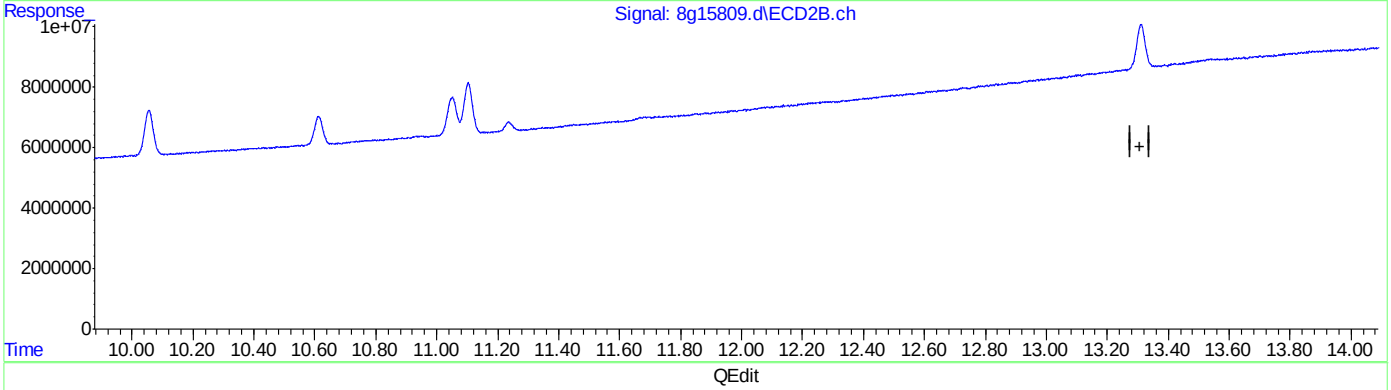
Quantitation Report (Qedit)

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





QEdit

(26) Decachlorobiphenyl (SA)
10.918min 5.834 PPB
response 23999362

(26) Decachlorobiphenyl #2 (SA)
0.000min 0.000 PPB
response 0

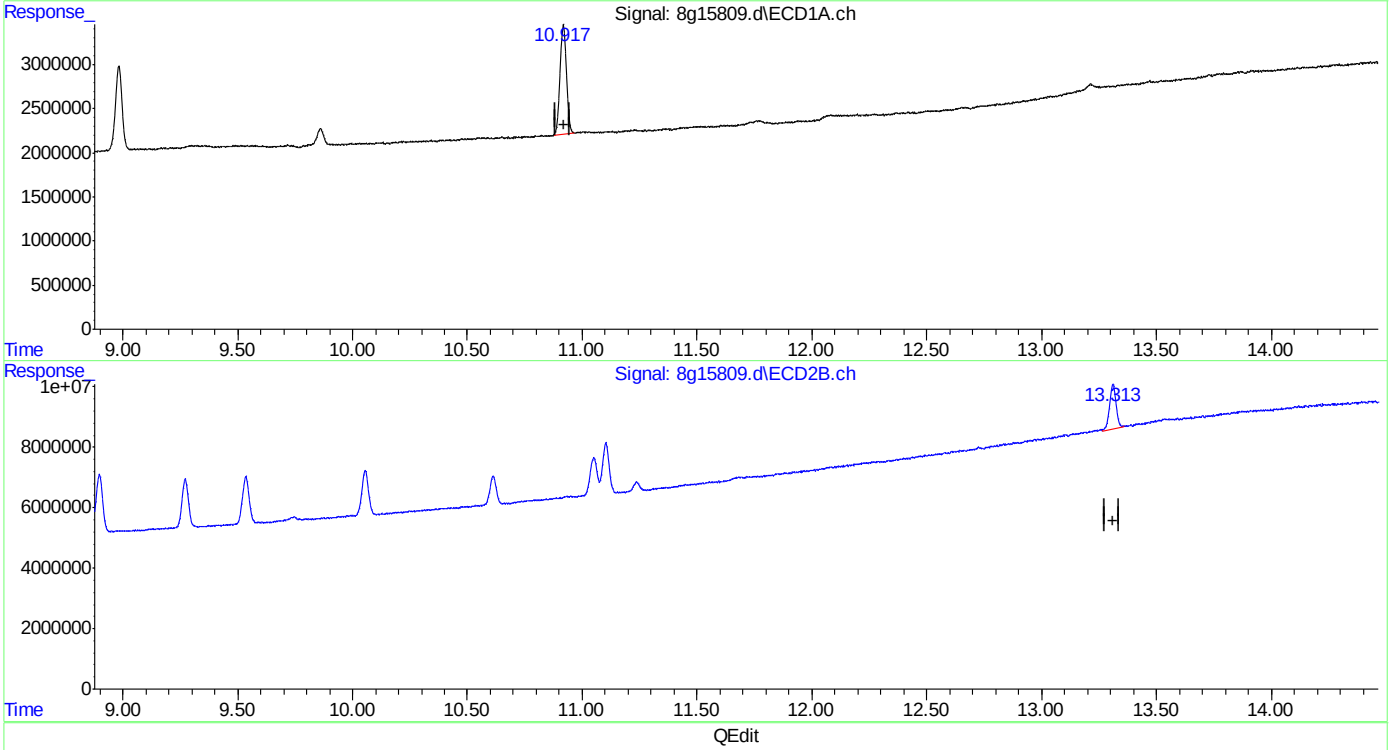
(+) = Expected Retention Time

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



QEdit

(26) Decachlorobiphenyl (SA)
10.918min 5.834 PPB
response 23999362

(26) Decachlorobiphenyl #2 (SA)
13.313min 3.991 PPB m
response 29772910

(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:16:50 2018

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 06/13/18 10:11

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

	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.

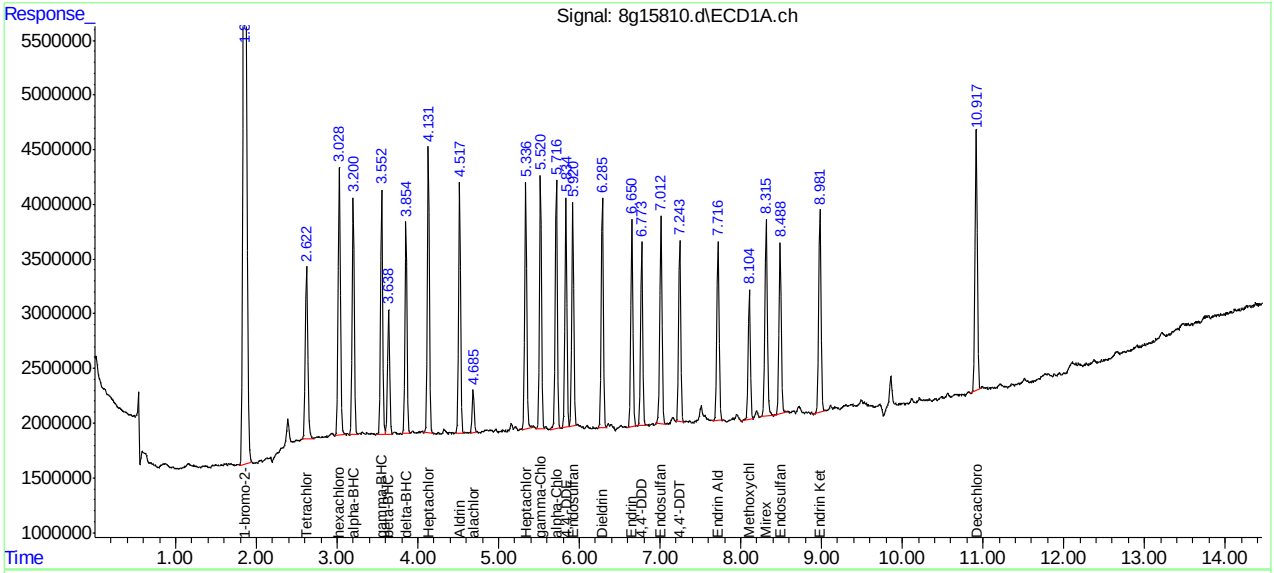
11.6.21 11

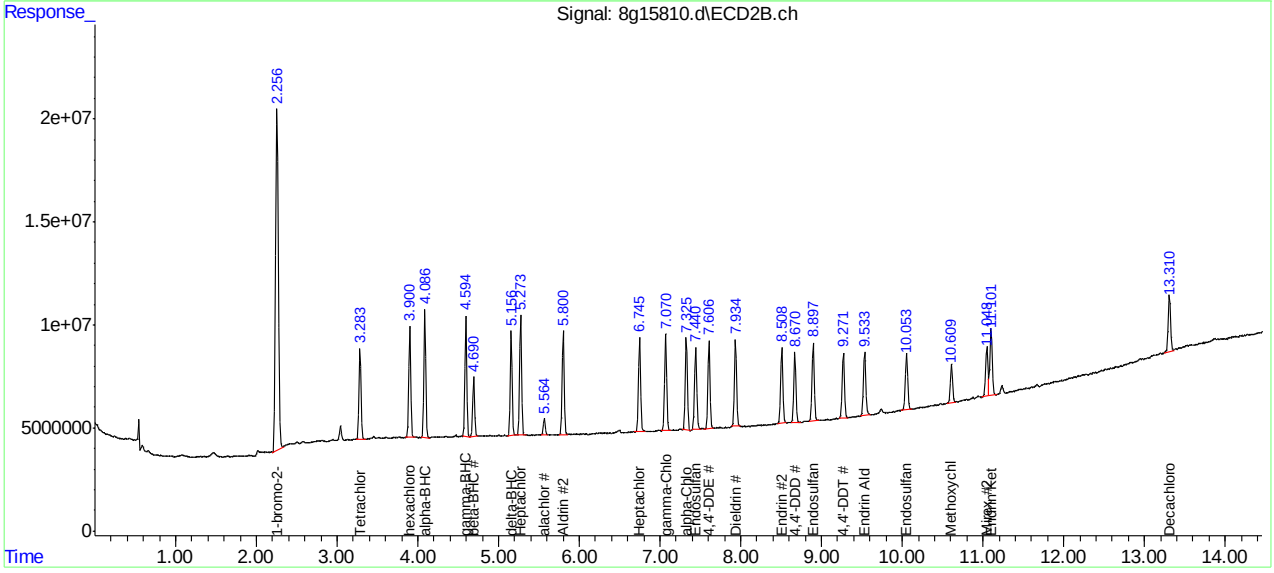
Quantitation Report (QT Reviewed)

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





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

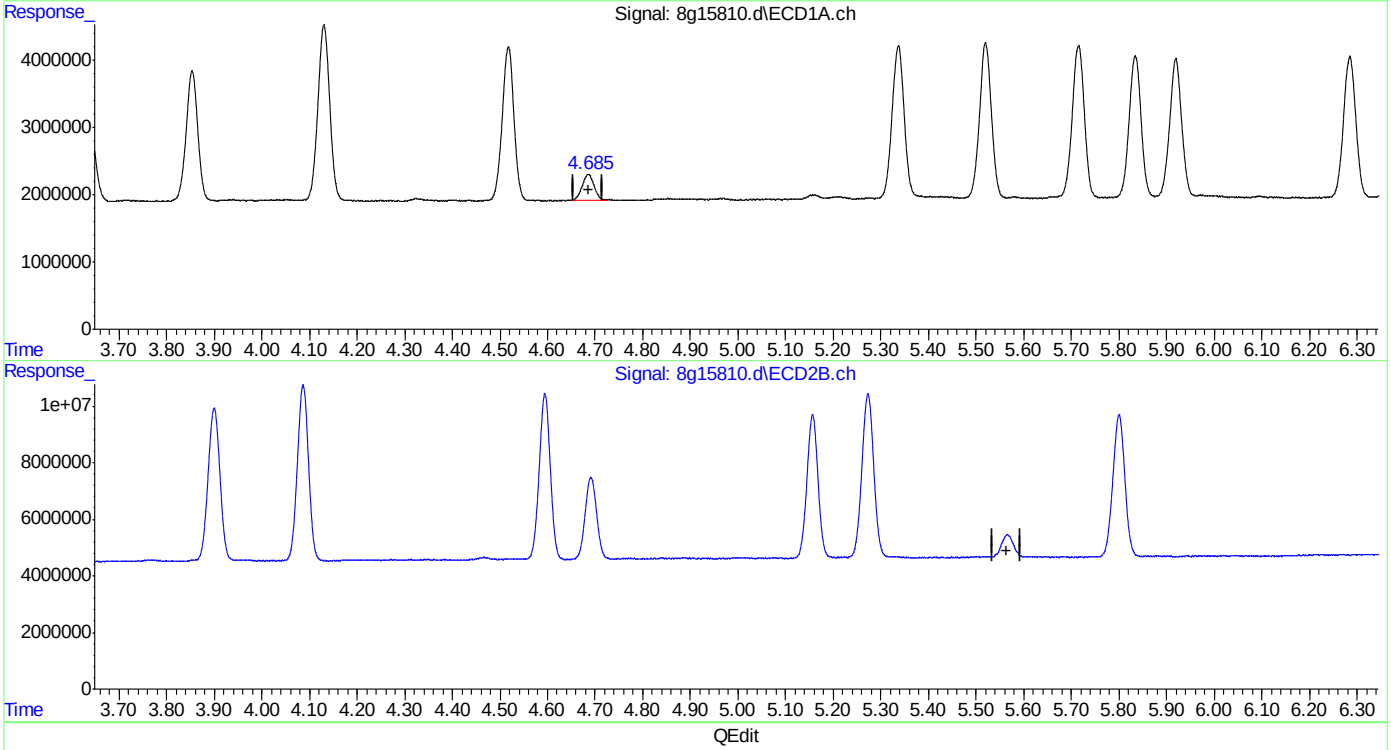
Parameter	CAS	Sig#	R.T. (min.)	Reason
Alachlor	15972-60-8	2	5.56	Poorly defined baseline

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



QEdit

(10) alachlor
4.685min 12.502 PPB
response 6741265

(10) alachlor #2
0.000min 0.000 PPB
response 0

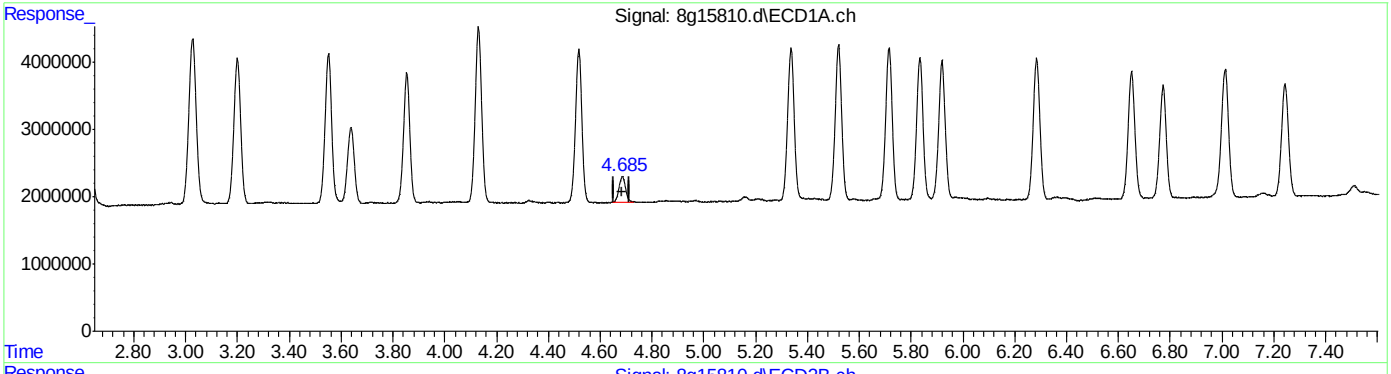
(+) = Expected Retention Time

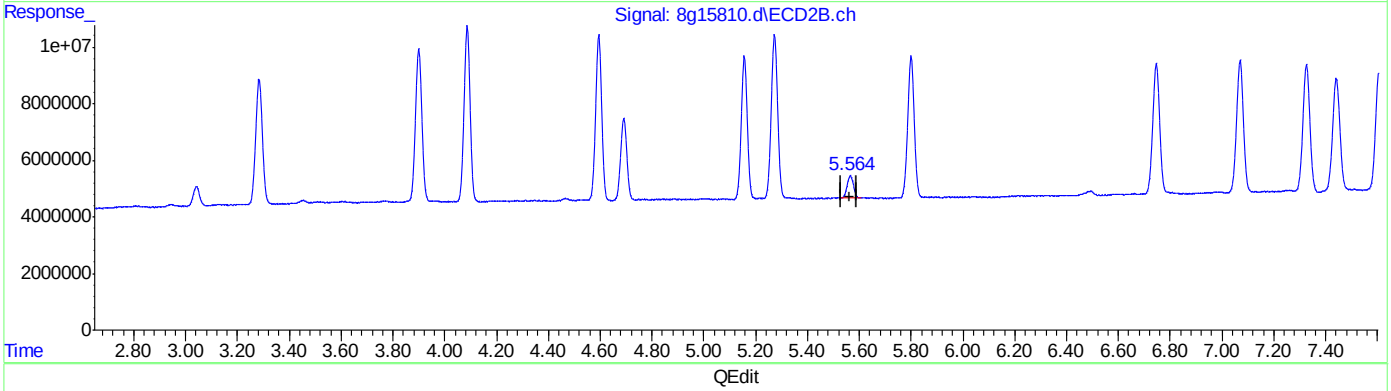
Quantitation Report (Qedit)

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





QEdit

(10) alachlor
4.685min 12.502 PPB
response 6741265

(10) alachlor #2
5.564min 12.658 PPB m
response 13772555

(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:15:00 2018

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

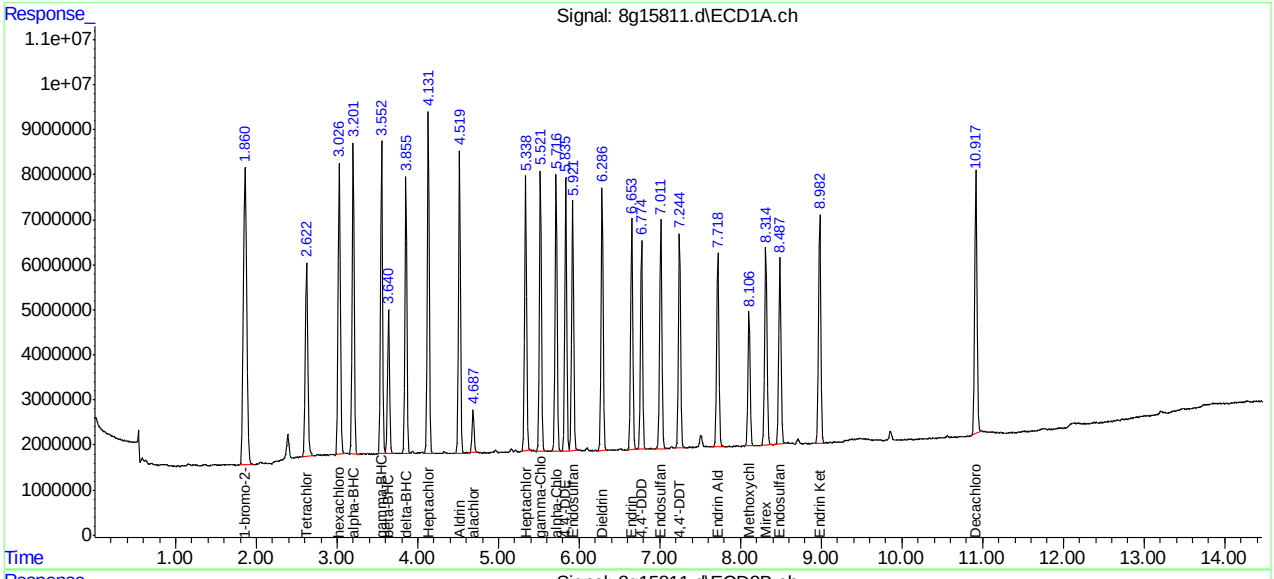
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

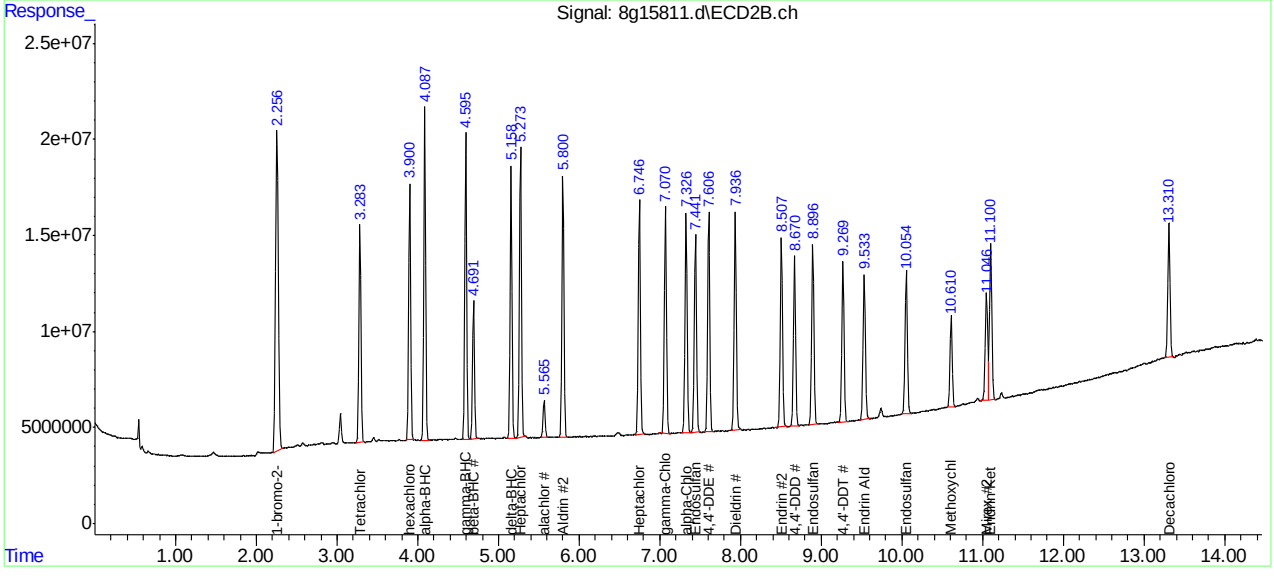
Quantitation Report (QT Reviewed)

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





11.6.22 11

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

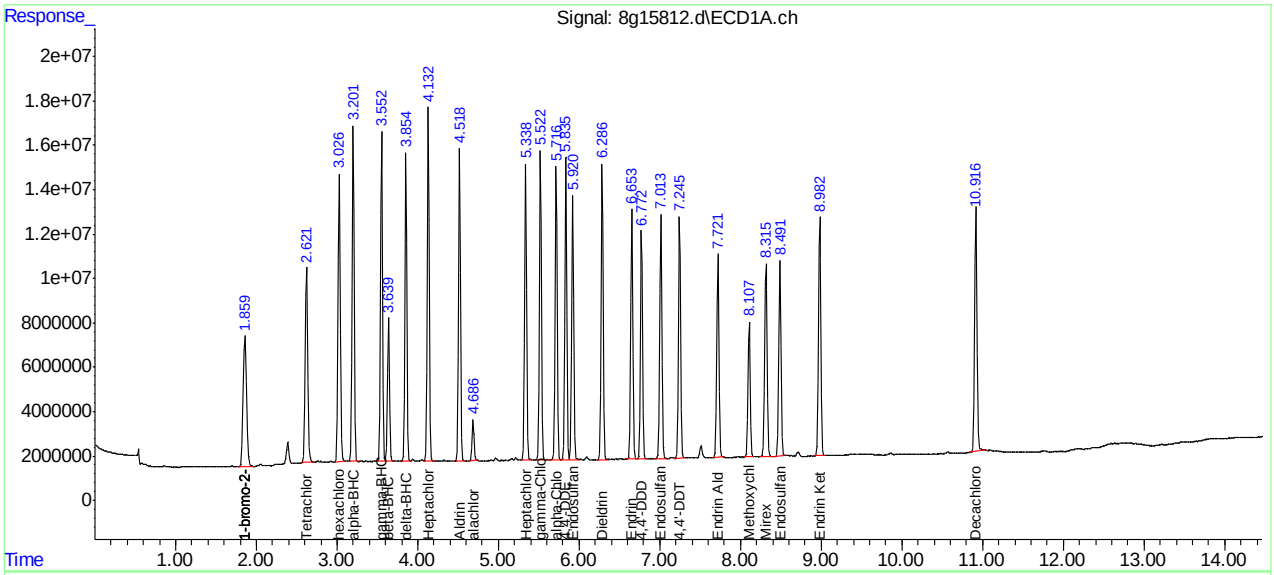
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

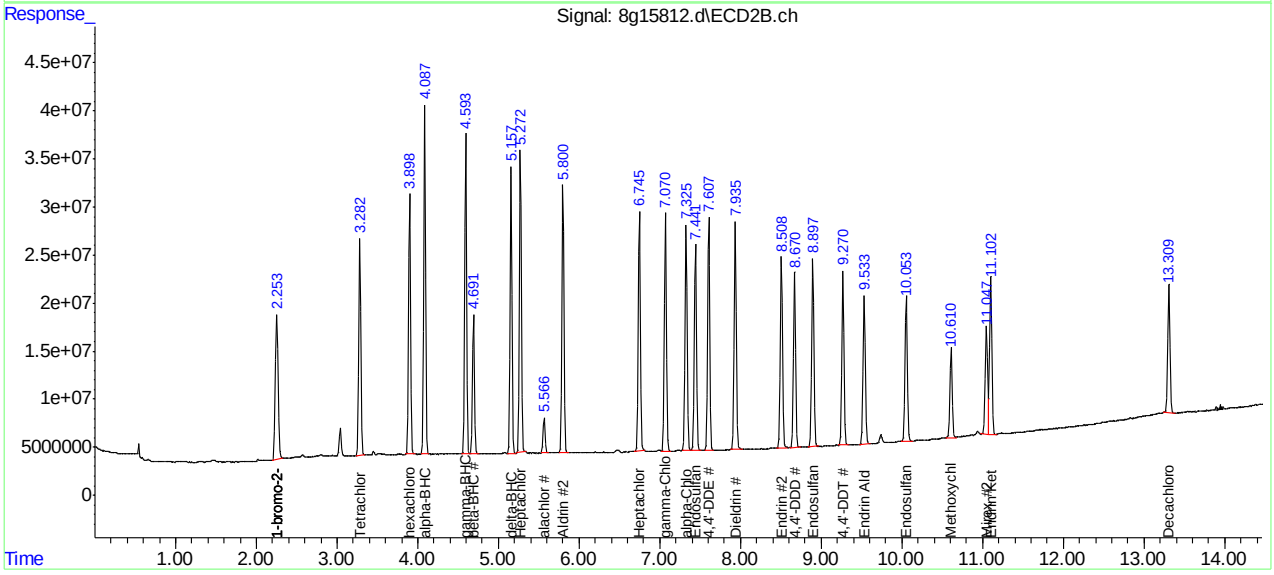
Quantitation Report (QT Reviewed)

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





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.

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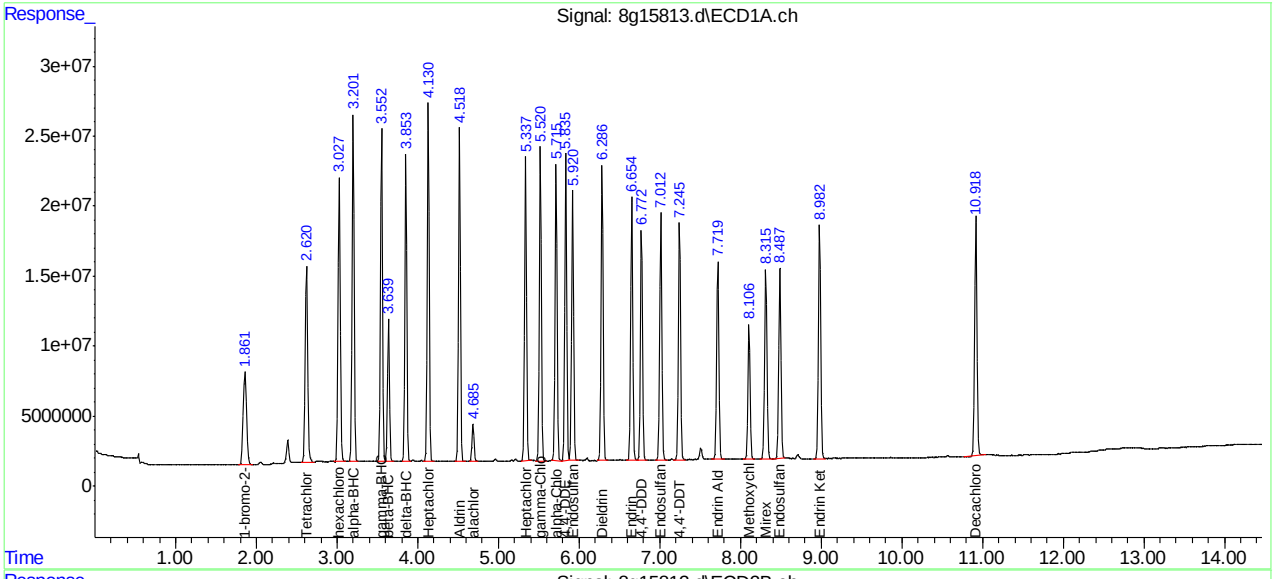
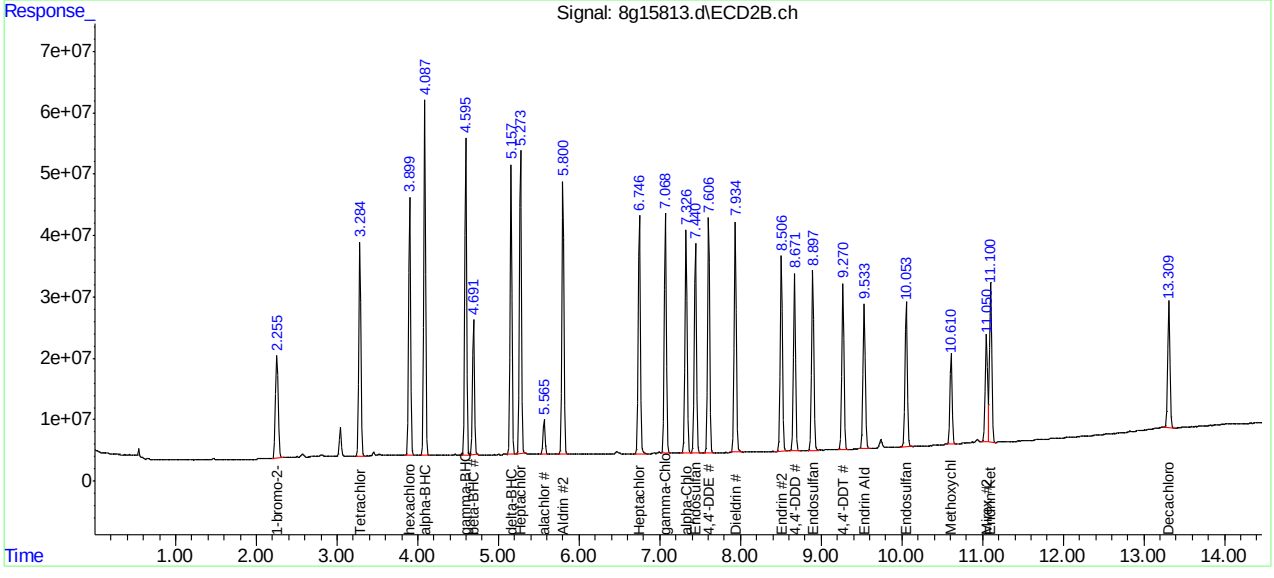
Quantitation Report (QT Reviewed)

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





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

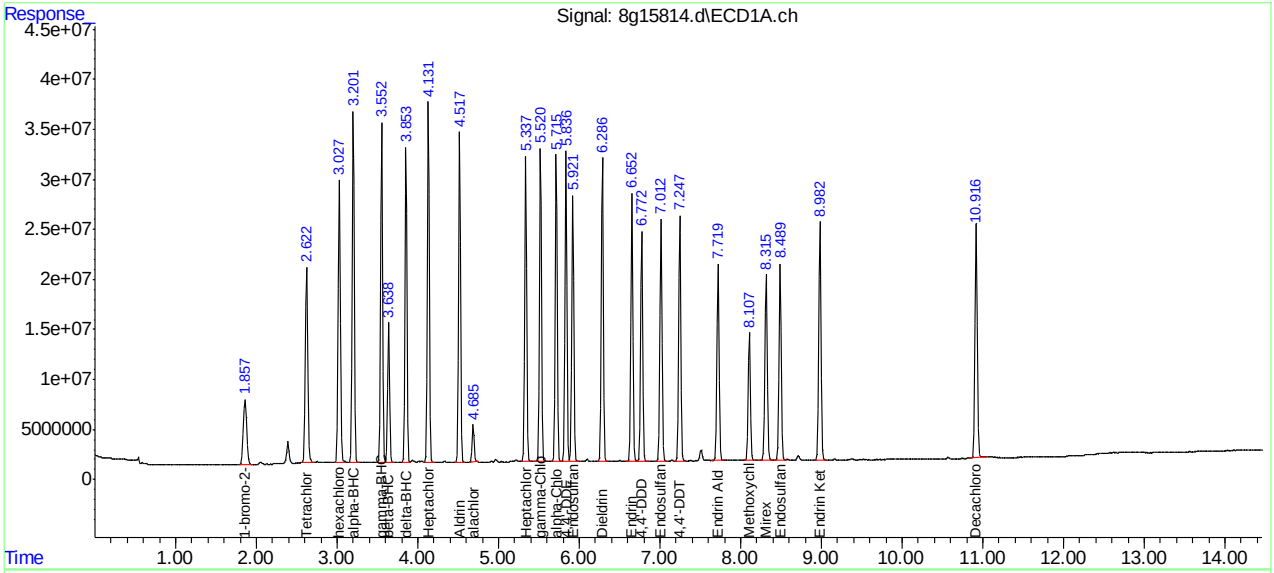
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

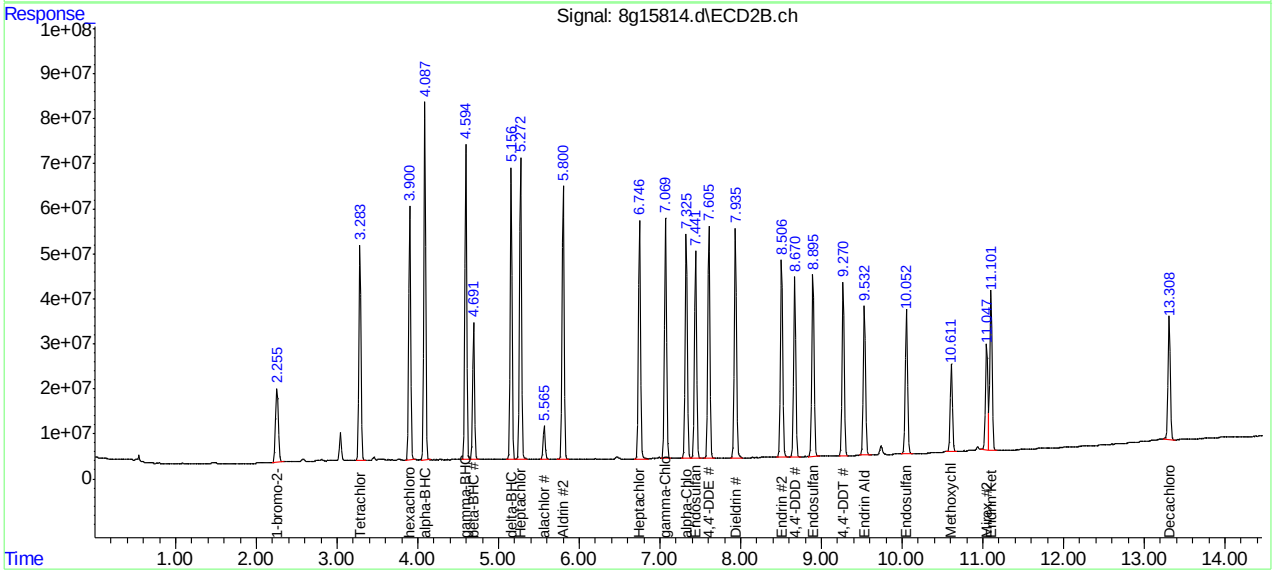
Quantitation Report (QT Reviewed)

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





Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 06/13/18 10:11

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.

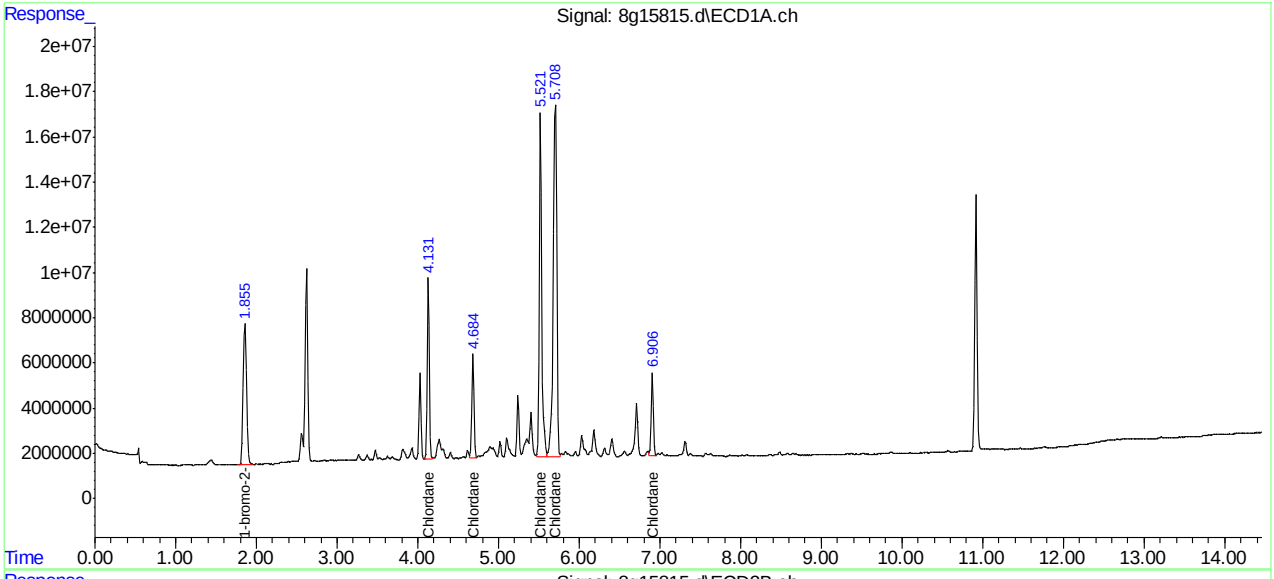
11.6.26 11

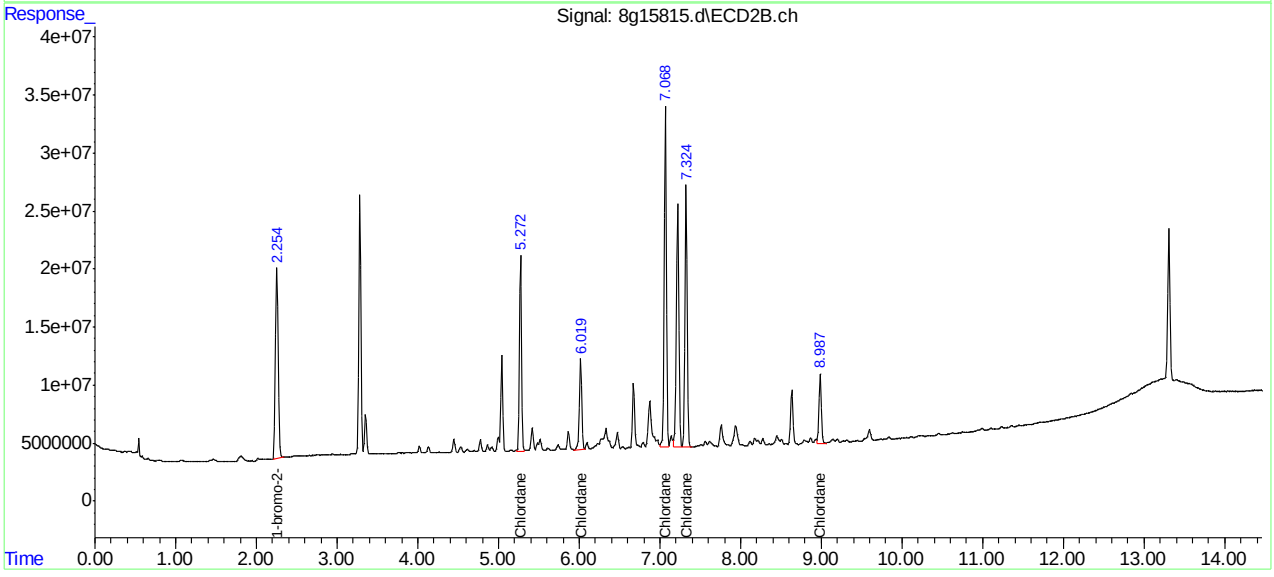
Quantitation Report (QT Reviewed)

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





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

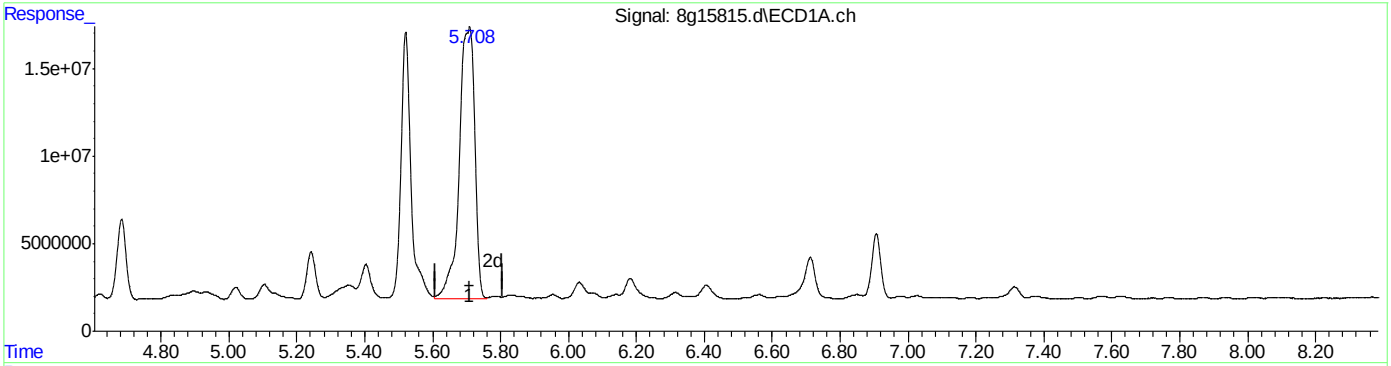
Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlordane-D		2	7.32	Split peak
Decachlorobiphenyl	2051-24-3	2	13.31	Poorly defined baseline

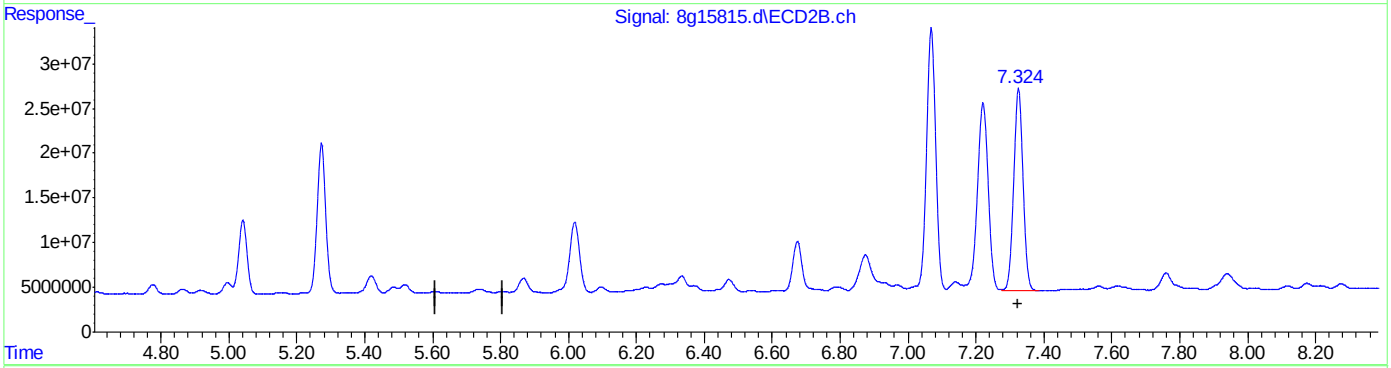
Quantitation Report (Qedit)

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





QEdit

(37) Chlordane {D}
5.709min 635.039 PPB
response 495248588

(37) Chlordane {D} #2
7.325min 265.645 PPB
response 429669537

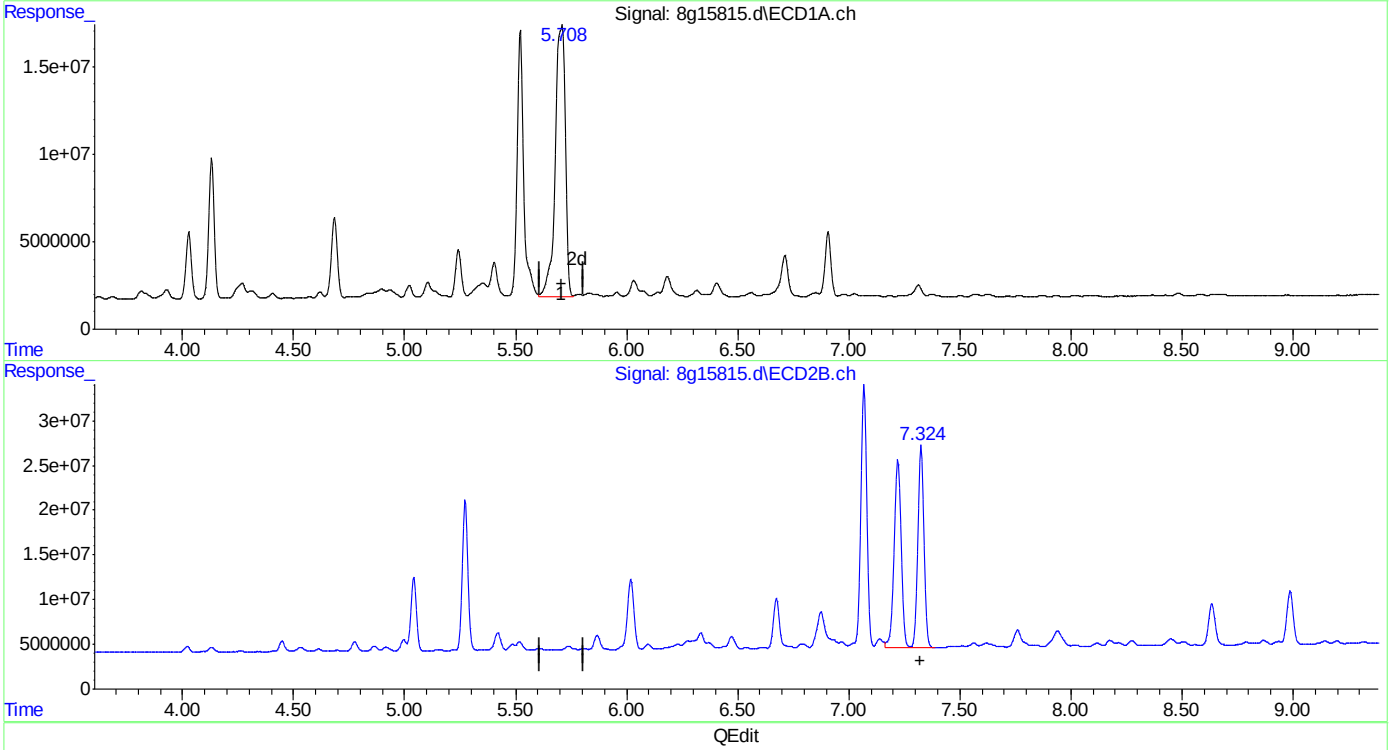
(+) = Expected Retention Time
8PST511.M Mon Jun 11 14:39:22 2018

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

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 06/13/18 10:11

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

	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.

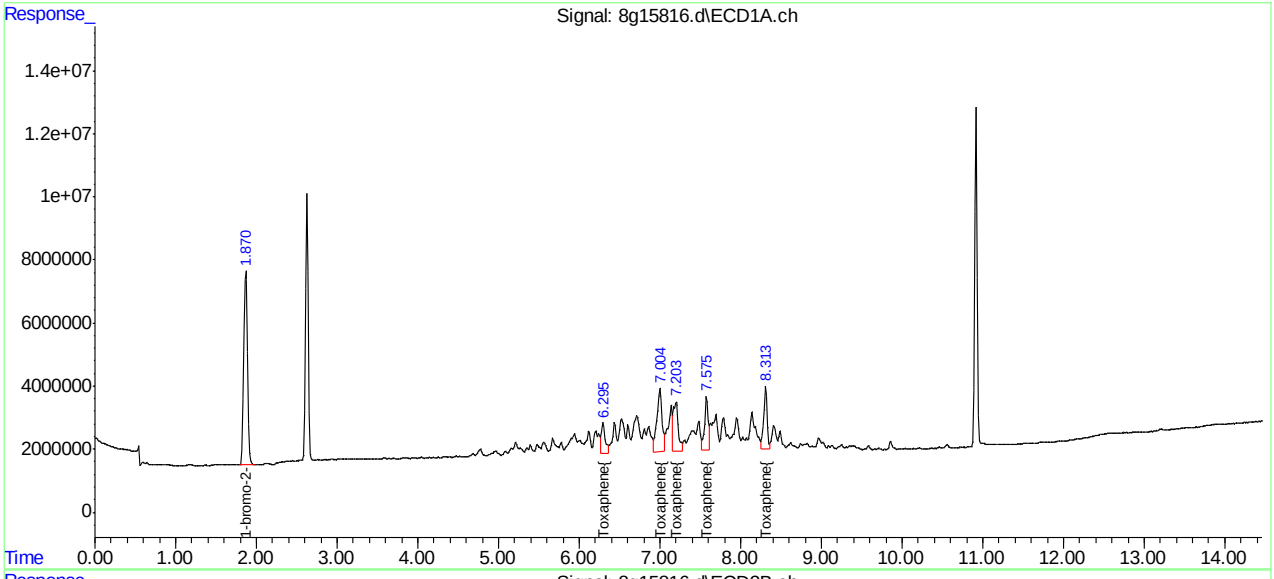
11.6.27 11

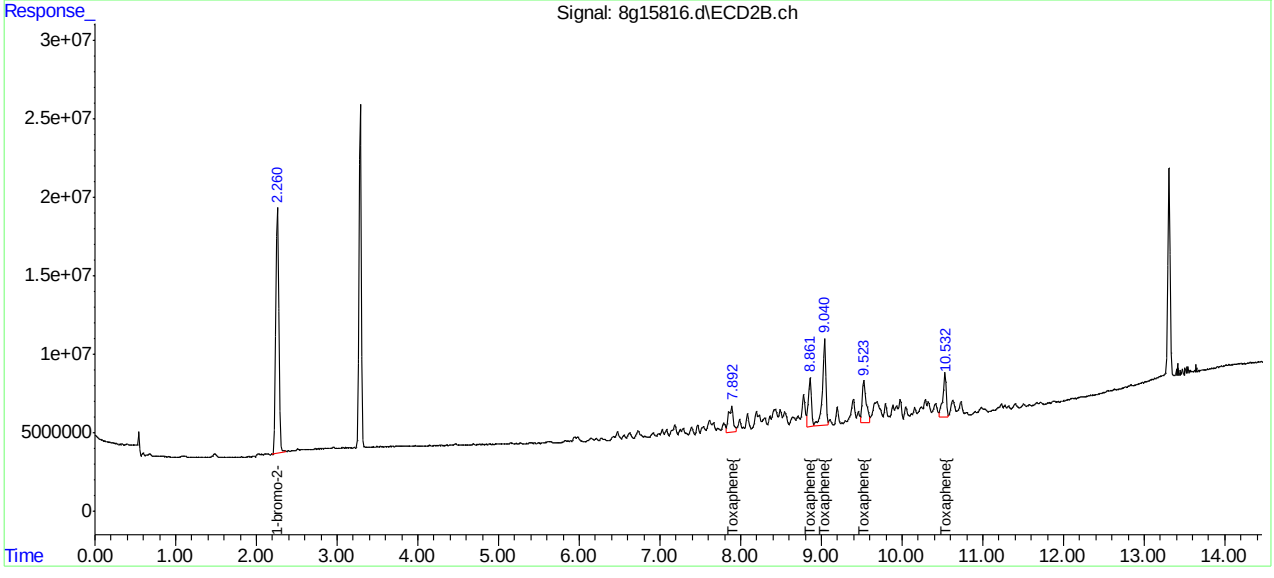
Quantitation Report (QT Reviewed)

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

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

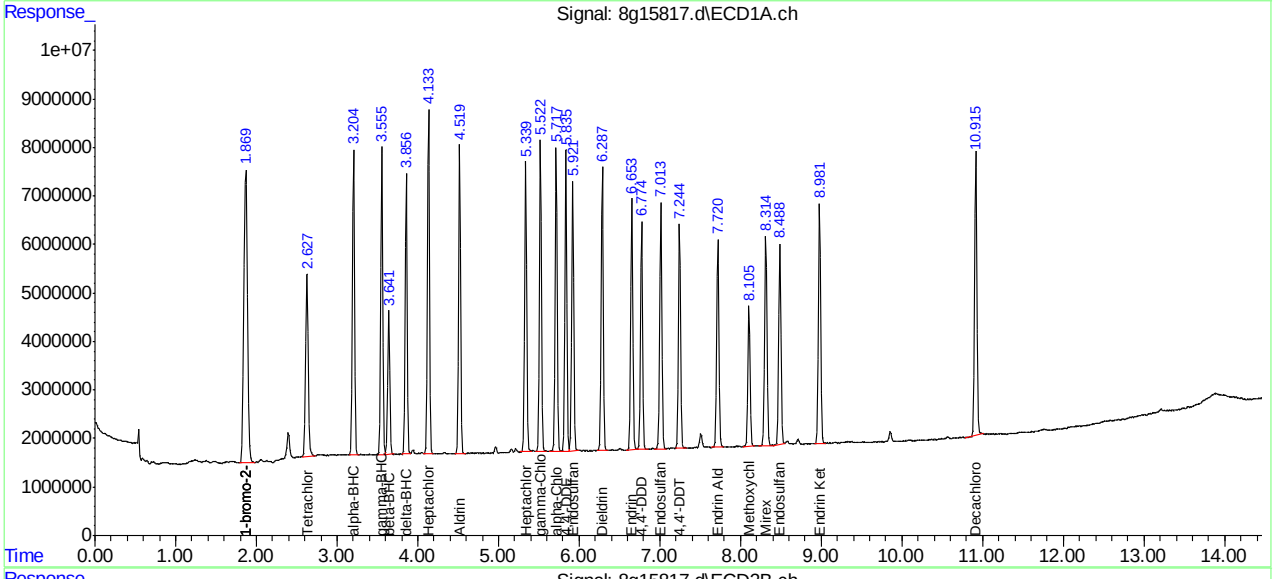
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

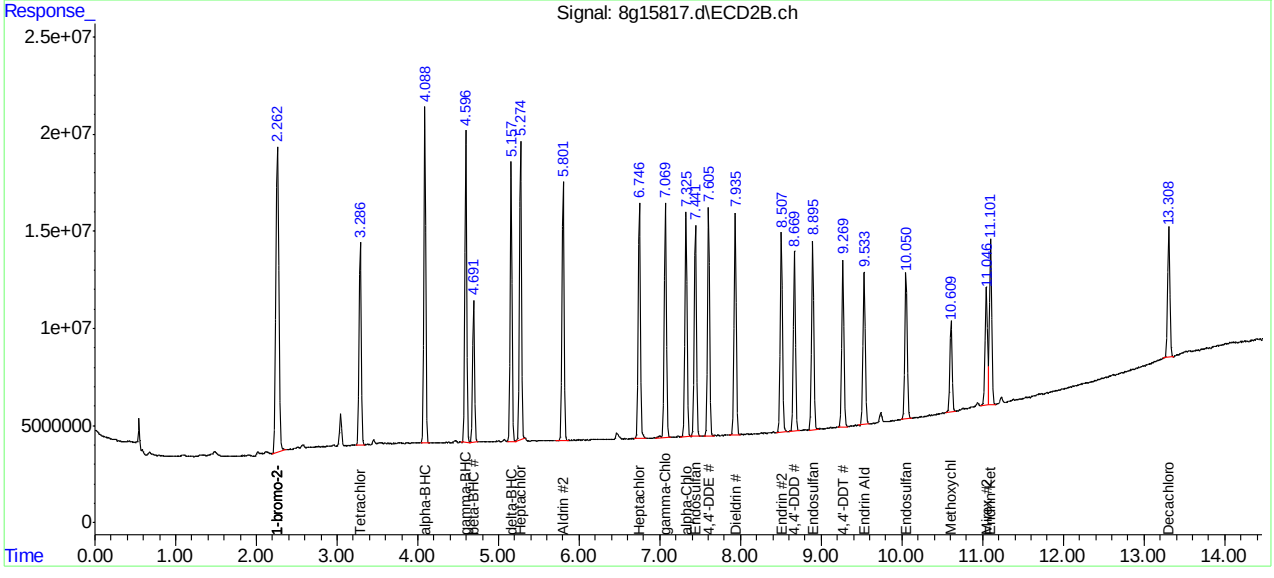
Quantitation Report (QT Reviewed)

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





Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 06/13/18 10:11

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.

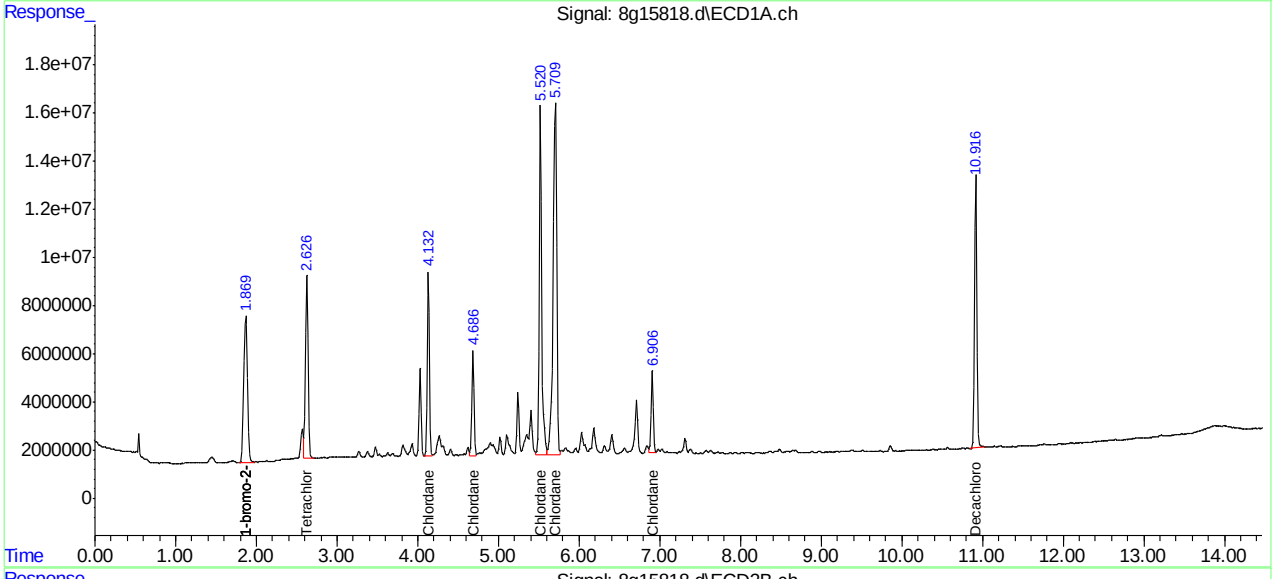
11.6.29 11

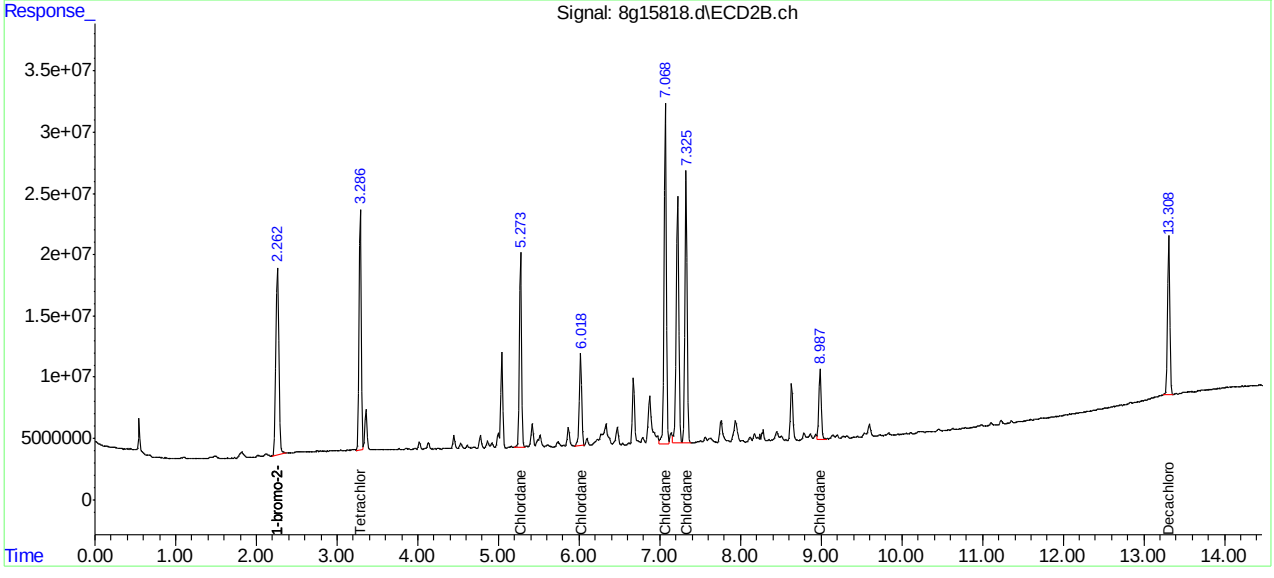
Quantitation Report (QT Reviewed)

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





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

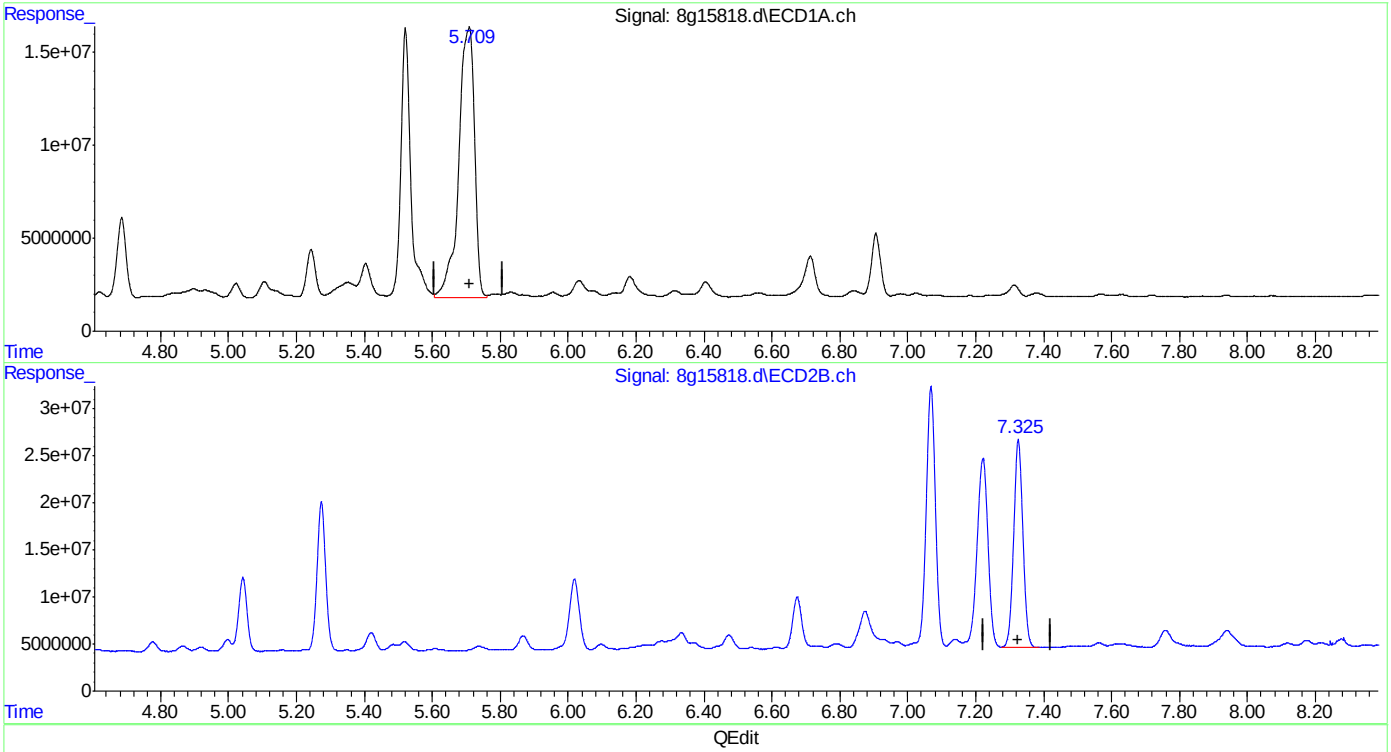
Parameter	CAS	Sig#	R.T. (min.)	Reason
Chlordane-D		2	7.32	Split peak

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



QEdit

(37) Chlordane {D}
5.709min 455.746 PPB
response 470233318

(37) Chlordane {D} #2
7.325min 231.542 PPB
response 416362219

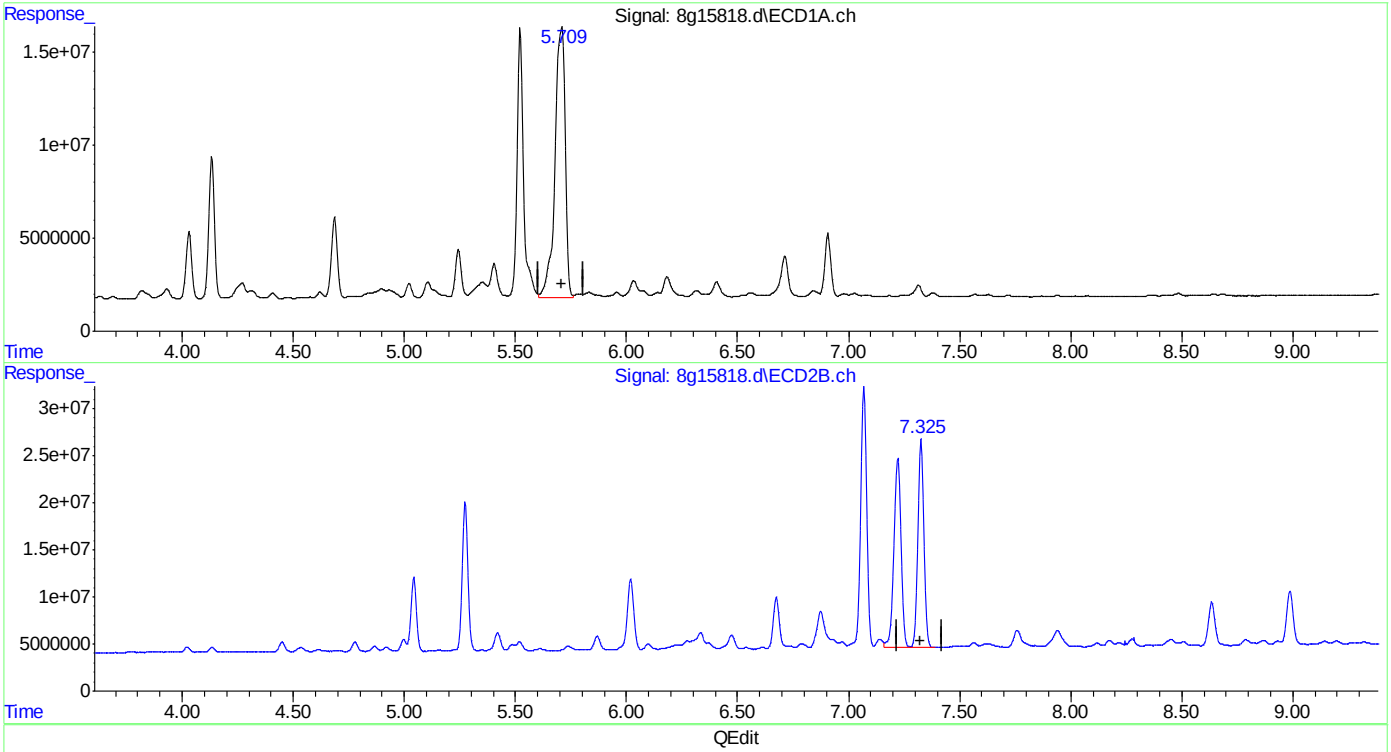
(+) = Expected Retention Time
8PST511.M Mon Jun 11 15:13:02 2018

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



QEdit

(37) Chlordane {D}
5.709min 455.746 PPB
response 470233318

(37) Chlordane {D} #2
7.325min 484.236 PPB m
response 870759543

(+) = Expected Retention Time
8PST511.M Mon Jun 11 15:13:15 2018

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						

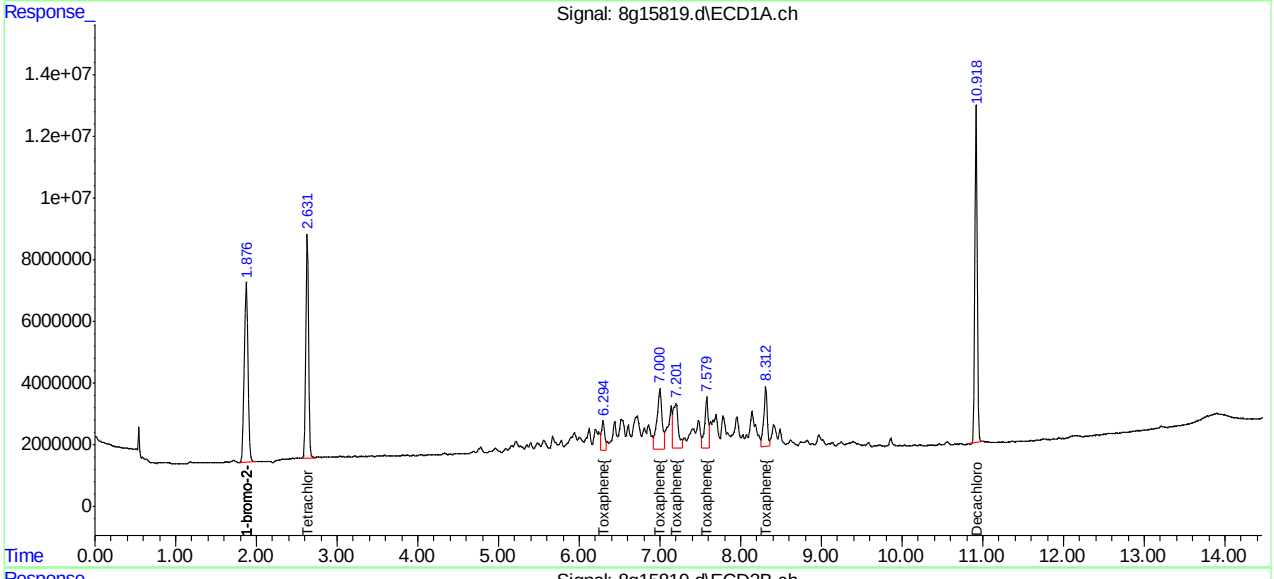
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

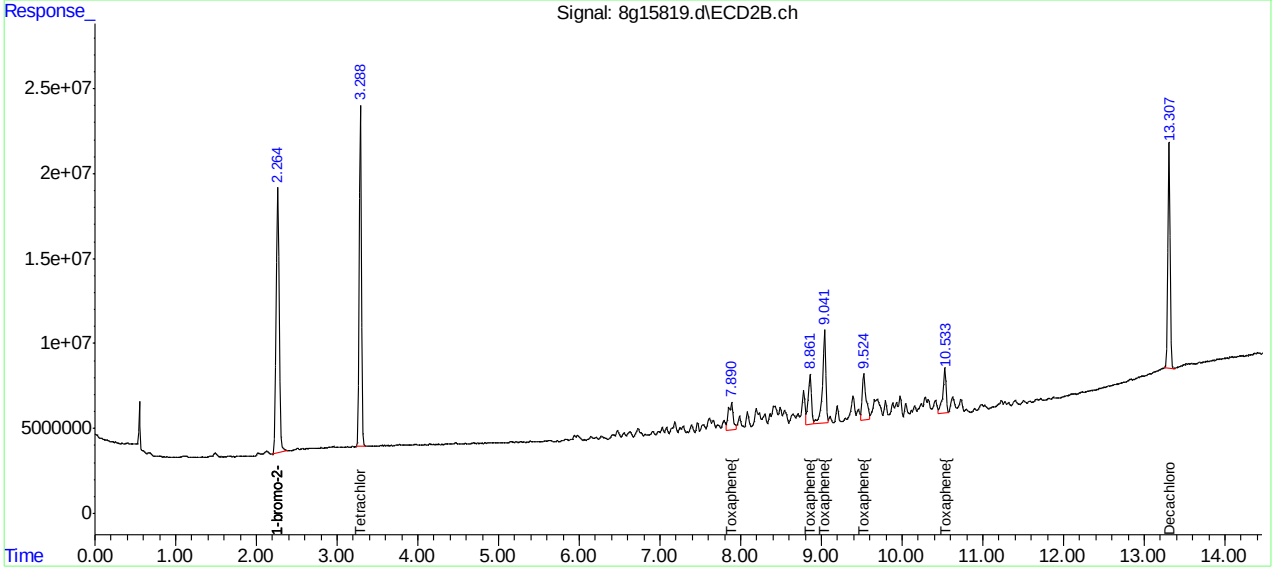
Quantitation Report (QT Reviewed)

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						

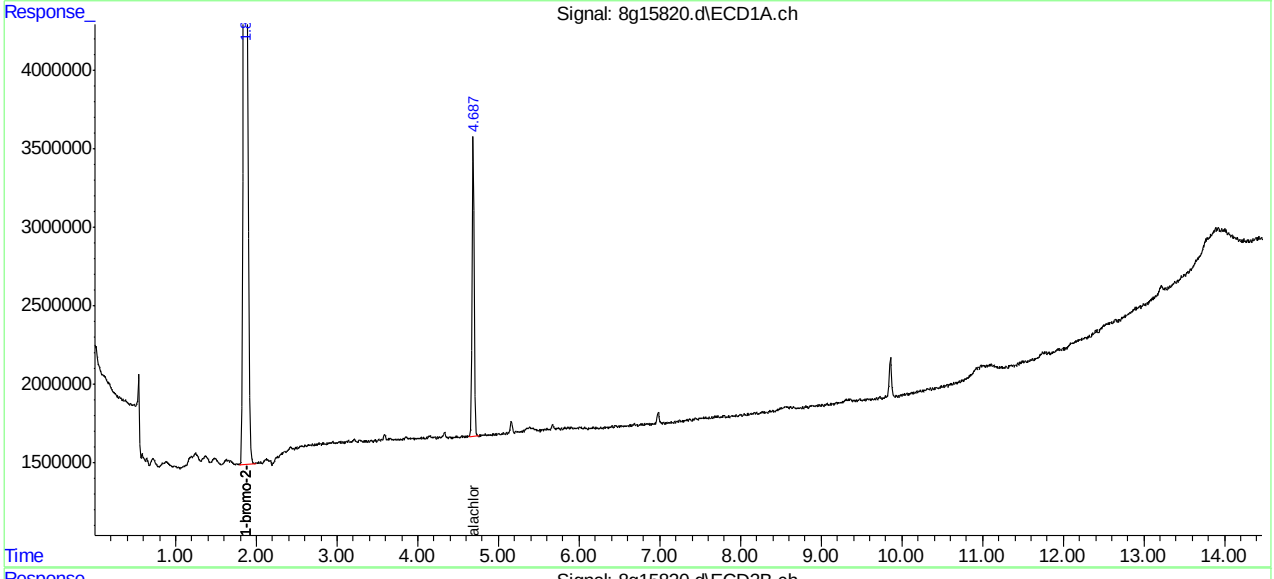
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

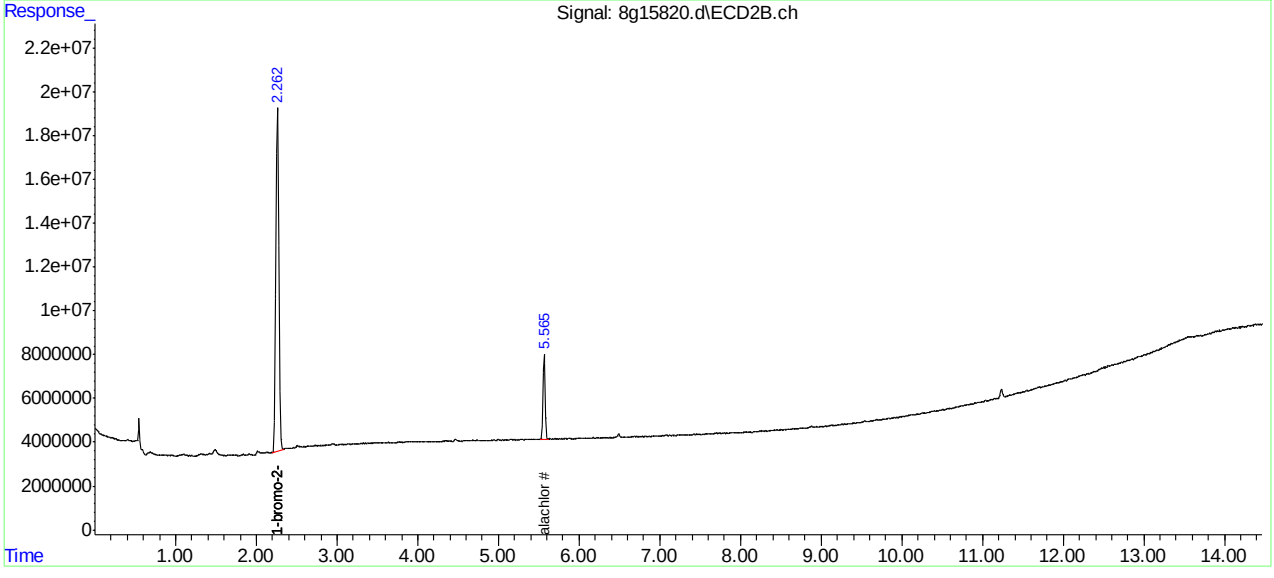
Quantitation Report (QT Reviewed)

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





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
	SemiQuant Compounds - Not Calibrated on this Instrument						

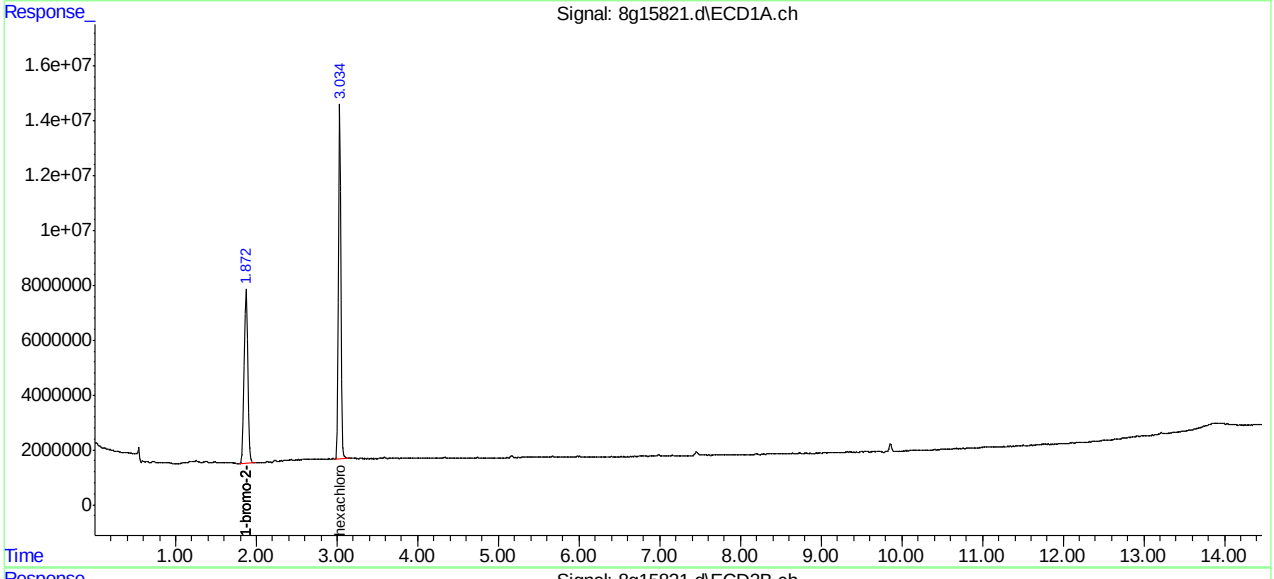
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

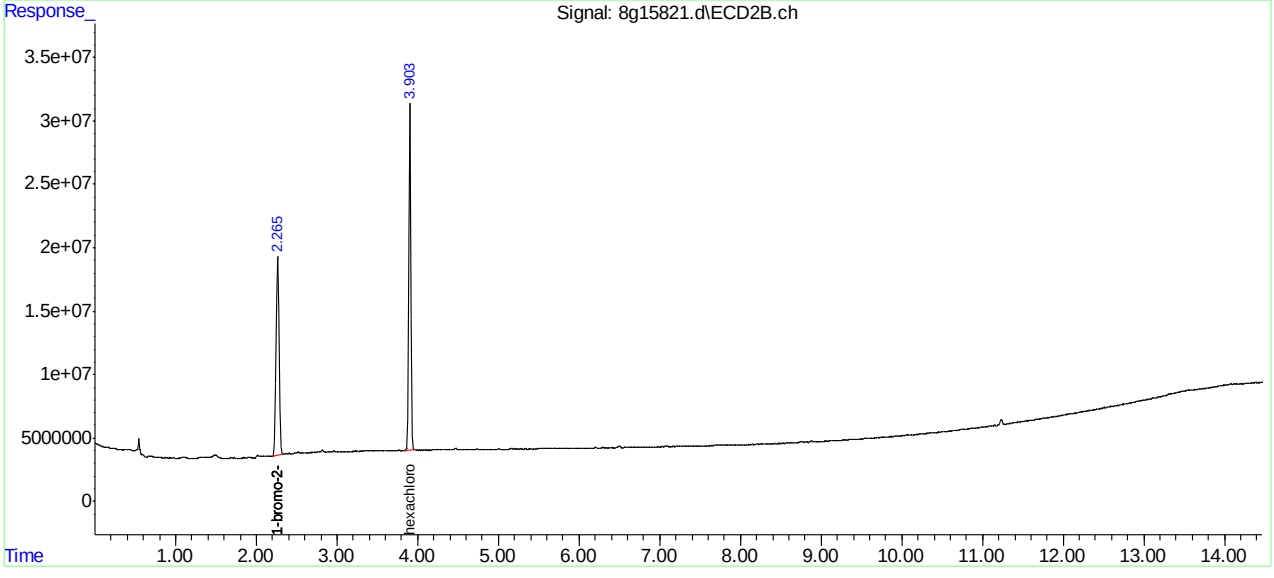
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\8G511\
Data File : 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

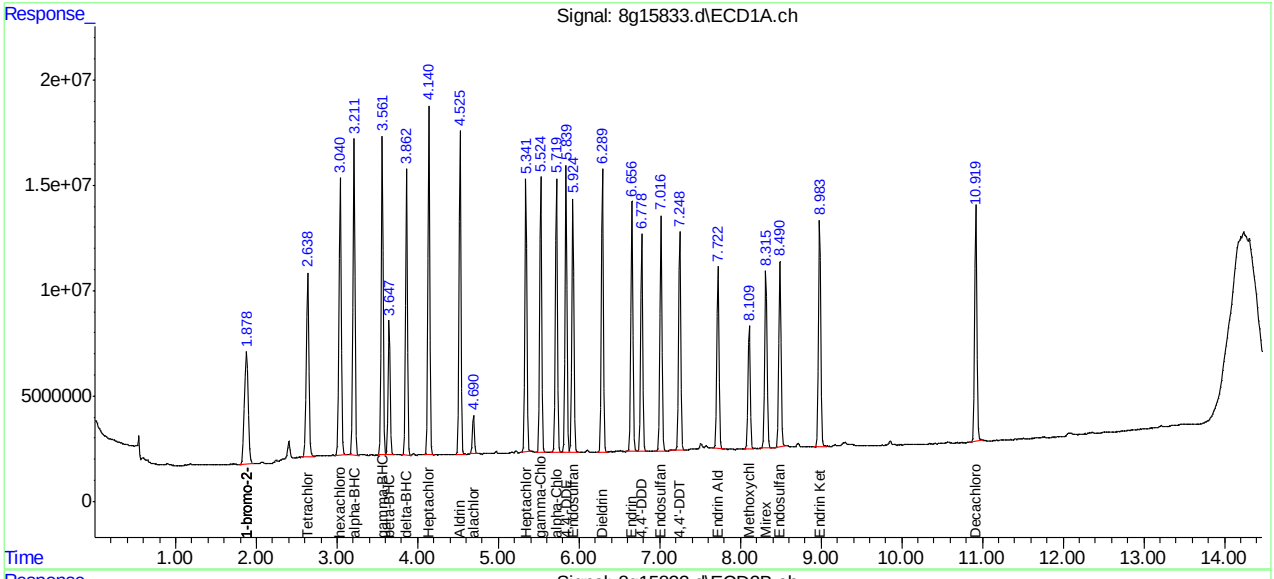
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

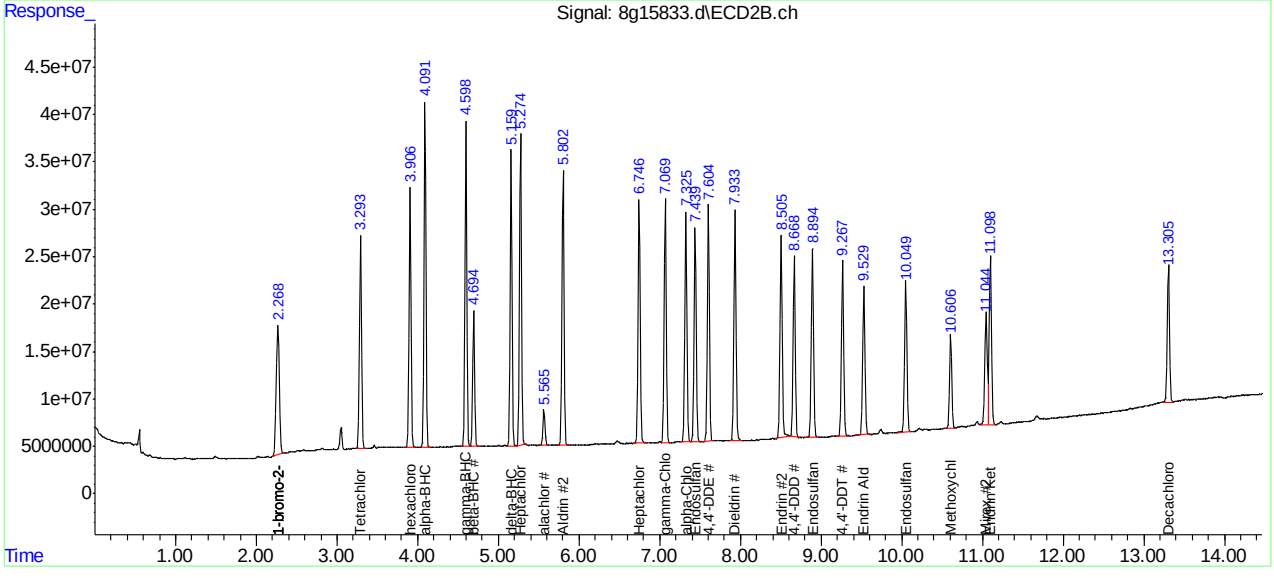
Quantitation Report (QT Reviewed)

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





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 : 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

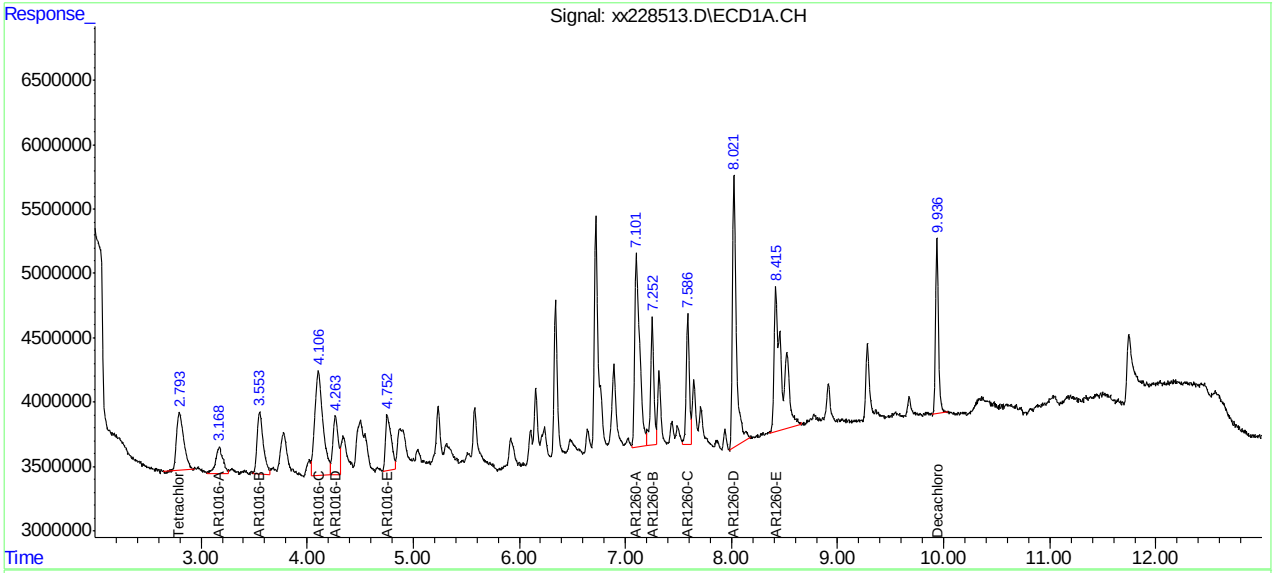
11

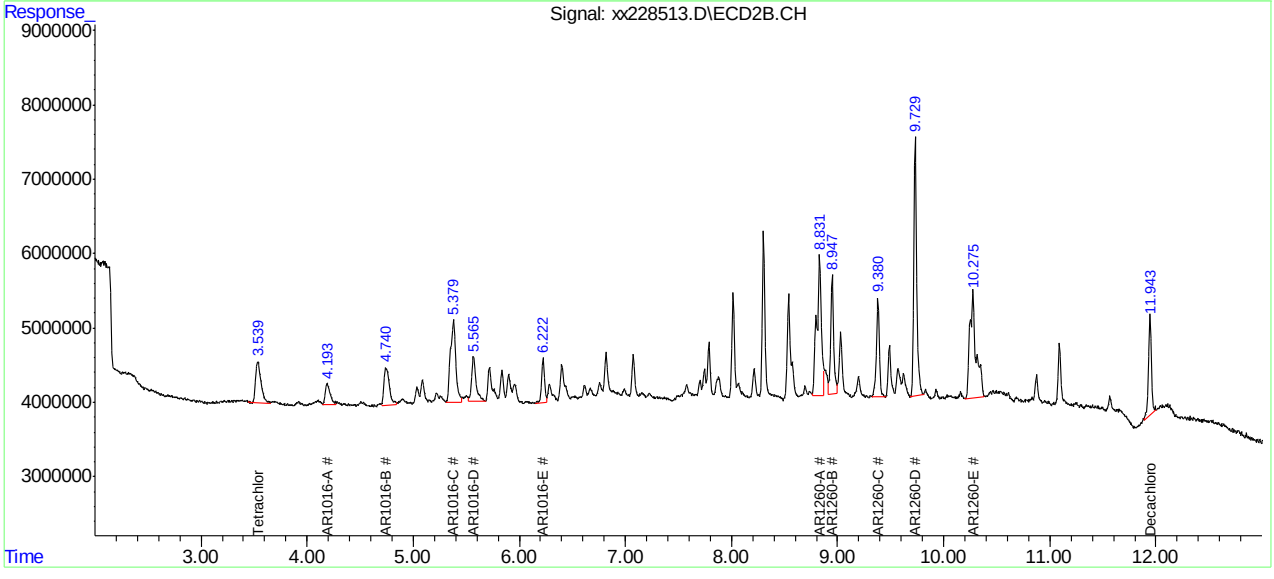
Quantitation Report (QT Reviewed)

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)





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

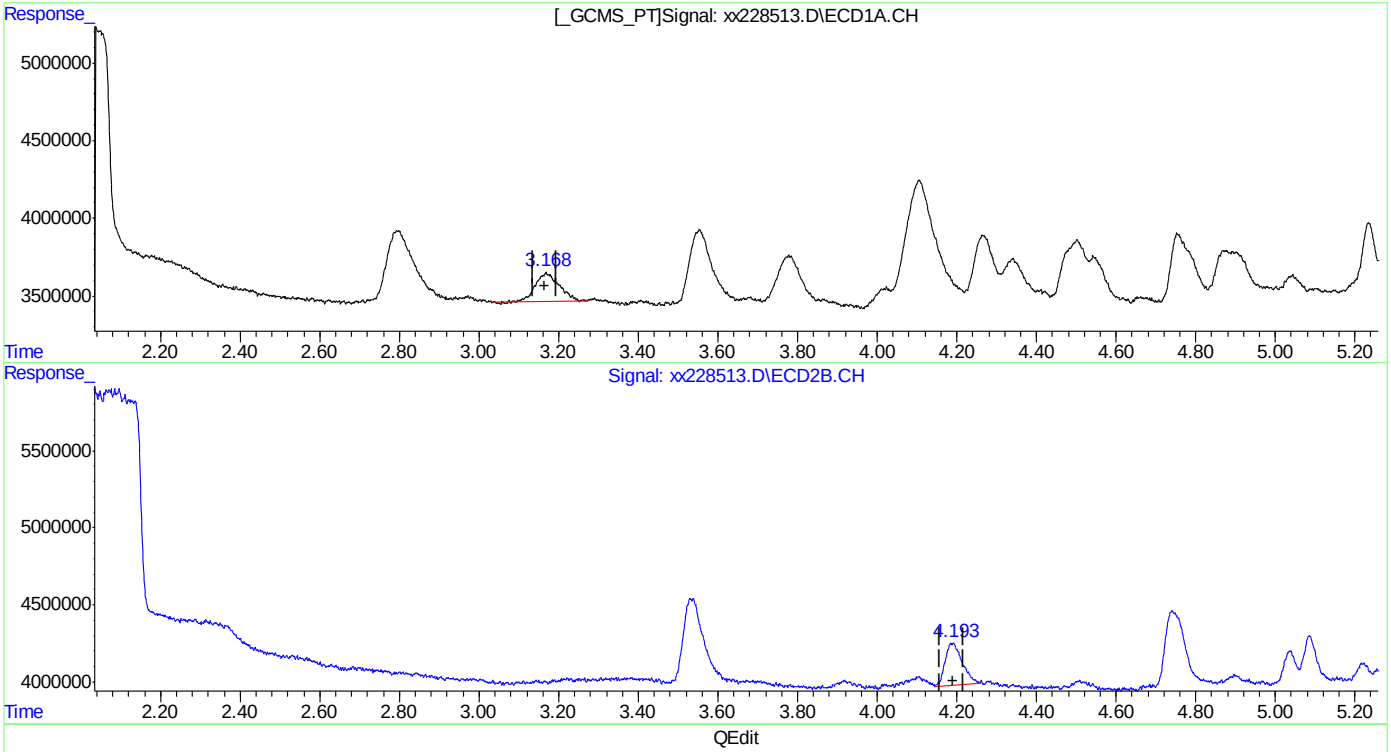
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-A		1	3.17	Split peak
AR1016-C		1	4.11	Split peak
AR1016-A		2	4.19	Split peak
AR1016-B		2	4.74	Split peak
AR1016-C		2	5.38	Split peak
AR1016-D		2	5.57	Split peak
AR1260-E		1	8.42	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.27	Split peak
Decachlorobiphenyl	2051-24-3	2	11.94	Poorly defined baseline

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)



QEdit

(41) AR1016-A
3.168min 44.520PPB
response 7721350

(41) AR1016-A #2
4.192min 61.697PPB
response 8113124

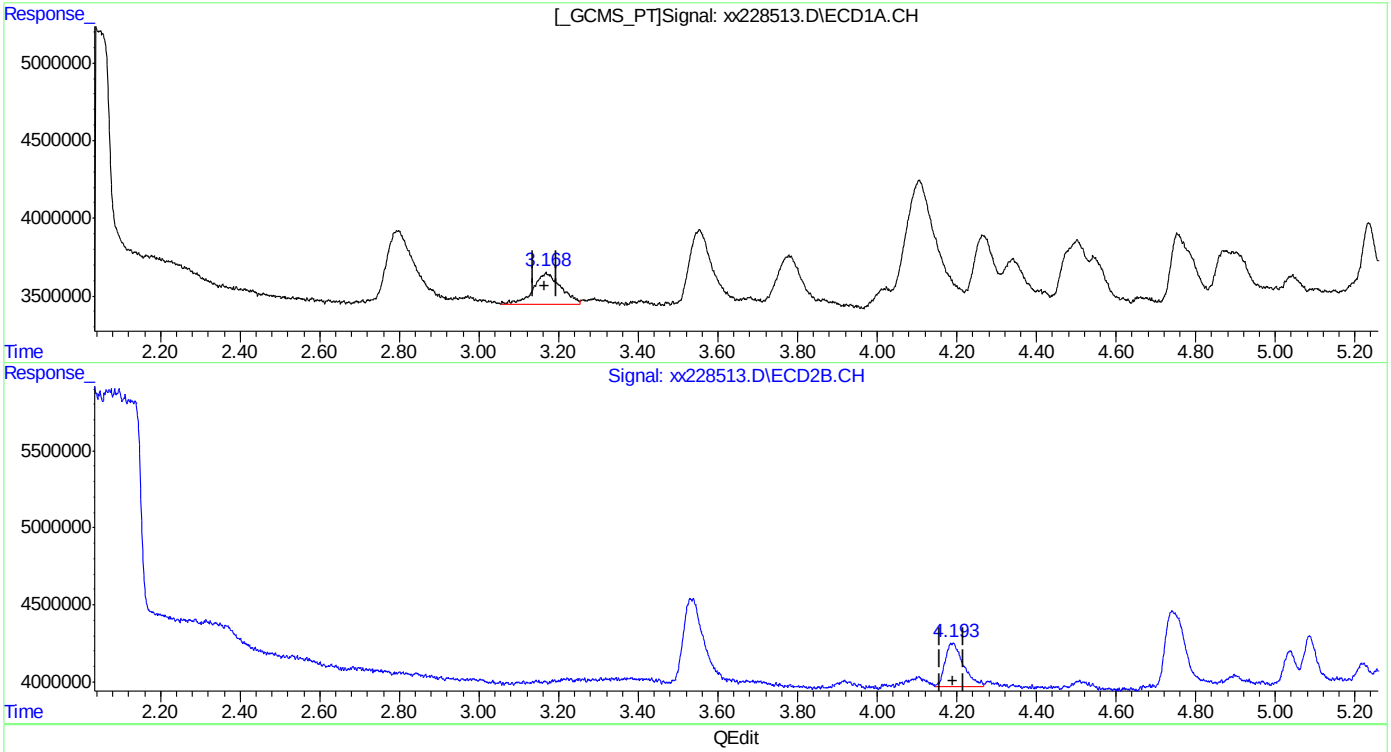
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:20:25 2018

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)



QEdit

(41) AR1016-A
3.168min 54.721PPB m
response 9490520

(41) AR1016-A #2
4.193min 69.258PPB m
response 9107309

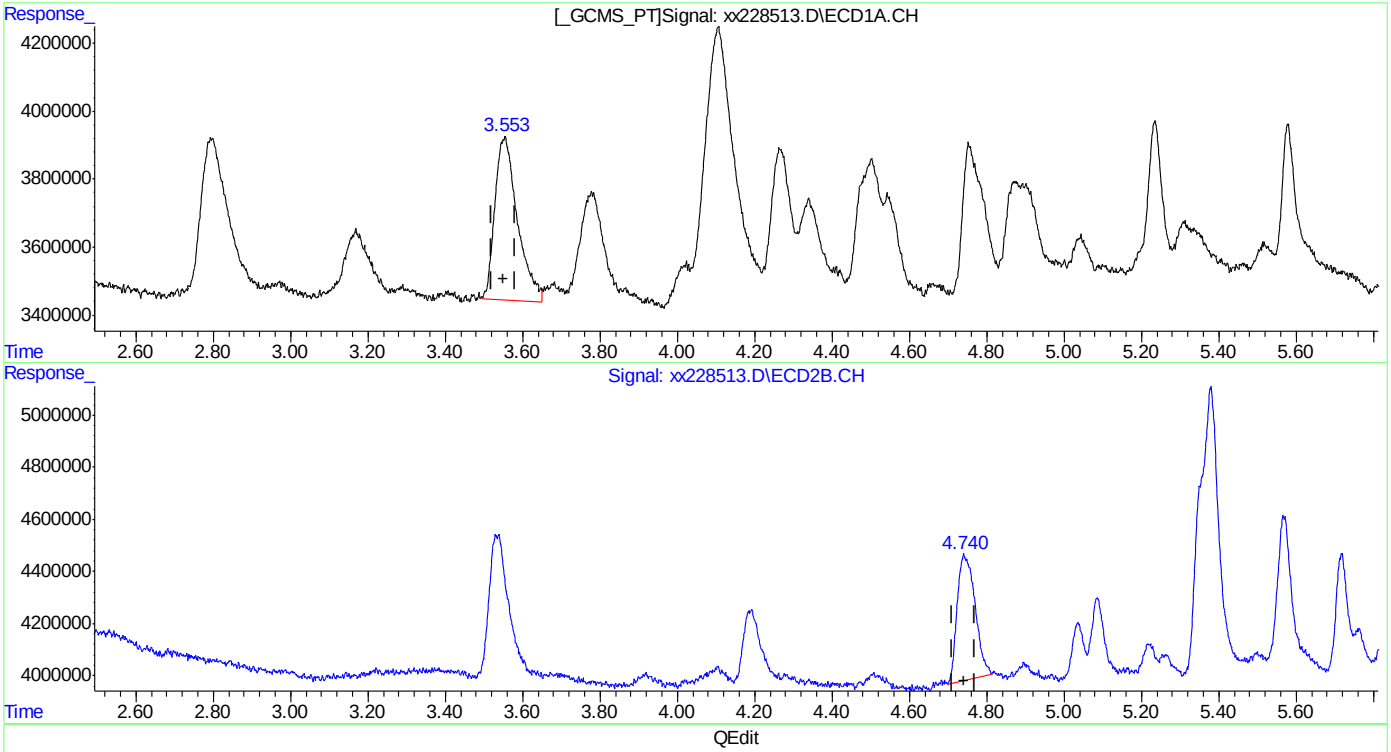
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:20:34 2018

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

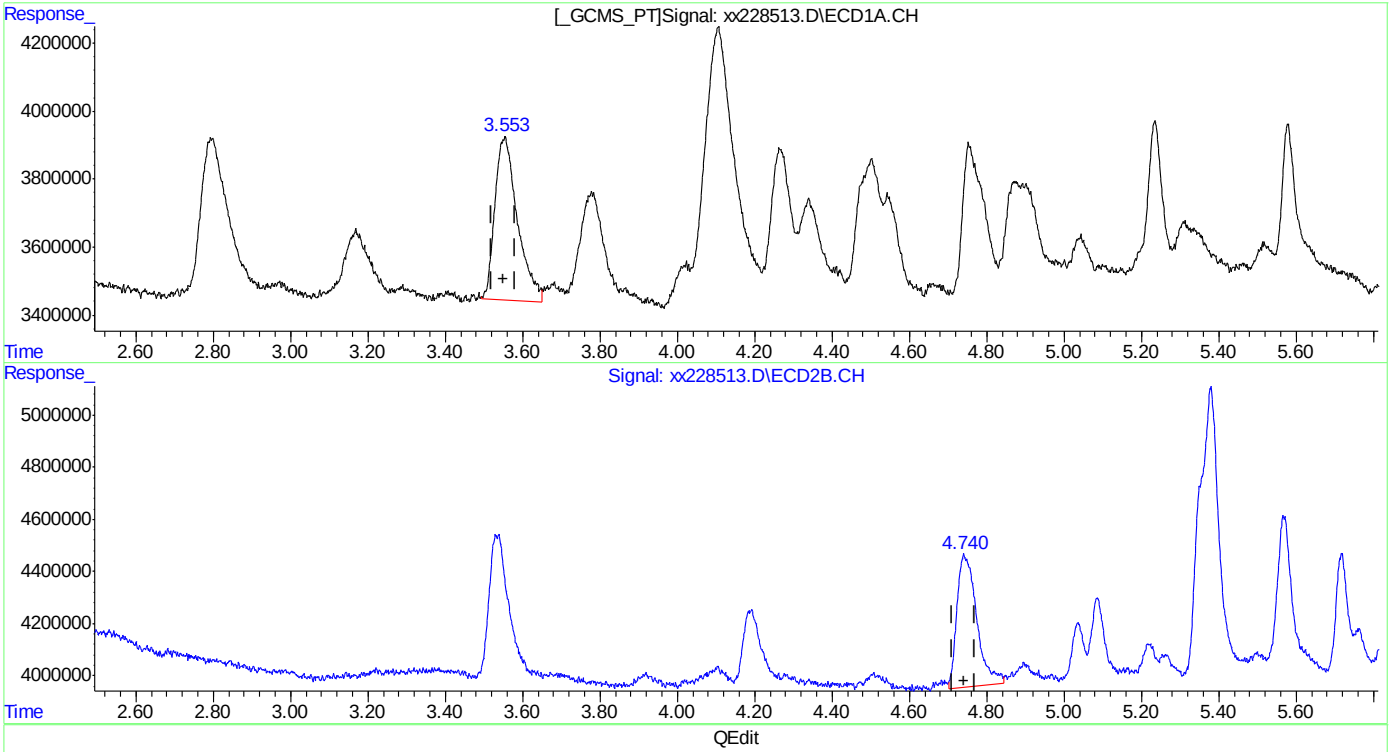
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:20:37 2018

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

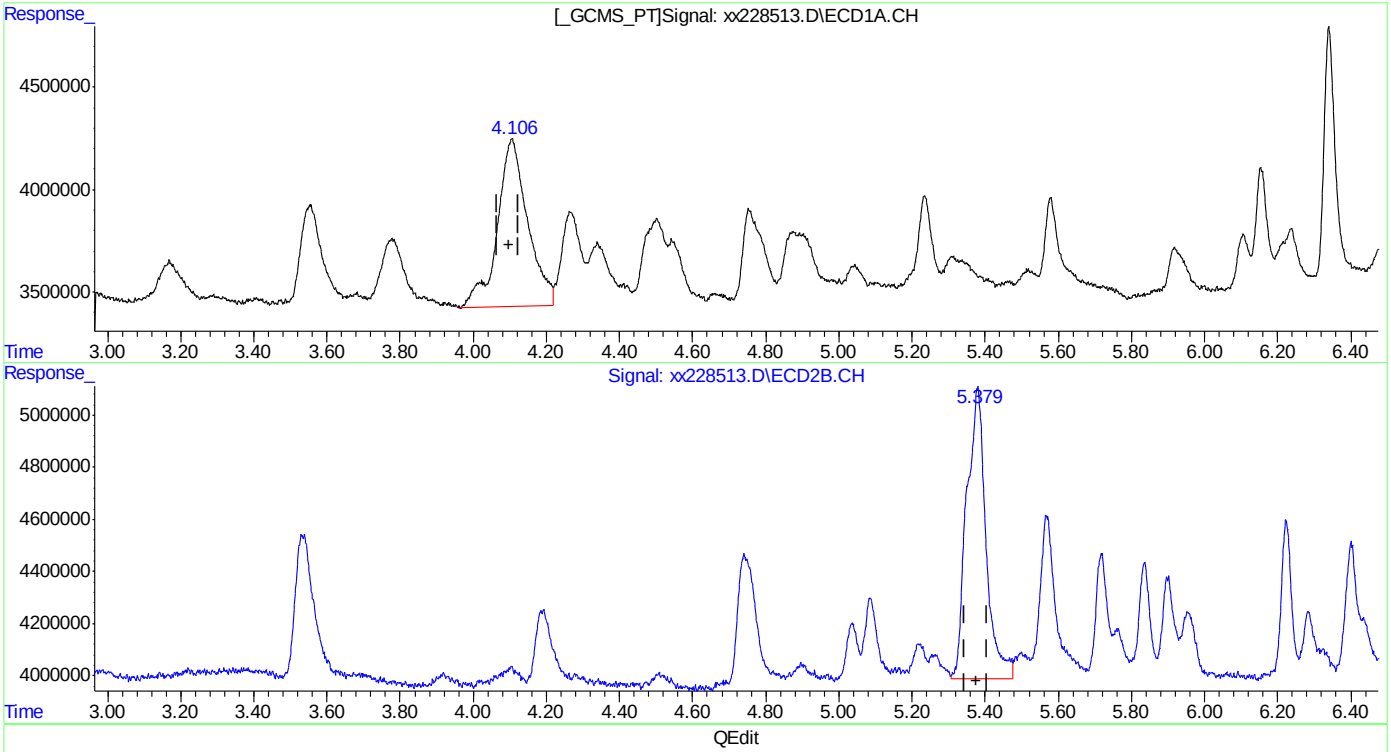
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:20:44 2018

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

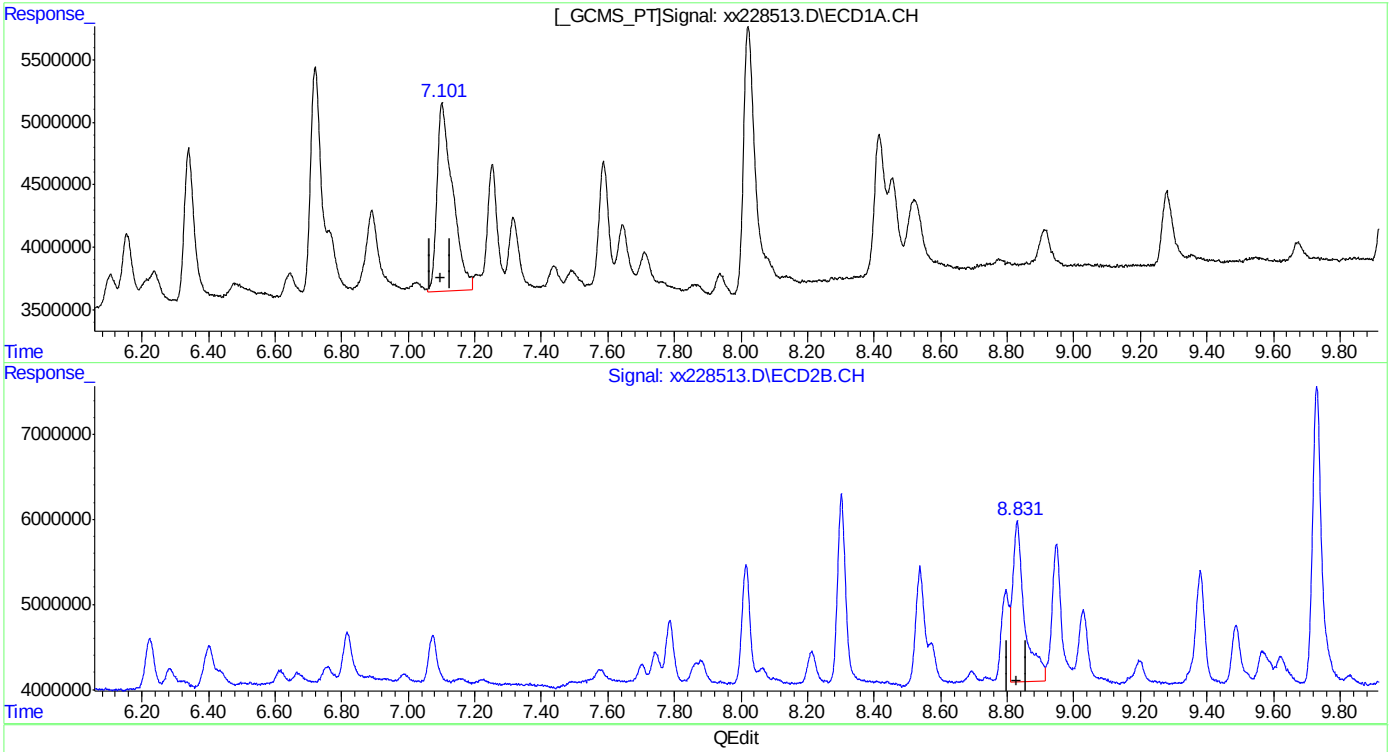
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:20:47 2018

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)



QEdit

(46) AR1260-A
7.101min 68.622PPB
response 48928163

(46) AR1260-A #2
8.830min 60.820PPB
response 47090842

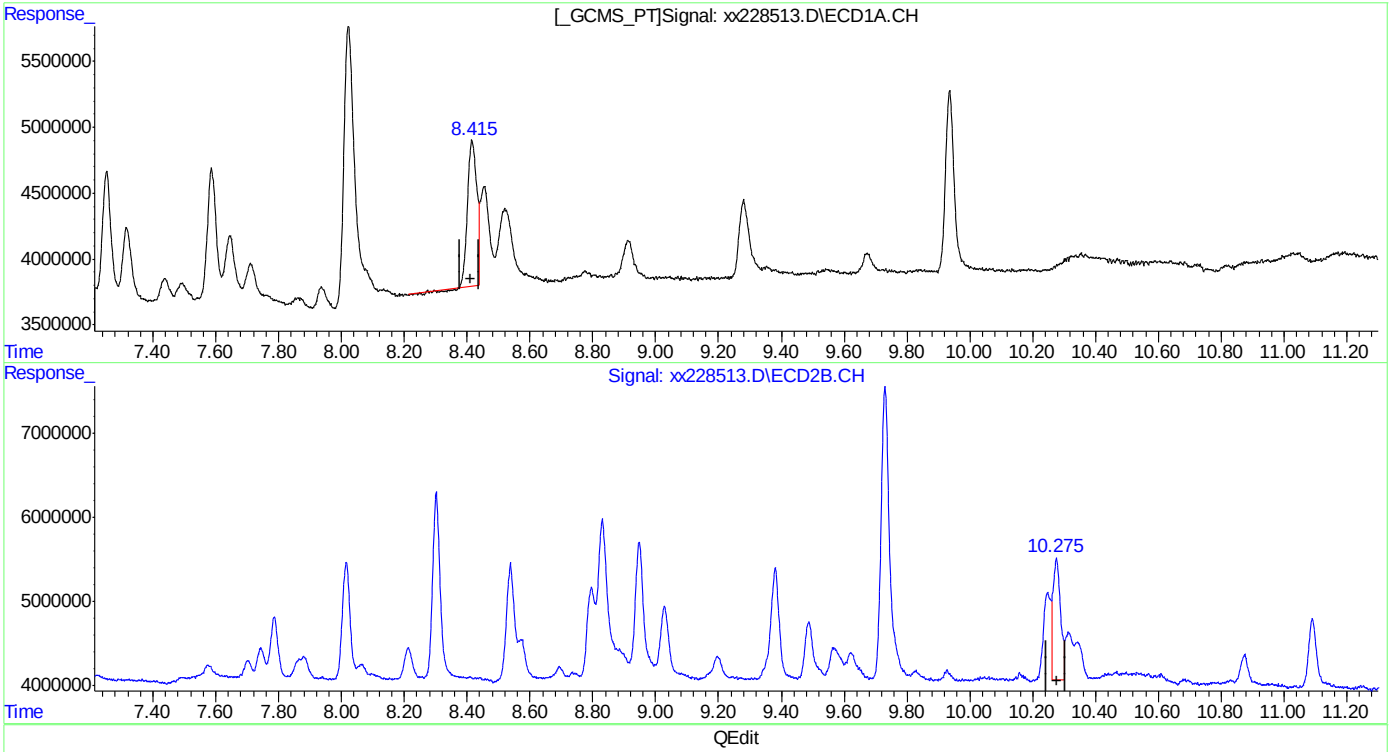
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:20:58 2018

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

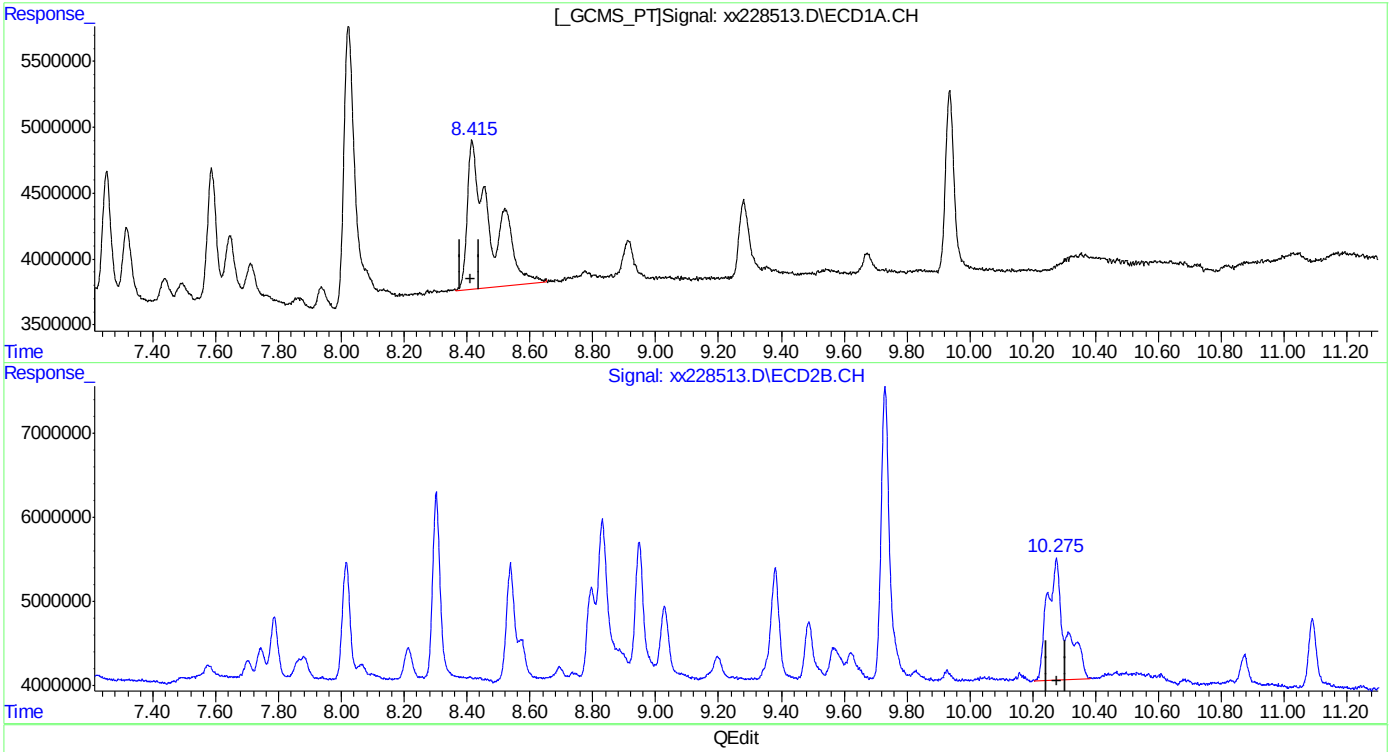
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:21:12 2018

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

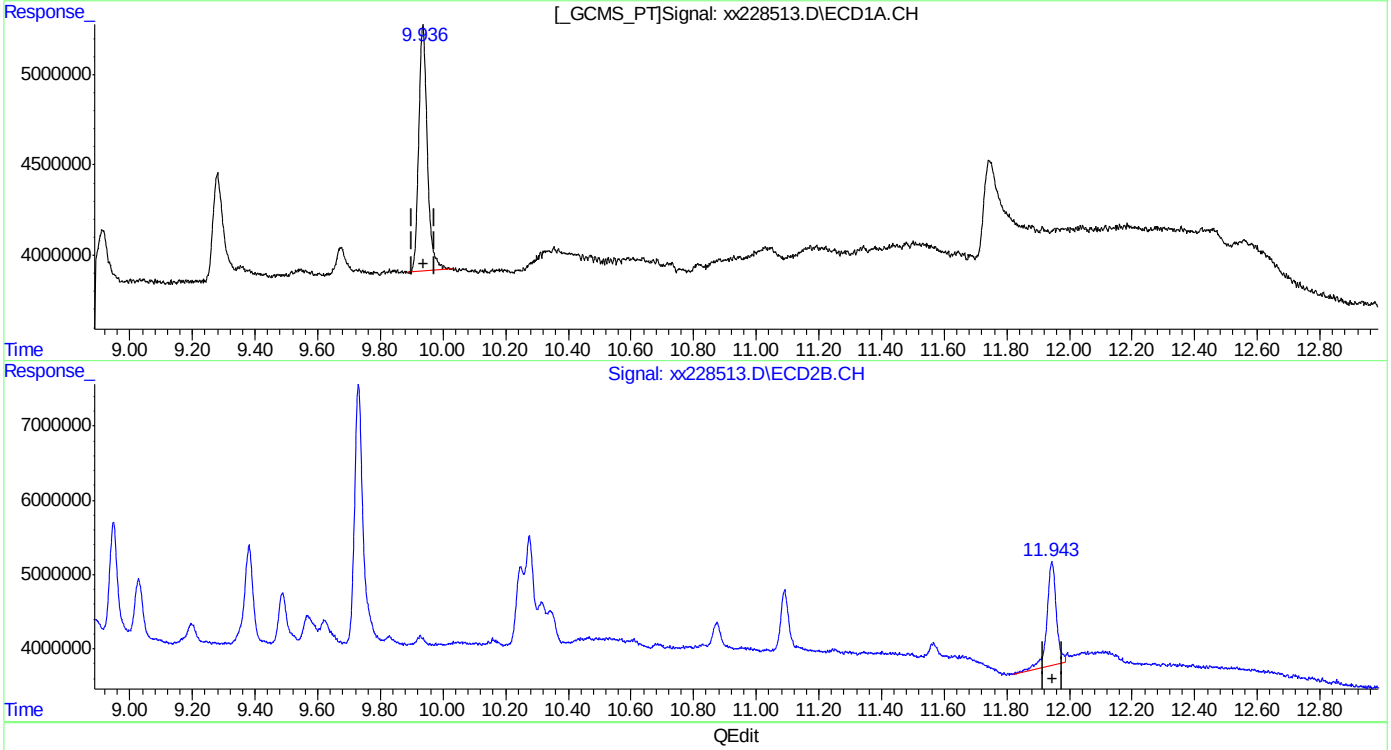
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:21:20 2018

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)



QEdit

(51) Decachlorobiphenyl (S)
9.936min 2.604ppb
response 25953752

(51) Decachlorobiphenyl #2 (S)
11.944min 3.226ppb
response 29460892

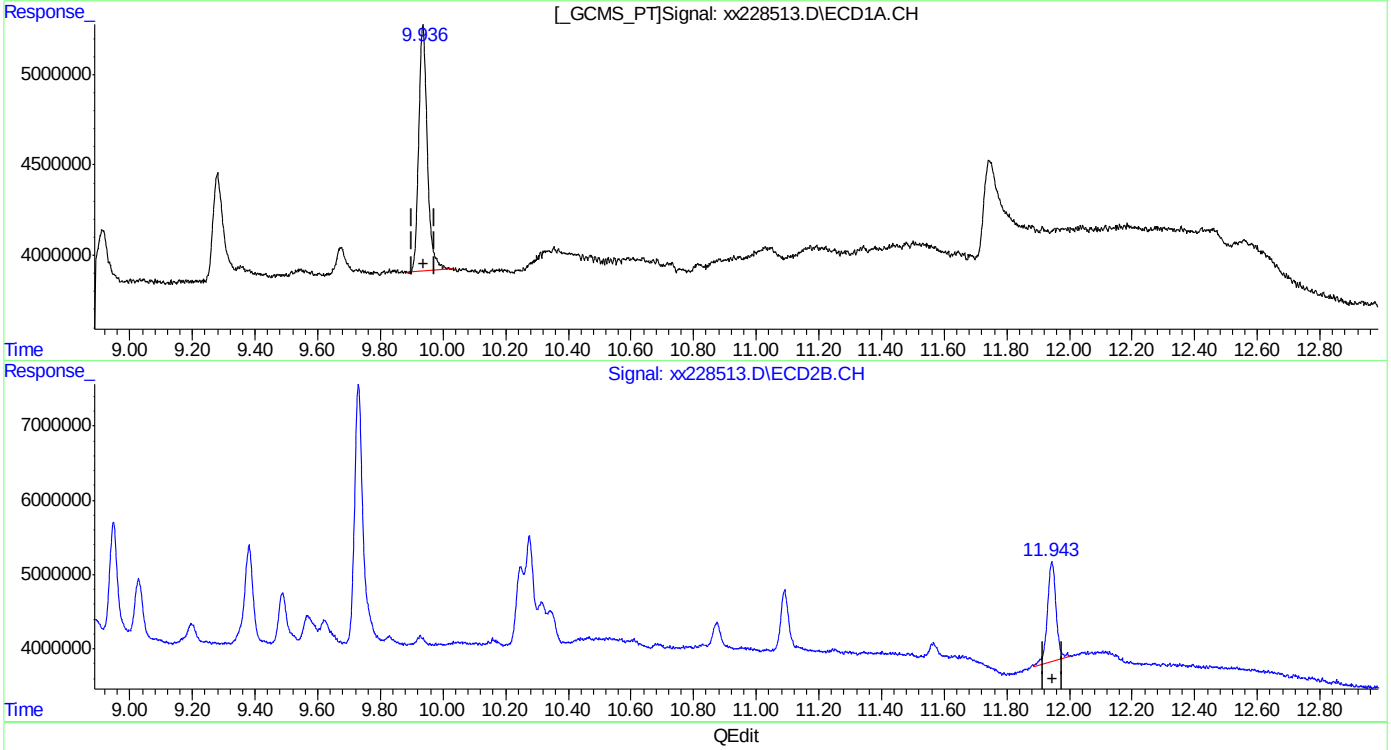
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:21:23 2018

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)



QEdit

(51) Decachlorobiphenyl (S)
9.936min 2.604ppb
response 25953752

(51) Decachlorobiphenyl #2 (S)
11.943min 2.842ppb m
response 25959334

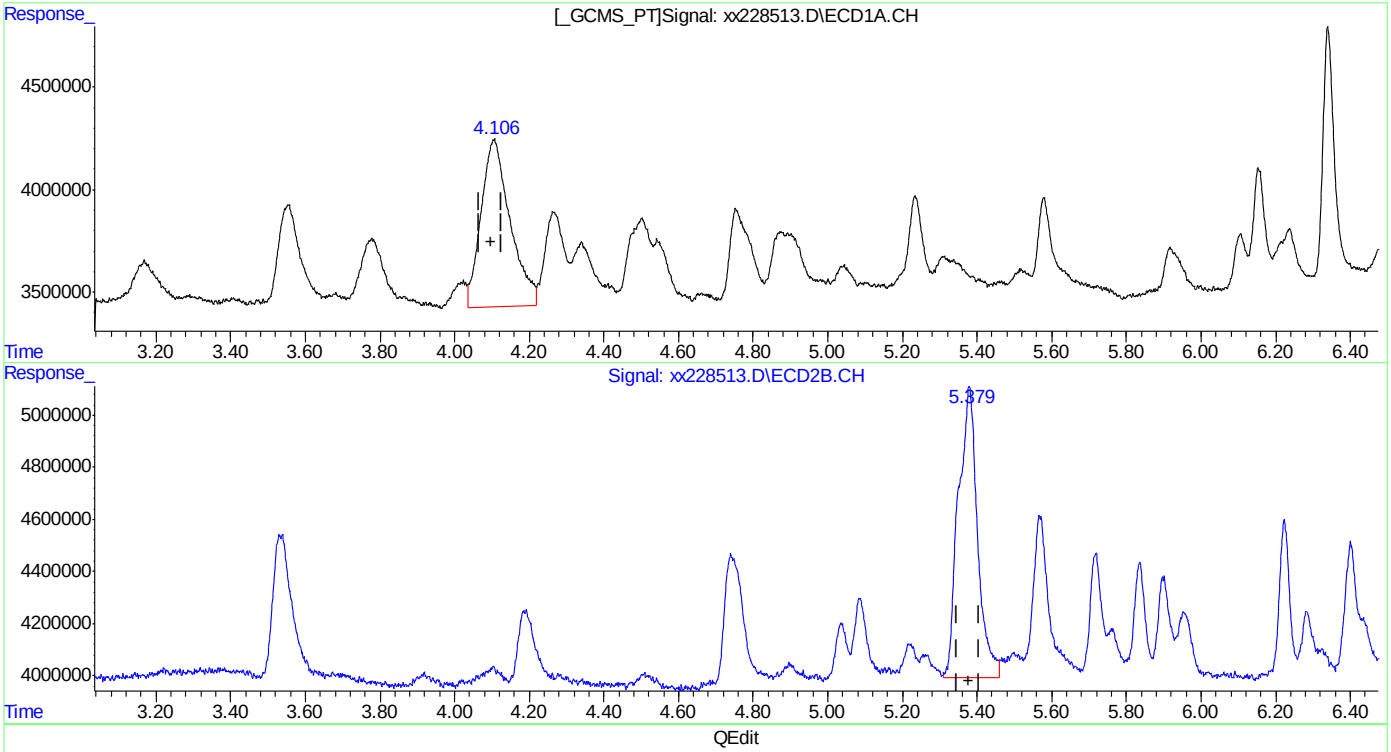
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:21:27 2018

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

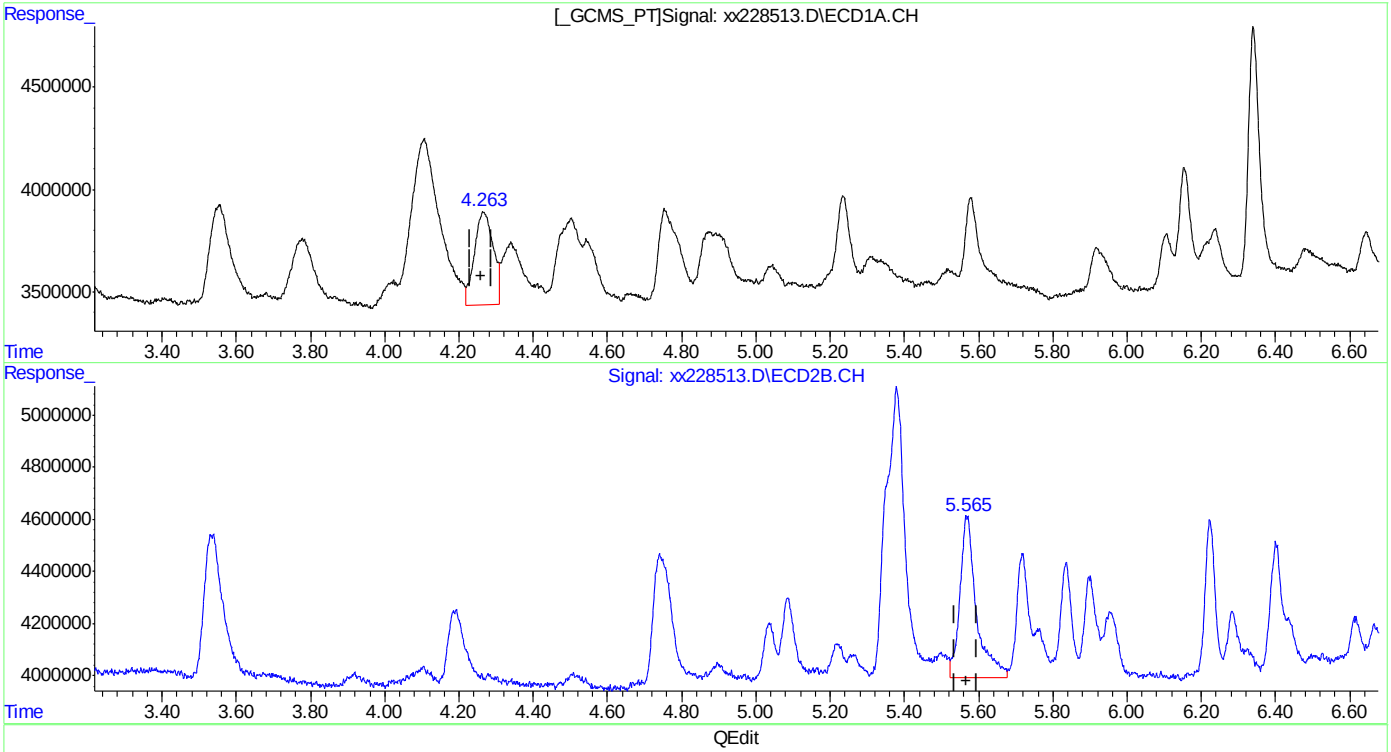
(+) = Expected Retention Time

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

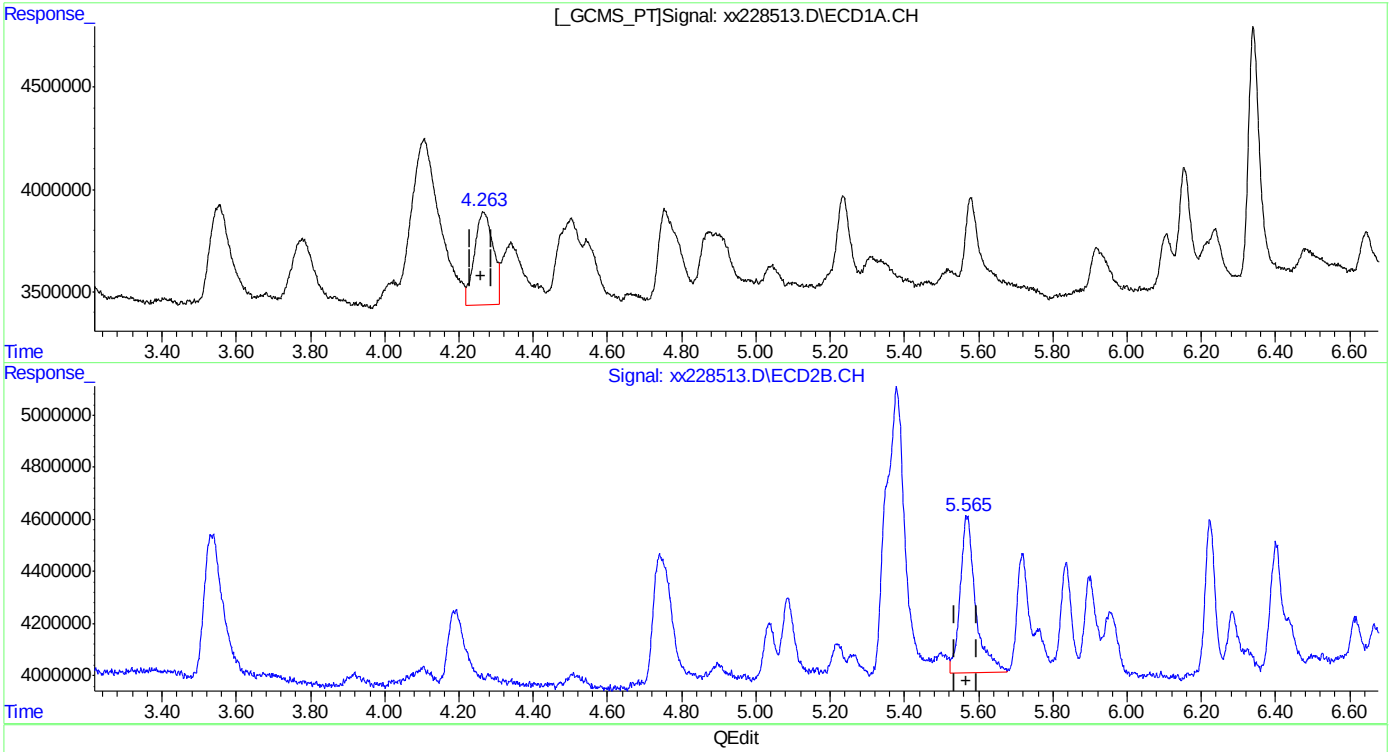
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:23:57 2018

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

(44) AR1016-D
4.266min 68.838PPB
response 16055392

(44) AR1016-D #2
5.565min 70.072PPB m
response 17318683

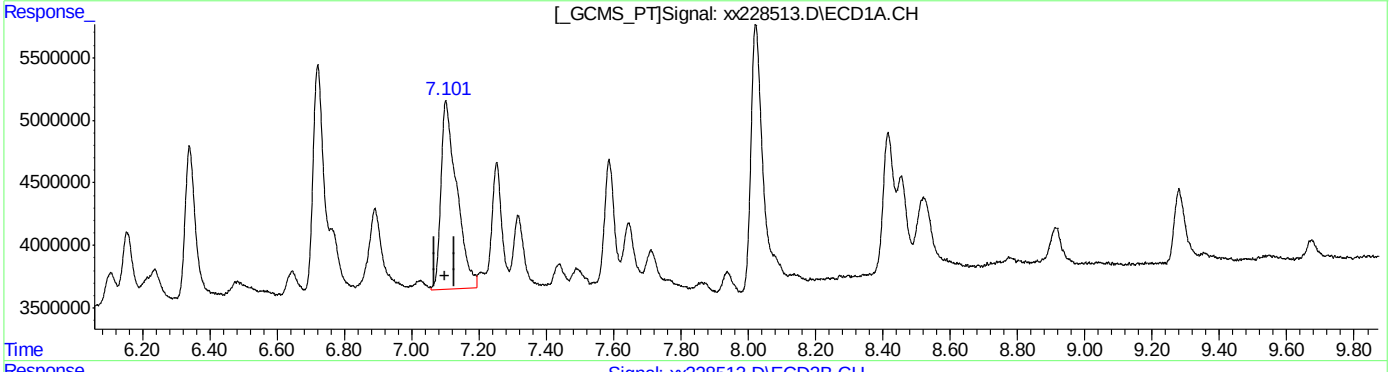
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:24:27 2018

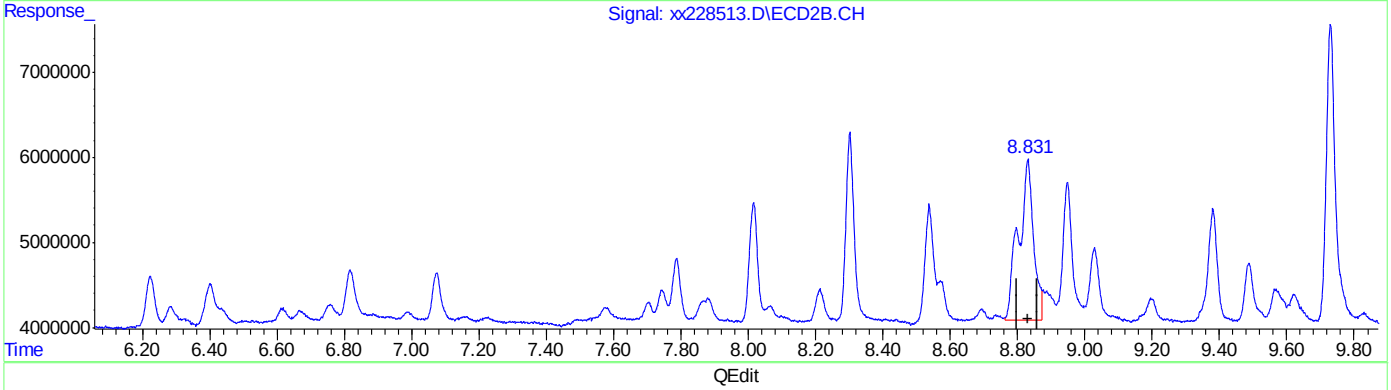
Quantitation Report (Qedit)

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)





QEdit

(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

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 : 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.

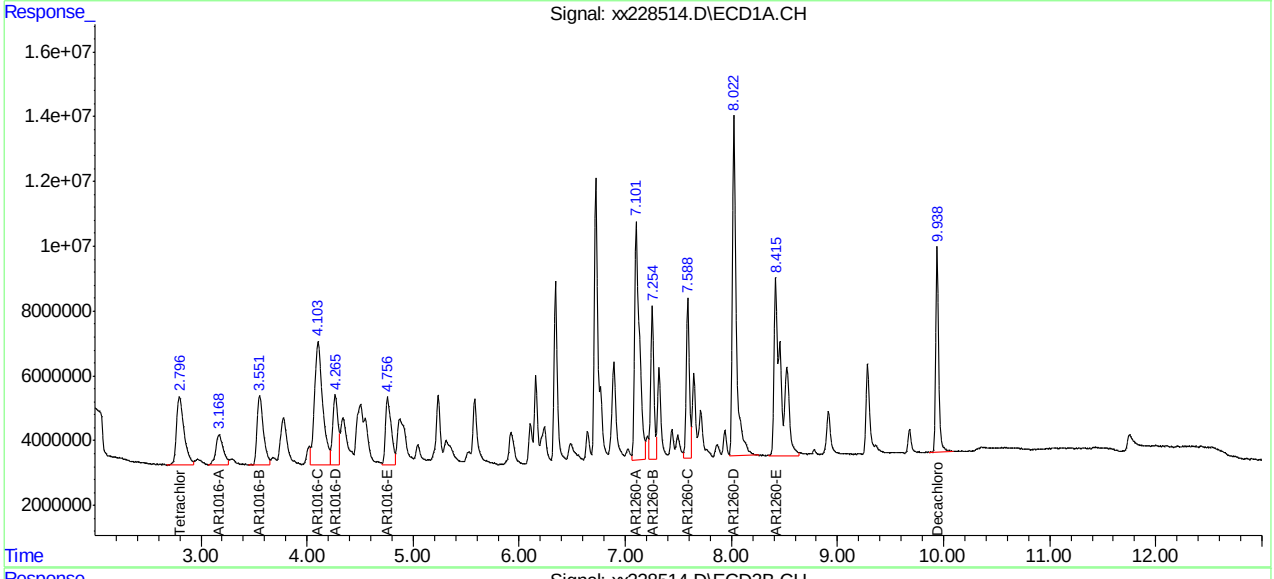
11.6.35 11

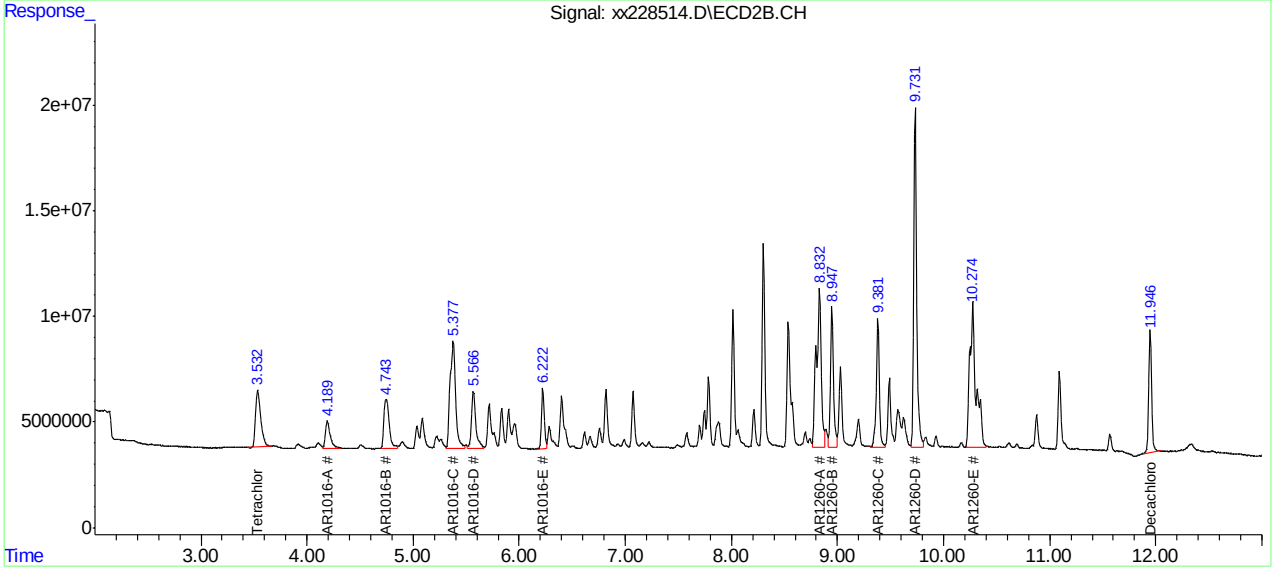
Quantitation Report (QT Reviewed)

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)





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

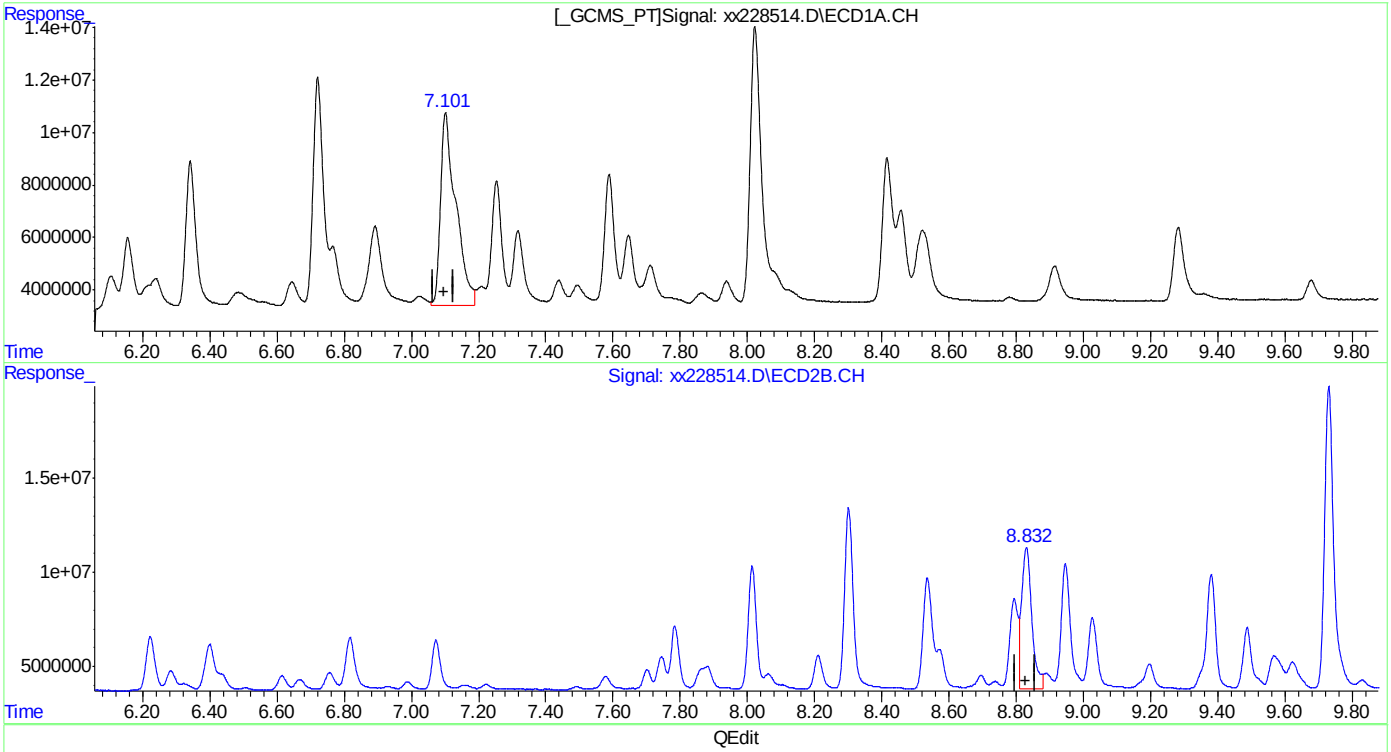
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1260-E		1	8.42	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.27	Split peak
Decachlorobiphenyl	2051-24-3	2	11.95	Poorly defined baseline

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

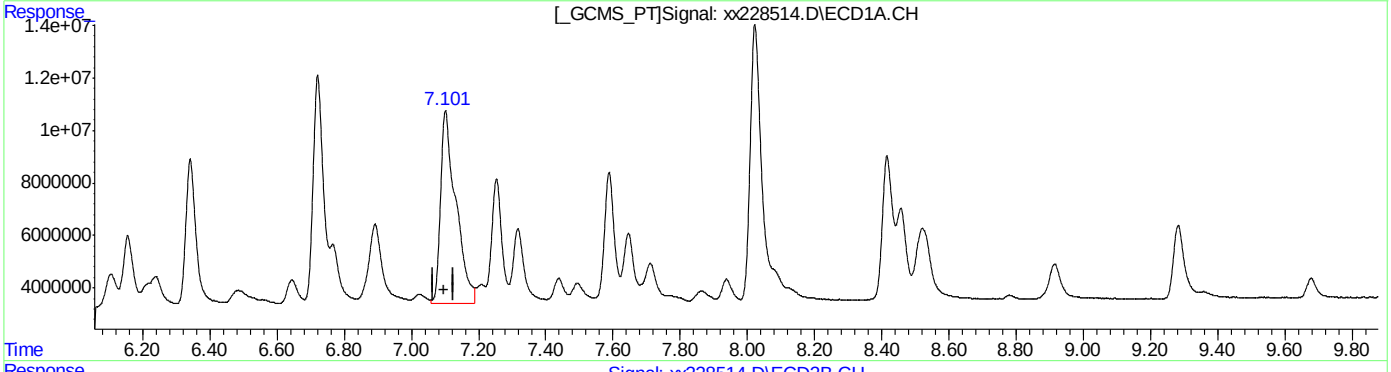
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:19:25 2018

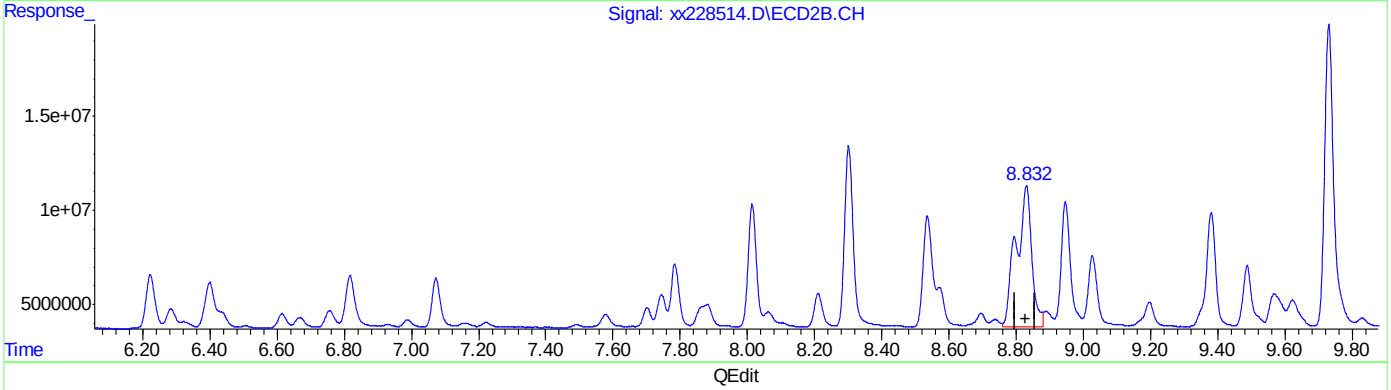
Quantitation Report (Qedit)

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)





QEdit

(46) AR1260-A
7.102min 325.903PPB
response 232370976

(46) AR1260-A #2
8.832min 314.403PPB m
response 243431373

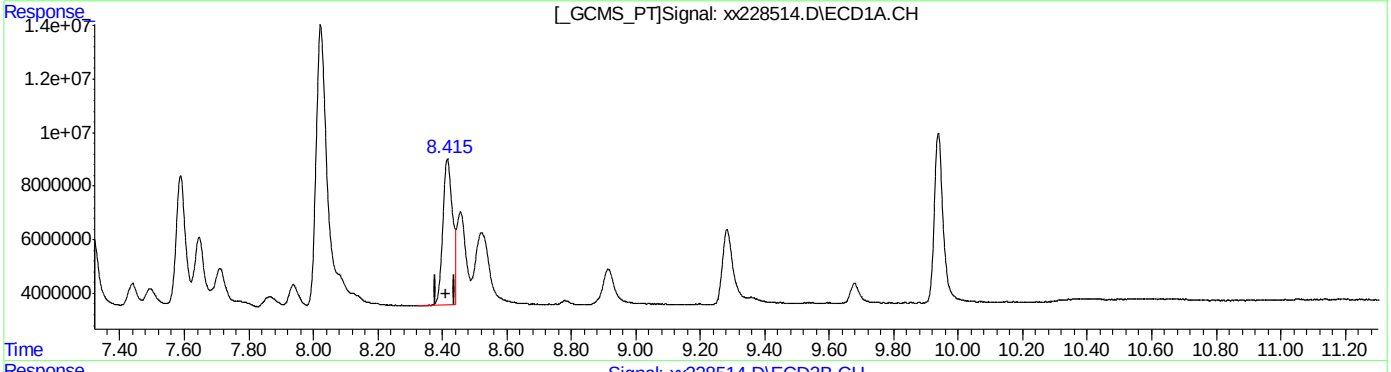
(+) = Expected Retention Time

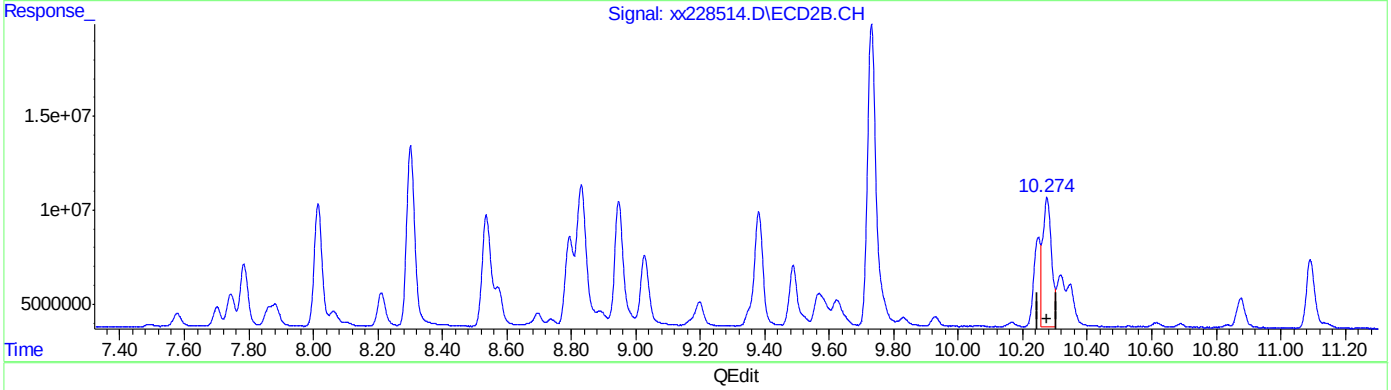
Quantitation Report (Qedit)

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)





QEdit

(50) AR1260-E
8.416min 125.055PPB
response 114226062

(50) AR1260-E #2
10.275min 133.087PPB
response 130438141

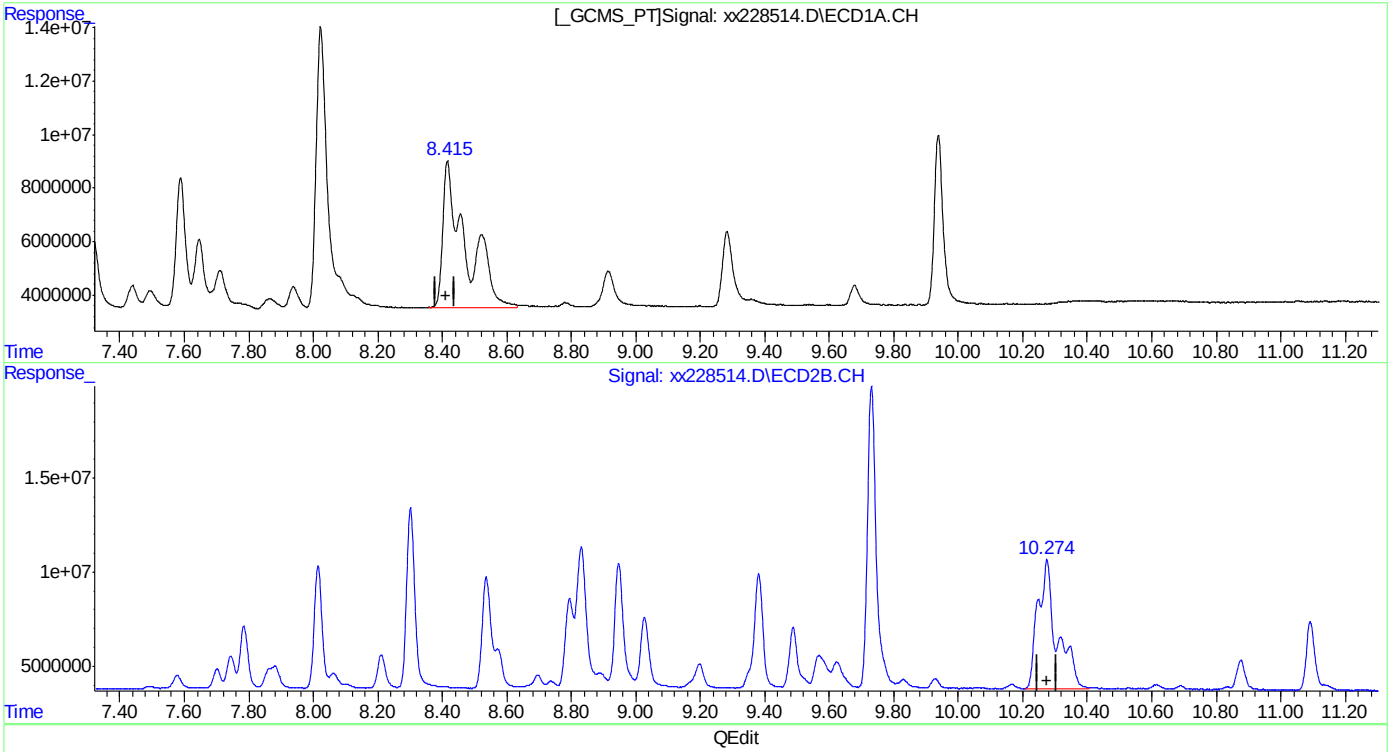
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:19:36 2018

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)



QEdit

(50) AR1260-E
8.415min 299.057PPB m
response 273160313

(50) AR1260-E #2
10.274min 289.679PPB m
response 283913888

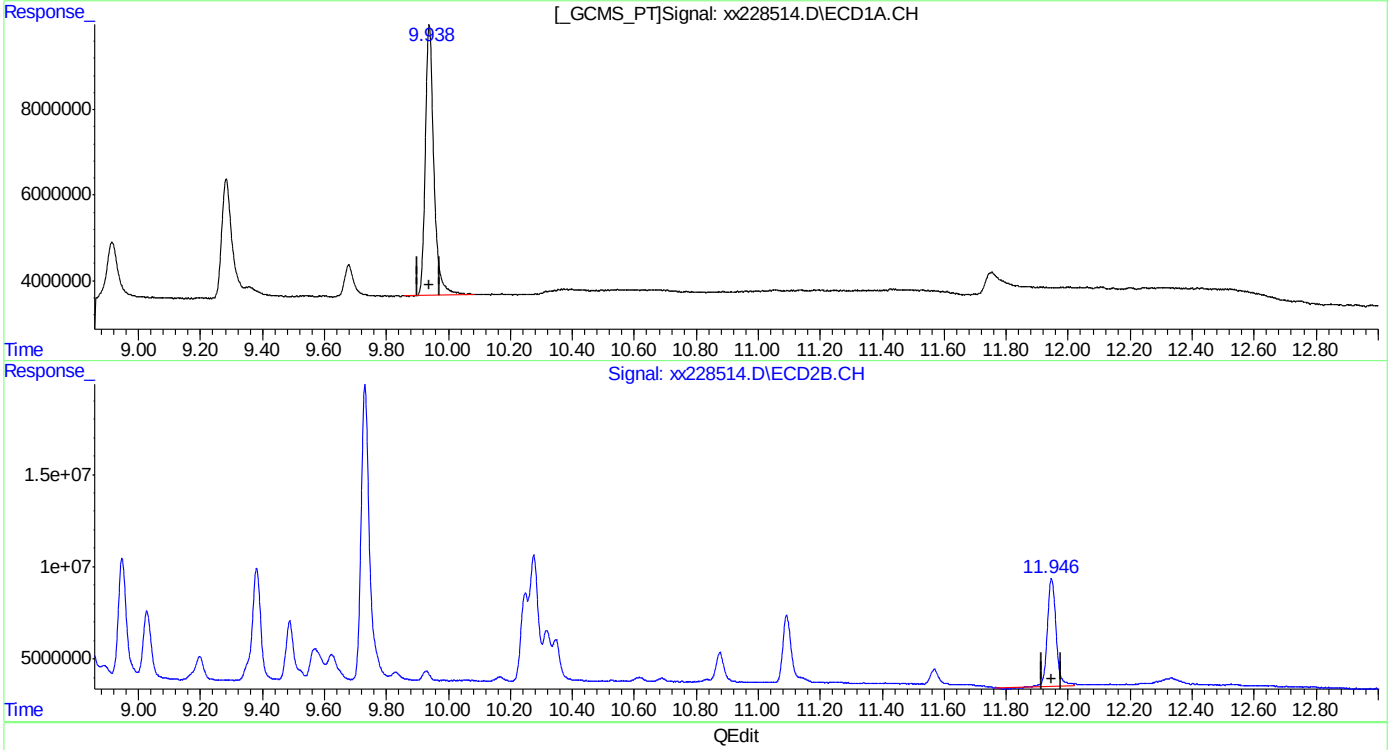
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:19:47 2018

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)



QEdit

(51) Decachlorobiphenyl (S)
9.938min 12.136ppb
response 120952704

(51) Decachlorobiphenyl #2 (S)
11.947min 12.504ppb
response 114194831

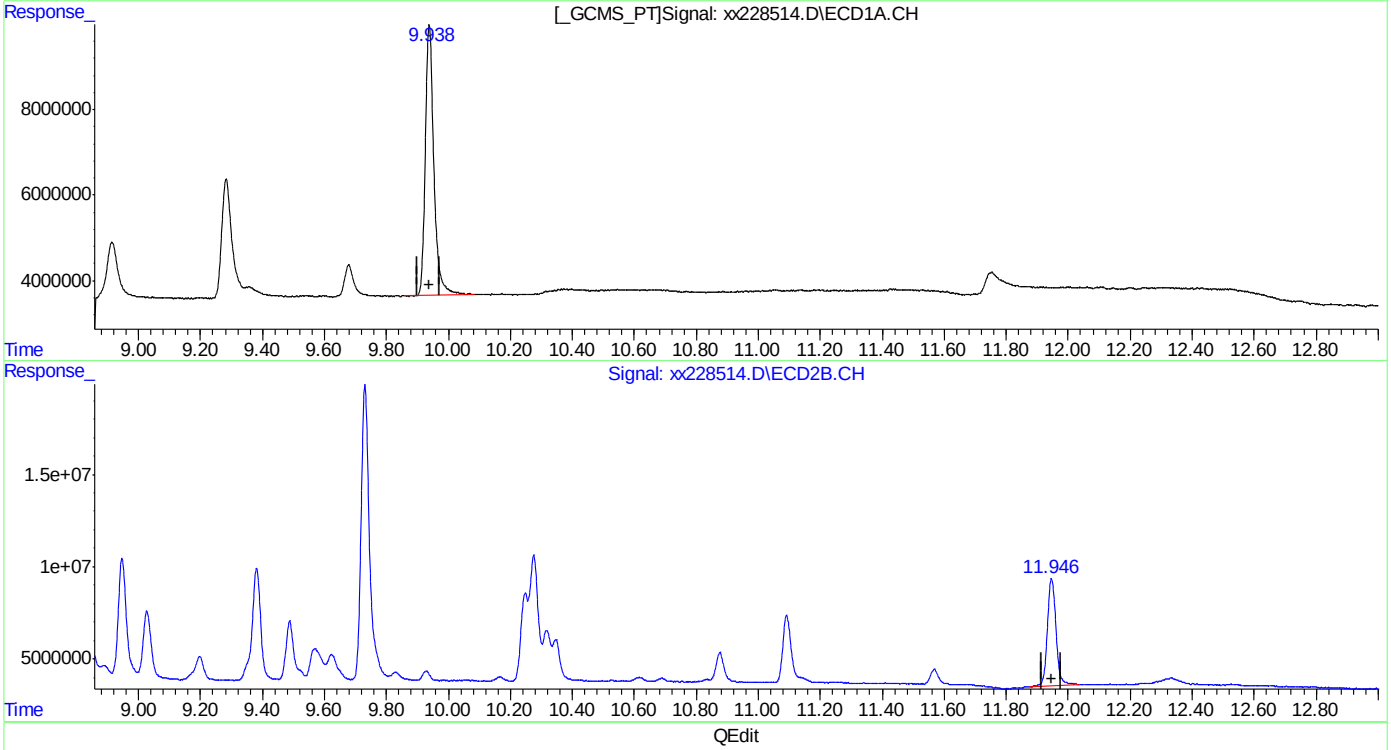
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:19:50 2018

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)



QEdit

(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

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 : 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.

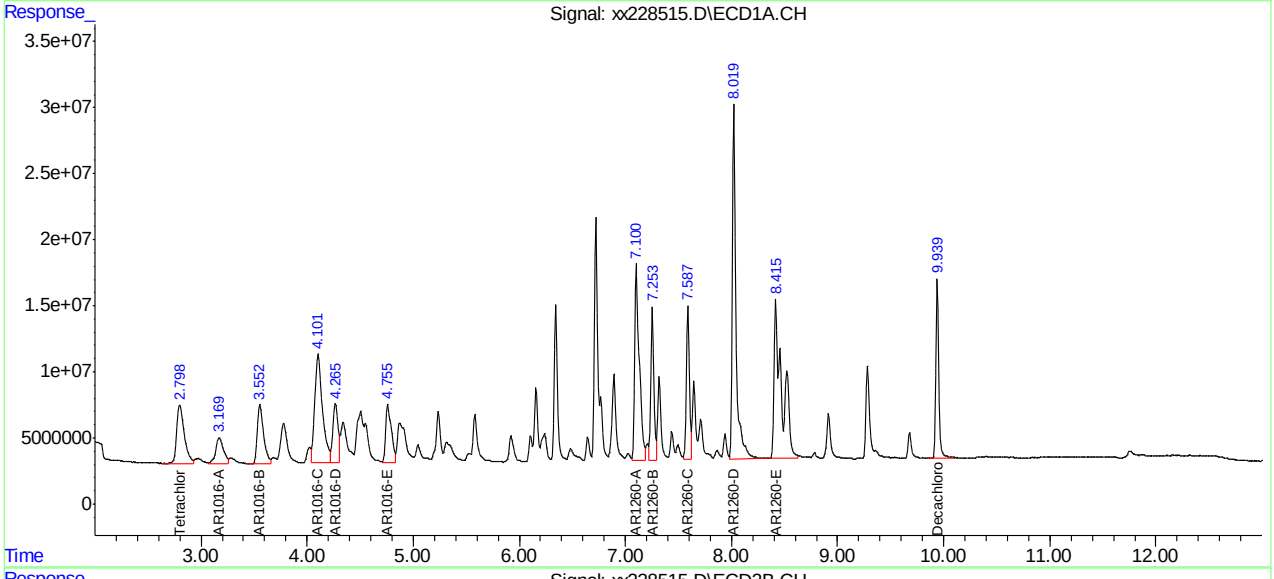
11.6.36 11

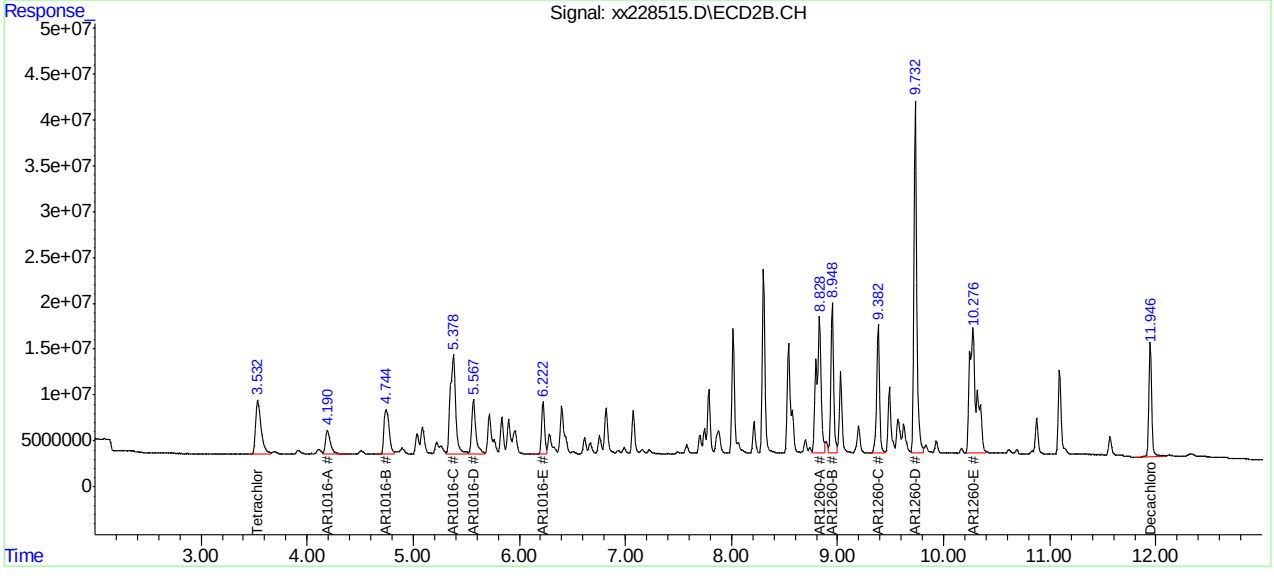
Quantitation Report (QT Reviewed)

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)





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

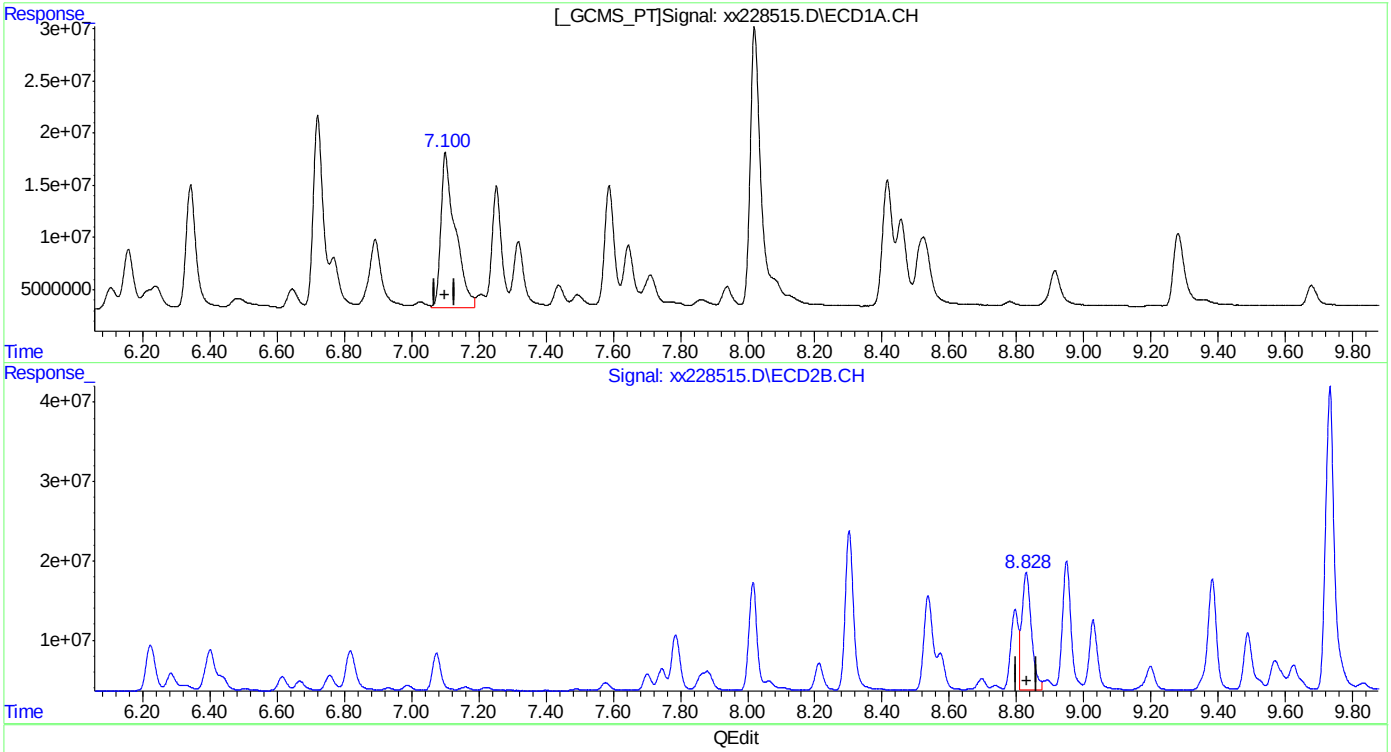
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1260-E		1	8.41	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.28	Split peak

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

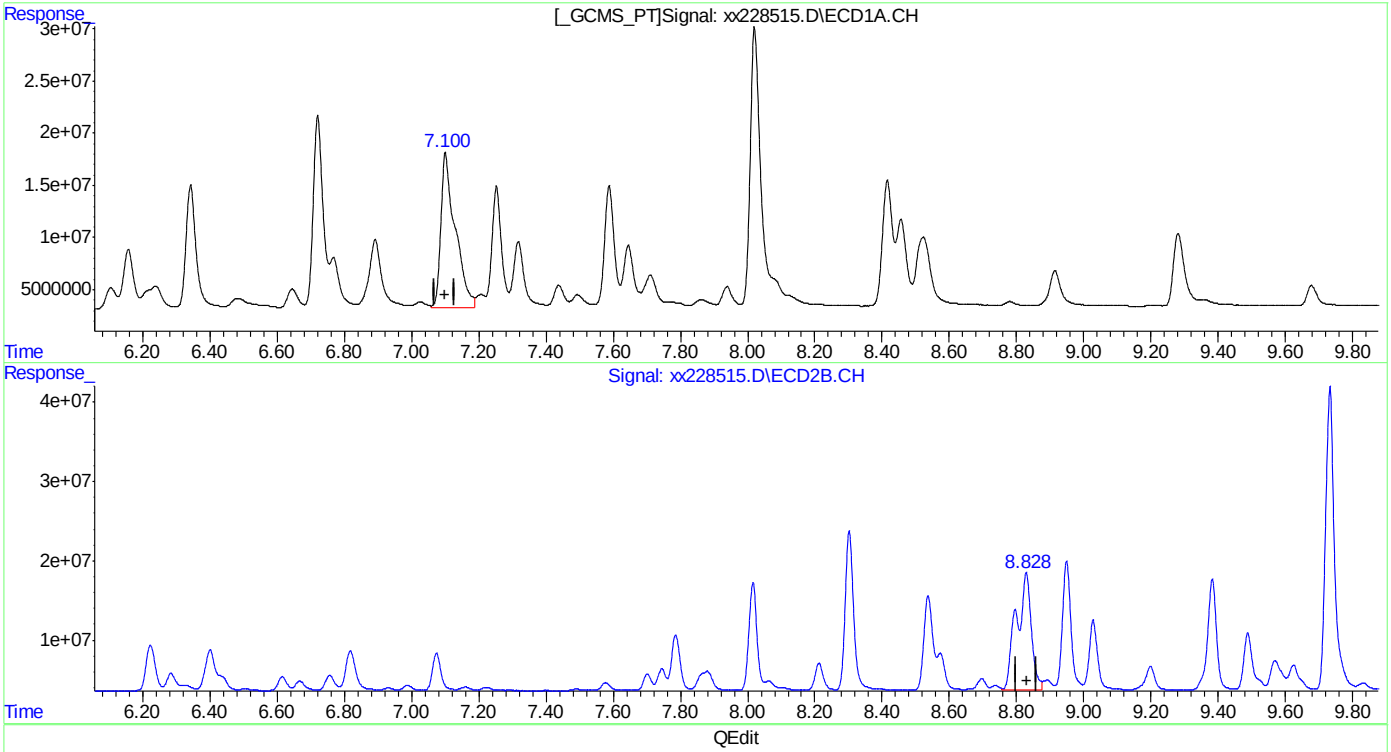
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:16:18 2018

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)



(46) AR1260-A
7.101min 622.085PPB
response 443551494

(46) AR1260-A #2
8.828min 590.361PPB m
response 457096418

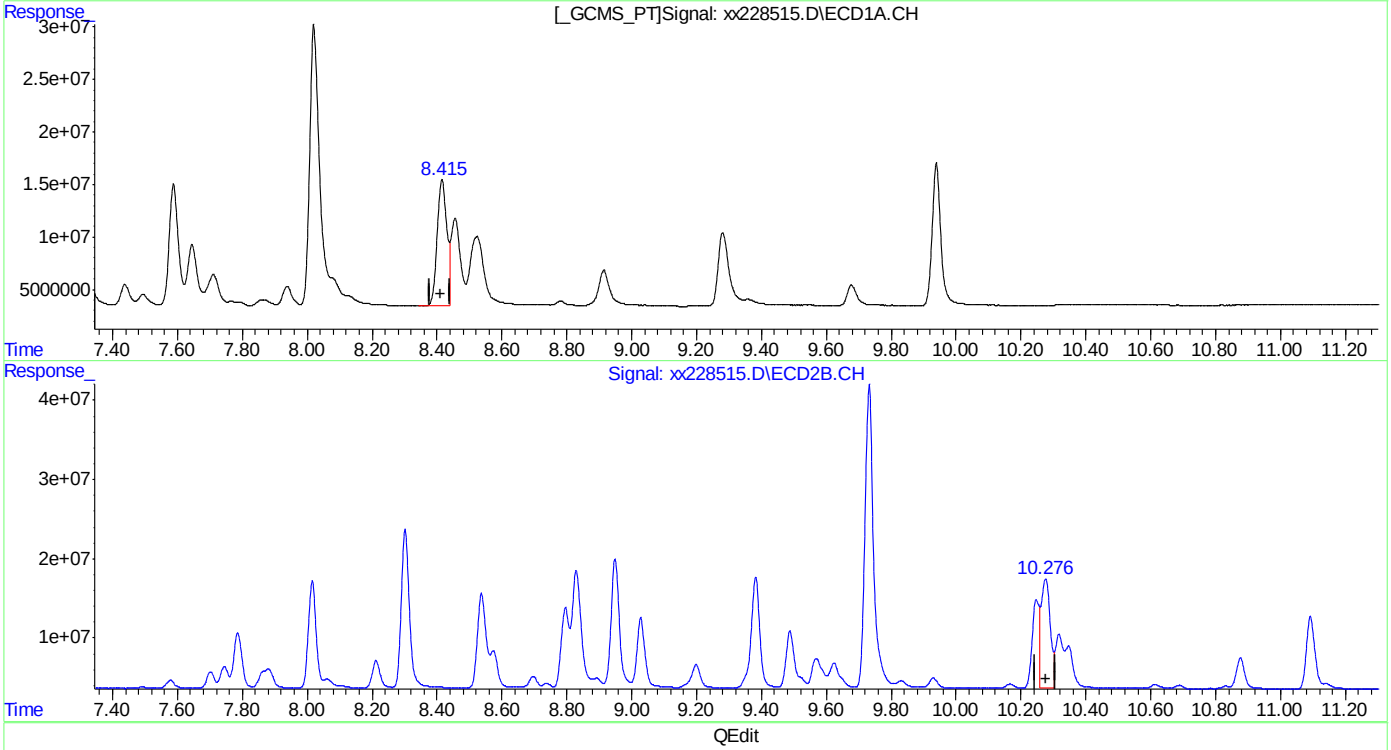
(+) = Expected Retention Time

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

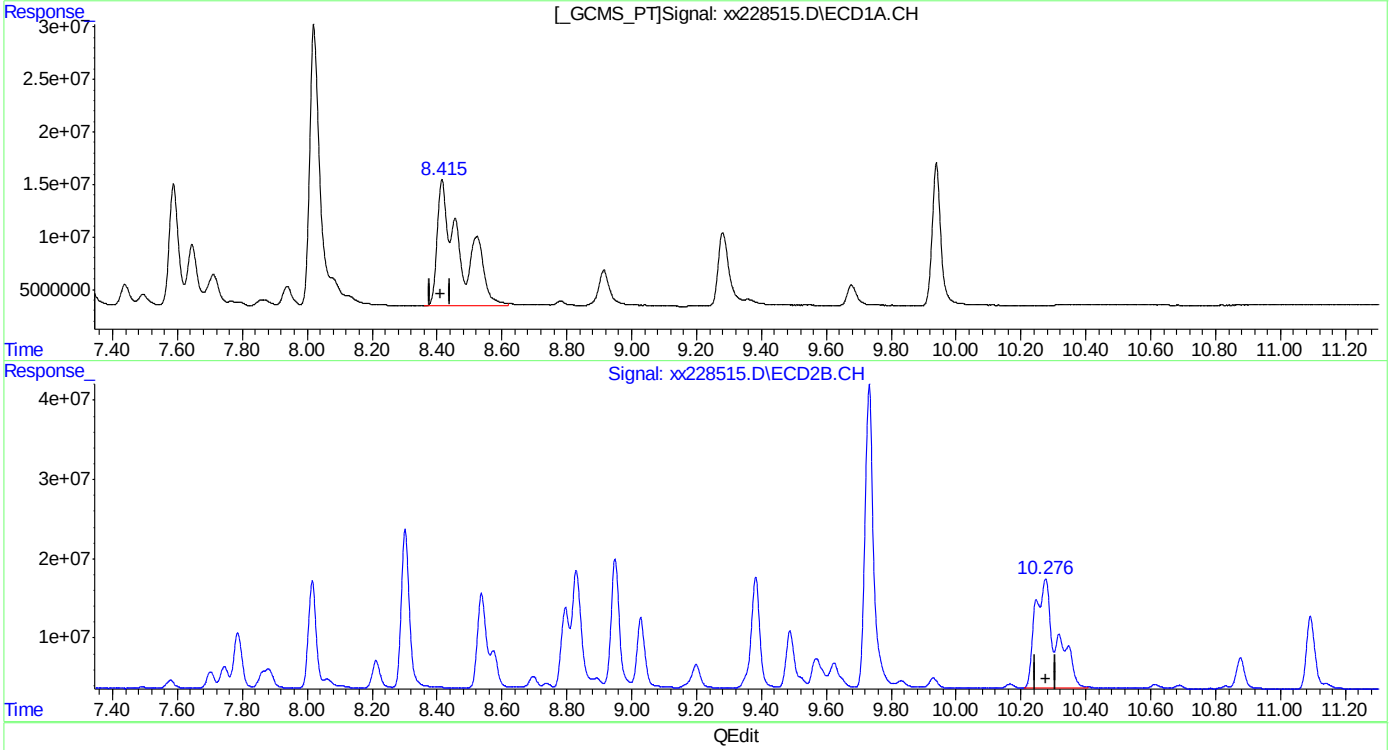
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:16:31 2018

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)



QEdit

(50) AR1260-E
8.415min 676.133PPB m
response 617584042

(50) AR1260-E #2
10.276min 650.427PPB m
response 637482816

(+) = Expected Retention Time
PCB6349.M Tue May 15 08:16:44 2018

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 : 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.

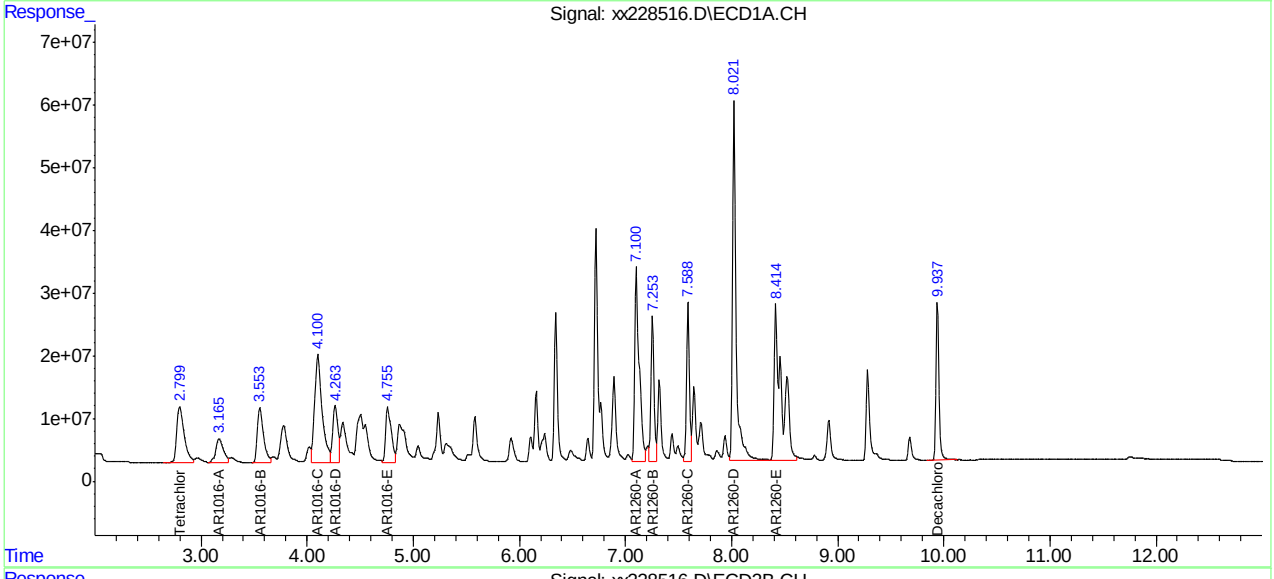
11.6.37 11

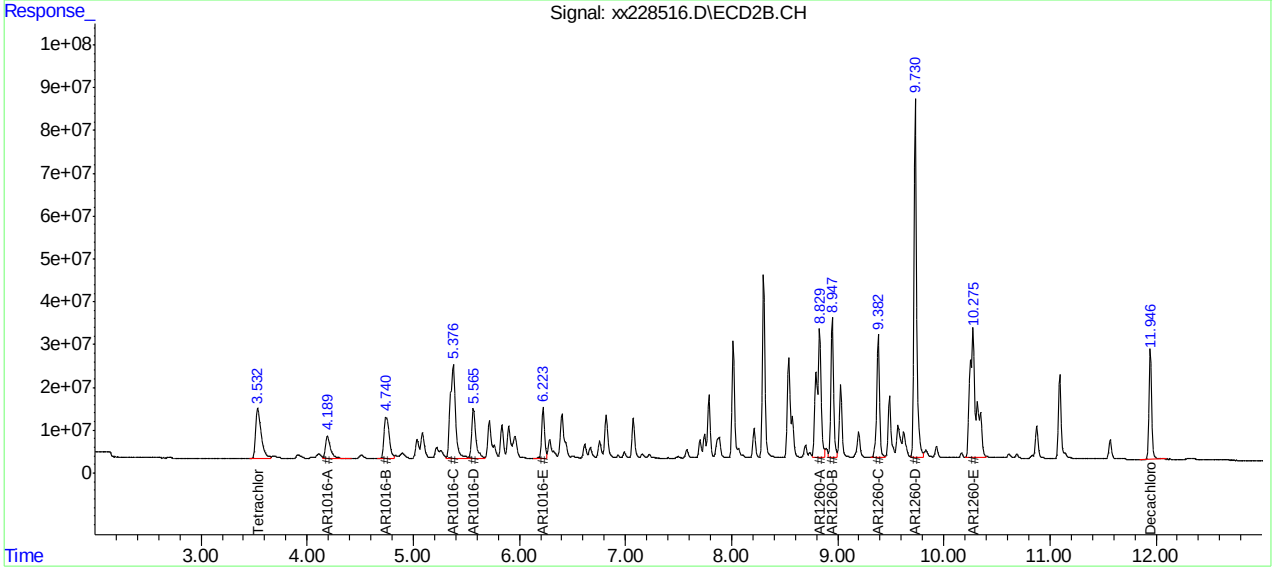
Quantitation Report (QT Reviewed)

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)





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

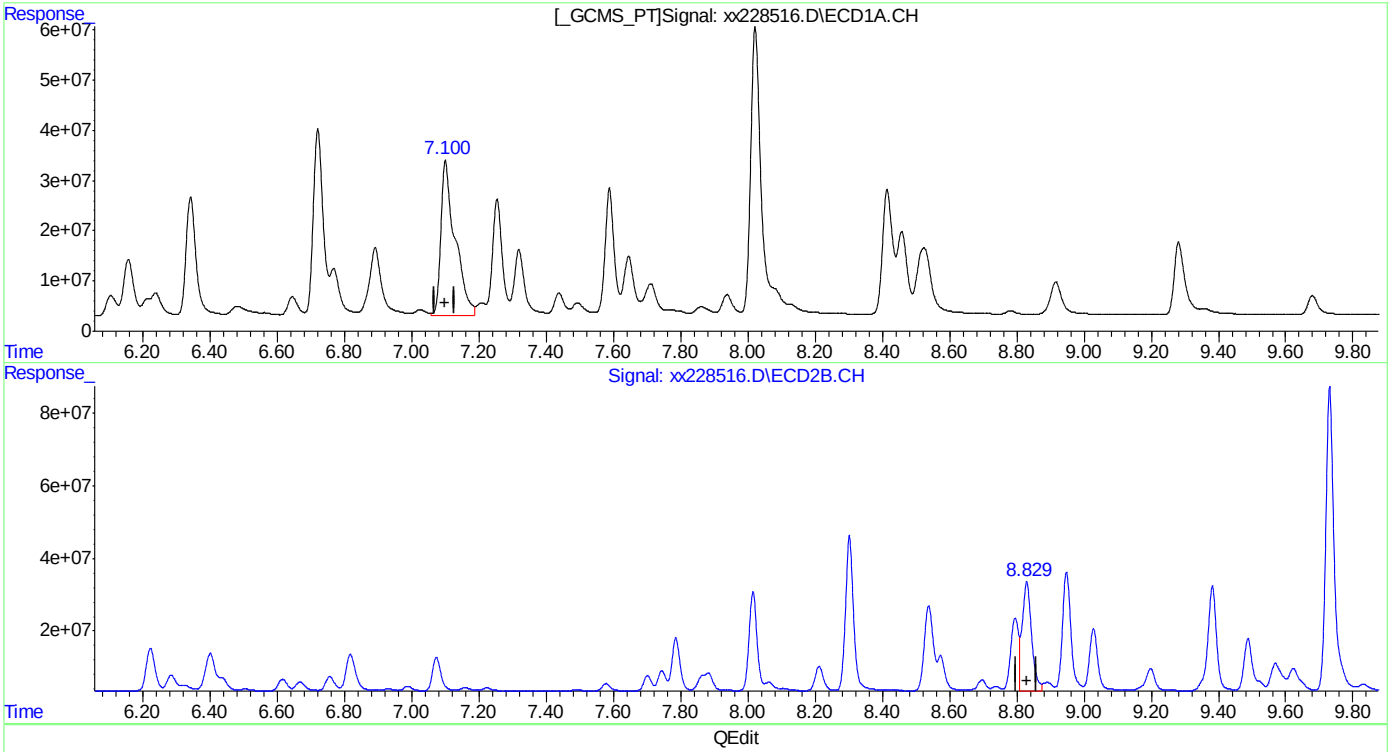
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1260-E		1	8.41	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.28	Split peak

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

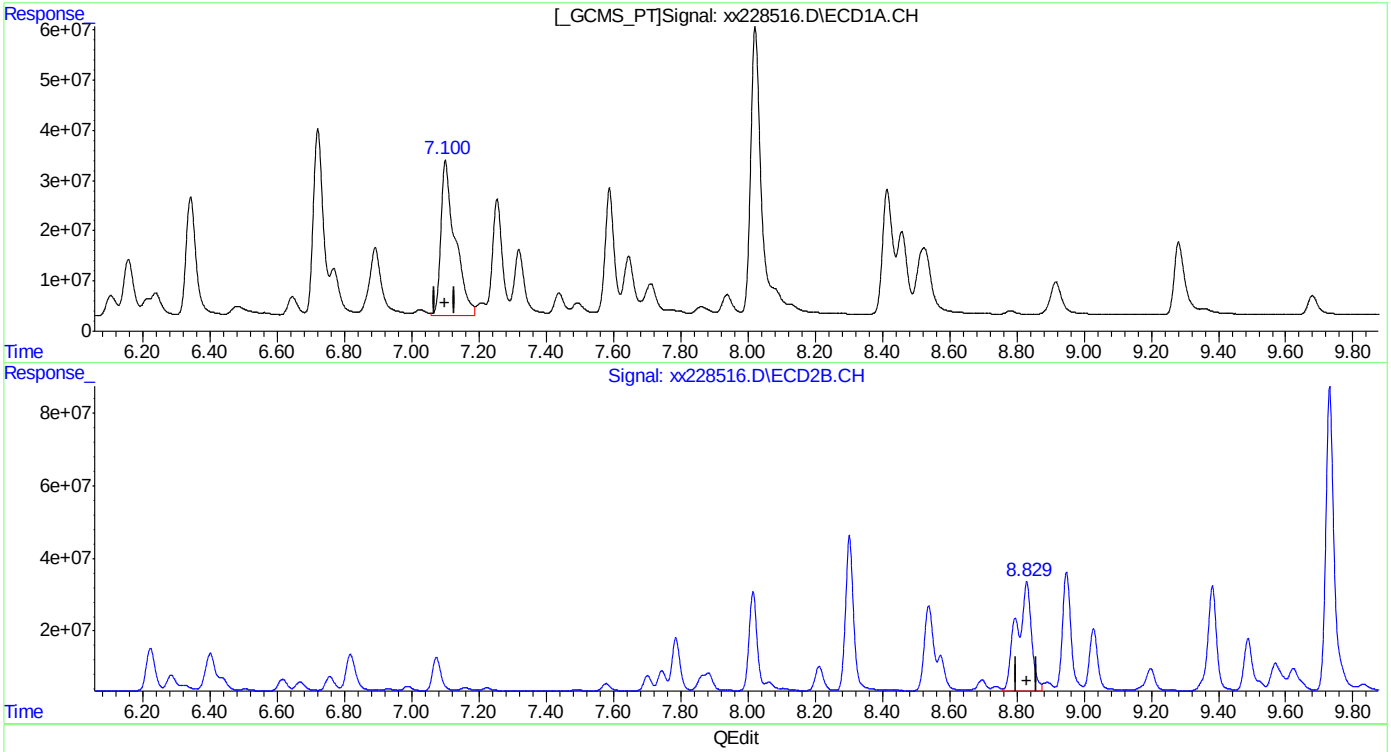
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:17:13 2018

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

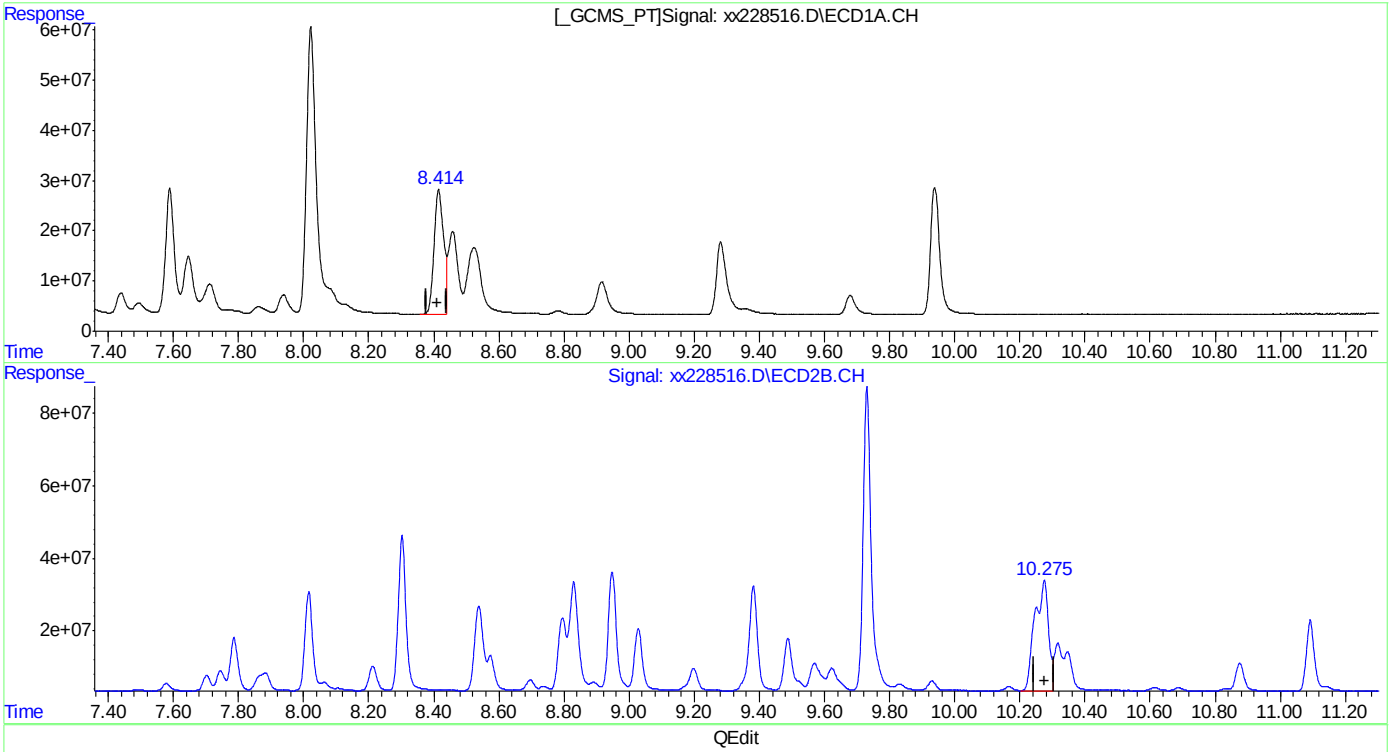
(+) = Expected Retention Time

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

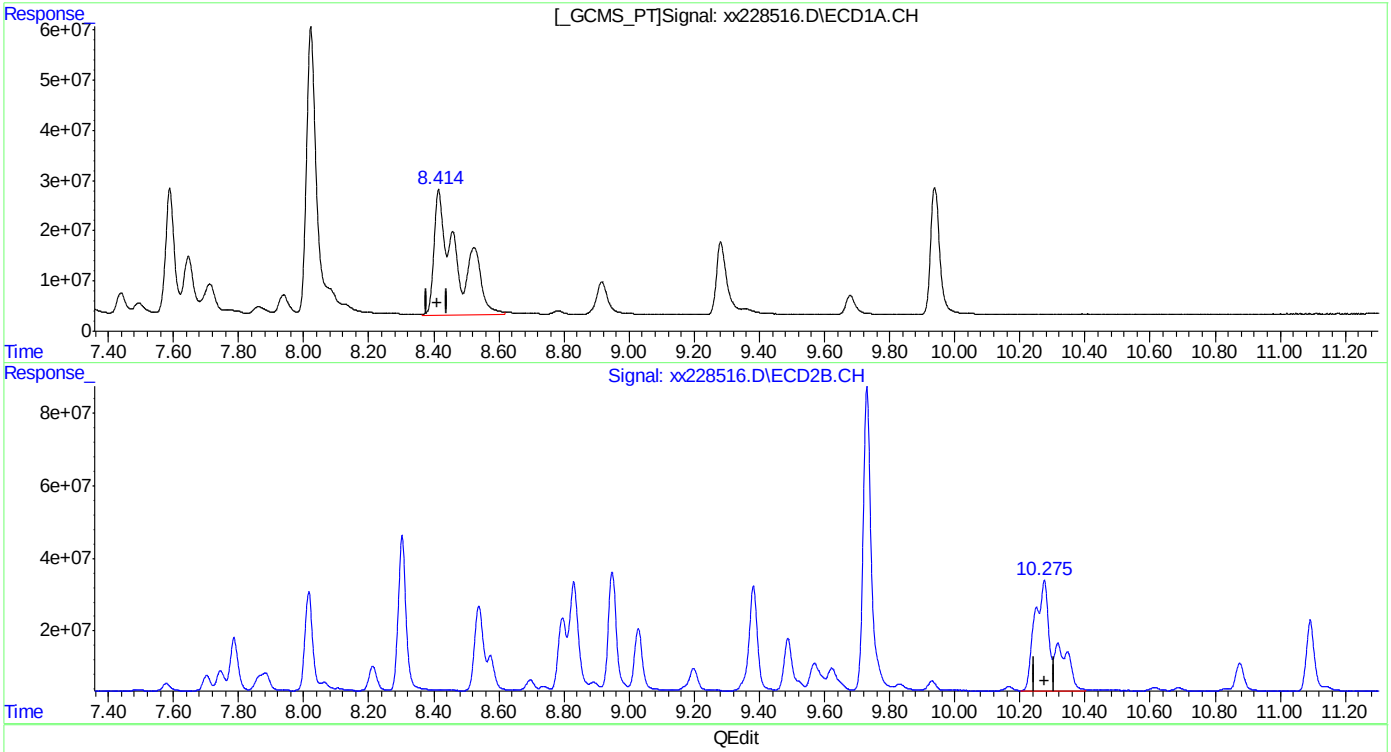
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:17:27 2018

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

(+) = Expected Retention Time

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 : 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.

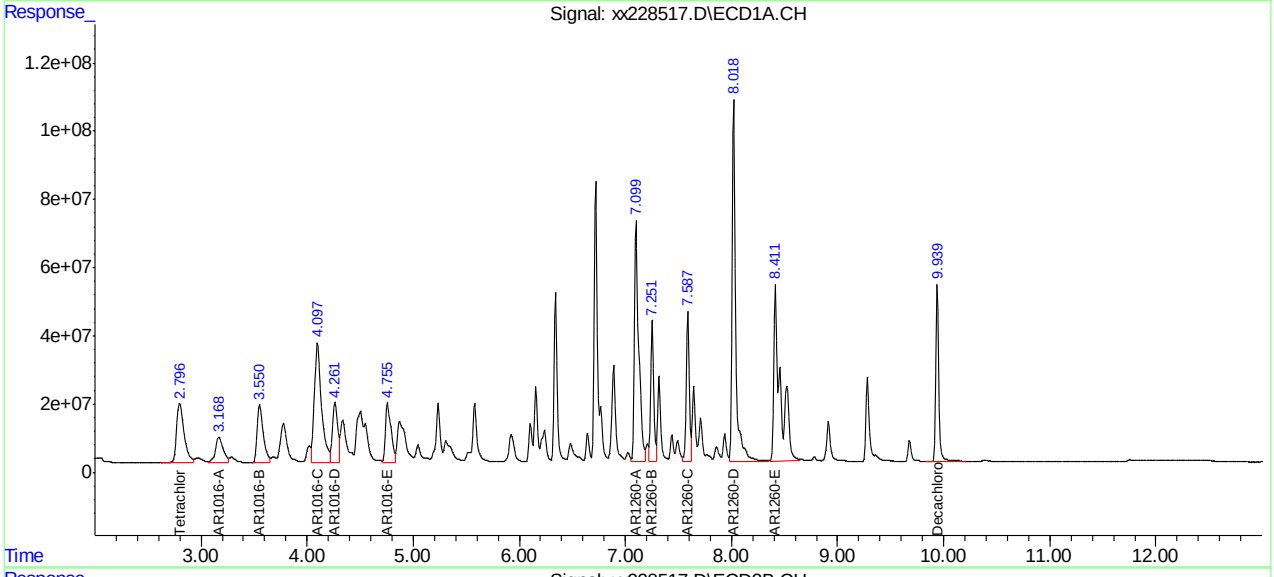
11.6.38 11

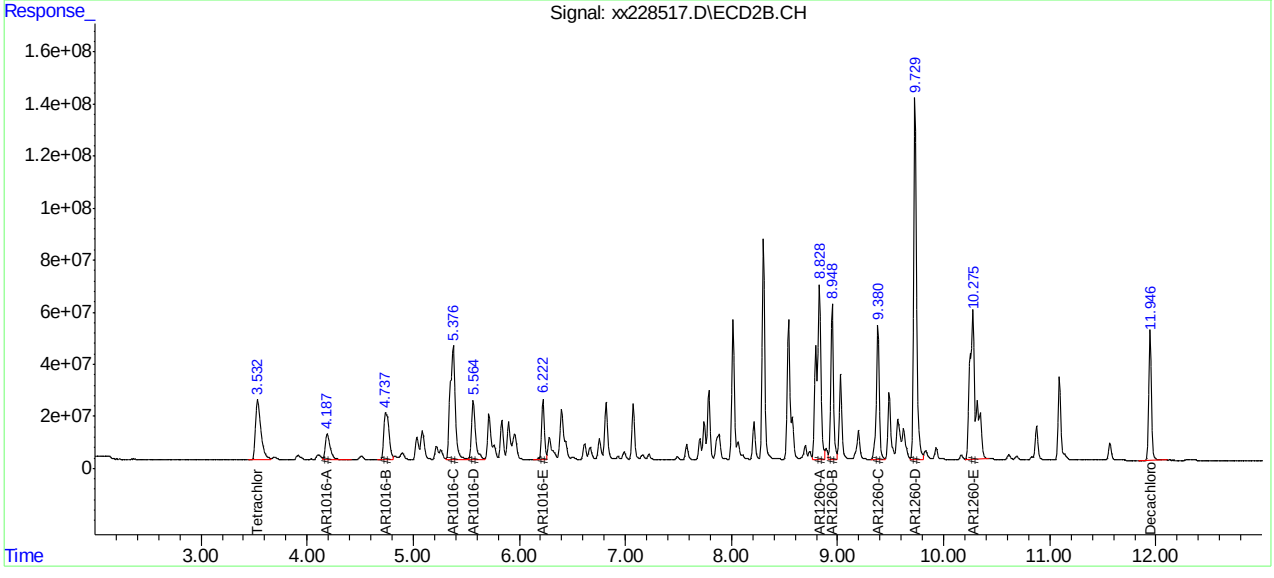
Quantitation Report (QT Reviewed)

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)





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

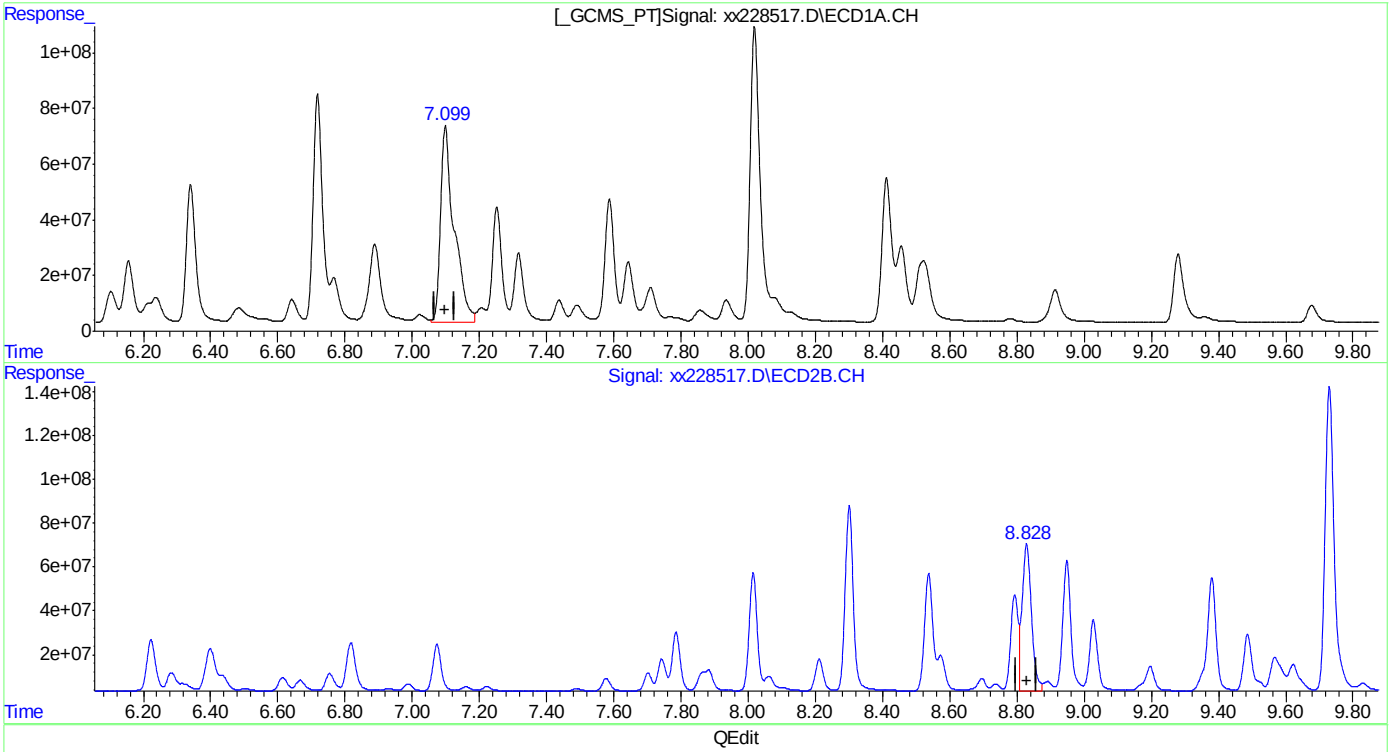
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1260-E		1	8.41	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.28	Split peak

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

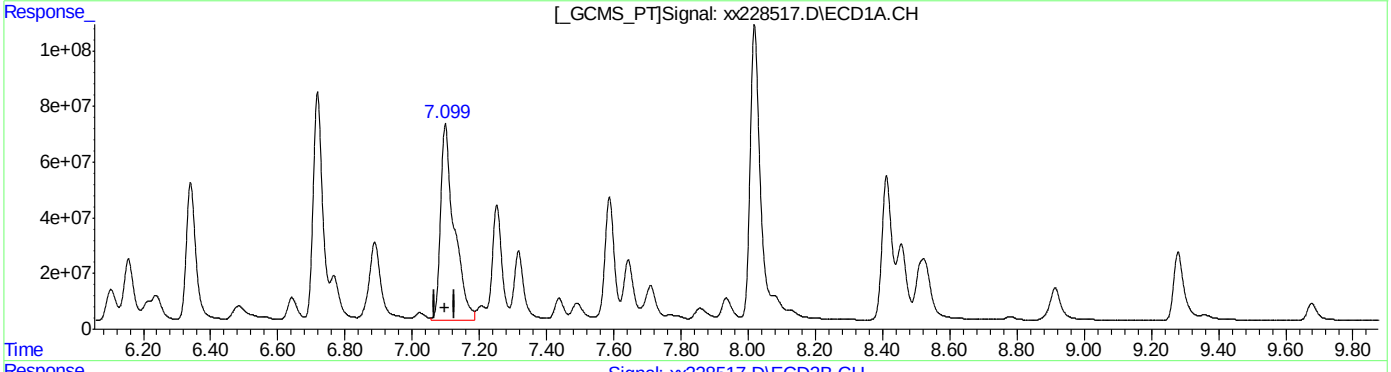
(+) = Expected Retention Time

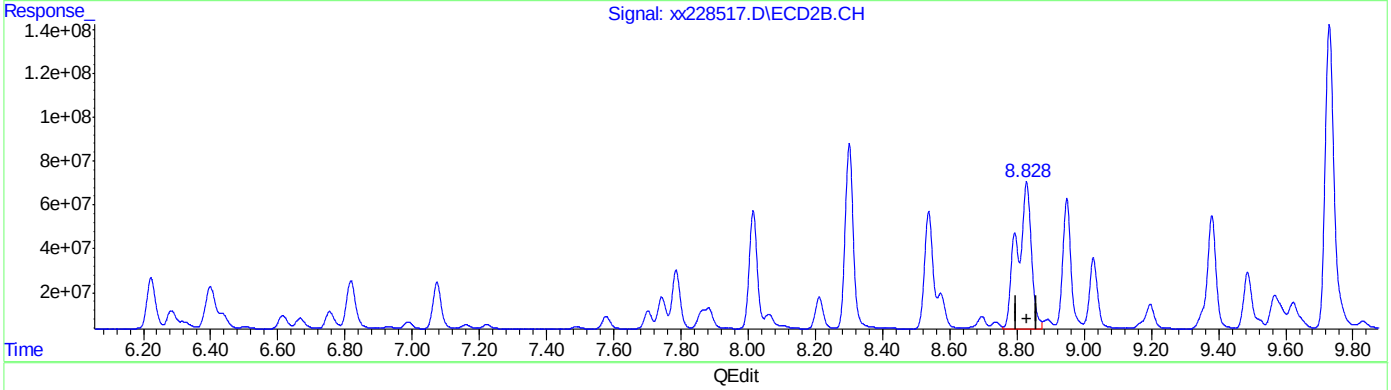
Quantitation Report (Qedit)

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)





QEdit

(46) AR1260-A
7.099min 2784.398PPB
response 1985296092

(46) AR1260-A #2
8.828min 2550.304PPB m
response 1974612329

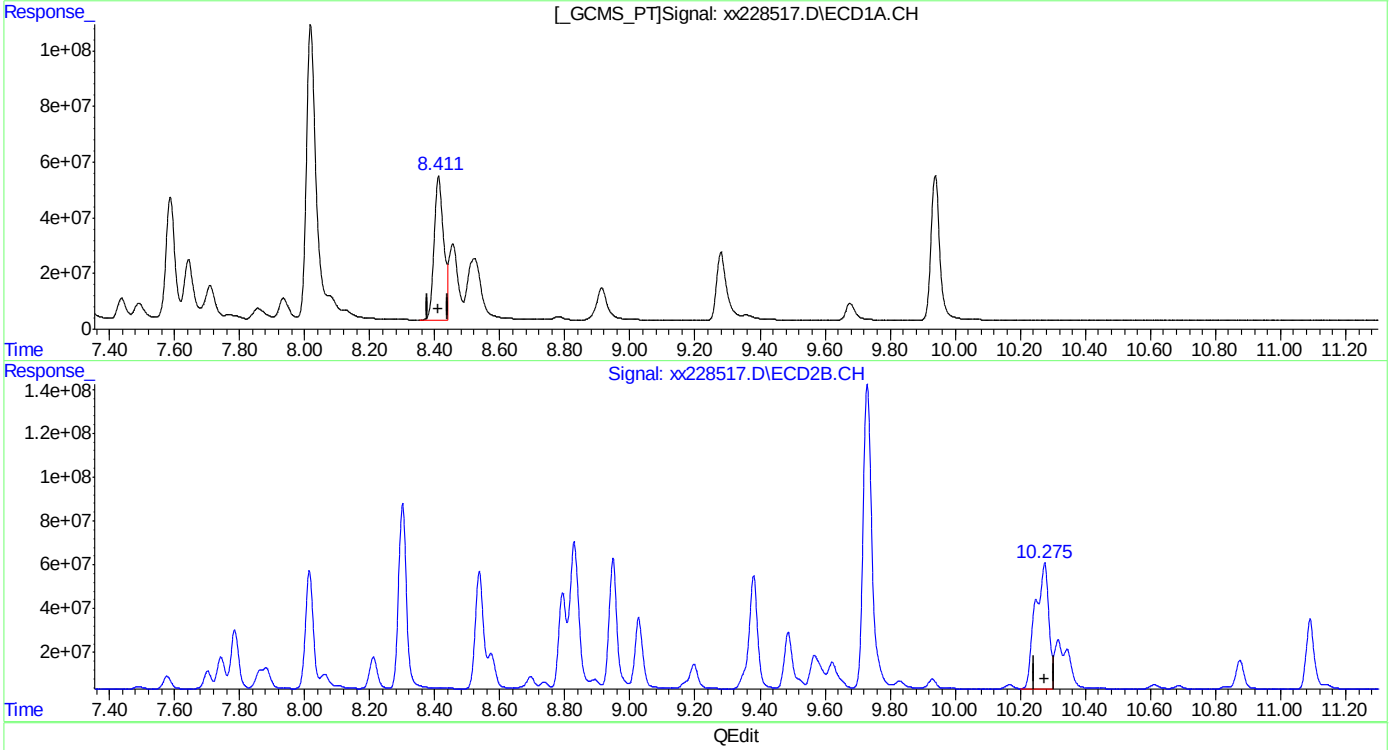
(+) = Expected Retention Time

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

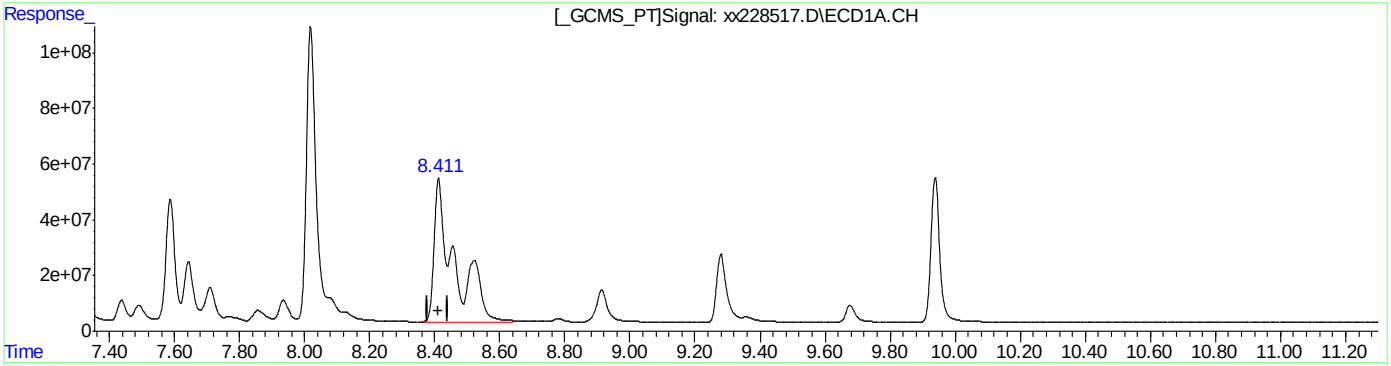
(+) = Expected Retention Time

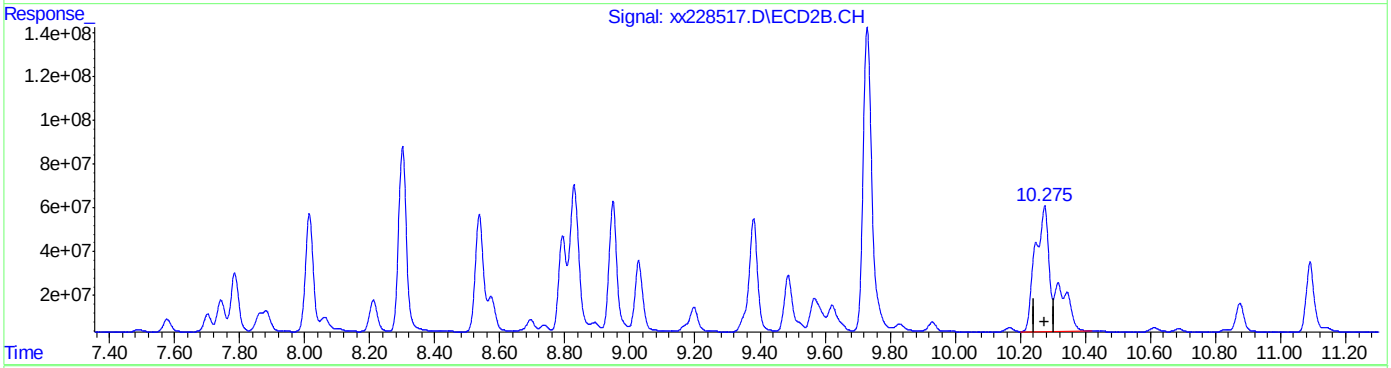
Quantitation Report (Qedit)

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)





QEdit

(50) AR1260-E
8.411min 2452.158PPB m
response 2239816221

(50) AR1260-E #2
10.275min 2339.844PPB m
response 2293277188

(+) = Expected Retention Time

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 : 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.

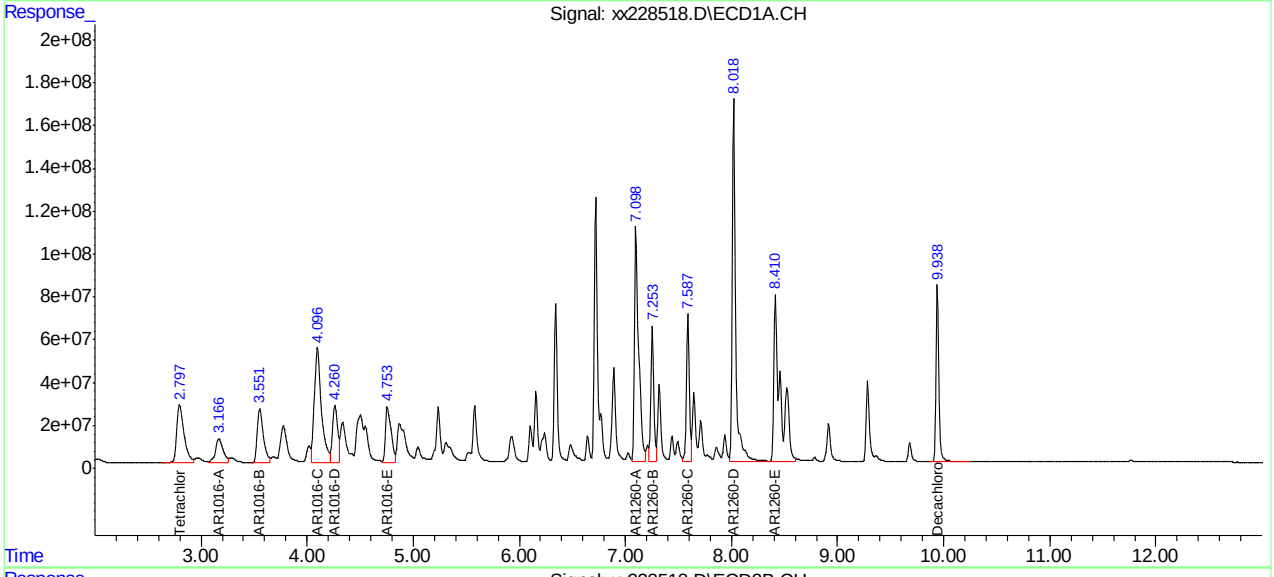
11.6.39 11

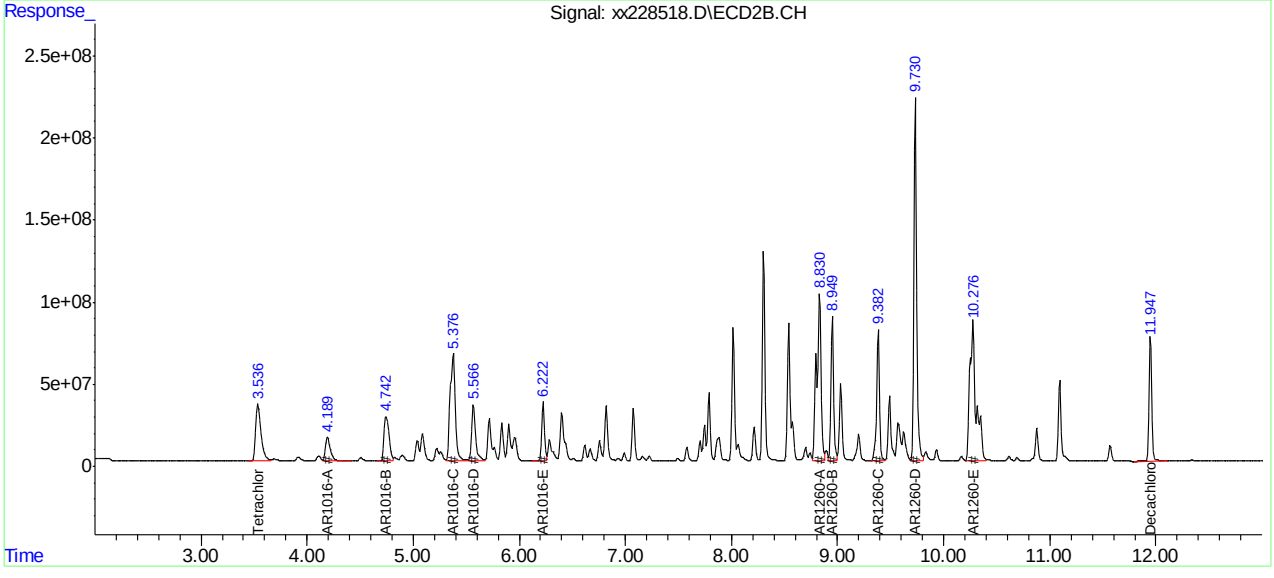
Quantitation Report (QT Reviewed)

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)





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

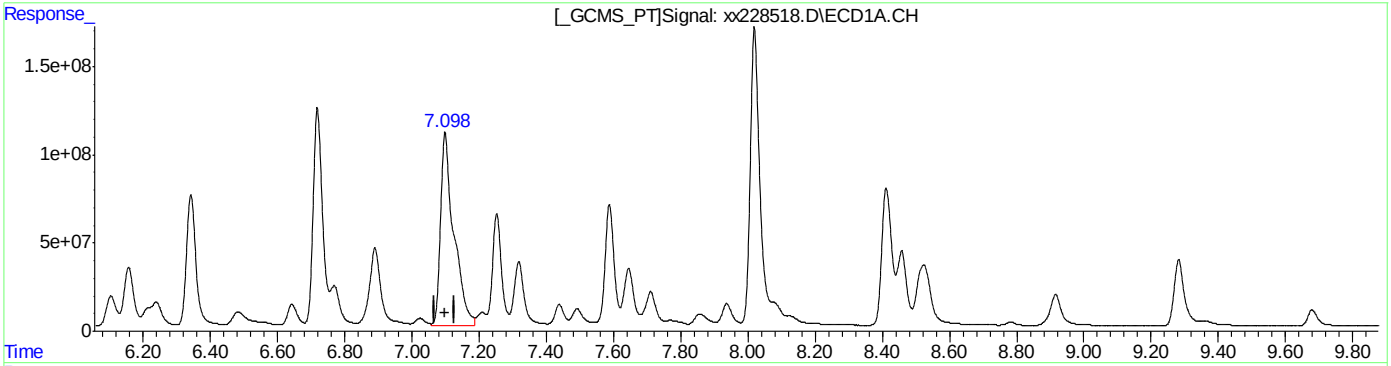
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1260-E		1	8.41	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.28	Split peak

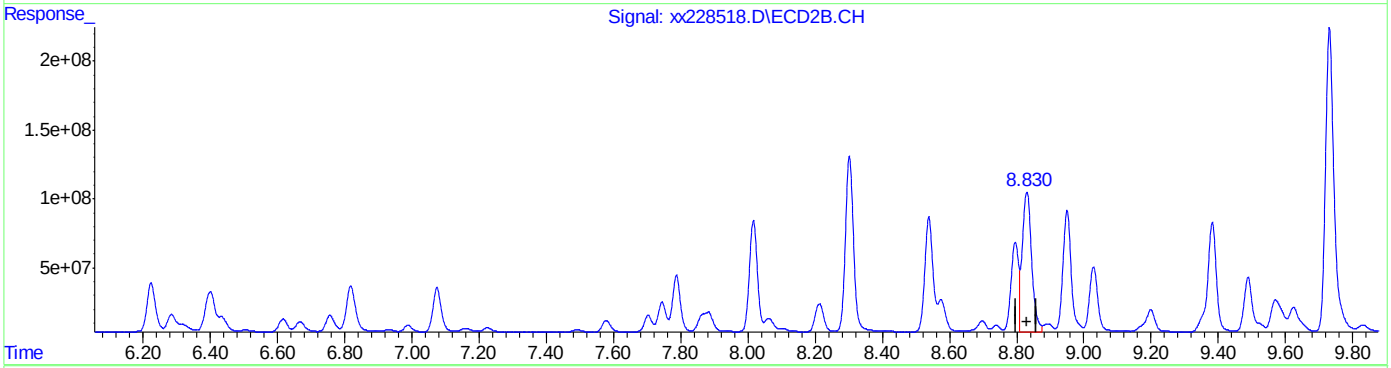
Quantitation Report (Qedit)

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)





QEdit

(46) AR1260-A
7.099min 4206.815PPB
response 2999490252

(46) AR1260-A #2
8.830min 2542.755PPB
response 1968767238

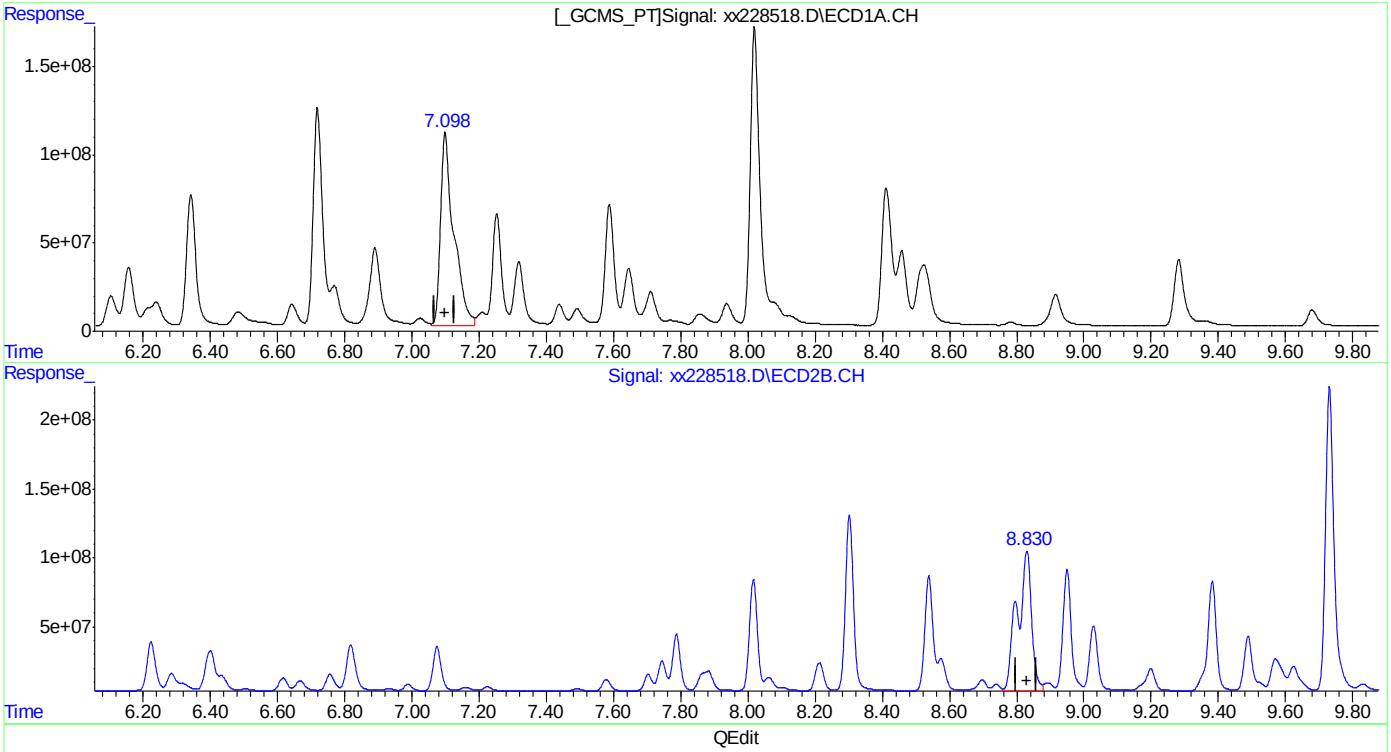
(+) = Expected Retention Time

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

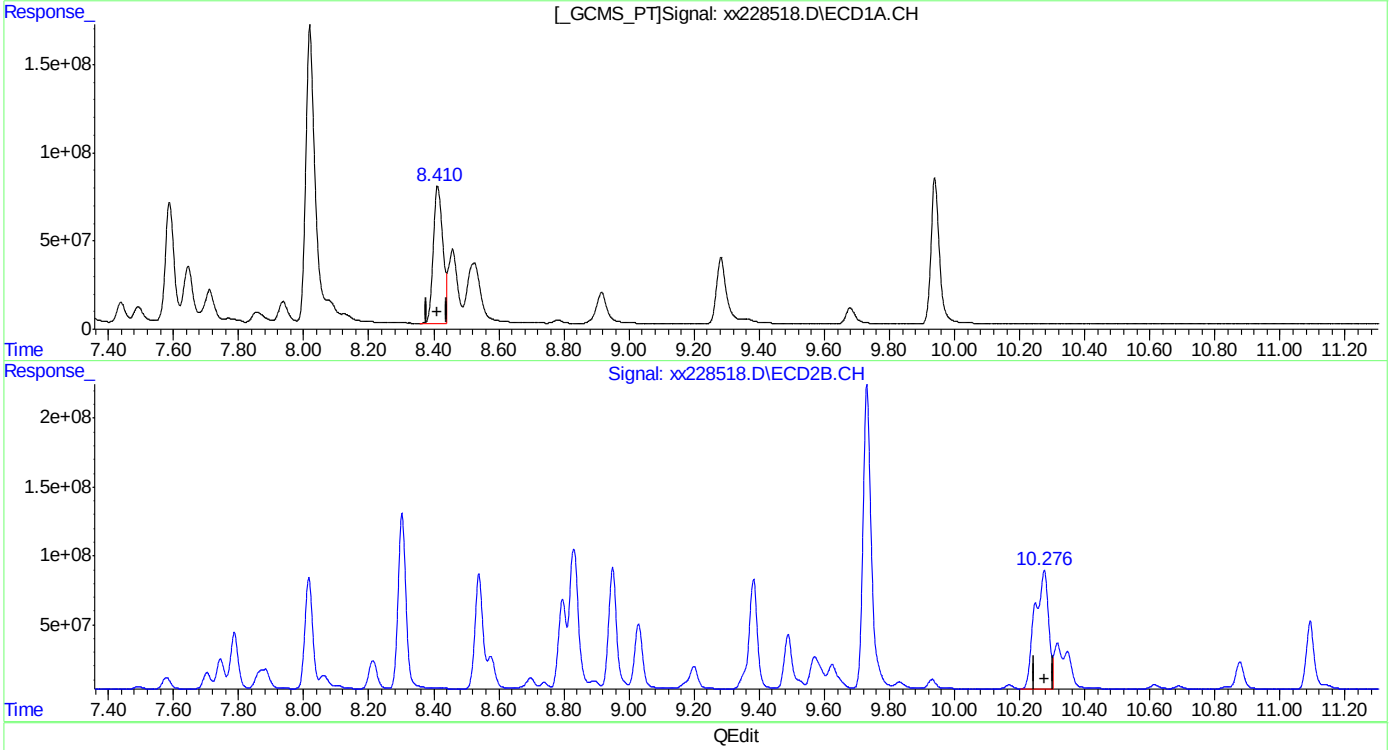
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:14:30 2018

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)



QEdit

(50) AR1260-E
8.412min 1751.630PPB
response 1599949238

(50) AR1260-E #2
10.276min 2549.468PPB
response 2498729048

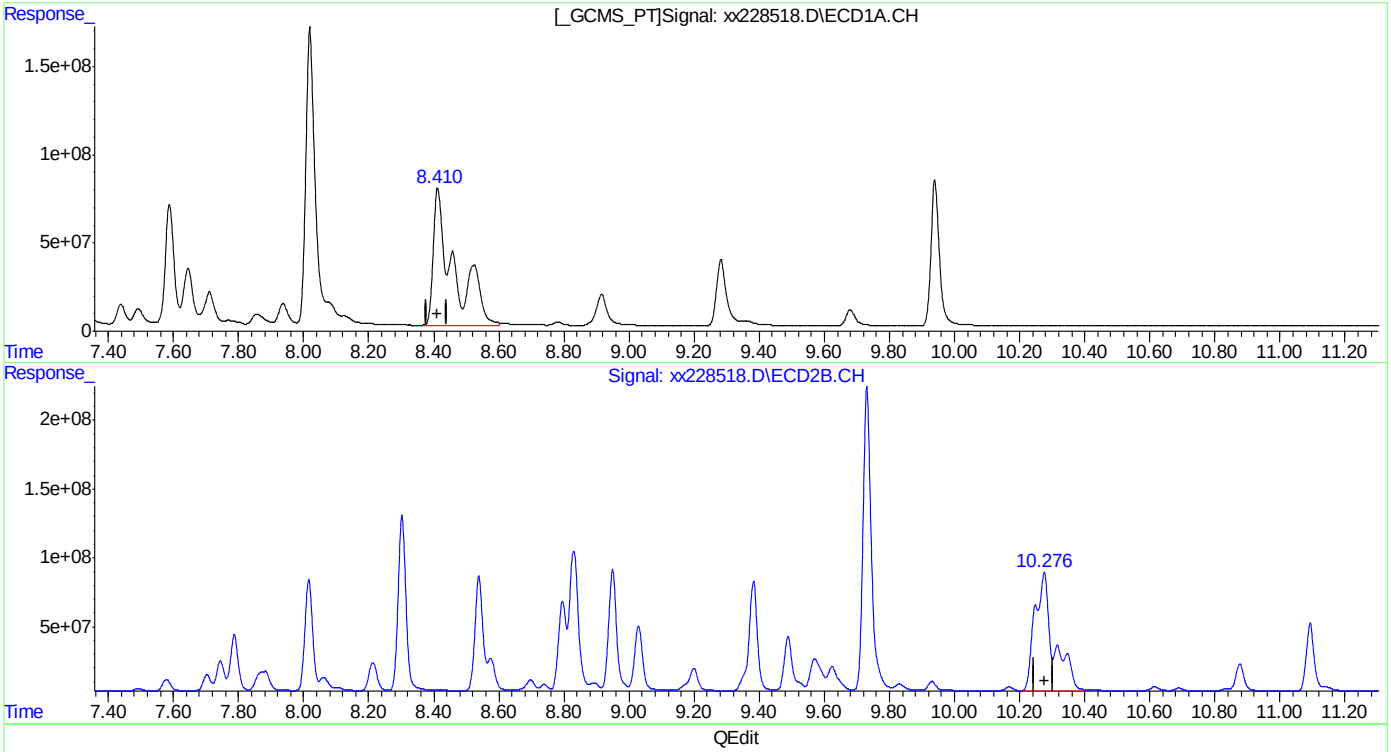
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:14:34 2018

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)



QEdit

(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

XX228519.D

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 : 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.

11.6.40

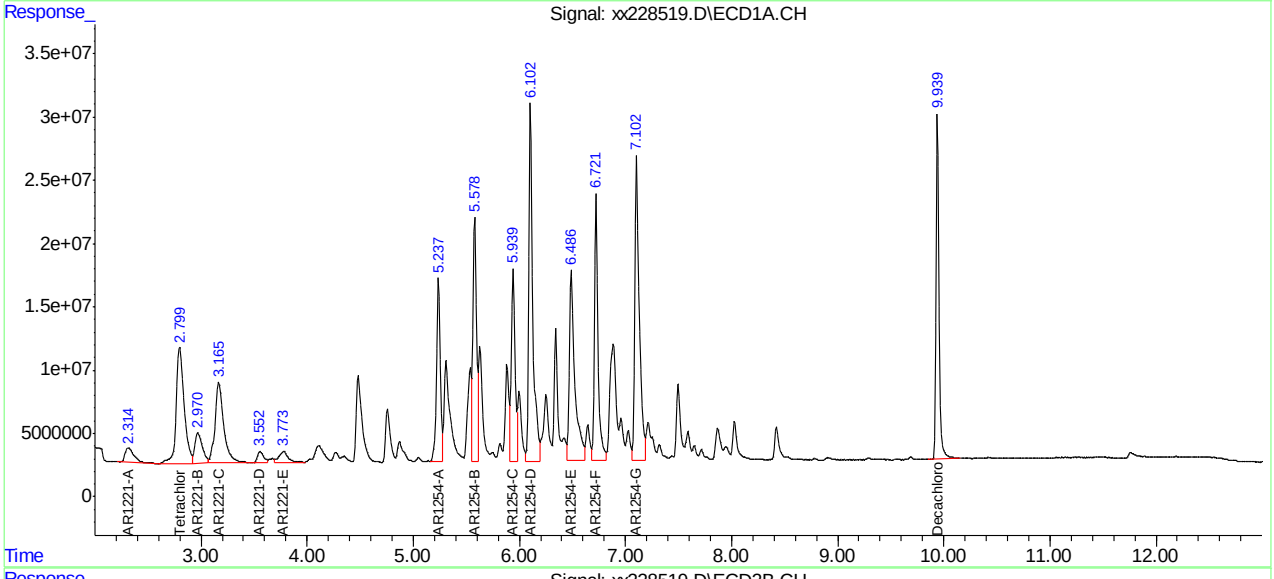
11

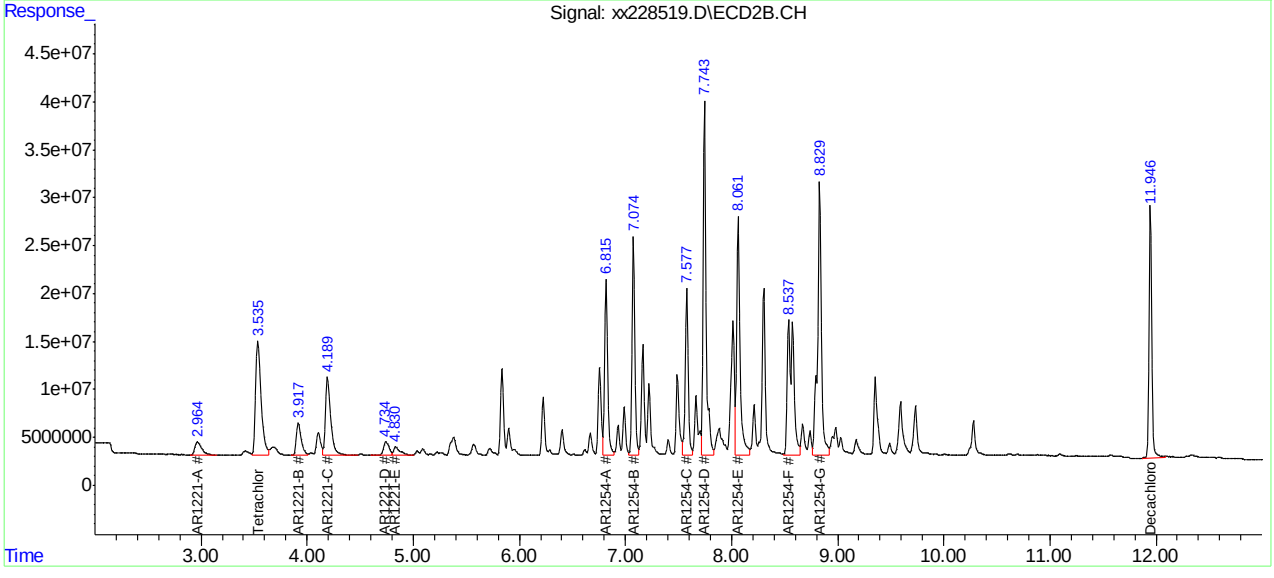
Quantitation Report (QT Reviewed)

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)





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

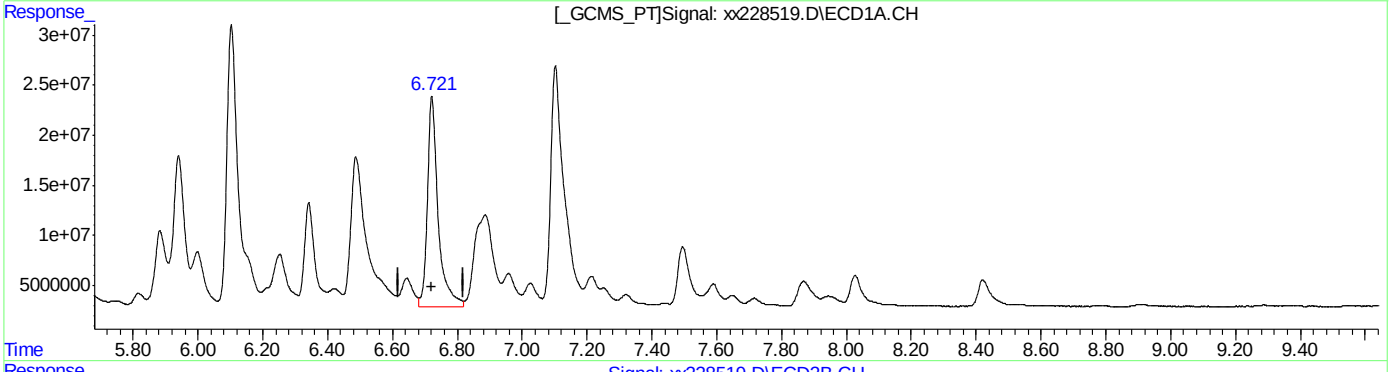
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1254-F		2	8.54	Split peak
Ar1254-G		2	8.83	Split peak
Decachlorobiphenyl	2051-24-3	2	11.95	Poorly defined baseline

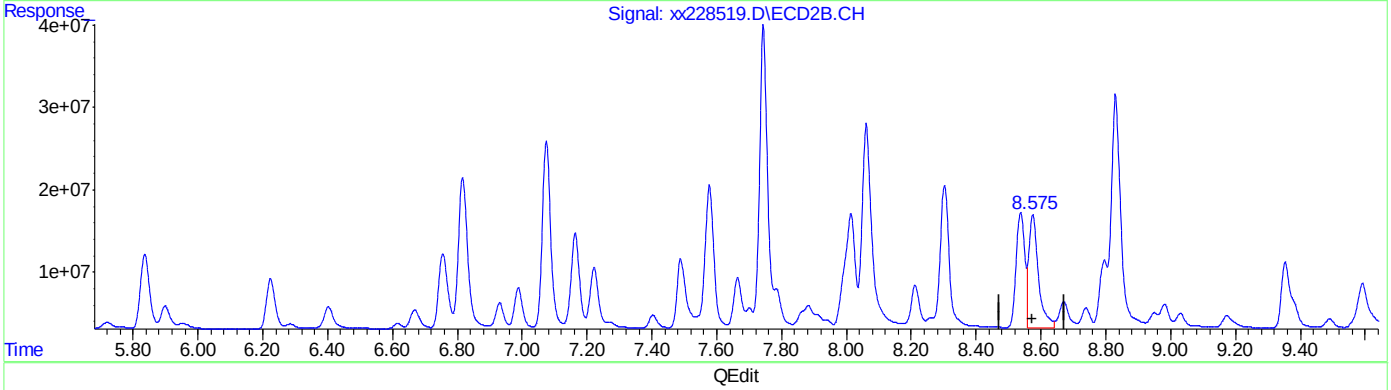
Quantitation Report (Qedit)

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

(29) AR1254-F
6.721min 1339.245PPB
response 483593531

(29) AR1254-F #2
8.575min 675.001PPB
response 293917974

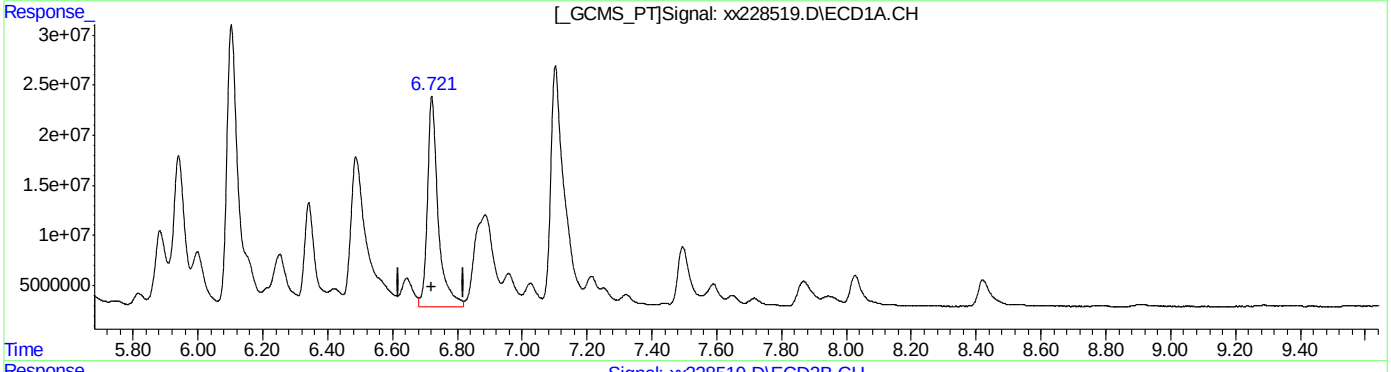
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:28:47 2018

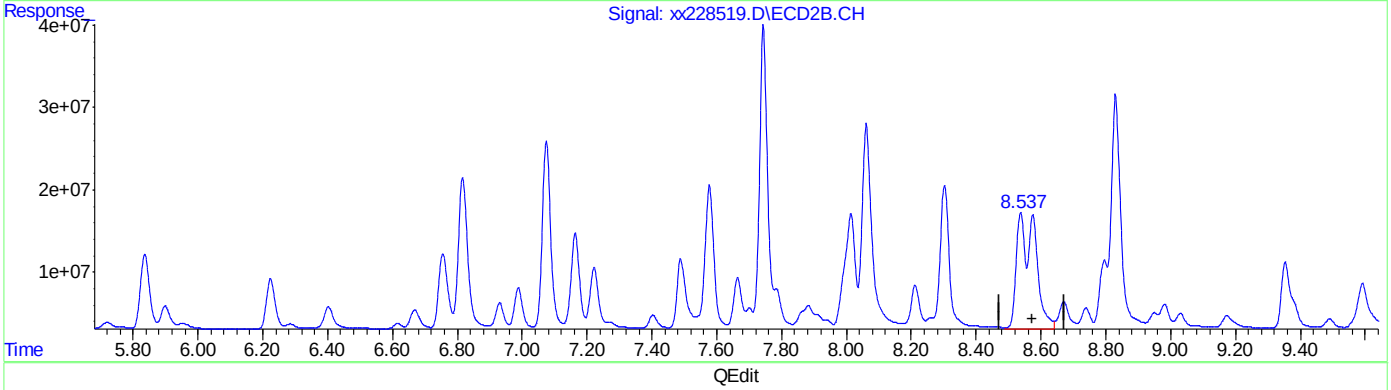
Quantitation Report (Qedit)

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)





QEdit

(29) AR1254-F
6.721min 1339.245PPB
response 483593531

(29) AR1254-F #2
8.537min 1276.749PPB m
response 555939102

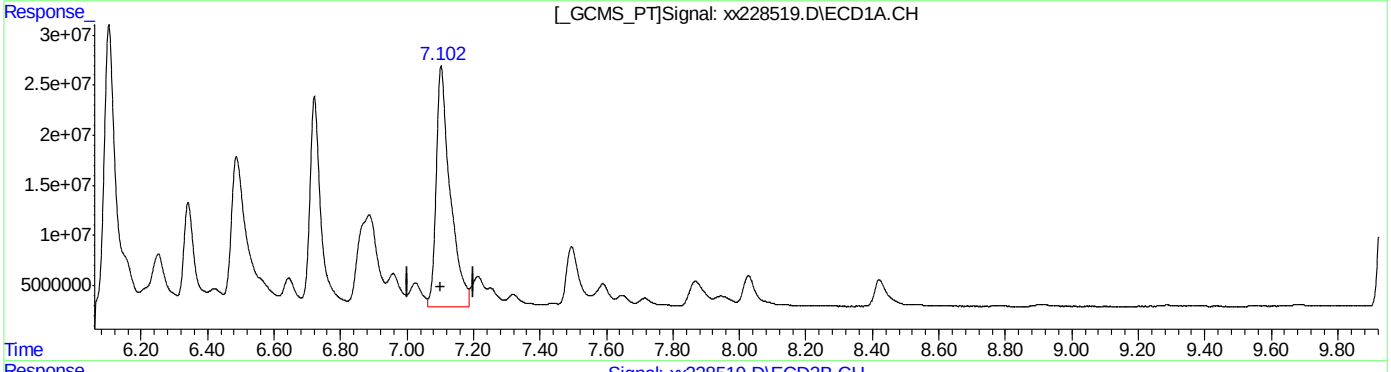
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:28:55 2018

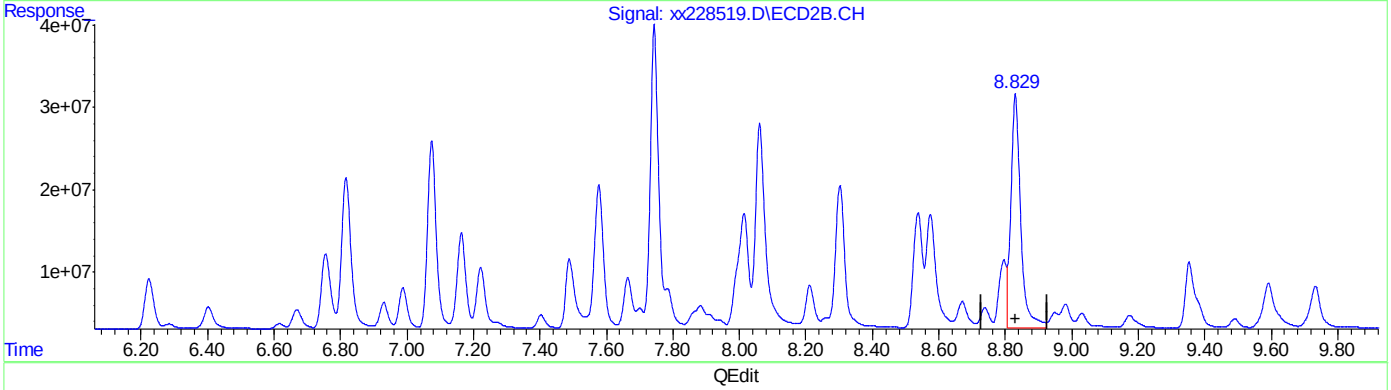
Quantitation Report (Qedit)

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)





QEdit

(30) AR1254-G
7.102min 1318.191PPB
response 699513242

(30) AR1254-G #2
8.830min 1063.172PPB
response 586817950

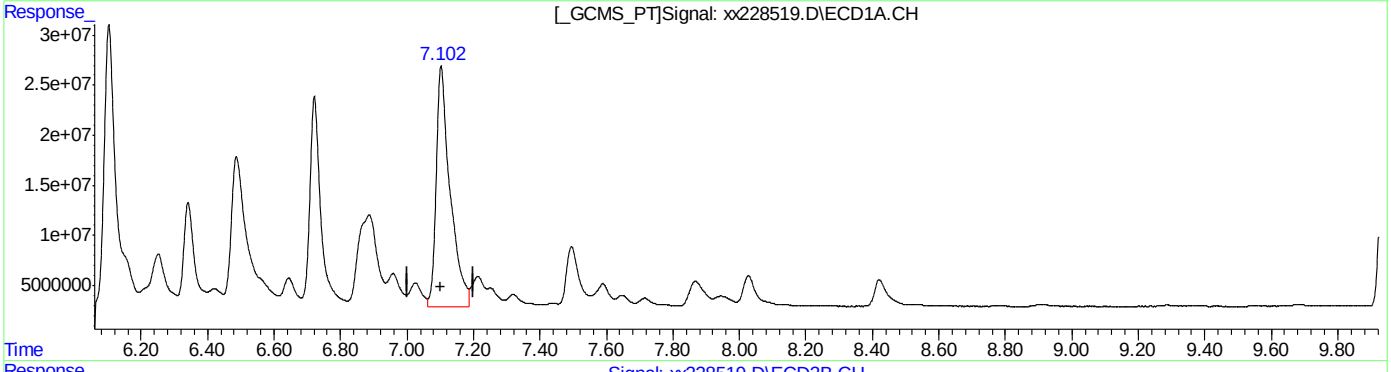
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:28:57 2018

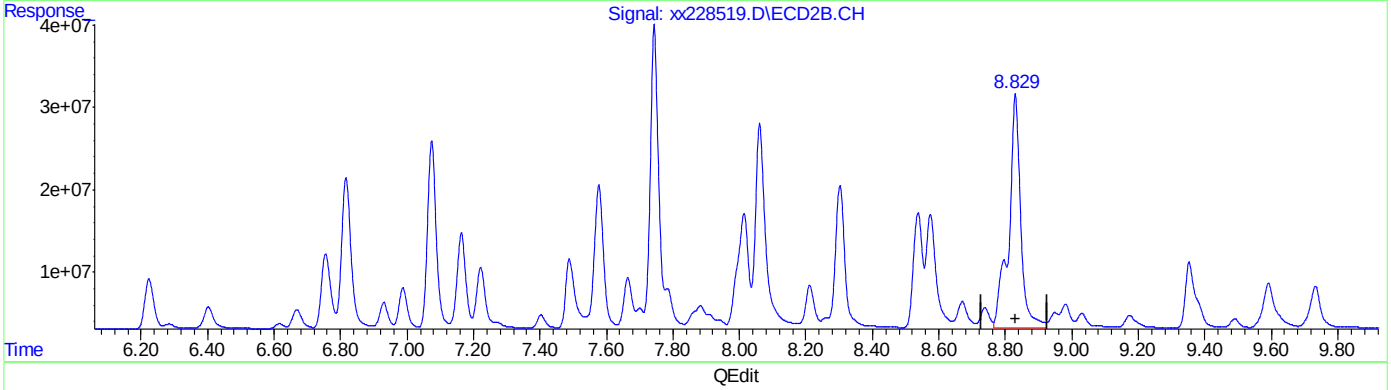
Quantitation Report (Qedit)

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

(30) AR1254-G
7.102min 1318.191PPB
response 699513242

(30) AR1254-G #2
8.829min 1297.886PPB m
response 716368660

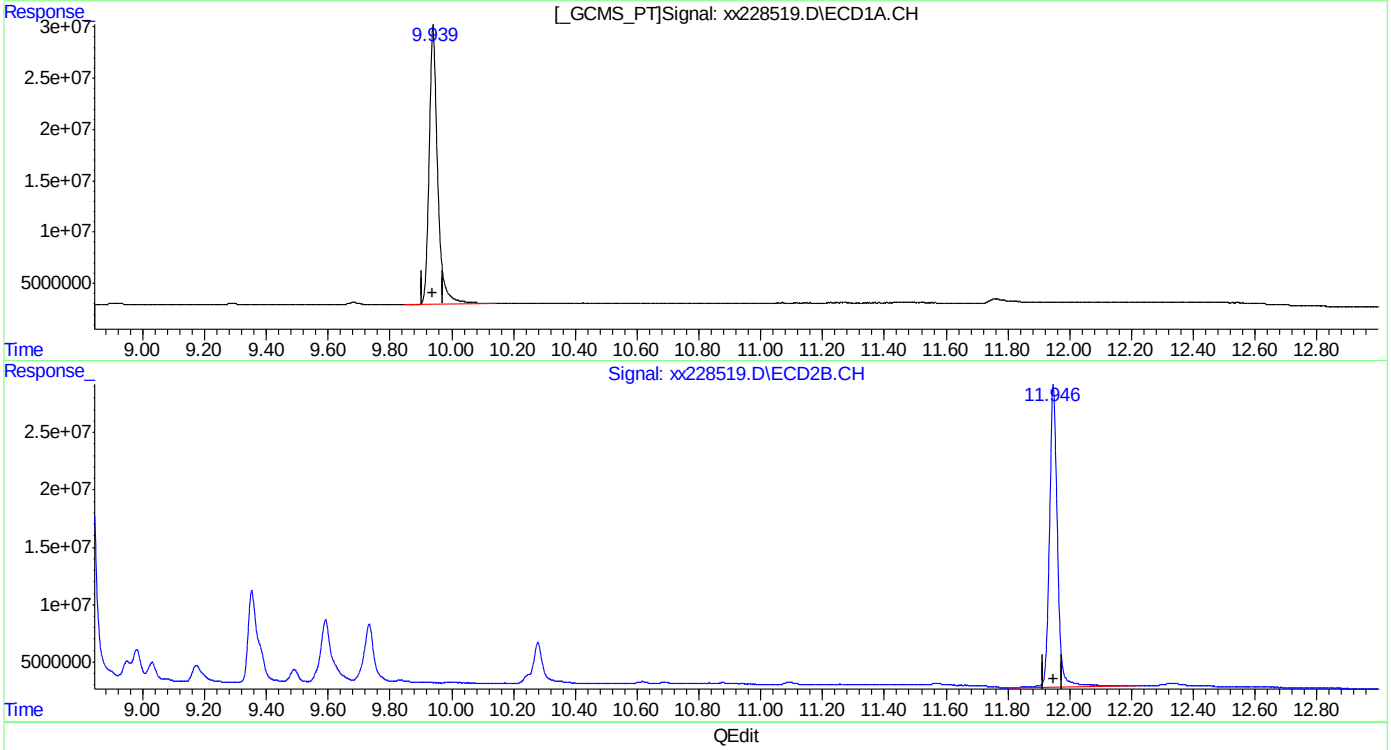
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:29:04 2018

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)
11.947min 41.411ppb
response 473583488

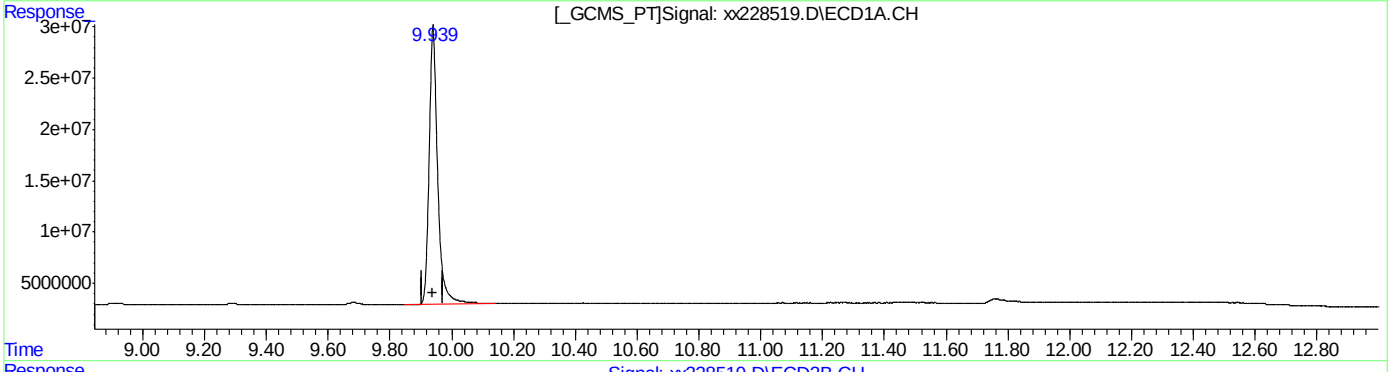
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:29:10 2018

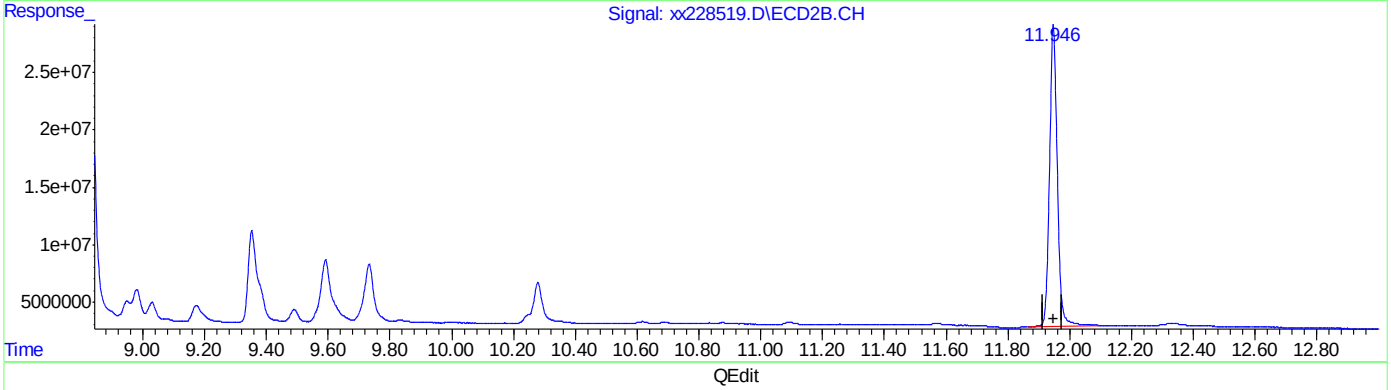
Quantitation Report (Qedit)

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)





QEdit

(51) Decachlorobiphenyl (S)
9.940min 41.114ppb
response 514641203

(51) Decachlorobiphenyl #2 (S)
11.946min 40.253ppb m
response 460343405

(+) = Expected Retention Time

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.

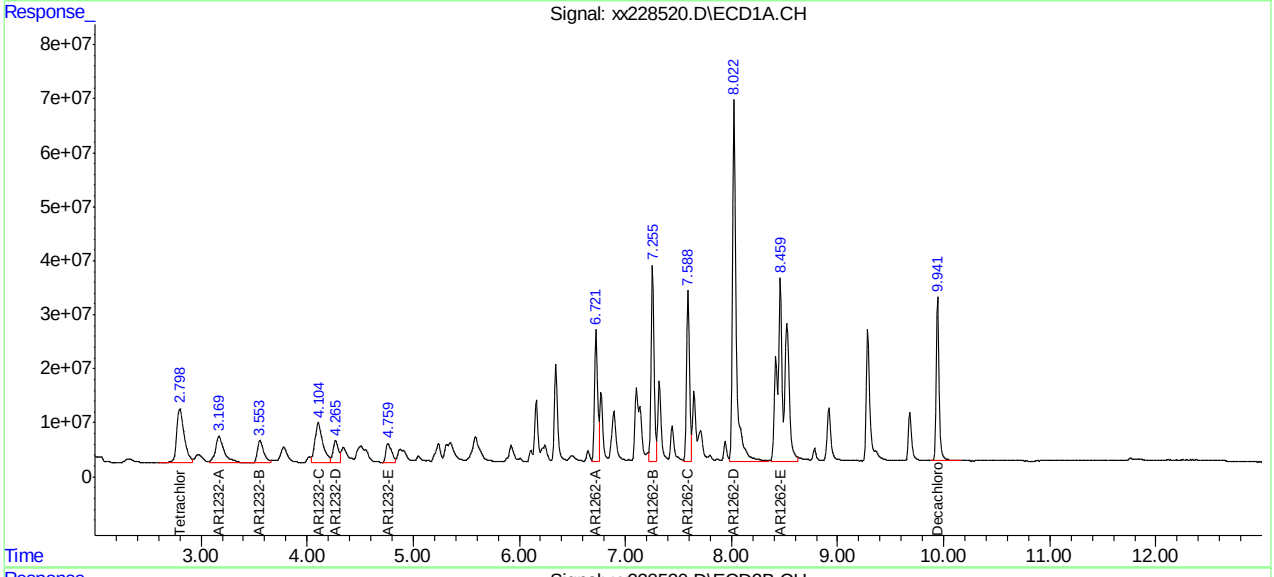
11.6.41
11

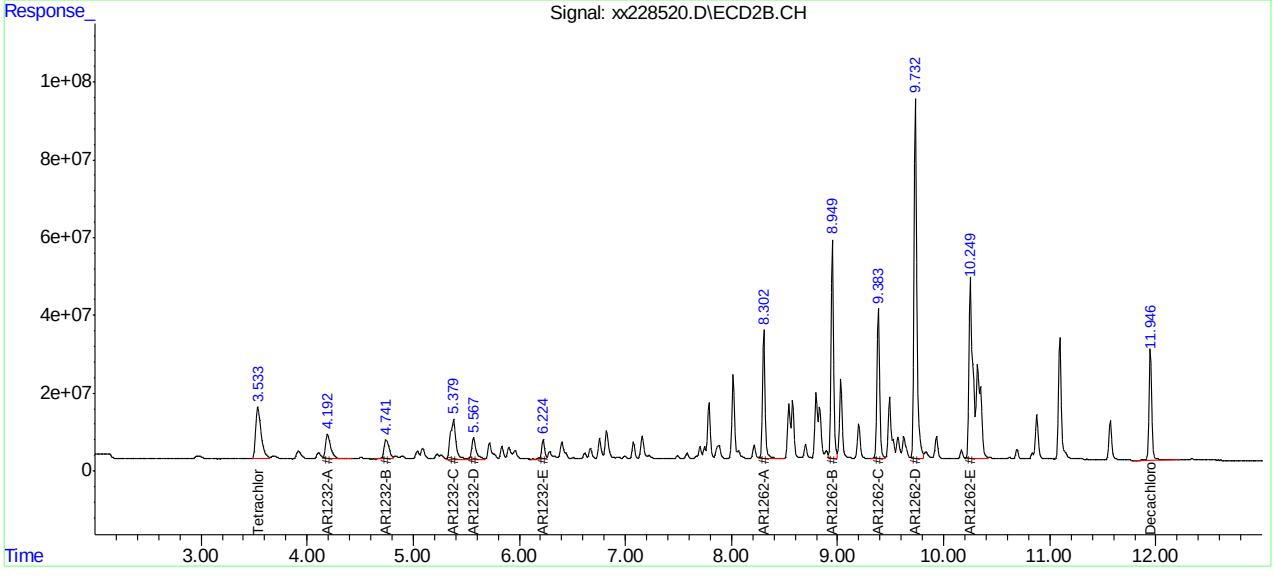
Quantitation Report (QT Reviewed)

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)





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

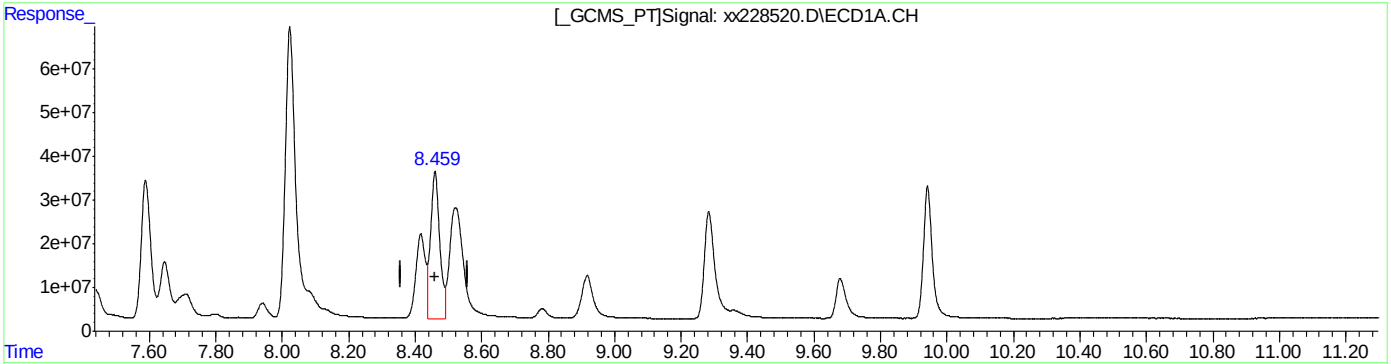
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1262-E		1	8.46	Split peak
AR1262-E		2	10.25	Split peak

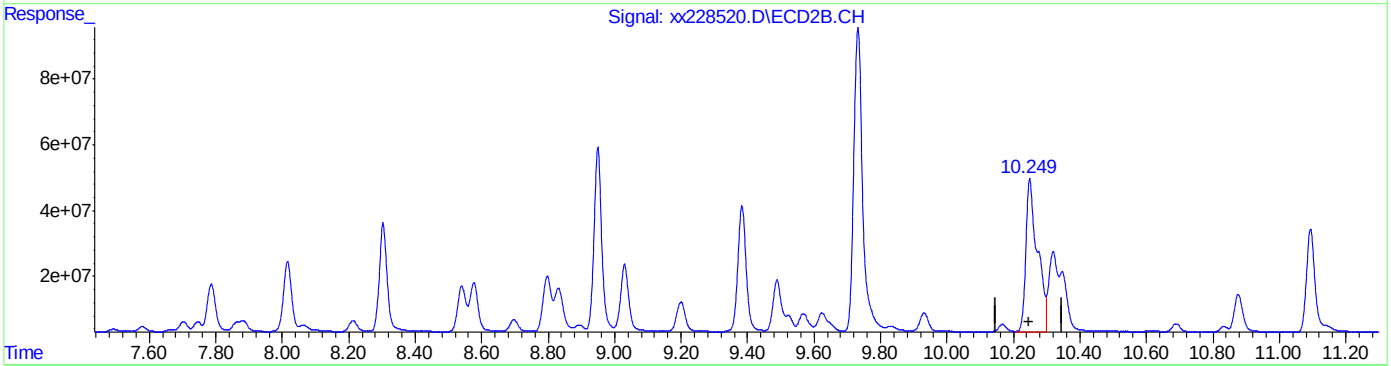
Quantitation Report (Qedit)

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

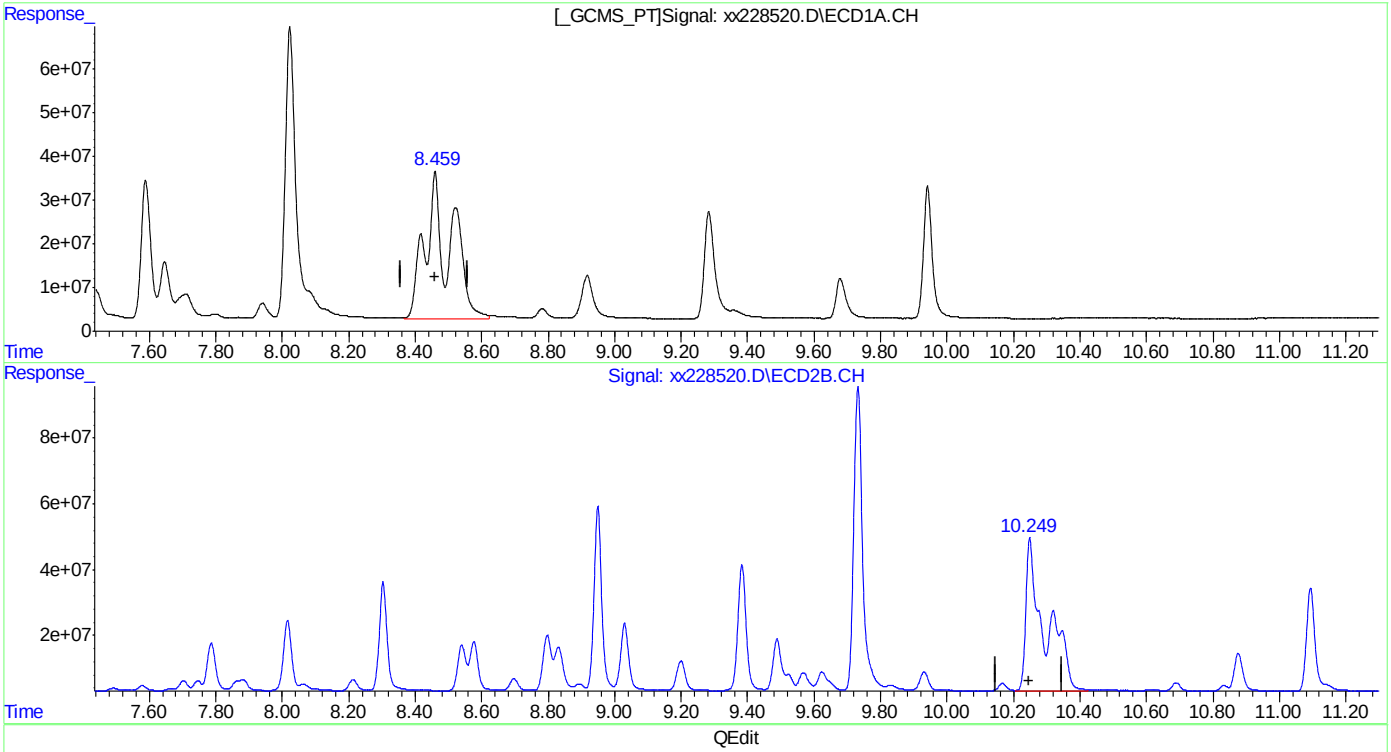
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:30:46 2018

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

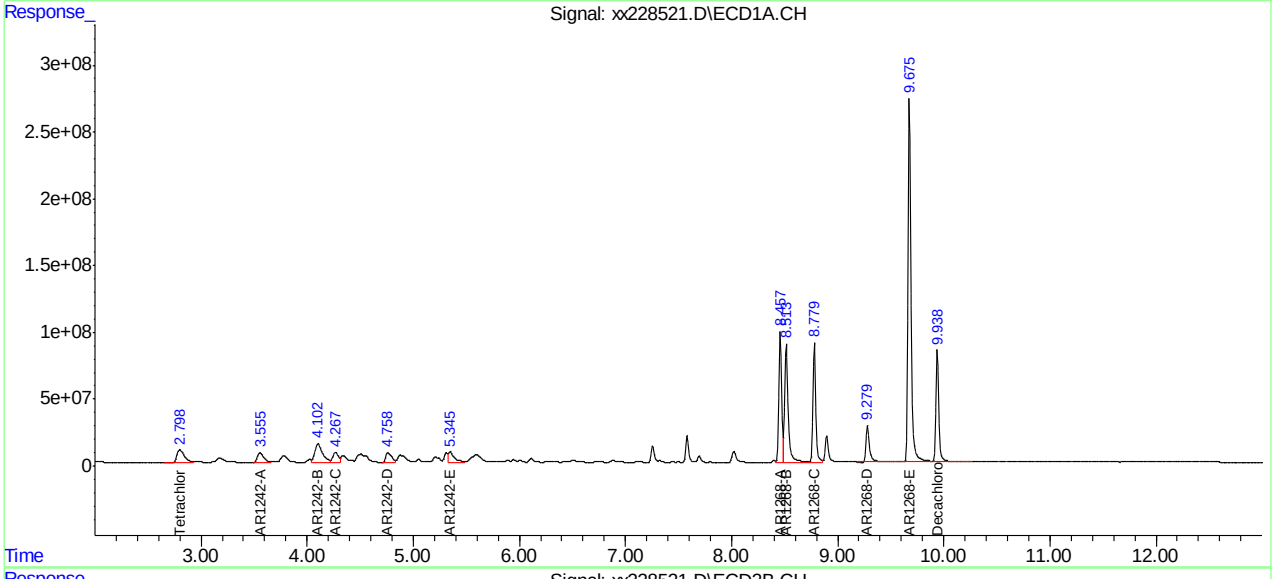
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

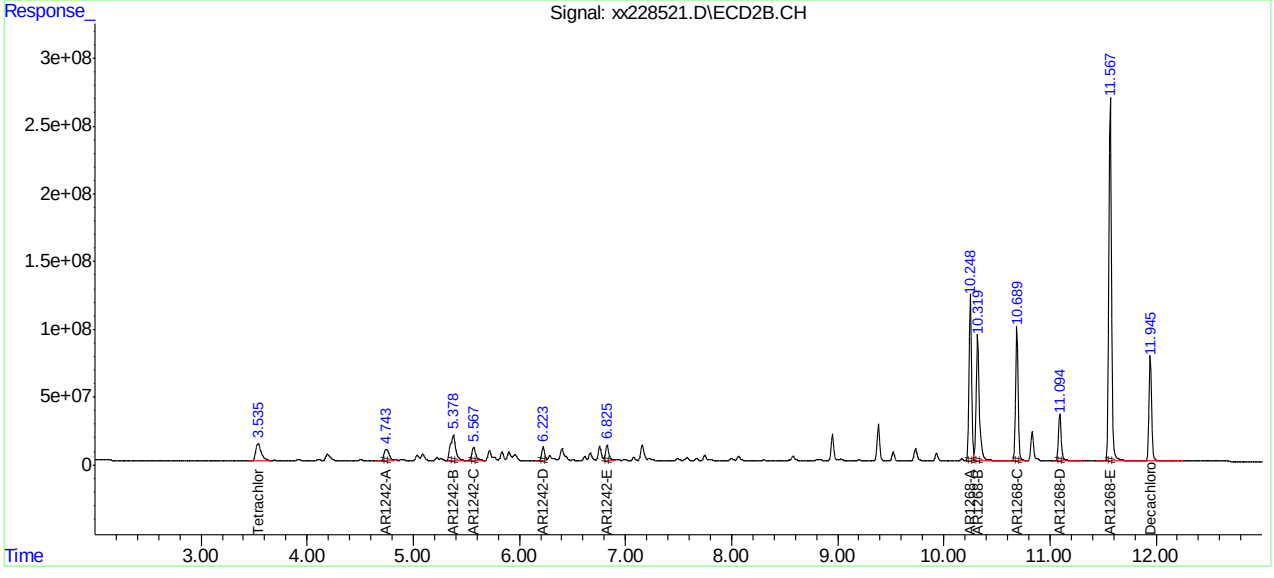
Quantitation Report (QT Reviewed)

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)





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 : 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.

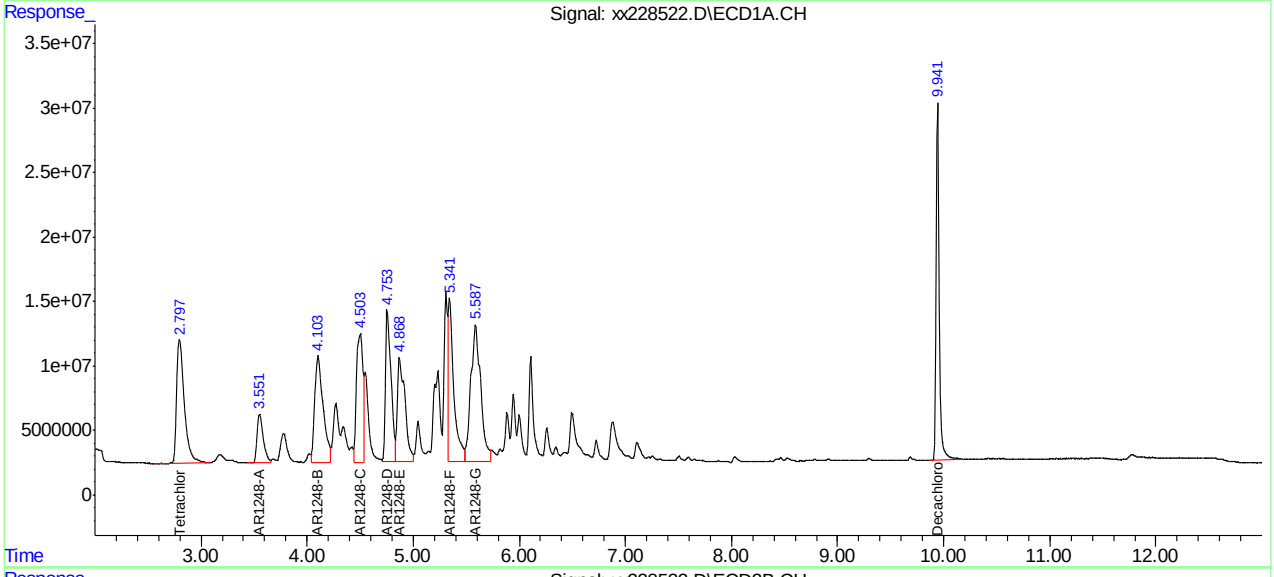
11.6.43 11

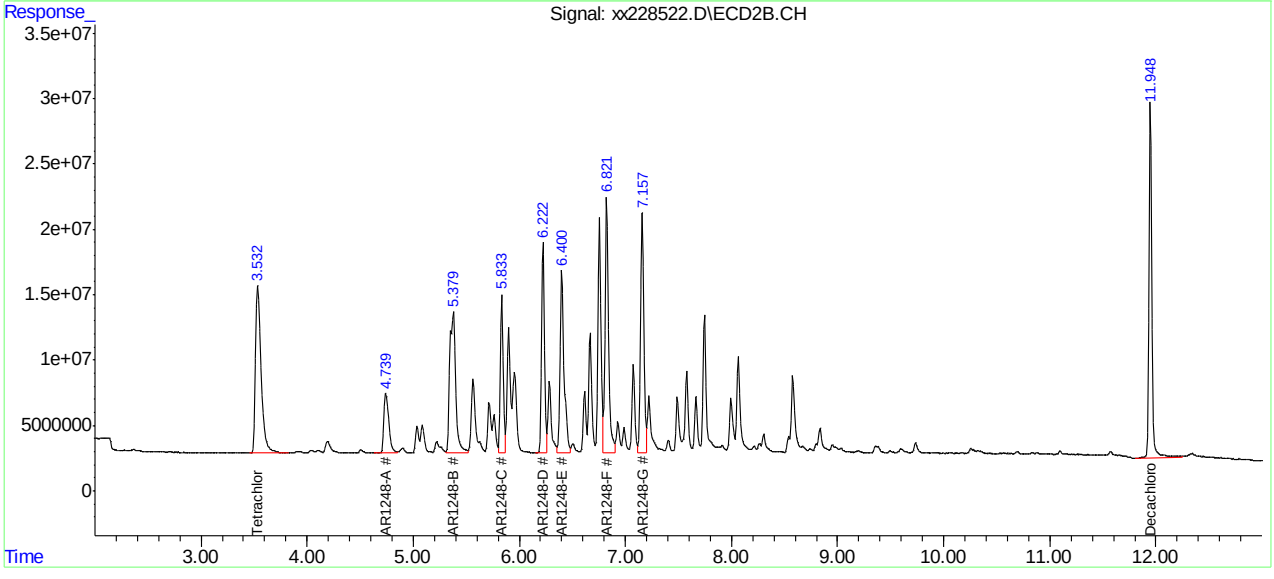
Quantitation Report (QT Reviewed)

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)





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

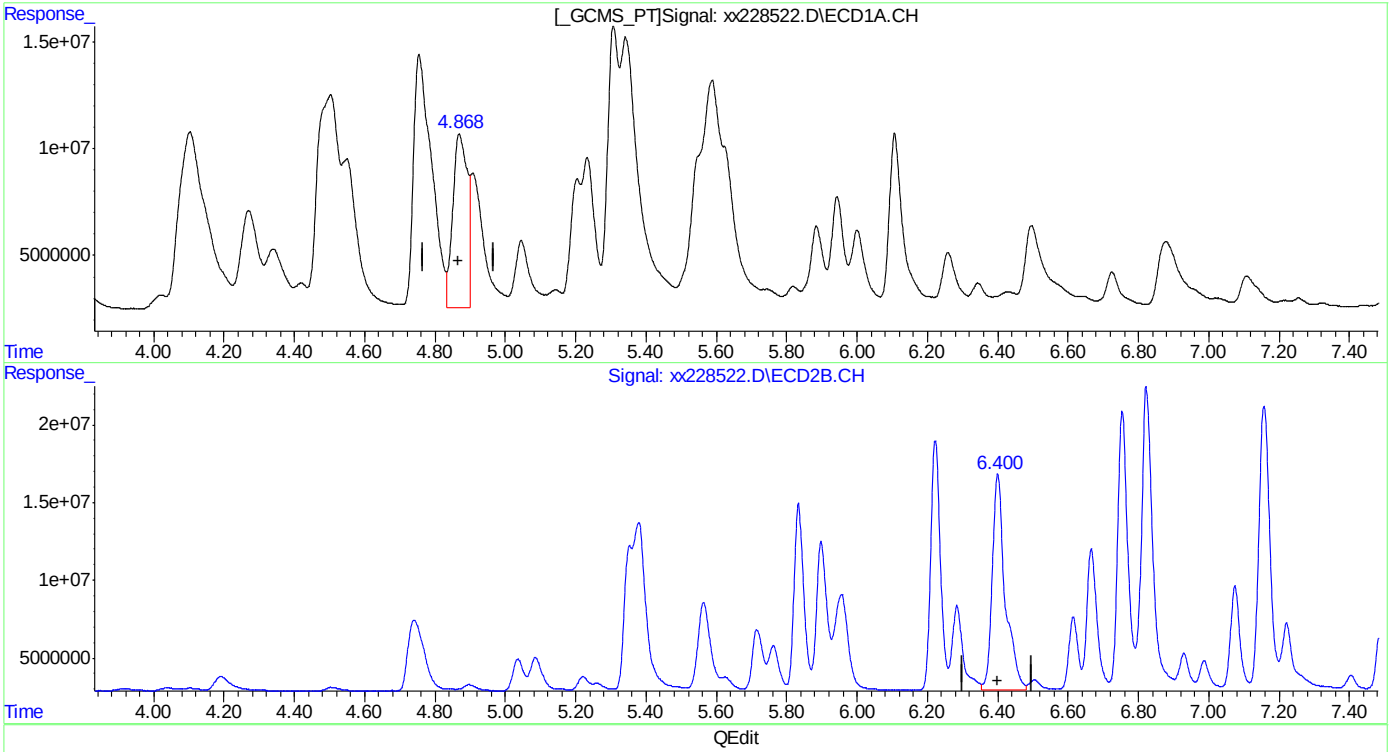
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1248-E		1	4.87	Split peak

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)



QEdit

(21) AR1248-E
4.869min 781.625PPB
response 236034705

(21) AR1248-E #2
6.400min 1305.097PPB
response 357499624

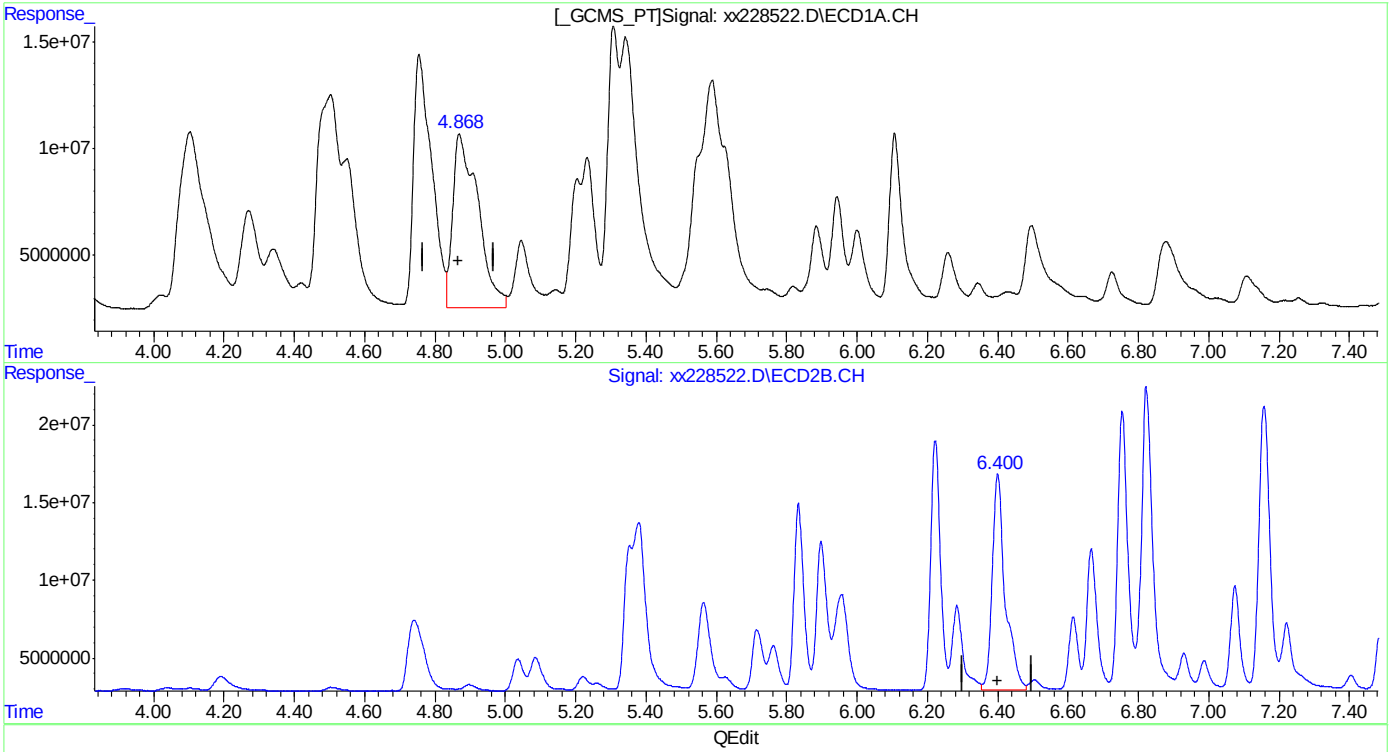
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:33:55 2018

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)



QEdit

(21) AR1248-E
4.868min 1341.429PPB m
response 405083908

(21) AR1248-E #2
6.400min 1305.097PPB
response 357499624

(+) = Expected Retention Time

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 : 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.

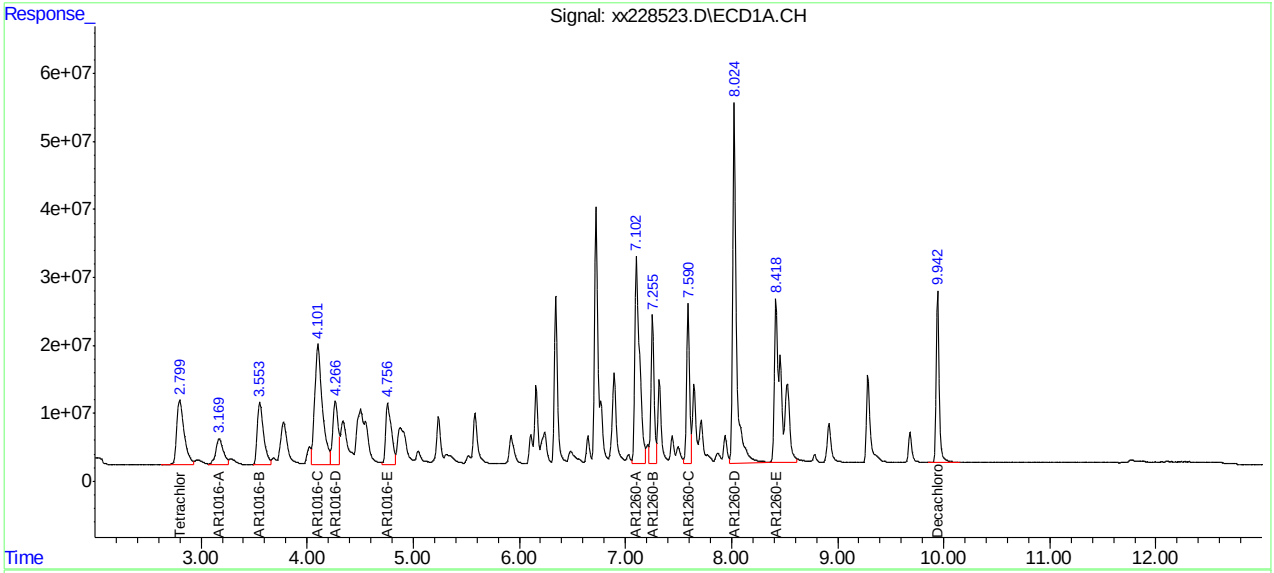
11.6.44 11

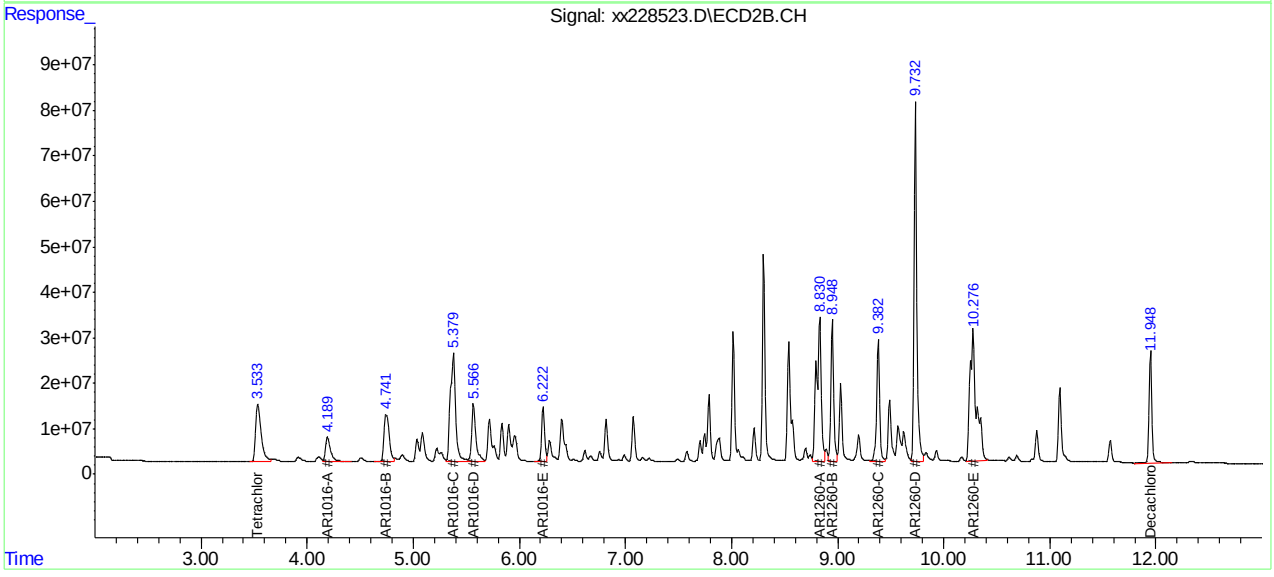
Quantitation Report (QT Reviewed)

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)





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

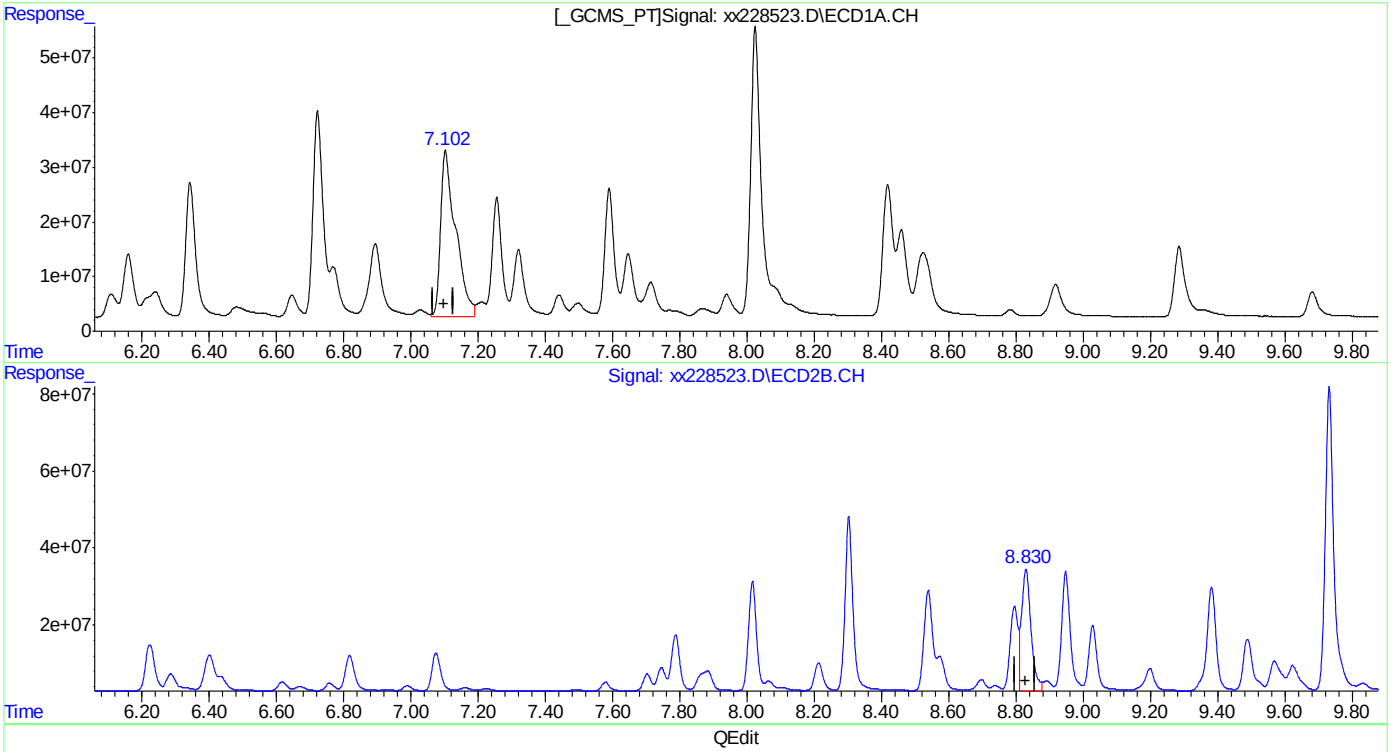
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1260-E		1	8.42	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.28	Split peak

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

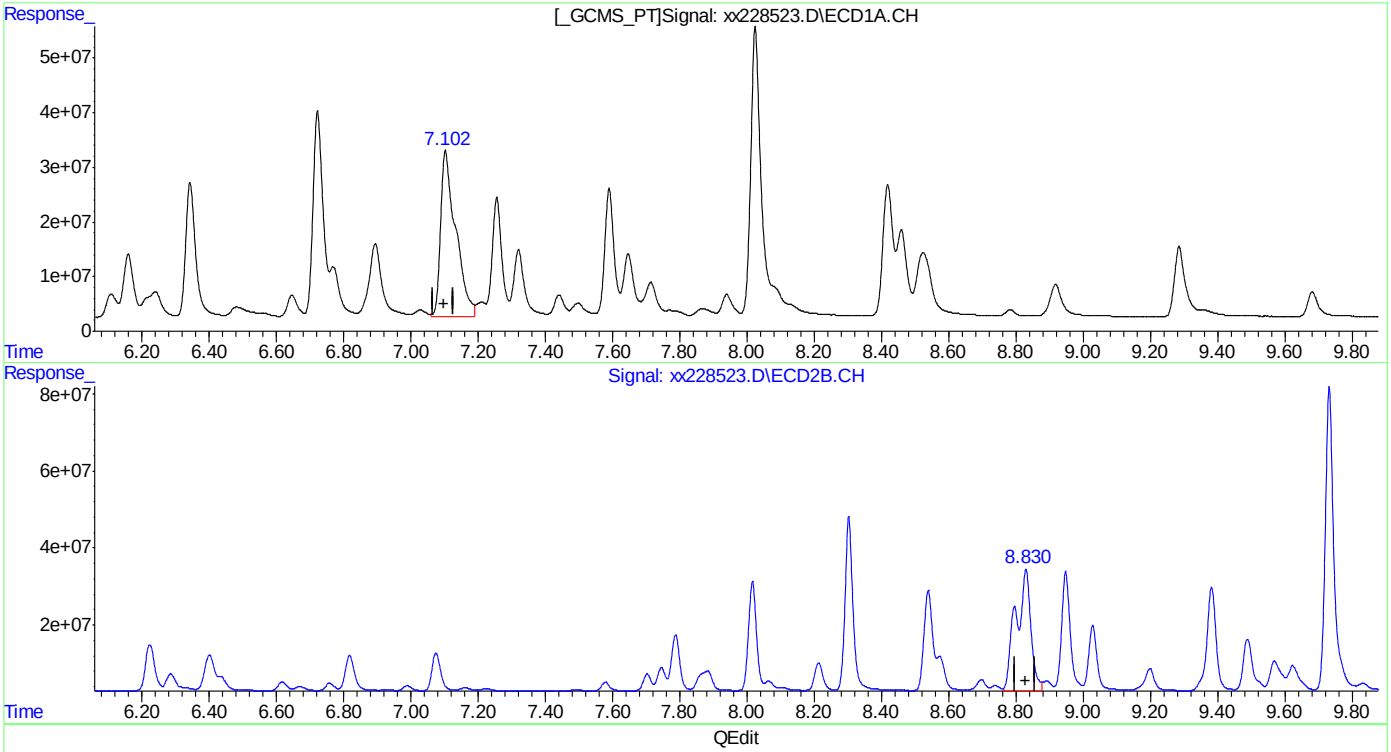
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:37:17 2018

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

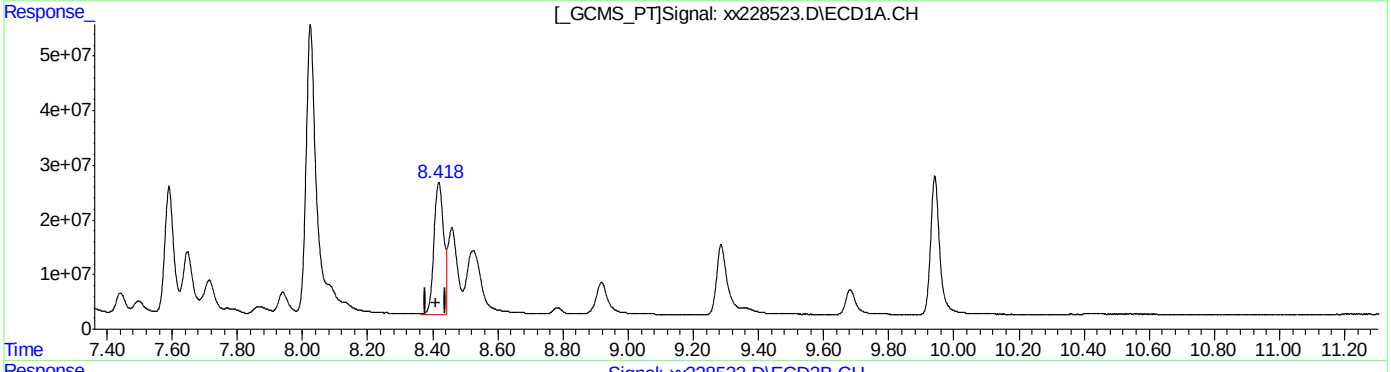
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:37:23 2018

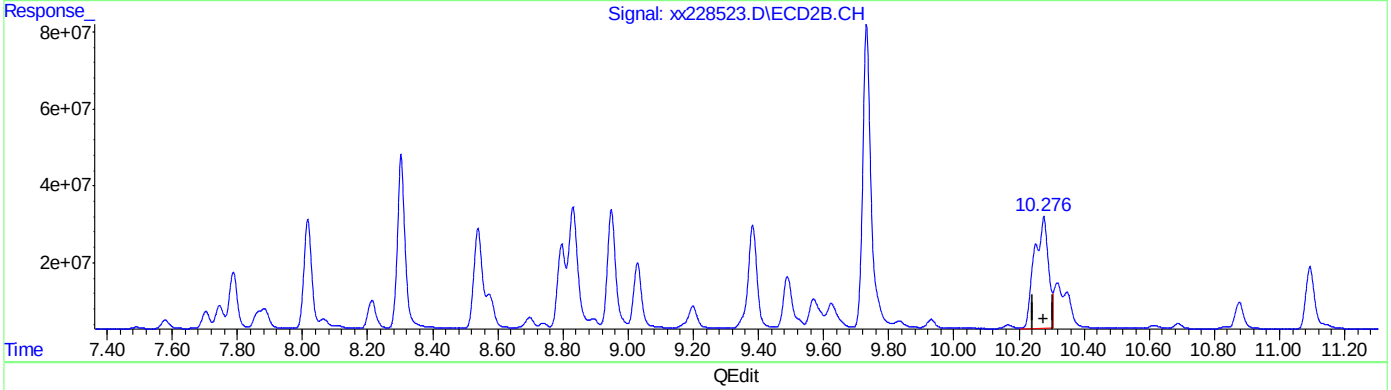
Quantitation Report (Qedit)

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)





QEdit

(50) AR1260-E
8.419min 424.372PPB
response 498736440

(50) AR1260-E #2
10.276min 719.507PPB
response 861408890

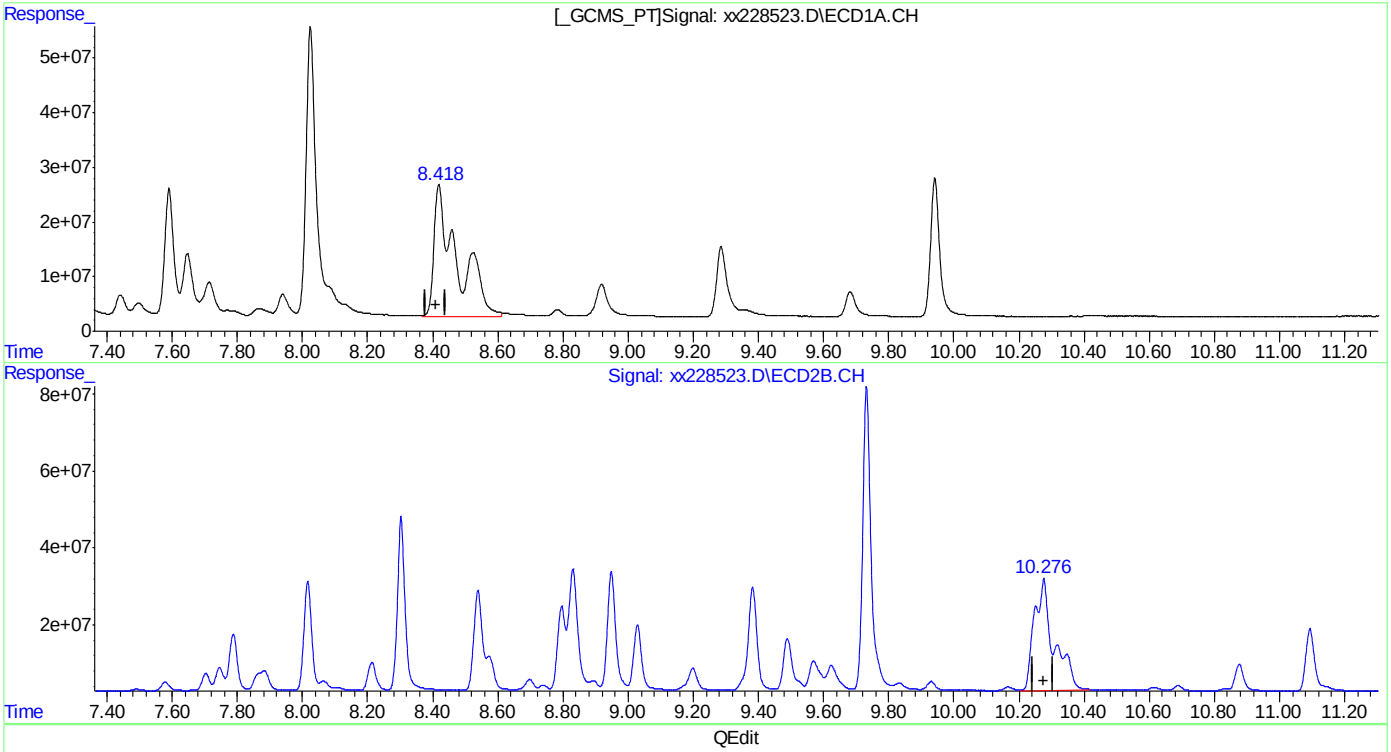
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:37:28 2018

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)



QEdit

(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

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 : 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.

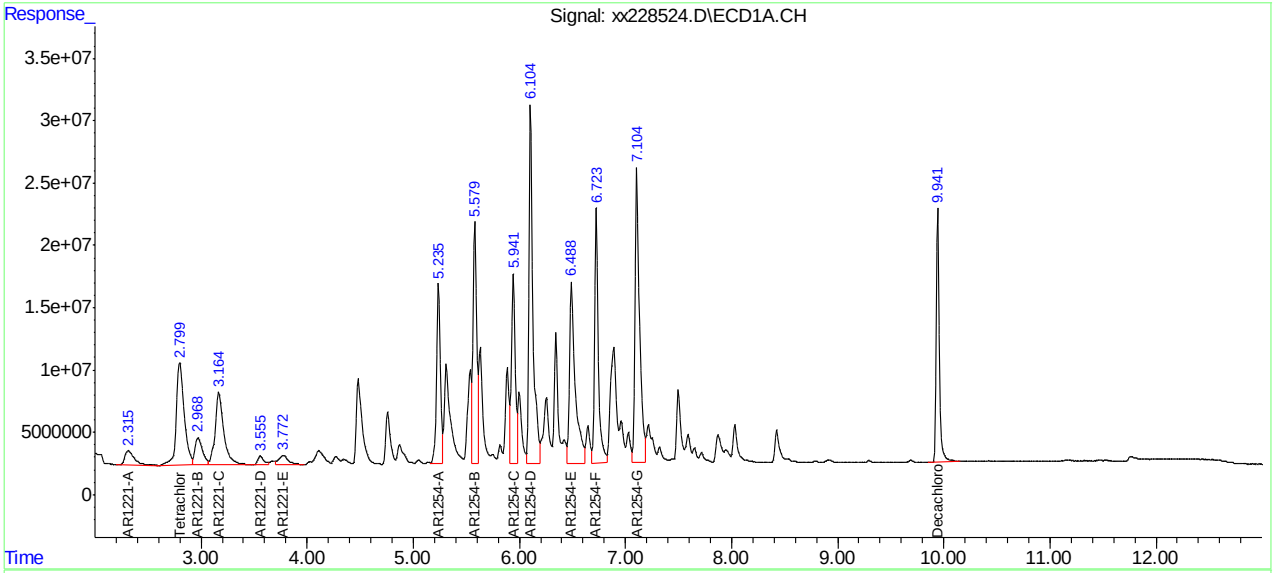
11.6.45 11

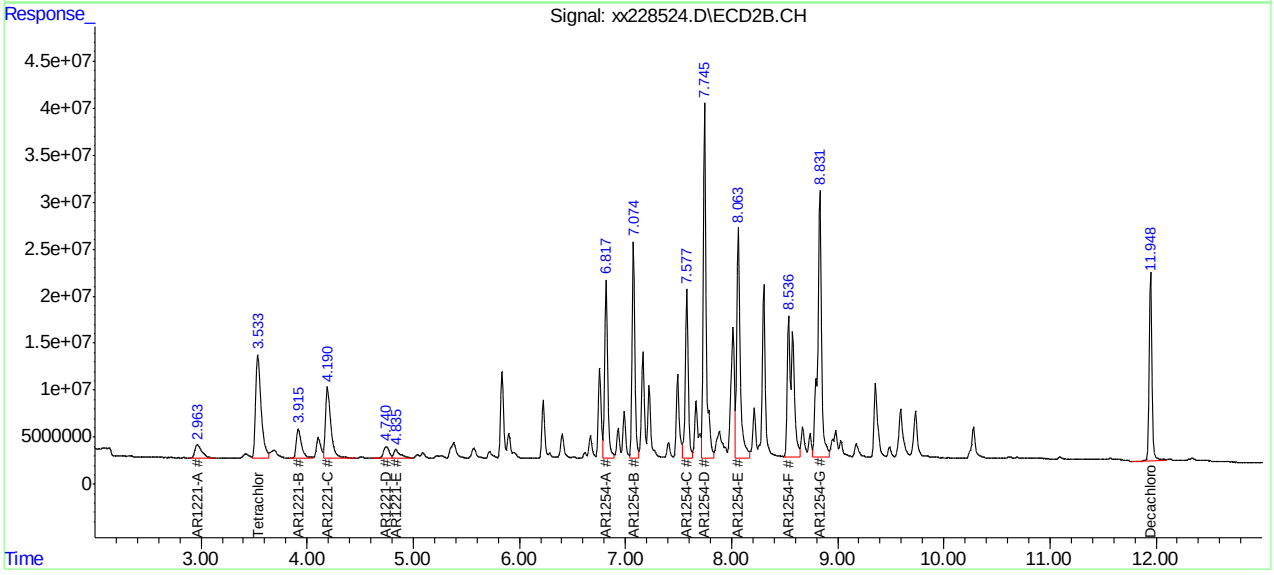
Quantitation Report (QT Reviewed)

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)





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

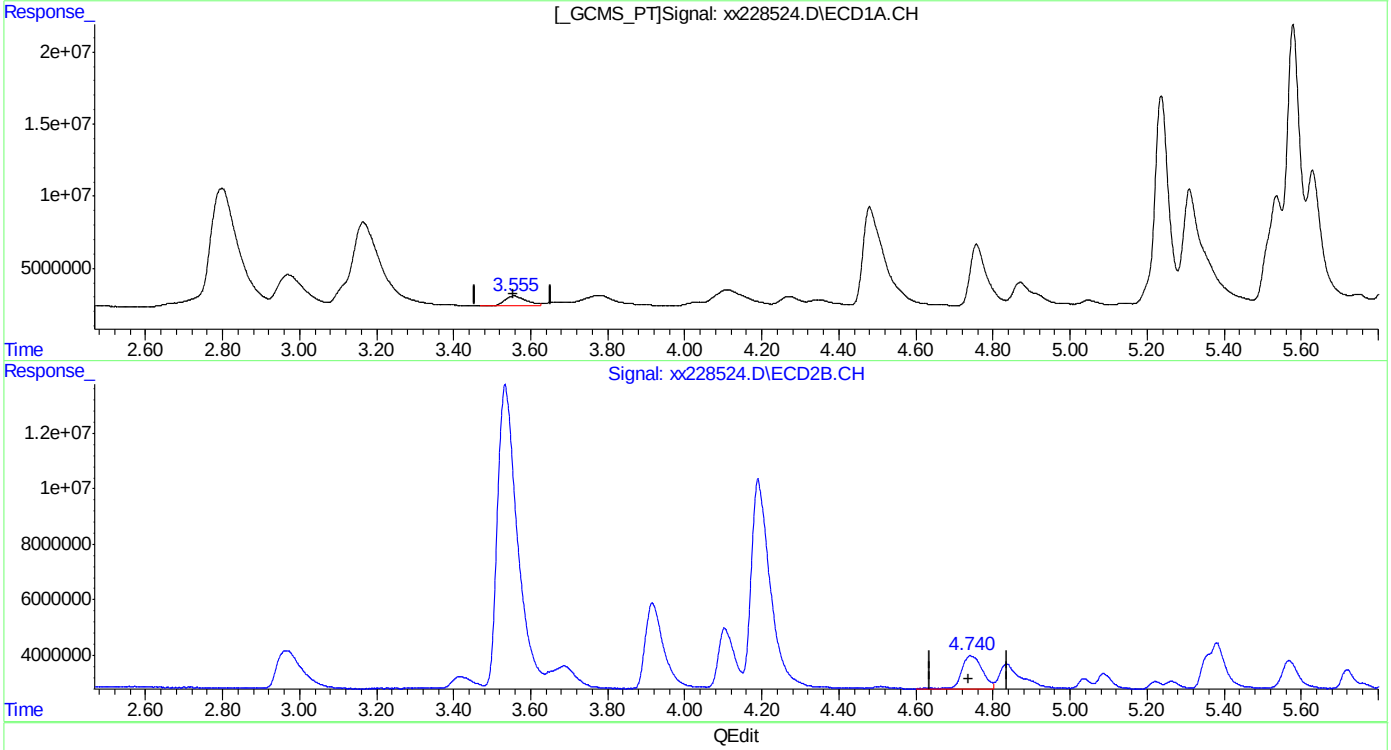
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1221-D		1	3.56	Split peak
AR1254-F		2	8.54	Split peak
Ar1254-G		2	8.83	Split peak

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

(5) AR1221-D
3.556min 747.779PPB
response 27740572

(5) AR1221-D #2
4.741min 893.486PPB
response 44879329

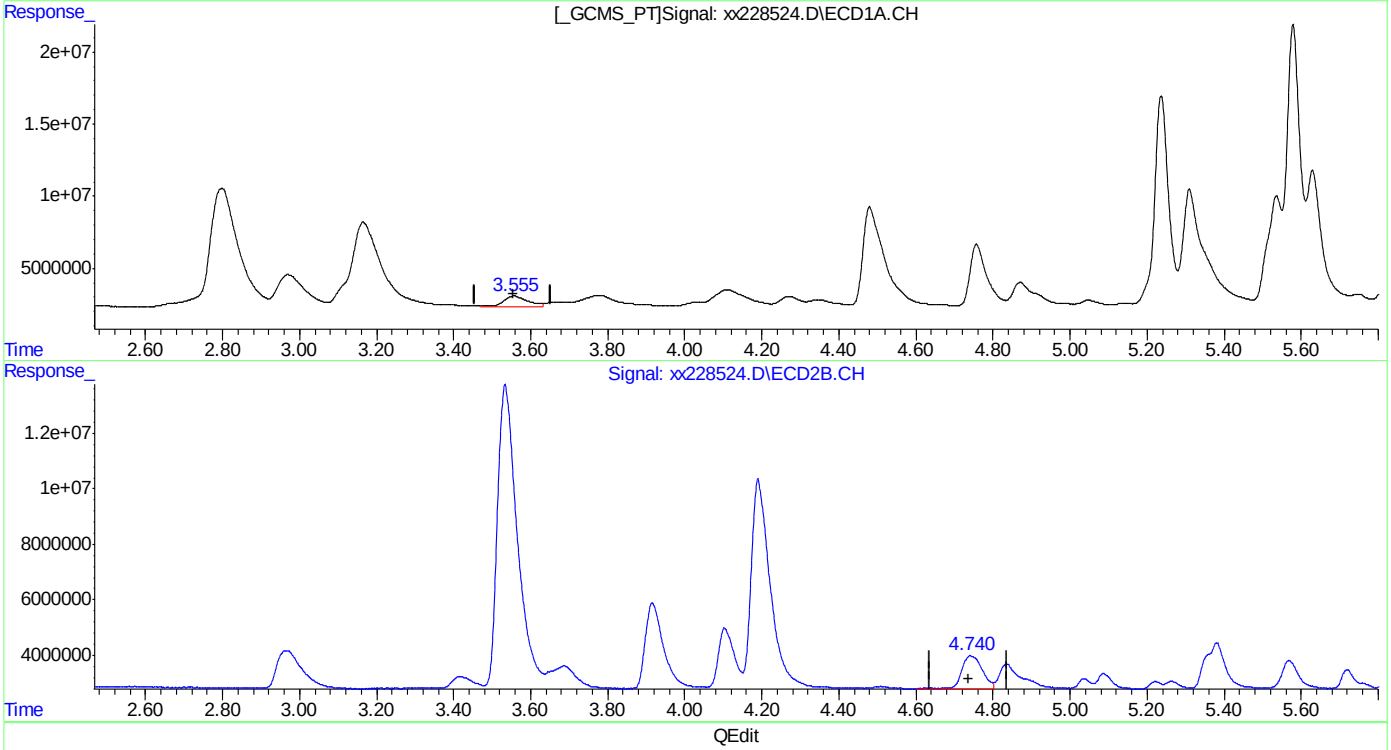
(+) = Expected Retention Time

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

(5) AR1221-D
3.555min 810.096PPB m
response 30052373

(5) AR1221-D #2
4.741min 893.486PPB
response 44879329

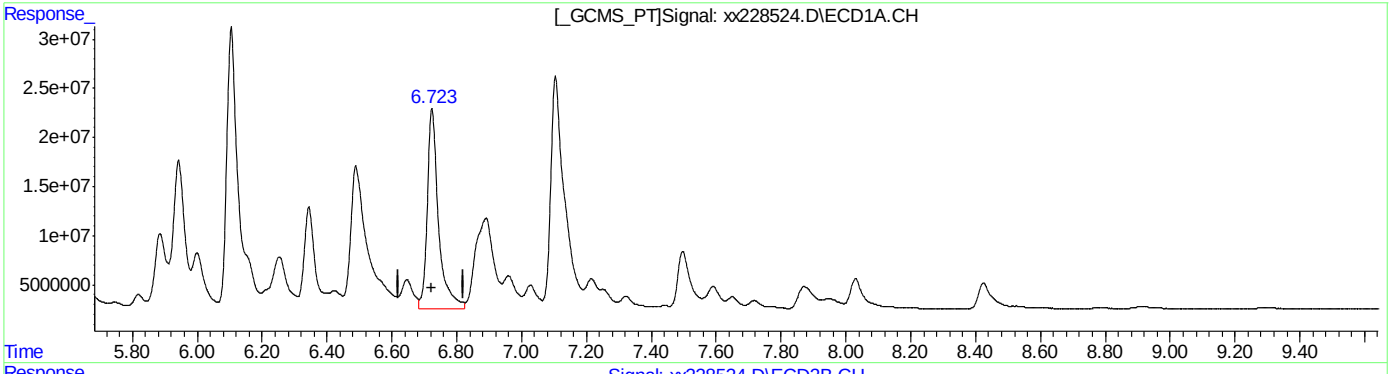
(+) = Expected Retention Time

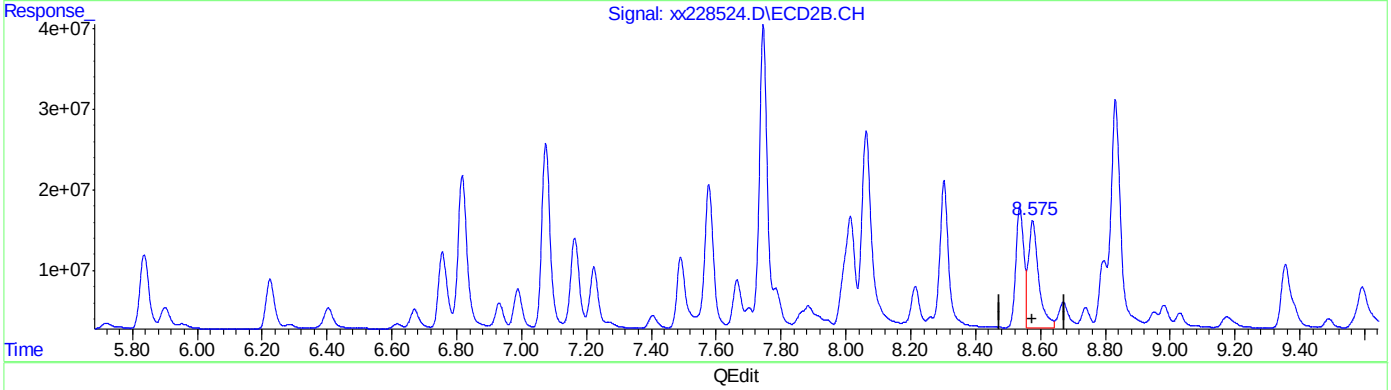
Quantitation Report (Qedit)

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

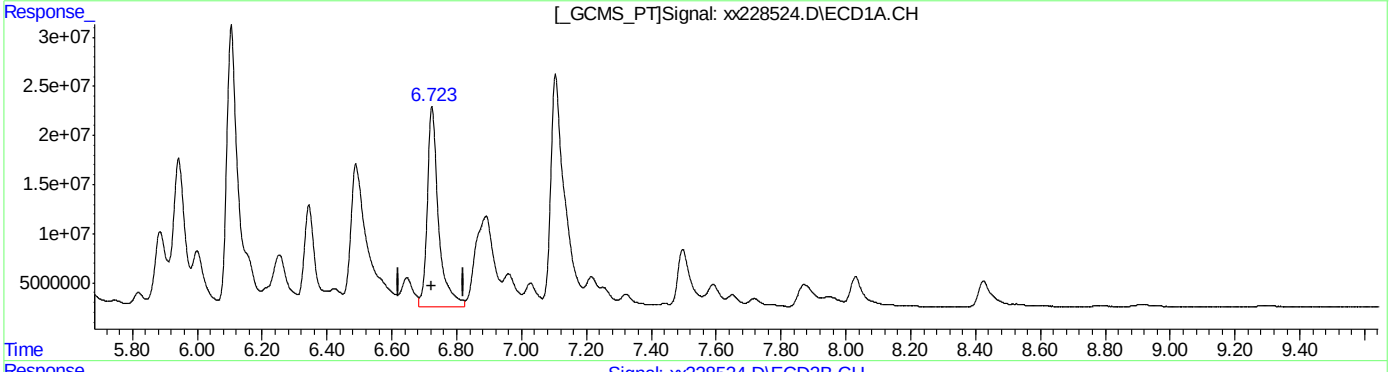
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:38:40 2018

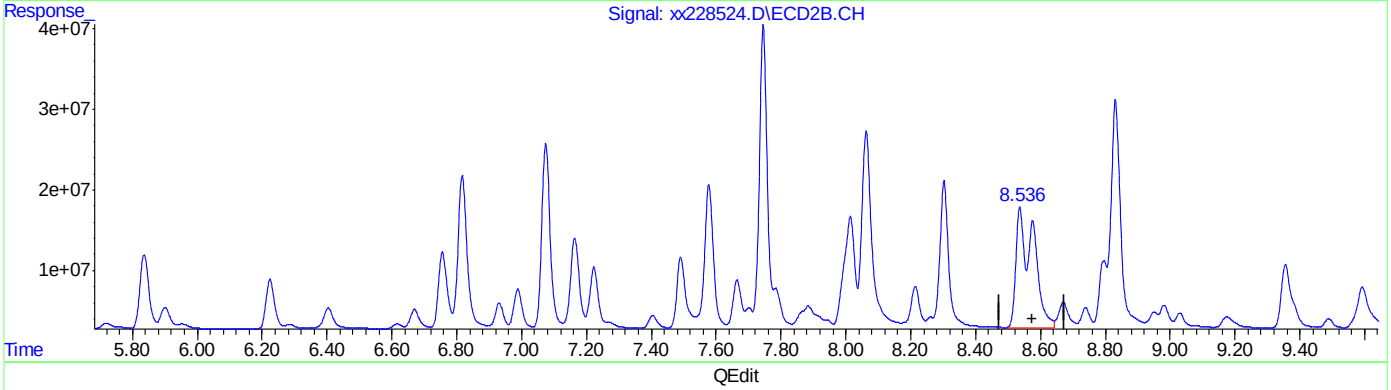
Quantitation Report (Qedit)

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
8.536min 998.557PPB m
response 555136842

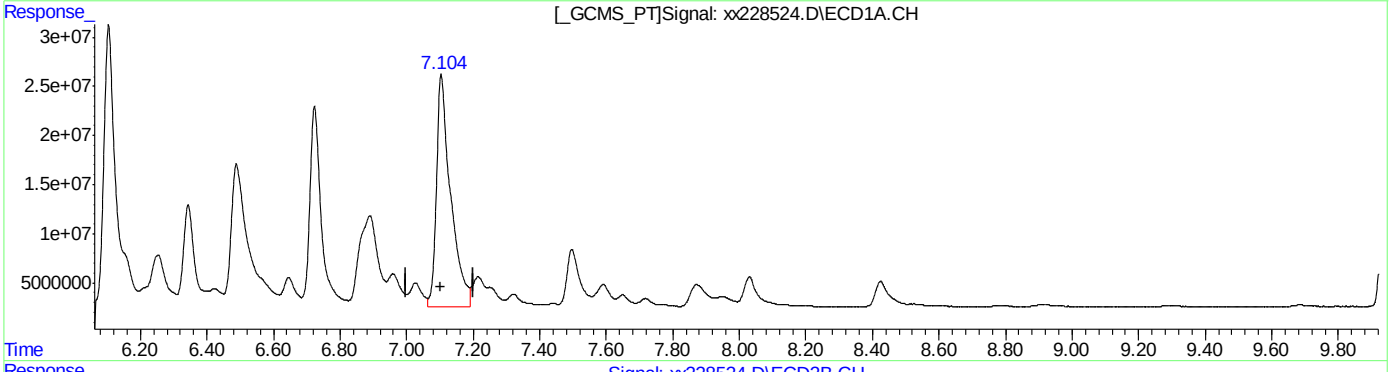
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:38:46 2018

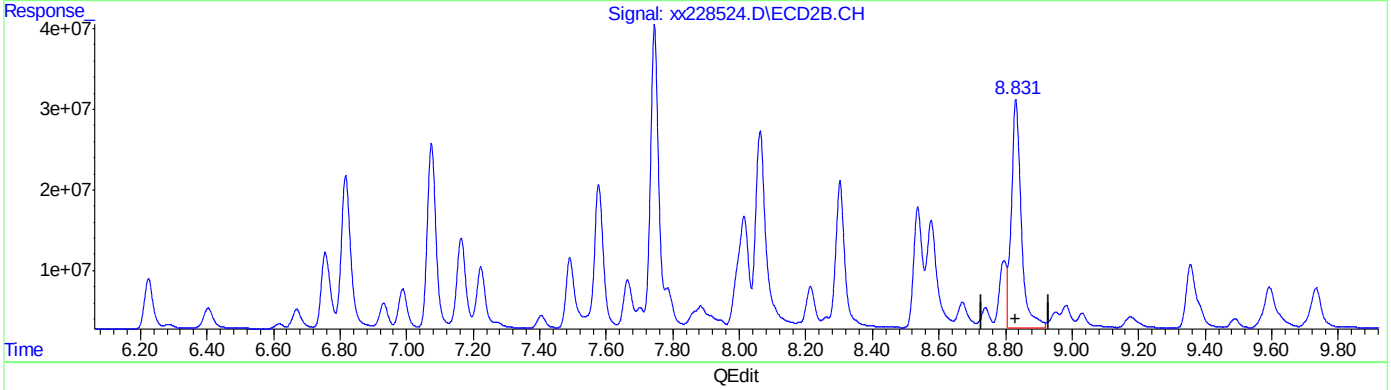
Quantitation Report (Qedit)

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)





QEdit

(30) AR1254-G
7.104min 1000.791PPB
response 700066743

(30) AR1254-G #2
8.831min 826.812PPB
response 592302433

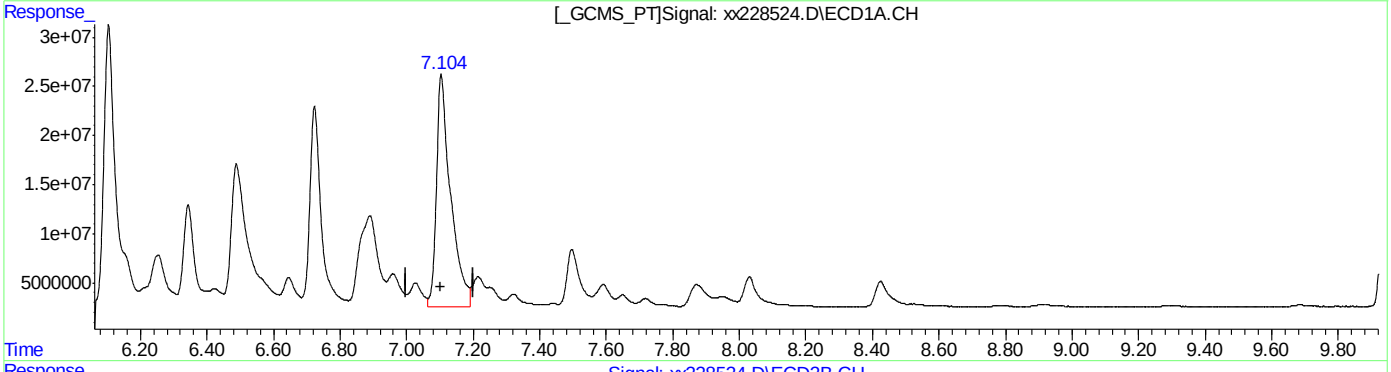
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:38:49 2018

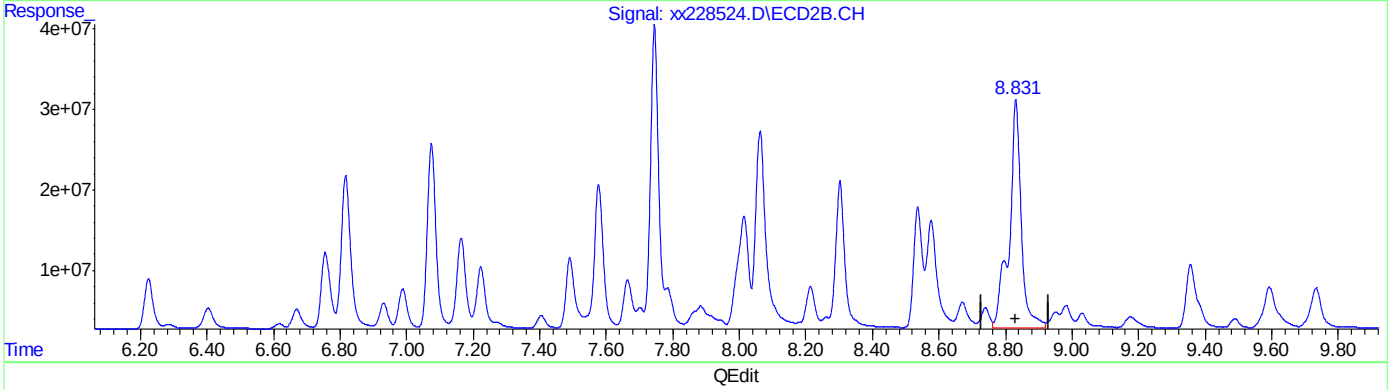
Quantitation Report (Qedit)

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

(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

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 : 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.

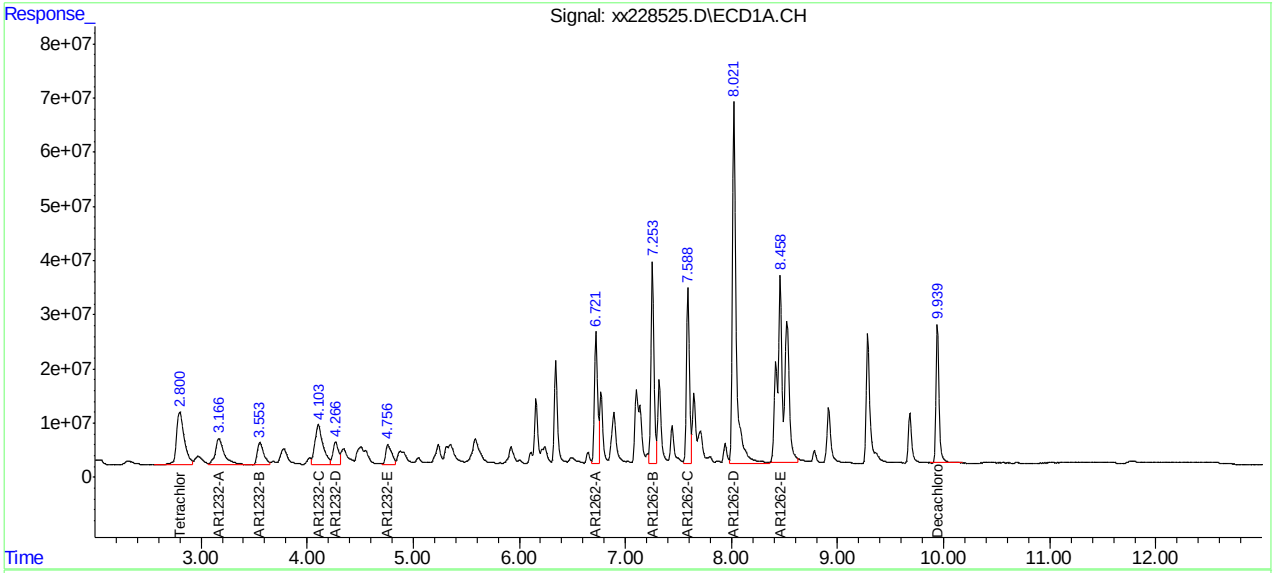
11.6.46 11

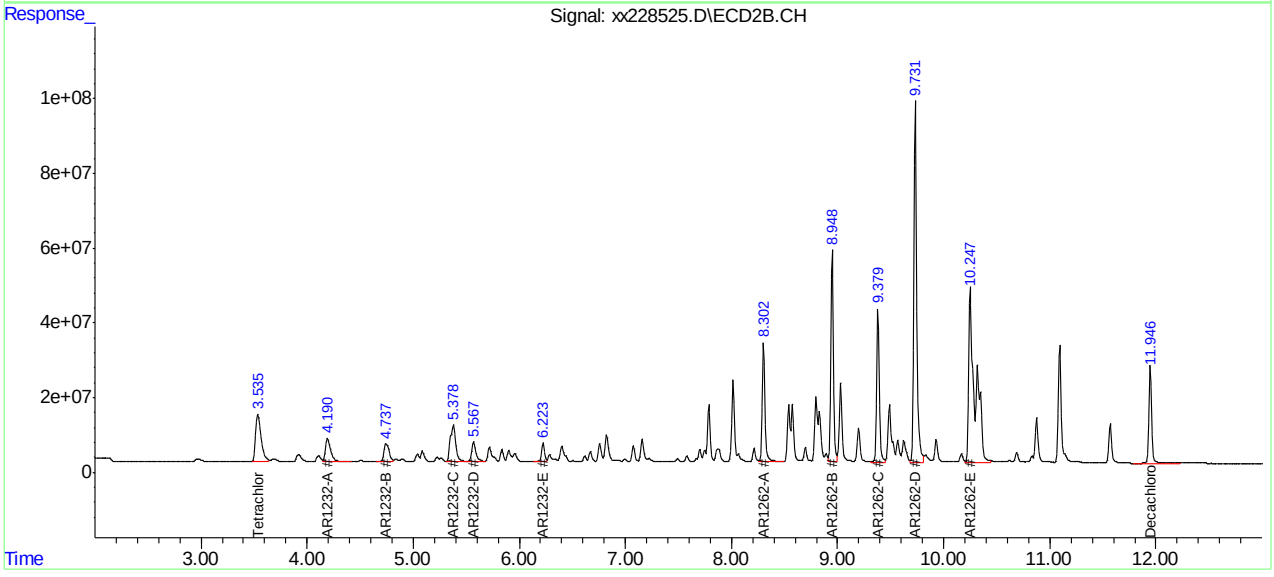
Quantitation Report (QT Reviewed)

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)





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

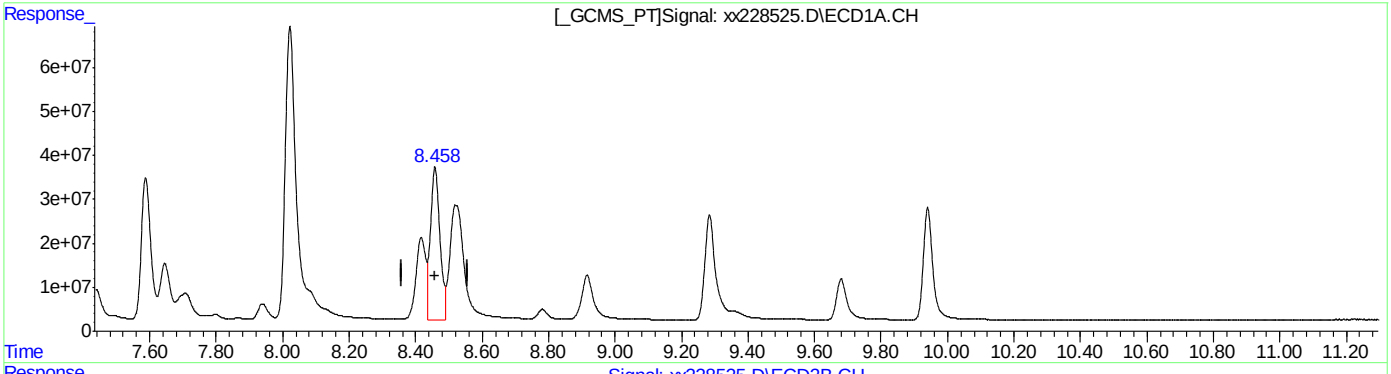
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1262-E		1	8.46	Split peak
AR1262-E		2	10.25	Split peak

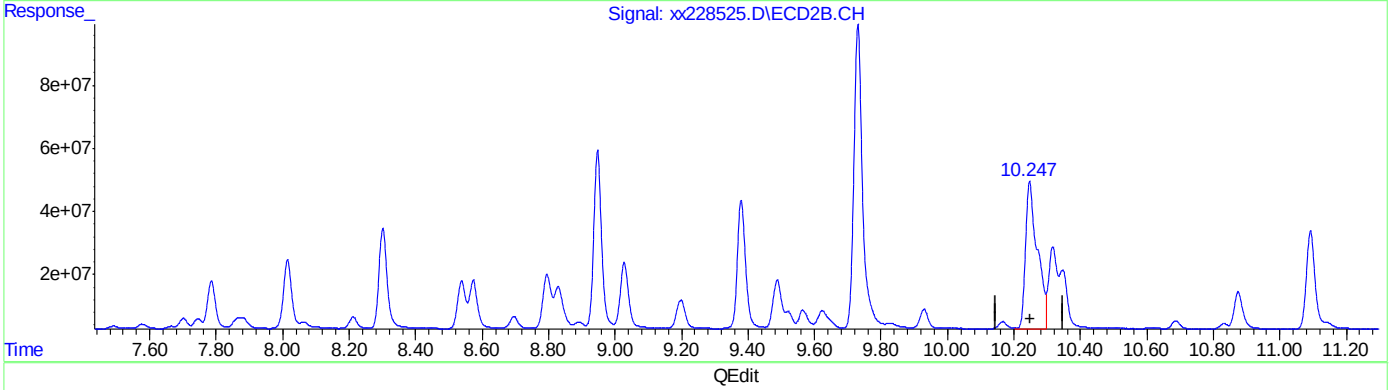
Quantitation Report (Qedit)

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)





QEdit

(35) AR1262-E
8.458min 391.924PPB
response 699153119

(35) AR1262-E #2
10.247min 614.636PPB
response 1146167306

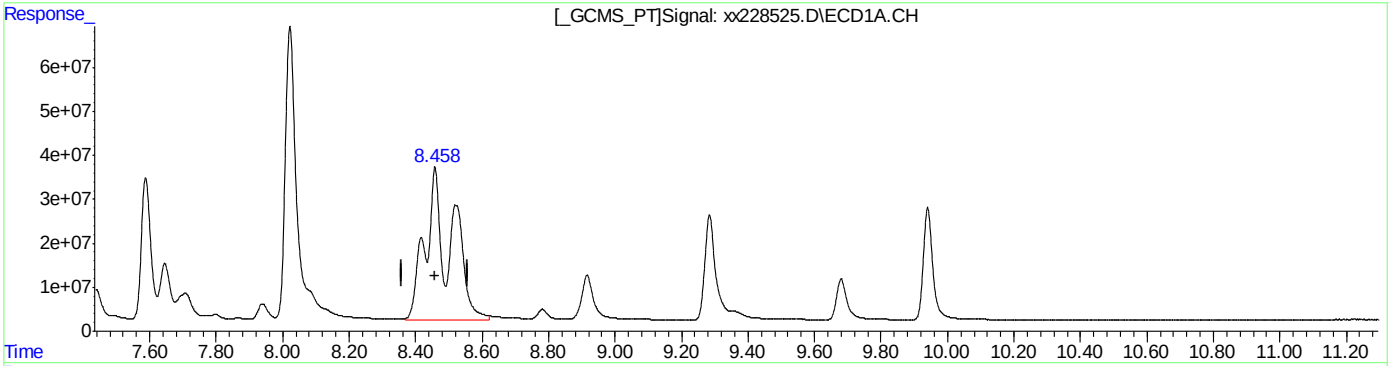
(+) = Expected Retention Time
PCB6349.M Tue May 15 08:40:21 2018

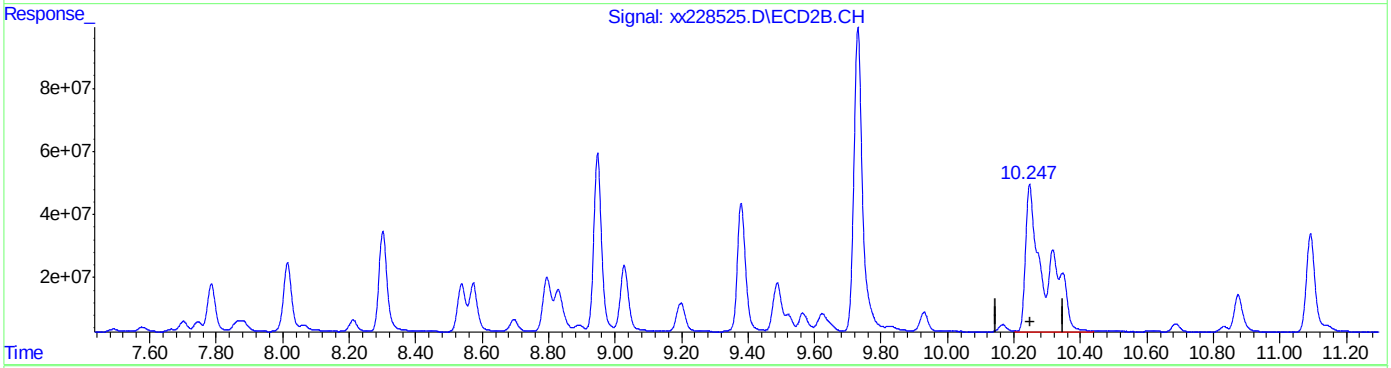
Quantitation Report (Qedit)

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)





QEdit

(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

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.

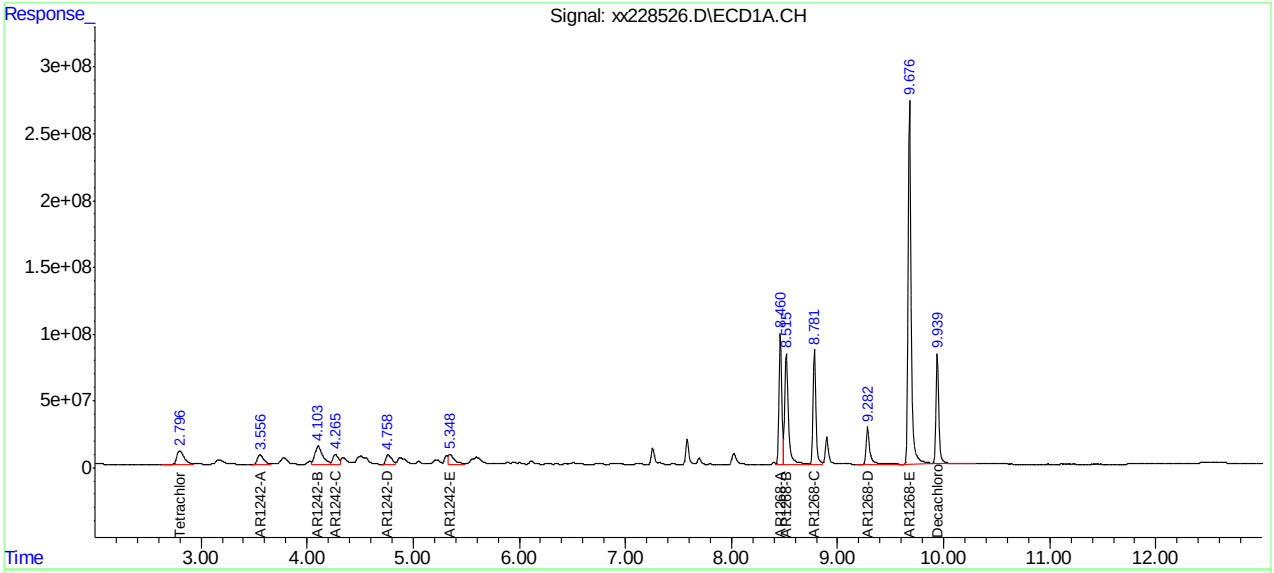
11.6.47 11

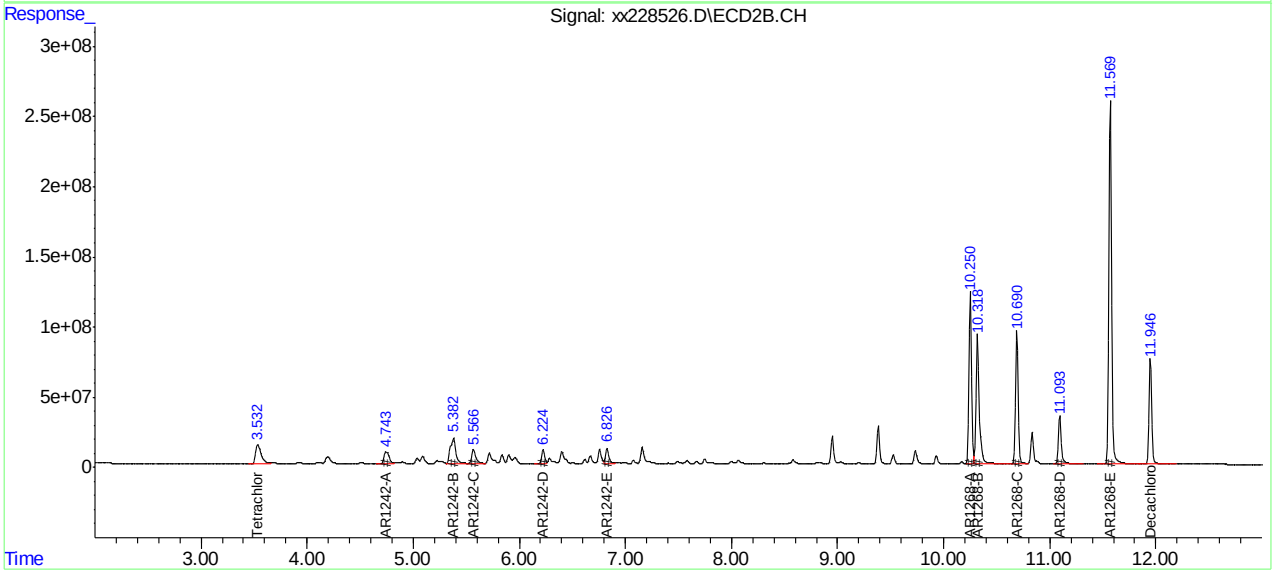
Quantitation Report (QT Reviewed)

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)





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 : 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.

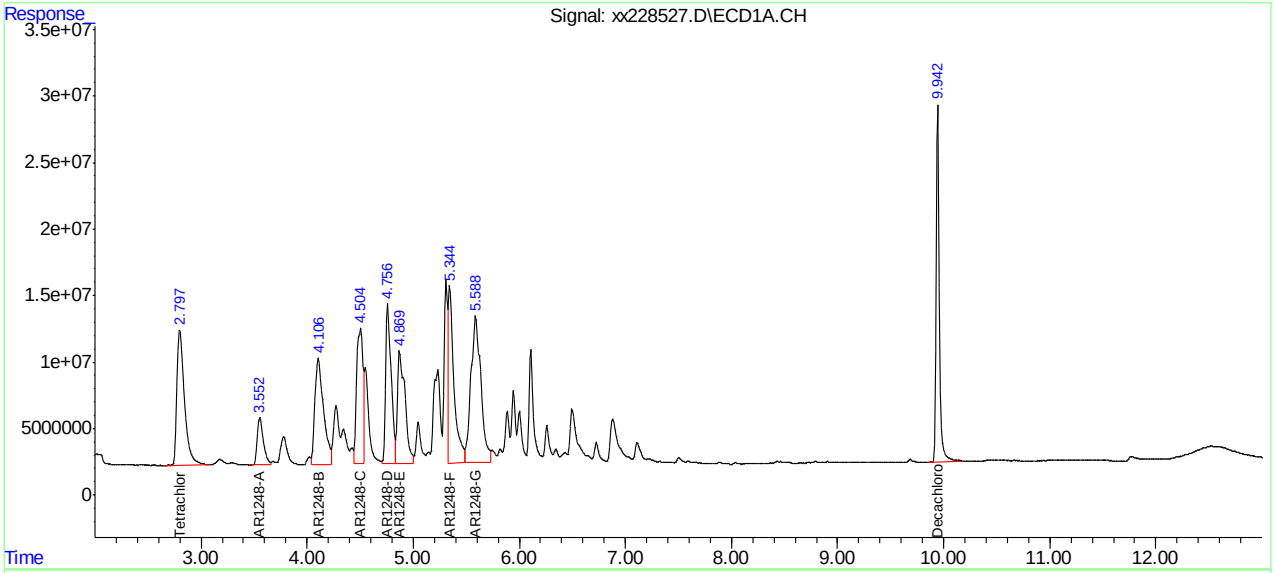
11.6.48 11

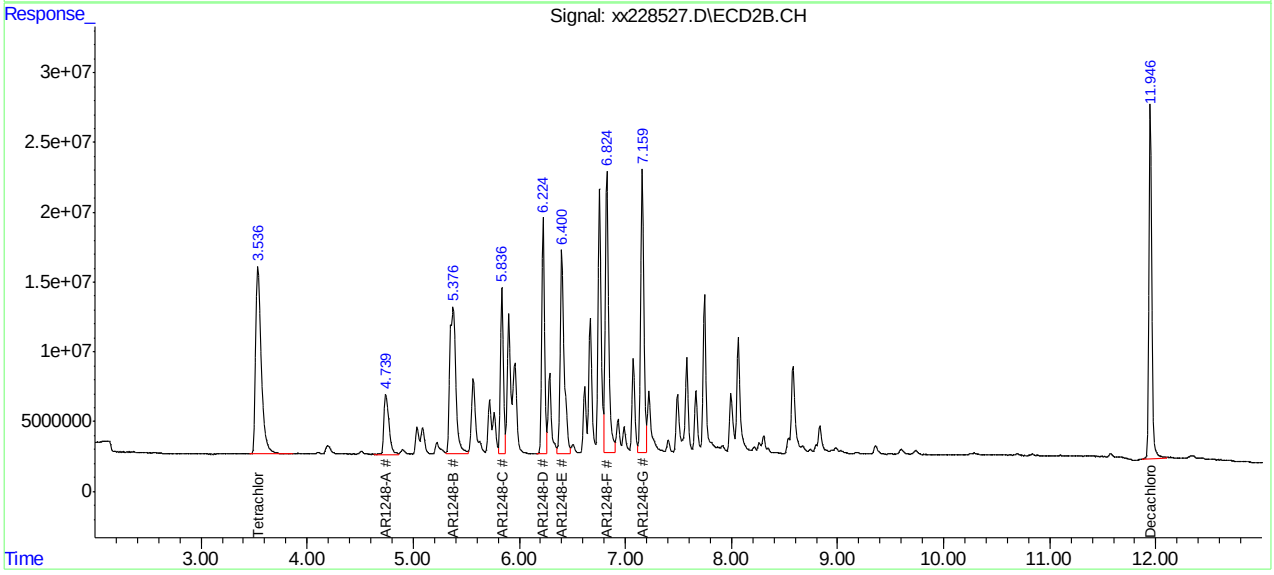
Quantitation Report (QT Reviewed)

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)





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

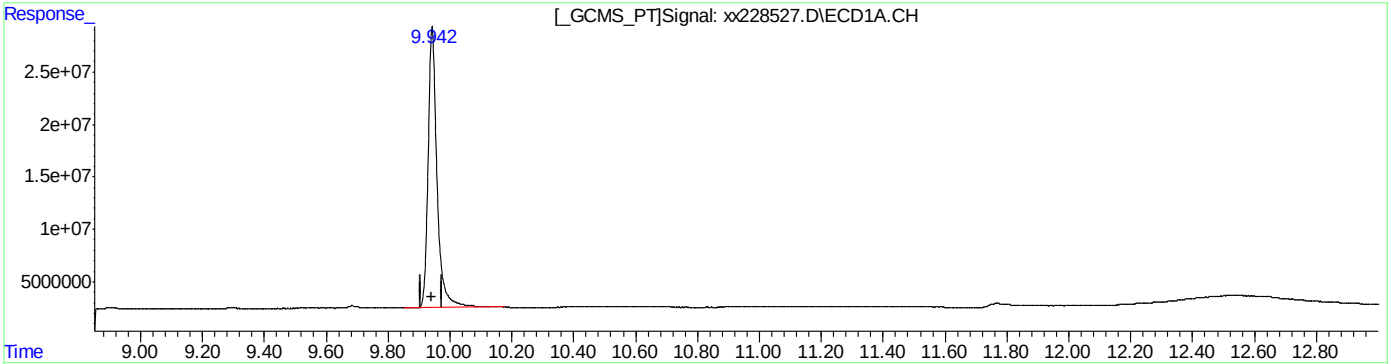
Parameter	CAS	Sig#	R.T. (min.)	Reason
Decachlorobiphenyl	2051-24-3	2	11.95	Poorly defined baseline

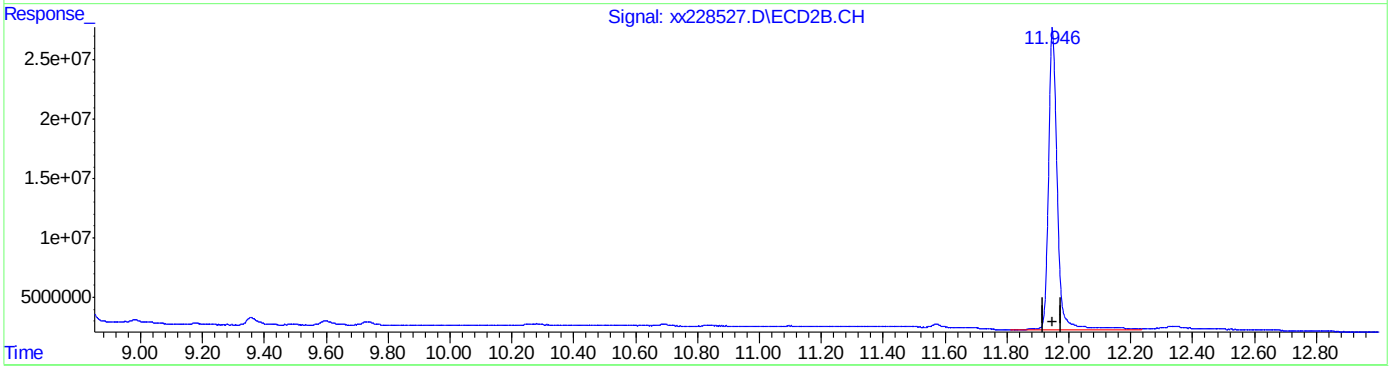
Quantitation Report (Qedit)

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)
11.947min 44.254ppb
response 506102594

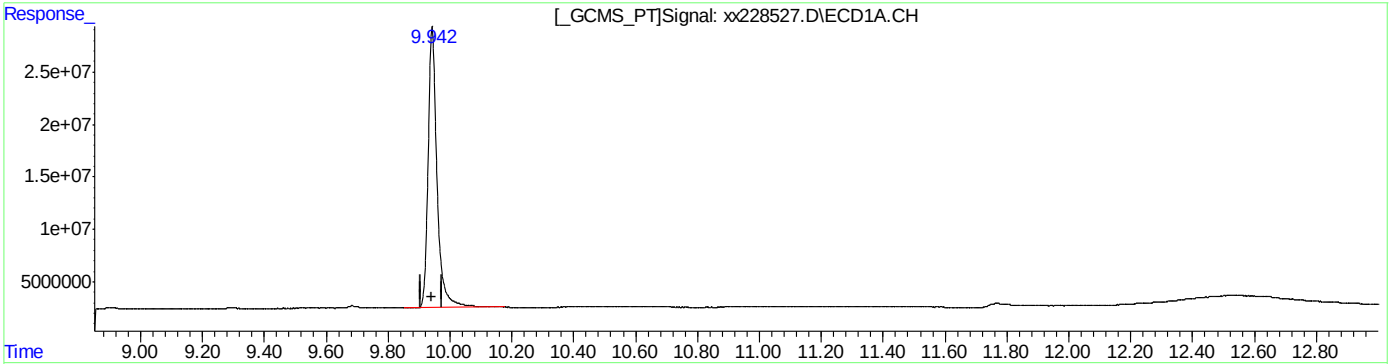
(+) = Expected Retention Time

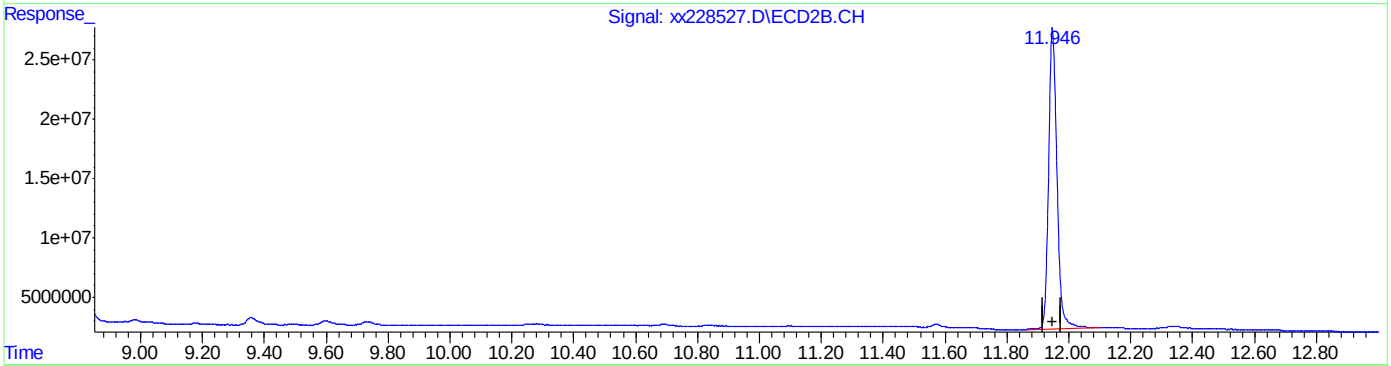
Quantitation Report (Qedit)

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

Manual Integrations
APPROVED
(compounds with "m" flag)
Gwendolyn Burns
06/05/18 13:48

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.

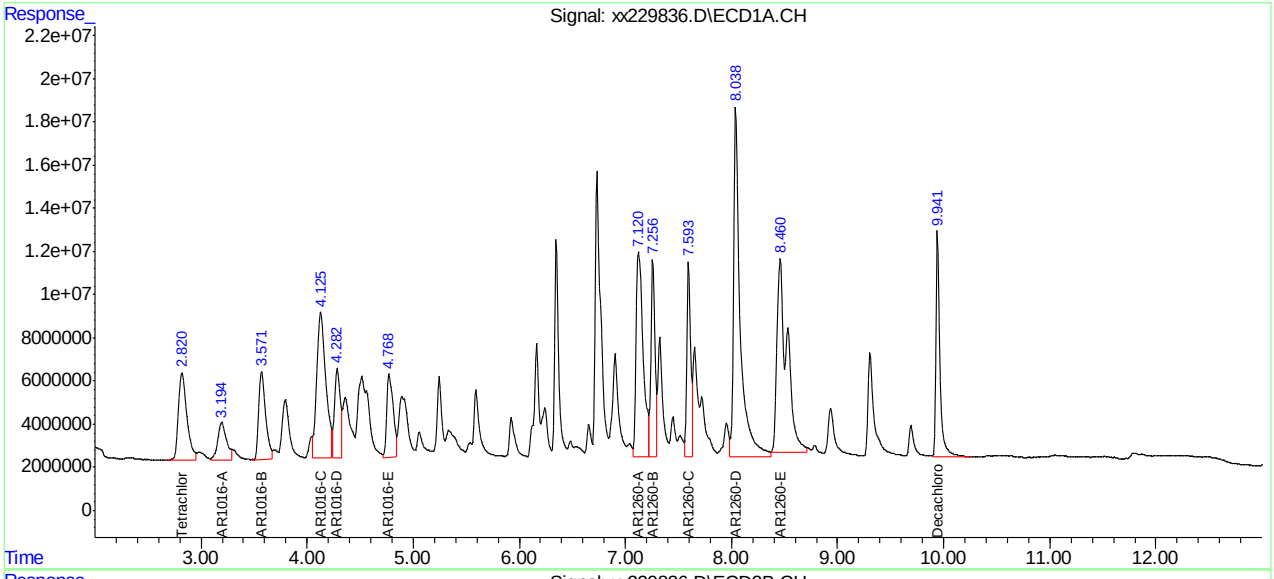
11.6.49
11

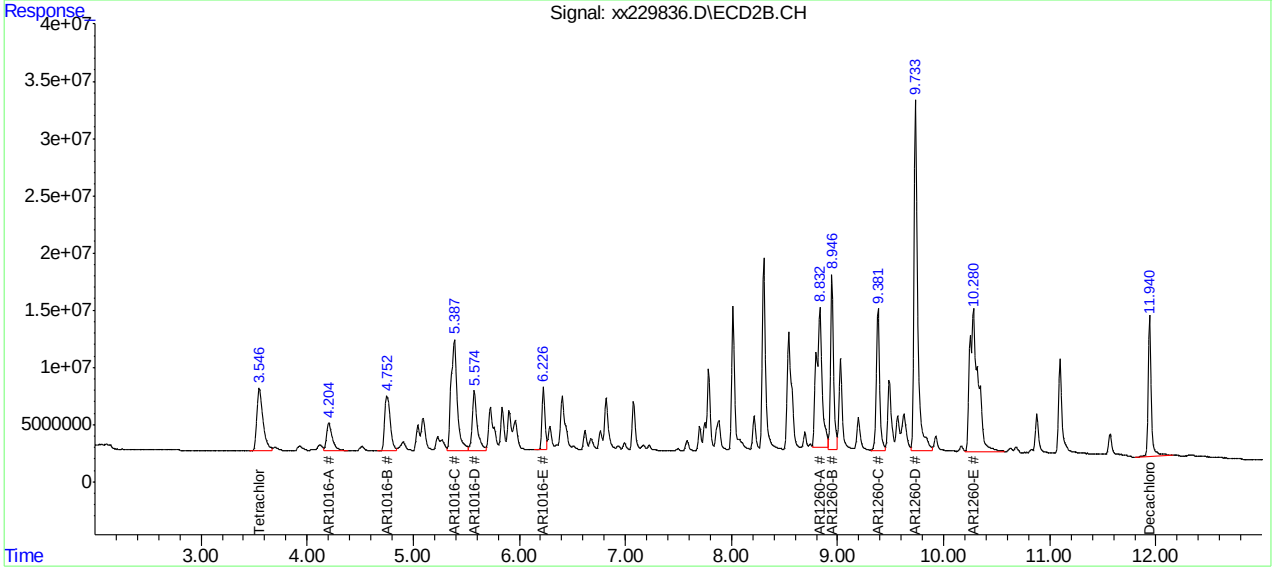
Quantitation Report (QT Reviewed)

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)





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

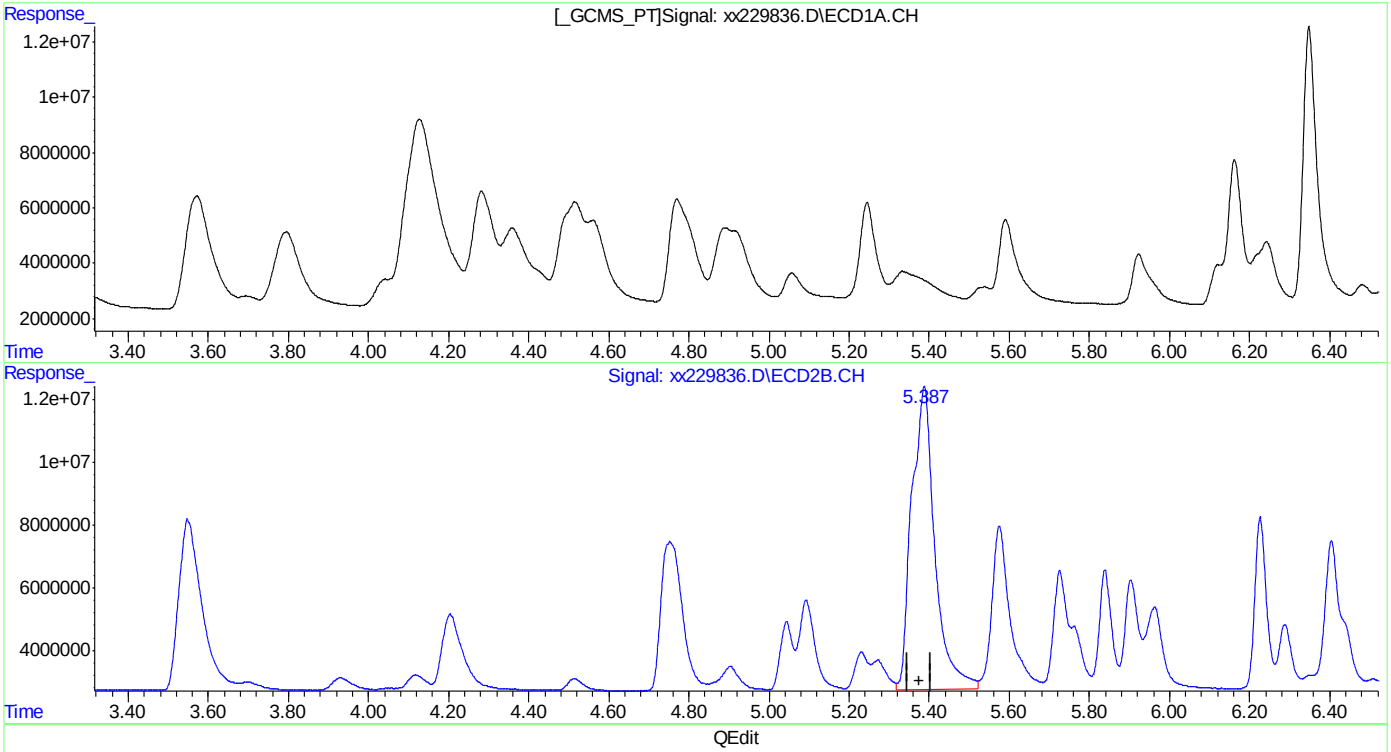
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-C		1	4.13	Split peak
AR1260-E		1	8.46	Split peak
AR1260-A		2	8.83	Split peak
AR1260-B		2	8.95	Split peak
AR1260-E		2	10.28	Split peak

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

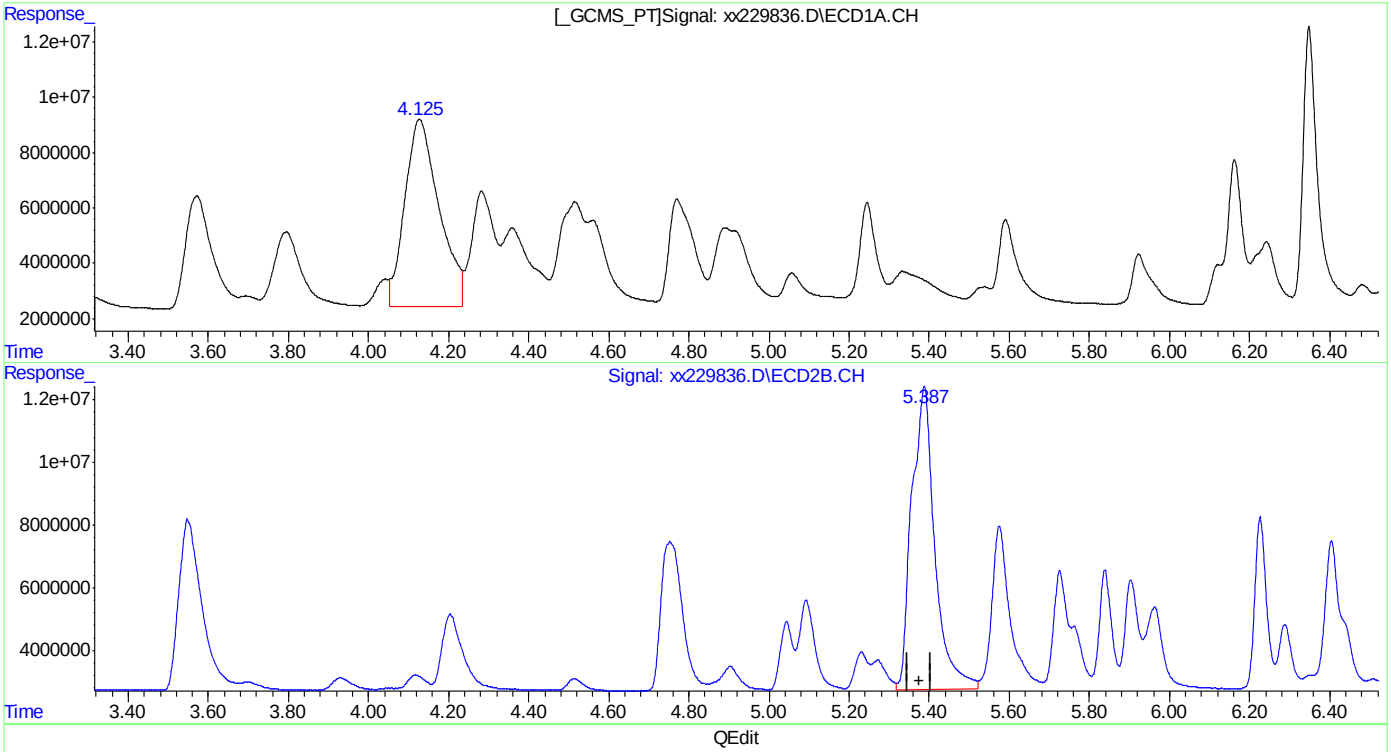
(+) = Expected Retention Time

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
4.125min 479.663PPB m
response 402875953

(43) AR1016-C #2
5.388min 513.615PPB
response 387921152

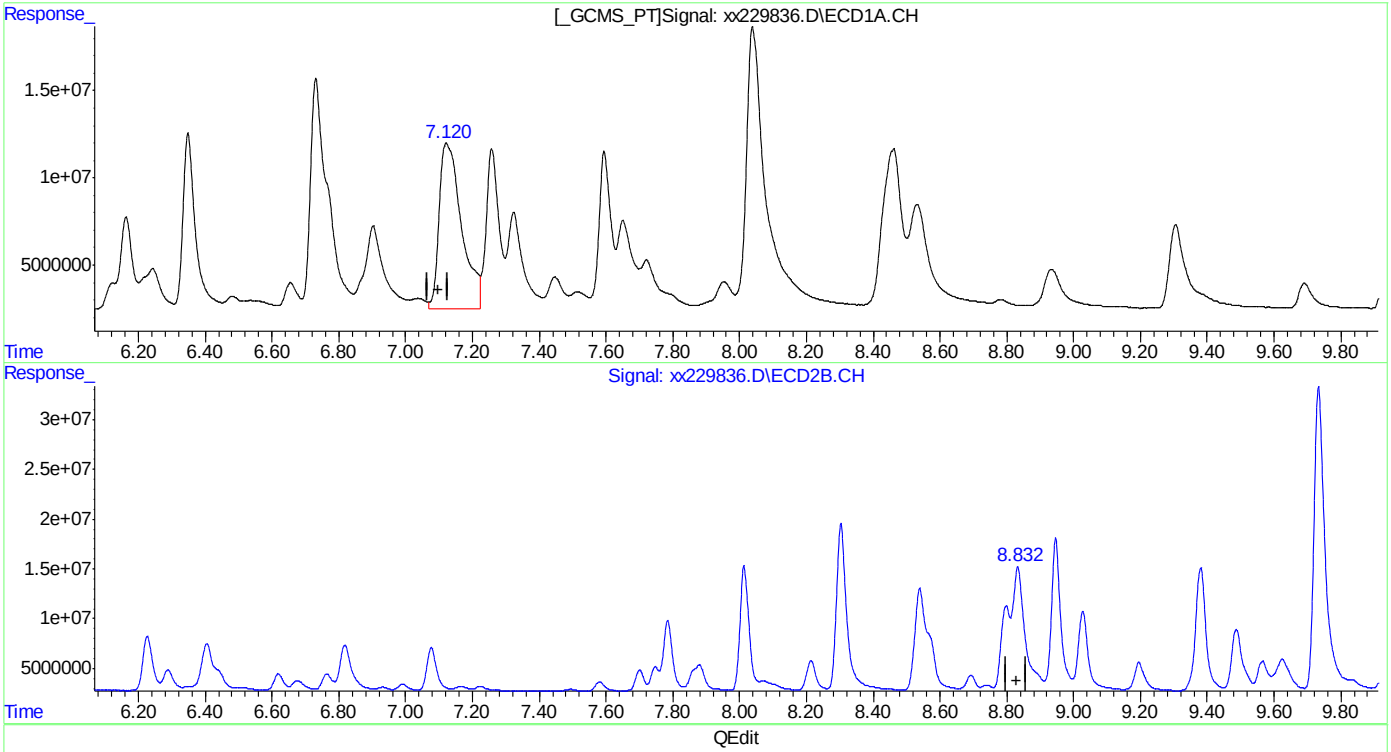
(+) = Expected Retention Time

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)



QEdit

(46) AR1260-A
7.121min 468.923PPB
response 444603126

(46) AR1260-A #2
8.833min 339.885PPB
response 337175794

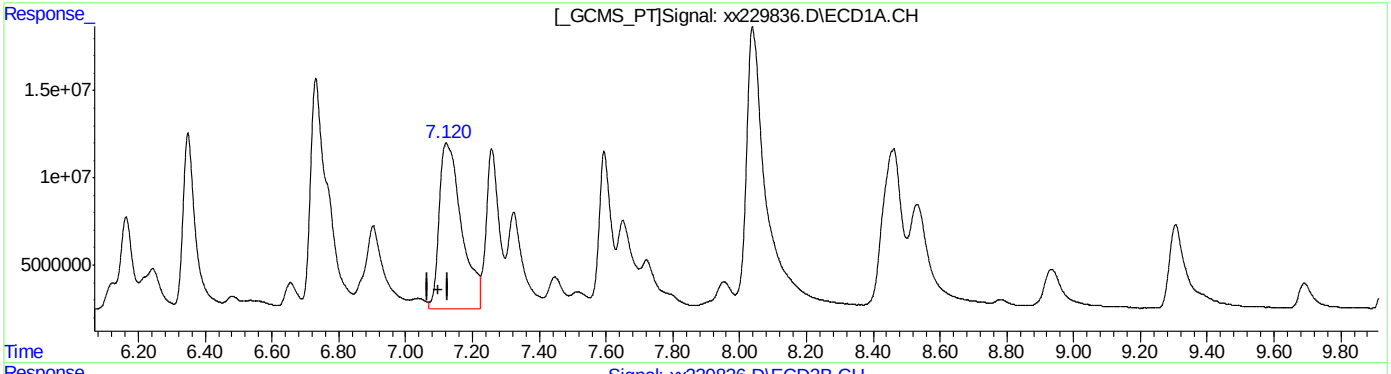
(+) = Expected Retention Time
PCB6349.M Mon Jun 04 08:55:19 2018

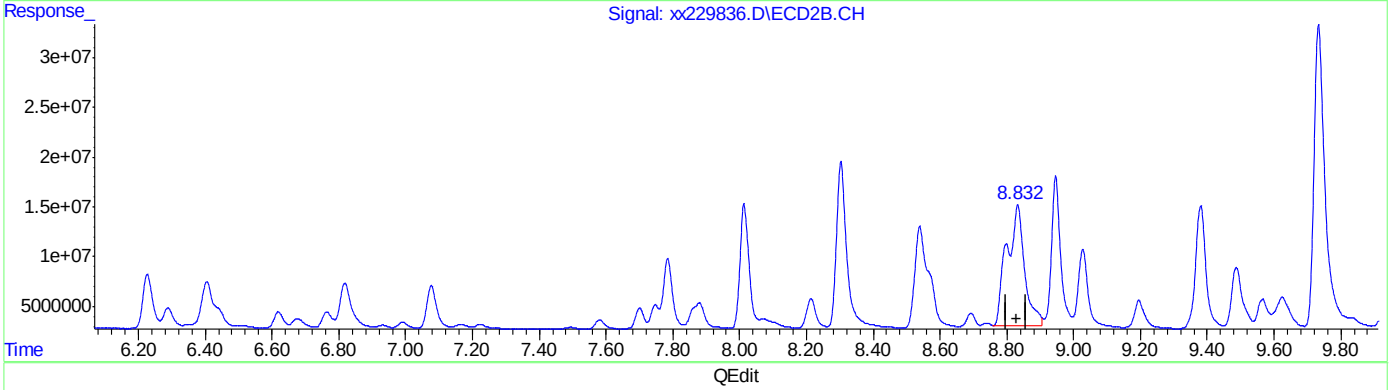
Quantitation Report (Qedit)

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)





QEdit

(46) AR1260-A
7.121min 468.923PPB
response 444603126

(46) AR1260-A #2
8.832min 459.689PPB m
response 456023932

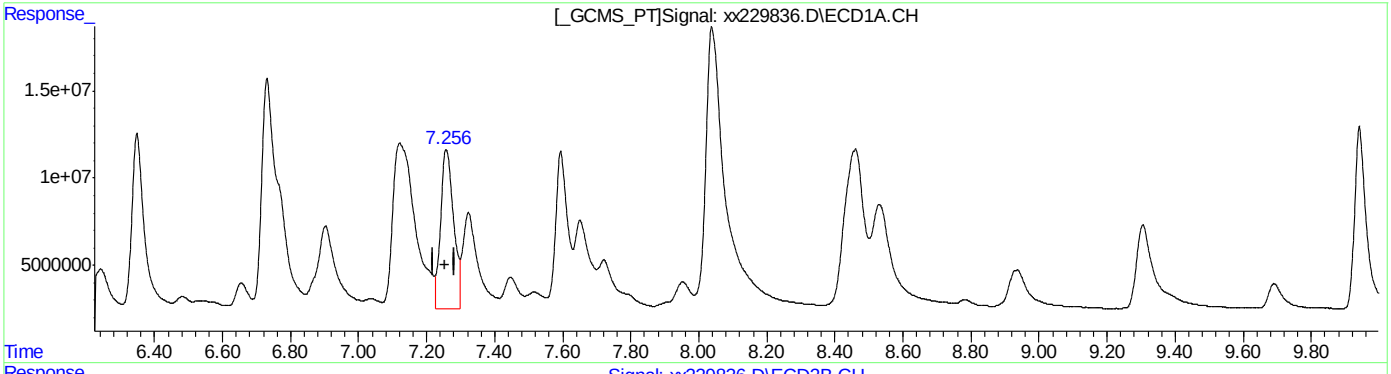
(+) = Expected Retention Time

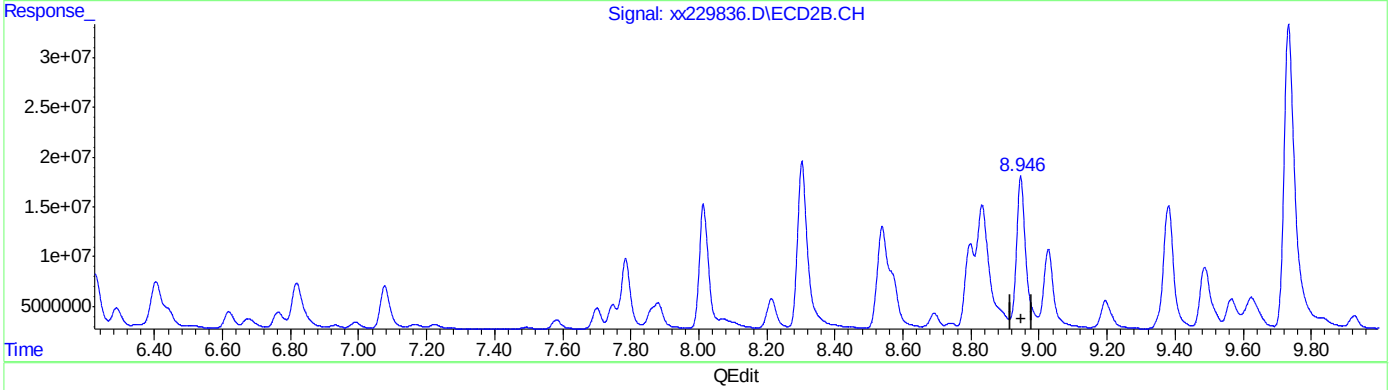
Quantitation Report (Qedit)

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)





QEdit

(47) AR1260-B
7.258min 570.605PPB
response 242456303

(47) AR1260-B #2
8.946min 550.555PPB
response 304119090

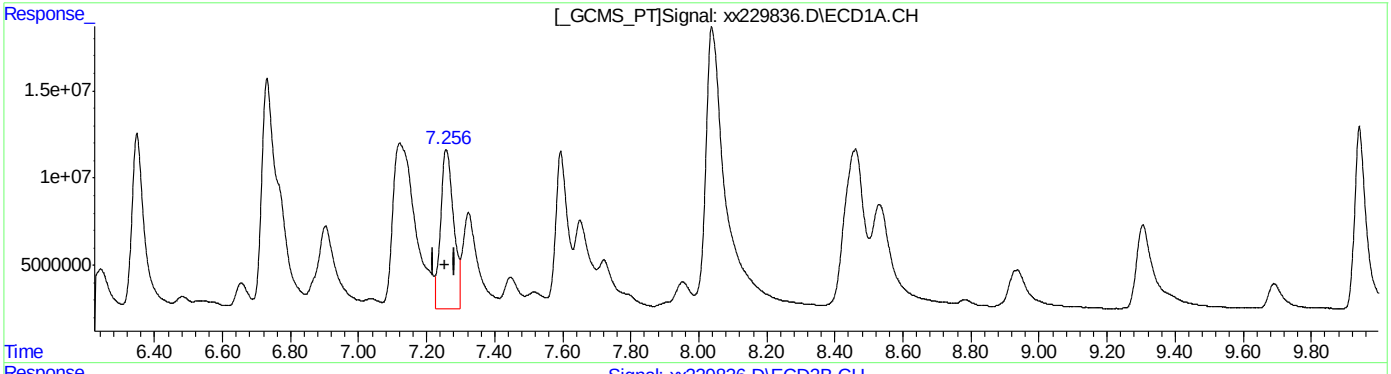
(+) = Expected Retention Time

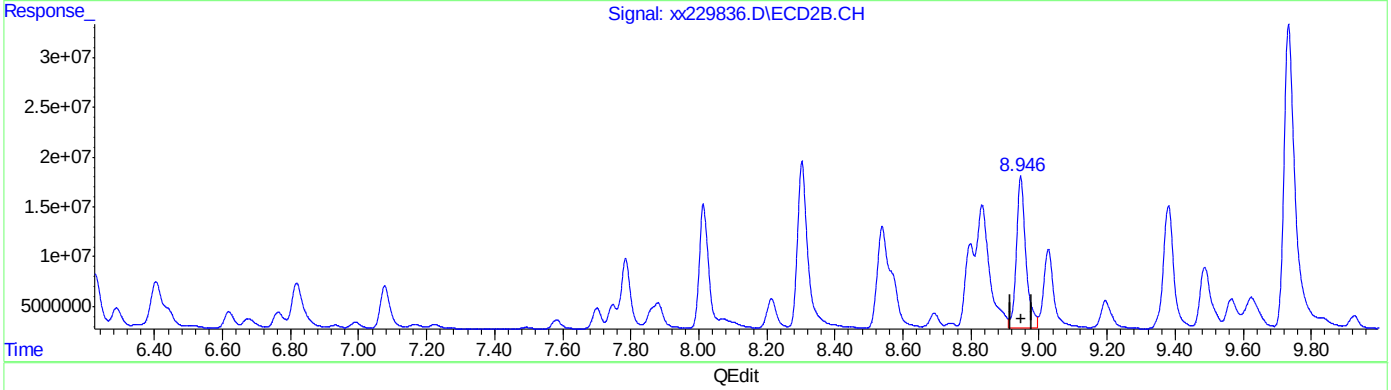
Quantitation Report (Qedit)

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)





QEdit

(47) AR1260-B
7.258min 570.605PPB
response 242456303

(47) AR1260-B #2
8.946min 540.497PPB m
response 298563275

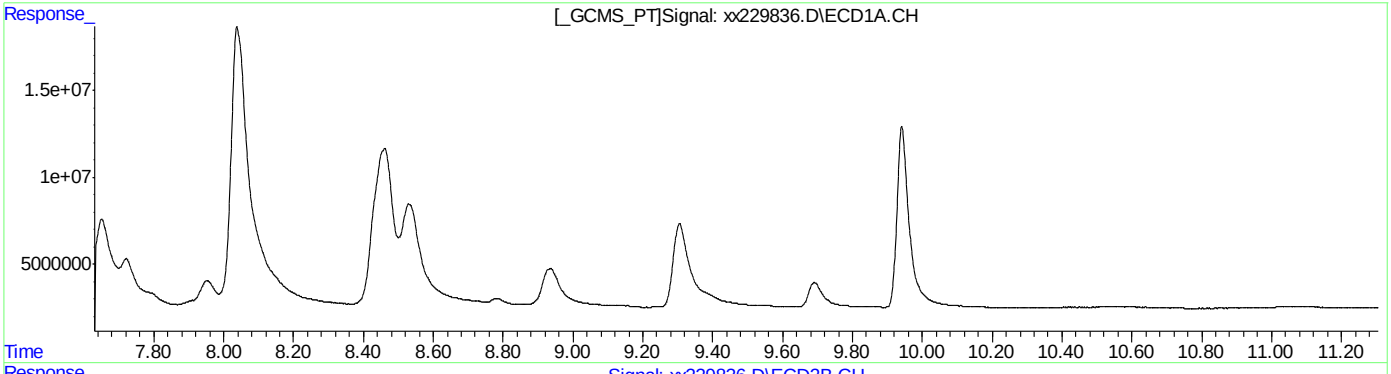
(+) = Expected Retention Time
PCB6349.M Mon Jun 04 08:56:06 2018

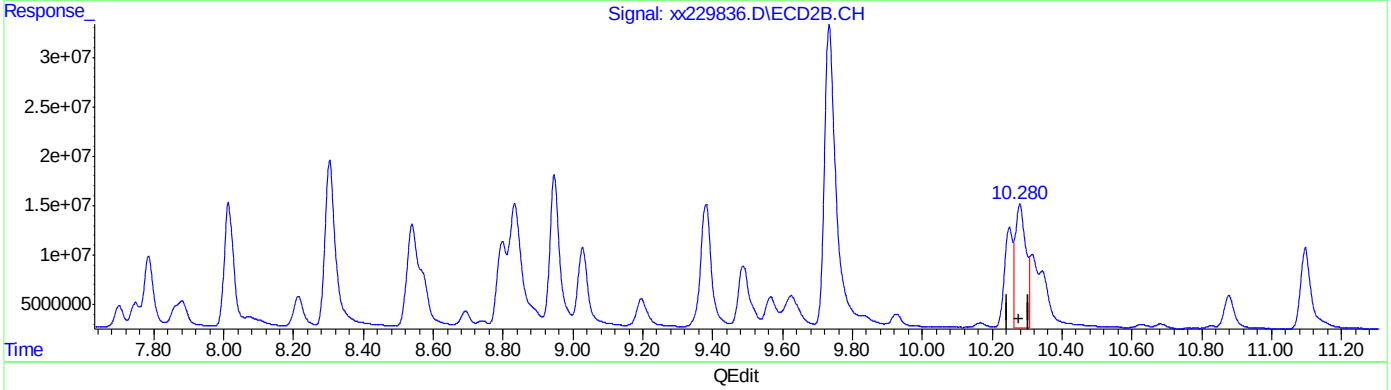
Quantitation Report (Qedit)

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)





QEdit

(50) AR1260-E
0.000min 0.000PPB
response 0

(50) AR1260-E #2
10.280min 222.076PPB
response 265873484

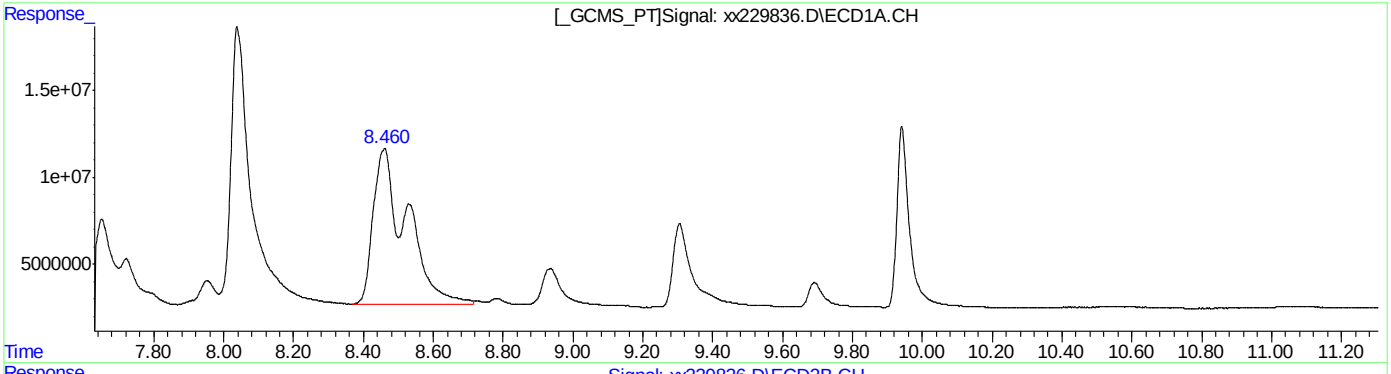
(+) = Expected Retention Time

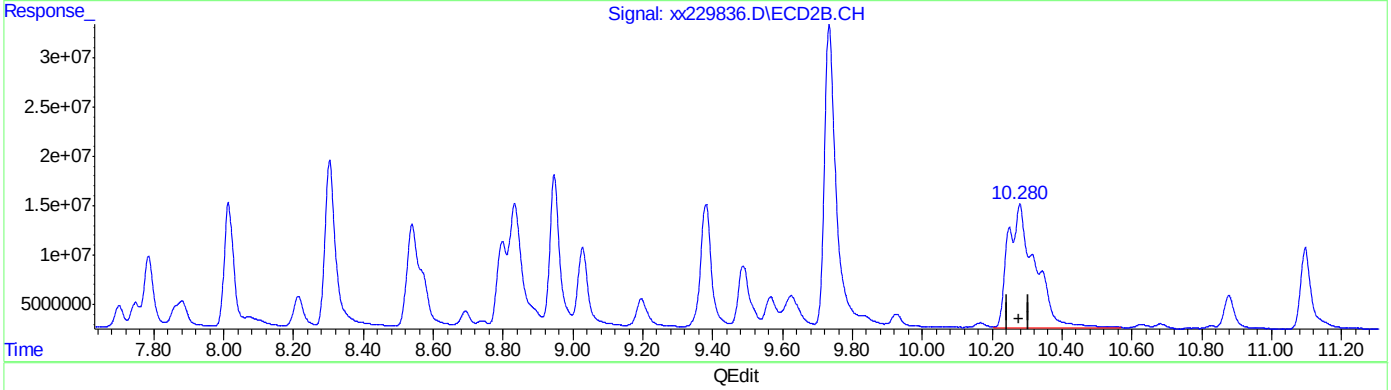
Quantitation Report (Qedit)

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)





QEdit

(50) AR1260-E
8.460min 504.665PPB m
response 593100096

(50) AR1260-E #2
10.280min 561.935PPB m
response 672760094

(+) = Expected Retention Time

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns 06/07/18 09:17

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.

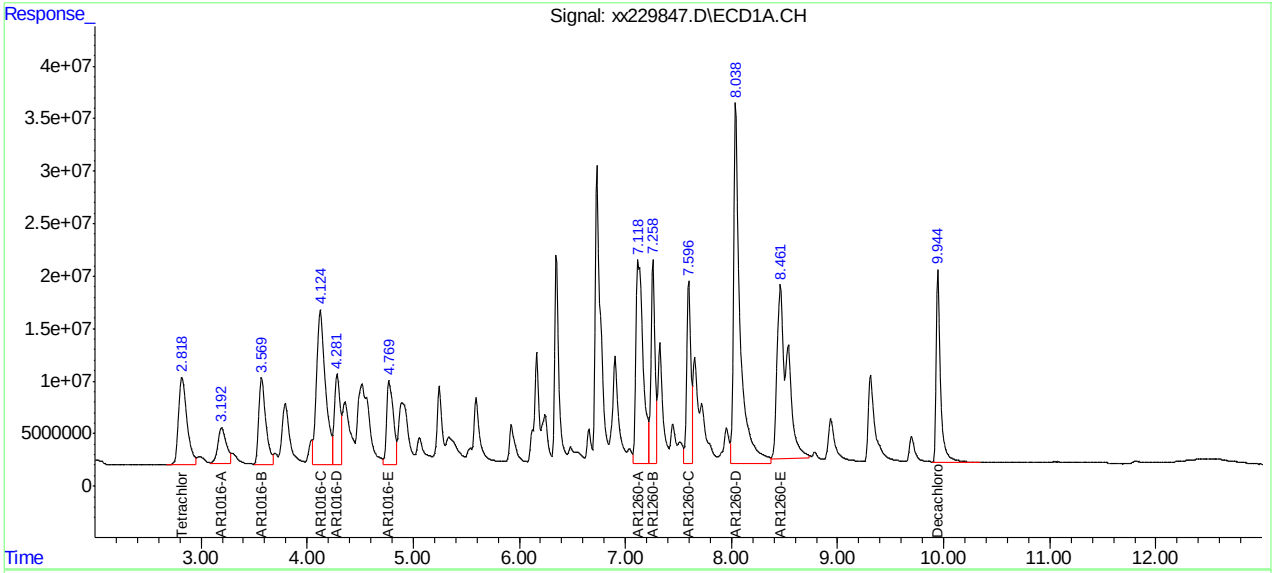
11.6.50 11

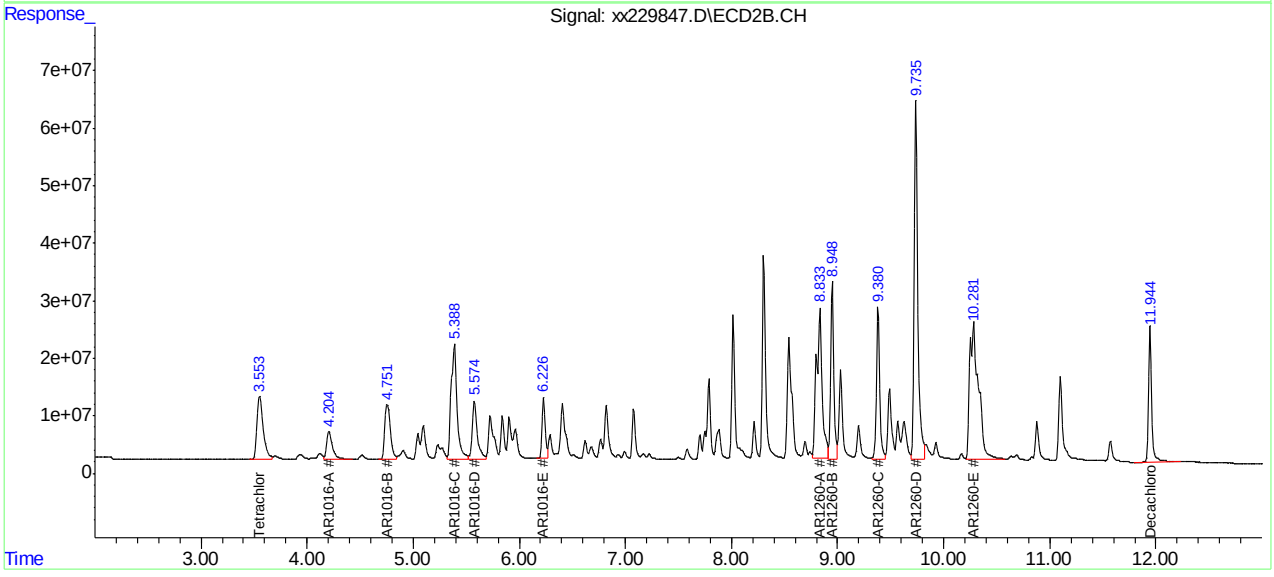
Quantitation Report (QT Reviewed)

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)





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

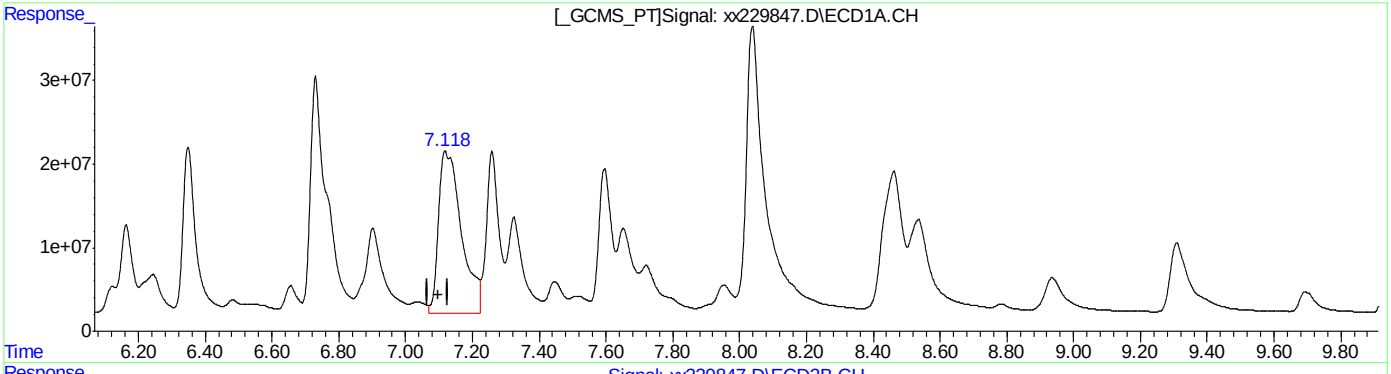
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-A		1	3.19	Split peak
AR1260-E		1	8.46	Split peak
AR1260-A		2	8.83	Split peak
AR1260-D		2	9.74	Split peak
AR1260-E		2	10.28	Split peak

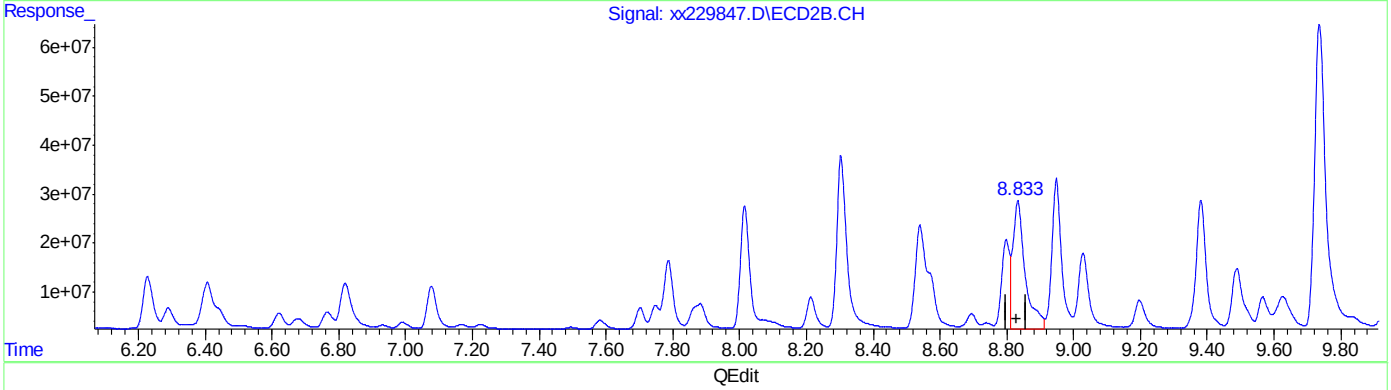
Quantitation Report (Qedit)

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)





QEdit

(46) AR1260-A
7.118min 975.920PPB
response 925304898

(46) AR1260-A #2
8.834min 686.712PPB
response 681237593

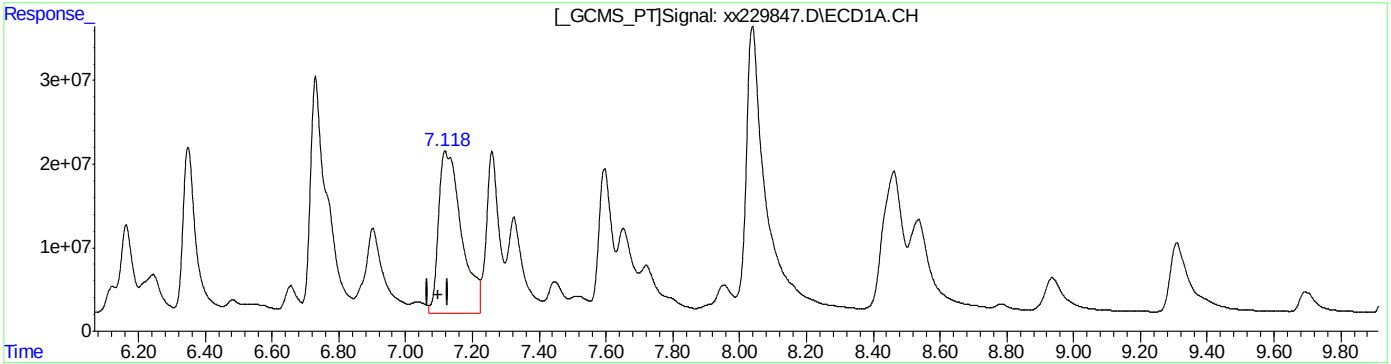
(+) = Expected Retention Time
PCB6349.M Mon Jun 04 08:51:33 2018

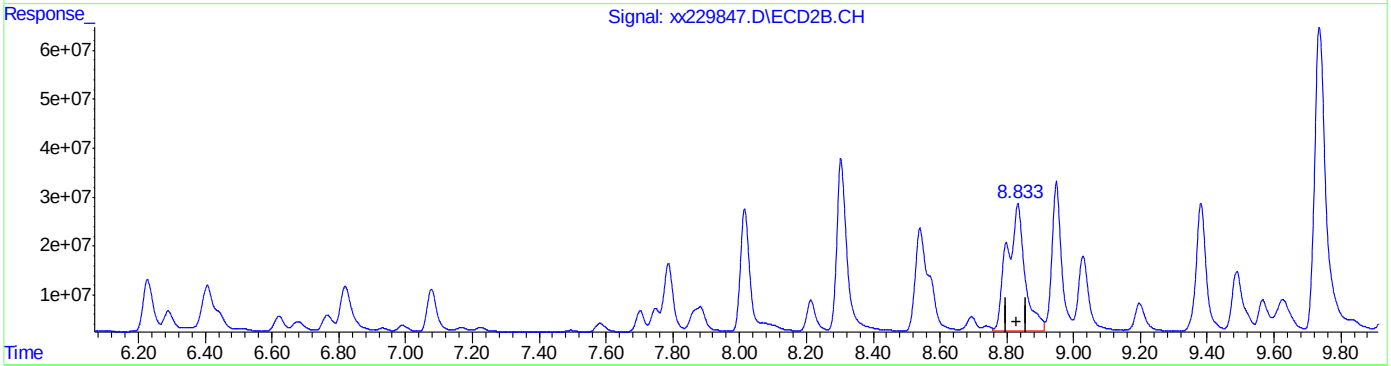
Quantitation Report (Qedit)

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)





QEdit

(46) AR1260-A
7.118min 975.920PPB
response 925304898

(46) AR1260-A #2
8.833min 971.000PPB m
response 963258631

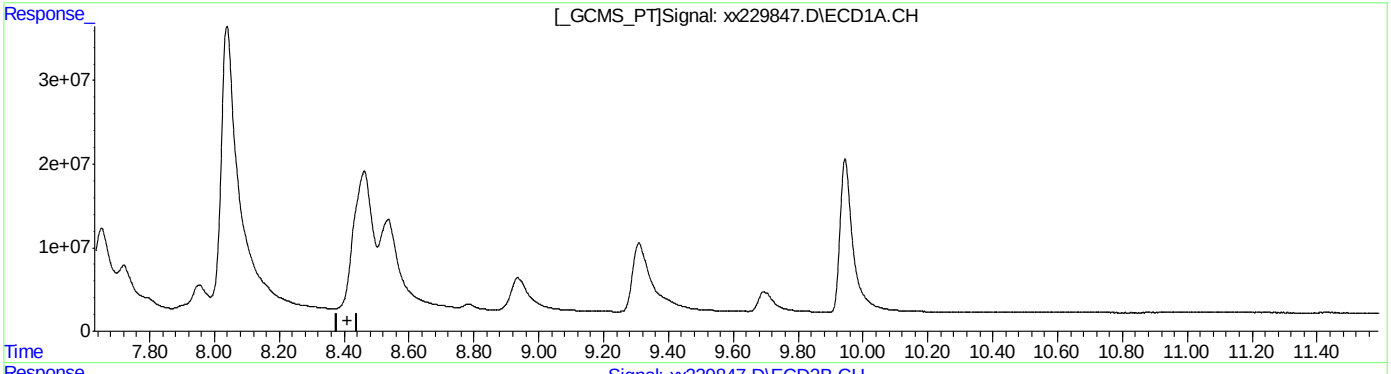
(+) = Expected Retention Time
PCB6349.M Mon Jun 04 08:51:44 2018

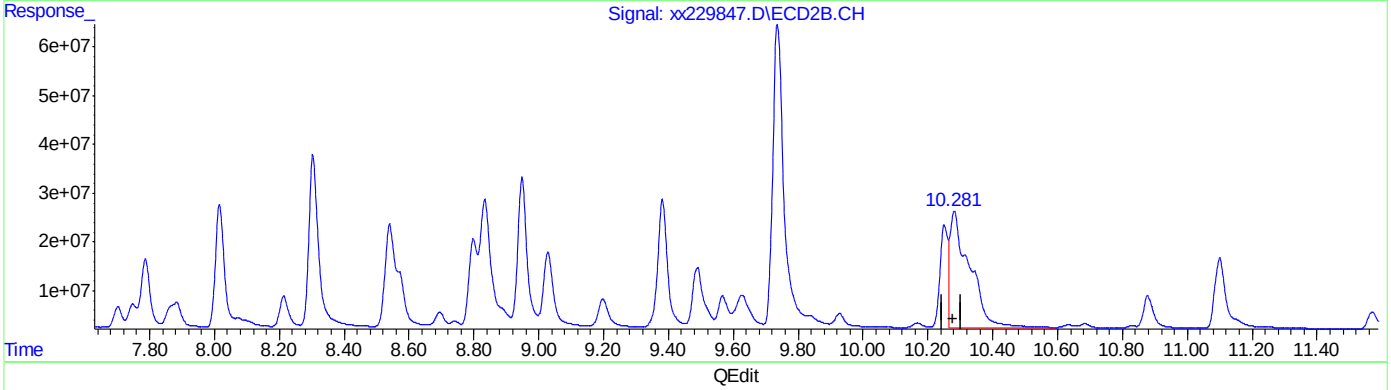
Quantitation Report (Qedit)

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)





QEdit

(50) AR1260-E
0.000min 0.000PPB
response 0

(50) AR1260-E #2
10.281min 857.548PPB
response 1026674465

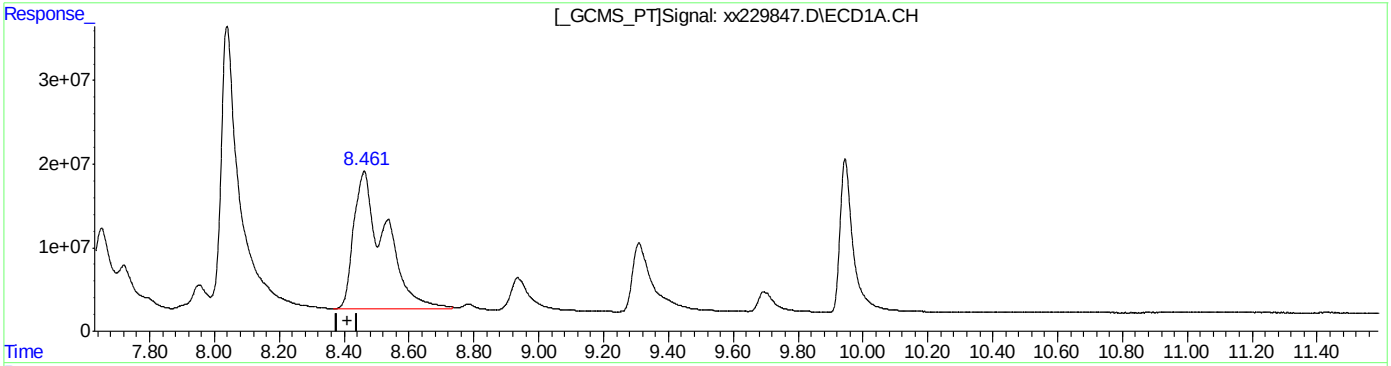
(+) = Expected Retention Time
PCB6349.M Mon Jun 04 08:51:49 2018

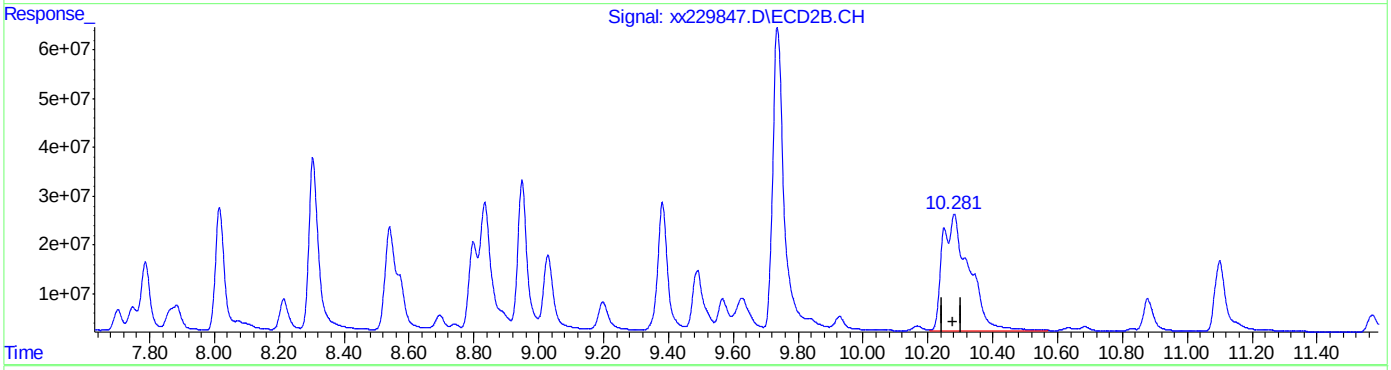
Quantitation Report (Qedit)

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)





QEdit

(50) AR1260-E
8.461min 958.178PPB m
response 1126083775

(50) AR1260-E #2
10.281min 1142.195PPB m
response 1367460143

(+) = Expected Retention Time

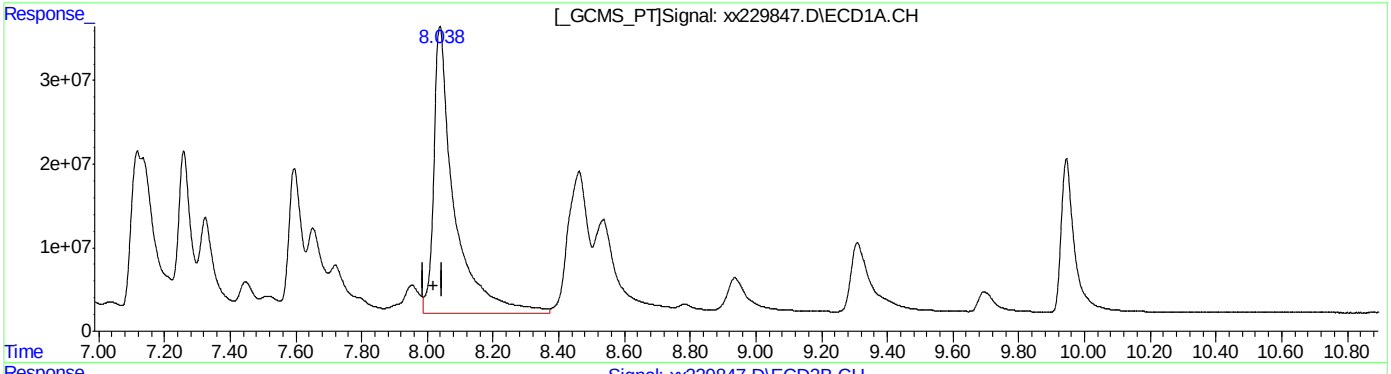
PCB6349.M Mon Jun 04 08:52:08 2018

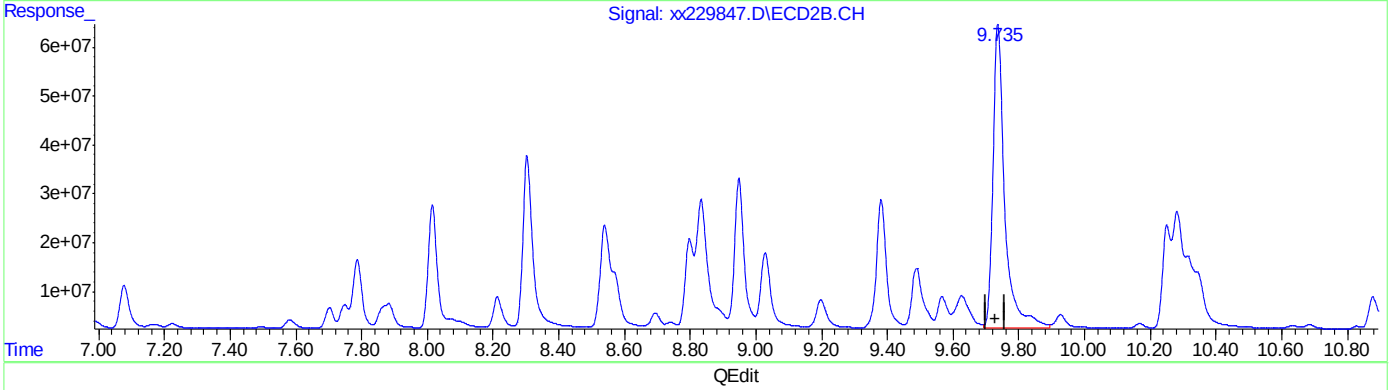
Quantitation Report (Qedit)

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)





QEdit

(49) AR1260-D
8.039min 1197.064PPB
response 1472889485

(49) AR1260-D #2
9.736min 1168.196PPB
response 1560953538

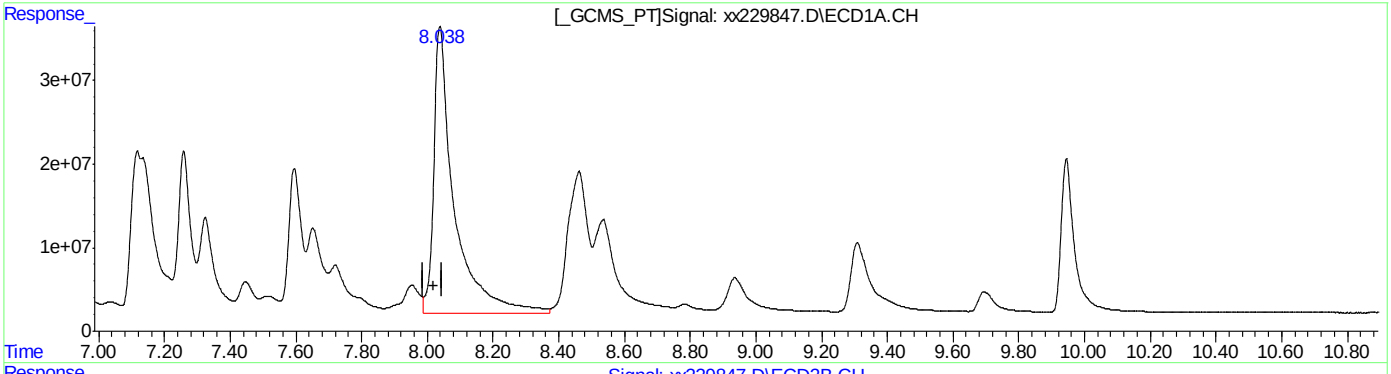
(+) = Expected Retention Time
PCB6349.M Mon Jun 04 11:36:40 2018

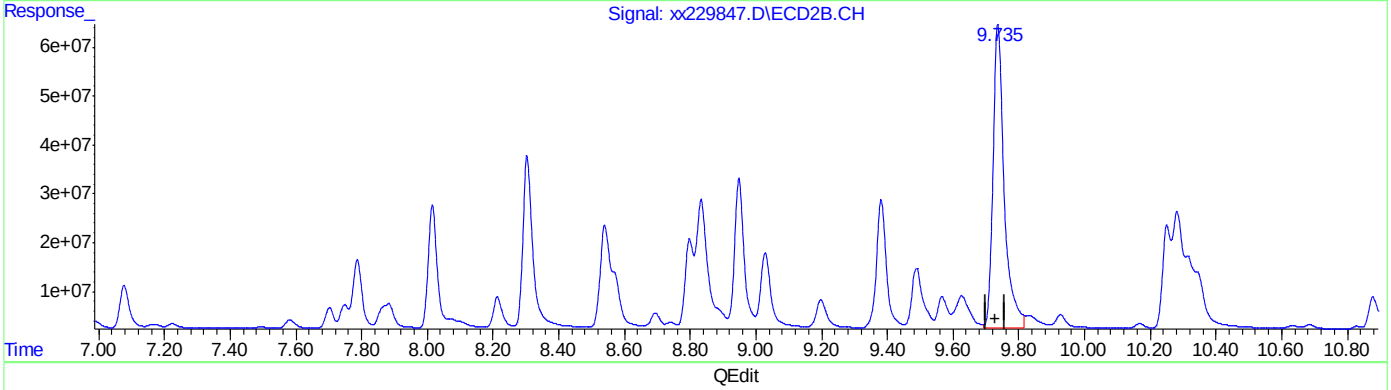
Quantitation Report (Qedit)

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)





QEdit

(49) AR1260-D
8.039min 1197.064PPB
response 1472889485

(49) AR1260-D #2
9.735min 1108.832PPB m
response 1481630838

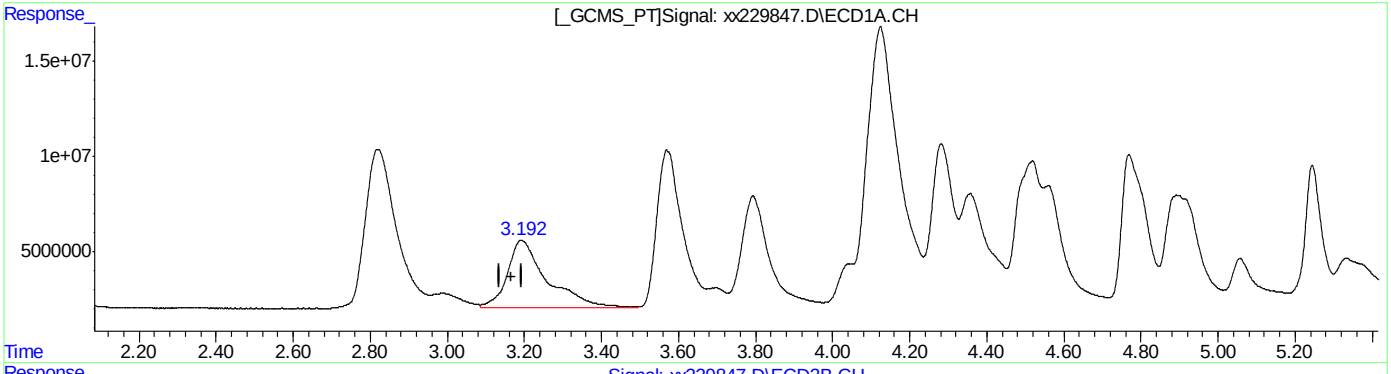
(+) = Expected Retention Time
PCB6349.M Mon Jun 04 11:36:46 2018

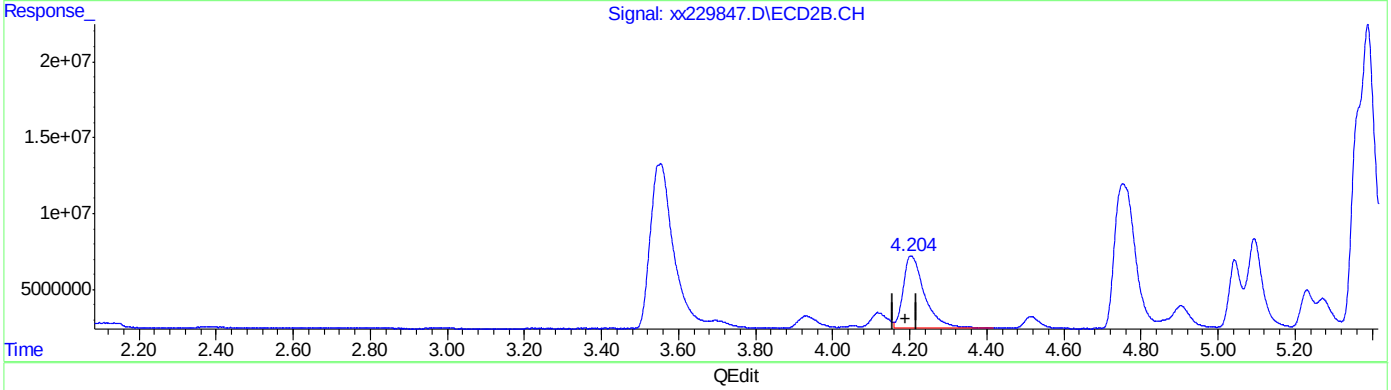
Quantitation Report (Qedit)

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)





QEdit

(41) AR1016-A
3.193min 1344.314PPB
response 257582838

(41) AR1016-A #2
4.203min 1088.959PPB
response 181541995

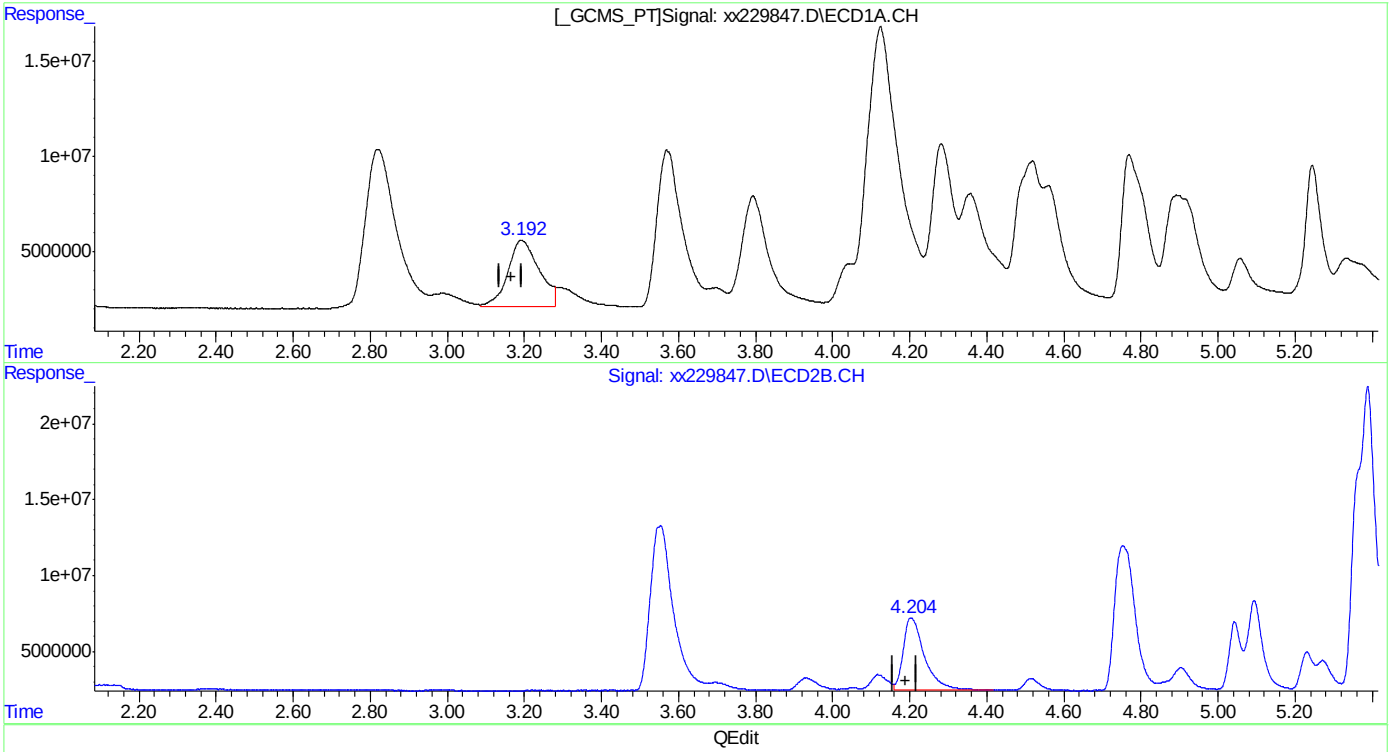
(+) = Expected Retention Time

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)



QEdit

(41) AR1016-A
3.192min 1012.165PPB m
response 193940016

(41) AR1016-A #2
4.203min 1088.959PPB
response 181541995

(+) = Expected Retention Time
PCB6349.M Wed Jun 06 08:43:57 2018

Manual Integrations APPROVED (compounds with "m" flag)
Gwendolyn Burns
06/07/18 09:17

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.

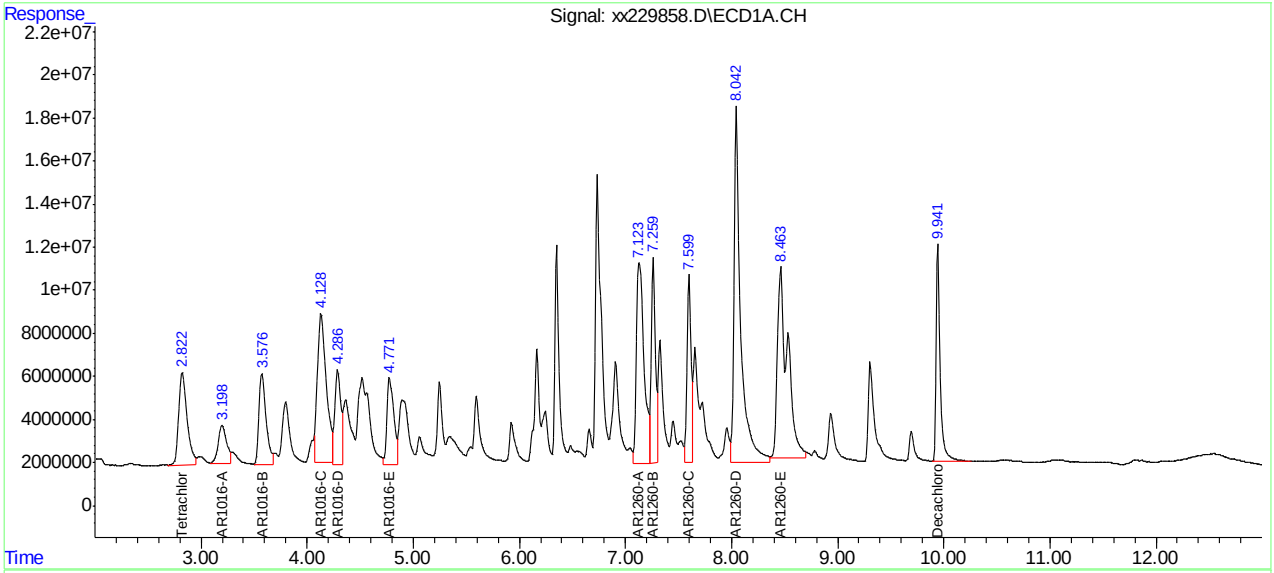
11.6.51 11

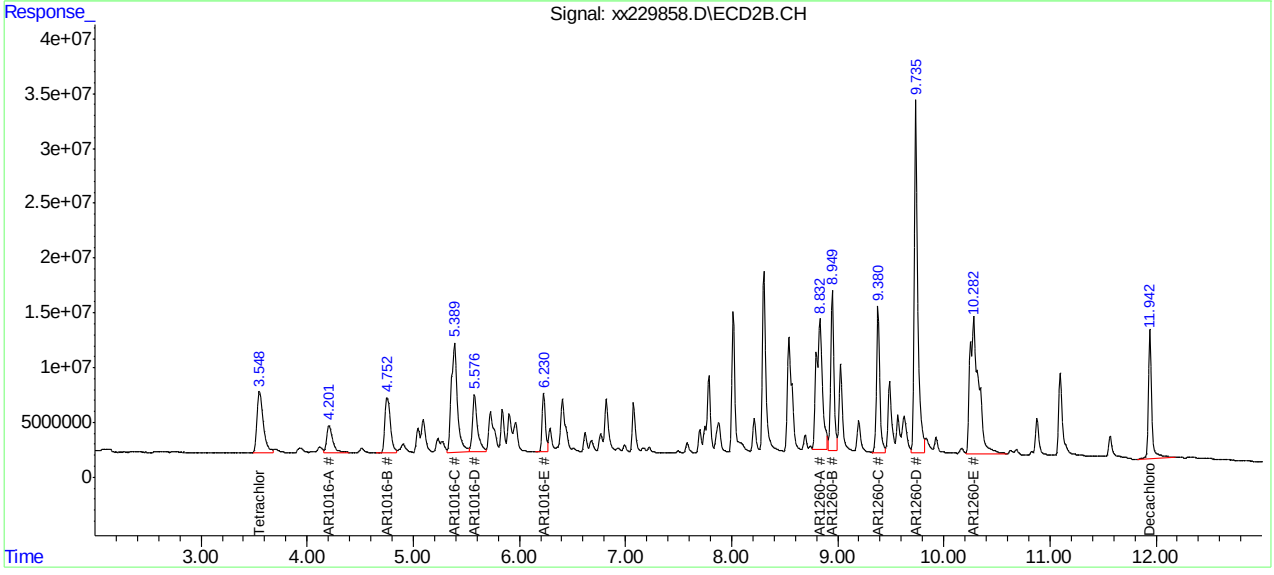
Quantitation Report (QT Reviewed)

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)





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

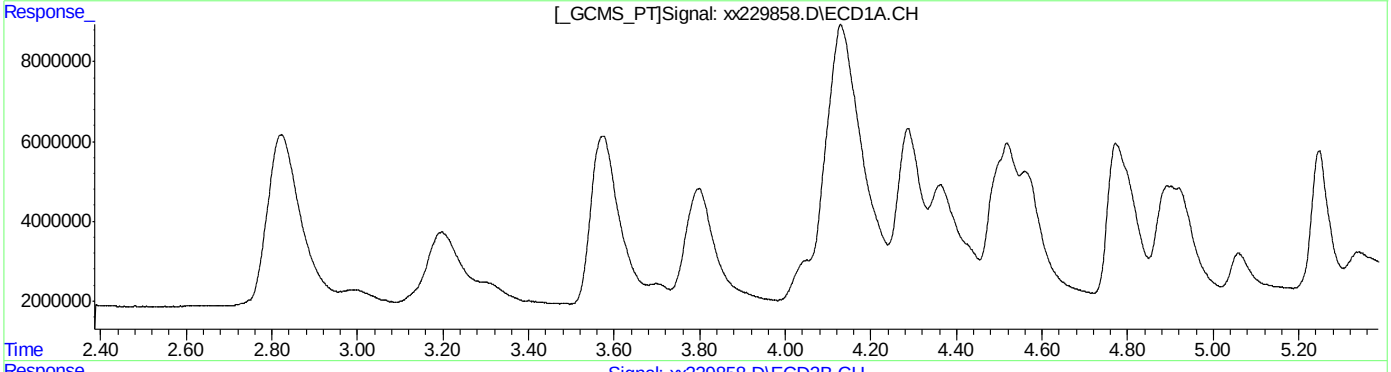
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1016-A		1	3.20	Split peak
AR1016-C		1	4.13	Split peak
AR1260-E		1	8.46	Split peak
AR1260-A		2	8.83	Split peak
AR1260-B		2	8.95	Split peak
AR1260-E		2	10.28	Split peak

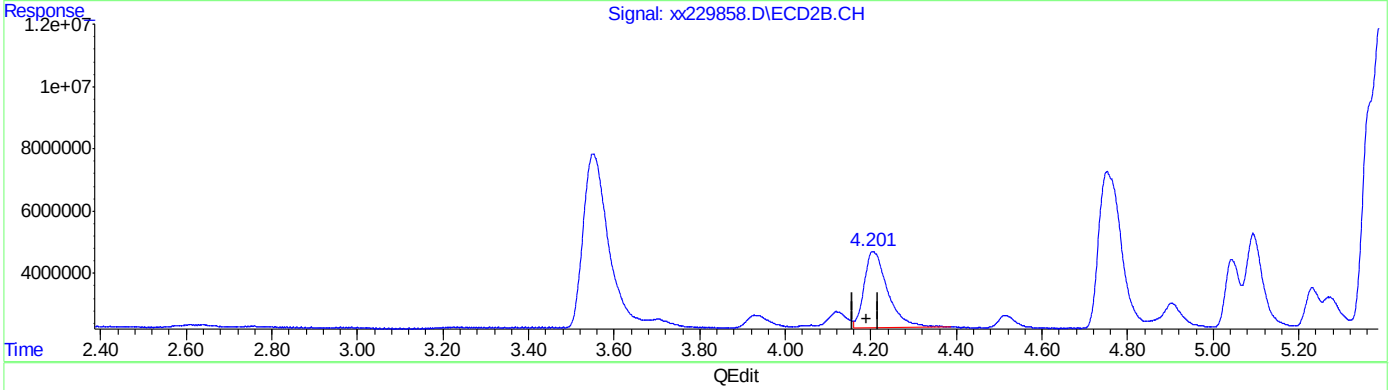
Quantitation Report (Qedit)

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)





QEdit

(41) AR1016-A
0.000min 0.000PPB
response 0

(41) AR1016-A #2
4.204min 560.372PPB
response 93420479

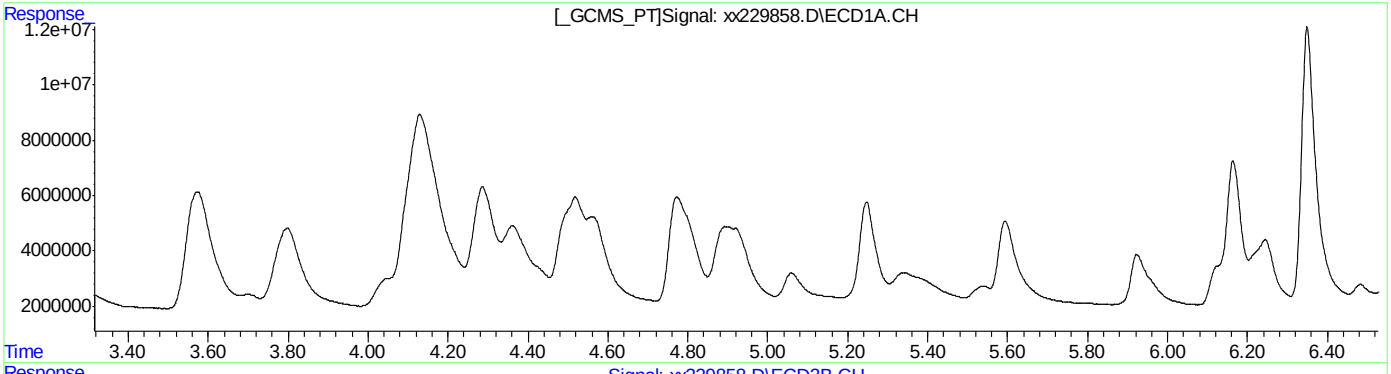
(+) = Expected Retention Time

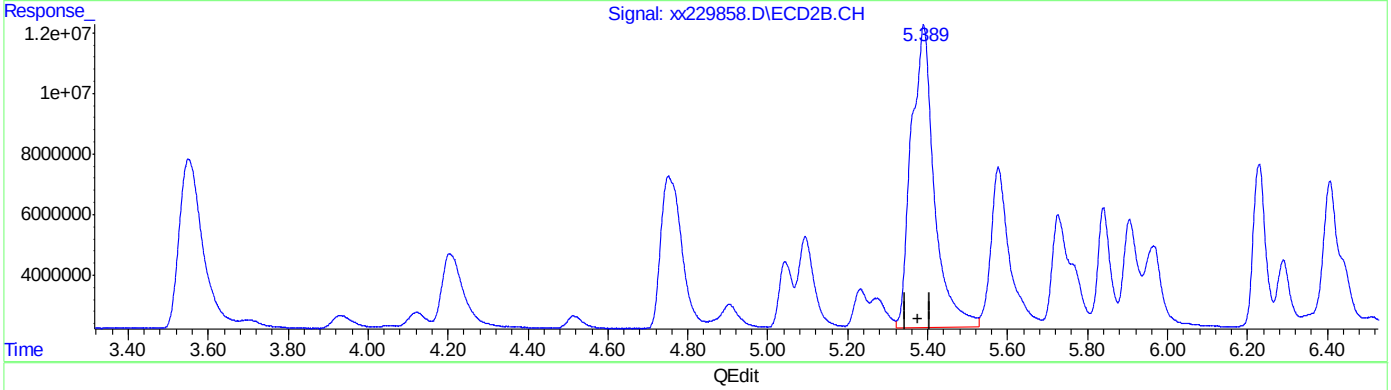
Quantitation Report (Qedit)

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)





QEdit

(43) AR1016-C
0.000min 0.000PPB
response 0

(43) AR1016-C #2
5.390min 530.231PPB
response 400471253

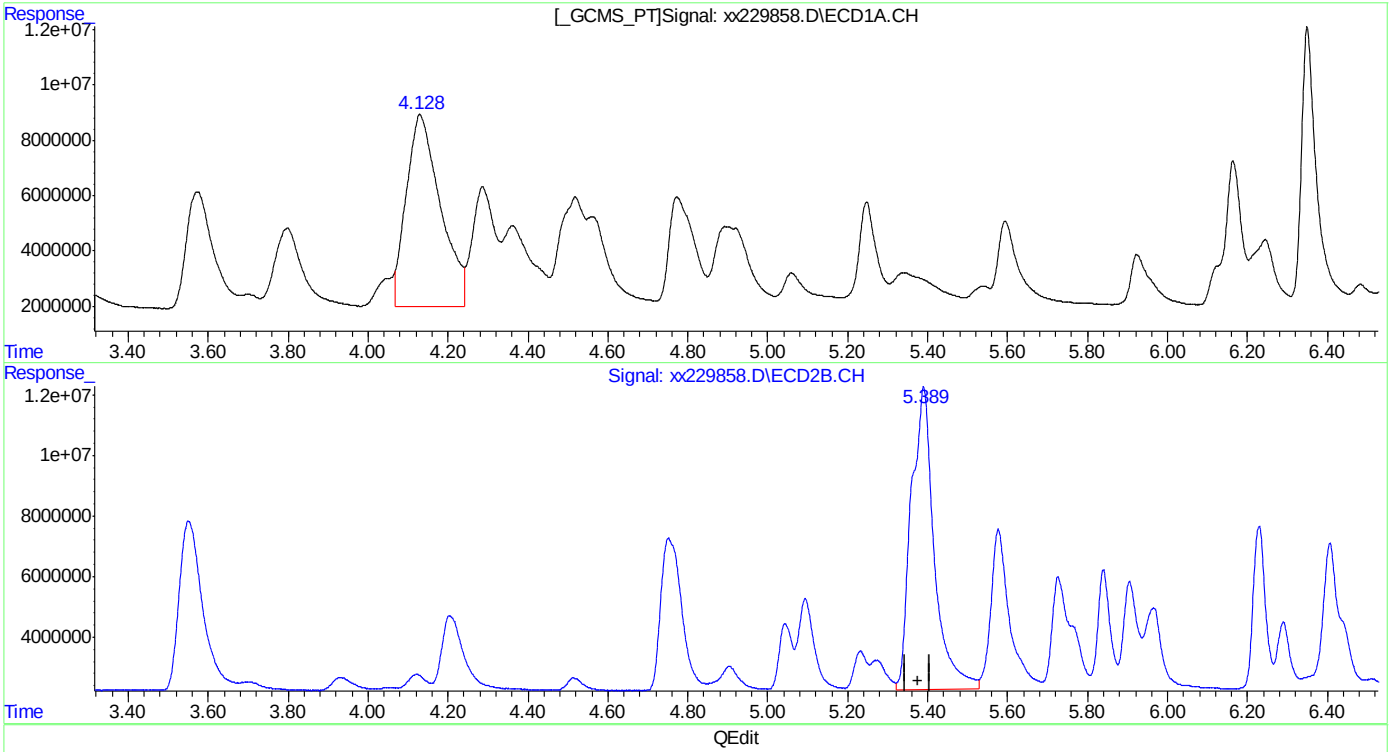
(+) = Expected Retention Time

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

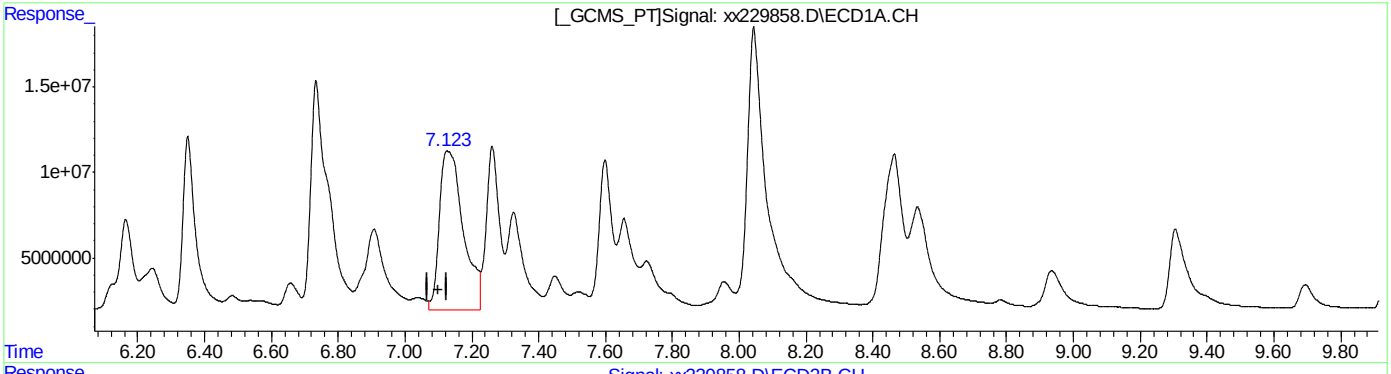
(+) = Expected Retention Time
PCB6349.M Mon Jun 04 08:48:00 2018

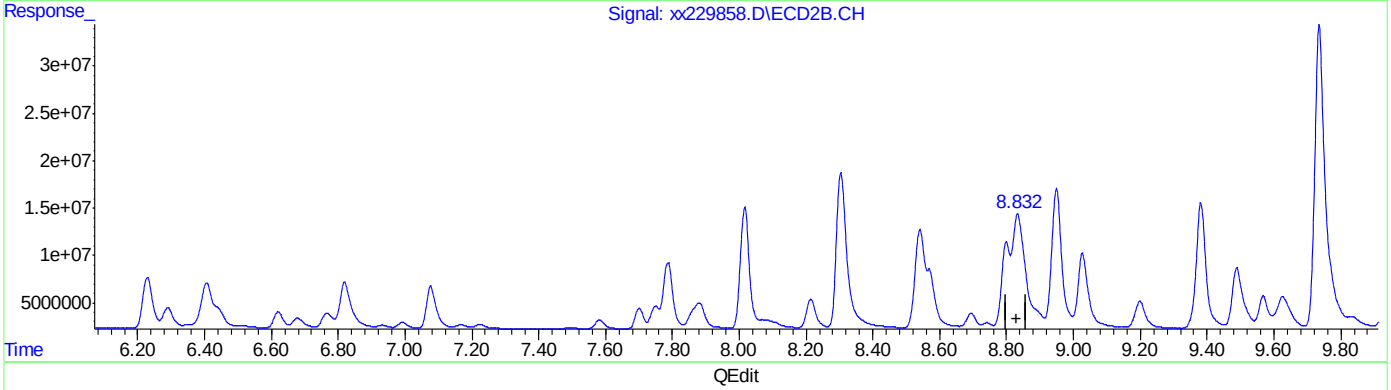
Quantitation Report (Qedit)

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)





QEdit

(46) AR1260-A
7.125min 486.915PPB
response 461662219

(46) AR1260-A #2
8.833min 355.235PPB
response 352402958

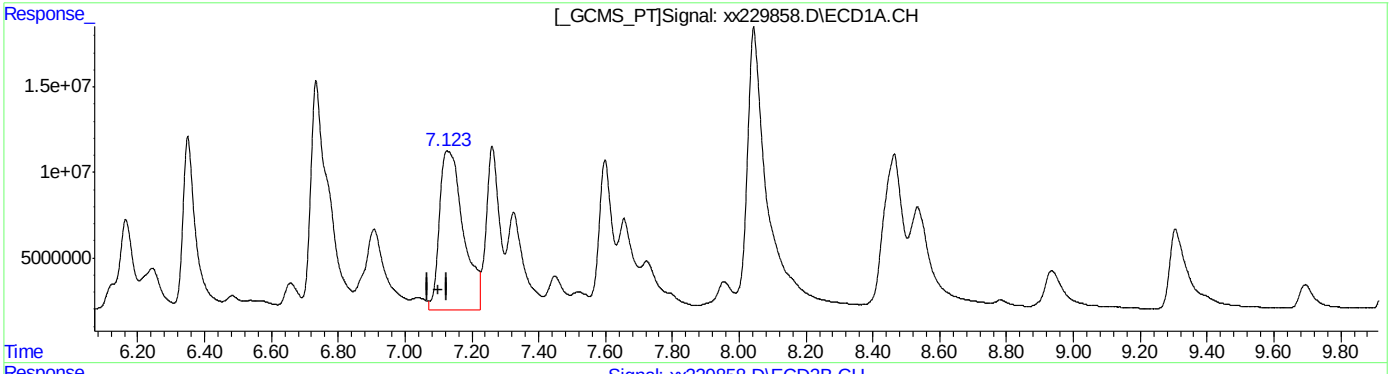
(+) = Expected Retention Time
PCB6349.M Mon Jun 04 08:48:05 2018

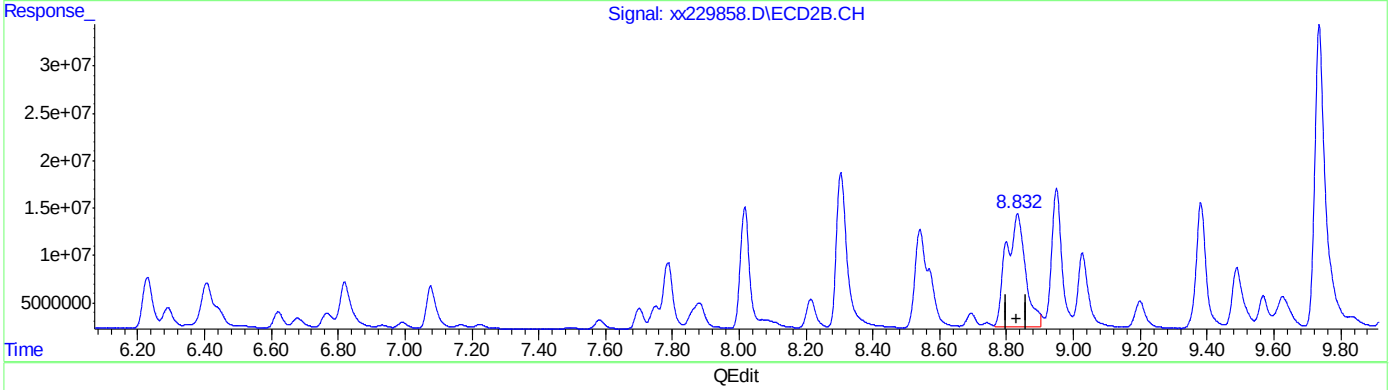
Quantitation Report (Qedit)

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)





QEdit

(46) AR1260-A
7.125min 486.915PPB
response 461662219

(46) AR1260-A #2
8.832min 476.394PPB m
response 472595626

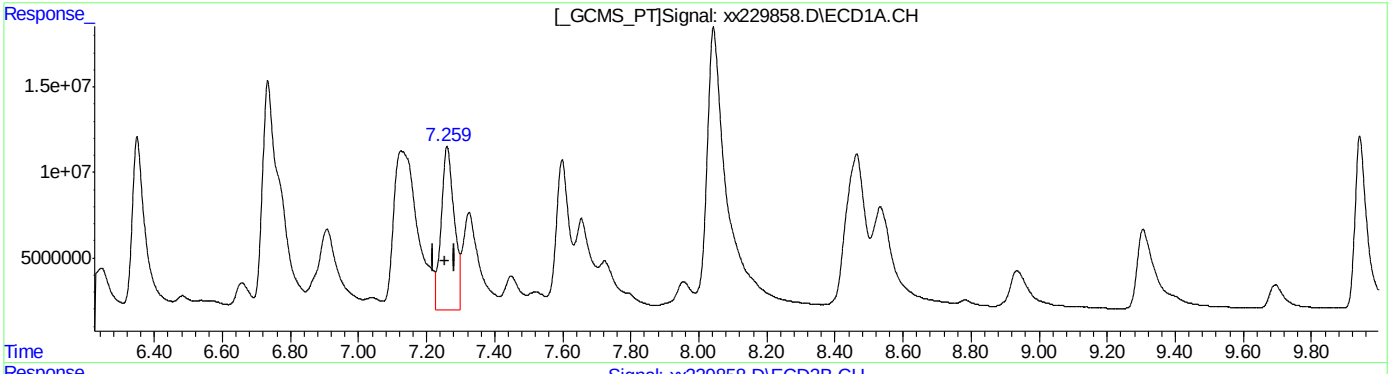
(+) = Expected Retention Time
PCB6349.M Mon Jun 04 08:48:14 2018

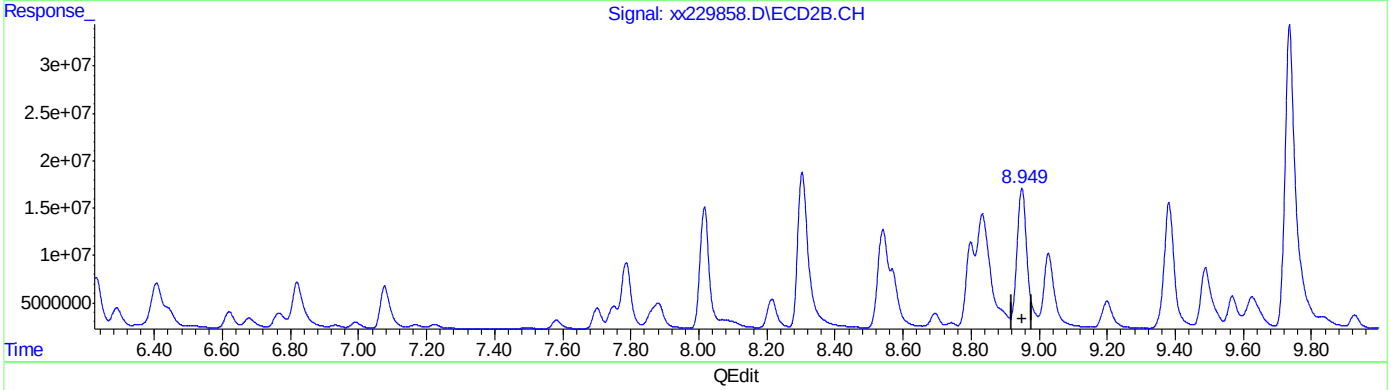
Quantitation Report (Qedit)

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)





QEdit

(47) AR1260-B
7.261min 603.400PPB
response 256391397

(47) AR1260-B #2
8.949min 573.513PPB
response 316801051

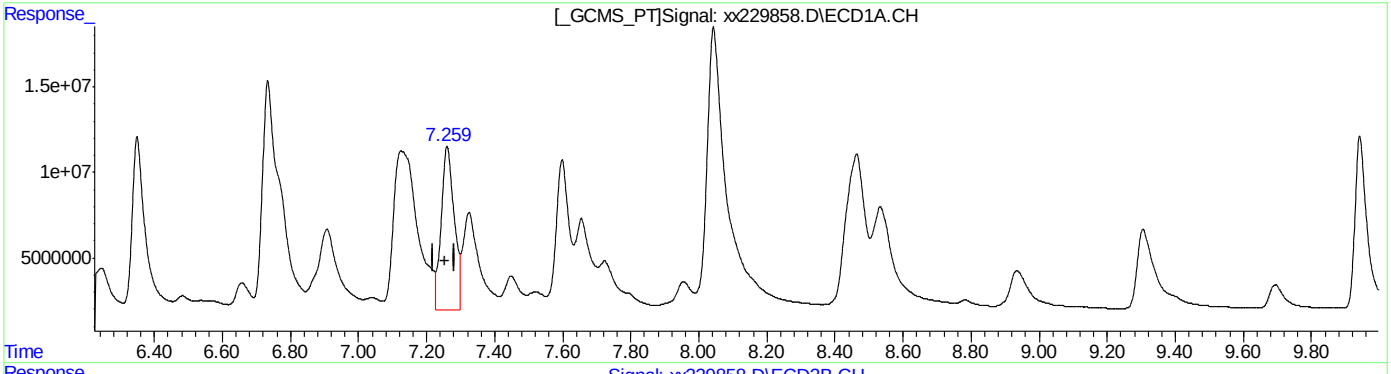
(+) = Expected Retention Time

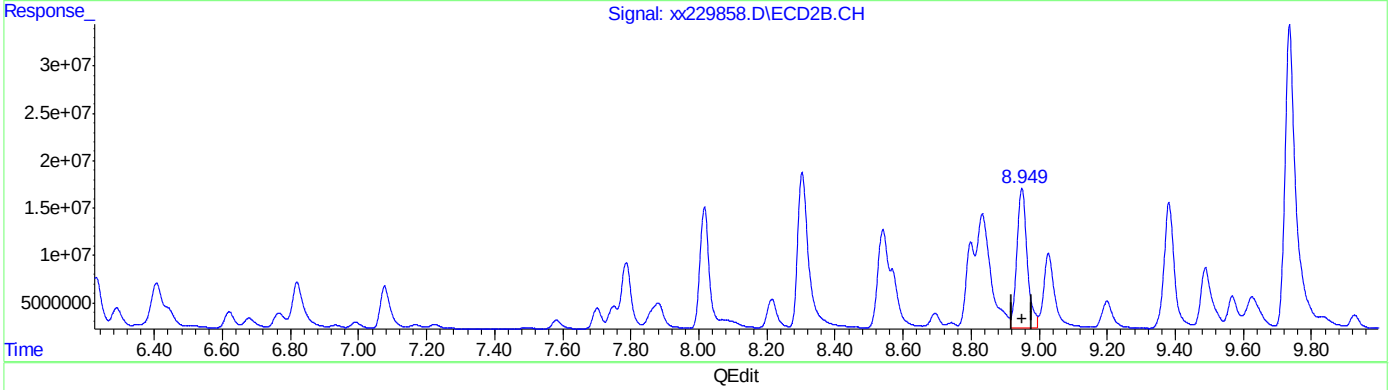
Quantitation Report (Qedit)

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)





QEdit

(47) AR1260-B
7.261min 603.400PPB
response 256391397

(47) AR1260-B #2
8.949min 554.580PPB m
response 306342535

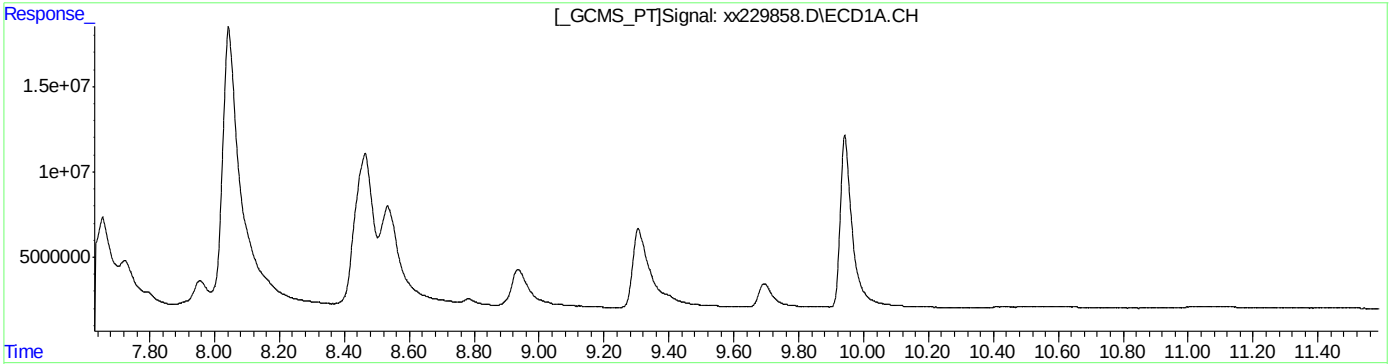
(+) = Expected Retention Time
PCB6349.M Mon Jun 04 08:48:24 2018

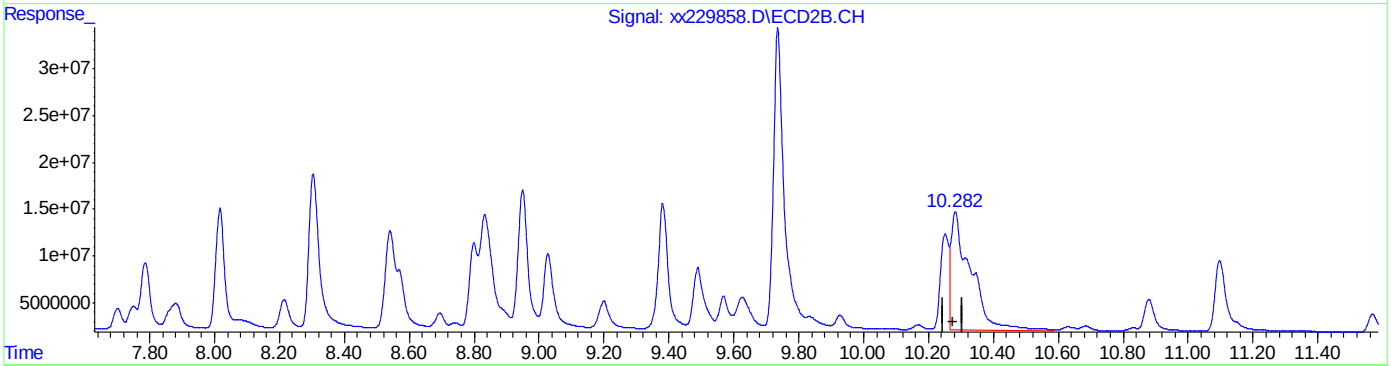
Quantitation Report (Qedit)

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)





QEdit

(50) AR1260-E
0.000min 0.000PPB
response 0

(50) AR1260-E #2
10.283min 447.201PPB
response 535398422

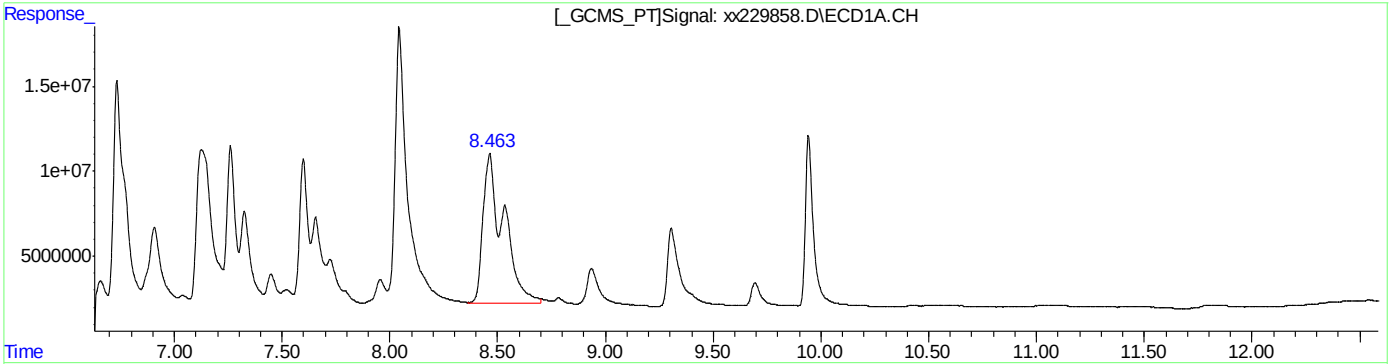
(+) = Expected Retention Time
PCB6349.M Mon Jun 04 08:48:29 2018

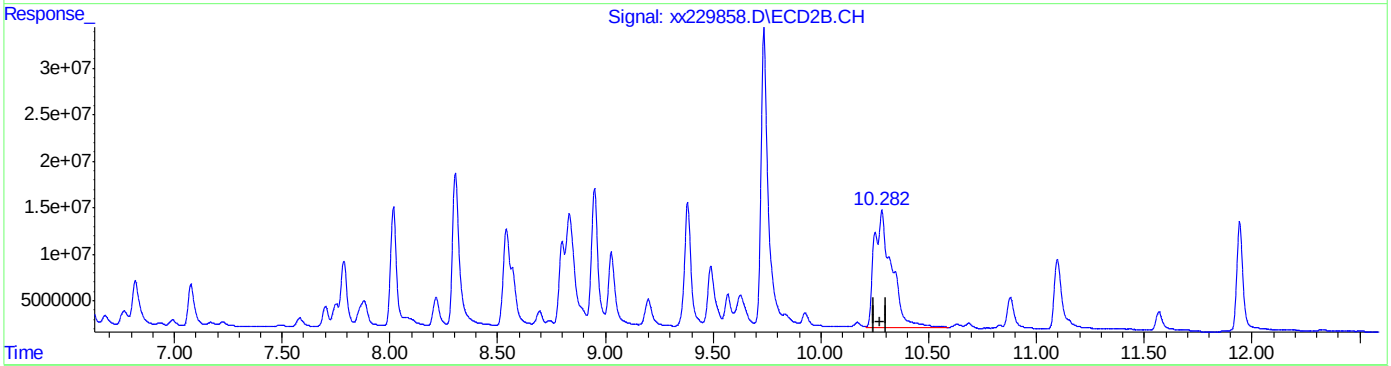
Quantitation Report (Qedit)

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)





QEdit

(50) AR1260-E
8.463min 496.769PPB m
response 583820680

(50) AR1260-E #2
10.282min 594.033PPB m
response 711188207

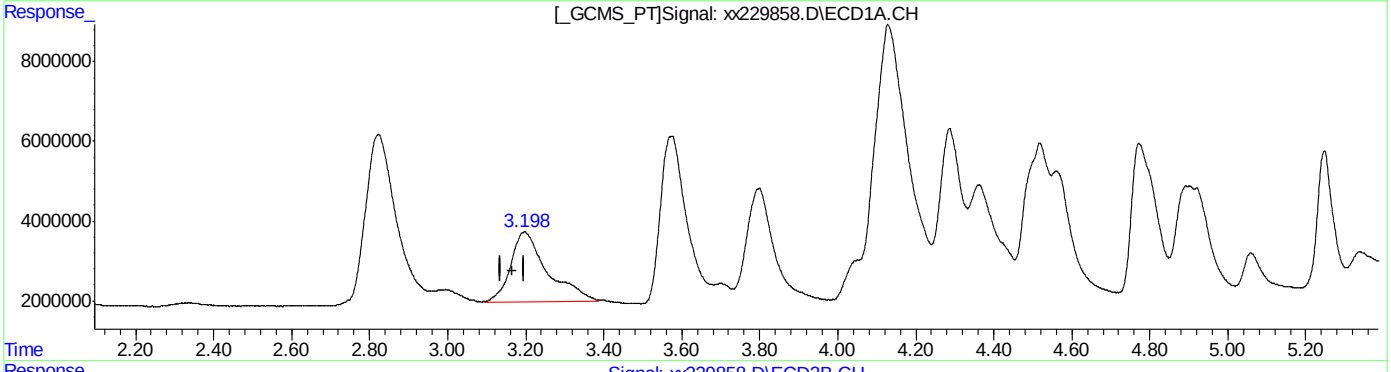
(+) = Expected Retention Time

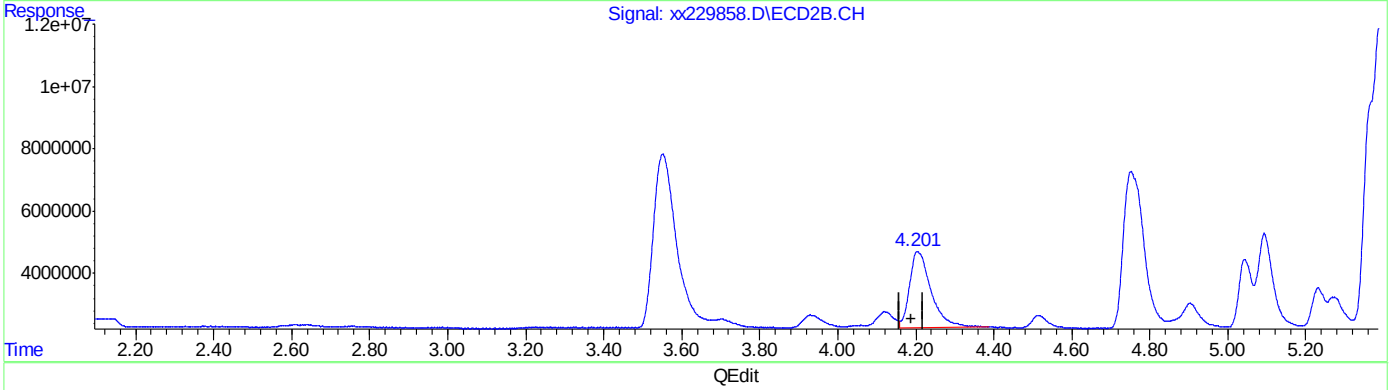
Quantitation Report (Qedit)

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)





QEdit

(41) AR1016-A
3.198min 601.885PPB m
response 115326721

(41) AR1016-A #2
4.204min 560.372PPB
response 93420479

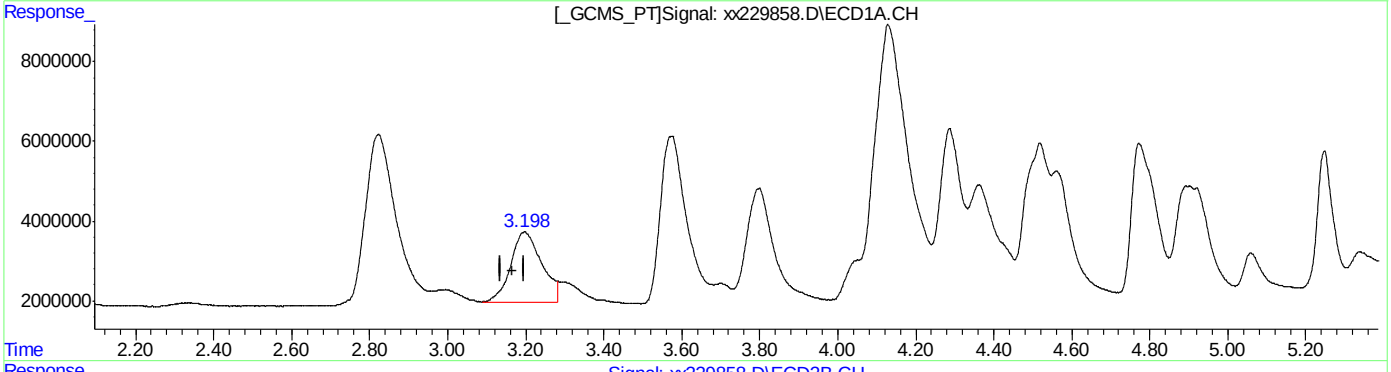
(+) = Expected Retention Time
PCB6349.M Wed Jun 06 08:44:19 2018

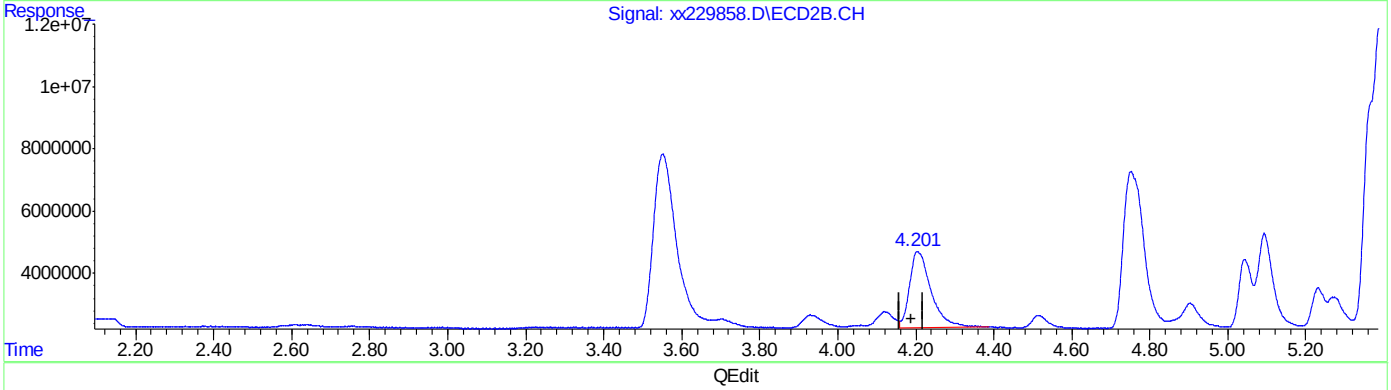
Quantitation Report (Qedit)

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)





QEdit

(41) AR1016-A
3.198min 504.438PPB m
response 96654870

(41) AR1016-A #2
4.204min 560.372PPB
response 93420479

(+) = Expected Retention Time

Manual Integrations
APPROVED
(compounds with "m" flag)
Gwendolyn Burns
06/05/18 14:01

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
Data File : xx229869.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03 Jun 2018 9:45 am
Operator : edouarda
Sample : cc6349-1000
Misc : op12456,GXX6375,15.0,,,10,1
ALS Vial : 33 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 04 08:27:22 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...	2.821f	3.556f	478.7E6	463.4E6	44.442	46.154
	Spiked Amount 40.000			Recovery	=	111.11%	115.39%
51) S	Decachlor...	9.931	11.938	469.9E6	418.8E6	37.538	36.622
	Spiked Amount 40.000			Recovery	=	93.84%	91.55%
	Target Compounds						
41)	AR1016-A	3.193f	4.206f	213.1E6	181.9E6	1111.971	1091.377
42)	AR1016-B	3.573f	4.751	384.4E6	349.0E6	1076.060	1062.501
43)	AR1016-C	4.116f	5.386	878.7E6	765.5E6	1046.143	1013.470
44)	AR1016-D	4.276f	5.574	331.4E6	320.7E6	1077.359	1020.609
45)	AR1016-E	4.764	6.226	347.2E6	217.4E6	1088.110	987.040
46)	AR1260-A	7.100	8.826	888.6E6	857.4E6	937.240	864.329m
47)	AR1260-B	7.251	8.944	469.9E6	551.1E6	1105.901	997.589
48)	AR1260-C	7.585	9.377	459.8E6	501.4E6	1057.749	988.306
49)	AR1260-D	8.020	9.726	1344.3E6	1341.3E6	1092.586	1003.818
50)	AR1260-E	8.412	10.271	1098.8E6	1156.6E6	934.941m	966.035m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

11.6.52
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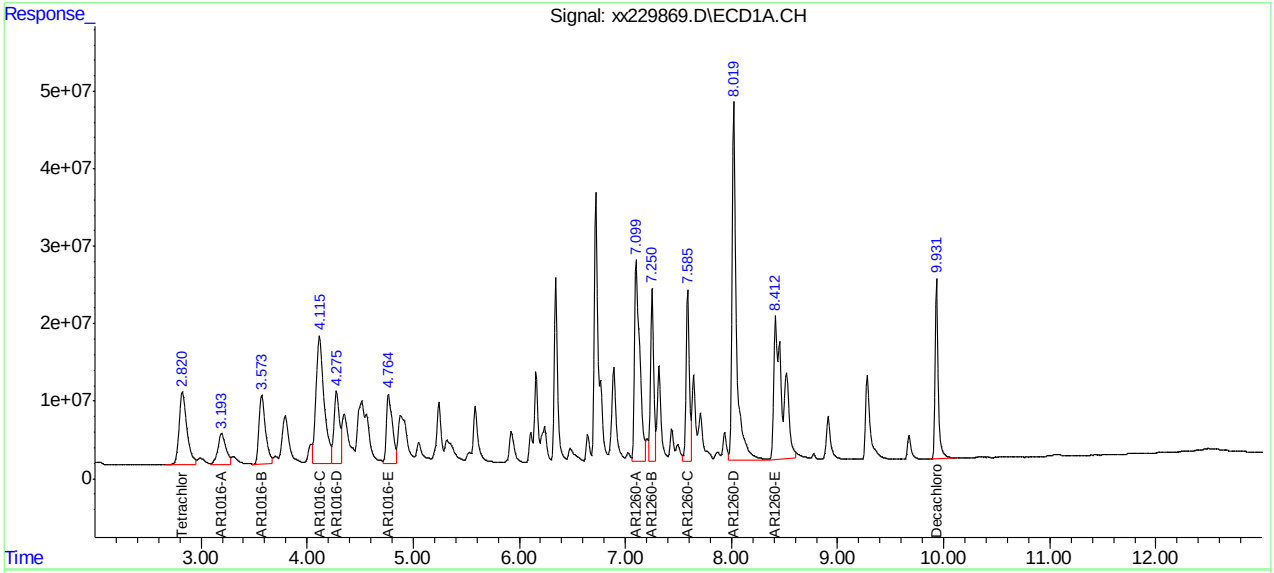
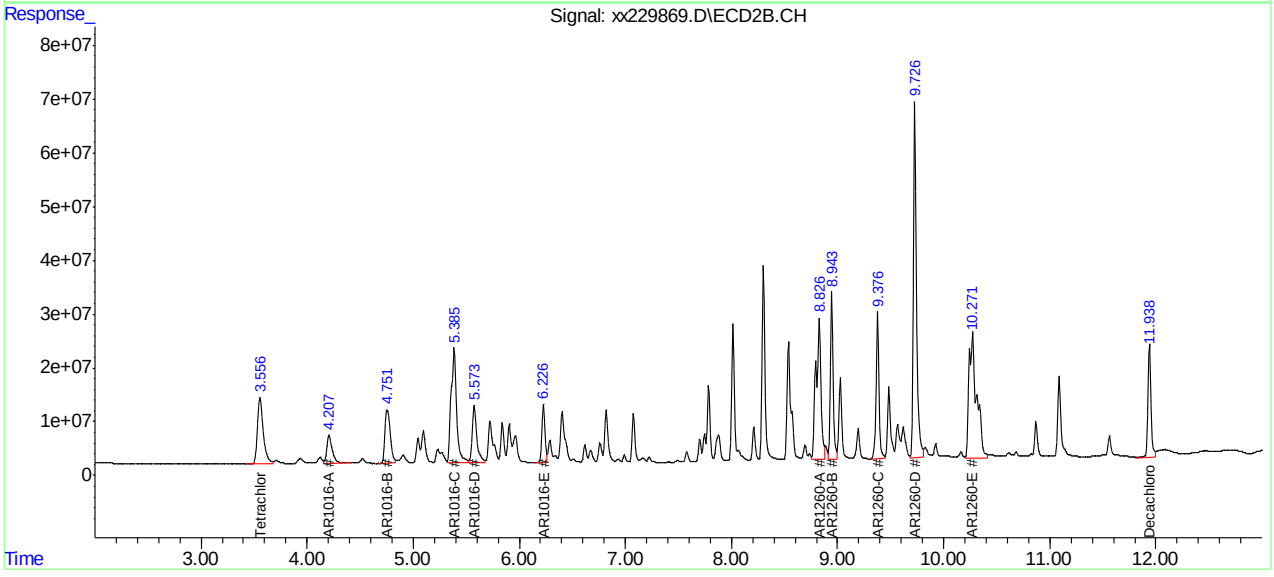
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\gxx6375\
Data File : xx229869.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03 Jun 2018 9:45 am
Operator : edouarda
Sample : cc6349-1000
Misc : op12456,GXX6375,15.0,,,10,1
ALS Vial : 33 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 04 08:27:22 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)





Manual Integration Approval Summary

Sample Number:	GXX6375-CC6349	**Method:**	SW846 8082A
Lab FileID:	XX229869.D	**Analyst approved:**	06/04/18 09:16 Summer Kotb
Injection Time:	06/03/18 09:45	**Supervisor approved:**	06/05/18 14:01 Gwendolyn Burns

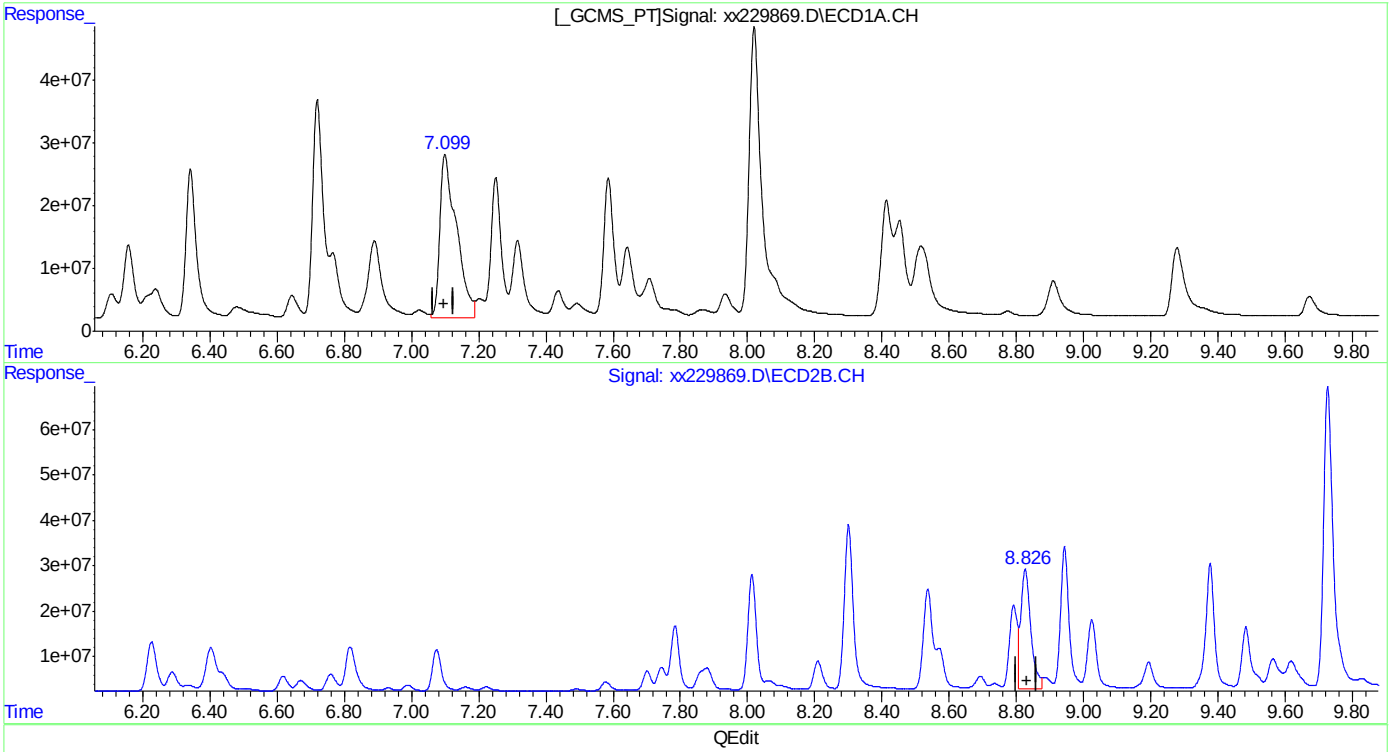
Parameter	CAS	Sig#	R.T. (min.)	Reason
AR1260-E		1	8.41	Split peak
AR1260-A		2	8.83	Split peak
AR1260-E		2	10.27	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
Data File : xx229869.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03 Jun 2018 9:45 am
Operator : edouarda
Sample : cc6349-1000
Misc : op12456,GXX6375,15.0,,,10,1
ALS Vial : 33 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 04 08:26:05 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)



(46) AR1260-A
7.100min 937.240PPB
response 888631151

(46) AR1260-A #2
8.827min 557.745PPB
response 553298308

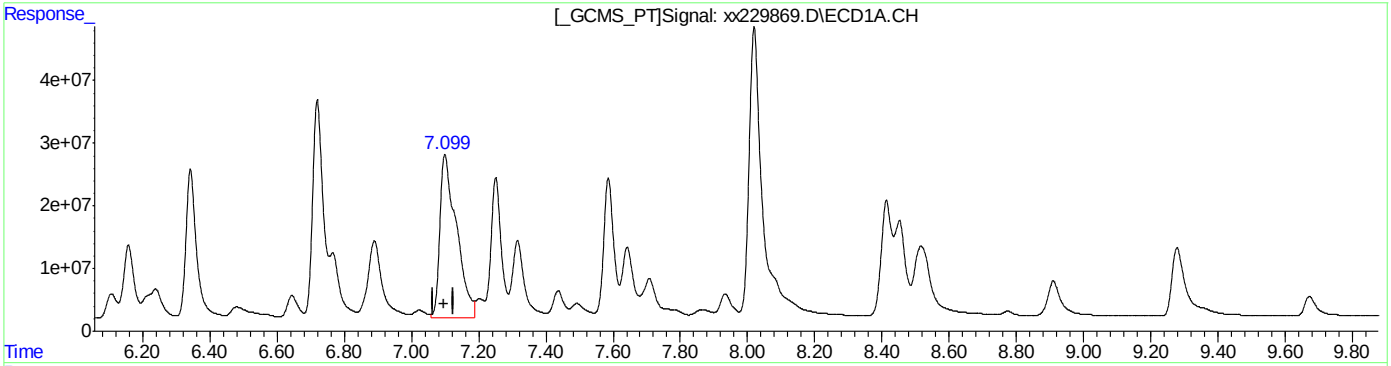
(+) = Expected Retention Time
PCB6349.M Mon Jun 04 08:26:30 2018

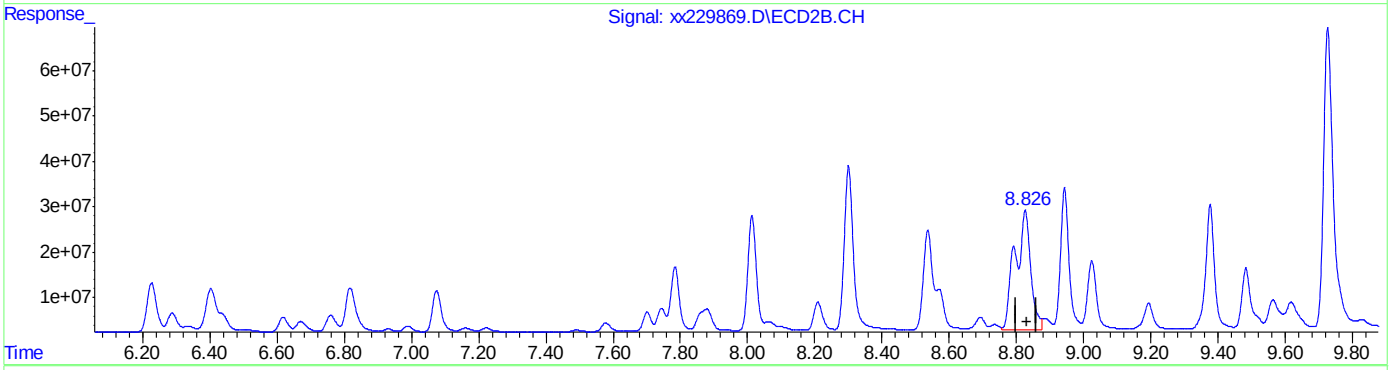
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
Data File : xx229869.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03 Jun 2018 9:45 am
Operator : edouarda
Sample : cc6349-1000
Misc : op12456,GXX6375,15.0,,,10,1
ALS Vial : 33 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 04 08:26:05 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)





QEdit

(46) AR1260-A
7.100min 937.240PPB
response 888631151

(46) AR1260-A #2
8.826min 864.329PPB m
response 857438243

(+) = Expected Retention Time
PCB6349.M Mon Jun 04 08:26:38 2018

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
Data File : xx229869.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03 Jun 2018 9:45 am
Operator : edouarda
Sample : cc6349-1000
Misc : op12456,GXX6375,15.0,,,10,1
ALS Vial : 33 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 04 08:26:05 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

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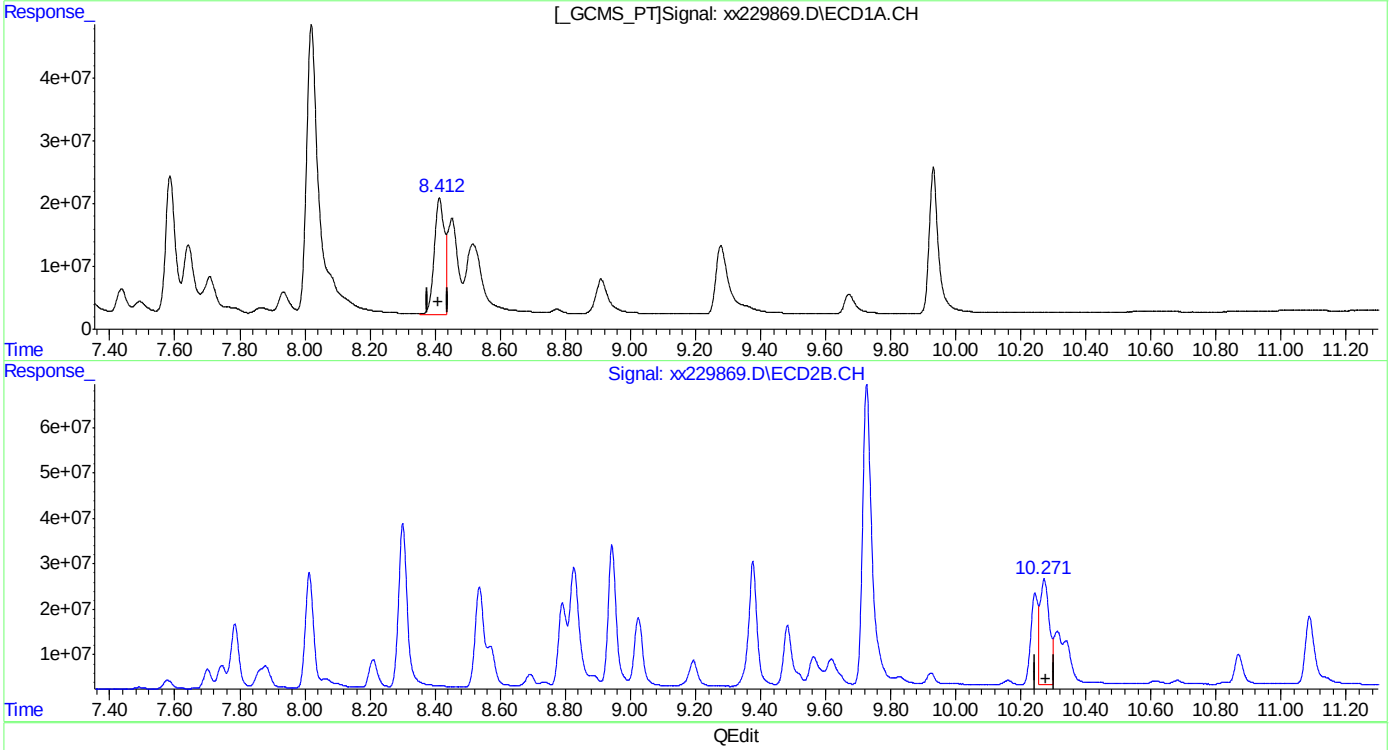
Signal #1 Phase : ZB-CLP1 Signal #2 Phase: ZB-CLP2
Signal #1 Info : 30m X 0.32mm(.32u Signal #2 Info : 30m X 0.32 mm (.25um)



(50) AR1260-E
8.413min 338.446PPB
response 397754048

(50) AR1260-E #2
10.272min 378.294PPB
response 452901846

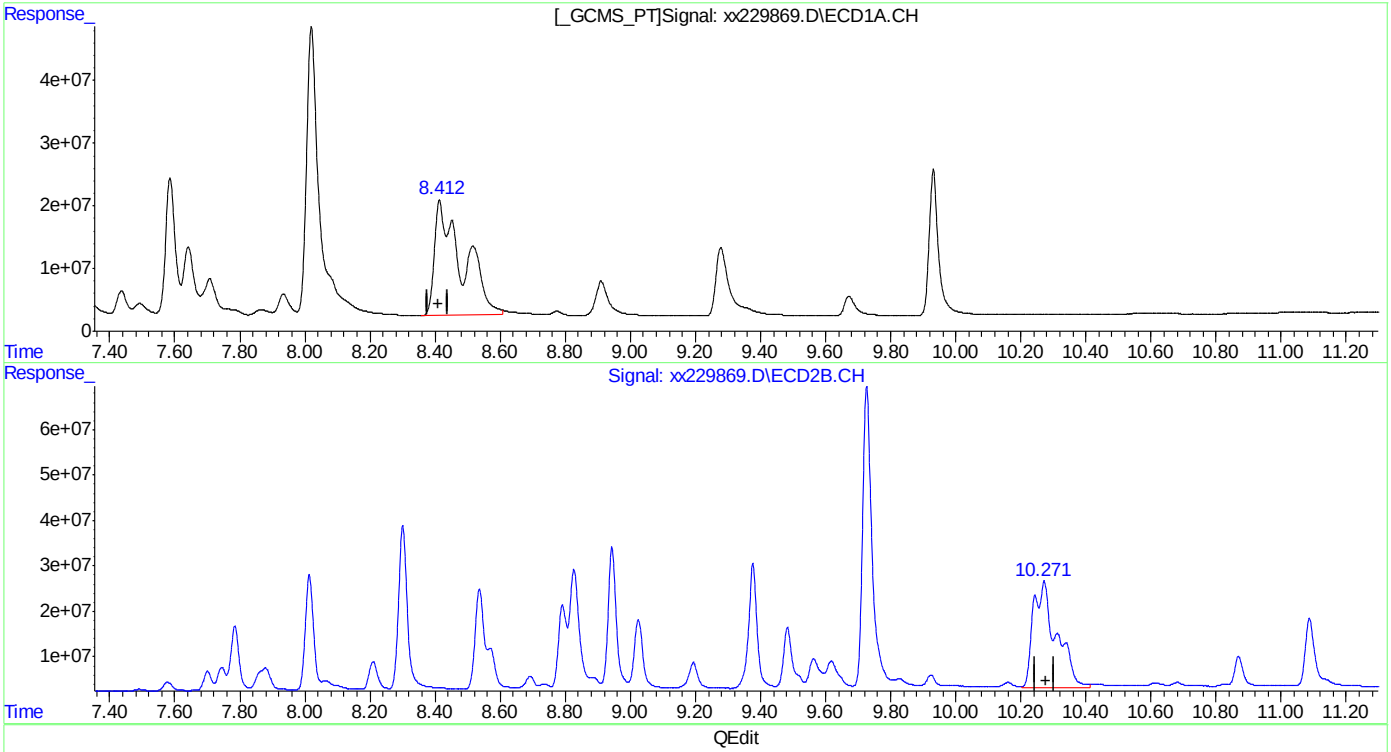
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\gxx6375\
Data File : xx229869.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03 Jun 2018 9:45 am
Operator : edouarda
Sample : cc6349-1000
Misc : op12456,GXX6375,15.0,,,10,1
ALS Vial : 33 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jun 04 08:26:05 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)



(50) AR1260-E
8.412min 934.941PPB m
response 1098774710

(50) AR1260-E #2
10.271min 966.035PPB m
response 1156557467

(+) = Expected Retention Time

SGS

SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G6G 1671

Print Analyst Name: Dhara Saporia

Date: 04/30/18

Analyst Signature: DS

Standard Data

Lot #	Description	Conc.
SV 18-2432-20	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	75 ppb

Standard Data

Lot #	Description	Conc.
SV 18-2432-29	Pest Mix	100ppb
SV 17-2362-03	Chlordane	500ppb
-125	Toxaphene	500ppb
SV 17-2362-17	PEM	10-250ppb
SV 18-2432-05	IB	20ppb
-01	Pest ISTD	5ppm
180405	hexane (Ethers)	—

Columns: 2nCLPI / 2nCLPII

Method: 608, 8081

Initial Cal. Method: G8ST 1671

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: [signature] Date: 5/5/18

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	IS	SU	Status (Data)	Comments
	6255778	blk				1				OK	
	779	IB				2				OK	
	780	IC 1671-1	Pest mix	1st source		3				OK	
	781	-2				4				OK	
	782	-5				5				OK	
	783	-10				6				OK	
	784	IC 1671-25				7				OK	
	785	IC 1671-50				8				OK	
	786	-75				9				OK	
	787	-100				10				OK	
	788	-500	CHL			11				OK	
	789	-500	TOX			12				OK	
	790	IC 1671-25	Pest	2nd source		13	10			OK	SV17-2362-17r @250ppb
	791	-500	CHL			14				OK	SV18-2432-19 @500ppb
	792	-500	TOX			15				OK	SV18-2432-18 @500ppb
	793	-50	Alcohols			16	20			OK	SV17-2285-141 @1000ppb
	794	-50	Hexane			17	20			OK	SV17-2285-142 @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.
Spikeouts must be initialed, dated, and reason applied if not transcription error

Form: OR016-09
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.

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)
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]

SGS

SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G6G1701

Print Analyst Name: Rebecca Kruy

Date: 6/6/18

Analyst Signature: RK

Columns: ZBCLPT/ZBCLPII

Method 8081

Initial Cal. Method 6PST1671

Injection Volume: 1.0uL

Date Archived:

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
18-2632-03	IB	20 ppm
-03	PCST ISID	5 ppm
-32A	PCST MIX	75 ppm
-32B	PCST MIX	50 ppm
-35	PCM	50-250 ppb
18-2463	HEXANE (PESTICIDE)	—

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: 6/8/18

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	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	tcl LM 8081	W	51				OK	
	981	OP12449-BS1				52				OK	
	982	OP12449-BSD				53				OK	
	983	JC67003-1				54				OK	** low surrogate
	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	tcl+ETT 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 strikeouts must be initialed, dated, and reason applied if not transcription error

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Form: OR016-09

Rev. Date: 5/25/17

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SGS

SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G6G1701

Print Analyst Name: Rebecca Krug

Analyst Signature: RK

Date: 6/6/18

Columns: ZBCLPI / ZBCLPII

Method 8081

Initial Cal. Method 6PST1671

Injection Volume: 1.0 L

Date Archived:

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
18 2432.03	TB	20 ppb
.05	PCBs LSTD	5 ppm
.52A	PCBs MIX	25 ppm
.52B	PCBs MIX	50 ppm
.53	PCM	625 ppm
18 40.5	Hexane (DSHCE)	–

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: 6/12/18

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	IS	SU	Status (Data)	Comments
	6656995	JC66951-6	12431	tcl 8081	S	66		/	/	OK	
	996	-7				67		/	/	OK	
	997	-8				68		/	/	OK	
	998	jc67120-5	12508			69	5	/	/	OK	
	999	ddt				1		/	/	OK	
	6657000	ccl671.25				2		/	/	OK	
	001	TB				3		/	/	OK	
	002	OP12567.MB1	12567	8081tcl	S	70		/	/	OK	
	003	.BS1				71		/	/	OK	
	004	jc67252.1				72		/	/	OK	
	005	.3				73		/	/	OK	
	006	OP12567.MS				74		/	/	OK	
	007	.MSD				75		/	/	OK	
	008	jc67262.1				76		/	/	OK	QR 1.5 DCB,DDD 1.100 DDT
	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: C-8C-511

Print Analyst Name: Dhara Suthrin

Date: 06/11/18

Analyst Signature: DK

Columns: 20CLPI / 20CLPII

Method: Part. 608

Initial Cal. Method: 8 PST 511

Injection Volume: 1.0 ul

Date Archived:

Standard Data

Lot #	Description	Conc.
SV 1r-2412-20	Pest Mix	1 ppb
-21		2 ppb
-22		5 ppb
-23		10 ppb
-24		25 ppb
-25		50 ppb
-26		75 ppb

Standard Data

Lot #	Description	Conc.
SV 1r-2412-01	Pest ISTD	5 ppm
DCB 1r-5-PCB	PCM	50 250 ppb
-102	IB	20 ppb
SV 1r-2412-27	Pest 2nd source	250 ppb
SV 1r-2412-10	Toxaphene 1ppm	500 ppb
-017	chlordane 1ppm	500 ppb
Hexane	Hexane (flush)	—

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: 6-13-18

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	IS	SU	Status (Data)	Comments
	82158.04	dblt				1				NOT USED	
	805	dblt				1				OK	
	806	IB				2				OK	
	807	Dev 511 - 1	Pest mix	1st source		3				OK	
	808	- 2				4				OK	
	809	- 5				5				OK	
	810	- 10				6				OK	
	811	Dev 511 - 25				7				OK	
	812	Dev 511 - 50				8				OK	
	813	- 75				9				OK	
	814	- 100				10				OK	SV1r-2412-27
	815	- 500	CHL			11				OK	
	816	- 500	Tox			12				OK	
	817	Dev 511 - 25	Pest	2nd source		13	10			OK	
	818	- 500	CHL			14				OK	SV1r-2412-19 @ 500 ppb
	819	- 500	Tox			15				OK	SV1r-2412-18 @ 500 ppb
	820	- 50	Alg			16	20			OK	SV1r-2412-17 @ 1000 ppb
	821	- 50	Hexch			17	20			OK	SV1r-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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SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: G8G 513

Print Analyst Name: Dhiraj Suryavanshi

Date: 06/12/18

Analyst Signature: DK

Columns: 2-RTX-5 / 2-RTX-1701

Method: 8081

Initial Cal. Method: 8081 511

Injection Volume: 1.0 uL

Date Archived:

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
Sv [illegible]	Pest I370	5 ppm
-22A	Pest mix	25 ppb
-22B	Pest mix	50 ppb
-25	DCBM	50-250 ppb
-102	IB	200 ppb
Hexanes	Hexane (Fisher)	—

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [signature] Date: 6/13/18

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	IS	SU	Status (Data)	Comments
	8215832	Blank				1				OK	
	833	CCS11-50				4				OK	ADMC, DDMC, Aldrin, Endrin
	834	IB				3				OK	
	835	OP12536-MB2	12536-2	MD23 Soil	W	11				OK	
	836	JC63805-20C				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	MD23 Soil	S	18				OK	
	843	JC63805-22C				19				OK	834
	844	-22C				20				OK	835
	845	-22C				21				OK	836
	846	-22C				22				OK	837
	847	-22C				23				OK	838
	848	-22C				24				OK	839
	849	OP12449-MB1	12449			25				OK	
	850	JC67003-1				26	5			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: Gxx6349

Print Analyst Name: Rebecca Krug

Analyst Signature: RK

Date: 5/14/18

Columns: ZBCLPI / ZBCLPII

Method 8082

Initial Cal. Method PCB6349 ~~PCB6321~~ RK 5/14/18

Injection Volume: 1.0 L

Date Archived:

Standard Data

Lot #	Description	Conc.
SV17.2285.85A	Ar1016/1260	50 ppb
.85B	Ar1016/1260	250 ppb
SV18.2432.36A	Ar1016/1260	500 ppb
.36B	Ar1016/1260	1000 ppb
SV17.2285.85E	Ar1016/1260	2000 ppb
.85F	Ar1016/1260	3000 ppb
SV18.2432.05	IB	20 ppb

Standard Data

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)	—

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	MTX	ALS #	Dilution	IS	SU	Status (Data)	Comments
	XX228512	IB				2			/	OK	
	513	IC6349-50				6			/	OK	
	514	-250				7			/	OK	
	515	-500				8			/	OK	
	516	ICC6349-1000				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 strikeouts must be initialed, dated, and reason applied if not transcription error

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RETENTION TIME WINDOW DETERMINATION

Instrument ID: GCXX
Method: SW846 8082A

	Lab FileID	Date/Time	Sample Number	Analyst
Std#1	XX228516.D	05/14/18 17:59	GXX6349-ICC6349	REBECCAK
Std#2	XX228529.D	05/14/18 21:35	GXX6350-CC6349	REBECCAK
Std#3	XX228540.D	05/15/18 00:36	GXX6350-CC6349	REBECCAK

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.

SGS

SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: GXX6375

Date: 6/2/2018

Print Analyst Name: EDUARDO ADRIANZA

Analyst Signature: EAL

Columns: ZB-5MS I / ZB-5MS II

Method 8082, 608

Initial Cal. Method PCB 6349

Injection Volume: 1.0 mL

Date Archived:

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
18-2482-780	AR 1016/1260	500 ppb
.88	AR 1016/1260	1000 ppb
.05	IB	20 ppb
18-4465	hexane (Pesticide)	—

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
	XX229826	CC 6349-1000				1				ok	1016 A ↑ ist
	827	IB				2				OK	
	828	OP12452-MB	12452	608	W	3				ok	
	829	-BS11				4				ok	
	830	-BSD11				5				OK	
	831	12450-MB1	12450	608	W	6				ok	
	832	-BS1				7				OK	
	833	-BSD				8				ok	
	834/835	hexane				100				ok	
	836	CC 6349-IW				9				OK	
	837	IB				2				OK	
	838	JC66982-1	12450	608	W	10				ok	
	839	JC66989-2				11				ok	
	840	JC67091-1				12				ok	
	841	JC66962-1	12452	608	W	13				ok	
	842	JC67110-1	12448	608	W	14				ok	
	843	OP12448-MB				15				OK	
	844	-MSD				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
Rev. Date: 5/25/17

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SGS

SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: GXX6375

Print Analyst Name: EDDUARD ADRIAN LEE

Date: 6/2/2018

Analyst Signature: EAL

Columns: 7 DBCP I / 7BCLP II

Method 8082, 608

Initial Cal. Method PCB 6349

Injection Volume: 1.0 uL

Date Archived:

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
183932-78A	AR 1016 / 1260	5 ppb
78B	AR 1016 / 1260	100 ppb
05	IB	2 ppb
182405	hexane (Dilution)	—

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
	1229 847	CC 6344-1000				17				ok	1016 A ↑ 1st
	848	IB				2				OK	
	849	OP/12448-MB1	12448	8082	W	18				ok	
	850	-BS1				19				ok	
	851	-BSD				20				ok	
	852	SC637623-1				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 1260 B ↑ 1st
	859	IB				2				OK	
	860	SC669577-3	12448	8082	W	26				ok	
	861	SC677110-3				27				ok	
	862	-5				28				ok	
	863	SC666947-1	12456	8082	S	29				ok	
	864	OP12456-MS1				30				ok	
	865	-MSD				31				ok	
	866	SC669470-1				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

Form: OR016-09

Rev. Date: 5/25/17

SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: GXX6375

Print Analyst Name: EDUARDO ADRIAN LEE

Date: 6/2/2018

Analyst Signature: EAL

Columns: ZBLUE I / ZBLUE II

Method 8082, 608

Initial Cal. Method PCB6349

Injection Volume: 1.0uL

Date Archived:

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
1852432-789	AR 1016/1260	500ppb
-792	AR 1016/1260	1000 ppb
-65	IB	20 ppb
1864405	hexane (Fisher)	—

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [signature] Date: 6/5/18

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	IS	SU	Status (Data)	Comments
	XX1224 367/368	hexane				100				ok	
	369	CC6349-1000				35				ok	
	370	IB				2				ok	
	371	OP12456MS1	12456	8082	S	34				ok	
	372	-MS1				35				ok	
	373	JC66947-2				36				ok	
	374	-3				37				ok	
	375	-4				38				ok	
	376	-5				39				ok	
	377	-6				40				ok	
	378/379	hexane				100				ok	
	380	CC6349-500				41				ok	
	381	IB				2				ok	
	382	JC66947-7	12456	8082	S	42				ok	
	383	-8				43				ok	
	384	-9				44				ok	
	385	-10				45				ok	
	386	-11				46				ok	
	387	-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

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Form: OR016-09
Rev. Date: 5/25/17

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SEMIVOLATILE by GC ANALYSIS LOG

Batch ID: GXX6375

Print Analyst Name: EDUARD ADRIANCE

Date: 6/2/2018

Analyst Signature: EAL

Columns: ZBCUPE / ZBCUPII

Method 8082, 608

Initial Cal. Method CCB6349

Injection Volume: 1.0 uL

Date Archived:

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
SW 1832832-788	AR 1016/1260	500 ppb
.788	AR 1016/1260	100 ppb
.65	IB	20 ppb
1806405	hexane (Fisher)	—

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [signature] Date: 6/5/18

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	IS	SU	Status (Data)	Comments
	xx209 866	SC66947-13	12456	8082	S	48				OK	
	889/890	hexane				100				OK	
	891	CCB349-1000				49				OK	1000 B.D ↑ 1st
	892	IB				2				OK	
	893	SC66947-14	12456	8082	S	50				OK	
	894	SC66950-4				51				OK	
	895	-6				52				OK	
	896	SC66952-1				53				OK	
	897	-2				54				OK	
	898/899	hexane				100				OK	
	901	CCB349-500				55				OK	
	902	IB				2				OK	
	903	OP81204-MQAA	81204	8082	W	56				OK	
	904	-BS1AA				57				OK	
	905	-BS2AA				58				OK	
	906	-BS3AA				59				OK	
	907	-BS4AA				60				OK	
	908/909	hexane				100				OK	
	910	CCB349-1000				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

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Rev. Date: 5/25/17

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8-7189

LOGBOOK ID:

Pest/PCB Extraction Log - Aqueous

Date Started: 6-1-18 Time Started: 1940
Date Finished: 6-1-18 Time Finished: 2355

Extract Method (CHECK OFF "√" /DO NOT CIRCLE):
Separatory Funnel: SW846 3510C/CLP/other 0
Continuous Liquid Liquid: SW846 3520C/CLP/other

BATCH #	GC 12448	RACK#	PCb-18
Set-up by:	RM		
Extracted by:	RM		
Concentrated by:	RG, EAL, AF		
Final Vol. Top-up:	RG		
Vialed by:	RG		
Supervisor Review:	6-1-18		

Special Client Spike Instructions

QC ID# for Special Spike	Amt to Spike	Spike ID	Lot #	Conc.	Amt. Spiked

WITNESS SIGN: SPIKE SIGN:
Manager/Supervisor/Team Lead Approval:

	Sample #	Analysis Type	Sample Bottle #	pH	Sample Description	Sample Volume (mL)	Final Extract Color	Final Extract Vol(mL)	GPC	Copper	H2SO4	Florisil	KMnO4	Comments
	MB1	PCB			DIH2O	300	Clear	2.0		/				
	BS1	LV1			DIH2O	300	Clear	2.0		/				
	BSD ~~MS~~	⊥			DIH2O	300	Clear	2.0		/				
	~~MSD~~													
	BS													
	JC67110-4 MS	T	18		1.Yellow	300	Clear	2.0		/				
	MSD		18		1.Yellow	300	Clear	2.0		/				
1	JC67003-1	PCB	5		1.Yellow	300	Clear	2.0		/				
2	-3	LV1	5		Yellow	300	Clear	2.0		/				
3	-2		5		1.Yellow	300	Clear	2.0		/				
4	-7		5		Yellow	300	Yellow	2.0		/				
5	JC66957-3		8		1.Yellow	300	Clear	2.0		/				
6	JC67110-3		5		1.Yellow	300	Clear	2.0		/				
7	-4		4		1.Yellow	300	Clear	2.0		/				
8	-5		5		1.Yellow	300	Clear	2.0		/				
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

SPECIAL PROCESSING INSTRUCTIONS

Rx Reason:

Spiking:

Weights/Volumes:

Required MS/MSD: JC67110-4

Final Volume:

Other:

Comments: QC Samples (MS, MSD, LINK and/or DUP, Link) Confirmed by:

Equipment/ Range	ID	Observed Temp (°C)	Correction Factor (°C)	Corrected Temp (°C)	Pressure/ Flowrate
Buchi (65-71°C)	2,3	65	—	—	OK
Buchi Chiller	F7183	11	—	—	OK
Waterbath (70-80°C)					
Waterbath Chiller (GPM)					
NEVAP (32-38°C, LPM)					

SURROGATE	LOT #	CONC (ppb)	AMT (mL)
PPCB	OP18215 8125	400	0.2
PPCB LL			
WITNESS SIGN: RM		SPIKE SIGN: AF	

MATRIX SPIKE	LOT #	CONC	AMT (mL)
PEST			
PEST LL			
PCB	OP18215 8121	2ppm	0.2
PCB LL			
WITNESS SIGN: RM		SPIKE SIGN: AF	

SOLVENT	LOT #	BRAND	AMT (mL)
METH CHLOR	182954	Fisher	15x3
HEXANE	182405	Fisher	50

REAGENT	LOT #	BAKE BATCH #	BRAND
Sodium Sulfate	41567	5-31-18a	Fisher
Glass Wool	303817		Lab
Filter Paper			
Copper	DIN1106005		Aldrich
Florisil			
1:1 Sulfuric Acid			
Chlorine Strips			

SGS
Form: OP021A-10
Rev Date: 8/2/17

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LOGBOOK ID: 8-2189

Pest/PCB Extraction Log - Aqueous

Date Started: 6-1-18 Time Started: 19:40
Date Finished: 6-1-18 Time Finished: 2355

Extract Method (CHECK OFF "√" /DO NOT CIRCLE):
Separatory Funnel: SW846 3510C/CLP/other ✓
Continuous Liquid Liquid: SW846 3520C/CLP/other

BATCH # GC 12449	RACK# Pest-2
Set-up by:	Rm
Extracted by:	LM
Concentrated by:	RG, EAL, AF
Final Vol. Top-up:	RG
Vialed by:	RG
Supervisor Review:	6/1/18

Special Client Spike Instructions

QC ID# for Special Spike	Amt to Spike	Spike ID	Lot #	Conc.	Amt. Spiked

Sample #	Analysis Type	Sample Bottle #	pH	Sample Description	Sample Volume (mL)	Final Extract Color	Final Extract Vol(mL)	GPC	Copper	H2SO4	Florisil	KMnO4	Comments
MB1	Pest			DIH2O	300	Clear	2.0		✓				
BS1	LV1			DIH2O	300	Clear	2.0		✓				
BSD ~~MS~~	↓			DIH2O	300	Clear	2.0		✓				
~~MSD~~													
BS													
JC67110-4 MS	T	7		1. Yellow	300	Clear	2.0		✓				
↓ MSD		17		1. Yellow	300	Clear	2.0		✓				
JC67003-1	Pest			1. Yellow	300	Clear	2.0		✓				
-3	LV1			Yellow	300	Clear	2.0		✓				
-2				1. Yellow	300	Clear	2.0		✓				
-7				1. Yellow	300	Yellow	2.0		✓				
JC66957-3				1. Yellow	300	Clear	2.0		✓				
JC67110-3				1. Yellow	300	Clear	2.0		✓				
-4				1. Yellow	300	Clear	2.0		✓				
-5				1. Yellow	300	Clear	2.0		✓				

Equipment/ Range	ID	Observed Temp (°C)	Correction Factor (°C)	Corrected Temp (°C)	Pressure/ Flowrate
Buchi (65-71°C)	2,3	65	—	—	Cl.
Buchi Chiller	2,3	11	—	—	Cl.
Waterbath (70-80°C)					
Waterbath Chiller (GPM)					
NEVAP (32-38°C, LPM)					

SURROGATE	LOT #	CONC (ppb)	AMT (mL)
PPCB	CP182154126	400	0.2
PPCB LL			

WITNESS SIGN: Rm SPIKE SIGN: AF

MATRIX SPIKE	LOT #	CONC	AMT (mL)
PEST	OP182154129a	250 ppb	0.2
PEST LL			
PCB			
PCB LL			

WITNESS SIGN: Rm SPIKE SIGN: AF

SOLVENT	LOT #	BRAND	AMT (mL)
METH CHLOR	182454	Fisher	15x3
HEXANE	180405	Fisher	50

REAGENT	LOT #	BAKE BATCH #	BRAND
Sodium Sulfate	181547	5-3-18	Fisher
Glass Wool	303817-2		Lab
Filter Paper			
Copper	OP151146GC3		Fisher
Florisil			
1:1 Sulfuric Acid			
Chlorine Strips			

WITNESS SIGN: SPIKE SIGN:
Manager/Supervisor/Team Lead Approval:

SPECIAL PROCESSING INSTRUCTIONS

Rx Reason:

Spiking:

Weights/Volumes:

Required MS/MSD: JC67110-4

Final Volume:

Other:

Comments: QC Samples (MS, MSD, LINK and/or DUP, Link) Confirmed by:

SGS
Form: OP021A-10
Rev Date: 8/2/17

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Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060618W1.CSV Date Analyzed: 06/06/18 Methods: SW846 7470A
Analyst: DP Run ID: MA44592
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:07	MA44592-STD1	1		B=2.1668E-004, C=3.8410E-002, R=0.9999129
10:08	MA44592-STD2	1		STDB
10:09	MA44592-STD3	1		STDC
10:11	MA44592-STD4	1		STDD
10:12	MA44592-STD5	1		STDE
10:14	MA44592-STD6	1		STDF
10:24	MA44592-ICV1	1		
10:27	MA44592-ICB1	1		
10:29	MA44592-CCV1	1		
10:30	MA44592-CCB1	1		
10:34	MA44592-CRI1	1		
10:39	MP7511-MB1	1		
10:40	MP7511-B1	1		
10:41	MP7511-S1	1		
10:43	MP7511-S2	1		
10:45	JC67191-1	1		(sample used for QC only; not part of login JC67110)
10:46	ZZZZZZ	1		
10:48	MA44592-CCV2	1		
10:49	MA44592-CCB2	1		
10:51	ZZZZZZ	1		
10:52	ZZZZZZ	1		
10:53	ZZZZZZ	1		
10:54	ZZZZZZ	1		
10:56	ZZZZZZ	1		
10:57	ZZZZZZ	1		
10:58	ZZZZZZ	1		
11:00	ZZZZZZ	1		
11:01	ZZZZZZ	1		
11:02	MA44592-CCV3	1		
11:03	MA44592-CCB3	1		
11:05	ZZZZZZ	1		
11:06	ZZZZZZ	1		
11:08	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060618W1.CSV Date Analyzed: 06/06/18 Methods: SW846 7470A
Analyst: DP Run ID: MA44592
Parameters: Hg

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	11:09	ZZZZZZ	1		
	11:10	ZZZZZZ	1		
	11:11	ZZZZZZ	1		
	11:13	ZZZZZZ	1		
	11:14	ZZZZZZ	1		
	11:15	ZZZZZZ	1		
	11:17	MA44592-CCV4	1		
	11:18	MA44592-CCB4	1		
	11:20	MP7512-MB1	1		
	11:21	MP7512-B1	1		
	11:22	MP7512-S1	1		
	11:24	MP7512-S2	1		
	11:25	JC67222-5	1		(sample used for QC only; not part of login JC67110)
	11:35	MP7513-MB1	1		
	11:36	MA44592-CCV5	1		
	11:38	MA44592-CCB5	1		
	11:39	MP7513-B1	1		
	11:41	MP7513-S1	1		
	11:42	MP7513-S2	1		
	11:44	JC67110-4	1		
	11:45	JC67110-1	1		
	11:47	JC67110-2	1		
	11:48	JC67110-3	1		
	11:49	JC67110-5	1		
---------->	Last reportable sample/prep for job JC67110				
	11:51	MA44592-CCV6	1		
	11:52	MA44592-CCB6	1		
---------->	Last reportable CCB for job JC67110				
	11:54	ZZZZZZ	1		
	11:55	ZZZZZZ	1		
	11:56	ZZZZZZ	1		
	11:57	ZZZZZZ	1		
	11:59	ZZZZZZ	1		
	12:00	ZZZZZZ	1		
	12:01	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060618W1.CSV Date Analyzed: 06/06/18 Methods: SW846 7470A
Analyst: DP Run ID: MA44592
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:03	ZZZZZZ	1		
12:04	ZZZZZZ	1		
12:05	MA44592-CCV7	1		
12:06	MA44592-CCB7	1		
13:09	MA44592-CCV8	1		
13:10	MA44592-CCB8	1		
13:11	MP7518-MB1	1		
13:13	MP7518-B1	1		
13:14	MP7518-S1	1		
13:16	MP7518-S2	1		
13:17	JC67229-2A	1		(sample used for QC only; not part of login JC67110)
13:19	ZZZZZZ	1		
13:20	ZZZZZZ	1		
13:21	ZZZZZZ	1		
13:23	MA44592-CCV9	1		
13:24	MA44592-CCB9	1		
13:26	ZZZZZZ	1		
13:27	ZZZZZZ	1		
13:28	MP7518-MB2	1		
13:30	MP7518-B2	1		
13:31	MP7519-MB1	1		
13:32	MP7519-B1	1		
13:34	MP7519-S1	1		
13:35	MP7519-S2	1		
13:37	MA44592-CCV10	1		
13:38	MA44592-CCB10	1		
13:40	TD21956-1	1		(sample used for QC only; not part of login JC67110)
13:41	ZZZZZZ	1		
13:43	ZZZZZZ	1		
13:44	ZZZZZZ	1		
13:46	ZZZZZZ	1		
13:47	ZZZZZZ	1		
13:48	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060618W1.CSV Date Analyzed: 06/06/18 Methods: SW846 7470A
Analyst: DP Run ID: MA44592
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:50	ZZZZZZ	1		
13:51	MA44592-CCV11	1		
13:53	MA44592-CCB11	1		
14:22	MA44592-CCV12	1		
14:24	MA44592-CCB12	1		
14:25	ZZZZZZ	1		
14:27	ZZZZZZ	1		
14:31	MA44592-CCV13	1		
14:32	MA44592-CCB13	1		

Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060618W1.CSV Date Analyzed: 06/06/18 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA44592 Units: ug/l

Time:			10:27		10:30		10:49		11:03	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.052	0.0432	<0.20	-0.0428	<0.20	-0.0281	<0.20	-0.0333	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060618W1.CSV Date Analyzed: 06/06/18 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA44592 Units: ug/l

Time:			11:18		11:38		11:52	
Sample ID:			CCB4		CCB5		CCB6	
Metal	RL	IDL	raw	final	raw	final	raw	final
Mercury	0.20	.052	-0.0275	<0.20	-0.0259	<0.20	-0.0220	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

12.1.1
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060618W1.CSV Date Analyzed: 06/06/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA44592 Units: ug/l

Time:		10:24			10:29			10:48	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.16	105.3	2.5	2.53	101.2	2.5	2.47	98.8

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060618W1.CSV Date Analyzed: 06/06/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA44592 Units: ug/l

Time:		11:02			11:17			11:36	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.43	97.2	2.5	2.51	100.4	2.5	2.45	98.0

(*) Outside of QC limits
(anr) Analyte not requested

12.1.2
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060618W1.CSV Date Analyzed: 06/06/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA44592 Units: ug/l

Time:		11:51	
Sample ID:	CCV	CCV6	
Metal	True	Results	% Rec
Mercury	2.5	2.70	108.0

(*) Outside of QC limits
(anr) Analyte not requested

12.1.2
12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: H9060618W1.CSV Date Analyzed: 06/06/18 Methods: SW846 7470A
QC Limits: 70 to 130 % Recovery Run ID: MA44592 Units: ug/l

Time:			10:34	
Sample ID:	CRI	CRIA	CRI1	
Metal	True	True	Results	% Rec
Mercury	0.20		0.208	104.0

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
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: JC67110
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 JC67110)
00:34	MP7521-SD1	5		
00:38	ZZZZZZ	1		
00:41	MP7530-MB1	1		Batch to reanalysis for As and Tl, MB neg
00:45	MP7530-B1	1		
00:47	ZZZZZZ	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 JC67110)
01:24	MP7530-SD1	5		
01:27	ZZZZZZ	1		
01:30	ZZZZZZ	1		
01:33	ZZZZZZ	1		
01:36	ZZZZZZ	1		
01:39	ZZZZZZ	1		
01:42	ZZZZZZ	1		
01:45	ZZZZZZ	1		
01:49	MA44612-CCV7	1		
01:51	MA44612-CCB7	1		
01:55	ZZZZZZ	1		
01:58	ZZZZZZ	1		
02:01	ZZZZZZ	1		
02:04	ZZZZZZ	1		
02:07	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
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		
	02:43	MP7493-SD1	5		
	02:46	ZZZZZZ	1		
	02:48	ZZZZZZ	1		
	02:51	ZZZZZZ	1		
	02:55	MA44612-CCV9	1		
	02:57	MA44612-CCB9	1		
	03:00	ZZZZZZ	1		
	03:03	ZZZZZZ	1		
	03:06	ZZZZZZ	1		
	03:09	ZZZZZZ	1		
	03:12	JC67110-1	1		
	03:15	JC67110-2	1		
	03:18	JC67110-3	1		
	03:21	JC67110-5	1		
---------->	Last reportable sample/prep for job JC67110				
	03:24	MP7494-B1	1		CRI out for Tl.
	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 JC67110)
	03:45	MP7494-SD1	10		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
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		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
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 JC67110				
	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.

INTERNAL STANDARD SUMMARY

Login Number: JC67110
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

INTERNAL STANDARD SUMMARY

Login Number: JC67110
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	ZZZZZZ	3701	85346	16522	6234
00:41	MP7530-MB1	3598	84475	16615	6089
00:45	MP7530-B1	3570	82828	16430	6184
00:47	ZZZZZZ	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	ZZZZZZ	3610	82512	16068	6192
01:30	ZZZZZZ	3619	84348	15938	6157
01:33	ZZZZZZ	3628	83464	16184	6217
01:36	ZZZZZZ	3581	83514	16002	6139
01:39	ZZZZZZ	3636	84188	16246	6222
01:42	ZZZZZZ	3624	84313	16248	6116
01:45	ZZZZZZ	3620	83698	15931	6199
01:49	MA44612-CCV7	3521	80865	15566	6145
01:51	MA44612-CCB7	3638	82688	15942	6152
01:55	ZZZZZZ	3544	83133	15832	6082
01:58	ZZZZZZ	3563	80839	15519	6102
02:01	ZZZZZZ	3644	83771	16473	6174
02:04	ZZZZZZ	3629	82791	16224	6199
02:07	ZZZZZZ	3738	85571	16300	6273

INTERNAL STANDARD SUMMARY

Login Number: JC67110
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	ZZZZZZ	3578	81431	15835	6081
02:48	ZZZZZZ	3609	83111	16108	6103
02:51	ZZZZZZ	3641	84346	16084	6238
02:55	MA44612-CCV9	3582	81188	15757	6213
02:57	MA44612-CCB9	3599	81945	15794	6087
03:00	ZZZZZZ	3561	84049	16093	6061
03:03	ZZZZZZ	3640	83207	15909	6170
03:06	ZZZZZZ	3630	83670	14903	6150
03:09	ZZZZZZ	3616	83813	16165	6135
03:12	JC67110-1	3605	83103	16121	6117
03:15	JC67110-2	3601	82335	15753	6109
03:18	JC67110-3	3622	83455	16095	6113
03:21	JC67110-5	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

INTERNAL STANDARD SUMMARY

Login Number: JC67110
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

INTERNAL STANDARD SUMMARY

Login Number: JC67110
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 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67110
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
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

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67110
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
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BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67110
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
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

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67110
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

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67110
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
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

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67110
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: JC67110
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
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

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67110
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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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	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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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
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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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	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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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	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: JC67110
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
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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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
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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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
Aluminum	40000	39300	98.3
Antimony	2000	1920	96.0
Arsenic	2000	1950	97.5
Barium	2000	2010	100.5
Beryllium	2000	1960	98.0
Bismuth			
Boron	anr		
Cadmium	2000	1910	95.5
Calcium	40000	40100	100.3
Chromium	2000	1970	98.5
Cobalt	2000	1960	98.0
Copper	2000	1910	95.5
Iron	40000	39600	99.0
Lead	anr		
Lithium			
Magnesium	40000	40800	102.0
Manganese	2000	1980	99.0
Molybdenum			
Nickel	2000	1990	99.5
Phosphorus			
Potassium	40000	39500	98.8
Selenium	2000	1920	96.0
Silicon			
Silver	250	245	98.0
Sodium	40000	40600	101.5
Strontium			
Sulfur			
Thallium	anr		
Tin			
Titanium			
Tungsten			
Vanadium	2000	1950	97.5
Zinc	2000	1940	97.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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: JC67110
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	
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			

HIGH STANDARD CHECK SUMMARY

Login Number: JC67110
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	
Metal	True	Results	% Rec	True	Results	% Rec
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested

12.2.4

12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67110
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	CRI1		CRID1		CRI2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
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

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67110
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	CRI1		CRID1		CRI2	
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.

12.2.5
12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67110
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
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

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67110
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.

12.2.5
12

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC67110
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: / Sample ID: / Metal	ICSA True	ICSAB True	23:25 ICSA2 Results	% Rec	23:28 ICSAB2 Results	% Rec	01:09 ICSA3 Results	% Rec	01:12 ICSAB3 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

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC67110
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:	ICSA	ICSAB	ICSA2		ICSAB2		ICSA3		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

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
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: Pb,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 JC67110)
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: JC67110
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: Pb,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		
14:40	MA44616-CCV5	1		
14:43	MA44616-CCB5	1		
14:46	MP7493-SD1	5		
14:49	ZZZZZZ	1		
14:52	ZZZZZZ	1		
14:55	ZZZZZZ	5		
14:58	ZZZZZZ	1		
15:01	ZZZZZZ	1		
15:04	ZZZZZZ	1		
15:07	ZZZZZZ	1		
15:10	JC67110-1	1		
15:13	MA44616-CCV6	1		
15:16	MA44616-CCB6	1		
15:19	JC67110-2	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
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: Pb,Tl

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	15:22	JC67110-3	1		
	15:25	JC67110-5	1		
	15:28	ZZZZZZ	2		
	15:33	JC67110-3	1		Not needed
---------->	Last reportable sample/prep for job JC67110				
	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 JC67110)
	17:01	MP7545-SD1	25		
	17:04	ZZZZZZ	10		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
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: Pb,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 JC67110				
	17:37	ZZZZZZ	1		
	17:40	ZZZZZZ	1		
	17:43	ZZZZZZ	1		
	17:46	ZZZZZZ	1		
	17:49	ZZZZZZ	1		
	17:53	ZZZZZZ	1		
	17:56	ZZZZZZ	1		
	17:59	ZZZZZZ	1		
	18:02	ZZZZZZ	1		
	18:05	ZZZZZZ	1		
	18:08	ZZZZZZ	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 JC67110)
	18:31	MP7547-SD1	5		
	18:34	ZZZZZZ	1		
	18:37	ZZZZZZ	1		
	18:40	ZZZZZZ	1		
	18:43	MA44616-CCV13	1		
	18:46	MA44616-CCB13	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
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: Pb,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		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
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: Pb,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 JC67110)
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 JC67110)
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		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
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: Pb,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 JC67110)
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.

INTERNAL STANDARD SUMMARY

Login Number: JC67110
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: Pb,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

INTERNAL STANDARD SUMMARY

Login Number: JC67110
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: Pb,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	ZZZZZZ	6026	118870	16712	9112
14:52	ZZZZZZ	5731	114670	15990	8548
14:55	ZZZZZZ	5932	116610	16277	9055
14:58	ZZZZZZ	6029	119430	16595	9092
15:01	ZZZZZZ	5929	118440	16385	8900
15:04	ZZZZZZ	6010	118730	16462	8969
15:07	ZZZZZZ	5803	115190	16232	8657
15:10	JC67110-1	5793	116530	16253	8584
15:13	MA44616-CCV6	5871	114880	16027	8759
15:16	MA44616-CCB6	6107	118550	16421	9346
15:19	JC67110-2	5864	117690	16299	8702

INTERNAL STANDARD SUMMARY

Login Number: JC67110
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: Pb,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:22	JC67110-3	5660	113600	16022	8425
15:25	JC67110-5	5870	118190	16405	8697
15:28	ZZZZZZ	5900	117010	16169	8819
15:33	JC67110-3	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

INTERNAL STANDARD SUMMARY

Login Number: JC67110
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: Pb,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

INTERNAL STANDARD SUMMARY

Login Number: JC67110
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: Pb,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

INTERNAL STANDARD SUMMARY

Login Number: JC67110
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: Pb,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

INTERNAL STANDARD SUMMARY

Login Number: JC67110
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: Pb,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 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67110
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
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	anr							
Chromium	10	.7	anr							
Cobalt	50	.4	anr							
Copper	10	1.1	anr							
Iron	100	3.5	anr							
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	anr							
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							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67110
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

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67110
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
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	anr							
Chromium	10	.7	anr							
Cobalt	50	.4	anr							
Copper	10	1.1	anr							
Iron	100	3.5	anr							
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	anr							
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							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67110
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

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67110
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
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	anr							
Chromium	10	.7	anr							
Cobalt	50	.4	anr							
Copper	10	1.1	anr							
Iron	100	3.5	anr							
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	anr							
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							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67110
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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2030	101.5	2000	2060	103.0	2000	1990	99.5
Lithium									
Magnesium	anr								
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								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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: JC67110
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	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2030	101.5	2000	2000	100.0	2000	2030	101.5
Lithium									
Magnesium	anr								
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								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2030	101.5	2000	1970	98.5	2000	1940	97.0
Lithium									
Magnesium	anr								
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								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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	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: JC67110
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
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron									
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	1960	98.0	2000	1950	97.5	2000	2010	100.5
Lithium									
Magnesium	anr								
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								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67110
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

HIGH STANDARD CHECK SUMMARY

Login Number: JC67110
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						
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron						
Lead	5000	5200	104.0			
Lithium						
Magnesium						
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					

HIGH STANDARD CHECK SUMMARY

Login Number: JC67110
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
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67110
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	CRI1		CRID2		CRI2	
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	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		anr					
Lead	3.0	20	2.5	2.80	93.3	-0.300U	0.0* (a)	2.30	76.7
Lithium	50								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20			anr					
Nickel	10		4.0	anr					
Phosphorus	50								
Potassium	5000		2000	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					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67110
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	CRI1		CRID2		CRI2	
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: JC67110
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		CRI3	
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	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500							
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	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	anr					
Phosphorus	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		2.0	anr					
Sodium	5000		1000	anr					
Strontium	10								
Sulfur	50								
Thallium	10		2.0	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					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67110
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		CRI3	
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: JC67110
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	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		anr					
Lead	3.0	20	2.5	3.20	106.7	0.200U	0.0* (a)	3.10	103.3
Lithium	50								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20			anr					
Nickel	10		4.0	anr					
Phosphorus	50								
Potassium	5000		2000	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					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67110
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
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: JC67110
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	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% 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

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JC67110
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	ICSA1		ICSAB1		ICSA2		ICSAB2	
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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC67110
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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7493 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/05/18

Metal	RL	IDL	MDL	MB raw	final
Zirconium	10	.3	2		

Associated samples MP7493: JC67110-1, JC67110-2, JC67110-3, JC67110-4, JC67110-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67110
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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7493 | Methods: SW846 6010C
Matrix Type: AQUEOUS | Units: ug/l

Prep Date: 06/05/18

Metal	JC67110-4 Original MS	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP7493: JC67110-1, JC67110-2, JC67110-3, JC67110-4, JC67110-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67110
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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7493 | Methods: SW846 6010C
Matrix Type: AQUEOUS | Units: ug/l

Prep Date: 06/05/18

Metal	JC67110-4 Original MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP7493: JC67110-1, JC67110-2, JC67110-3, JC67110-4, JC67110-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC67110
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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC67110
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
Zirconium				

Associated samples MP7493: JC67110-1, JC67110-2, JC67110-3, JC67110-4, JC67110-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC67110
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

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7493 | Methods: SW846 6010C
Matrix Type: AQUEOUS | Units: ug/l

Prep Date: 06/05/18

Metal	JC67110-4 Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP7493: JC67110-1, JC67110-2, JC67110-3, JC67110-4, JC67110-5

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).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7513
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 06/06/18

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.052	.13	0.061	<0.20

Associated samples MP7513: JC67110-1, JC67110-2, JC67110-3, JC67110-4, JC67110-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7513
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 06/06/18

Metal	JC67110-4 Original	MS	Spikelot HGPW3	% Rec	QC Limits
Mercury	0.0	2.1	2	105.0	75-125

Associated samples MP7513: JC67110-1, JC67110-2, JC67110-3, JC67110-4, JC67110-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7513 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/06/18

Metal	JC67110-4 Original	MSD	Spikelot HGPW3	% Rec	MSD RPD	QC Limit
Mercury	0.0	2.2	2	110.0	4.7	20

Associated samples MP7513: JC67110-1, JC67110-2, JC67110-3, JC67110-4, JC67110-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

QC Batch ID: MP7513
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 06/06/18

Metal	BSP Result	Spikelot HGPW3	% Rec	QC Limits
Mercury	2.3	2	115.0	80-120

Associated samples MP7513: JC67110-1, JC67110-2, JC67110-3, JC67110-4, JC67110-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Instrument Detection Limits

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Instrument ID: LEEMANHG9 **Effective Date:** 05/30/18

Analyte	IDL ug/l
Mercury	.0521

The above applies to the following instrument runs:
MA44592

Instrument Detection Limits

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Instrument ID: SSTRACE3 **Effective Date:** 03/16/18

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

Instrument Linear Ranges

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Instrument ID: LEEMANHG9 **Effective Date:** 02/26/18

Analyte	Linear Range ug/l
Mercury	5

The above applies to the following instrument runs:
MA44592

Instrument Linear Ranges

Job Number: JC67110
Account: BBLNYS Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Instrument ID: SSTRACE3 **Effective Date:** 12/09/15

Analyte	Linear Range ug/l
Aluminum	600000
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

Metals Analysis

Raw Data

MA44592

Method: Accutest Operator: Admin Date of Analysis: 06 Jun 2018 08:36:07

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
STDA - 1	06 Jun 2018 10:07:22	Std	ug/l	-	-114	1.000	1.000
STDB - 1	06 Jun 2018 10:08:40	Std	ug/l	-	910	1.000	1.000
STDC - 1	06 Jun 2018 10:09:58	Std	ug/l	-	2061	1.000	1.000
STDD - 1	06 Jun 2018 10:11:19	Std	ug/l	-	4271	1.000	1.000
STDE - 1	06 Jun 2018 10:12:42	Std	ug/l	-	11316	1.000	1.000
STDF - 1	06 Jun 2018 10:14:14	Std	ug/l	-	22951	1.000	1.000
ICV - 1	06 Jun 2018 10:24:38	SMPL	ug/l	3.1558	14387	1.000	1.000
ICB - 1	06 Jun 2018 10:27:22	SMPL	ug/l	0.0432	22	1.000	1.000
CCV - 1	06 Jun 2018 10:29:00	CK STND	ug/l	101.1% 2.5276	11488	1.000	1.000
CCB - 1	06 Jun 2018 10:30:17	CK STND	ug/l	-0.0428	-375	1.000	1.000
CRI - 1	06 Jun 2018 10:34:53	SMPL	ug/l	0.2079	782	1.000	1.000
MP7511-MB1 - 1	06 Jun 2018 10:39:22	SMPL	ug/l	0.0772	179	1.000	1.000
MP7511-B1 - 1	06 Jun 2018 10:40:38	SMPL	ug/l	2.2943	10411	1.000	1.000
MP7511-S1 - 1	06 Jun 2018 10:41:56	SMPL	ug/l	2.2871	10378	1.000	1.000
MP7511-S2 - 1	06 Jun 2018 10:43:31	SMPL	ug/l	2.2676	10288	1.000	1.000
JC67191-1 - 1	06 Jun 2018 10:45:07	SMPL	ug/l	0.0222	-75	1.000	1.000
JC67191-2 - 1	06 Jun 2018 10:46:41	SMPL	ug/l	0.0380	-2	1.000	1.000
CCV - 1	06 Jun 2018 10:48:00	CK STND	ug/l	98.8% 2.4689	11217	1.000	1.000
CCB - 1	06 Jun 2018 10:49:16	CK STND	ug/l	-0.0281	-307	1.000	1.000
JC67191-3 - 1	06 Jun 2018 10:51:00	SMPL	ug/l	0.0464	37	1.000	1.000
JC67193-1A - 1	06 Jun 2018 10:52:18	SMPL	ug/l	0.0503	55	1.000	1.000
JC67156-1A - 1	06 Jun 2018 10:53:36	SMPL	ug/l	0.0486	47	1.000	1.000
JC67194-1A - 1	06 Jun 2018 10:54:54	SMPL	ug/l	0.0534	69	1.000	1.000
JC67194-2A - 1	06 Jun 2018 10:56:11	SMPL	ug/l	0.0479	44	1.000	1.000
JC67194-3A - 1	06 Jun 2018 10:57:27	SMPL	ug/l	0.0453	32	1.000	1.000
JC67194-4A - 1	06 Jun 2018 10:58:44	SMPL	ug/l	0.0722	156	1.000	1.000
JC67195-1A - 1	06 Jun 2018 11:00:00	SMPL	ug/l	0.0536	70	1.000	1.000
JC67195-2A - 1	06 Jun 2018 11:01:17	SMPL	ug/l	0.0341	-20	1.000	1.000
CCV - 1	06 Jun 2018 11:02:33	CK STND	ug/l	97.1% 2.4282	11029	1.000	1.000
CCB - 1	06 Jun 2018 11:03:49	CK STND	ug/l	-0.0333	-331	1.000	1.000
JC67195-3A - 1	06 Jun 2018 11:05:30	SMPL	ug/l	0.0575	88	1.000	1.000
JC67195-4A - 1	06 Jun 2018 11:06:48	SMPL	ug/l	0.0555	79	1.000	1.000
JC67196-1A - 1	06 Jun 2018 11:08:05	SMPL	ug/l	0.0512	59	1.000	1.000
JC67196-2A - 1	06 Jun 2018 11:09:22	SMPL	ug/l	0.0542	73	1.000	1.000
TD21920-1A - 1	06 Jun 2018 11:10:40	SMPL	ug/l	0.0501	54	1.000	1.000
TD21842-1A - 1	06 Jun 2018 11:11:58	SMPL	ug/l	0.0508	57	1.000	1.000
TD21769-1B - 1	06 Jun 2018 11:13:17	SMPL	ug/l	0.0605	102	1.000	1.000
TD21771-1B - 1	06 Jun 2018 11:14:33	SMPL	ug/l	0.0577	89	1.000	1.000
JC67164-2 - 1	06 Jun 2018 11:15:50	SMPL	ug/l	0.0659	127	1.000	1.000
CCV - 1	06 Jun 2018 11:17:07	CK STND	ug/l	100.6% 2.5140	11425	1.000	1.000
CCB - 1	06 Jun 2018 11:18:23	CK STND	ug/l	-0.0275	-304	1.000	1.000
MP7512-MB1 - 1	06 Jun 2018 11:20:04	SMPL	ug/l	0.0531	68	1.000	1.000
MP7512-B1 - 1	06 Jun 2018 11:21:21	SMPL	ug/l	2.2282	10106	1.000	1.000
MP7512-S1 - 1	06 Jun 2018 11:22:38	SMPL	ug/l	1.5881	7152	1.000	1.000
MP7512-S2 - 1	06 Jun 2018 11:24:11	SMPL	ug/l	1.5953	7185	1.000	1.000
JC67222-5 - 1	06 Jun 2018 11:25:49	SMPL	ug/l	0.0001	-177	1.000	1.000
MP7513-MB1 - 1	06 Jun 2018 11:35:38	SMPL	ug/l	0.0614	106	1.000	1.000
CCV - 1	06 Jun 2018 11:36:56	CK STND	ug/l	98.2% 2.4542	11149	1.000	1.000
CCB - 1	06 Jun 2018 11:38:11	CK STND	ug/l	-0.0259	-297	1.000	1.000
MP7513-B1 - 1	06 Jun 2018 11:39:53	SMPL	ug/l	2.2813	10351	1.000	1.000
MP7513-S1 - 1	06 Jun 2018 11:41:10	SMPL	ug/l	2.1144	9581	1.000	1.000
MP7513-S2 - 1	06 Jun 2018 11:42:46	SMPL	ug/l	2.1654	9816	1.000	1.000
JC67110-4 - 1	06 Jun 2018 11:44:22	SMPL	ug/l	-0.0010	-182	1.000	1.000
JC67110-1 - 1	06 Jun 2018 11:45:58	SMPL	ug/l	0.0475	42	1.000	1.000
JC67110-2 - 1	06 Jun 2018 11:47:15	SMPL	ug/l	0.0525	65	1.000	1.000
JC67110-3 - 1	06 Jun 2018 11:48:32	SMPL	ug/l	0.0469	39	1.000	1.000
JC67110-5 - 1	06 Jun 2018 11:49:49	SMPL	ug/l	0.0456	33	1.000	1.000
CCV - 1	06 Jun 2018 11:51:06	CK STND	ug/l	108.0% 2.6990	12279	1.000	1.000
CCB - 1	06 Jun 2018 11:52:22	CK STND	ug/l	-0.0220	-279	1.000	1.000
JC67254-1 - 1	06 Jun 2018 11:54:02	SMPL	ug/l	0.0362	-10	1.000	1.000
JC67087-1 - 1	06 Jun 2018 11:55:18	SMPL	ug/l	0.0453	32	1.000	1.000
JC67259-4 - 1	06 Jun 2018 11:56:35	SMPL	ug/l	0.0846	213	1.000	1.000
JC67259-8 - 1	06 Jun 2018 11:57:53	SMPL	ug/l	0.0508	57	1.000	1.000
JC67259-4F - 1	06 Jun 2018 11:59:11	SMPL	ug/l	0.0672	133	1.000	1.000
JC67259-8F - 1	06 Jun 2018 12:00:29	SMPL	ug/l	0.0371	-6	1.000	1.000
JC67297-4 - 1	06 Jun 2018 12:01:47	SMPL	ug/l	0.0596	98	1.000	1.000
JC67309-1Q - 1	06 Jun 2018 12:03:05	SMPL	ug/l	0.0341	-20	1.000	1.000
JC67308-6 - 1	06 Jun 2018 12:04:23	SMPL	ug/l	0.0423	18	1.000	1.000
CCV - 1	06 Jun 2018 12:05:40	CK STND	ug/l	106.5% 2.6637	12116	1.000	1.000

MA44592

Method: Accutest Operator: Admin Date of Analysis: 06 Jun 2018 08:36:07

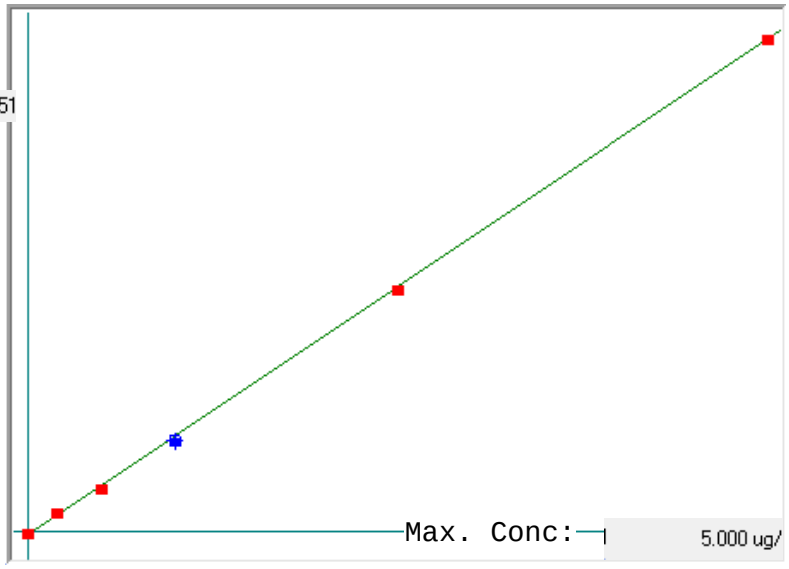
Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
CCB - 1	06 Jun 2018 12:06:56	CK STND	ug/l	-0.0151	-247	1.000	1.000
CCV - 1	06 Jun 2018 13:09:04	CK STND	ug/l	104.4% 2.6093	11865	1.000	1.000
CCB - 1	06 Jun 2018 13:10:19	CK STND	ug/l	-0.0197	-268	1.000	1.000
MP7518-MB1 - 1	06 Jun 2018 13:11:58	SMPL	ug/l	0.0486	47	1.000	1.000
MP7518-B1 - 1	06 Jun 2018 13:13:15	SMPL	ug/l	2.1311	9658	1.000	1.000
MP7518-S1 - 1	06 Jun 2018 13:14:32	SMPL	ug/l	2.2570	10239	1.000	1.000
MP7518-S2 - 1	06 Jun 2018 13:16:06	SMPL	ug/l	2.2839	10363	1.000	1.000
JC67229-2A - 1	06 Jun 2018 13:17:40	SMPL	ug/l	0.0256	-59	1.000	1.000
JC67262-1 - 1	06 Jun 2018 13:19:15	SMPL	ug/l	0.0531	68	1.000	1.000
JC67278-1A - 1	06 Jun 2018 13:20:34	SMPL	ug/l	0.0657	126	1.000	1.000
JC67222-1 - 1	06 Jun 2018 13:21:52	SMPL	ug/l	0.2360	912	1.000	1.000
CCV - 1	06 Jun 2018 13:23:11	CK STND	ug/l	94.3% 2.3584	10707	1.000	1.000
CCB - 1	06 Jun 2018 13:24:29	CK STND	ug/l	-0.0199	-269	1.000	1.000
JC67222-2 - 1	06 Jun 2018 13:26:08	SMPL	ug/l	0.0486	47	1.000	1.000
JC67222-3 - 1	06 Jun 2018 13:27:26	SMPL	ug/l	0.0651	123	1.000	1.000
MP7518-MB2 - 1	06 Jun 2018 13:28:44	SMPL	ug/l	0.0551	77	1.000	1.000
MP7518-B2 - 1	06 Jun 2018 13:30:01	SMPL	ug/l	2.2542	10226	1.000	1.000
MP7519-MB1 - 1	06 Jun 2018 13:31:18	SMPL	ug/l	0.0245	-64	1.000	1.000
MP7519-B1 - 1	06 Jun 2018 13:32:53	SMPL	ug/l	2.2442	10180	1.000	1.000
MP7519-S1 - 1	06 Jun 2018 13:34:11	SMPL	ug/l	2.1576	9780	1.000	1.000
MP7519-S2 - 1	06 Jun 2018 13:35:47	SMPL	ug/l	2.1667	9822	1.000	1.000
CCV - 1	06 Jun 2018 13:37:23	CK STND	ug/l	104.2% 2.6041	11841	1.000	1.000
CCB - 1	06 Jun 2018 13:38:57	CK STND	ug/l	-0.0205	-272	1.000	1.000
TD21956-1 - 1	06 Jun 2018 13:40:38	SMPL	ug/l	0.0592	96	1.000	1.000
JC67351-1 - 1	06 Jun 2018 13:41:55	SMPL	ug/l	0.0505	56	1.000	1.000
JC67351-2 - 1	06 Jun 2018 13:43:12	SMPL	ug/l	0.6111	2643	1.000	1.000
TD21957-1 - 1	06 Jun 2018 13:44:30	SMPL	ug/l	-0.0444	-382	1.000	1.000
JC67308-6A - 1	06 Jun 2018 13:46:20	SMPL	ug/l	0.0401	8	1.000	1.000
JC66602-62CONF - 1	06 Jun 2018 13:47:40	SMPL	ug/l	0.0542	73	1.000	1.000
MP7504-FMBCONF - 1	06 Jun 2018 13:48:59	SMPL	ug/l	0.0419	16	1.000	1.000
MP7504-FMBCONF - 1	06 Jun 2018 13:50:16	SMPL	ug/l	2.2494	10204	1.000	1.000
CCV - 1	06 Jun 2018 13:51:33	CK STND	ug/l	105.4% 2.6349	11983	1.000	1.000
CCB - 1	06 Jun 2018 13:53:08	CK STND	ug/l	-0.0060	-205	1.000	1.000
CCV - 1	06 Jun 2018 14:22:55	CK STND	ug/l	104.1% 2.6037	11839	1.000	1.000
CCB - 1	06 Jun 2018 14:24:11	CK STND	ug/l	-0.0095	-221	1.000	1.000
JC67222-1CONF - 1	06 Jun 2018 14:25:49	SMPL	ug/l	0.2388	925	1.000	1.000
JC67351-2CONF - 1	06 Jun 2018 14:27:07	SMPL	ug/l	0.2674	1057	1.000	1.000
CCV - 1	06 Jun 2018 14:31:33	CK STND	ug/l	99.7% 2.4934	11330	1.000	1.000
CCB - 1	06 Jun 2018 14:32:52	CK STND	ug/l	-0.0095	-221	1.000	1.000

Accutest

Linear

μ Abs.:

22951



A= 0.0000e+000

B= 2.1668e-004

C= 3.8410e-002

Rho= 0.9999129

Accept=Accepted

Accepted Date=

06/06/18 10:18

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
STDA	0.000	0.014	0.014	-114	0.000	-114				
STDB	0.200	0.236	0.036	910	0.0 %	910				
STDC	0.500	0.485	-0.015	2061	0.0 %	2061				
STDD	1.000	0.964	-0.036	4271	0.0 %	4271				
STDE	2.500	2.490	-0.010	11316	0.0 %	11316				
STDF	5.000	5.011	0.011	22951	0.0 %	22951				

Zoom In
Zoom Out

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	-.0002	.0079	.0001	.0003	-.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	-.0007	-.0000	-.0008	-.0001	.0006	.0005	-.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	-.0006	-.0052	.0026	-.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	-.0001	.0016	-.0010	-.0067	.0002	-.0011	-.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

Zoom In
Zoom Out

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

Zoom In
Zoom Out

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	.5069	.9643	3.091	1.841	.0735
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	.5032	.9556	3.066	1.822	.0729
#2	6.270	8.401	5.008	2.242	.5106	.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	.2485	.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	.2461	.7637	.5388	.7250	2.813	5.601
#2	.7560	6.729	.6670	.2509	.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	.6138	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	.3788	.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	.3742	.6743	1.633	.8138
#2	.6147	1.369	1.707	.3835	.6902	1.610	.8311

Zoom In
Zoom Out

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

Zoom In Zoom Out

Sample Name: ccvconf 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**	**.2576**
Stddev	.003	.004	.015	.014	.004	.004	.003	.017	.0006
%RSD	.1350	.1755	.7504	.6633	.1747	.1817	.1327	.8173	.2380
#1	2.055	2.061	2.005	2.066	2.073	2.008	2.084	2.071	.2572
#2	2.059	2.066	2.026	2.085	2.078	2.013	2.088	2.095	.2581
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	**2.070**	**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
#1	2.067	2.039	2.026	2.036	2.055	1.994	2.012	40.54	41.22
#2	2.073	2.059	2.037	2.049	2.077	2.012	2.030	40.60	41.43
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**41.01**	**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	.6696	.7976	.6755	.6520	.1475
#1	40.99	41.28	40.95	41.21	2.008	2.034	5.118	2.036	2.054
#2	41.02	41.48	41.45	41.49	2.027	2.058	5.167	2.055	2.059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccvconf Acquired: 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
#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
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	**82546.**	**16260.**	**3589.5**	**6265.5**
Stddev	11.	25.	5.8	8.9
%RSD	.01306	.15377	.16088	.14190
#1	82553.	16243.	3585.4	6259.2
#2	82538.	16278.	3593.6	6271.8

Zoom In Zoom Out

Sample Name: ccbconf 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**	**-.0005**	**.0001**	**-.0010**	**-.0000**	**.0003**	**-.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
#1	.0007	.0001	.0001	-.0004	.0000	-.0013	.0000	.0006	-.0011
#2	.0007	.0001	-.0000	-.0007	.0001	-.0006	-.0001	.0001	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0001**	**.0014**	**.0002**	**.0012**	**-.0007**	**.0023**	**-.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
#1	.0004	.0002	.0014	.0002	.0009	-.0027	.0017	-.0140	.0002
#2	-.0010	-.0001	.0014	.0001	.0016	.0013	.0028	-.0038	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**-.0155**	**-.0123**	**-.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
#1	-.0000	-.0130	.0183	.0048	.0050	.0001	.0039	.0017	-.0001
#2	.0011	-.0180	-.0429	-.0065	.0036	.0002	.0015	.0002	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccbconf 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**	**-.0014**	**-.0000**	**.0021**	**-.0004**	**-.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
#1	.0001	-.0010	-.0003	.0033	-.0017	-.0048	.0003
#2	.0002	-.0019	.0002	.0010	.0010	-.0005	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**84421.**	**16424.**	**3666.9**	**6219.6**
Stddev	953.	45.	23.1	36.3
%RSD	1.1290	.27108	.62954	.58411
#1	85095.	16392.	3683.2	6245.3
#2	83747.	16455.	3650.6	6193.9

Zoom In Zoom Out

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**	**.2587**
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	.2562
#2	2.108	2.144	2.059	2.123	2.090	2.106	2.112	2.114	.2612
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.125**	**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 ?	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	**40.86**	**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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICV 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 ?	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	**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

Zoom In Zoom Out

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	**-.0000**	**.0000**	**.0000**	**-.0002**	**.0001**	**-.0005**	**-.0000**	**-.0008**	**.0000**
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	-.0000	-.0001	-.0002	.0002	-.0008	-.0000	-.0014	.0006
#2	-.0003	.0001	.0002	-.0002	.0001	-.0002	-.0000	-.0001	-.0006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**-.0000**	**.0003**	**.0005**	**-.0009**	**.0002**	**.0025**	**.0058**	**.0034**
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	-.0000	.0006	.0014	.0015	-.0004	.0037	-.0008	.0032
#2	.0004	-.0000	.0001	-.0005	-.0033	.0008	.0013	.0123	.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	**.0006**	**.0109**	**-.0499**	**.0123**	**.0032**	**.0007**	**-.0011**	**.0011**	**-.0001**
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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ICB Acquired: 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	**.0006**	F **.0077**	**.0008**	**.0032**	**-.0013**	**-.0000**	**.0023**
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	-.0038	.0007	.0027
#2	.0005	.0077	.0009	.0036	.0013	-.0007	.0019
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.0050					
Low Limit		-.0050					

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**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

Zoom In Zoom Out

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**	**.2613**
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									

Zoom In Zoom Out

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
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

Zoom In Zoom Out

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	**-.0003**	**.0000**	**-.0002**	**.0000**	**-.0001**	**-.0006**	**-.0001**	**-.0003**	**-.0001**
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	-.0002	.0000	-.0002	-.0003	-.0000	-.0008	-.0001	-.0001	.0001
#2	-.0005	.0000	-.0001	.0003	-.0001	-.0004	-.0002	-.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									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0001**	**.0008**	**-.0015**	**-.0003**	**-.0022**	**.0018**	**-.0077**	**.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	-.0006	.0001	-.0002	-.0021	.0003	-.0033	.0036	-.0017	.0032
#2	.0002	.0001	.0018	-.0008	-.0009	-.0010	.0001	-.0138	.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**	**-.0136**	**.0034**	**.0002**	**-.0007**	**.0009**	**-.0000**
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	-.0025	.0029	.0003	-.0007	.0009	.0000
#2	.0002	-.0015	.0243	-.0247	.0038	.0002	-.0007	.0009	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 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**	**-.0001**	**.0000**	**-.0010**	**-.0026**	**.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	-.0001	.0000	-.0001	.0003	-.0025	-.0004
#2	.0001	.0015	-.0003	.0001	-.0023	-.0026	.0008
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	**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

Zoom In Zoom Out

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 ?	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	**.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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Warn
Value						.0030		.0060
Range						-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	**.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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Zoom In Zoom Out

Sample Name: CRI Acquired: 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 ?	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	**.0534**	**.0492**
Stddev	.0007	.0015
%RSD	1.254	3.060
#1	.0538	.0481
#2	.0529	.0503
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	**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

Zoom In Zoom Out

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 ?	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 **.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 ?	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	**.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 ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Zoom In Zoom Out

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 ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**.0005**	**.0000**
Stddev	.0026	.0014
%RSD	519.9	3072.
#1	.0023	-.0009
#2	-.0013	.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	**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

Zoom In Zoom Out

Sample Name: ICSA Acquired: 6/7/2018 23:17:04 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	k **.0019**	k **.0001**	k **-.0001**	k **.0017**	s **.0004**	sF **-.0199**	s **-.0066**	k **.0022**
Stddev	.0001	.0000	.0002	.0034	.0003	.0237	.0064	.0038
%RSD	5.858	10.06	113.2	202.3	81.38	119.3	96.81	167.5
#1	k .0020	k .0001	k -.0000	k .0041	s .0002	s -.0366	s -.0112	k .0049
#2	.0019	.0001	-.0003	-.0007	.0007	-.0031	-.0021	-.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit						.0100		
Low Limit						-.0100		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	sF **-.0108**	s **.0057**	k **.0037**	k **.0014**	kF **-.0045**	kF **-.0293**	kF **-.0151**	k **.0055**
Stddev	.0211	.0042	.0042	.0023	.0062	.0535	.0269	.0043
%RSD	194.8	74.14	115.6	170.5	137.0	182.5	178.7	79.31
#1	s -.0257	s .0027	k .0067	k -.0003	k -.0090	k -.0672	k -.0341	k .0024
#2	.0041	.0086	.0007	.0030	-.0001	.0085	.0040	.0086
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass
High Limit	.0100				.0040	.0060	.0100	
Low Limit	-.0100				-.0040	-.0060	-.0100	

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **571.5**	k **424.3**	k **211.4**	k **559.8**	k **.0998**	k **.0490**	k **.0018**	k **-.0019**
Stddev	10.4	7.3	6.6	18.3	.0893	.0246	.0005	.0033
%RSD	1.814	1.710	3.132	3.271	89.45	50.29	28.61	177.5
#1	k 564.2	k 419.2	k 206.7	k 546.8	k .0367	k .0664	k .0021	k -.0042
#2	578.9	429.5	216.1	572.7	.1629	.0316	.0014	.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Zoom In Zoom Out

Sample Name: ICSA Acquired: 6/7/2018 23:17:04 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	k **.0067**	k **-.0044**	k **.0059**	s **-.0016**	k **-.0018**	s **-.0061**	k **.0159**	k **.0171**
Stddev	.0054	.0025	.0123	.0012	.0025	.0014	.0048	.0184
%RSD	80.53	55.89	207.5	73.30	136.6	22.44	30.53	107.6
#1	k .0029	k -.0027	k .0147	s -.0008	k -.0001	s -.0070	k .0193	k .0301
#2	.0105	-.0061	-.0028	-.0024	-.0036	-.0051	.0125	.0041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	k **.0012**	k **.0007**
Stddev	.0031	.0006
%RSD	268.4	81.62
#1	k -.0010	k .0011
#2	.0034	.0003
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	^ *****	**14848.**	**3323.2**	**6086.1**
Stddev	-----	301.	12.4	14.7
%RSD	-----	2.0268	.37381	.24109
#1	^ -----	15061.	3332.0	6096.5
#2	74317.	14636.	3314.4	6075.8

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 6/7/2018 23:20:11 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	**.5105**	**.4953**	**1.031**	**.4876**	**.4920**	**.5165**	**.5011**	**.9692**	**1.061**
Stddev	.0022	.0047	.011	.0042	.0055	.0067	.0086	.0075	.019
%RSD	.4263	.9587	1.050	.8682	1.125	1.299	1.715	.7726	1.756
#1	.5120	.4986	1.023	.4846	.4881	.5118	.4951	.9639	1.048
#2	.5090	.4919	1.038	.4906	.4959	.5213	.5072	.9745	1.074
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	**.5093**	**.9701**	**1.069**	**1.002**	**.9700**	**1.029**	**1.052**	**533.6**	**410.7**
Stddev	.0101	.0087	.013	.010	.0073	.009	.012	8.1	10.9
%RSD	1.990	.8960	1.256	.9843	.7523	.9193	1.108	1.516	2.641
#1	.5022	.9639	1.059	.9950	.9648	1.022	1.043	539.4	418.4
#2	.5165	.9762	1.078	1.009	.9752	1.035	1.060	527.9	403.1
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	**206.5**	**533.1**	**.1481**	**.0073**	**.5274**	**.5046**	**.5276**	**.4873**	**.5174**
Stddev	1.7	4.6	.0469	.0021	.0076	.0049	.0091	.0030	.0016
%RSD	.8266	.8690	31.66	29.10	1.438	.9746	1.732	.6253	.3020
#1	207.7	536.4	.1812	.0058	.5221	.5011	.5211	.4851	.5185
#2	205.3	529.8	.1149	.0088	.5328	.5081	.5340	.4894	.5163
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 6/7/2018 23:20:11 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	**.5114**	**.5092**	**.4863**	**.5234**	**.5320**	**.5240**	**.5127**
Stddev	.0106	.0074	.0092	.0069	.0077	.0009	.0060
%RSD	2.066	1.459	1.888	1.325	1.451	.1658	1.169
#1	.5040	.5040	.4798	.5185	.5265	.5246	.5084
#2	.5189	.5145	.4928	.5283	.5374	.5234	.5169
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	**78563.**	**15503.**	**3353.6**	**6140.1**
Stddev	1021.	131.	5.1	4.9
%RSD	1.3000	.84301	.15178	.07937
#1	79285.	15411.	3357.2	6143.5
#2	77841.	15595.	3350.0	6136.6

Zoom In Zoom Out

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**	**-.0002**	**-.0006**	**.0005**	**-.0034**	**-.0024**	**-.0003**	**.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	-.0000	-.0001	-.0003	.0003	-.0043	-.0027	.0001	.0022
#2	.0024	.0001	-.0003	-.0010	.0007	-.0026	-.0022	-.0008	.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**	**-.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									

Zoom In Zoom Out

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	**-.0023**	**.0027**	**-.0036**	**.0168**	**.0069**	**-.0002**	**.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
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

Zoom In Zoom Out

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**	**.9967**	**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									

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**.6452**
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	.6442
#2	5.448	5.382	5.173	5.415	5.421	5.221	5.413	5.470	.6462
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**	**-.0434**	**-.1290**
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	-.0343	-.1263
#2	5.325	5.404	5.189	5.297	5.351	5.147	5.178	-.0524	-.1317
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	**-.0193**	**.0630**	**.1627**	**.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	.4055
#1	-.0181	.0596	.1332	.0429	5.079	5.153	25.30	5.174	5.401
#2	-.0204	.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									

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**-.0002**	**-.0008**	**.0013**	**-.0018**	**-.0015**	**-.0005**	**.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	-.0003	-.0008	.0015	-.0022	-.0015	-.0006	.0039
#2	.0018	-.0001	-.0001	-.0009	.0011	-.0013	-.0016	-.0004	.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**	**.0004**	**.0022**	**-.0380**	**.0011**	**.0022**	**.0058**	**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	-.0372	.0000	.0067	.0062	315.7	156.2
#2	.0058	.0005	.0024	-.0389	.0021	-.0022	.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**	**.0055**	**.0009**	**.0127**	**-.0029**	**-.0012**
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	-.0029	-.0014
#2	155.1	315.0	159.4	160.6	.0049	-.0002	.0130	-.0029	-.0010
Check ?	None	None	None	None	None	None	None	None	None
Value									
Range									

Zoom In Zoom Out

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	**-.0009**	**.0001**	**-.0036**	**.0083**	**-.0005**	**.0020**	**-.0012**
Stddev	.0006	.0001	.0001	.0036	.0066	.0021	.0001
%RSD	65.36	117.0	3.936	43.95	1369.	106.3	7.086
#1	-.0005	.0002	-.0035	.0057	.0042	.0005	-.0013
#2	-.0014	.0000	-.0037	.0108	-.0052	.0035	-.0012
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

Zoom In Zoom Out

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**	**.2575**
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	.2567
#2	2.083	2.069	2.029	2.080	2.071	2.012	2.082	2.097	.2582
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.054**	**2.046**	**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 ?	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	**41.08**	**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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 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 ?	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	**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

Zoom In Zoom Out

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**	**-.0001**	**.0003**	**-.0005**	**.0000**	**-.0003**	**-.0001**	**-.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	-.0000	.0004	-.0001	.0002	-.0004	.0000	-.0011	.0004
#2	.0006	-.0001	.0002	-.0010	-.0002	-.0002	-.0002	.0005	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**.0001**	**.0008**	**-.0004**	**-.0016**	**-.0000**	**.0011**	**-.0073**	**.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	-.0000	-.0002	.0008	-.0025	-.0019	-.0005	.0063	.0083
#2	-.0001	.0001	.0018	-.0016	-.0007	.0018	.0027	-.0208	.0077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024**	**.0014**	**.0175**	**.0080**	**.0031**	**.0008**	**.0004**	**.0017**	**-.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	-.0140	.0061	.0042	.0034	.0012	.0004	.0023	.0000
#2	.0033	.0169	.0289	.0118	.0029	.0004	.0004	.0010	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

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**	**-.0019**	**.0001**	**-.0004**	**-.0006**	**-.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	-.0017	.0002	-.0012	-.0009	-.0014	.0004
#2	.0001	-.0020	-.0001	.0003	-.0003	-.0003	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**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

Zoom In Zoom Out

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**	**-.0000**	**-.0008**	**-.0008**	**-.0004**	**-.0033**	**-.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	-.0001	-.0009	-.0010	-.0002	-.0035	-.0017	.0003	.0046
#2	.0007	-.0000	-.0006	-.0006	-.0007	-.0030	-.0017	-.0003	.0032

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0054**	**-.0027**	**.0040**	**-.0000**	**.0040**	**.0003**	**.0031**	**-.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	-.0026	.0060	-.0016	.0046	.0002	.0046	-.0044	.0294
#2	.0053	-.0028	.0020	.0015	.0033	.0003	.0017	-.0027	.0342

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**203.6**	**.0233**	**.0818**	**.0215**	**-.0008**	**.0004**	**.0042**	**-.0009**	**-.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	-.0008	-.0002	.0033	-.0006	-.0000
#2	204.1	.0286	.0470	.0222	-.0007	.0009	.0051	-.0013	-.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0001**	**-.0036**	**-.0038**	**.0026**	**.0083**	**-.0042**	**-.0070**
Stddev	.0011	.0006	.0000	.0019	.0007	.0024	.0007
%RSD	1555.	16.77	.8680	70.99	8.409	56.77	9.556
#1	.0009	-.0040	-.0038	.0040	.0088	-.0025	-.0075
#2	-.0007	-.0031	-.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

Zoom In Zoom Out

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**	**-.0002**	**-.0005**	F **10.77**	**-.0008**	**-.0011**	**.0006**	**-.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	-.0002	-.0003	10.72	-.0006	-.0012	.0003	-.0002
#2	.0010	.0001	-.0002	-.0007	10.82	-.0010	-.0011	.0008	-.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0039**	**.0133**	**-.0003**	**.0006**	**.0024**	**-.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**	**-.0470**	**-.0128**	**-.0001**	**.0010**	**.0106**	**-.0013**	**-.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	-.0110	-.0127	-.0009	.0012	.0094	-.0009	-.0001
#2	-.0011	.0198	-.0829	-.0129	.0007	.0008	.0118	-.0017	.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**-.0023**	**.0033**	**.0009**	**.0027**	**.0141**	**-.0012**	**-.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

Zoom In Zoom Out

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**	**-.0000**	**-.0004**	**-.0003**	**.0009**	**-.0008**	**.0001**	**-.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	-.0002	-.0006	.0013	-.0010	.0001	-.0009
#2	-.0001	-.0001	-.0005	.0000	.0005	-.0007	.0001	.0008

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	**-.0003**	**-.0002**	**.0024**	**5.331**	F **-.0034**	**.0029**	**-.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	-.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	**-.0033**	**-.0019**	**.0048**	**.0478**	**-.0449**	**.0256**	**-.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**	**-.0001**	**.0011**	**-.0028**	**.0000**	**-.0017**	**-.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	**-.0013**	**.0012**
Stddev	.0012	.0009
%RSD	93.38	73.46
#1	-.0021	.0006
#2	-.0004	.0018

Zoom In Zoom Out

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

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.098**	**2.080**	**2.050**	**2.100**	**2.097**	**2.041**	**2.112**	**2.119**	**.2613**
Stddev	.001	.011	.023	.021	.025	.027	.022	.023	.0031
%RSD	.0640	.5466	1.111	.9773	1.195	1.312	1.051	1.073	1.199
#1	2.097	2.072	2.034	2.086	2.079	2.022	2.096	2.103	.2591
#2	2.099	2.088	2.066	2.115	2.114	2.060	2.128	2.135	.2635
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	**2.092**	**2.082**	**2.077**	**2.068**	**2.088**	**2.052**	**2.058**	**41.12**	**41.91**
Stddev	.024	.022	.022	.022	.019	.024	.023	.16	.18
%RSD	1.161	1.044	1.045	1.071	.9182	1.185	1.126	.3938	.4207
#1	2.075	2.067	2.061	2.052	2.074	2.035	2.042	41.00	41.78
#2	2.110	2.098	2.092	2.084	2.101	2.069	2.075	41.23	42.03
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**41.53**	**42.19**	**41.62**	**42.25**	**2.046**	**2.090**	**5.218**	**2.075**	**2.093**
Stddev	.12	.10	.19	.07	.025	.025	.058	.024	.003
%RSD	.2981	.2386	.4458	.1763	1.243	1.178	1.115	1.146	.1330
#1	41.45	42.12	41.49	42.20	2.028	2.073	5.177	2.059	2.091
#2	41.62	42.26	41.75	42.31	2.064	2.107	5.259	2.092	2.095
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 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:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.122**	**2.090**	**2.106**	**2.026**	**2.055**	**2.104**	**2.064**
Stddev	.021	.025	.023	.027	.015	.004	.018
%RSD	.9855	1.197	1.085	1.324	.7112	.1642	.8791
#1	2.108	2.073	2.090	2.007	2.044	2.101	2.051
#2	2.137	2.108	2.123	2.045	2.065	2.106	2.076
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	**81428.**	**15957.**	**3543.9**	**6190.1**
Stddev	343.	38.	10.2	11.5
%RSD	.42142	.23599	.28859	.18610
#1	81671.	15930.	3551.1	6198.2
#2	81186.	15983.	3536.6	6181.9

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**-.0000**	**-.0000**	**-.0006**	**-.0000**	**-.0010**	**-.0001**	**.0000**	**-.0006**
Stddev	.0001	.0000	.0000	.0004	.0004	.0002	.0000	.0008	.0005
%RSD	10.84	495.2	115.4	71.42	1155.	21.24	1.330	1840.	88.68
#1	.0007	-.0000	-.0000	-.0009	.0003	-.0008	-.0001	-.0005	-.0002
#2	.0006	.0000	-.0000	-.0003	-.0003	-.0011	-.0001	.0006	-.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0000**	**.0011**	**-.0010**	**-.0016**	**-.0019**	**.0025**	**-.0182**	**.0020**
Stddev	.0003	.0000	.0012	.0019	.0003	.0014	.0025	.0028	.0017
%RSD	503.4	46.32	108.4	194.0	18.69	75.80	98.82	15.24	84.17
#1	-.0003	.0000	.0003	-.0023	-.0014	-.0009	.0008	-.0201	.0008
#2	.0001	.0000	.0020	.0004	-.0019	-.0029	.0042	-.0162	.0031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**-.0043**	**-.0140**	**.0072**	**-.0000**	**.0009**	**-.0013**	**.0012**	**-.0000**
Stddev	.0010	.0150	.0890	.0078	.0015	.0001	.0013	.0009	.0002
%RSD	144.0	350.6	633.8	108.8	4639.	15.25	99.99	73.18	1260.
#1	.0014	-.0149	.0489	.0127	.0010	.0010	-.0022	.0018	.0001
#2	-.0000	.0063	-.0769	.0017	-.0011	.0008	-.0004	.0006	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 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:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0014**	**-.0001**	**.0012**	**.0042**	**-.0002**	**.0015**
Stddev	.0002	.0008	.0004	.0003	.0036	.0054	.0003
%RSD	102.4	53.51	474.9	21.27	85.14	2625.	21.55
#1	.0001	-.0009	-.0003	.0011	.0067	.0036	.0017
#2	.0004	-.0020	.0002	.0014	.0017	-.0040	.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**83635.**	**16127.**	**3650.6**	**6185.8**
Stddev	39.	92.	1.0	2.7
%RSD	.04658	.56857	.02867	.04296
#1	83663.	16191.	3649.8	6183.9
#2	83608.	16062.	3651.3	6187.7

Zoom In Zoom Out

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**	**-.0006**	**.0031**	**.0042**	**-.0002**
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**	**-.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**	**-.0007**	**.0001**	**-.0025**	**.0003**	**-.0001**
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**	**-.0017**	**.0002**	**-.0004**	**.0010**	**-.0024**	**-.0006**
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	-.0027	.0002	.0011	.0022	-.0003	-.0004
#2	-.0002	-.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

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**-.0007**	**-.0017**	**-.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	**-.0001**	**.0002**	**.0098**	**.0037**	**-.0009**	**-.0127**	**-.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	**-.0564**	**.3553**	**.0997**	**.0552**	**.8514**	W **1442.**	**-.0064**	**.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**	**-.0066**	**-.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	**-.0085**	**.0801**
Stddev	.0046	.0031
%RSD	54.10	3.840
#1	-.0118	.0823
#2	-.0053	.0780

Zoom In Zoom Out

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

Zoom In Zoom Out

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	**.2482**	**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

Zoom In Zoom Out

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

Zoom In Zoom Out

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	**.0221**	**-.0006**	**.0032**	**.1765**	**.0032**	**.0061**	**15.58**	**3.007**	**-.0098**
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	-.0010	.0022	.1767	.0030	.0044	15.64	2.990	-.0108
#2	.0221	-.0003	.0041	.1763	.0034	.0078	15.51	3.024	-.0089

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0037**	F **157.9**	**.0269**	**.0558**	**.0298**	**-.0283**	**.0237**	**.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	-.0035	157.3	.0252	.0548	.0336	-.0153	.0210	.1444	124.0
#2	-.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.**	**.2741**	**.0086**	**8.288**	**-.0007**	**.3758**
Stddev	.02	.037	.057	7.	.0007	.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	-.0013	.3763
#2	10.49	3.442	3.245	1334.	.2736	.0078	8.231	-.0001	.3753

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0029**	**.6891**	**-.0026**	**5.724**	**.0004**	**.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	.6949	-.0033	5.709	.0010	.0220	3.220
#2	.0055	.6833	-.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

Zoom In Zoom Out

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	**-.0001**	**-.0001**	**-.0002**	**-.0007**	**.0004**	**-.0012**	**-.0001**	**-.0004**	**-.0008**
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	-.0000	-.0002	-.0006	-.0002	-.0008	-.0001	-.0006	-.0006
#2	-.0006	-.0002	-.0001	-.0008	.0010	-.0015	-.0000	-.0003	-.0011

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0005**	**.0030**	**-.0016**	**-.0019**	**.0000**	**-.0032**	**.0031**	**-.0086**	**-.0019**
Stddev	.0007	.0001	.0003	.0008	.0026	.0003	.0012	.0014	.0025
%RSD	138.8	3.635	17.19	41.81	8172.	10.85	37.55	15.87	131.3
#1	-.0010	.0030	-.0014	-.0024	-.0018	-.0029	.0039	-.0076	-.0037
#2	-.0000	.0029	-.0018	-.0013	.0019	-.0034	.0023	-.0096	-.0001

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**.0001**	**.0141**	**.0477**	**.0606**	**-.0029**	**.0005**	**.0101**	**-.0006**	**-.0001**
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	-.0010	.0011	-.0011	.0577	-.0031	.0004	.0091	-.0002	.0000
#2	.0011	.0270	.0965	.0634	-.0027	.0007	.0111	-.0009	-.0002

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0009**	**-.0028**	**.0004**	**.0015**	**-.0016**	**.0018**	**.0013**
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	-.0037	.0004	-.0005	-.0019	.0013	.0013
#2	.0008	-.0019	.0003	.0034	-.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

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**2.013**	**1.994**	**1.926**	**2.001**	**1.951**	**1.886**	**1.971**	**2.019**	**.2414**
Stddev	.008	.011	.017	.013	.006	.012	.012	.017	.0022
%RSD	.3864	.5584	.8813	.6666	.3280	.6592	.5959	.8475	.9277
#1	2.007	1.986	1.914	1.991	1.947	1.877	1.963	2.007	.2398
#2	2.018	2.001	1.938	2.010	1.956	1.894	1.980	2.031	.2430

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.950**	**1.960**	**1.939**	**1.958**	**1.989**	**1.927**	**1.933**	**24.84**	**25.30**
Stddev	.011	.017	.020	.017	.016	.017	.017	.11	.14
%RSD	.5765	.8432	1.038	.8422	.8008	.8967	.8811	.4409	.5407
#1	1.942	1.948	1.925	1.947	1.978	1.915	1.921	24.76	25.20
#2	1.958	1.971	1.953	1.970	2.000	1.939	1.945	24.92	25.40

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**25.21**	**25.62**	**24.86**	**25.48**	**1.925**	**1.950**	**-.0344**	**1.934**	**2.003**
Stddev	.09	.14	.24	.21	.020	.018	.0016	.014	.007
%RSD	.3442	.5435	.9726	.8246	1.044	.8992	4.687	.7010	.3650
#1	25.15	25.52	24.69	25.33	1.911	1.938	-.0355	1.924	1.998
#2	25.27	25.71	25.03	25.62	1.940	1.963	-.0333	1.943	2.008

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.971**	**1.853**	**1.953**	**.0419**	**.0326**	**-.0013**	**1.937**
Stddev	.013	.010	.009	.0011	.0023	.0004	.018
%RSD	.6716	.5424	.4674	2.546	7.009	30.08	.9481
#1	1.961	1.846	1.947	.0427	.0342	-.0016	1.924
#2	1.980	1.860	1.960	.0412	.0310	-.0010	1.950

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**84261.**	**16518.**	**3640.4**	**6279.5**
Stddev	230.	95.	7.0	16.0
%RSD	.27304	.57532	.19193	.25529
#1	84424.	16585.	3635.4	6268.1
#2	84098.	16450.	3645.3	6290.8

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**2.217**	**2.005**	**2.044**	**2.012**	**1.916**	**2.077**	**2.747**	**2.007**	**.2623**
Stddev	.030	.021	.051	.047	.018	.016	.022	.046	.0031
%RSD	1.360	1.053	2.495	2.332	.9424	.7802	.8192	2.282	1.198
#1	2.196	1.991	2.008	1.979	1.904	2.065	2.731	1.975	.2601
#2	2.239	2.020	2.080	2.045	1.929	2.088	2.763	2.040	.2645

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.958**	**1.964**	**1.988**	**2.079**	**2.041**	**1.996**	**2.017**	**25.10**	**173.7**
Stddev	.016	.048	.055	.046	.043	.053	.054	.26	1.8
%RSD	.8052	2.440	2.748	2.207	2.116	2.637	2.668	1.018	1.056
#1	1.947	1.930	1.950	2.046	2.011	1.959	1.979	24.92	172.4
#2	1.969	1.998	2.027	2.111	2.072	2.033	2.055	25.28	175.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**28.54**	**252.2**	**107.6**	F **1802.**	**2.982**	**1.988**	**9.335**	**1.976**	**3.785**
Stddev	.33	3.0	1.7	25.	.076	.049	.234	.046	.044
%RSD	1.149	1.186	1.566	1.373	2.549	2.470	2.512	2.328	1.166
#1	28.31	250.1	106.4	1785.	2.928	1.954	9.169	1.943	3.754
#2	28.77	254.3	108.8	1820.	3.035	2.023	9.501	2.009	3.816

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.979**	**1.964**	**1.981**	F **154.3**	**.0275**	**.0786**	**2.207**
Stddev	.014	.053	.017	3.8	.0009	.0012	.054
%RSD	.7037	2.705	.8314	2.487	3.417	1.519	2.428
#1	1.969	1.926	1.969	151.6	.0269	.0778	2.169
#2	1.989	2.001	1.992	157.0	.0282	.0795	2.244

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**81068.**	**15508.**	**3474.2**	**6066.8**
Stddev	515.	129.	49.1	68.7
%RSD	.63490	.83319	1.4140	1.1317
#1	81432.	15599.	3509.0	6115.4
#2	80704.	15416.	3439.5	6018.3

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**2.189**	**1.976**	**2.023**	**1.993**	**1.893**	**2.055**	**2.720**	**1.993**	**.2593**
Stddev	.036	.032	.009	.011	.003	.008	.010	.013	.0000
%RSD	1.662	1.597	.4411	.5671	.1532	.4076	.3645	.6479	.0164
#1	2.163	1.953	2.017	1.985	1.891	2.049	2.713	1.984	.2593
#2	2.214	1.998	2.030	2.001	1.895	2.061	2.727	2.002	.2593

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.934**	**1.947**	**1.980**	**2.054**	**2.017**	**1.985**	**2.009**	**24.85**	**172.6**
Stddev	.004	.008	.012	.011	.011	.008	.012	.43	2.9
%RSD	.2259	.4192	.5794	.5115	.5562	.4192	.5869	1.743	1.703
#1	1.931	1.941	1.972	2.047	2.009	1.979	2.000	24.55	170.5
#2	1.937	1.952	1.989	2.061	2.025	1.991	2.017	25.16	174.7

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**28.31**	**250.8**	**107.0**	F **1685.**	**2.962**	**1.976**	**9.356**	**1.961**	**3.742**
Stddev	.44	4.3	2.5	35.	.015	.010	.044	.005	.068
%RSD	1.571	1.698	2.355	2.049	.5110	.4851	.4693	.2562	1.815
#1	28.00	247.8	105.2	1661.	2.951	1.969	9.325	1.958	3.694
#2	28.62	253.8	108.8	1710.	2.972	1.983	9.387	1.965	3.790

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.963**	**1.943**	**1.962**	F **154.2**	**.0260**	**.0997**	**2.188**
Stddev	.008	.003	.004	.6	.0008	.0017	.012
%RSD	.3929	.1710	.2065	.3570	3.264	1.668	.5633
#1	1.957	1.941	1.959	153.8	.0266	.0985	2.180
#2	1.968	1.946	1.965	154.6	.0254	.1009	2.197

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**81594.**	**15505.**	**3488.9**	**6088.3**
Stddev	69.	176.	15.1	13.1
%RSD	.08502	1.1350	.43387	.21459
#1	81643.	15630.	3478.2	6079.0
#2	81545.	15381.	3499.6	6097.5

Zoom In Zoom Out

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	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.106**	**2.065**	**2.006**	**2.052**	**2.061**	**2.007**	**2.076**	**2.072**	**.2564**
Stddev	.055	.055	.013	.009	.055	.052	.052	.012	.0059
%RSD	2.614	2.668	.6665	.4547	2.662	2.616	2.495	.5779	2.319
#1	2.067	2.026	1.996	2.045	2.022	1.970	2.040	2.064	.2522
#2	2.145	2.104	2.015	2.059	2.100	2.044	2.113	2.081	.2606
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**	**2.033**	**2.034**	**2.030**	**2.043**	**2.008**	**2.018**	**41.04**	**41.74**
Stddev	.050	.015	.014	.010	.010	.007	.011	1.14	1.11
%RSD	2.411	.7121	.7018	.4719	.4751	.3676	.5508	2.773	2.653
#1	2.020	2.023	2.024	2.024	2.036	2.003	2.010	40.23	40.96
#2	2.090	2.044	2.044	2.037	2.050	2.013	2.025	41.84	42.53
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	**41.47**	**42.16**	**41.47**	**41.33**	**2.010**	**2.042**	**5.095**	**2.026**	**2.095**
Stddev	1.13	1.20	1.15	1.18	.012	.013	.024	.015	.055
%RSD	2.728	2.846	2.779	2.862	.5881	.6204	.4696	.7608	2.642
#1	40.67	41.31	40.66	40.49	2.002	2.033	5.078	2.015	2.056
#2	42.27	43.01	42.29	42.16	2.018	2.051	5.112	2.037	2.134
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 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 ?	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	**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

Zoom In Zoom Out

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**	**-.0001**	**-.0006**	**-.0001**	**-.0017**	**.0000**	**-.0002**	**-.0004**
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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0001**	**-.0001**	**.0020**	**.0002**	**-.0037**	**.0015**	**-.0054**	**-.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 ?	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	**-.0021**	**.0095**	**.1735**	**.2185**	**.0028**	**.0006**	**-.0004**	**.0011**	**-.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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 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**	**-.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 ?	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	**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

Zoom In Zoom Out

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
Avg	**.1754**	**.0001**	**-.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	.2129	20.82	283.1
#1	.1730	.0001	-.0002	.0002	.0008	.0017	.7785	.0038	-.0003
#2	.1777	.0001	.0000	.0003	.0020	.0013	.7761	.0028	.0008

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
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

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**3.504**	**223.3**	**80.71**	F **1690.**	**.9453**	**.0040**	**8.941**	**-.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

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0017**	**.0022**	**-.0007**	F **148.8**	**-.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

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
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

Zoom In Zoom Out

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

Zoom In Zoom Out

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

Zoom In Zoom Out

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

Zoom In Zoom Out

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

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**2.025**	**1.994**	**1.981**	**2.047**	**2.000**	**1.937**	**2.017**	**2.067**	**.2458**
Stddev	.043	.044	.020	.020	.013	.019	.015	.019	.0025
%RSD	2.102	2.206	1.023	.9937	.6402	.9772	.7603	.9206	1.023
#1	2.056	2.025	1.967	2.033	1.991	1.923	2.006	2.053	.2440
#2	1.995	1.963	1.995	2.062	2.009	1.950	2.028	2.080	.2476

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.996**	**2.015**	**1.980**	**2.009**	**2.029**	**1.978**	**1.973**	**24.83**	**25.29**
Stddev	.015	.023	.020	.018	.020	.020	.015	.57	.53
%RSD	.7553	1.129	.9838	.8953	1.004	1.026	.7627	2.285	2.111
#1	1.985	1.999	1.967	1.997	2.015	1.963	1.963	25.23	25.67
#2	2.006	2.031	1.994	2.022	2.044	1.992	1.984	24.43	24.91

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**25.14**	**25.62**	**24.82**	**25.53**	**1.982**	**2.001**	**-.0422**	**1.973**	**2.011**
Stddev	.55	.59	.37	.47	.020	.018	.0005	.023	.042
%RSD	2.181	2.285	1.472	1.842	1.019	.8952	1.075	1.187	2.111
#1	25.53	26.03	25.08	25.86	1.968	1.988	-.0425	1.956	2.041
#2	24.75	25.20	24.56	25.20	1.997	2.013	-.0419	1.989	1.981

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**2.008**	**1.949**	**1.991**	**.0419**	**.0300**	**-.0008**	**1.995**
Stddev	.015	.015	.015	.0012	.0016	.0012	.019
%RSD	.7360	.7442	.7430	2.979	5.278	149.1	.9508
#1	1.998	1.939	1.981	.0427	.0312	-.0016	1.982
#2	2.019	1.960	2.002	.0410	.0289	.0000	2.008

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**82828.**	**16430.**	**3570.3**	**6183.7**
Stddev	338.	338.	7.0	7.8
%RSD	.40802	2.0599	.19639	.12642
#1	82589.	16191.	3575.3	6189.2
#2	83067.	16669.	3565.4	6178.1

Zoom In Zoom Out

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

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.1844**	**.0001**	**.0001**	**-.0004**	**.0005**	**.0005**	**.0914**	**.0019**	**-.0003**
Stddev	.0012	.0000	.0001	.0006	.0001	.0005	.0006	.0006	.0006
%RSD	.6765	19.68	206.0	172.2	23.31	93.22	.6553	31.24	199.6
#1	.1835	.0001	.0002	.0001	.0006	.0009	.0910	.0023	-.0007
#2	.1853	.0001	-.0000	-.0008	.0005	.0002	.0919	.0015	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0020**	**.0040**	**.0043**	**-.0003**	**.0030**	**-.0001**	**.0011**	**.1845**	**61.03**
Stddev	.0002	.0002	.0013	.0001	.0011	.0013	.0009	.0059	.39
%RSD	12.09	4.028	30.47	37.26	37.78	1298.	80.48	3.214	.6436
#1	.0022	.0039	.0034	-.0004	.0022	.0008	.0017	.1886	60.75
#2	.0018	.0041	.0052	-.0002	.0038	-.0010	.0005	.1803	61.30

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**.2335**	**30.67**	**23.47**	**F 331.1**	**.5235**	**.0055**	**1.958**	**-.0007**	**.7591**
Stddev	.0020	.17	.30	2.3	.0074	.0002	.040	.0002	.0046
%RSD	.8541	.5406	1.292	.6908	1.414	3.213	2.022	27.18	.6120
#1	.2349	30.55	23.25	329.4	.5183	.0056	1.930	-.0006	.7558
#2	.2321	30.79	23.68	332.7	.5288	.0054	1.986	-.0008	.7623

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0054**	**.0051**	**.0005**	**26.88**	**-.0003**	**.0229**	**.0821**
Stddev	.0003	.0012	.0001	.33	.0023	.0004	.0012
%RSD	5.237	22.83	21.51	1.219	814.0	1.581	1.404
#1	.0056	.0059	.0006	26.64	-.0019	.0227	.0813
#2	.0052	.0043	.0004	27.11	.0013	.0232	.0830

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**83848.**	**16019.**	**3608.8**	**6186.5**
Stddev	107.	42.	11.3	14.2
%RSD	.12781	.26014	.31279	.22876
#1	83772.	15990.	3616.8	6196.5
#2	83923.	16049.	3600.8	6176.5

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**1.989**	**1.961**	**1.944**	**1.976**	**1.983**	**1.932**	**1.938**	**1.989**	**.2432**
Stddev	.001	.010	.034	.037	.017	.020	.014	.033	.0025
%RSD	.0635	.5045	1.755	1.867	.8543	1.057	.7158	1.656	1.047
#1	1.990	1.968	1.920	1.950	1.971	1.918	1.928	1.966	.2414
#2	1.988	1.954	1.968	2.002	1.995	1.947	1.948	2.013	.2450

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.933**	**1.926**	**1.933**	**1.986**	**1.963**	**1.934**	**1.933**	**24.29**	**71.69**
Stddev	.014	.031	.034	.039	.032	.031	.037	.12	.26
%RSD	.7027	1.594	1.781	1.973	1.646	1.612	1.929	.4898	.3630
#1	1.923	1.904	1.909	1.958	1.940	1.912	1.907	24.38	71.87
#2	1.942	1.948	1.957	2.013	1.986	1.956	1.959	24.21	71.50

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**24.61**	**50.10**	**29.07**	**213.8**	**2.165**	**1.943**	**12.04**	**1.915**	**2.075**
Stddev	.11	.04	.04	.0	.042	.036	.22	.034	.004
%RSD	.4561	.0706	.1286	.0232	1.938	1.846	1.850	1.778	.1986
#1	24.69	50.13	29.05	213.8	2.136	1.918	11.88	1.891	2.078
#2	24.53	50.08	29.10	213.9	2.195	1.969	12.20	1.939	2.072

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.943**	**1.933**	**1.920**	**24.29**	**.0283**	**.0064**	**2.005**
Stddev	.014	.029	.016	.44	.0003	.0020	.034
%RSD	.7332	1.489	.8254	1.825	.9417	31.17	1.718
#1	1.933	1.913	1.908	23.98	.0281	.0050	1.980
#2	1.953	1.954	1.931	24.61	.0285	.0078	2.029

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**83612.**	**16434.**	**3600.8**	**6255.3**
Stddev	192.	154.	6.1	12.5
%RSD	.22975	.93745	.17069	.20013
#1	83476.	16325.	3605.2	6264.2
#2	83748.	16543.	3596.5	6246.5

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**2.040**	**2.016**	**2.013**	**2.039**	**2.083**	**2.037**	**2.036**	**2.054**	**.2557**
Stddev	.016	.014	.026	.024	.028	.032	.023	.023	.0029
%RSD	.8014	.6775	1.305	1.151	1.356	1.556	1.119	1.115	1.147
#1	2.028	2.006	1.995	2.022	2.063	2.014	2.020	2.038	.2536
#2	2.051	2.025	2.032	2.055	2.103	2.059	2.052	2.070	.2578

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**2.029**	**1.995**	**2.008**	**2.050**	**2.029**	**2.002**	**2.012**	**24.99**	**74.64**
Stddev	.025	.024	.030	.020	.022	.026	.032	.17	.52
%RSD	1.233	1.177	1.485	.9846	1.108	1.313	1.577	.6737	.6933
#1	2.011	1.979	1.987	2.036	2.013	1.984	1.989	24.87	74.27
#2	2.046	2.012	2.029	2.064	2.045	2.021	2.034	25.11	75.00

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**25.28**	**51.98**	**30.10**	**223.4**	**2.247**	**2.020**	**12.71**	**1.991**	**2.132**
Stddev	.18	.36	.40	2.1	.030	.026	.15	.026	.018
%RSD	.7117	.6867	1.331	.9353	1.329	1.308	1.210	1.318	.8545
#1	25.15	51.73	29.82	221.9	2.226	2.002	12.60	1.972	2.120
#2	25.41	52.23	30.38	224.8	2.268	2.039	12.82	2.009	2.145

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**2.050**	**2.012**	**2.027**	**25.56**	**.0297**	**.0083**	**2.075**
Stddev	.022	.020	.024	.30	.0004	.0004	.027
%RSD	1.093	1.015	1.205	1.161	1.202	5.292	1.315
#1	2.034	1.997	2.009	25.35	.0295	.0086	2.056
#2	2.066	2.026	2.044	25.77	.0300	.0079	2.094

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**81024.**	**16005.**	**3527.6**	**6154.1**
Stddev	455.	41.	11.6	13.3
%RSD	.56096	.25776	.32832	.21538
#1	81345.	15976.	3535.8	6163.5
#2	80703.	16034.	3519.4	6144.7

Zoom In Zoom Out

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**	**.2591**
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	.2569
#2	2.109	2.081	2.017	2.060	2.098	2.047	2.112	2.082	.2614
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									

Zoom In Zoom Out

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
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	.47531	.45676
#1	81854.	16017.	3564.8	6208.2
#2	80844.	15752.	3588.8	6248.4

Zoom In Zoom Out

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**	**-.0001**	**.0000**	**-.0004**	**-.0002**	**-.0013**	**-.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	-.0002	.0002	-.0003	-.0008	-.0011	-.0000	.0001	.0005
#2	.0007	-.0000	-.0001	-.0004	.0004	-.0015	-.0000	-.0001	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0000**	**-.0004**	**-.0004**	**-.0006**	**-.0027**	**.0019**	**-.0162**	**-.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	-.0001	-.0003	.0004	.0006	-.0017	.0018	-.0165	-.0059
#2	-.0009	.0002	-.0005	-.0012	-.0017	-.0036	.0019	-.0158	-.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**	**-.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	-.0008	.0007	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 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**	**-.0011**	**.0003**	**.0010**	**-.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	-.0002	.0007	.0014	-.0017	.0027	.0007
#2	.0002	-.0021	-.0001	.0006	-.0042	.0003	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**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

Zoom In Zoom Out

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 Pass	Chk Warn	Chk Warn
Value							.0100	.0060
Range							-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	**.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								

Zoom In Zoom Out

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

Zoom In Zoom Out

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			.0010			.0020		
Range			-30.00%			-30.00%		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.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	.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	**.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				.1000				
Range				30.00%				

Zoom In Zoom Out

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**	**6076.5**
Stddev	1399.	273.	20.6	25.3
%RSD	1.7092	1.7133	.57522	.41581
#1	82853.	16126.	3595.3	6094.3
#2	80874.	15740.	3566.2	6058.6

Zoom In Zoom Out

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**	**-.0005**	**-.0008**	**.0006**	**-.0027**	**-.0025**	**-.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	-.0008	-.0009	.0009	-.0018	-.0019	-.0002	.0046
#2	.0021	.0000	-.0001	-.0007	.0002	-.0035	-.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	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**197.5**	**528.2**	**.2166**	**.1512**	**-.0009**	**.0003**	**.0085**	**-.0055**	**-.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	-.0005	.0002	.0094	-.0053	-.0030
#2	195.9	523.6	.2427	.1464	-.0013	.0005	.0075	-.0056	-.0032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: icsa Acquired: 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	**-.0021**	**.0010**	**-.0049**	**.0177**	**-.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	-.0024	.0006	-.0043	.0165	-.0011	.0044	.0012
#2	-.0018	.0014	-.0054	.0189	.0007	.0035	.0023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**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

Zoom In Zoom Out

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	Sn1899	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									

Zoom In Zoom Out

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
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

Zoom In Zoom Out

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**	**.2574**
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	.2571
#2	2.121	2.077	2.028	2.070	2.068	2.015	2.082	2.094	.2576
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.055**	**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									

Zoom In Zoom Out

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
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

Zoom In Zoom Out

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**	**-.0000**	**-.0001**	**-.0006**	**.0004**	**-.0010**	**-.0000**	**-.0001**	**-.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	-.0000	-.0000	-.0002	.0001	-.0007	-.0001	-.0001	-.0008
#2	.0001	-.0000	-.0002	-.0009	.0007	-.0014	.0000	-.0002	-.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0002**	**-.0007**	**.0015**	**-.0002**	**-.0013**	**.0005**	**-.0097**	**-.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	-.0001	-.0001	.0006	.0020	-.0004	.0002	-.0005	-.0016	-.0082
#2	-.0001	-.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**	**-.0006**	**.0009**	**-.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									

Zoom In Zoom Out

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**	**-.0011**	**.0001**	**-.0023**	**-.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
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

Zoom In Zoom Out

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**	**-.0001**	**.0001**	**-.0006**	**.0622**	**-.0018**	**.0029**	**-.0004**	**-.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	-.0001	-.0001	-.0007	.0621	-.0015	.0029	-.0009	.0006
#2	.0137	-.0002	.0002	-.0005	.0624	-.0020	.0029	.0002	-.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0020**	**.0004**	**.0001**	**.0038**	**-.0009**	**-.0020**	**.0001**	**-.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	-.0002	.0028	.0002	-.0009	-.0005	-.0053	47.35
#2	.0022	.0004	.0004	.0049	-.0020	-.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**	**.2187**	**.0003**	**11.82**	**-.0029**	**.1138**
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	-.0029	.1139
#2	.0058	25.82	4.649	195.2	.2201	.0005	11.95	-.0028	.1138

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**-.0006**	**-.0023**	**-.0051**	**23.85**	**-.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	-.0004	-.0040	-.0049	23.63	-.0019	.0047	.0518
#2	-.0009	-.0006	-.0053	24.08	-.0060	-.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

Zoom In Zoom Out

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**	**-.0001**	**-.0011**	**-.0030**	**.0662**	**-.0063**	**.0027**	**-.0041**	**-.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	-.0002	-.0014	.0001	.0649	-.0076	.0026	-.0048	-.0033
#2	.0157	-.0000	-.0007	-.0061	.0675	-.0050	.0028	-.0033	-.0030

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0025**	**.0034**	**-.0007**	**-.0038**	**-.0025**	**-.0035**	**.0070**	**-.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	-.0114	.0130	-.0830	48.49
#2	.0040	.0029	-.0034	-.0086	-.0078	.0045	.0009	-.0252	48.27

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**.0087**	**26.69**	**4.743**	**206.3**	**.2139**	**.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	-.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**	**-.0075**	**-.0051**	**24.39**	**-.0117**	**-.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	-.0150	-.0053	24.16	-.0016	.0059	.0524
#2	.0031	.0000	-.0049	24.62	-.0218	-.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

Zoom In Zoom Out

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	**-.0003**	**.0080**	**.0867**	**.0015**	F **-.0047**	**.0023**	**-.0007**	**-.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	-.0008	.0083	.0858	.0022	-.0054	.0027	-.0018	-.0005
#2	.0003	.0077	.0877	.0008	-.0040	.0019	.0004	-.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**	**.1084**	**.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**	**-.0004**	**-.0034**	**18.79**	**-.0011**
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	-.0009	-.0032	18.58	-.0003
#2	11.24	.0149	.1812	.1888	.0001	-.0036	18.99	-.0019

Elem	Li6707	P_1774
Avg	**.0047**	**.1470**
Stddev	.0050	.0016
%RSD	106.0	1.110
#1	.0083	.1458
#2	.0012	.1481

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**-.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	-.0006	.3301	.0011	-.0001
#2	.0796	.0000	.0001	.0005	.0024	-.0006	.3327	.0016	.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0023**	**.0050**	**.0011**	**-.0008**	**.0016**	**-.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	-.0017	.0003	-.0004	.0042	1.113	107.4
#2	.0024	.0050	.0007	-.0000	.0029	-.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**	**-.0008**	**.5402**
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	-.0005	.5415
#2	1.049	27.89	3.373	155.2	.0630	.0006	6.722	-.0011	.5389

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0497**	**-.0009**	**-.0025**	**28.44**	**-.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	-.0026	28.14	-.0052	.0057	.0426
#2	.0506	-.0038	-.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

Zoom In Zoom Out

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**	**-.0000**	**.0000**	**-.0010**	**.0997**	**-.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	-.0000	-.0001	-.0011	.0979	-.0004	.0259	.0107
#2	.0039	-.0000	.0001	-.0010	.1014	-.0013	.0262	.0109

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	**.0002**	**.0018**	**.0017**	**-.0003**	**.0032**	**-.0016**	**-.0006**	**-.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	-.0004	.0014	-.0022	-.0032	-.0016
#2	.0001	.0022	.0017	-.0002	.0049	-.0010	.0020	-.0024

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	**-.0173**	**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	-.0080	20.84	.0082	10.39	5.894	238.9	1.114	.0011
#2	-.0265	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**	**-.0025**	**.0362**	**-.0006**	**.0004**	F **-.0104**	**26.41**	**-.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	-.0029	.0361	-.0002	.0031	-.0102	26.23	-.0037
#2	18.51	-.0022	.0364	-.0009	-.0023	-.0105	26.59	-.0060

Elem	Li6707	P_1774
Avg	**.0088**	**.1184**
Stddev	.0010	.0013
%RSD	11.07	1.074
#1	.0094	.1175
#2	.0081	.1193

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**-.0001**	**-.0001**	**-.0005**	**.5023**	**-.0013**	**.3133**	**-.0008**
Stddev	.0005	.0001	.0000	.0004	.0045	.0006	.0041	.0004
%RSD	.6602	57.36	17.02	94.16	.9000	47.42	1.314	48.72
#1	.0806	-.0002	-.0002	-.0008	.4991	-.0017	.3104	-.0005
#2	.0798	-.0001	-.0001	-.0002	.5055	-.0008	.3162	-.0010

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	**.0009**	**.0033**	**.0014**	**.0009**	**-.0000**	**-.0012**	**.0011**	F **-.0031**
Stddev	.0001	.0007	.0001	.0015	.0020	.0009	.0011	.0022
%RSD	15.57	22.08	9.206	167.0	5993.	74.27	102.0	68.93
#1	.0010	.0028	.0013	-.0002	-.0014	-.0018	.0003	-.0016
#2	.0008	.0038	.0015	.0019	.0014	-.0006	.0018	-.0046

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	**-.0108**	**93.25**	**.0179**	**37.76**	**5.362**	**198.3**	**.1077**	**.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	-.0223	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**	**-.0025**	**.3223**	**-.0001**	**-.0003**	**-.0042**	**20.75**	**-.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	-.0030	.3225	.0002	.0008	-.0039	20.54	-.0023
#2	7.982	-.0021	.3220	-.0004	-.0013	-.0045	20.95	-.0043

Elem	Li6707	P_1774
Avg	**.0044**	**.0389**
Stddev	.0016	.0009
%RSD	36.15	2.267
#1	.0033	.0383
#2	.0055	.0395

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**-.0001**	**.0002**	**-.0009**	**.1004**	**-.0012**	**.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	-.0002	.0003	-.0008	.1005	-.0015	.0254	.0109
#2	.0042	-.0000	.0001	-.0009	.1002	-.0010	.0254	.0109

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	**-.0005**	**.0014**	**.0009**	**-.0011**	**-.0009**	**-.0023**	**-.0028**	**-.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	-.0011	.0019	.0008	-.0010	-.0016	-.0048	-.0005	-.0019
#2	.0001	.0009	.0011	-.0012	-.0003	.0001	-.0051	-.0014

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	**-.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	-.0206	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**	**-.0028**	**.0353**	**.0005**	**-.0028**	F **-.0102**	**26.55**	**-.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	-.0027	.0351	.0007	-.0039	-.0099	26.28	-.0009
#2	18.59	-.0029	.0356	.0002	-.0017	-.0105	26.82	-.0037

Elem	Li6707	P_1774
Avg	**.0071**	**.1208**
Stddev	.0035	.0008
%RSD	49.10	.6256
#1	.0096	.1202
#2	.0046	.1213

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**-.0001**	**.0001**	**-.0005**	**.0006**	**-.0009**	**.0002**	**-.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	-.0001	.0001	-.0006	.0002	-.0006	.0002	-.0009
#2	.0004	-.0001	.0000	-.0003	.0010	-.0013	.0001	.0001

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	**.0002**	**-.0006**	**.0004**	**.0005**	F **-.0041**	**.0002**	**-.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	-.0001	.0004	.0017	-.0047	.0009	-.0030	.0033
#2	.0000	-.0011	.0004	-.0006	-.0035	-.0005	-.0014	-.0001

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	**-.0063**	**.0328**	**.0031**	**.0285**	**-.0099**	**.1460**	**-.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	-.0118	.0376	.0007	.0108	-.0608	.1455	-.0011	.0002
#2	-.0008	.0279	.0055	.0461	.0410	.1465	-.0007	.0003

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	**.0098**	**-.0005**	**.0000**	**.0007**	**-.0025**	**.0003**	**.0039**	**-.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	-.0010	.0001	.0004	-.0033	.0001	.0056	-.0050
#2	.0084	.0001	-.0000	.0010	-.0017	.0005	.0023	-.0026

Elem	Li6707	P_1774
Avg	**-.0023**	**.0021**
Stddev	.0011	.0000
%RSD	49.82	.4853
#1	-.0031	.0021
#2	-.0015	.0021

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**-.0000**	**-.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**	**-.0012**	**.0022**	**.0008**	**.0055**	**-.0024**	**-.0042**	**-.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**	**-.0029**	**.5161**	**.0115**	**-.0049**	F **-.0116**	**5.237**	**-.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

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**.2603**
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									

Zoom In Zoom Out

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 ?	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	**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

Zoom In Zoom Out

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**	**-.0001**	**-.0004**	**-.0001**	**-.0007**	**.0000**	**-.0005**	**-.0008**
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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0002**	**-.0001**	**-.0009**	**-.0003**	**-.0022**	**.0013**	**-.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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012**	**.0067**	**.0397**	**.1145**	**-.0012**	**.0006**	**.0013**	**.0012**	**.0001**
Stddev	.0026	.0041	.0906	.0119	.0014	.0001	.0013	.0005	.0000
%RSD	217.7	60.94	228.6	10.39	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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 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**	**-.0026**	**.0002**	**-.0001**	**-.0021**	**-.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 ?	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	**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

Zoom In Zoom Out

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
Avg	**.0502**	**.0000**	**.0003**	**-.0013**	**.0032**	**-.0002**	**.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

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0025**	**.0011**	**.0005**	**.0002**	**-.0016**	**.0000**	**-.0019**	**.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
Avg	**.0215**	**98.89**	**4.138**	**234.3**	**.1251**	**.0016**	**16.11**	**-.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

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0004**	**-.0031**	**-.0081**	**22.83**	**-.0035**	**.0076**	**.0437**
Stddev	.0004	.0012	.0005	.15	.0015	.0020	.0003
%RSD	111.2	40.81	6.228	.6449	43.96	25.78	.5970
#1	.0001	-.0022	-.0085	22.94	-.0046	.0062	.0439
#2	.0007	-.0039	-.0078	22.73	-.0024	.0090	.0435

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
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

Zoom In Zoom Out

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	Tl1908	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

Zoom In Zoom Out

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	Tl1908	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	**.2159**	**12.46**	**.4802**	**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

Zoom In Zoom Out

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	Tl1908	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**	**4.669**	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

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**-.0012**	**.3202**	**.0325**	**-.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	-.0012	.3193	.0323	-.0004
#2	.0830	.0040	.0014	.0340	.0009	-.0012	.3212	.0327	-.0013

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0005**	**.0886**	**.0025**	**.0001**	**.0006**	**-.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	-.0002	.0001	.0023	7.135	25.28
#2	.0003	.0894	.0026	.0002	.0015	-.0005	-.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**	**-.0007**	**.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	-.0003	.1807
#2	.3584	17.03	7.707	352.5	.0440	.0005	3.864	-.0012	.1865

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0016**	**-.0012**	**-.0013**	**15.67**	**-.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	-.0015	-.0014	15.54	-.0016	.0076	.0070
#2	.0015	-.0010	-.0011	15.80	-.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

Zoom In Zoom Out

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
Avg	**.0703**	**-.0001**	**.0001**	**-.0002**	**.0011**	**-.0005**	**.8767**	**.0007**
Stddev	.0010	.0000	.0002	.0006	.0001	.0003	.0088	.0000
%RSD	1.426	20.54	165.6	298.0	4.475	71.24	1.003	5.253
#1	.0711	-.0001	.0003	.0002	.0012	-.0002	.8704	.0008
#2	.0696	-.0000	-.0000	-.0006	.0011	-.0007	.8829	.0007

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	**-.0005**	**.0013**	**.0020**	**.0032**	**.0009**	**-.0001**	**-.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	-.0007	.0015	.0022	.0037	.0021	.0017	-.0000	.0001
#2	-.0003	.0011	.0018	.0028	-.0004	-.0018	-.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	-.0001
#2	.0522	113.5	20.63	21.78	8.062	388.6	.0345	.0004

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	**22.29**	**-.0036**	**.6263**	**.0010**	**-.0032**	F **-.0134**	**5.967**	**-.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	-.0035	.6280	.0012	-.0034	-.0133	5.919	-.0028
#2	22.48	-.0037	.6246	.0007	-.0031	-.0134	6.014	-.0035

Elem	Li6707	P_1774
Avg	**.0066**	**.1048**
Stddev	.0010	.0019
%RSD	15.88	1.806
#1	.0059	.1035
#2	.0073	.1061

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**-.0008**	**.3179**	**.0203**	**-.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	-.0010	.3196	.0206	-.0005
#2	.0672	.0011	.0006	.0278	.0015	-.0007	.3162	.0200	-.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0004**	**.0746**	**-.0009**	**.0016**	**.0017**	**-.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	-.0005	.0741	-.0008	.0010	.0014	.0011	-.0003	2.097	24.91
#2	-.0002	.0751	-.0010	.0022	.0021	-.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**	**-.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	-.0009	.0645
#2	.2253	10.05	10.48	106.8	.0333	.0002	4.554	-.0010	.0659

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0013**	**-.0007**	**-.0020**	**15.11**	**-.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	-.0013	-.0020	14.98	-.0032	.0045	.0071
#2	.0016	-.0001	-.0020	15.24	-.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

Zoom In Zoom Out

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**	**.3293**
Stddev	.0355	1.13	.42	9.4	.0003	.0007	.051	.0000	.0125
%RSD	4.227	3.487	2.718	2.992	.6765	247.8	.6114	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

Zoom In Zoom Out

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
Avg	**.0011**	**-.0002**	**-.0001**	**-.0005**	**-.0001**	**-.0011**	**.0004**	**-.0001**
Stddev	.0004	.0001	.0004	.0000	.0002	.0008	.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

Zoom In Zoom Out

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

Zoom In Zoom Out

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									

Zoom In Zoom Out

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 ?	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	**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

Zoom In Zoom Out

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**	**-.0002**	**-.0001**	**.0004**	**-.0019**	**-.0000**	**-.0004**
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	-.0003	-.0001	.0003	-.0021	-.0000	-.0003
#2	.0013	.0000	-.0001	-.0002	.0005	-.0018	.0000	-.0006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0002**	**.0001**	**-.0010**	F **-.0034**	F **.0033**	**-.0014**	**-.0001**
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	-.0001	-.0001	.0001	-.0023	-.0011	.0035	-.0004	.0002
#2	-.0001	-.0003	.0002	.0002	-.0058	.0031	-.0024	-.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit					.0020	.0030		
Low Limit					-.0020	-.0030		

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0122**	**-.0046**	**-.0000**	**.0102**	**.0605**	**.1039**	**-.0027**	**-.0001**
Stddev	.0077	.0016	.0037	.0147	.0443	.0212	.0008	.0001
%RSD	62.75	35.05	18450.	144.3	73.17	20.44	30.30	91.12
#1	-.0176	-.0057	.0026	.0205	.0919	.0889	-.0033	-.0001
#2	-.0068	-.0034	-.0027	-.0002	.0292	.1189	-.0021	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Zoom In Zoom Out

Sample Name: ccb Acquired: 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**	**-.0022**	**.0001**	**.0023**	**-.0007**
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	-.0010	.0004	.0035	.0002
#2	.0014	.0012	.0000	.0008	-.0033	-.0002	.0011	-.0015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0016**	**.0012**
Stddev	.0008	.0011
%RSD	49.24	93.92
#1	-.0022	.0020
#2	-.0011	.0004
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**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

Zoom In Zoom Out

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: WATER

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	**.0005**	**-.0002**	**.0003**	**-.0004**	**.0000**	**-.0015**	**-.0000**	**-.0005**
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	-.0002	.0005	-.0003	.0000	-.0015	-.0001	-.0004
#2	.0005	-.0002	.0001	-.0005	.0001	-.0016	.0000	-.0005

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	**-.0008**	**-.0001**	**.0009**	**-.0004**	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	-.0008	-.0005	.0009	.0000	-.0054	.0042	-.0002	.0030
#2	-.0008	.0002	.0008	-.0008	-.0033	-.0003	.0010	.0026

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	**-.0091**	**.0020**	**.0039**	**.0163**	**.0237**	**.1214**	**-.0032**	**.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	-.0025	.0036	.0049	.0055	-.0395	.1184	-.0035	.0012
#2	-.0157	.0004	.0029	.0271	.0869	.1245	-.0029	.0007

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	**.0319**	**-.0002**	**-.0001**	**.0012**	**-.0002**	**.0003**	**.0051**	**-.0016**
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	-.0007
#2	.0332	-.0006	-.0003	.0011	-.0016	.0002	.0022	-.0025

Elem	Li6707	P_1774
Avg	**-.0013**	**.0034**
Stddev	.0029	.0006
%RSD	223.2	18.01
#1	-.0034	.0029
#2	.0008	.0038

Zoom In
Zoom Out

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: WATER

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**85047.**	**16490.**	**3677.1**	**6183.5**
Stddev	1067.	70.	10.9	16.8
%RSD	1.2540	.42560	.29715	.27195
#1	84293.	16440.	3684.9	6195.4
#2	85801.	16540.	3669.4	6171.6

Zoom In
Zoom Out

Sample Name: mp7493-b1 2 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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**2.050**	**2.014**	**1.942**	**2.004**	**1.986**	**1.923**	**1.994**	**2.033**	**.2490**
Stddev	.004	.009	.021	.020	.031	.032	.032	.021	.0046
%RSD	.2030	.4678	1.056	.9948	1.545	1.668	1.596	1.050	1.864
#1	2.047	2.007	1.927	1.990	1.964	1.901	1.971	2.018	.2457
#2	2.053	2.021	1.956	2.018	2.008	1.946	2.016	2.048	.2522

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.967**	**1.973**	**1.954**	**1.972**	**1.979**	**1.943**	**1.942**	**25.28**	**25.82**
Stddev	.030	.021	.024	.018	.015	.026	.019	.07	.13
%RSD	1.533	1.086	1.238	.9256	.7711	1.366	.9719	.2589	.4996
#1	1.946	1.958	1.937	1.959	1.968	1.924	1.928	25.24	25.73
#2	1.988	1.988	1.971	1.985	1.989	1.961	1.955	25.33	25.91

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**25.62**	**26.23**	**25.29**	**26.04**	**1.941**	**1.969**	**.7349**	**1.930**	**2.038**
Stddev	.10	.17	.29	.13	.024	.020	.0108	.018	.006
%RSD	.4045	.6512	1.158	.5025	1.228	.9950	1.474	.9513	.2898
#1	25.55	26.11	25.08	25.95	1.924	1.955	.7272	1.917	2.034
#2	25.69	26.35	25.50	26.13	1.958	1.983	.7425	1.943	2.042

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.998**	**1.887**	**1.973**	**.0464**	**.0360**	**-.0007**	**1.968**
Stddev	.031	.019	.030	.0007	.0020	.0006	.023
%RSD	1.551	1.022	1.544	1.484	5.582	81.86	1.183
#1	1.976	1.873	1.951	.0459	.0346	-.0012	1.951
#2	2.020	1.900	1.994	.0469	.0374	-.0003	1.984

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**82354.**	**15899.**	**3569.5**	**6156.8**
Stddev	635.	96.	.3	.2
%RSD	.77076	.60219	.00961	.00282
#1	82803.	15967.	3569.8	6156.9
#2	81905.	15832.	3569.3	6156.6

Zoom In
Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**2.205**	**1.973**	**1.952**	**1.954**	**1.921**	**1.951**	**2.482**	**1.977**	**.2535**
Stddev	.017	.013	.031	.030	.008	.004	.008	.032	.0015
%RSD	.7748	.6721	1.583	1.530	.4389	.2171	.3341	1.593	.5945
#1	2.217	1.982	1.930	1.933	1.927	1.954	2.488	1.955	.2524
#2	2.193	1.964	1.974	1.975	1.915	1.948	2.476	2.000	.2545

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.930**	**1.903**	**1.957**	**1.978**	**1.962**	**1.943**	**1.949**	**25.09**	**175.7**
Stddev	.007	.028	.028	.024	.034	.031	.033	.19	1.3
%RSD	.3763	1.471	1.423	1.207	1.724	1.577	1.706	.7528	.7421
#1	1.935	1.883	1.937	1.961	1.938	1.921	1.925	25.22	176.7
#2	1.925	1.923	1.976	1.995	1.986	1.965	1.972	24.95	174.8

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**27.88**	**139.0**	**46.74**	**87.51**	**2.388**	**1.954**	**13.13**	**1.898**	**3.377**
Stddev	.22	1.2	.05	.44	.037	.032	.22	.027	.024
%RSD	.7980	.8986	.1065	.5053	1.539	1.660	1.668	1.411	.7022
#1	28.04	139.9	46.78	87.82	2.362	1.931	12.98	1.879	3.393
#2	27.73	138.1	46.71	87.20	2.414	1.977	13.29	1.917	3.360

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.966**	**1.954**	**1.931**	**53.16**	**.0322**	**.1144**	**2.407**
Stddev	.005	.027	.007	.82	.0012	.0031	.036
%RSD	.2397	1.381	.3511	1.551	3.759	2.691	1.505
#1	1.969	1.935	1.936	52.57	.0331	.1166	2.382
#2	1.962	1.973	1.926	53.74	.0313	.1122	2.433

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**83424.**	**16075.**	**3573.6**	**6168.6**
Stddev	584.	126.	6.4	12.1
%RSD	.69990	.78609	.17977	.19652
#1	83011.	15986.	3578.1	6177.2
#2	83837.	16165.	3569.0	6160.0

Zoom In
Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**2.213**	**1.979**	**1.984**	**1.985**	**1.922**	**1.945**	**2.477**	**2.010**	**.2505**
Stddev	.003	.005	.059	.059	.008	.008	.015	.059	.0017
%RSD	.1488	.2520	2.984	2.954	.4311	.4171	.5964	2.920	.6952
#1	2.211	1.976	1.942	1.944	1.916	1.940	2.466	1.969	.2493
#2	2.215	1.983	2.026	2.027	1.928	1.951	2.487	2.052	.2517

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.929**	**1.934**	**1.980**	**2.001**	**1.991**	**1.975**	**1.978**	**25.07**	**175.1**
Stddev	.011	.054	.063	.060	.051	.061	.064	.00	.3
%RSD	.5674	2.815	3.197	3.016	2.566	3.085	3.213	.0102	.1715
#1	1.921	1.896	1.935	1.959	1.955	1.932	1.933	25.07	174.9
#2	1.937	1.973	2.025	2.044	2.027	2.018	2.023	25.07	175.3

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**27.90**	**138.3**	**46.92**	**87.32**	**2.425**	**1.987**	**13.24**	**1.929**	**3.377**
Stddev	.06	.2	.21	.32	.074	.060	.41	.049	.003
%RSD	.2269	.1790	.4378	.3635	3.042	3.022	3.119	2.540	.0840
#1	27.85	138.1	46.78	87.10	2.373	1.945	12.95	1.894	3.375
#2	27.94	138.5	47.07	87.54	2.477	2.030	13.54	1.963	3.379

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.958**	**1.979**	**1.926**	**53.59**	**.0287**	**.1148**	**2.445**
Stddev	.009	.061	.008	1.52	.0009	.0002	.068
%RSD	.4466	3.102	.4102	2.834	3.258	.1684	2.795
#1	1.951	1.935	1.921	52.52	.0294	.1149	2.397
#2	1.964	2.022	1.932	54.67	.0281	.1147	2.494

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**84019.**	**16128.**	**3562.4**	**6159.5**
Stddev	330.	4.	49.4	82.2
%RSD	.39266	.02351	1.3876	1.3343
#1	84253.	16125.	3597.4	6217.6
#2	83786.	16131.	3527.4	6101.4

Zoom In Zoom Out

Sample Name: jc67110-4 Acquired: 6/8/2018 2:40:04 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	**.1916**	**-.0000**	**.0001**	**.0004**	**.0017**	**-.0003**	**.5423**	**.0020**	**.0002**
Stddev	.0035	.0001	.0001	.0002	.0009	.0007	.0016	.0002	.0000
%RSD	1.819	354.5	84.37	50.67	53.68	212.3	.2979	9.480	20.28
#1	.1891	-.0001	.0002	.0005	.0023	.0002	.5435	.0021	.0002
#2	.1941	.0000	.0001	.0002	.0010	-.0008	.5412	.0019	.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0011**	**.0038**	**.0004**	**.0051**	**.0140**	**.0024**	**-.0004**	**.1338**	**151.3**
Stddev	.0005	.0000	.0007	.0006	.0013	.0020	.0002	.0142	2.7
%RSD	42.82	1.047	159.7	12.01	9.434	83.51	36.64	10.62	1.764
#1	.0008	.0038	.0009	.0055	.0150	.0010	-.0005	.1439	149.4
#2	.0014	.0038	-.0001	.0046	.0131	.0038	-.0003	.1238	153.2

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**3.099**	**114.0**	**21.53**	**62.09**	**.4266**	**.0026**	**12.83**	**-.0026**	**1.379**
Stddev	.050	1.9	.39	1.16	.0063	.0001	.18	.0009	.025
%RSD	1.605	1.626	1.790	1.874	1.470	5.153	1.366	34.65	1.782
#1	3.064	112.7	21.26	61.27	.4222	.0025	12.71	-.0033	1.362
#2	3.134	115.3	21.81	62.91	.4310	.0027	12.96	-.0020	1.396

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0043**	**.0109**	**-.0042**	**52.05**	**-.0083**	**.1130**	**.4401**
Stddev	.0005	.0004	.0001	.68	.0004	.0027	.0045
%RSD	10.99	3.952	3.378	1.313	4.224	2.408	1.015
#1	.0040	.0106	-.0043	51.57	-.0085	.1149	.4369
#2	.0047	.0112	-.0041	52.53	-.0080	.1111	.4433

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**84326.**	**16106.**	**3641.1**	**6158.4**
Stddev	232.	194.	9.3	13.3
%RSD	.27462	1.2030	.25582	.21526
#1	84489.	16243.	3647.7	6167.8
#2	84162.	15969.	3634.6	6149.0

Zoom In Zoom Out

Sample Name: mp7493-sd1 Acquired: 6/8/2018 2:43:01 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	**.2000**	**.0003**	**-.0003**	**-.0032**	**.0040**	**-.0044**	**.5744**	**.0016**	**-.0009**
Stddev	.0027	.0004	.0001	.0008	.0009	.0007	.0022	.0020	.0016
%RSD	1.374	159.4	41.36	25.69	23.21	16.45	.3853	121.5	185.0
#1	.1980	.0006	-.0004	-.0038	.0046	-.0049	.5760	.0030	.0003
#2	.2019	-.0000	-.0002	-.0026	.0033	-.0039	.5729	.0002	-.0020

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0033**	**.0334**	**.0040**	**-.0005**	**.0055**	**-.0131**	**.0077**	**.2053**	**159.0**
Stddev	.0017	.0009	.0036	.0032	.0013	.0019	.0080	.0841	1.4
%RSD	52.15	2.618	91.11	634.3	23.33	14.44	104.1	40.95	.8617
#1	.0021	.0328	.0066	.0018	.0064	-.0117	.0133	.1459	158.0
#2	.0045	.0341	.0014	-.0028	.0046	-.0144	.0020	.2648	160.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**3.252**	**121.2**	**22.88**	**65.42**	**.4279**	**.0022**	**13.31**	**-.0038**	**1.434**
Stddev	.015	1.2	.35	.99	.0068	.0005	.27	.0003	.015
%RSD	.4649	.9988	1.550	1.517	1.596	20.23	2.050	7.808	1.074
#1	3.241	120.4	22.63	64.71	.4231	.0026	13.12	-.0040	1.424
#2	3.262	122.1	23.13	66.12	.4328	.0019	13.50	-.0036	1.445

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0115**	**.0122**	**-.0029**	**53.94**	**-.0233**	**.1268**	**.4622**
Stddev	.0005	.0011	.0000	1.14	.0027	.0089	.0121
%RSD	4.656	8.878	1.467	2.114	11.75	7.014	2.608
#1	.0118	.0114	-.0029	53.13	-.0253	.1205	.4537
#2	.0111	.0130	-.0029	54.75	-.0214	.1331	.4707

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**83757.**	**15970.**	**3651.6**	**6180.9**
Stddev	249.	18.	25.2	35.6
%RSD	.29765	.11196	.68911	.57658
#1	83581.	15958.	3669.4	6206.1
#2	83933.	15983.	3633.8	6155.7

Zoom In Zoom Out

Sample Name: jc67003-1 Acquired: 6/8/2018 2:46:01 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
Avg	**.0772**	**.0001**	**.0002**	**.0011**	**.0053**	**.0025**	**.6391**	**.0027**	**.0001**
Stddev	.0008	.0001	.0001	.0001	.0001	.0007	.0021	.0008	.0003
%RSD	1.073	130.7	72.82	5.771	2.654	26.88	.3341	28.18	407.9
#1	.0766	.0002	.0003	.0011	.0054	.0020	.6376	.0032	.0003
#2	.0778	.0000	.0001	.0012	.0052	.0029	.6406	.0022	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0029**	**.0341**	**.0041**	**.0006**	**.0070**	**-.0017**	**-.0000**	**1.083**	**60.19**
Stddev	.0000	.0004	.0005	.0015	.0008	.0020	.0014	.021	.67
%RSD	.3719	1.162	11.19	255.7	11.71	120.1	16040.	1.923	1.109
#1	.0028	.0338	.0038	.0017	.0064	-.0031	-.0010	1.069	59.71
#2	.0029	.0344	.0044	-.0005	.0076	-.0003	.0010	1.098	60.66

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**2.899**	**10.80**	**1.873**	**3.635**	**.0675**	**.0015**	**15.69**	**-.0021**	**.2402**
Stddev	.035	.12	.032	.050	.0003	.0004	.20	.0005	.0028
%RSD	1.201	1.104	1.684	1.364	.5017	27.84	1.271	21.62	1.153
#1	2.875	10.71	1.896	3.600	.0673	.0012	15.55	-.0018	.2383
#2	2.924	10.88	1.851	3.670	.0678	.0018	15.83	-.0024	.2422

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0209**	**-.0006**	**-.0072**	**25.03**	**-.0041**	**.0216**	**.2642**
Stddev	.0001	.0019	.0003	.30	.0004	.0029	.0047
%RSD	.5826	324.4	4.306	1.201	10.04	13.36	1.773
#1	.0210	.0007	-.0070	24.82	-.0038	.0196	.2609
#2	.0208	-.0019	-.0075	25.25	-.0043	.0237	.2675

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**81431.**	**15835.**	**3577.8**	**6081.0**
Stddev	39.	65.	4.8	11.0
%RSD	.04801	.40752	.13519	.18170
#1	81403.	15880.	3574.4	6073.2
#2	81459.	15789.	3581.2	6088.9

Zoom In Zoom Out

Sample Name: jc67003-2 Acquired: 6/8/2018 2:48:58 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	**.5429**	**-.0001**	**.0006**	**.0011**	**.0035**	**.0122**	**.1557**	**.0039**	**-.0001**
Stddev	.0170	.0001	.0002	.0001	.0008	.0007	.0039	.0001	.0005
%RSD	3.135	66.16	27.06	6.110	21.84	5.370	2.524	2.730	575.2
#1	.5309	-.0001	.0007	.0011	.0040	.0118	.1529	.0039	.0003
#2	.5550	-.0000	.0005	.0010	.0030	.0127	.1584	.0038	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0024**	**.0545**	**.0015**	**.0001**	**.0613**	**.0003**	**.0005**	**.5075**	**111.5**
Stddev	.0003	.0009	.0008	.0001	.0015	.0002	.0039	.0099	3.1
%RSD	14.27	1.662	54.58	135.2	2.513	70.89	702.1	1.956	2.789
#1	.0022	.0538	.0009	.0001	.0624	.0005	-.0022	.5005	109.3
#2	.0027	.0551	.0021	.0000	.0602	.0002	.0033	.5146	113.7

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**2.598**	**62.99**	**9.062**	**36.97**	**.2020**	**.0016**	**14.20**	**.0043**	**.8629**
Stddev	.077	1.78	.262	1.12	.0019	.0003	.22	.0005	.0255
%RSD	2.968	2.827	2.890	3.022	.9389	19.40	1.527	11.54	2.953
#1	2.544	61.73	8.877	36.18	.2007	.0014	14.04	.0047	.8448
#2	2.653	64.25	9.248	37.76	.2034	.0018	14.35	.0040	.8809

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0147**	**.0120**	**-.0060**	**33.58**	**-.0017**	**.1600**	**.3374**
Stddev	.0002	.0032	.0000	.52	.0011	.0057	.0054
%RSD	1.643	26.35	.7207	1.557	68.66	3.544	1.613
#1	.0145	.0098	-.0061	33.21	-.0009	.1560	.3336
#2	.0149	.0142	-.0060	33.95	-.0025	.1640	.3413

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**83111.**	**16108.**	**3609.0**	**6103.2**
Stddev	1288.	322.	7.6	7.0
%RSD	1.5502	1.9980	.20966	.11460
#1	84022.	16335.	3603.7	6098.2
#2	82200.	15880.	3614.4	6108.1

Zoom In Zoom Out

Sample Name: jc67003-3 Acquired: 6/8/2018 2:51:55 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	Ag3280
Avg	**.0573**	**-.0002**	**-.0003**	**-.0004**	**.0045**	**-.0011**	**2.333**	**-.0006**	**.0016**
Stddev	.0000	.0001	.0001	.0001	.0001	.0000	.020	.0002	.0009
%RSD	.0271	58.21	43.55	21.56	3.163	3.773	.8428	30.08	56.38
#1	.0573	-.0001	-.0004	-.0005	.0046	-.0011	2.319	-.0004	.0023
#2	.0573	-.0003	-.0002	-.0004	.0044	-.0010	2.346	-.0007	.0010

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0013**	**.0037**	**-.0012**	**.0013**	**-.0006**	**.0070**	**-.0004**	**.0577**	**242.2**
Stddev	.0005	.0001	.0015	.0006	.0011	.0006	.0002	.0299	.3
%RSD	38.51	3.247	131.0	45.18	167.8	8.024	50.37	51.78	.1226
#1	.0009	.0036	-.0023	.0009	-.0014	.0066	-.0002	.0788	242.4
#2	.0016	.0038	-.0001	.0018	.0001	.0073	-.0005	.0366	242.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**42.61**	**42.45**	**7.921**	**14.64**	**.1599**	**.0001**	**16.15**	**-.0030**	**1.384**
Stddev	.21	.13	.029	.02	.0001	.0004	.20	.0016	.005
%RSD	.4968	.3095	.3649	.1217	.0406	244.2	1.266	53.30	.3408
#1	42.76	42.54	7.900	14.63	.1599	-.0001	16.01	-.0041	1.387
#2	42.47	42.36	7.941	14.66	.1599	.0004	16.30	-.0019	1.381

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0028**	**-.0015**	**-.0033**	**F 214.3**	**-.0021**	**.0250**	**1.361**
Stddev	.0002	.0004	.0003	2.4	.0011	.0036	.017
%RSD	7.000	29.88	8.050	1.103	54.89	14.50	1.273
#1	.0027	-.0011	-.0035	212.6	-.0029	.0225	1.349
#2	.0030	-.0018	-.0031	216.0	-.0013	.0276	1.373

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**84346.**	**16084.**	**3641.1**	**6237.8**
Stddev	537.	44.	3.7	11.8
%RSD	.63637	.27311	.10050	.18924
#1	84726.	16053.	3638.5	6229.5
#2	83967.	16115.	3643.7	6246.2

Zoom In Zoom Out

Sample Name: ccv Acquired: 6/8/2018 2:55:00 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	**2.048**	**2.005**	**1.967**	**2.009**	**2.027**	**1.974**	**2.034**	**2.037**	**.2520**
Stddev	.003	.008	.021	.019	.009	.015	.011	.020	.0039
%RSD	.1657	.4115	1.045	.9332	.4705	.7322	.5603	.9556	1.554
#1	2.050	2.011	1.952	1.996	2.020	1.963	2.025	2.024	.2493
#2	2.045	1.999	1.982	2.022	2.034	1.984	2.042	2.051	.2548
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	**2.006**	**1.987**	**2.003**	**1.994**	**2.043**	**1.972**	**1.987**	**40.06**	**40.85**
Stddev	.011	.021	.025	.015	.019	.028	.031	.21	.14
%RSD	.5562	1.081	1.247	.7679	.9486	1.430	1.558	.5254	.3328
#1	1.998	1.972	1.985	1.983	2.029	1.952	1.965	40.21	40.94
#2	2.014	2.002	2.020	2.005	2.057	1.992	2.009	39.91	40.75
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.44**	**41.50**	**40.22**	**41.29**	**1.976**	**2.010**	**4.994**	**1.966**	**2.038**
Stddev	.17	.04	.13	.00	.021	.021	.053	.017	.006
%RSD	.4235	.1028	.3251	.0073	1.041	1.025	1.068	.8589	.2921
#1	40.56	41.53	40.12	41.28	1.962	1.995	4.956	1.954	2.042
#2	40.32	41.47	40.31	41.29	1.991	2.025	5.031	1.977	2.034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 6/8/2018 2:55:00 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	**2.065**	**2.015**	**2.030**	**1.937**	**1.983**	**2.042**	**2.000**
Stddev	.013	.021	.011	.015	.017	.001	.024
%RSD	.6029	1.064	.5513	.7707	.8309	.0232	1.202
#1	2.056	1.999	2.023	1.927	1.971	2.042	1.983
#2	2.074	2.030	2.038	1.948	1.994	2.041	2.017
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	**81188.**	**15757.**	**3581.7**	**6212.8**
Stddev	75.	98.	9.3	8.0
%RSD	.09290	.62387	.26035	.12913
#1	81135.	15688.	3588.3	6218.5
#2	81242.	15827.	3575.1	6207.1

Zoom In Zoom Out

Sample Name: ccb Acquired: 6/8/2018 2:57:50 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	**.0008**	**-.0001**	**.0002**	**-.0002**	**.0003**	**-.0011**	**-.0001**	**-.0001**	**-.0008**
Stddev	.0003	.0000	.0002	.0005	.0005	.0002	.0000	.0006	.0003
%RSD	37.69	51.33	156.0	200.2	180.0	19.86	19.78	476.0	41.50
#1	.0010	-.0000	.0003	-.0006	-.0001	-.0009	-.0001	.0003	-.0006
#2	.0006	-.0001	-.0000	.0001	.0006	-.0012	-.0002	-.0005	-.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0002**	**-.0003**	**-.0013**	**-.0006**	**-.0007**	**.0026**	**.0032**	**.0022**
Stddev	.0001	.0000	.0002	.0008	.0020	.0031	.0011	.0059	.0066
%RSD	1146.	1.501	68.98	56.72	305.4	464.6	42.21	183.4	301.3
#1	.0001	.0002	-.0005	-.0019	.0007	-.0029	.0033	-.0010	.0069
#2	-.0001	.0002	-.0002	-.0008	-.0020	.0015	.0018	.0074	-.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	**.0060**	**.0288**	**.0508**	**.0703**	**-.0013**	**.0009**	**.0009**	**.0002**	**.0001**
Stddev	.0004	.0195	.0781	.0119	.0015	.0001	.0003	.0003	.0003
%RSD	6.901	67.92	153.7	16.99	116.8	8.510	27.74	156.5	329.3
#1	.0063	.0150	-.0044	.0618	-.0002	.0009	.0008	.0004	-.0001
#2	.0057	.0426	.1061	.0787	-.0023	.0008	.0011	-.0000	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 6/8/2018 2:57:50 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	-.0024	-.0000	.0018	.0007	-.0027	.0012
Stddev	.0000	.0000	.0004	.0003	.0004	.0035	.0002
%RSD	4.183	.3810	938.2	15.40	66.64	129.2	19.51
#1	.0006	-.0024	-.0003	.0016	.0004	-.0002	.0014
#2	.0006	-.0024	.0002	.0019	.0010	-.0051	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	81945.	15794.	3598.7	6086.9
Stddev	439.	52.	9.5	9.4
%RSD	.53602	.33171	.26465	.15396
#1	82255.	15831.	3592.0	6080.3
#2	81634.	15757.	3605.5	6093.5

Zoom In Zoom Out

Sample Name: jc67003-4 Acquired: 6/8/2018 3:00:53 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	.2268	-.0002	.0008	-.0004	.0015	.0069	.0454	.0066	.0002
Stddev	.0044	.0001	.0001	.0002	.0002	.0002	.0003	.0002	.0002
%RSD	1.926	49.11	13.47	35.15	10.52	3.117	.5687	3.029	108.5
#1	.2299	-.0001	.0009	-.0003	.0014	.0071	.0456	.0064	.0000
#2	.2237	-.0002	.0008	-.0005	.0016	.0068	.0453	.0067	.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0009	.1174	.0026	-.0009	.0261	-.0010	.0016	.0377	82.89
Stddev	.0003	.0009	.0009	.0003	.0002	.0020	.0015	.0185	1.41
%RSD	31.91	.7808	36.43	34.50	.9070	212.1	90.81	49.00	1.697
#1	.0007	.1180	.0033	-.0011	.0263	-.0024	.0026	.0508	83.88
#2	.0011	.1167	.0019	-.0007	.0259	.0005	.0006	.0246	81.90

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	.9123	8.650	4.232	4.101	.0566	.0034	12.01	-.0022	.3882
Stddev	.0074	.103	.013	.053	.0023	.0011	.09	.0010	.0066
%RSD	.8155	1.196	.3068	1.284	4.008	32.46	.7809	42.82	1.691
#1	.9176	8.723	4.242	4.138	.0582	.0042	12.08	-.0029	.3928
#2	.9071	8.577	4.223	4.064	.0550	.0026	11.94	-.0016	.3835

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	.0012	-.0001	-.0065	2.254	-.0065	.0099	.0411
Stddev	.0011	.0016	.0005	.019	.0015	.0022	.0012
%RSD	87.54	1728.	7.296	.8431	23.85	22.61	2.867
#1	.0020	.0011	-.0068	2.268	-.0054	.0115	.0419
#2	.0005	-.0012	-.0061	2.241	-.0076	.0083	.0403

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	84049.	16093.	3561.4	6060.8
Stddev	687.	243.	68.2	98.9
%RSD	.81709	1.5129	1.9152	1.6323
#1	83563.	15921.	3513.2	5990.8
#2	84534.	16265.	3609.7	6130.7

Zoom In Zoom Out

Sample Name: jc67003-5 Acquired: 6/8/2018 3:03:52 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	-.0000	.0008	.0059	.0010	.0284	.3603	.5243	.0013
Stddev	.0027	.0000	.0000	.0003	.0002	.0007	.0017	.0073	.0004
%RSD	.8376	95.38	5.067	4.531	15.34	2.327	.4758	1.385	27.68
#1	.3195	-.0001	.0009	.0061	.0011	.0288	.3615	.5192	.0011
#2	.3157	-.0000	.0008	.0057	.0009	.0279	.3590	.5294	.0016

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0006	2.070	.0042	.0019	.0837	.0000	.0021	.0263	159.2
Stddev	.0004	.025	.0010	.0022	.0010	.0055	.0023	.0163	1.4
%RSD	76.75	1.201	24.75	119.7	1.156	14810.	110.9	61.86	.8539
#1	.0009	2.053	.0035	.0003	.0830	-.0039	.0005	.0148	160.2
#2	.0003	2.088	.0049	.0034	.0844	.0039	.0037	.0378	158.3

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	2.986	14.59	4.621	4.749	.0684	.0014	11.22	-.0025	.6242
Stddev	.032	.16	.025	.048	.0006	.0006	.14	.0002	.0070
%RSD	1.084	1.082	.5400	1.007	.9350	46.11	1.276	9.332	1.115
#1	3.009	14.70	4.639	4.783	.0679	.0019	11.11	-.0026	.6291
#2	2.963	14.48	4.603	4.715	.0688	.0009	11.32	-.0023	.6192

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	.0005	.0071	-.0054	6.530	-.0020	.0150	.1875
Stddev	.0001	.0021	.0005	.084	.0021	.0008	.0017
%RSD	25.80	29.15	8.527	1.281	106.9	5.107	.9238
#1	.0004	.0086	-.0051	6.471	-.0005	.0145	.1863
#2	.0006	.0056	-.0058	6.590	-.0035	.0156	.1887

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	83207.	15909.	3640.4	6170.4
Stddev	41.	21.	4.3	7.4
%RSD	.04906	.12910	.11772	.11968
#1	83178.	15895.	3643.5	6175.6
#2	83236.	15924.	3637.4	6165.2

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	.1260	-.0000	.0001	.0008	.0012	.0149	.5930	.0043
Stddev	.0201	.0002	.0001	.0001	.0002	.0003	.0036	.0001
%RSD	15.99	762.0	71.74	12.97	14.62	2.271	.6049	3.175
#1	.1117	-.0002	.0001	.0007	.0010	.0146	.5955	.0043
#2	.1402	.0001	.0002	.0009	.0013	.0151	.5905	.0042

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	.0014	.0004	.0150	.0037	F -.0024	.0088	.0009	.0016
Stddev	.0011	.0001	.0000	.0007	.0007	.0011	.0033	.0018
%RSD	76.95	20.26	.3147	18.11	29.23	13.00	374.0	112.8
#1	.0006	.0005	.0150	.0041	-.0019	.0080	.0033	.0003
#2	.0022	.0004	.0150	.0032	-.0029	.0096	-.0015	.0028

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	.0538	111.7	9.462	39.32	13.67	9.906	.1311	.0016
Stddev	.0074	17.4	1.491	6.09	2.13	1.535	.0006	.0003
%RSD	13.69	15.62	15.75	15.49	15.60	15.49	.4898	16.05
#1	.0486	99.34	8.408	35.02	12.16	8.820	.1307	.0018
#2	.0590	124.0	10.52	43.63	15.18	10.99	.1316	.0014

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	13.23	-.0023	.6595	.0010	-.0017	-.0076	12.11	-.0039
Stddev	.13	.0001	.1008	.0007	.0003	.0000	.10	.0038
%RSD	.9820	2.621	15.28	67.36	18.98	.3851	.8087	96.60
#1	13.14	-.0023	.5883	.0015	-.0015	-.0075	12.04	-.0066
#2	13.32	-.0024	.7308	.0005	-.0020	-.0076	12.18	-.0012

Elem	Li6707	P_1774
Avg	.0153	.0850
Stddev	.0014	.0005
%RSD	9.367	.6164
#1	.0143	.0847
#2	.0163	.0854

Zoom In
Zoom Out

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:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**83670.**	**14903.**	**3630.3**	**6150.4**
Stddev	773.	1975.	15.6	25.5
%RSD	.92401	13.254	.42885	.41386
#1	83124.	16300.	3619.3	6132.4
#2	84217.	13506.	3641.3	6168.4

Zoom In
Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.2424**	**-.0001**	**.0001**	**.0003**	**.0050**	**.0168**	**1.118**	**.0045**	**.0029**
Stddev	.0018	.0001	.0000	.0004	.0005	.0000	.002	.0003	.0005
%RSD	.7541	106.1	22.52	121.5	10.14	.0717	.2056	6.144	17.10
#1	.2411	-.0001	.0001	.0000	.0054	.0168	1.120	.0043	.0033
#2	.2437	-.0000	.0001	.0006	.0047	.0168	1.116	.0047	.0026

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0050**	**.1353**	**.0094**	**-.0004**	**.2123**	**.0005**	**-.0002**	**1.567**	**103.7**
Stddev	.0012	.0022	.0009	.0034	.0002	.0000	.0017	.023	.7
%RSD	24.84	1.608	9.889	780.2	.1172	5.466	943.1	1.490	.6377
#1	.0059	.1338	.0088	-.0028	.2124	.0005	.0010	1.551	103.3
#2	.0041	.1368	.0101	.0020	.2121	.0005	-.0014	1.584	104.2

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**17.12**	**44.17**	**16.38**	**11.97**	**.1490**	**.0012**	**13.94**	**-.0000**	**.5978**
Stddev	.07	.24	.19	.11	.0019	.0004	.19	.0006	.0027
%RSD	.3998	.5491	1.147	.9174	1.289	31.12	1.358	7458.	.4566
#1	17.08	43.99	16.25	11.90	.1477	.0009	13.80	-.0004	.5959
#2	17.17	44.34	16.52	12.05	.1504	.0015	14.07	.0004	.5997

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0474**	**-.0002**	**-.0073**	**14.73**	**-.0036**	**.0356**	**.2628**
Stddev	.0002	.0005	.0001	.21	.0011	.0001	.0050
%RSD	.3978	316.6	.9425	1.393	31.37	.4088	1.904
#1	.0475	-.0005	-.0073	14.59	-.0028	.0355	.2593
#2	.0472	.0002	-.0074	14.88	-.0044	.0357	.2664

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**83813.**	**16165.**	**3615.5**	**6135.0**
Stddev	11.	221.	11.5	5.0
%RSD	.01299	1.3665	.31909	.08185
#1	83805.	16322.	3623.7	6138.6
#2	83821.	16009.	3607.4	6131.5

Zoom In
Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0670**	**-.0001**	**.0004**	**.0022**	**.0036**	**.0043**	**.6759**	**.0052**	**.0007**
Stddev	.0004	.0001	.0001	.0004	.0004	.0000	.0022	.0013	.0002
%RSD	.5711	57.15	28.88	16.93	11.90	.1805	.3216	25.01	30.39
#1	.0667	-.0001	.0005	.0025	.0039	.0043	.6743	.0043	.0008
#2	.0673	-.0002	.0003	.0019	.0033	.0043	.6774	.0061	.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0116**	**.0571**	**.0346**	**-.0007**	**.0110**	**.0059**	**.0060**	**.0003**	**154.6**
Stddev	.0002	.0005	.0013	.0017	.0006	.0018	.0045	.0109	1.3
%RSD	1.523	.9122	3.886	230.1	5.651	30.09	75.17	4008.	.8392
#1	.0118	.0567	.0337	-.0019	.0105	.0046	.0028	.0080	153.7
#2	.0115	.0575	.0356	.0005	.0114	.0071	.0091	-.0074	155.5

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**9.504**	**125.8**	**17.91**	**16.36**	**.3625**	**.0106**	**13.58**	**-.0032**	**1.337**
Stddev	.054	1.0	.28	.19	.0039	.0005	.11	.0001	.012
%RSD	.5727	.7900	1.576	1.139	1.078	4.513	.8144	4.306	.8741
#1	9.466	125.1	17.71	16.23	.3597	.0103	13.50	-.0031	1.329
#2	9.543	126.5	18.11	16.49	.3653	.0109	13.66	-.0033	1.345

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**-.0002**	**-.0005**	**-.0062**	**47.49**	**-.0033**	**.0293**	**.2075**
Stddev	.0002	.0009	.0002	.39	.0038	.0012	.0007
%RSD	122.4	186.3	3.951	.8195	115.8	3.994	.3331
#1	-.0000	.0002	-.0063	47.21	-.0060	.0301	.2071
#2	-.0003	-.0012	-.0060	47.76	-.0006	.0285	.2080

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**83103.**	**16121.**	**3604.8**	**6116.5**
Stddev	7.	152.	5.9	19.4
%RSD	.00901	.94088	.16432	.31787
#1	83098.	16228.	3600.6	6102.7
#2	83109.	16013.	3609.0	6130.2

Zoom In
Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0563**	**-.0000**	**.0003**	**.0043**	**.0013**	**.0065**	**.4880**	**.0113**	**-.0002**
Stddev	.0003	.0001	.0002	.0002	.0003	.0010	.0052	.0002	.0005
%RSD	.6113	278.4	76.19	3.648	18.79	15.14	1.064	1.449	223.4
#1	.0565	-.0001	.0001	.0041	.0012	.0058	.4844	.0112	-.0006
#2	.0560	.0000	.0005	.0044	.0015	.0072	.4917	.0114	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0010**	**.0246**	**.0074**	**.0015**	**.0067**	**.0037**	**.0004**	**.0912**	**169.2**
Stddev	.0002	.0002	.0019	.0033	.0006	.0017	.0016	.0140	.2
%RSD	18.77	.9904	25.60	212.5	8.508	47.07	369.6	15.34	.0962
#1	.0012	.0244	.0088	-.0008	.0071	.0025	-.0007	.0813	169.3
#2	.0009	.0248	.0061	.0038	.0063	.0049	.0015	.1011	169.1

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**6.167**	**100.3**	**11.81**	**18.27**	**.2588**	**.0083**	**14.77**	**-.0033**	**.9154**
Stddev	.008	.2	.04	.01	.0042	.0001	.23	.0001	.0020
%RSD	.1260	.2399	.3406	.0473	1.618	.7152	1.568	3.303	.2220
#1	6.172	100.5	11.78	18.26	.2558	.0083	14.61	-.0033	.9169
#2	6.161	100.2	11.83	18.27	.2617	.0082	14.93	-.0034	.9140

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0034**	**-.0030**	**-.0069**	**53.02**	**-.0018**	**.0262**	**.1379**
Stddev	.0009	.0002	.0000	.79	.0038	.0002	.0019
%RSD	25.50	6.034	.1271	1.484	210.2	.8479	1.349
#1	.0040	-.0028	-.0069	52.47	-.0045	.0260	.1366
#2	.0028	-.0031	-.0069	53.58	.0009	.0263	.1392

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**82335.**	**15753.**	**3601.0**	**6108.9**
Stddev	489.	2.	20.8	35.8
%RSD	.59450	.01491	.57885	.58610
#1	82681.	15752.	3615.7	6134.2
#2	81988.	15755.	3586.2	6083.6

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.3520**	**-.0001**	**.0000**	**.0006**	**.0020**	**.0012**	**.3828**	**.0004**	**.0003**
Stddev	.0015	.0000	.0000	.0000	.0001	.0009	.0027	.0003	.0003
%RSD	.4283	.2757	106.2	3.651	4.186	71.36	.6984	76.97	101.2
#1	.3510	-.0001	.0001	.0006	.0020	.0006	.3847	.0006	.0001
#2	.3531	-.0001	.0000	.0006	.0021	.0018	.3809	.0002	.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0018**	**.0075**	**.0067**	**.0002**	**.0043**	**-.0006**	**-.0015**	**.6606**	**102.8**
Stddev	.0001	.0004	.0006	.0006	.0016	.0001	.0014	.0078	.5
%RSD	6.967	5.679	8.881	287.4	37.83	14.73	90.88	1.177	.5111
#1	.0017	.0072	.0063	.0006	.0055	-.0006	-.0005	.6661	102.4
#2	.0019	.0078	.0072	-.0002	.0032	-.0007	-.0025	.6551	103.1

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**3.555**	**74.15**	**14.91**	**47.58**	**.3014**	**.0007**	**10.51**	**-.0011**	**.9905**
Stddev	.014	.38	.25	.28	.0038	.0001	.12	.0010	.0038
%RSD	.3951	.5115	1.652	.5877	1.266	19.49	1.150	87.79	.3835
#1	3.545	73.88	14.74	47.39	.2987	.0006	10.43	-.0018	.9878
#2	3.565	74.42	15.09	47.78	.3041	.0008	10.60	-.0004	.9932

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0243**	**-.0012**	**-.0053**	**.5969**	**-.0020**	**.1581**	**.6902**
Stddev	.0003	.0003	.0002	.0049	.0015	.0036	.0082
%RSD	1.230	24.49	3.358	.8148	75.15	2.259	1.190
#1	.0241	-.0010	-.0054	.5935	-.0030	.1556	.6844
#2	.0245	-.0014	-.0052	.6003	-.0009	.1606	.6960

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**83455.**	**16095.**	**3622.1**	**6112.6**
Stddev	449.	81.	10.5	11.5
%RSD	.53810	.50041	.29084	.18835
#1	83137.	16152.	3614.7	6104.5
#2	83773.	16038.	3629.6	6120.7

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.3495**	**-.0001**	**-.0000**	**-.0002**	**.0011**	**.0004**	**.3695**	**.0003**	**-.0006**
Stddev	.0010	.0001	.0001	.0001	.0006	.0007	.0015	.0003	.0003
%RSD	.2768	100.1	249.2	30.75	50.20	195.1	.4097	104.1	48.37
#1	.3488	-.0002	-.0001	-.0001	.0007	.0008	.3705	.0001	-.0008
#2	.3502	-.0000	.0000	-.0002	.0015	-.0001	.3684	.0005	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0004**	**.0020**	**.0066**	**-.0000**	**-.0002**	**-.0007**	**-.0001**	**.2752**	**103.2**
Stddev	.0010	.0001	.0000	.0001	.0025	.0005	.0005	.0153	.8
%RSD	258.7	4.606	.5060	43060.	1151.	76.26	378.7	5.550	.8218
#1	-.0003	.0019	.0066	.0001	.0015	-.0010	.0002	.2644	102.6
#2	.0011	.0020	.0066	-.0001	-.0020	-.0003	-.0005	.2860	103.8

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**2.895**	**74.92**	**14.99**	**47.79**	**.3019**	**.0007**	**9.910**	**-.0021**	**.9924**
Stddev	.016	.35	.24	.42	.0036	.0000	.141	.0011	.0084
%RSD	.5398	.4712	1.574	.8846	1.199	.2544	1.419	51.88	.8418
#1	2.884	74.67	14.82	47.49	.2994	.0007	9.810	-.0013	.9865
#2	2.906	75.17	15.15	48.09	.3045	.0007	10.01	-.0029	.9983

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0091**	**-.0007**	**-.0054**	**.5728**	**-.0025**	**.1576**	**.6753**
Stddev	.0004	.0022	.0002	.0086	.0038	.0021	.0083
%RSD	3.952	329.6	4.487	1.507	154.4	1.311	1.236
#1	.0089	.0009	-.0052	.5667	-.0052	.1562	.6694
#2	.0094	-.0022	-.0056	.5789	.0002	.1591	.6812

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**83922.**	**15891.**	**3621.0**	**6106.5**
Stddev	638.	54.	3.9	4.1
%RSD	.76012	.34107	.10819	.06686
#1	83471.	15929.	3618.2	6103.6
#2	84373.	15852.	3623.7	6109.4

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**2.007**	**1.964**	**1.907**	**1.971**	**1.955**	**1.894**	**1.968**	**2.003**	**.2448**
Stddev	.004	.005	.020	.018	.025	.030	.024	.019	.0045
%RSD	.2189	.2552	1.051	.9354	1.273	1.591	1.211	.9483	1.857
#1	2.010	1.967	1.892	1.958	1.937	1.873	1.952	1.990	.2415
#2	2.004	1.960	1.921	1.985	1.972	1.915	1.985	2.017	.2480

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.937**	**1.938**	**1.920**	**1.941**	**2.008**	**1.906**	**1.901**	**24.71**	**25.25**
Stddev	.025	.019	.021	.016	.018	.021	.021	.08	.06
%RSD	1.284	.9669	1.086	.8427	.9219	1.109	1.108	.3300	.2315
#1	1.920	1.925	1.905	1.929	1.995	1.891	1.887	24.77	25.29
#2	1.955	1.952	1.935	1.952	2.021	1.921	1.916	24.65	25.20

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**25.07**	**25.74**	**24.70**	**25.72**	**1.908**	**1.936**	**.1144**	**1.887**	**1.990**
Stddev	.06	.15	.04	.02	.020	.020	.0011	.021	.004
%RSD	.2418	.5966	.1643	.0733	1.025	1.026	.9187	1.089	.1841
#1	25.11	25.85	24.73	25.73	1.895	1.922	.1136	1.873	1.993
#2	25.03	25.63	24.67	25.71	1.922	1.950	.1151	1.902	1.987

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.970**	**1.842**	**1.940**	**.1694**	**.0367**	**-.0001**	**1.940**
Stddev	.025	.020	.025	.0011	.0012	.0031	.023
%RSD	1.284	1.083	1.308	.6577	3.375	3552.	1.192
#1	1.953	1.828	1.922	.1686	.0358	.0021	1.924
#2	1.988	1.856	1.958	.1702	.0376	-.0023	1.956

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**82996.**	**16128.**	**3622.5**	**6226.8**
Stddev	4.	132.	5.1	2.4
%RSD	.00436	.82011	.14099	.03805
#1	82993.	16034.	3626.1	6228.5
#2	82998.	16221.	3618.9	6225.2

Zoom In Zoom Out

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	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.041**	**2.004**	**1.939**	**1.982**	**1.979**	**1.927**	**1.985**	**2.011**	**.2458**
Stddev	.004	.008	.019	.018	.013	.017	.019	.018	.0014
%RSD	.1943	.3824	.9781	.9195	.6669	.8978	.9600	.9209	.5673
#1	2.044	2.009	1.925	1.969	1.969	1.915	1.971	1.997	.2448
#2	2.038	1.998	1.952	1.995	1.988	1.940	1.998	2.024	.2468
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	**1.958**	**1.962**	**1.976**	**1.977**	**2.013**	**1.954**	**1.949**	**40.12**	**40.89**
Stddev	.016	.023	.025	.014	.024	.032	.022	.23	.13
%RSD	.8295	1.165	1.281	.7027	1.196	1.622	1.113	.5685	.3296
#1	1.947	1.946	1.958	1.967	1.996	1.931	1.934	40.28	40.98
#2	1.970	1.978	1.994	1.986	2.030	1.976	1.964	39.96	40.79
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	**40.43**	**41.42**	**40.07**	**41.16**	**1.951**	**1.986**	**4.916**	**1.937**	**2.034**
Stddev	.16	.17	.05	.00	.021	.023	.052	.020	.008
%RSD	.4015	.4226	.1285	.0119	1.051	1.170	1.055	1.055	.3810
#1	40.54	41.55	40.10	41.16	1.936	1.969	4.880	1.923	2.040
#2	40.31	41.30	40.03	41.16	1.965	2.002	4.953	1.952	2.029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: 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							
Range							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	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

Zoom In Zoom Out

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
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.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
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**	**-.0103**	**.0116**	**.0480**	**-.0010**	**.0006**	**.0005**	**.0003**	**.0001**
Stddev	.0020	.0420	.0831	.0091	.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
High Limit									
Low Limit									

Zoom In Zoom Out

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
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	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

Zoom In Zoom Out

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
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

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
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
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
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.	Y_3600	Y_3710	Y_2243	In2306
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

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**2.048**	**1.883**	**1.855**	**2.176**	**1.891**	**1.829**	**8.912**	**2.288**	**.2357**
Stddev	.024	.016	.017	.020	.010	.007	.005	.021	.0012
%RSD	1.154	.8722	.9161	.9234	.5061	.3954	.0514	.9187	.5219
#1	2.065	1.894	1.843	2.162	1.898	1.834	8.909	2.273	.2348
#2	2.031	1.871	1.867	2.191	1.884	1.824	8.915	2.303	.2365

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.851**	**2.136**	**1.847**	**1.948**	**2.018**	**1.834**	**1.828**	**24.89**	**173.6**
Stddev	.006	.015	.011	.012	.008	.017	.014	.35	1.5
%RSD	.3392	.7163	.6017	.6218	.4025	.8988	.7801	1.417	.8688
#1	1.855	2.125	1.839	1.940	2.012	1.822	1.818	25.14	174.7
#2	1.846	2.147	1.855	1.957	2.024	1.845	1.838	24.64	172.6

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**27.10**	**94.49**	**28.01**	**82.18**	**1.858**	**1.863**	**15.40**	**1.806**	**2.275**
Stddev	.25	.79	.13	.64	.019	.017	.14	.017	.024
%RSD	.9233	.8335	.4640	.7797	1.043	.9064	.9319	.9207	1.074
#1	27.28	95.05	28.10	82.64	1.845	1.851	15.30	1.794	2.292
#2	26.93	93.94	27.92	81.73	1.872	1.874	15.50	1.818	2.258

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.910**	**1.843**	**1.850**	**100.2**	**.0344**	**.0023**	**1.918**
Stddev	.009	.013	.009	.9	.0018	.0015	.009
%RSD	.4676	.6936	.4671	.8640	5.111	64.16	.4409
#1	1.916	1.834	1.856	99.58	.0356	.0034	1.912
#2	1.903	1.852	1.844	100.8	.0332	.0013	1.924

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**86206.**	**16551.**	**3790.3**	**6238.7**
Stddev	467.	173.	6.2	10.1
%RSD	.54138	1.0470	.16270	.16247
#1	85876.	16428.	3786.0	6231.5
#2	86536.	16674.	3794.7	6245.9

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**2.051**	**1.883**	**1.824**	**2.143**	**1.863**	**1.802**	**8.755**	**2.254**	**.2306**
Stddev	.015	.011	.007	.009	.015	.013	.156	.009	.0013
%RSD	.7384	.5832	.3971	.4210	.7988	.7151	1.785	.3882	.5581
#1	2.062	1.891	1.819	2.137	1.853	1.792	8.644	2.248	.2297
#2	2.040	1.875	1.829	2.149	1.874	1.811	8.865	2.261	.2315

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.823**	**2.101**	**1.814**	**1.920**	**1.981**	**1.807**	**1.788**	**24.97**	**173.9**
Stddev	.019	.008	.008	.003	.008	.010	.006	.15	1.2
%RSD	1.025	.3851	.4249	.1342	.3912	.5409	.3447	.5892	.6734
#1	1.809	2.095	1.809	1.918	1.976	1.800	1.784	25.07	174.7
#2	1.836	2.107	1.820	1.922	1.987	1.814	1.793	24.86	173.1

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**27.12**	**94.44**	**27.96**	**82.61**	**1.826**	**1.825**	**15.11**	**1.772**	**2.278**
Stddev	.22	.85	.18	.49	.006	.005	.05	.011	.014
%RSD	.7934	.9018	.6414	.5877	.3494	.2990	.3598	.6047	.6074
#1	27.28	95.04	28.09	82.95	1.822	1.821	15.07	1.764	2.288
#2	26.97	93.84	27.84	82.26	1.831	1.829	15.15	1.779	2.269

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.875**	**1.804**	**1.819**	**98.55**	**.0357**	**.0004**	**1.889**
Stddev	.014	.017	.013	.33	.0067	.0055	.010
%RSD	.7224	.9490	.7230	.3375	18.78	1271.	.5066
#1	1.865	1.792	1.810	98.32	.0309	.0043	1.882
#2	1.884	1.816	1.829	98.79	.0404	-.0035	1.896

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**87385.**	**16434.**	**3805.9**	**6257.8**
Stddev	159.	124.	10.8	20.1
%RSD	.18245	.75548	.28278	.32103
#1	87498.	16346.	3798.3	6243.6
#2	87272.	16522.	3813.5	6272.0

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.1242**	**-.0000**	**.0243**	**.2257**	**.0393**	**.0433**	**7.075**	**.3147**	**-.0015**
Stddev	.0015	.0002	.0000	.0035	.0003	.0003	.036	.0060	.0015
%RSD	1.191	1090.	.1154	1.529	.8864	.7388	.5038	1.918	102.8
#1	.1232	.0002	.0244	.2233	.0391	.0435	7.100	.3104	-.0004
#2	.1253	-.0002	.0243	.2281	.0396	.0431	7.049	.3190	-.0025

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0004**	**.3042**	**.0011**	**.0200**	**.0859**	**.0008**	**.0008**	**.5472**	**149.5**
Stddev	.0019	.0049	.0014	.0023	.0026	.0019	.0009	.0084	.4
%RSD	433.9	1.599	131.8	11.56	3.027	245.5	105.0	1.529	.2355
#1	-.0009	.3008	.0021	.0216	.0877	-.0006	.0014	.5532	149.3
#2	.0017	.3077	.0001	.0184	.0840	.0021	.0002	.5413	149.8

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**2.931**	**70.29**	**3.793**	**57.65**	**.0210**	**.0014**	**14.46**	**-.0023**	**.3653**
Stddev	.004	.22	.080	.35	.0009	.0003	.22	.0021	.0004
%RSD	.1242	.3124	2.101	.6025	4.344	24.89	1.545	92.90	.1183
#1	2.928	70.13	3.850	57.41	.0203	.0011	14.30	-.0038	.3650
#2	2.934	70.44	3.737	57.90	.0216	.0016	14.62	-.0008	.3656

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0350**	**-.0008**	**.0013**	**98.98**	**-.0062**	**-.0070**	**.0527**
Stddev	.0014	.0039	.0001	1.57	.0028	.0070	.0003
%RSD	4.057	471.3	4.883	1.587	45.10	99.94	.5750
#1	.0360	-.0036	.0012	97.87	-.0081	-.0119	.0525
#2	.0340	.0019	.0013	100.1	-.0042	-.0020	.0529

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**86894.**	**16446.**	**3806.2**	**6216.3**
Stddev	862.	83.	18.2	39.0
%RSD	.99149	.50426	.47765	.62730
#1	86285.	16505.	3819.1	6243.9
#2	87503.	16387.	3793.4	6188.7

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.1317**	**-.0014**	**.0231**	**.2274**	**.0429**	**.0267**	**7.544**	**.3200**	**-.0066**
Stddev	.0038	.0004	.0012	.0037	.0044	.0111	.047	.0025	.0060
%RSD	2.863	24.84	5.014	1.623	10.38	41.79	.6189	.7967	91.61
#1	.1344	-.0012	.0239	.2247	.0397	.0188	7.511	.3182	-.0023
#2	.1291	-.0017	.0223	.2300	.0460	.0345	7.577	.3218	-.0108

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0050**	**.3289**	**.0130**	**-.0068**	**.0606**	**-.0107**	**.0005**	**.4561**	**154.2**
Stddev	.0005	.0021	.0018	.0168	.0171	.0114	.0185	.0384	2.3
%RSD	10.16	.6477	13.49	248.3	28.22	105.8	3538.	8.418	1.469
#1	-.0047	.3274	.0118	.0051	.0485	-.0188	-.0126	.4832	155.8
#2	-.0054	.3304	.0143	-.0187	.0727	-.0027	.0136	.4289	152.6

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**3.022**	**73.35**	**4.450**	**59.93**	**-.0054**	**.0057**	**15.05**	**-.0041**	**.3794**
Stddev	.036	1.40	.506	1.08	.0134	.0018	.22	.0011	.0061
%RSD	1.182	1.911	11.38	1.804	248.6	31.50	1.463	25.96	1.613
#1	3.047	74.34	4.092	60.69	-.0149	.0044	14.89	-.0034	.3837
#2	2.997	72.36	4.808	59.16	.0041	.0070	15.20	-.0049	.3750

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0450**	**-.0015**	**.0029**	**103.3**	**-.0290**	**-.0002**	**.0691**
Stddev	.0055	.0049	.0012	1.4	.0485	.0129	.0060
%RSD	12.30	322.9	40.15	1.330	166.9	6629.	8.669
#1	.0411	.0020	.0021	102.3	.0052	.0089	.0733
#2	.0489	-.0050	.0038	104.3	-.0633	-.0093	.0648

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**84335.**	**16177.**	**3743.7**	**6270.5**
Stddev	379.	377.	17.3	29.5
%RSD	.44966	2.3291	.46345	.47045
#1	84603.	15911.	3756.0	6291.4
#2	84067.	16444.	3731.5	6249.6

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.1141**	**.0002**	**.0049**	**.0738**	**.0044**	**.0289**	**1.930**	**.0601**	**-.0001**
Stddev	.0002	.0001	.0004	.0048	.0001	.0011	.027	.0033	.0003
%RSD	.1852	22.28	8.402	6.490	1.863	3.707	1.402	5.461	296.7
#1	.1143	.0003	.0046	.0704	.0045	.0282	1.911	.0578	.0001
#2	.1140	.0002	.0051	.0772	.0043	.0297	1.950	.0624	-.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0085**	**.1077**	**-.0003**	**.0029**	**.0014**	**-.0010**	**-.0009**	**8.176**	**43.31**
Stddev	.0003	.0075	.0007	.0026	.0018	.0021	.0018	.055	.40
%RSD	3.105	6.975	254.3	91.20	123.1	199.9	202.1	.6763	.9243
#1	.0087	.1024	.0002	.0047	.0002	-.0025	-.0022	8.215	43.59
#2	.0083	.1130	-.0007	.0010	.0027	.0004	.0004	8.137	43.02

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**6.931**	**21.92**	**3.138**	**49.51**	**.0127**	**.0001**	**18.83**	**-.0024**	**.1075**
Stddev	.077	.28	.085	.33	.0011	.0003	1.33	.0004	.0006
%RSD	1.118	1.256	2.710	.6687	8.754	441.1	7.052	14.60	.5786
#1	6.985	22.11	3.198	49.75	.0119	-.0001	17.89	-.0027	.1079
#2	6.876	21.72	3.078	49.28	.0135	.0002	19.77	-.0022	.1070

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.1928**	**-.0020**	**-.0080**	**69.53**	**.0021**	**.0020**	**1.391**
Stddev	.0030	.0008	.0003	4.88	.0003	.0013	.093
%RSD	1.544	40.15	3.760	7.019	14.41	66.37	6.681
#1	.1907	-.0014	-.0078	66.08	.0023	.0029	1.326
#2	.1949	-.0025	-.0083	72.98	.0019	.0010	1.457

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**86168.**	**16506.**	**3638.4**	**6119.8**
Stddev	822.	219.	164.9	239.3
%RSD	.95421	1.3241	4.5323	3.9094
#1	86750.	16351.	3755.0	6289.0
#2	85587.	16660.	3521.8	5950.7

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0937**	**-.0001**	**.0105**	**.0781**	**.0024**	**.0333**	**7.334**	**.0876**	**-.0002**
Stddev	.0009	.0002	.0001	.0012	.0011	.0013	.085	.0015	.0000
%RSD	.9747	129.8	.7300	1.561	44.42	3.835	1.155	1.709	6.016
#1	.0931	-.0000	.0104	.0773	.0031	.0324	7.274	.0865	-.0003
#2	.0944	-.0002	.0105	.0790	.0016	.0342	7.394	.0886	-.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0007**	**.1405**	**-.0032**	**.0056**	**.0036**	**-.0034**	**.0046**	**2.750**	**79.48**
Stddev	.0009	.0025	.0028	.0033	.0022	.0052	.0010	.003	.53
%RSD	129.9	1.807	88.07	58.90	59.98	152.1	21.90	.1094	.6689
#1	.0001	.1387	-.0052	.0033	.0021	.0003	.0038	2.748	79.11
#2	.0013	.1423	-.0012	.0080	.0052	-.0071	.0053	2.752	79.86

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**3.190**	**40.33**	**3.967**	**95.97**	**.0432**	**.0014**	**16.49**	**.0157**	**.1428**
Stddev	.012	.33	.011	.95	.0002	.0003	.28	.0016	.0007
%RSD	.3798	.8138	.2668	.9912	.4104	24.51	1.688	10.22	.4692
#1	3.181	40.10	3.975	95.30	.0434	.0011	16.29	.0146	.1424
#2	3.198	40.57	3.960	96.64	.0431	.0016	16.69	.0169	.1433

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0779**	**-.0054**	**-.0049**	**81.81**	**-.0001**	**.0023**	**.2601**
Stddev	.0008	.0006	.0008	1.43	.0019	.0068	.0055
%RSD	1.049	11.14	16.79	1.753	1663.	291.4	2.097
#1	.0784	-.0050	-.0054	80.80	.0012	-.0025	.2563
#2	.0773	-.0058	-.0043	82.83	-.0015	.0071	.2640

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**85429.**	**16270.**	**3749.8**	**6284.6**
Stddev	100.	9.	17.5	27.0
%RSD	.11727	.05360	.46707	.42980
#1	85500.	16264.	3762.2	6303.7
#2	85358.	16277.	3737.4	6265.5

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0314**	**.0001**	**.0040**	**.0716**	**.0034**	**.2632**	**3.705**	**.0493**	**-.0008**
Stddev	.0001	.0000	.0000	.0006	.0003	.0012	.011	.0009	.0001
%RSD	.2506	49.12	.7066	.9034	9.745	.4501	.2890	1.752	17.40
#1	.0315	.0001	.0040	.0711	.0036	.2624	3.698	.0487	-.0009
#2	.0314	.0000	.0041	.0720	.0031	.2641	3.713	.0499	-.0007

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0008**	**.1507**	**-.0009**	**.0045**	**.0024**	**.0012**	**.0001**	**.5153**	**61.56**
Stddev	.0002	.0027	.0005	.0028	.0017	.0027	.0001	.0044	.23
%RSD	29.35	1.793	52.18	61.14	70.71	218.4	119.3	.8525	.3662
#1	-.0006	.1488	-.0012	.0026	.0012	.0031	.0002	.5121	61.72
#2	-.0010	.1526	-.0006	.0065	.0036	-.0007	.0000	.5184	61.40

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**2.129**	**30.21**	**7.186**	**85.14**	**.0392**	**.0006**	**14.89**	**.0116**	**.1158**
Stddev	.012	.13	.031	.23	.0002	.0001	.26	.0001	.0008
%RSD	.5768	.4435	.4320	.2739	.5524	18.73	1.755	.9402	.6482
#1	2.138	30.31	7.208	85.31	.0390	.0007	14.70	.0115	.1163
#2	2.121	30.12	7.164	84.98	.0393	.0006	15.07	.0117	.1152

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0193**	**-.0011**	**-.0059**	**71.57**	**-.0031**	**.0037**	**.8549**
Stddev	.0009	.0007	.0004	1.31	.0013	.0038	.0154
%RSD	4.623	61.22	7.008	1.837	40.74	103.0	1.801
#1	.0186	-.0006	-.0056	70.64	-.0040	.0010	.8440
#2	.0199	-.0016	-.0062	72.50	-.0022	.0064	.8657

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**86035.**	**16257.**	**3750.0**	**6336.6**
Stddev	299.	87.	18.6	17.9
%RSD	.34772	.53395	.49604	.28248
#1	85823.	16196.	3763.1	6349.3
#2	86246.	16319.	3736.8	6324.0

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0412**	**.0012**	**.0313**	**.3037**	**.1191**	**.0549**	**28.93**	**.4187**	**-.0025**
Stddev	.0080	.0014	.0003	.0017	.0035	.0075	.06	.0040	.0001
%RSD	19.44	116.0	1.116	.5484	2.903	13.62	.1938	.9460	2.359
#1	.0355	.0002	.0315	.3048	.1216	.0602	28.89	.4159	-.0025
#2	.0468	.0022	.0310	.3025	.1167	.0496	28.97	.4215	-.0026

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0107**	**.2910**	**-.0148**	**.0079**	**.0113**	**.0067**	**.0162**	**1.353**	**86.05**
Stddev	.0031	.0027	.0016	.0106	.0167	.0163	.0082	.005	.06
%RSD	28.54	.9254	10.78	134.5	147.5	245.0	50.79	.3493	.0661
#1	-.0129	.2890	-.0137	.0154	-.0005	.0182	.0221	1.350	86.01
#2	-.0086	.2929	-.0159	.0004	.0231	-.0049	.0104	1.356	86.09

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**4.316**	**41.16**	**41.87**	**430.4**	**-.0108**	**.0010**	**22.05**	**.0113**	**.2205**
Stddev	.057	.04	.16	1.4	.0062	.0052	.29	.0086	.0016
%RSD	1.317	.0935	.3837	.3282	57.69	520.3	1.295	76.01	.7240
#1	4.356	41.19	41.75	429.4	-.0152	.0046	21.85	.0173	.2217
#2	4.276	41.13	41.98	431.4	-.0064	-.0027	22.25	.0052	.2194

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0787**	**-.0006**	**.0004**	**370.2**	**-.0377**	**.0174**	**3.103**
Stddev	.0047	.0061	.0009	4.5	.0003	.0068	.023
%RSD	6.022	1029.	200.2	1.227	.7558	39.08	.7523
#1	.0821	.0037	-.0002	367.0	-.0379	.0126	3.087
#2	.0754	-.0049	.0011	373.5	-.0375	.0222	3.120

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**84511.**	**16065.**	**3731.3**	**6299.7**
Stddev	462.	106.	1.1	3.1
%RSD	.54656	.65959	.02916	.04984
#1	84837.	16140.	3732.0	6297.5
#2	84184.	15990.	3730.5	6301.9

Zoom In Zoom Out

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**	**.2468**
Stddev	.021	.015	.016	.014	.003	.002	.010	.014	.0022
%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	.2452
#2	2.078	2.032	1.910	1.958	1.988	1.935	1.996	1.990	.2484
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.959**	**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	.5560	.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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.83**	**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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 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 ?	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	**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

Zoom In Zoom Out

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**	**-.0001**	**-.0002**	**.0001**	**-.0001**	F **-.0026**	**-.0000**	**-.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	-.0002	-.0002	-.0002	-.0008	-.0022	.0000	-.0010
#2	.0007	-.0001	-.0002	.0004	.0006	-.0030	-.0001	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit						.0024		
Low Limit						-.0024		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0015**	**-.0006**	**.0001**	**.0008**	**-.0003**	**.0012**	**-.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	-.0016	-.0009	.0001	.0013	-.0006	.0012	.0004	-.0015
#2	-.0013	-.0003	.0001	.0003	.0001	.0012	-.0011	.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0213**	**-.0017**	**.0000**	**-.0062**	**-.0122**	**.0396**	**-.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	-.0195	-.0014	.0003	-.0156	-.0101	.0354	-.0026	-.0002
#2	-.0231	-.0020	-.0003	.0031	-.0143	.0437	-.0031	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Zoom In Zoom Out

Sample Name: ccb Acquired: 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**	**-.0000**	**.0011**	**-.0004**	**.0002**	**.0039**	**-.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	-.0002	.0007	.0001	.0010	.0004	.0001	.0059	-.0072
#2	.0013	.0018	-.0001	.0013	-.0012	.0003	.0020	.0018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0007**	**.0009**
Stddev	.0019	.0006
%RSD	255.0	66.29
#1	-.0020	.0005
#2	.0006	.0014
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**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

Zoom In Zoom Out

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**	**-.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	Tl1908	Pb2203	Se1960	Sb2068
Avg	**-.0002**	**-.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**	**-.0088**
Stddev	.064	.9	.41	.30	.0	7.	.0027	.0001
%RSD	5.033	.6985	.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	.8691	.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

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**-.0041**	**-.0014**	**2.068**	**-.0017**	**.0141**	**143.8**	**1.983**	**-.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	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0394**	**.7466**	**-.0411**	**.1353**	**-.0643**	**.1048**	**-.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.**	**-.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	**.1228**	**.0014**	**.1205**	F **5559.**	**-.0207**	**.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

Zoom In Zoom Out

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	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0112**	**.0466**	**-.0011**	**.0013**	**.0014**	**-.0004**	**-.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**	**-.0020**	**-.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

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0351**	**.0015**	**.0106**	**.1995**	**.0044**	**.0354**	**15.09**	**.1162**	**.0004**
Stddev	.0009	.0003	.0006	.0018	.0024	.0020	.07	.0015	.0024
%RSD	2.497	16.92	5.236	.8908	54.49	5.674	.4433	1.319	656.7
#1	.0344	.0017	.0110	.1982	.0027	.0340	15.04	.1151	-.0013
#2	.0357	.0014	.0102	.2007	.0061	.0368	15.14	.1173	.0020

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0048**	**.3726**	**-.0041**	**.0115**	**-.0075**	**-.0097**	**.0045**	**2.275**	**101.9**
Stddev	.0033	.0043	.0010	.0054	.0000	.0076	.0009	.066	1.2
%RSD	69.60	1.147	24.13	47.05	.3917	77.99	20.01	2.888	1.169
#1	-.0024	.3696	-.0034	.0153	-.0075	-.0151	.0052	2.322	102.7
#2	-.0071	.3756	-.0048	.0076	-.0075	-.0044	.0039	2.229	101.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**10.71**	**53.77**	**50.82**	**390.2**	**.0342**	**.0006**	**25.01**	**.0211**	**.2328**
Stddev	.12	.85	.14	2.7	.0013	.0001	.22	.0019	.0030
%RSD	1.086	1.585	.2660	.6967	3.884	14.19	.8628	8.862	1.303
#1	10.79	54.37	50.91	392.1	.0333	.0006	24.86	.0225	.2349
#2	10.63	53.16	50.72	388.2	.0351	.0005	25.17	.0198	.2307

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0212**	**-.0059**	**-.0042**	**299.8**	**-.0073**	**.0015**	**3.281**
Stddev	.0007	.0040	.0017	2.5	.0064	.0133	.022
%RSD	3.226	67.69	40.85	.8370	86.79	890.2	.6606
#1	.0207	-.0087	-.0054	298.0	-.0118	.0109	3.266
#2	.0217	-.0031	-.0030	301.5	-.0028	-.0079	3.297

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**84955.**	**16051.**	**3709.0**	**6287.3**
Stddev	107.	77.	15.9	21.3
%RSD	.12593	.47669	.42995	.33848
#1	85031.	15997.	3720.2	6302.4
#2	84879.	16105.	3697.7	6272.3

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.1463**	**-.0000**	**.0105**	**.1228**	**.0144**	**.0313**	**11.38**	**.1182**	**-.0016**
Stddev	.0023	.0001	.0002	.0017	.0004	.0002	.09	.0019	.0003
%RSD	1.604	199.3	1.606	1.390	2.937	.4983	.7705	1.580	20.40
#1	.1480	-.0001	.0106	.1216	.0141	.0312	11.44	.1169	-.0014
#2	.1447	.0000	.0104	.1240	.0147	.0314	11.32	.1195	-.0018

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0089**	**.2681**	**-.0008**	**.0068**	**.0112**	**-.0084**	**-.0026**	**8.636**	**87.24**
Stddev	.0001	.0029	.0015	.0008	.0009	.0007	.0095	.122	.76
%RSD	1.412	1.064	188.4	12.41	7.722	8.484	361.1	1.414	.8757
#1	.0090	.2661	-.0018	.0062	.0118	-.0079	-.0094	8.722	87.78
#2	.0088	.2701	.0003	.0074	.0106	-.0089	.0041	8.549	86.70

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**13.63**	**46.27**	**6.548**	**74.29**	**.0468**	**.0005**	**30.70**	**-.0037**	**.1494**
Stddev	.11	.40	.093	.40	.0003	.0012	.29	.0018	.0019
%RSD	.8099	.8548	1.422	.5353	.7177	257.2	.9496	48.53	1.256
#1	13.71	46.55	6.614	74.57	.0466	.0013	30.50	-.0050	.1507
#2	13.55	45.99	6.482	74.01	.0471	-.0004	30.91	-.0025	.1481

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.5503**	**-.0055**	**-.0107**	**65.67**	**.0046**	**.0099**	**.2204**
Stddev	.0012	.0027	.0003	.73	.0037	.0044	.0017
%RSD	.2208	49.64	2.787	1.111	80.68	44.62	.7928
#1	.5512	-.0036	-.0105	65.15	.0020	.0068	.2192
#2	.5494	-.0075	-.0109	66.18	.0073	.0130	.2216

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**84807.**	**16008.**	**3693.0**	**6208.8**
Stddev	569.	70.	1.7	3.9
%RSD	.67049	.43591	.04660	.06325
#1	84404.	15959.	3691.8	6206.0
#2	85209.	16058.	3694.2	6211.6

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.1306**	**.0010**	**.0150**	**.0807**	**.1449**	**.0565**	**4.447**	**.1911**	**-.0047**
Stddev	.0012	.0001	.0020	.0013	.0086	.0129	.368	.0012	.0006
%RSD	.9283	8.814	13.15	1.644	5.906	22.89	8.276	.6081	12.83
#1	.1297	.0011	.0136	.0816	.1509	.0656	4.707	.1902	-.0052
#2	.1315	.0010	.0163	.0797	.1388	.0473	4.187	.1919	-.0043

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0256**	**.3378**	**-.0068**	**.0023**	**.0019**	**-.0036**	**-.0046**	**12.13**	**114.8**
Stddev	.0041	.0004	.0044	.0037	.0007	.0088	.0003	.05	.1
%RSD	15.97	.1257	64.80	162.8	36.13	245.4	5.634	.3755	.0659
#1	.0285	.3375	-.0099	.0049	.0014	-.0098	-.0048	12.16	114.8
#2	.0227	.3381	-.0037	-.0003	.0024	.0026	-.0045	12.10	114.7

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**20.40**	**70.01**	**15.31**	**258.1**	**.0150**	**.0036**	**32.27**	**.0031**	**.1843**
Stddev	.00	.01	.23	.5	.0042	.0001	.11	.0017	.0003
%RSD	.0130	.0081	1.472	.1938	27.98	4.123	.3430	54.40	.1792
#1	20.40	70.01	15.15	257.8	.0179	.0035	32.19	.0043	.1846
#2	20.40	70.01	15.47	258.5	.0120	.0037	32.34	.0019	.1841

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.038**	**-.0059**	**-.0053**	**241.4**	**.0099**	**.0019**	**2.457**
Stddev	.080	.0062	.0018	.5	.0177	.0124	.012
%RSD	7.707	105.0	33.50	.2249	178.9	652.9	.4881
#1	1.095	-.0103	-.0065	241.0	-.0026	-.0069	2.449
#2	.9817	-.0015	-.0040	241.7	.0224	.0106	2.466

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**78903.**	**16236.**	**3710.0**	**6206.3**
Stddev	5859.	18.	6.6	8.4
%RSD	7.4257	.11193	.17854	.13570
#1	74760.	16249.	3705.3	6200.3
#2	83046.	16223.	3714.6	6212.3

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.1895**	**-.0001**	**-.0003**	**.0027**	**.0016**	**.0044**	**1.816**	**.0054**	**.0013**
Stddev	.0029	.0001	.0002	.0000	.0006	.0007	.015	.0009	.0008
%RSD	1.548	87.79	56.07	1.429	41.16	15.25	.7984	16.49	60.07
#1	.1874	-.0001	-.0002	.0027	.0020	.0049	1.827	.0047	.0007
#2	.1915	-.0002	-.0004	.0027	.0011	.0039	1.806	.0060	.0018

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0090**	**.0712**	**.0434**	**-.0018**	**.0067**	**.0027**	**.0007**	**.7770**	**235.6**
Stddev	.0001	.0015	.0006	.0013	.0011	.0029	.0020	.0006	.9
%RSD	1.611	2.118	1.466	70.84	16.09	108.0	288.4	.0736	.3903
#1	.0089	.0701	.0438	-.0027	.0060	.0006	-.0007	.7774	235.0
#2	.0091	.0722	.0429	-.0009	.0075	.0048	.0021	.7766	236.3

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**77.64**	**41.51**	**16.42**	**19.39**	**.0292**	**.0016**	**5.281**	**-.0010**	**.9385**
Stddev	.87	.66	.32	.29	.0010	.0000	.101	.0003	.0108
%RSD	1.121	1.590	1.938	1.505	3.438	.2477	1.906	33.69	1.146
#1	77.02	41.04	16.19	19.18	.0285	.0016	5.209	-.0012	.9309
#2	78.25	41.98	16.64	19.60	.0299	.0016	5.352	-.0007	.9461

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0096**	**-.0013**	**-.0023**	**4.484**	**.0018**	**-.0001**	**.4711**
Stddev	.0013	.0018	.0004	.078	.0005	.0008	.0080
%RSD	13.61	139.0	15.66	1.746	28.84	939.2	1.704
#1	.0087	-.0026	-.0026	4.429	.0022	-.0007	.4654
#2	.0105	-.0000	-.0021	4.540	.0015	.0005	.4768

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**82629.**	**15757.**	**3584.3**	**6144.7**
Stddev	819.	164.	26.7	41.0
%RSD	.99128	1.0409	.74612	.66697
#1	82049.	15873.	3603.2	6173.6
#2	83208.	15641.	3565.4	6115.7

Zoom In Zoom Out

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**	**-.0001**	**-.0005**	**.0039**	**.0004**	**-.0004**	**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	-.0001	-.0008	.0042	.0005	-.0005	5.449	.0021	-.0005
#2	1.049	-.0000	-.0003	.0036	.0004	-.0004	5.466	.0019	.0014

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0018**	**.0107**	**-.0000**	**.0072**	**-.0026**	**-.0005**	**-.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	-.0019	.0104	.0004	.0088	-.0027	.0019	-.0017	.3400	404.3
#2	-.0017	.0110	-.0004	.0056	-.0026	-.0028	.0002	.3460	402.8

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**.1097**	**82.50**	**6.320**	F **851.6**	**.2383**	**.0046**	**8.800**	**-.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	.4118
#1	.1102	82.96	6.241	854.4	.2351	.0050	8.702	-.0013	2.133
#2	.1092	82.04	6.400	848.7	.2416	.0043	8.897	-.0023	2.120

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0025**	**.0002**	**-.0039**	**19.00**	**-.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	-.0041	18.81	-.0047	.0269	.0282
#2	.0027	-.0003	-.0036	19.20	.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

Zoom In Zoom Out

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**	**-.0006**	**.0006**	**.0017**	**-.0013**	**-.0098**	**5.691**	**-.0010**	**-.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	-.0009	.0014	.0013	-.0029	-.0133	5.658	.0006	-.0014
#2	1.058	-.0003	-.0002	.0021	.0003	-.0062	5.725	-.0026	-.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0027**	**.0133**	**-.0006**	**.0097**	**-.0020**	**-.0115**	**-.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	-.0033	.0124	.0013	.0147	-.0004	-.0076	.0045	.2198	417.5
#2	-.0020	.0142	-.0026	.0047	-.0037	-.0154	-.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**	**-.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	-.0051	2.108
#2	.0849	85.10	7.067	903.1	.2130	.0083	8.688	-.0052	2.121

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0062**	**-.0005**	**-.0055**	**18.60**	**-.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	-.0012	-.0052	18.56	-.0116	.0280	.0331
#2	.0110	.0001	-.0059	18.64	-.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

Zoom In Zoom Out

Sample Name: ccv 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**	**.2417**
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	.2406
#2	2.023	1.973	1.922	1.970	1.958	1.906	1.962	2.005	.2429
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	.012	.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									

Zoom In Zoom Out

Sample Name: ccv 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

Zoom In Zoom Out

Sample Name: ccb Acquired: 6/8/2018 4:36:06 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	**.0009**	**-.0001**	**-.0001**	**-.0006**	**-.0001**	**-.0024**	**-.0001**	**-.0004**	**-.0007**
Stddev	.0002	.0000	.0002	.0000	.0008	.0003	.0000	.0007	.0004
%RSD	22.13	4.319	175.7	.1537	968.0	12.16	64.48	175.1	55.06
#1	.0010	-.0001	.0000	-.0006	.0005	-.0022	-.0000	.0001	-.0004
#2	.0007	-.0001	-.0003	-.0006	-.0006	-.0026	-.0001	-.0010	-.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0004**	**.0005**	**-.0007**	**.0004**	**-.0012**	**-.0001**	**-.0001**	**-.0007**
Stddev	.0002	.0001	.0004	.0003	.0004	.0026	.0011	.0021	.0024
%RSD	97.18	20.01	78.98	43.82	91.13	219.1	1244.	2883.	326.5
#1	-.0001	.0004	.0007	-.0010	.0001	-.0030	-.0008	-.0016	-.0024
#2	-.0004	.0003	.0002	-.0005	.0007	.0006	.0007	.0014	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0008**	**.0068**	**.0731**	**.1399**	**-.0031**	**.0001**	**.0034**	**.0014**	**.0001**
Stddev	.0004	.0024	.0055	.0017	.0008	.0002	.0002	.0007	.0000
%RSD	47.64	34.68	7.477	1.234	24.19	228.3	5.558	52.45	55.49
#1	-.0011	.0051	.0770	.1387	-.0037	-.0001	.0036	.0019	.0001
#2	-.0006	.0084	.0692	.1411	-.0026	.0002	.0033	.0009	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 6/8/2018 4:36:06 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	**.0010**	**-.0027**	**.0002**	**.0023**	**-.0021**	**.0001**	**.0012**
Stddev	.0003	.0008	.0001	.0014	.0003	.0038	.0004
%RSD	31.06	30.56	71.01	61.80	12.69	3244.	30.44
#1	.0008	-.0021	.0003	.0013	-.0019	-.0026	.0014
#2	.0012	-.0033	.0001	.0033	-.0022	.0028	.0009
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	**84872.**	**15948.**	**3716.8**	**6236.4**
Stddev	334.	73.	15.4	19.4
%RSD	.39357	.45535	.41535	.31035
#1	85109.	15897.	3727.7	6250.1
#2	84636.	15999.	3705.9	6222.7

Zoom In Zoom Out

Sample Name: fa54707-1 2 Acquired: 6/8/2018 4:39:08 Type: Unk
Method: Accutest XPress(v421) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: mp7521, water

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0072**	**-.0001**	**.0000**	**-.0006**	**-.0003**	**-.0027**	**.0218**	**-.0001**	**-.0007**
Stddev	.0004	.0002	.0001	.0003	.0002	.0003	.0001	.0006	.0011
%RSD	5.978	168.9	328.0	44.11	78.45	12.76	.5491	403.8	167.4
#1	.0069	-.0003	-.0001	-.0008	-.0001	-.0030	.0217	.0003	.0001
#2	.0075	.0000	.0001	-.0004	-.0004	-.0025	.0219	-.0005	-.0015

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0000**	**.0007**	**-.0017**	**-.0007**	**-.0001**	**-.0012**	**.0036**	**.3108**	**.3331**
Stddev	.0003	.0001	.0016	.0009	.0025	.0005	.0014	.0047	.0084
%RSD	639.8	10.69	94.84	120.6	2955.	43.17	38.20	1.518	2.520
#1	-.0002	.0007	-.0028	-.0014	-.0019	-.0008	.0046	.3074	.3271
#2	.0002	.0006	-.0006	-.0001	.0017	-.0015	.0027	.3141	.3390

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**.0249**	**.2174**	**.1535**	**1.588**	**.0052**	**.0005**	**1.521**	**-.0006**	**.0037**
Stddev	.0003	.0131	.0648	.018	.0000	.0002	.020	.0001	.0001
%RSD	1.399	6.009	42.22	1.141	.4329	47.00	1.340	23.98	3.655
#1	.0247	.2266	.1994	1.575	.0051	.0006	1.507	-.0005	.0036
#2	.0252	.2081	.1077	1.601	.0052	.0003	1.536	-.0007	.0038

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0046**	**-.0007**	**-.0006**	**.6308**	**.0010**	**.0022**	**.0059**
Stddev	.0003	.0003	.0005	.0093	.0002	.0034	.0004
%RSD	6.581	42.29	74.78	1.468	21.89	153.7	7.163
#1	.0044	-.0009	-.0003	.6243	.0012	-.0002	.0062
#2	.0048	-.0005	-.0010	.6374	.0009	.0046	.0056

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**85704.**	**16251.**	**3730.6**	**6260.6**
Stddev	286.	6.	10.8	16.1
%RSD	.33355	.03644	.28874	.25670
#1	85502.	16255.	3723.0	6249.3
#2	85907.	16247.	3738.2	6272.0

Zoom In Zoom Out

Sample Name: fa54707-2 Acquired: 6/8/2018 4:42:09 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	**.0054**	**-.0002**	**-.0001**	**-.0001**	**.0081**	**-.0021**	**.0737**	**.0006**	**-.0005**
Stddev	.0004	.0000	.0002	.0003	.0004	.0000	.0002	.0003	.0002
%RSD	7.105	17.99	151.9	287.4	4.375	.4954	.3076	44.21	37.32
#1	.0057	-.0002	-.0002	.0001	.0078	-.0021	.0739	.0004	-.0006
#2	.0052	-.0001	.0000	-.0003	.0083	-.0021	.0736	.0008	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0000**	**.0012**	**.0027**	**-.0002**	**-.0002**	**.0031**	**.0043**	**.0689**	**74.37**
Stddev	.0008	.0001	.0014	.0012	.0003	.0005	.0009	.0002	.24
%RSD	6786.	5.211	49.56	571.2	155.9	15.40	20.69	.2383	.3255
#1	-.0005	.0012	.0037	.0006	-.0004	.0028	.0037	.0690	74.54
#2	.0005	.0013	.0018	-.0010	.0000	.0035	.0050	.0688	74.20

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**.3409**	**21.05**	**41.12**	**67.11**	**2.180**	**.0001**	**.5903**	**-.0005**	**.0676**
Stddev	.0020	.02	.15	.16	.029	.0001	.0074	.0002	.0002
%RSD	.5763	.0865	.3697	.2431	1.324	62.51	1.258	48.04	.2956
#1	.3395	21.06	41.02	67.00	2.159	.0001	.5850	-.0007	.0677
#2	.3423	21.04	41.23	67.23	2.200	.0002	.5955	-.0003	.0674

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0016**	**-.0020**	**.0011**	**20.50**	**-.0027**	**.0010**	**.0124**
Stddev	.0003	.0013	.0001	.26	.0013	.0004	.0005
%RSD	18.47	65.10	12.89	1.273	46.74	37.87	4.184
#1	.0019	-.0011	.0010	20.32	-.0037	.0012	.0121
#2	.0014	-.0029	.0012	20.68	-.0018	.0007	.0128

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**84968.**	**16219.**	**3699.9**	**6231.0**
Stddev	480.	15.	2.7	.0
%RSD	.56447	.09550	.07267	.00041
#1	84628.	16209.	3701.8	6231.0
#2	85307.	16230.	3698.0	6230.9

Zoom In Zoom Out

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**	**-.0001**	**-.0001**	**.0008**	**.0150**	**-.0020**	**.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	-.0001	-.0001	.0011	.0157	-.0015	.1710	.0009
#2	.0156	-.0001	-.0001	.0006	.0143	-.0025	.1662	.0001

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	**.0000**	**.0016**	**.0008**	**.0035**	F **-.0025**	**-.0024**	**-.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	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	**1.004**	**-.0009**	**.3360**	**.0000**	**-.0002**	**.0010**	**8.085**	**-.0011**
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

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**-.0001**	**.0003**	**.0001**	**.0125**	**-.0014**	**.2019**	**-.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**	**-.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	Sn1899	Sr4077
Avg	**.0128**	**41.97**	**47.69**	**77.30**	**4.600**	**.0005**	**11.19**	**-.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**	**-.0031**	**16.34**	**-.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

Zoom In Zoom Out

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**	**-.0001**	**.0001**	**-.0005**	**.0051**	**-.0012**	**.1397**	**-.0001**
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**	**-.0013**	F **-.0033**	**-.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**	**2.561**	**.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	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	**1.789**	**-.0008**	**.8373**	**.0063**	**-.0001**	**.0014**	**43.77**	**-.0029**
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

Zoom In
Zoom Out

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

Zoom In
Zoom Out

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	-.0001	.0003	-.0007	.0032	-.0021	.0788	-.0001	-.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	-.0001	.0001	-.0006	.0033	-.0023	.0778	-.0009	-.0008
#2	.0172	-.0001	.0004	-.0007	.0030	-.0019	.0798	.0006	-.0007

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	-.0002	.0018	.0006	-.0003	-.0026	-.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	-.0016	.4329
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	.4298
#2	.0237	15.21	12.38	17.51	.7593	-.0003	2.498	-.0025	.4361

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	.0020	-.0028	-.0007	12.76	-.0017	-.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

Zoom In
Zoom Out

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	-.0000	-.0001	-.0010	.0014	-.0017	.0940	-.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	-.0001	.0002	.0004	-.0011	F -.0028	-.0003	-.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	-.0012	.5381	-.0007	-.0013	-.0018	7.493	-.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	-.0004	.0155
Stddev	.0058	.0001
%RSD	1595.	.5560
#1	-.0044	.0154
#2	.0037	.0155

Zoom In
Zoom Out

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

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0057**	**-.0001**	**.0001**	**-.0008**	**-.0003**	**-.0018**	**.0002**	**-.0007**	**-.0009**
Stddev	.0002	.0001	.0000	.0003	.0007	.0003	.0001	.0004	.0001
%RSD	4.220	74.03	30.90	41.49	229.9	17.85	24.15	56.07	11.83
#1	.0055	-.0002	.0001	-.0006	.0002	-.0021	.0002	-.0004	-.0010
#2	.0059	-.0001	.0001	-.0010	-.0008	-.0016	.0003	-.0009	-.0008

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0009**	**.0005**	**-.0006**	**-.0014**	**-.0012**	**-.0002**	**.0008**	**-.0025**	**18.14**
Stddev	.0001	.0000	.0002	.0021	.0019	.0000	.0001	.0082	.12
%RSD	16.07	4.654	41.59	154.9	158.2	10.08	9.138	328.5	.6841
#1	-.0008	.0005	-.0008	-.0028	.0001	-.0002	.0008	.0033	18.05
#2	-.0010	.0005	-.0004	.0001	-.0026	-.0003	.0007	-.0083	18.23

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**.0056**	**2.118**	**.2556**	**1.515**	**.0088**	**.0010**	**4.025**	**-.0010**	**.1006**
Stddev	.0005	.011	.0391	.019	.0013	.0000	.091	.0005	.0010
%RSD	9.372	.5156	15.30	1.230	14.79	1.887	2.262	51.82	1.040
#1	.0059	2.111	.2832	1.501	.0079	.0010	3.961	-.0014	.0998
#2	.0052	2.126	.2279	1.528	.0098	.0010	4.090	-.0006	.1013

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**-.0001**	**-.0015**	**-.0019**	**1.778**	**-.0036**	**-.0009**	**.0218**
Stddev	.0001	.0007	.0000	.043	.0001	.0000	.0020
%RSD	215.4	44.23	.2342	2.426	1.899	1.813	8.948
#1	-.0002	-.0020	-.0019	1.747	-.0035	-.0009	.0204
#2	.0000	-.0010	-.0019	1.808	-.0036	-.0009	.0232

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	83528.	16175.	3664.9	6180.3
Stddev	133.	118.	35.4	48.5
%RSD	.15871	.72759	.96595	.78472
#1	83622.	16258.	3689.9	6214.6
#2	83434.	16092.	3639.9	6146.0

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0059**	**-.0000**	**-.0004**	**-.0009**	**.0082**	**-.0017**	**.0731**	**.0005**	**-.0003**
Stddev	.0002	.0000	.0001	.0005	.0005	.0008	.0005	.0004	.0001
%RSD	2.784	56.68	25.49	58.00	5.780	44.78	.6496	82.65	24.00
#1	.0060	-.0000	-.0003	-.0012	.0086	-.0022	.0727	.0002	-.0003
#2	.0058	-.0000	-.0004	-.0005	.0079	-.0011	.0734	.0008	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0004**	**.0006**	**.0023**	**-.0012**	**-.0016**	**-.0016**	**.0029**	**.0518**	**76.78**
Stddev	.0004	.0000	.0009	.0006	.0007	.0008	.0017	.0056	.09
%RSD	94.37	8.124	38.30	49.70	43.45	47.55	59.01	10.83	.1204
#1	.0001	.0006	.0016	-.0008	-.0011	-.0011	.0017	.0557	76.71
#2	.0007	.0006	.0029	-.0016	-.0021	-.0022	.0041	.0478	76.84

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**.3399**	**21.69**	**42.07**	**68.81**	**2.190**	**-.0000**	**.5855**	**-.0013**	**.0696**
Stddev	.0032	.10	.28	.42	.028	.0001	.0073	.0002	.0001
%RSD	.9395	.4591	.6651	.6112	1.288	609.1	1.241	19.37	.1807
#1	.3422	21.62	41.87	68.51	2.170	.0001	.5804	-.0011	.0696
#2	.3377	21.76	42.27	69.10	2.210	-.0001	.5907	-.0015	.0697

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**-.0000**	**-.0023**	**.0014**	**21.82**	**-.0036**	**-.0014**	**.0118**
Stddev	.0001	.0012	.0002	.31	.0011	.0002	.0001
%RSD	486.3	49.67	16.43	1.404	30.65	12.37	1.223
#1	-.0001	-.0032	.0013	21.60	-.0043	-.0015	.0117
#2	.0001	-.0015	.0016	22.03	-.0028	-.0013	.0119

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	85559.	16287.	3765.4	6318.2
Stddev	240.	60.	2.7	8.6
%RSD	.28088	.36954	.07135	.13563
#1	85729.	16245.	3763.5	6312.1
#2	85389.	16330.	3767.3	6324.2

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.031**	**1.990**	**1.935**	**1.975**	**1.967**	**1.912**	**1.966**	**2.009**	**.2442**
Stddev	.010	.018	.022	.018	.010	.012	.018	.019	.0031
%RSD	.5065	.8895	1.147	.9168	.4997	.6266	.9028	.9590	1.282
#1	2.039	2.003	1.919	1.962	1.960	1.903	1.953	1.995	.2420
#2	2.024	1.978	1.950	1.988	1.974	1.920	1.978	2.022	.2464
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.937**	**1.957**	**1.976**	**1.963**	**1.942**	**1.949**	**1.954**	**39.92**	**40.73**
Stddev	.015	.020	.024	.014	.016	.026	.020	.33	.27
%RSD	.7585	1.026	1.212	.7040	.8232	1.335	.9995	.8180	.6638
#1	1.927	1.943	1.959	1.953	1.930	1.931	1.940	40.15	40.92
#2	1.947	1.971	1.993	1.973	1.953	1.968	1.968	39.69	40.54
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.19**	**41.50**	**39.76**	**40.99**	**1.954**	**1.988**	**4.935**	**1.931**	**2.025**
Stddev	.36	.26	.06	.14	.021	.018	.057	.018	.014
%RSD	.9002	.6332	.1549	.3445	1.072	.9058	1.161	.9076	.6712
#1	40.44	41.69	39.71	41.09	1.940	1.975	4.895	1.919	2.035
#2	39.93	41.32	39.80	40.89	1.969	2.000	4.976	1.943	2.016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 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:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.004**	**1.984**	**1.964**	**1.887**	**1.953**	**2.023**	**1.979**
Stddev	.017	.024	.014	.017	.022	.014	.017
%RSD	.8639	1.203	.6951	.8725	1.107	.7131	.8708
#1	1.992	1.967	1.955	1.875	1.938	2.033	1.967
#2	2.016	2.001	1.974	1.899	1.969	2.013	1.991
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	81638.	15520.	3557.2	6161.6
Stddev	567.	72.	.3	9.9
%RSD	.69510	.46159	.00806	.16107
#1	82039.	15469.	3557.0	6154.6
#2	81237.	15570.	3557.4	6168.6

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**-.0000**	**.0001**	**-.0001**	**-.0005**	F **-.0030**	**-.0001**	**.0001**
Stddev	.0001	.0000	.0002	.0003	.0001	.0011	.0000	.0005
%RSD	12.54	2.134	144.4	279.4	22.58	35.81	14.98	527.5
#1	.0009	-.0000	.0002	-.0003	-.0004	-.0038	-.0001	-.0002
#2	.0010	-.0000	-.0000	.0001	-.0006	-.0023	-.0001	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit						.0024		
Low Limit						-.0024		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0007**	**-.0005**	**-.0000**	**-.0006**	**-.0005**	**.0011**	**-.0009**	**.0019**
Stddev	.0001	.0002	.0001	.0007	.0023	.0003	.0000	.0012
%RSD	11.24	31.41	235.9	105.9	430.8	30.28	3.455	63.97
#1	-.0006	-.0004	-.0001	-.0002	.0011	.0014	-.0009	.0028
#2	-.0007	-.0007	.0000	-.0011	-.0021	.0009	-.0008	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0043**	**-.0036**	**-.0015**	**.0067**	**.0300**	**.0604**	**.0025**	**.0006**
Stddev	.0105	.0055	.0007	.0180	.1020	.0175	.0004	.0005
%RSD	241.8	154.8	47.92	268.7	340.3	29.01	15.31	84.90
#1	-.0118	-.0075	-.0010	-.0060	-.0422	.0727	.0028	.0009
#2	.0031	.0003	-.0020	.0195	.1021	.0480	.0022	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Zoom In Zoom Out

Sample Name: ccb Acquired: 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:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0038**	**.0006**	**-.0000**	**.0010**	**-.0022**	**.0003**	**.0016**	**.0003**
Stddev	.0002	.0009	.0000	.0001	.0010	.0001	.0013	.0012
%RSD	5.247	140.4	387.7	10.46	45.46	23.77	82.86	420.5
#1	.0037	.0000	.0000	.0011	-.0015	.0003	.0025	.0012
#2	.0040	.0012	-.0000	.0009	-.0029	.0002	.0006	-.0006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0032**	**.0015**
Stddev	.0015	.0001
%RSD	47.81	10.12
#1	-.0043	.0016
#2	-.0021	.0014
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**84160.**	**15890.**	**3684.5**	**6189.0**
Stddev	1173.	276.	2.0	11.6
%RSD	1.3936	1.7343	.05345	.18676
#1	84989.	16085.	3683.1	6180.8
#2	83330.	15695.	3685.9	6197.2

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0001**	**-.0001**	**.0000**	**-.0008**	**.0013**	**-.0015**	**-.0001**	**-.0009**	**-.0008**
Stddev	.0003	.0000	.0002	.0000	.0003	.0005	.0001	.0002	.0003
%RSD	285.6	39.66	602.1	3.671	24.15	30.58	179.0	20.44	41.31
#1	.0003	-.0001	-.0001	-.0007	.0015	-.0018	-.0002	-.0008	-.0011
#2	-.0001	-.0001	.0002	-.0008	.0010	-.0012	.0000	-.0010	-.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0006**	**.0015**	**-.0012**	**-.0014**	**-.0026**	**-.0026**	**.0020**	**.0039**	**.0020**
Stddev	.0002	.0001	.0026	.0017	.0004	.0017	.0001	.0235	.0010
%RSD	37.12	8.963	220.3	124.6	16.17	65.05	2.859	606.6	50.05
#1	-.0005	.0014	.0007	-.0026	-.0023	-.0038	.0020	.0205	.0027
#2	-.0008	.0016	-.0031	-.0002	-.0029	-.0014	.0021	-.0127	.0013

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**.0069**	**.0273**	**.0420**	**.0658**	**.0007**	**.0002**	**.0263**	**.0001**	**-.0000**
Stddev	.0028	.0092	.0863	.0012	.0012	.0005	.0002	.0000	.0000
%RSD	40.19	33.60	205.5	1.756	178.5	217.7	.7947	8.430	40.48
#1	.0088	.0208	.1031	.0650	-.0002	-.0001	.0264	.0001	-.0001
#2	.0049	.0338	-.0190	.0666	.0015	.0006	.0261	.0002	-.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0012**	**-.0001**	**.0006**	**.0097**	**-.0008**	**.0008**	**.0029**
Stddev	.0001	.0030	.0001	.0008	.0002	.0022	.0007
%RSD	8.889	5518.	17.80	7.897	25.20	264.0	23.85
#1	.0013	-.0022	.0006	.0102	-.0006	-.0007	.0024
#2	.0011	.0021	.0005	.0091	-.0009	.0024	.0034

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**85290.**	**16311.**	**3706.9**	**6202.3**
Stddev	1809.	207.	35.7	55.7
%RSD	2.1212	1.2709	.96220	.89815
#1	84011.	16164.	3732.2	6241.7
#2	86570.	16457.	3681.7	6162.9

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.1748**	**-.0002**	**-.0000**	**.0004**	**.0011**	**.0002**	**.7672**	**.0032**	**.0000**
Stddev	.0030	.0000	.0003	.0002	.0006	.0003	.0008	.0007	.0002
%RSD	1.698	4.785	1765.	42.37	51.54	141.9	.1070	21.57	335.1
#1	.1769	-.0002	.0002	.0005	.0007	-.0000	.7677	.0037	.0002
#2	.1727	-.0001	-.0003	.0003	.0016	.0004	.7666	.0027	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0012**	**.0612**	**.0015**	**.0064**	**.0010**	**.0044**	**.0014**	**.0717**	**146.7**
Stddev	.0013	.0009	.0005	.0025	.0001	.0010	.0005	.0103	1.3
%RSD	108.4	1.495	33.16	39.42	7.162	22.75	38.74	14.39	.8904
#1	.0021	.0605	.0019	.0046	.0009	.0037	.0010	.0644	147.6
#2	.0003	.0618	.0012	.0082	.0010	.0051	.0017	.0790	145.7

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**3.623**	**224.5**	**80.45**	F **1712.**	**.9436**	**.0035**	**8.926**	**-.0020**	**1.717**
Stddev	.035	2.3	.21	56.	.0143	.0002	.134	.0011	.018
%RSD	.9743	1.025	.2667	3.252	1.514	7.018	1.499	54.36	1.069
#1	3.648	226.2	80.60	1751.	.9335	.0033	8.831	-.0013	1.730
#2	3.598	222.9	80.30	1673.	.9537	.0037	9.021	-.0028	1.704

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0027**	**.0000**	**-.0009**	F **146.0**	**-.0020**	**.0623**	**.1873**
Stddev	.0002	.0011	.0005	2.2	.0037	.0018	.0015
%RSD	9.190	30160.	51.96	1.530	181.0	2.940	.8146
#1	.0025	.0008	-.0006	144.4	.0006	.0610	.1862
#2	.0028	-.0008	-.0012	147.6	-.0046	.0636	.1884

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**83209.**	**15440.**	**3572.9**	**6089.6**
Stddev	426.	109.	20.5	31.1
%RSD	.51140	.70809	.57428	.50992
#1	82908.	15363.	3587.4	6111.5
#2	83510.	15517.	3558.4	6067.6

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.1752**	**-.0000**	**.0002**	**.0002**	**.0013**	**-.0008**	**.7657**	**.0026**	**-.0001**
Stddev	.0014	.0000	.0003	.0002	.0002	.0014	.0301	.0001	.0009
%RSD	.8171	15.61	132.1	98.86	17.00	179.6	3.937	4.765	812.7
#1	.1742	-.0000	.0000	.0001	.0014	-.0018	.7444	.0026	-.0007
#2	.1763	-.0000	.0004	.0003	.0011	.0002	.7870	.0027	.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0010**	**.0483**	**.0022**	**.0061**	**.0013**	**.0002**	**-.0020**	**.0643**	**147.2**
Stddev	.0001	.0001	.0008	.0019	.0012	.0010	.0013	.0084	1.4
%RSD	12.98	.1235	38.53	31.09	91.56	495.8	67.16	13.07	.9456
#1	.0009	.0482	.0028	.0074	.0022	-.0005	-.0010	.0703	146.2
#2	.0011	.0483	.0016	.0047	.0005	.0009	-.0029	.0584	148.2

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**3.463**	**225.8**	**81.31**	F **1628.**	**.9364**	**.0036**	**8.844**	**-.0026**	**1.726**
Stddev	.029	1.9	1.27	21.	.0104	.0002	.104	.0005	.018
%RSD	.8275	.8561	1.565	1.273	1.107	4.789	1.173	18.40	1.038
#1	3.443	224.4	80.41	1643.	.9290	.0035	8.771	-.0030	1.713
#2	3.483	227.1	82.21	1614.	.9437	.0037	8.917	-.0023	1.739

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0014**	**-.0009**	**-.0009**	F **145.1**	**-.0037**	**.0679**	**.1799**
Stddev	.0003	.0043	.0001	1.7	.0001	.0005	.0036
%RSD	21.76	495.6	9.165	1.168	1.578	.6693	2.024
#1	.0016	-.0039	-.0010	143.9	-.0037	.0675	.1773
#2	.0012	.0022	-.0009	146.3	-.0036	.0682	.1824

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**83628.**	**15381.**	**3612.2**	**6143.5**
Stddev	1879.	38.	9.5	26.7
%RSD	2.2464	.24989	.26302	.43407
#1	84957.	15408.	3618.9	6162.3
#2	82300.	15353.	3605.4	6124.6

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.1731**	**-.0000**	**.0002**	**.0004**	**.0006**	**.0000**	**.7618**	**.0031**	**-.0001**
Stddev	.0002	.0000	.0001	.0001	.0004	.0001	.0015	.0000	.0002
%RSD	.1398	.0413	57.69	23.30	74.07	961.6	.1904	.2831	259.1
#1	.1729	-.0000	.0002	.0004	.0009	-.0001	.7628	.0031	-.0002
#2	.1733	-.0000	.0001	.0005	.0003	.0001	.7607	.0031	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0012**	**.0546**	**.0034**	**.0034**	**.0005**	**.0005**	**.0034**	**.0697**	**146.0**
Stddev	.0002	.0006	.0008	.0000	.0006	.0030	.0005	.0122	.2
%RSD	14.84	1.150	24.44	.5406	119.1	574.1	14.24	17.47	.1449
#1	.0011	.0542	.0028	.0034	.0001	-.0016	.0030	.0783	146.1
#2	.0013	.0551	.0040	.0034	.0009	.0027	.0037	.0611	145.8

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**3.468**	**223.6**	**80.56**	F **1555.**	**.9115**	**.0035**	**8.590**	**-.0023**	**1.710**
Stddev	.022	.6	.45	5.	.0144	.0001	.130	.0007	.003
%RSD	.6310	.2468	.5537	.3427	1.578	2.908	1.516	31.84	.1576
#1	3.484	224.0	80.25	1558.	.9013	.0036	8.498	-.0018	1.712
#2	3.453	223.2	80.88	1551.	.9216	.0034	8.682	-.0028	1.708

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0023**	**-.0012**	**-.0007**	F **140.9**	**.0017**	**.0675**	**.1735**
Stddev	.0001	.0007	.0003	2.0	.0021	.0018	.0013
%RSD	5.740	58.72	46.82	1.450	129.3	2.730	.7512
#1	.0024	-.0007	-.0009	139.4	.0032	.0688	.1726
#2	.0022	-.0018	-.0004	142.3	.0001	.0662	.1745

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**83352.**	**15396.**	**3676.3**	**6220.4**
Stddev	629.	67.	9.2	13.4
%RSD	.75457	.43445	.25051	.21569
#1	82908.	15348.	3682.8	6229.9
#2	83797.	15443.	3669.8	6211.0

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.1777**	**-.0001**	**-.0003**	**.0000**	**.0008**	**.0001**	**.7755**	**.0034**	**.0002**
Stddev	.0014	.0001	.0006	.0000	.0002	.0004	.0070	.0007	.0002
%RSD	.7705	64.08	169.2	32.55	22.15	255.0	.9059	20.02	88.15
#1	.1767	-.0002	.0001	.0000	.0006	-.0001	.7705	.0038	.0001
#2	.1787	-.0001	-.0007	.0001	.0009	.0004	.7805	.0029	.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0004**	**.0545**	**.0018**	**.0078**	**-.0009**	**.0035**	**.0002**	**.0507**	**148.0**
Stddev	.0002	.0003	.0003	.0001	.0001	.0001	.0003	.0113	1.5
%RSD	51.38	.6265	19.04	.6635	9.291	2.782	191.2	22.30	1.021
#1	.0005	.0542	.0016	.0079	-.0009	.0035	.0004	.0427	146.9
#2	.0002	.0547	.0021	.0078	-.0010	.0036	-.0001	.0587	149.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**3.606**	**229.2**	**82.78**	F **1586.**	**.9367**	**.0035**	**8.720**	**-.0021**	**1.743**
Stddev	.030	2.2	1.36	18.	.0052	.0007	.070	.0002	.015
%RSD	.8253	.9620	1.648	1.123	.5602	19.81	.8054	11.50	.8621
#1	3.585	227.6	81.81	1574.	.9330	.0030	8.670	-.0019	1.732
#2	3.627	230.7	83.74	1599.	.9404	.0040	8.769	-.0023	1.754

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0022**	**-.0014**	**-.0004**	F **145.8**	**-.0008**	**.0684**	**.1806**
Stddev	.0002	.0003	.0005	1.1	.0022	.0042	.0019
%RSD	9.467	21.30	116.7	.7494	291.0	6.144	1.058
#1	.0023	-.0016	-.0007	145.0	.0008	.0654	.1793
#2	.0020	-.0012	-.0001	146.6	-.0023	.0713	.1820

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**82271.**	**15141.**	**3594.7**	**6116.8**
Stddev	638.	144.	16.9	24.7
%RSD	.77512	.95291	.46900	.40361
#1	82722.	15243.	3582.8	6099.3
#2	81820.	15039.	3606.7	6134.2

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0581**	**.0026**	**.0242**	**.0303**	**.0037**	**.0031**	**.1698**	**.1573**	**-.0005**
Stddev	.0005	.0002	.0002	.0001	.0003	.0011	.0019	.0009	.0001
%RSD	.7784	6.117	.9013	.3766	8.088	36.16	1.124	.5864	18.88
#1	.0578	.0028	.0241	.0303	.0035	.0039	.1712	.1566	-.0004
#2	.0584	.0025	.0244	.0302	.0039	.0023	.1685	.1580	-.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0028**	**.7981**	**.0053**	**.0016**	**.0010**	**.0006**	**.0001**	**25.39**	**17.88**
Stddev	.0009	.0078	.0004	.0006	.0001	.0001	.0007	.07	.04
%RSD	32.19	.9712	6.906	39.40	8.725	16.62	673.3	.2897	.2317
#1	.0035	.7926	.0050	.0011	.0010	.0005	-.0004	25.44	17.91
#2	.0022	.8036	.0056	.0020	.0009	.0007	.0006	25.34	17.85

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**11.65**	**15.99**	**13.46**	**213.3**	**.0523**	**.0000**	**7.131**	**-.0011**	**.1320**
Stddev	.04	.00	.04	5.3	.0003	.0004	.059	.0002	.0002
%RSD	.3680	.0044	.3177	2.477	.4818	795.3	.8316	14.43	.1402
#1	11.68	15.98	13.43	209.6	.0521	.0003	7.089	-.0010	.1322
#2	11.62	15.99	13.49	217.1	.0524	-.0002	7.173	-.0012	.1319

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0038**	**.0023**	**-.0017**	**50.23**	**-.0033**	**.0095**	**.0350**
Stddev	.0006	.0010	.0001	.45	.0026	.0024	.0012
%RSD	16.11	45.88	8.245	.8952	77.72	25.52	3.342
#1	.0042	.0030	-.0018	49.91	-.0051	.0078	.0341
#2	.0034	.0015	-.0016	50.55	-.0015	.0113	.0358

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**89130.**	**16980.**	**3913.2**	**6299.1**
Stddev	952.	11.	14.3	13.3
%RSD	1.0684	.06559	.36502	.21177
#1	88457.	16973.	3903.1	6289.7
#2	89803.	16988.	3923.3	6308.6

Zoom In Zoom Out

Sample Name: jc67328-4 Acquired: 6/8/2018 5:30:09 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	**.0660**	**.0051**	**.0113**	**.0189**	**.0108**	**.0040**	**.2457**	**.0847**	**-.0016**
Stddev	.0024	.0001	.0000	.0000	.0004	.0035	.0272	.0004	.0018
%RSD	3.670	1.057	.3316	.1866	3.608	87.25	11.09	.4240	117.2
#1	.0677	.0051	.0112	.0189	.0111	.0065	.2649	.0844	-.0029
#2	.0643	.0050	.0113	.0189	.0105	.0015	.2264	.0849	-.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0027**	**.6315**	**.0070**	**.0007**	**.0005**	**-.0004**	**-.0011**	**25.29**	**17.95**
Stddev	.0003	.0009	.0001	.0033	.0006	.0024	.0014	.47	.33
%RSD	9.246	.1436	1.913	460.4	116.3	535.3	135.1	1.855	1.853
#1	.0029	.6308	.0071	-.0016	.0009	.0012	-.0000	25.62	18.18
#2	.0026	.6321	.0069	.0031	.0001	-.0021	-.0021	24.96	17.71

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**17.75**	**14.06**	**11.75**	**177.8**	**.0669**	**.0008**	**10.90**	**-.0009**	**.0597**
Stddev	.37	.29	.21	3.5	.0004	.0000	.03	.0010	.0011
%RSD	2.101	2.043	1.802	1.992	.6167	4.010	.2644	109.4	1.817
#1	18.02	14.26	11.90	180.3	.0671	.0007	10.88	-.0016	.0605
#2	17.49	13.85	11.60	175.3	.0666	.0008	10.92	-.0002	.0589

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0116**	**.0000**	**-.0042**	**34.79**	**-.0047**	**.0067**	**.0386**
Stddev	.0004	.0016	.0001	.14	.0008	.0000	.0009
%RSD	3.192	10190.	2.043	.4099	16.39	.1788	2.416
#1	.0118	.0012	-.0041	34.69	-.0052	.0067	.0379
#2	.0113	-.0011	-.0042	34.89	-.0042	.0067	.0392

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**82186.**	**16618.**	**3906.9**	**6293.9**
Stddev	7485.	313.	24.4	28.7
%RSD	9.1073	1.8809	.62362	.45674
#1	76893.	16397.	3889.7	6273.6
#2	87478.	16839.	3924.2	6314.2

Zoom In Zoom Out

Sample Name: jc67328-3f Acquired: 6/8/2018 5:33:05 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	**.0572**	**.0024**	**.0214**	**.0279**	**.0024**	**.0042**	**.1584**	**.1482**	**-.0008**
Stddev	.0010	.0001	.0003	.0002	.0001	.0004	.0011	.0012	.0003
%RSD	1.758	2.991	1.169	.8092	3.623	9.824	.6820	.8336	31.55
#1	.0579	.0025	.0213	.0278	.0023	.0039	.1576	.1473	-.0006
#2	.0565	.0024	.0216	.0281	.0024	.0045	.1592	.1491	-.0010

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0024**	**.7708**	**.0059**	**-.0008**	**.0016**	**-.0029**	**-.0001**	**22.75**	**17.49**
Stddev	.0001	.0028	.0006	.0007	.0029	.0008	.0001	.32	.21
%RSD	4.986	.3649	10.79	91.89	186.1	28.43	109.4	1.418	1.189
#1	.0023	.7688	.0063	-.0003	.0037	-.0023	-.0002	22.98	17.63
#2	.0025	.7728	.0054	-.0013	-.0005	-.0034	-.0000	22.52	17.34

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**9.353**	**15.39**	**13.31**	**217.6**	**.0513**	**.0005**	**6.748**	**-.0023**	**.1304**
Stddev	.107	.19	.08	2.5	.0004	.0003	.032	.0005	.0022
%RSD	1.144	1.221	.6143	1.150	.8143	52.99	.4739	21.07	1.667
#1	9.429	15.53	13.37	219.4	.0516	.0007	6.725	-.0019	.1320
#2	9.277	15.26	13.25	215.9	.0510	.0003	6.771	-.0026	.1289

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0017**	**.0003**	**-.0018**	**45.93**	**-.0064**	**.0077**	**.0246**
Stddev	.0004	.0001	.0002	.20	.0037	.0022	.0010
%RSD	25.34	48.70	9.847	.4259	57.71	28.88	4.188
#1	.0014	.0003	-.0017	45.79	-.0090	.0093	.0253
#2	.0020	.0002	-.0020	46.06	-.0038	.0062	.0239

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**88136.**	**16830.**	**3886.5**	**6267.5**
Stddev	142.	90.	16.1	27.1
%RSD	.16103	.53416	.41333	.43185
#1	88036.	16767.	3875.1	6248.4
#2	88237.	16894.	3897.9	6286.7

Zoom In Zoom Out

Sample Name: jc67328-4f Acquired: 6/8/2018 5:36:07 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	**.0648**	**.0049**	**.0100**	**.0187**	**.0059**	**.0002**	**.2239**	**.0828**	**.0001**
Stddev	.0004	.0001	.0004	.0000	.0000	.0003	.0006	.0004	.0006
%RSD	.6711	1.608	3.865	.0234	.5580	176.7	.2817	.5270	1151.
#1	.0651	.0049	.0097	.0187	.0059	-.0000	.2244	.0831	.0005
#2	.0645	.0050	.0103	.0187	.0059	.0004	.2235	.0824	-.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0015**	**.6184**	**.0049**	**.0021**	**.0017**	**-.0006**	**-.0009**	**24.44**	**18.23**
Stddev	.0000	.0026	.0001	.0006	.0012	.0009	.0028	.12	.02
%RSD	1.263	.4160	1.388	29.50	70.26	145.1	307.5	.4786	.0852
#1	.0014	.6166	.0048	.0017	.0009	-.0013	-.0029	24.52	18.24
#2	.0015	.6202	.0049	.0026	.0026	.0000	.0011	24.36	18.22

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**15.94**	**13.86**	**11.32**	**179.1**	**.0638**	**.0005**	**9.338**	**-.0019**	**.0618**
Stddev	.05	.07	.04	.5	.0009	.0002	.028	.0013	.0006
%RSD	.3249	.5118	.3170	.2596	1.403	50.99	.3034	66.37	.9946
#1	15.98	13.91	11.35	179.4	.0644	.0006	9.318	-.0010	.0622
#2	15.90	13.81	11.30	178.8	.0632	.0003	9.358	-.0028	.0613

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0020**	**.0007**	**-.0038**	**35.06**	**-.0057**	**.0075**	**.0181**
Stddev	.0003	.0004	.0000	.13	.0002	.0022	.0003
%RSD	13.83	57.45	1.251	.3774	3.015	29.95	1.590
#1	.0018	.0004	-.0038	34.97	-.0056	.0091	.0183
#2	.0022	.0011	-.0038	35.16	-.0058	.0059	.0179

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**88143.**	**16535.**	**3909.1**	**6300.4**
Stddev	609.	50.	9.5	13.1
%RSD	.69111	.30425	.24329	.20816
#1	87713.	16499.	3902.4	6291.1
#2	88574.	16570.	3915.9	6309.6

Zoom In Zoom Out

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	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.029**	**1.976**	**1.918**	**1.964**	**1.970**	**1.923**	**1.973**	**1.997**	**.2453**
Stddev	.019	.008	.036	.033	.009	.013	.009	.034	.0004
%RSD	.9419	.4233	1.868	1.655	.4825	.6752	.4413	1.701	.1450
#1	2.042	1.982	1.892	1.941	1.977	1.932	1.979	1.973	.2451
#2	2.015	1.970	1.943	1.987	1.963	1.913	1.967	2.021	.2456
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	**1.939**	**1.942**	**1.961**	**1.950**	**1.929**	**1.932**	**1.931**	**39.67**	**40.52**
Stddev	.012	.034	.039	.035	.036	.032	.037	.23	.14
%RSD	.5993	1.773	1.992	1.814	1.878	1.648	1.937	.5810	.3431
#1	1.947	1.917	1.933	1.925	1.903	1.910	1.904	39.83	40.62
#2	1.931	1.966	1.989	1.975	1.954	1.955	1.957	39.50	40.43
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.05**	**41.33**	**39.80**	**40.79**	**1.932**	**1.973**	**4.875**	**1.908**	**2.015**
Stddev	.26	.25	.07	.19	.041	.033	.092	.031	.015
%RSD	.6416	.6040	.1869	.4643	2.115	1.683	1.891	1.622	.7419
#1	40.23	41.50	39.75	40.93	1.903	1.950	4.809	1.886	2.026
#2	39.86	41.15	39.86	40.66	1.961	1.997	4.940	1.930	2.005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 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							
Range							

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

Zoom In Zoom Out

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**	**-.0005**	**-.0001**	**-.0012**	**-.0001**	**-.0007**	**-.0000**
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	-.0000	-.0004	.0003	-.0017	-.0000	-.0006	.0003
#2	.0007	-.0000	.0001	-.0007	-.0005	-.0007	-.0001	-.0009	-.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	**-.0010**	**.0000**	**.0000**	**.0014**	**.0008**	**-.0026**	**.0023**	**.0007**	**-.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	-.0015	.0000	-.0001	.0025	-.0002	.0002	.0011	.0088	-.0042
#2	-.0004	-.0000	.0001	.0002	.0018	-.0054	.0034	-.0074	-.0056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019**	**-.0068**	**.1228**	**.2909**	**-.0013**	**.0003**	**.0015**	**.0004**	**-.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	-.0004	.0004	.0021	.0001	-.0000
#2	.0022	-.0162	.1283	.2947	-.0022	.0002	.0009	.0008	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 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**	**-.0016**	**.0001**	**.0019**	**-.0012**	**-.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	-.0036	-.0002	.0028	-.0018	-.0020	.0028
#2	.0003	.0003	.0004	.0010	-.0005	.0002	.0033
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	**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

Zoom In Zoom Out

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	**.2022**	**.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	.2022	.0017	.0032	.0486	.0104	.0123	.0172	.0103
#2	.2021	.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								
Range								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	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	.0060
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**	**.1008**	**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								
Range								

Zoom In Zoom Out

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

Zoom In Zoom Out

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	Tl1908	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								

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**.2445**
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	Tl1908	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									

Zoom In
Zoom Out

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 ?	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	**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

Zoom In
Zoom Out

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**	**-.0001**	**.0000**	**-.0004**	**-.0001**	**-.0016**	**-.0001**	**-.0001**
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	-.0001	.0001	-.0003	-.0001	-.0018	-.0001	.0004
#2	.0014	-.0002	-.0000	-.0005	-.0001	-.0014	-.0001	-.0006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**-.0003**	**-.0002**	**-.0010**	F **-.0026**	**-.0022**	**-.0004**	**.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	-.0008	-.0002	-.0002	-.0010	.0004	-.0025	-.0000	.0028
#2	.0001	-.0004	-.0002	-.0011	-.0057	-.0019	-.0008	.0040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit					.0020			
Low Limit					-.0020			

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0023**	**-.0022**	**.0006**	**.0042**	**.1053**	**.1869**	**-.0008**	**.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	-.0028	.0014	-.0006	.0997	.1885	-.0004	.0002
#2	-.0043	-.0015	-.0002	.0090	.1109	.1853	-.0011	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Zoom In
Zoom Out

Sample Name: ccb Acquired: 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**	**-.0001**	**.0008**	**-.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	-.0001	.0018	-.0029	.0004	.0057	.0012
#2	.0023	.0012	-.0002	-.0003	-.0023	.0006	-.0057	-.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0014**	**.0023**
Stddev	.0013	.0013
%RSD	93.12	55.83
#1	-.0024	.0014
#2	-.0005	.0033
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**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

NOTE: The remaining raw data for this batch is not relevant to this job. As such it has been omitted.

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ba 455.403 { 74}	☒	1	Zr	0.000941	0.000000	No
Be 313.042 {108}	☒	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}	☒	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}	☒	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}	☒	8	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	☒	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}	☒	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}	☒	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?
			Se	0.000100	0.000000	No
Ag 328.068 {103}	☒	14	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
			W	-0.000010	0.000000	No
V 292.402 {115}	☒	6	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
			Mn	-0.001587	0.000000	No
Zn 206.200 {464}	☒	9	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
			Be	0.000364	0.000000	No
As 189.042 {478}	☒	17	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
			Mn	-0.000080	0.000000	No
			S	0.000007	0.000000	No
Tl 190.856 {477}	☒	24	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}	☒	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
			Zn	-0.000106	0.000000	No
Se 196.090 {472}	☒	22	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}	☒	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}	☒	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}	☒	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}	☒	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}	☒	3	Mo	-0.020250	0.000000	No
			W	-0.006578	0.000000	No
			Mn	-0.002445	0.000000	No
K 766.490 { 44}	☒	11	Fe	-0.000440	0.000000	No
			Al	0.000077	0.000000	No
			Ca	-0.000121	0.000000	No
			Mn	-0.000570	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}	☒	4	K	-0.000560	0.000000	No
			Ba	0.000900	0.000000	No
			Ca	0.000180	0.000000	No
			V	-0.005000	0.000000	No
B 208.959 {462}	☒	1	Mo	0.038137	0.000000	No
Mo 202.030 {467}	☒	2	Al	-0.000004	0.000000	No
			Fe	-0.000010	0.000000	No
Si 212.412 {459}	☒	12	Sr	0.000366	0.000000	No
			Ni	0.002092	0.000000	No
			Mo	0.031190	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}	☒	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}	☒	2	Ca	0.000043	0.000000	No
			Si	0.000033	0.000000	No
Ti 334.904 {101}	☒	3	Cr	0.000189	0.000000	No
			Mo	0.001070	0.000000	No
			Si	0.000035	0.000000	No
Y 360.073 { 94}*	☒	None				
Y 371.030 { 91}*	☒	None				
Y 224.306 {451}*	☒	None				
In 230.606 {446}*	☒	None				
W 207.911 {462}	☒	20	Si	0.000105	0.000000	No
			As	0.000100	0.000000	No
			Mn	0.000066	0.000000	No
			Mo	-0.000300	0.000000	No
			Ti	0.000080	0.000000	No
			Sr	-0.000850	0.000000	No
			V	-0.000140	0.000000	No
			Cd	-0.000650	0.000000	No
			Cr	-0.000390	0.000000	No
			Zn	0.009921	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
			Tl	-0.002600	0.000000	No
Zr 339.198 { 99}	☒	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}	☒	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}	☒	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}	☒	2	Ca	0.000003	0.000000	No
				Fe	0.000004	0.000000	No
	P 177.495 {490}	☒	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 MQL	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

Zoom In
Zoom Out

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	.4171
#1	-.0000	.0006	-.0009	-.0030	.0000	.0023	-.0124
#2	-.0000	.0005	-.0006	-.0030	.0003	-.0000	-.0124

Zoom In
Zoom Out

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

Zoom In
Zoom Out

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**	**.4921**	**.9353**	**2.932**	**1.932**	**.0702**
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	.4903	.9342	2.902	1.927	.0699
#2	6.742	8.730	4.120	2.436	.4938	.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**	**.4414**	**.3066**	**.8195**	**.3188**	**.5629**	**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	.4402	.3060	.8171	.3180	.5614	2.882	5.548
#2	.7468	5.206	.4426	.3072	.8218	.3196	.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**	**.6055**	**1.374**	**6.045**	**.9143**	**2.697**	**1.912**	**.8547**	**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	.9124	2.689	1.905	.8519	11.37
#2	3.796	.6080	1.383	6.074	.9162	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**	**.6076**	**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	.6060	1.714	.4924
#2	.6176	1.353	1.765	.2082	.6092	1.728	.4950

Zoom In
Zoom Out

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

Zoom In Zoom Out

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**	**.2520**
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	.2512
#2	2.076	2.080	2.048	2.070	2.037	1.989	2.101	2.079	.2528
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									

Zoom In Zoom Out

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
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

Zoom In Zoom Out

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	**-.0008**	**.0000**	**.0000**	**-.0000**	**-.0007**	**-.0007**	**-.0000**	**-.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	-.0009	.0001	.0002	.0001	-.0010	-.0009	-.0000	-.0001	.0012
#2	-.0007	-.0000	-.0002	-.0001	-.0003	-.0004	.0000	-.0002	.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	**-.0008**	**-.0001**	**.0002**	**.0000**	**-.0002**	**.0008**	**.0007**	**-.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	-.0006	-.0000	.0001	-.0007	-.0011	-.0008	.0014	.0014	.0063
#2	-.0010	-.0001	.0002	.0007	.0007	.0024	.0001	-.0086	-.0042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0034**	**.0522**	**-.0266**	**-.0018**	**-.0004**	**.0002**	**.0027**	**-.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	-.0021	.0563	-.0014	-.0075	-.0002	.0000	.0015	-.0001	.0002
#2	-.0047	.0481	-.0518	.0039	-.0007	.0003	.0039	-.0007	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: 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**	**-.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	-.0002	.0024	.0024
#2	.0002	-.0001	.0004	.0023	-.0003	.0018	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**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: mpconf 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	**-.0001**	**.0000**	**.0000**	**.0002**	**-.0009**	**.0003**	**.0000**	**.0001**	**.0007**
Stddev	.0002	.0001	.0000	.0001	.0000	.0002	.0000	.0002	.0000
%RSD	206.3	368.6	8.287	61.79	2.135	90.79	227.9	278.7	5.554
#1	.0001	-.0000	.0000	.0001	-.0008	.0001	.0000	.0002	.0008
#2	-.0003	.0001	.0000	.0002	-.0009	.0004	-.0000	-.0001	.0007

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0001**	**-.0003**	**.0004**	**.0020**	**-.0005**	**-.0011**	**-.0001**	**-.0094**	**.0008**
Stddev	.0003	.0000	.0002	.0020	.0003	.0011	.0009	.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	.0002	.0034	-.0007	-.0003	.0005	-.0035	.0033

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**-.0034**	**.0364**	**-.1113**	**-.0548**	**-.0048**	**-.0001**	**-.0011**	**-.0015**	**.0001**
Stddev	.0012	.0094	.0219	.0046	.0013	.0001	.0009	.0002	.0001
%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	-.0000	-.0005	-.0014	.0002
#2	-.0042	.0298	-.1267	-.0581	-.0057	-.0002	-.0017	-.0016	.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0005**	**.0004**	**.0001**	**-.0013**	**.0001**	**-.0046**	**.0010**
Stddev	.0004	.0005	.0000	.0007	.0021	.0009	.0002
%RSD	80.57	137.2	11.72	54.66	1432.	20.05	23.21
#1	.0008	.0008	.0001	-.0008	-.0013	-.0039	.0012
#2	.0002	.0000	.0001	-.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

Zoom In
Zoom Out

Sample Name: bconf 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**	**.2407**
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	.2392
#2	2.027	1.992	2.038	2.026	2.026	1.940	2.088	2.041	.2422

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**	**-.0525**	**1.948**	**1.994**
Stddev	.24	.23	.43	.35	.009	.009	.0001	.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	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.972**	**1.832**	**1.967**	**.0094**	**.0227**	**-.0056**	**1.985**
Stddev	.004	.005	.003	.0006	.0007	.0004	.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

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**	**.2535**
Stddev	.011	.008	.021	.023	.007	.010	.006	.021	.0006
%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	.2531
#2	2.006	2.035	2.008	2.083	1.935	1.917	2.040	2.020	.2539
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									

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	Ti3349	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

Zoom In Zoom Out

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	**-.0004**	**.0001**	**.0000**	**.0002**	**-.0003**	**-.0006**	**.0000**	**-.0002**	**.0001**
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
#1	-.0004	.0001	.0000	.0003	-.0005	-.0006	.0000	-.0001	.0003
#2	-.0004	.0001	.0001	.0000	-.0001	-.0007	-.0000	-.0004	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0001**	**.0008**	**-.0000**	**-.0009**	**-.0002**	**.0009**	**-.0153**	**-.0007**
Stddev	.0003	.0000	.0002	.0005	.0007	.0020	.0009	.0215	.0013
%RSD	247.5	42.91	28.60	1097.	80.78	808.1	100.5	140.3	199.2
#1	.0001	-.0001	.0010	.0003	-.0014	.0012	.0015	-.0001	-.0016
#2	-.0003	-.0001	.0007	-.0004	-.0004	-.0016	.0003	-.0305	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0033**	**.0267**	**.0082**	**-.0045**	**-.0023**	**.0009**	**.0016**	**.0002**	**.0000**
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
#1	-.0028	.0211	.0176	-.0055	-.0028	.0006	.0008	.0002	.0001
#2	-.0039	.0324	-.0012	-.0035	-.0018	.0012	.0023	.0003	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: icb 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	**.0007**	**F .0189**	**.0010**	**.0004**	**.0007**	**-.0010**	**.0023**
Stddev	.0004	.0010	.0001	.0019	.0006	.0004	.0000
%RSD	56.42	5.242	6.230	430.3	88.28	36.01	1.479
#1	.0010	.0196	.0009	.0018	.0003	-.0008	.0023
#2	.0004	.0182	.0010	-.0009	.0011	-.0013	.0023
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.0050					
Low Limit		-.0050					

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**118000.**	**16811.**	**5988.1**	**9243.1**
Stddev	199.	69.	18.2	24.8
%RSD	.16835	.41308	.30345	.26777
#1	117860.	16761.	5975.3	9225.6
#2	118140.	16860.	6001.0	9260.6

Zoom In Zoom Out

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**	**.2513**
Stddev	.008	.008	.000	.004	.021	.029	.026	.001	.0032
%RSD	.4027	.4140	.0178	.1934	1.010	1.469	1.262	.0680	1.261
#1	1.980	1.977	2.025	2.050	2.020	1.963	2.067	2.061	.2490
#2	1.991	1.989	2.025	2.055	2.050	2.004	2.105	2.063	.2535
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	**2.017**	**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
#1	1.998	2.050	2.022	2.093	2.057	2.034	2.033	39.15	39.42
#2	2.037	2.052	2.024	2.092	2.060	2.027	2.037	39.31	39.70
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	**39.61**	**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
#1	39.46	39.67	38.88	39.40	2.037	2.047	5.093	2.048	1.983
#2	39.76	39.74	39.27	39.66	2.041	2.048	5.092	2.057	1.993
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 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
#1	1.993	2.027	2.005	1.997	2.048	1.952	2.033
#2	2.031	2.028	2.041	2.004	2.052	1.969	2.031
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	**112790.**	**16530.**	**5687.3**	**8564.5**
Stddev	83.	15.	41.1	51.8
%RSD	.07398	.08994	.72260	.60439
#1	112730.	16519.	5658.2	8527.9
#2	112850.	16541.	5716.3	8601.1

Zoom In Zoom Out

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	**-.0007**	**.0000**	**-.0001**	**.0001**	**-.0006**	**-.0004**	**.0000**	**.0002**	**.0006**
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	-.0007	.0001	-.0000	.0002	-.0008	-.0003	-.0000	.0005	.0008
#2	-.0007	-.0000	-.0001	.0000	-.0005	-.0006	.0001	-.0001	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**-.0001**	**.0000**	**-.0008**	**-.0014**	**.0004**	**.0009**	**.0009**	**.0000**
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	-.0006	-.0000	-.0005	-.0020	-.0000	-.0004	.0015	.0027	.0010
#2	-.0004	-.0001	.0006	.0004	-.0028	.0012	.0002	-.0010	-.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0020**	**.0201**	**-.0209**	**-.0166**	**-.0029**	**.0004**	**.0017**	**-.0007**	**.0001**
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	-.0011	.0380	-.0119	-.0170	-.0028	.0006	.0010	-.0001	.0001
#2	-.0028	.0023	-.0300	-.0163	-.0030	.0003	.0023	-.0014	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 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	**-.0002**	**F .0061**	**.0006**	**.0013**	**-.0012**	**-.0020**	**.0025**
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	-.0030	.0023
#2	-.0005	.0067	.0005	.0009	-.0027	-.0010	.0027
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.0050					
Low Limit		-.0050					

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**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

Zoom In Zoom Out

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**	**.0508**	**.0093**	**.0089**	**.0156**	**.0102**	**.0055**
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 ?	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	**.0489**	**.0205**	**.0089**	**.0089**	**.0028**	**.0113**	**.0063**	**.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 ?	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	**.0967**	**5.176**	**4.935**	**5.059**	**.0956**	**.0206**	**.2032**	**.0095**	**.0098**
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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CRI Acquired: 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	**.0098**	**.0544**	**.0117**	**.0487**	**.0200**	**.0519**	**.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 ?	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	**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

Zoom In Zoom Out

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	.2261	84.47	5.813	.2382	.4346	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%				

Zoom In Zoom Out

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

Zoom In Zoom Out

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									

Zoom In Zoom Out

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

Zoom In Zoom Out

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 ?	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	.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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	200.3	511.8	.1488	-.0081	.4916	.4866	.5056	.4648	.5137
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	.5045
#2	203.6	520.4	.1840	-.0164	.4939	.4893	.5056	.4655	.5230
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 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	.9090	.2328	.9648	.3425	.7577	3.103	.7412
#1	.4914	.4863	.4689	.4680	.5085	.4989	.5001
#2	.4978	.4847	.4754	.4703	.5140	.5213	.5054
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	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

Zoom In Zoom Out

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	5.053	5.072	5.131	5.163	5.019	5.219	5.178	.6189
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	.6188
#2	5.132	5.074	5.088	5.149	5.151	5.013	5.246	5.197	.6190
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	5.046	5.276	5.031	5.236	5.204	5.067	5.108	-.0164	-.1183
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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0183	.0557	.1353	.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	.4892	.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 ?	None	None	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

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 ?	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	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

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**.0002**	**.0003**	**.0003**	**.0000**	**.0004**	**-.0004**	**-.0003**	**.0028**
Stddev	.0003	.0000	.0002	.0003	.0005	.0005	.0001	.0002	.0003
%RSD	20.36	3.278	74.36	108.3	1023.	133.6	15.37	56.91	11.27
#1	.0015	.0002	.0004	.0001	-.0003	.0007	-.0004	-.0004	.0026
#2	.0011	.0002	.0001	.0005	.0004	.0000	-.0004	-.0002	.0030
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	**.0011**	**-.0002**	**-.0002**	**.0001**	**.0026**	**.0048**	**-.0021**	**319.0**	**156.3**
Stddev	.0002	.0002	.0005	.0001	.0001	.0037	.0041	.5	.3
%RSD	18.80	106.4	206.3	66.88	5.231	78.17	196.5	.1697	.1802
#1	.0013	-.0003	.0001	.0001	.0025	.0021	.0008	318.6	156.1
#2	.0010	-.0000	-.0006	.0002	.0027	.0074	-.0049	319.4	156.5
Check ?	None	None	None	None	None	None	None	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**156.0**	**315.1**	**159.2**	**160.5**	**-.0014**	**.0013**	**.0295**	**-.0021**	**-.0010**
Stddev	.3	.4	1.0	.4	.0003	.0000	.0018	.0002	.0000
%RSD	.2112	.1122	.6033	.2534	20.73	1.295	5.958	9.524	2.774
#1	155.8	315.4	158.5	160.2	-.0012	.0013	.0308	-.0019	-.0009
#2	156.2	314.9	159.8	160.8	-.0016	.0013	.0283	-.0022	-.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	None	None	None
Value									
Range									

Zoom In Zoom Out

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:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0009**	**.0058**	**-.0017**	**-.0129**	**.0042**	**.0040**	**.0033**
Stddev	.0008	.0011	.0001	.0042	.0002	.0025	.0002
%RSD	96.63	18.11	4.808	32.84	4.212	61.87	5.065
#1	-.0015	.0065	-.0017	-.0099	.0040	.0023	.0032
#2	-.0003	.0051	-.0018	-.0159	.0043	.0058	.0034
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	**109520.**	**15320.**	**5463.9**	**8015.8**
Stddev	481.	85.	19.6	14.7
%RSD	.43923	.55386	.35810	.18373
#1	109180.	15260.	5450.1	8005.4
#2	109860.	15380.	5477.8	8026.2

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0004**	**-.0000**	**-.0001**	**.0003**	**-.0003**	**-.0015**	**-.0004**	**.0001**	**.0039**
Stddev	.0002	.0001	.0001	.0004	.0001	.0020	.0007	.0000	.0021
%RSD	54.75	250.3	122.2	141.9	21.49	130.0	184.4	21.25	54.48
#1	.0005	.0000	-.0000	-.0000	-.0003	-.0001	.0001	.0001	.0054
#2	.0002	-.0001	-.0002	.0005	-.0003	-.0029	-.0009	.0001	.0024

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0006**	**-.0045**	**-.0004**	**-.0006**	**-.0006**	**.0001**	**.0005**	**-.0048**	**.0074**
Stddev	.0002	.0003	.0010	.0001	.0008	.0003	.0022	.0156	.0013
%RSD	34.11	6.968	225.4	15.69	127.4	254.0	466.9	327.7	17.80
#1	.0007	-.0047	.0003	-.0007	-.0011	.0003	-.0011	-.0158	.0084
#2	.0004	-.0043	-.0011	-.0006	-.0001	-.0001	.0020	.0063	.0065

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**204.2**	**.0490**	**.0089**	**-.0202**	**-.0062**	**.0003**	**.0203**	**.0004**	**.0002**
Stddev	8.2	.0158	.0259	.0156	.0002	.0001	.0022	.0007	.0000
%RSD	4.016	32.32	291.5	77.37	3.016	21.34	11.05	162.7	17.29
#1	210.0	.0602	.0272	-.0092	-.0064	.0004	.0219	.0010	.0002
#2	198.4	.0378	-.0094	-.0313	-.0061	.0003	.0187	-.0001	.0002

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0003**	**.0039**	**-.0018**	**-.0033**	**.0099**	**-.0007**	**-.0085**
Stddev	.0002	.0019	.0004	.0008	.0024	.0017	.0013
%RSD	50.97	49.39	19.48	24.71	23.96	238.6	15.35
#1	.0005	.0053	-.0016	-.0028	.0082	-.0019	-.0076
#2	.0002	.0026	-.0021	-.0039	.0116	.0005	-.0095

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**116980.**	**16034.**	**5844.8**	**9215.2**
Stddev	1453.	524.	11.0	12.1
%RSD	1.2417	3.2694	.18778	.13147
#1	115950.	15663.	5852.6	9223.8
#2	118010.	16405.	5837.1	9206.6

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	**-.0002**	**-.0001**	**.0001**	**-.0002**	W **9.950**	**-.0007**	**-.0012**	**-.0004**
Stddev	.0004	.0001	.0000	.0002	.122	.0001	.0000	.0002
%RSD	207.5	94.16	17.91	119.7	1.223	7.137	1.909	46.26
#1	.0001	-.0002	.0001	-.0000	9.864	-.0007	-.0012	-.0002
#2	-.0005	-.0000	.0001	-.0004	10.04	-.0008	-.0012	-.0005

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	**.0002**	**.0000**	**.0019**	**-.0001**	**.0001**	**.0008**	**-.0013**	**.0046**
Stddev	.0003	.0010	.0002	.0011	.0001	.0009	.0017	.0031
%RSD	150.7	3000.	10.46	1794.	130.9	120.0	129.8	66.65
#1	-.0000	-.0006	.0018	.0007	.0002	.0001	-.0001	.0068
#2	.0004	.0007	.0021	-.0009	.0000	.0014	-.0025	.0024

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	**-.0085**	**.0061**	**-.0159**	**.0196**	**-.1045**	**-.0599**	**-.0047**	**.0004**
Stddev	.0034	.0030	.0004	.0019	.0486	.0135	.0000	.0001
%RSD	39.62	49.10	2.497	9.516	46.57	22.53	.5855	22.20
#1	-.0061	.0083	-.0162	.0183	-.1389	-.0694	-.0048	.0003
#2	-.0109	.0040	-.0156	.0209	-.0701	-.0504	-.0047	.0004

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	**.0191**	**-.0018**	**.0000**	**-.0022**	**.0074**	**.0020**	**.0024**	**.0155**
Stddev	.0003	.0003	.0001	.0002	.0009	.0000	.0001	.0007
%RSD	1.644	13.93	460.5	8.499	12.78	1.304	3.698	4.511
#1	.0194	-.0017	.0001	-.0021	.0068	.0020	.0025	.0160
#2	.0189	-.0020	-.0001	-.0023	.0081	.0019	.0024	.0150

Elem	Li6707	P_1774
Avg	**-.0008**	**.0003**
Stddev	.0008	.0009
%RSD	94.24	260.6
#1	-.0014	.0010
#2	-.0003	-.0003

Zoom In Zoom Out

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

Zoom In Zoom Out

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	-.0002	-.0001	-.0008	-.0001	-.0002	-.0013	-.0000	-.0000	.0005
Stddev	.0004	.0001	.0001	.0001	.0004	.0002	.0000	.0004	.0003
%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	-.0001	.0010	5.074	-.0002	-.0005	-.0006	.0003	-.0063	-.0480
Stddev	.0003	.0002	.080	.0007	.0014	.0008	.0003	.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	-.0045	.0285	-.0794	-.0469	-.0058	.0002	.0117	-.0000	.0002
Stddev	.0035	.0123	.0605	.0050	.0005	.0000	.0010	.0000	.0001
%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	-.0007	-.0022	.0014
Stddev	.0002	.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

Zoom In Zoom Out

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	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.974	1.962	1.929	1.971	1.947	1.886	2.003	1.985	.2401
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	.2397
#2	1.968	1.952	1.940	1.984	1.949	1.891	2.004	1.997	.2405
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	1.928	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 ?	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	39.32	39.68	38.72	39.38	1.949	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	1.942	4.830	1.948	1.980
#2	39.18	39.52	38.81	39.29	1.959	1.966	4.889	1.974	1.973
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: CCV Acquired: 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	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	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 ?	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	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

Zoom In Zoom Out

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	**-.0004**	**-.0001**	**-.0001**	**.0001**	**-.0008**	**-.0004**	**-.0000**	**.0002**	**.0005**
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	-.0001	-.0000	-.0001	.0003	-.0009	-.0006	-.0001	.0002	.0006
#2	-.0006	-.0001	-.0002	-.0001	-.0006	-.0002	.0001	.0001	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**-.0002**	**.0010**	**.0001**	**.0001**	**.0014**	**.0013**	**-.0061**	**-.0020**
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	-.0002	-.0002	.0018	.0000	-.0010	.0010	.0015	-.0062	-.0050
#2	-.0008	-.0002	.0002	.0001	.0012	.0018	.0011	-.0060	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0037**	**.0283**	**-.0118**	**-.0522**	**-.0040**	**.0001**	**.0021**	**-.0004**	**.0001**
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	-.0027	.0307	-.0314	-.0621	-.0035	.0002	.0015	-.0002	.0002
#2	-.0048	.0259	.0077	-.0424	-.0044	.0001	.0027	-.0006	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: CCB Acquired: 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	**.0001**	**.0032**	**.0003**	**-.0002**	**.0008**	**-.0031**	**.0017**
Stddev	.0004	.0000	.0001	.0027	.0014	.0026	.0014
%RSD	386.8	1.070	50.40	1308.	178.7	82.63	80.81
#1	-.0002	.0031	.0004	.0017	.0017	-.0050	.0026
#2	.0004	.0032	.0002	-.0021	-.0002	-.0013	.0007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**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

Zoom In Zoom Out

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	**.0038**	**.0010**	**.0010**	**.0033**	**.0014**	F **-.0004**	**.0033**	**.0038**
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	-.0008	.0033	.0037
#2	.0038	.0010	.0010	.0031	.0011	-.0001	.0034	.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 **.0010**	**.0015**	**.0105**	**.0032**	**.0017**	F **-.0003**	**.0045**	F **.0003**
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	-.0002	.0039	.0020
#2	.0003	.0015	.0104	.0035	.0007	-.0005	.0051	-.0013
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	**.1022**	**1.085**	**.0007**	F **.1476**	**2.057**	**1.037**	**-.0049**	**-.0001**
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	-.0046	.0000
#2	.1042	1.092	-.0005	.1510	2.034	1.038	-.0052	-.0001
Check ?	Chk Pass	Chk Pass	None	Chk Fail	Chk Pass	Chk Pass	None	None
Value				.1000				
Range				30.00%				

Zoom In Zoom Out

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	**-.0010**	**-.0000**	**.0000**	**.0002**	**.0003**	**.0003**	**.0011**	**-.0004**
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	-.0011	.0001	.0000	-.0001	-.0001	.0003	-.0001	.0005
#2	-.0009	-.0001	-.0000	.0004	.0006	.0002	.0022	-.0014
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0006**	**.0015**
Stddev	.0007	.0004
%RSD	119.2	23.59
#1	-.0001	.0018
#2	-.0011	.0013
Check ?	None	None
Value		
Range		

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	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

Zoom In
Zoom Out

Sample Name: mp7494-mb1 2 Acquired: 6/8/2018 13:10:11 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	**-.0003**	**-.0002**	**-.0000**	**.0001**	**-.0006**	**-.0010**	**.0010**	**-.0000**	**.0006**
Stddev	.0001	.0001	.0000	.0001	.0002	.0000	.0000	.0004	.0003
%RSD	31.69	25.49	166.9	48.35	38.02	2.050	1.678	2213.	48.34
#1	-.0003	-.0002	.0000	.0001	-.0004	-.0010	.0010	-.0003	.0008
#2	-.0002	-.0002	-.0001	.0002	-.0008	-.0010	.0010	.0003	.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0004**	**.0005**	**.0000**	**-.0011**	**-.0015**	**-.0000**	**.0030**	**.0009**	**.0014**
Stddev	.0004	.0001	.0006	.0004	.0005	.0008	.0004	.0098	.0016
%RSD	107.4	24.64	1623.	36.19	33.04	2419.	14.48	1085.	113.7
#1	-.0001	.0004	.0004	-.0008	-.0019	-.0006	.0027	.0078	.0003
#2	-.0007	.0006	-.0004	-.0014	-.0012	.0005	.0033	-.0060	.0026

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**-.0018**	**.0396**	**-.0500**	**-.0035**	**-.0057**	**.0002**	**.0118**	**.0001**	**.0001**
Stddev	.0010	.0283	.0158	.0028	.0002	.0000	.0001	.0003	.0001
%RSD	55.35	71.37	31.68	80.38	2.913	6.541	.7914	461.9	47.33
#1	-.0025	.0196	-.0388	-.0055	-.0058	.0002	.0118	-.0001	.0001
#2	-.0011	.0596	-.0612	-.0015	-.0056	.0002	.0117	.0003	.0002

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0002**	**.0019**	**.0004**	**.0421**	**-.0005**	**.0015**	**.0036**
Stddev	.0003	.0002	.0000	.0011	.0033	.0005	.0012
%RSD	166.2	9.412	1.465	2.605	647.0	31.57	33.61
#1	.0004	.0020	.0004	.0413	-.0028	.0019	.0028
#2	-.0000	.0018	.0004	.0429	.0018	.0012	.0045

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**119760.**	**16824.**	**5955.4**	**9145.5**
Stddev	1167.	91.	157.8	217.5
%RSD	.97480	.54112	2.6502	2.3788
#1	118940.	16760.	6067.0	9299.4
#2	120590.	16889.	5843.8	8991.7

Zoom In
Zoom Out

Sample Name: mp7494-b1 Acquired: 6/8/2018 13:13:14 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	**1.919**	**1.907**	**1.876**	**1.914**	**1.870**	**1.816**	**1.923**	**1.928**	**.2322**
Stddev	.009	.011	.039	.038	.009	.015	.009	.040	.0015
%RSD	.4735	.5981	2.097	1.963	.4799	.8075	.4812	2.060	.6313
#1	1.925	1.915	1.848	1.888	1.864	1.806	1.916	1.900	.2312
#2	1.913	1.899	1.903	1.941	1.876	1.827	1.930	1.956	.2332

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.847**	**1.913**	**1.866**	**1.957**	**1.933**	**1.888**	**1.887**	**24.05**	**24.33**
Stddev	.009	.040	.041	.036	.038	.036	.039	.03	.01
%RSD	.5099	2.075	2.205	1.841	1.966	1.885	2.071	.1077	.0263
#1	1.840	1.885	1.837	1.931	1.906	1.863	1.859	24.07	24.34
#2	1.853	1.941	1.895	1.982	1.960	1.914	1.915	24.03	24.33

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**24.40**	**24.57**	**23.57**	**24.29**	**1.881**	**1.901**	**-.0266**	**1.901**	**1.914**
Stddev	.08	.06	.12	.00	.039	.039	.0042	.040	.001
%RSD	.3255	.2560	.5142	.0009	2.077	2.039	15.89	2.111	.0348
#1	24.46	24.61	23.48	24.29	1.853	1.873	-.0296	1.872	1.914
#2	24.35	24.52	23.65	24.30	1.908	1.928	-.0236	1.929	1.913

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.842**	**1.792**	**1.842**	**.1462**	**.0222**	**-.0021**	**1.880**
Stddev	.006	.034	.011	.0021	.0010	.0006	.036
%RSD	.3158	1.920	.5990	1.406	4.546	30.89	1.907
#1	1.838	1.767	1.834	.1476	.0230	-.0025	1.855
#2	1.846	1.816	1.849	.1447	.0215	-.0016	1.905

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**119840.**	**16716.**	**6011.8**	**9047.2**
Stddev	139.	98.	49.4	74.0
%RSD	.11558	.58514	.82212	.81842
#1	119750.	16647.	6046.7	9099.5
#2	119940.	16786.	5976.8	8994.8

Zoom In
Zoom Out

Sample Name: mp7494-s1 Acquired: 6/8/2018 13:16:03 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	**1.992**	**1.854**	**1.899**	**2.189**	**1.896**	**1.837**	**9.034**	**2.285**	**.2346**
Stddev	.018	.017	.015	.017	.005	.015	.058	.017	.0032
%RSD	.8964	.9374	.7860	.7704	.2607	.7975	.6391	.7548	1.380
#1	1.980	1.841	1.888	2.177	1.893	1.827	8.994	2.273	.2323
#2	2.005	1.866	1.910	2.201	1.900	1.848	9.075	2.297	.2369

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.865**	**2.196**	**1.881**	**2.001**	**2.078**	**1.893**	**1.890**	**24.68**	**169.9**
Stddev	.014	.022	.012	.013	.015	.014	.019	.13	1.2
%RSD	.7288	.9933	.6293	.6464	.7344	.7113	1.010	.5252	.7023
#1	1.856	2.180	1.873	1.992	2.067	1.884	1.876	24.59	169.1
#2	1.875	2.211	1.890	2.010	2.089	1.903	1.903	24.78	170.8

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**26.77**	**91.70**	**27.20**	**79.39**	**1.910**	**1.900**	**15.75**	**1.888**	**2.231**
Stddev	.15	.68	.34	.92	.017	.014	.13	.015	.017
%RSD	.5656	.7364	1.246	1.153	.9121	.7499	.8372	.7867	.7708
#1	26.66	91.22	26.96	78.74	1.898	1.890	15.65	1.878	2.218
#2	26.87	92.17	27.43	80.04	1.922	1.910	15.84	1.899	2.243

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.874**	**1.866**	**1.846**	**106.6**	**.0179**	**-.0026**	**1.941**
Stddev	.014	.016	.013	.9	.0013	.0002	.018
%RSD	.7261	.8702	.6814	.7987	7.208	7.839	.9378
#1	1.865	1.855	1.837	106.0	.0188	-.0025	1.928
#2	1.884	1.878	1.855	107.2	.0170	-.0028	1.953

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**120070.**	**16996.**	**6042.3**	**8714.8**
Stddev	395.	131.	15.6	17.0
%RSD	.32896	.76856	.25777	.19460
#1	119790.	17088.	6053.4	8726.8
#2	120350.	16904.	6031.3	8702.8

Zoom In
Zoom Out

Sample Name: mp7494-s2 Acquired: 6/8/2018 13:18:57 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	**2.040**	**1.901**	**1.898**	**2.189**	**1.919**	**1.861**	**9.216**	**2.284**	**.2374**
Stddev	.007	.009	.020	.021	.026	.025	.071	.024	.0038
%RSD	.3561	.4643	1.050	.9828	1.339	1.320	.7681	1.057	1.585
#1	2.035	1.895	1.884	2.174	1.901	1.844	9.166	2.267	.2347
#2	2.045	1.907	1.913	2.204	1.937	1.879	9.266	2.301	.2400

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.891**	**2.197**	**1.881**	**2.004**	**2.076**	**1.900**	**1.884**	**25.21**	**173.4**
Stddev	.025	.025	.025	.020	.021	.017	.021	.07	.6
%RSD	1.343	1.149	1.305	.9957	1.037	.9126	1.120	.2953	.3303
#1	1.873	2.179	1.864	1.990	2.060	1.887	1.869	25.16	173.0
#2	1.909	2.214	1.898	2.019	2.091	1.912	1.899	25.26	173.8

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**27.40**	**93.62**	**27.69**	**81.29**	**1.912**	**1.896**	**15.78**	**1.885**	**2.276**
Stddev	.04	.29	.12	.55	.018	.024	.18	.025	.005
%RSD	.1438	.3102	.4449	.6720	.9650	1.243	1.125	1.325	.2337
#1	27.37	93.42	27.61	80.91	1.899	1.879	15.65	1.868	2.273
#2	27.43	93.83	27.78	81.68	1.925	1.913	15.90	1.903	2.280

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.895**	**1.859**	**1.866**	**107.0**	**.0233**	**.0006**	**1.938**
Stddev	.025	.024	.024	1.0	.0060	.0037	.016
%RSD	1.317	1.265	1.289	.9772	25.77	595.5	.8016
#1	1.877	1.843	1.849	106.2	.0190	.0032	1.927
#2	1.912	1.876	1.883	107.7	.0275	-.0020	1.949

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**118780.**	**16661.**	**6043.6**	**8721.6**
Stddev	725.	49.	17.3	18.4
%RSD	.61048	.29690	.28626	.21092
#1	119290.	16696.	6055.8	8734.7
#2	118260.	16626.	6031.4	8708.6

Zoom In
Zoom Out

Sample Name: jc67085-4 Acquired: 6/8/2018 13:21:52 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	**.1248**	**-.0003**	**.0257**	**.2312**	**.0415**	**.0486**	**7.354**	**.3200**	**-.0000**
Stddev	.0007	.0001	.0002	.0001	.0007	.0001	.070	.0004	.0004
%RSD	.5996	41.82	.9127	.0415	1.569	.2164	.9516	.1156	4203.
#1	.1253	-.0004	.0259	.2313	.0411	.0485	7.305	.3197	.0003
#2	.1243	-.0002	.0256	.2311	.0420	.0487	7.404	.3202	-.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0091**	**.3200**	**.0025**	**.0013**	**.0914**	**.0037**	**-.0001**	**.6442**	**153.1**
Stddev	.0002	.0018	.0015	.0017	.0023	.0040	.0029	.0234	1.6
%RSD	2.416	.5616	62.68	127.7	2.483	108.3	3594.	3.638	1.042
#1	.0093	.3187	.0014	.0001	.0898	.0065	-.0021	.6608	154.2
#2	.0090	.3213	.0035	.0025	.0931	.0009	.0020	.6276	151.9

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**3.034**	**71.14**	**3.923**	**58.00**	**.0142**	**.0009**	**15.29**	**-.0038**	**.3741**
Stddev	.043	.52	.014	.40	.0018	.0011	.04	.0006	.0035
%RSD	1.404	.7352	.3638	.6935	12.98	128.2	.2619	15.04	.9427
#1	3.064	71.51	3.913	58.29	.0155	.0016	15.26	-.0034	.3766
#2	3.004	70.77	3.933	57.72	.0129	.0001	15.31	-.0042	.3716

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0375**	**.0050**	**.0024**	**107.6**	**-.0030**	**.0008**	**.0457**
Stddev	.0003	.0011	.0006	.2	.0023	.0072	.0015
%RSD	.7693	21.89	25.46	.1670	78.04	956.4	3.318
#1	.0377	.0042	.0029	107.5	-.0047	-.0044	.0447
#2	.0373	.0058	.0020	107.7	-.0013	.0059	.0468

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**122390.**	**17117.**	**6159.2**	**8939.9**
Stddev	1303.	106.	13.8	19.9
%RSD	1.0646	.61662	.22395	.22271
#1	123310.	17042.	6149.4	8925.8
#2	121470.	17191.	6168.9	8954.0

Zoom In
Zoom Out

Sample Name: mp7494-sd1 Acquired: 6/8/2018 13:24:56 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	**.1170**	**-.0005**	**.0262**	**.2208**	**.0329**	**.0446**	**7.306**	**.3018**	**.0070**
Stddev	.0014	.0003	.0021	.0046	.0015	.0006	.056	.0007	.0034
%RSD	1.189	52.40	7.932	2.083	4.434	1.448	.7607	.2290	48.90
#1	.1160	-.0007	.0248	.2175	.0319	.0441	7.267	.3013	.0046
#2	.1180	-.0003	.0277	.2240	.0340	.0451	7.345	.3023	.0094

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0098**	**.3154**	**.0019**	**.0055**	**.0889**	**.0059**	**.0059**	**.4626**	**145.1**
Stddev	.0023	.0048	.0078	.0026	.0093	.0020	.0169	.0367	1.2
%RSD	23.20	1.520	406.6	47.74	10.50	34.37	288.0	7.936	.8187
#1	.0114	.3120	-.0036	.0036	.0823	.0074	.0178	.4366	144.2
#2	.0082	.3188	.0074	.0074	.0955	.0045	-.0061	.4885	145.9

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**2.829**	**68.92**	**2.822**	**54.46**	**-.0243**	**.0010**	**14.62**	**-.0101**	**.3579**
Stddev	.022	.28	.197	.72	.0035	.0017	.21	.0025	.0048
%RSD	.7899	.4057	6.997	1.315	14.57	177.4	1.449	24.33	1.348
#1	2.814	68.72	2.682	53.95	-.0268	.0022	14.47	-.0119	.3544
#2	2.845	69.12	2.962	54.97	-.0218	-.0002	14.77	-.0084	.3613

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0346**	**.0363**	**.0034**	**103.2**	**-.0014**	**-.0263**	**.0645**
Stddev	.0002	.0257	.0013	1.6	.0027	.0332	.0163
%RSD	.6286	70.81	37.14	1.579	196.5	126.0	25.35
#1	.0347	.0545	.0025	102.1	-.0033	-.0029	.0529
#2	.0344	.0181	.0043	104.4	.0005	-.0498	.0760

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**115410.**	**16083.**	**5878.6**	**8951.5**
Stddev	927.	76.	31.9	34.8
%RSD	.80339	.47234	.54318	.38928
#1	116060.	16137.	5901.1	8976.1
#2	114750.	16030.	5856.0	8926.8

Zoom In
Zoom Out

Sample Name: jc67085-1 Acquired: 6/8/2018 13:27:55 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
Avg	**.1129**	**.0002**	**.0050**	**.0731**	**.0040**	**.0299**	**2.010**	**.0588**	**.0007**
Stddev	.0010	.0001	.0001	.0009	.0003	.0008	.029	.0003	.0003
%RSD	.9264	33.63	2.824	1.269	8.525	2.705	1.428	.4739	37.85
#1	.1137	.0003	.0049	.0724	.0038	.0293	1.989	.0587	.0005
#2	.1122	.0002	.0051	.0737	.0043	.0305	2.030	.0590	.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0102**	**.1075**	**-.0003**	**-.0014**	**.0031**	**.0004**	**-.0011**	**8.322**	**43.53**
Stddev	.0003	.0010	.0008	.0005	.0007	.0007	.0019	.097	.40
%RSD	3.407	.9223	240.3	35.48	21.04	182.5	176.4	1.171	.9217
#1	.0100	.1068	.0002	-.0017	.0026	.0009	-.0025	8.391	43.82
#2	.0105	.1083	-.0009	-.0010	.0036	-.0001	.0003	8.253	43.25

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**7.024**	**21.85**	**3.104**	**48.81**	**.0089**	**.0003**	**18.73**	**-.0035**	**.1081**
Stddev	.061	.20	.054	.23	.0014	.0001	.14	.0005	.0009
%RSD	.8669	.9376	1.730	.4750	15.94	29.65	.7717	13.12	.8042
#1	7.067	22.00	3.142	48.97	.0099	.0003	18.63	-.0032	.1087
#2	6.981	21.71	3.066	48.65	.0079	.0004	18.84	-.0038	.1075

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.1905**	**.0016**	**-.0078**	**71.95**	**.0010**	**.0027**	**1.374**
Stddev	.0014	.0000	.0000	.55	.0007	.0011	.013
%RSD	.7465	.0643	.5597	.7575	78.06	39.47	.9606
#1	.1895	.0016	-.0078	71.57	.0004	.0019	1.365
#2	.1915	.0016	-.0078	72.34	.0015	.0034	1.384

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**119770.**	**16825.**	**6045.3**	**8888.4**
Stddev	1397.	52.	11.1	5.3
%RSD	1.1666	.30651	.18383	.05998
#1	120750.	16788.	6037.5	8884.7
#2	118780.	16861.	6053.2	8892.2

Zoom In
Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	**.2605**	**.0003**	**.0021**	**.0045**	**.0030**	**.0076**	**.1994**	**.0215**
Stddev	.0010	.0000	.0000	.0004	.0005	.0002	.0003	.0000
%RSD	.3925	6.131	1.248	9.450	15.65	2.523	.1605	.0542
#1	.2598	.0004	.0021	.0042	.0027	.0077	.1992	.0215
#2	.2613	.0003	.0021	.0048	.0034	.0075	.1996	.0215

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	**.0011**	**.0066**	**.1075**	**.0002**	**.0001**	**.0023**	**-.0000**	**-.0018**
Stddev	.0000	.0000	.0013	.0016	.0003	.0005	.0009	.0008
%RSD	1.189	.6340	1.250	726.5	248.7	20.89	4877.	45.28
#1	.0011	.0066	.1066	.0014	.0003	.0019	.0006	-.0024
#2	.0010	.0065	.1085	-.0009	-.0001	.0026	-.0007	-.0012

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	**5.184**	**78.22**	**5.135**	**47.49**	**4.095**	**15.97**	**.0107**	**.0003**
Stddev	.034	.06	.009	.04	.049	.07	.0007	.0002
%RSD	.6643	.0797	.1712	.0745	1.190	.4280	6.418	61.35
#1	5.208	78.18	5.128	47.47	4.130	15.92	.0102	.0002
#2	5.160	78.27	5.141	47.52	4.061	16.02	.0111	.0005

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	**21.90**	**-.0039**	**.1836**	**.1139**	**-.0001**	F **-.0118**	**11.71**	**-.0025**
Stddev	.22	.0002	.0003	.0002	.0009	.0002	.12	.0022
%RSD	.9982	5.426	.1426	.1572	1153.	1.861	.9857	86.72
#1	21.74	-.0037	.1838	.1140	-.0007	-.0119	11.62	-.0041
#2	22.05	-.0040	.1834	.1138	.0005	-.0116	11.79	-.0010

Elem	Li6707	P_1774
Avg	**.0009**	**.1014**
Stddev	.0004	.0000
%RSD	38.29	.0082
#1	.0012	.1014
#2	.0007	.1014

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**.2463**
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	.2459
#2	2.040	2.022	1.979	2.021	2.007	1.954	2.061	2.038	.2468
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									

Zoom In Zoom Out

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

Zoom In Zoom Out

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	**-.0003**	**-.0001**	**-.0001**	**-.0001**	**-.0003**	**-.0013**	**.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	-.0002	.0001	-.0002	.0002	-.0004	-.0014	.0001	.0000	.0001
#2	-.0005	-.0002	-.0000	-.0003	-.0002	-.0012	.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	**-.0008**	**-.0002**	**.0007**	**-.0011**	**-.0007**	**-.0011**	**.0020**	**-.0071**	**-.0020**
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	-.0009	-.0002	.0002	-.0016	-.0010	-.0018	.0026	.0097	-.0002
#2	-.0008	-.0002	.0012	-.0007	-.0004	-.0005	.0014	-.0240	-.0038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0022**	**.0512**	**-.1090**	**-.0523**	**-.0049**	**.0002**	**.0026**	**-.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	-.0007	.0466	-.1317	-.0359	-.0053	.0002	.0022	-.0006	.0000
#2	-.0037	.0557	-.0862	-.0687	-.0046	.0001	.0030	-.0006	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 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

Zoom In Zoom Out

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	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0081**	**.1463**	**.0001**	**-.0002**	**.0079**	**.0028**	**-.0030**	**2.786**	**79.24**
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

Zoom In Zoom Out

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	Tl1908	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

Zoom In Zoom Out

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	Tl1908	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

Zoom In Zoom Out

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**	**-.0013**	**.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	-.0016	.0052	2.314	.0103	.0515	140.4	2.210
#2	.1032	-.0011	.0032	2.338	.0103	.0510	142.3	2.229

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	**.0067**	**-.0590**	**.8336**	F **-.0390**	**.0012**	**-.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	-.0550	.8299	-.0406	.0060	-.0111	.1835	-.0179
#2	.0090	-.0629	.8374	-.0374	-.0037	-.0108	.1862	-.0127

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	**1.300**	**139.0**	**51.61**	**43.16**	**485.4**	F **4991.**	**-.0067**	**-.0077**
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.	-.0080	-.0081
#2	1.233	140.1	52.16	43.51	491.0	5083.	-.0055	-.0073

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	**95.12**	**.4856**	**.5645**	**.1078**	**-.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	-.0045	.1095	5537.	-.0027
#2	95.40	.4886	.5695	.1094	-.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

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**-.0010**	**-.0013**	**.0018**	**-.0016**	**-.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	-.0012	-.0021	.0013	-.0003	-.0005	7.199	15.50
#2	.0126	.0504	-.0007	-.0004	.0022	-.0030	-.0018	7.246	15.71

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**9.429**	**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**	**-.0098**	**31.38**	**.0013**	**.0056**	**6.797**
Stddev	.0028	.0000	.0006	.45	.0009	.0001	.093
%RSD	.7502	1.265	5.964	1.440	65.36	1.985	1.368
#1	.3756	.0017	-.0094	31.06	.0020	.0056	6.731
#2	.3796	.0016	-.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

Zoom In Zoom Out

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**	**-.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	-.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**	**-.0012**	**.0015**	**.0105**	**-.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	-.0037	.0017	.0202	-.0036	2.301	102.7
#2	.0149	.4004	.0028	.0013	.0012	.0007	-.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**	**-.0054**	**330.4**	**-.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	-.0051	329.1	-.0080	.0137	3.446
#2	.0158	.0076	-.0056	331.7	-.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

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.1379	.0001	.0109	.1228	.0134	.0314	11.38	.1167	.0019
Stddev	.0012	.0002	.0003	.0013	.0004	.0000	.09	.0010	.0003
%RSD	.8800	164.9	2.396	1.040	3.352	.0652	.7593	.8457	16.11
#1	.1370	-.0000	.0111	.1219	.0137	.0315	11.32	.1160	.0021
#2	.1387	.0002	.0107	.1237	.0131	.0314	11.44	.1174	.0017

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0228	.2718	-.0012	.0022	.0155	-.0058	-.0019	8.355	83.32
Stddev	.0009	.0023	.0019	.0027	.0010	.0030	.0027	.028	.33
%RSD	3.764	.8442	152.4	121.1	6.268	51.73	137.9	.3383	.3927
#1	.0222	.2702	.0001	.0042	.0148	-.0079	-.0000	8.335	83.09
#2	.0234	.2734	-.0025	.0003	.0162	-.0037	-.0038	8.375	83.55

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	13.16	43.92	6.043	69.96	.0401	.0004	30.89	-.0058	.1432
Stddev	.05	.22	.147	.40	.0015	.0005	.32	.0002	.0003
%RSD	.3962	.5054	2.434	.5727	3.701	123.8	1.021	3.462	.2042
#1	13.13	43.76	5.939	69.68	.0390	.0008	30.67	-.0060	.1430
#2	13.20	44.08	6.147	70.25	.0411	.0001	31.11	-.0057	.1434

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	.5333	.0040	-.0104	68.50	.0052	.0004	.2015
Stddev	.0072	.0018	.0001	.65	.0012	.0012	.0032
%RSD	1.355	44.68	.9459	.9490	23.36	264.3	1.576
#1	.5282	.0028	-.0105	68.04	.0043	-.0004	.1993
#2	.5384	.0053	-.0103	68.96	.0060	.0013	.2038

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	119620.	16674.	5987.5	8917.6
Stddev	93.	60.	3.2	7.5
%RSD	.07814	.35811	.05394	.08439
#1	119550.	16632.	5985.3	8912.3
#2	119680.	16717.	5989.8	8922.9

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.1414	.0006	.0173	.0893	.1439	.0544	4.533	.2070	.0031
Stddev	.0006	.0003	.0011	.0008	.0006	.0016	.012	.0039	.0003
%RSD	.4044	42.54	6.505	.8481	.4159	2.972	.2526	1.890	11.19
#1	.1410	.0005	.0181	.0888	.1443	.0532	4.525	.2042	.0028
#2	.1418	.0008	.0165	.0899	.1434	.0555	4.541	.2098	.0033

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0277	.3747	.0020	-.0026	.0062	-.0036	.0022	13.56	126.2
Stddev	.0031	.0033	.0041	.0041	.0022	.0008	.0095	.12	1.1
%RSD	11.04	.8854	199.9	158.2	35.78	22.28	440.9	.9135	.8636
#1	.0255	.3723	-.0008	-.0055	.0046	-.0042	-.0046	13.47	125.4
#2	.0298	.3770	.0049	.0003	.0078	-.0030	.0089	13.65	127.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	22.69	76.42	15.97	278.2	.0073	.0019	35.59	.0017	.2039
Stddev	.28	.46	.02	2.1	.0019	.0003	.36	.0003	.0010
%RSD	1.236	.5978	.1022	.7623	26.56	15.28	1.013	16.87	.4834
#1	22.49	76.10	15.99	276.7	.0087	.0021	35.33	.0019	.2032
#2	22.89	76.74	15.96	279.7	.0059	.0017	35.84	.0015	.2046

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	1.007	.0081	-.0047	275.8	.0034	.0101	2.700
Stddev	.004	.0085	.0001	2.4	.0047	.0250	.019
%RSD	.4115	105.2	2.970	.8590	137.9	247.6	.7027
#1	1.005	.0021	-.0046	274.2	.0067	.0278	2.686
#2	1.010	.0141	-.0048	277.5	.0001	-.0076	2.713

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	117670.	16154.	5944.2	8820.1
Stddev	24.	39.	8.6	6.3
%RSD	.02076	.24080	.14498	.07140
#1	117690.	16126.	5938.1	8815.7
#2	117650.	16181.	5950.3	8824.6

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	.0007	-.0001	-.0001	.0003	-.0001	-.0003	.0200	.0017
Stddev	.0004	.0001	.0000	.0001	.0002	.0005	.0000	.0006
%RSD	55.24	124.1	1.870	28.24	162.7	187.0	.1496	37.71
#1	.0004	-.0001	-.0001	.0002	.0000	-.0007	.0201	.0022
#2	.0010	-.0000	-.0001	.0004	-.0003	.0001	.0200	.0013

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	.0006	-.0000	.0023	-.0002	F -.0023	.0007	-.0012	.0029
Stddev	.0006	.0006	.0000	.0000	.0000	.0015	.0011	.0004
%RSD	103.4	5067.	.3498	24.15	.9262	232.6	87.55	14.79
#1	.0002	.0004	.0023	-.0002	-.0023	.0017	-.0005	.0032
#2	.0011	-.0005	.0023	-.0001	-.0023	-.0004	-.0020	.0026

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	.0288	.0910	.0275	.0625	.0503	.6782	-.0076	.0003
Stddev	.0125	.0005	.0039	.0216	.0564	.0037	.0004	.0003
%RSD	43.57	.5810	14.12	34.50	112.3	.5468	5.411	123.0
#1	.0377	.0914	.0248	.0777	.0104	.6756	-.0079	.0000
#2	.0199	.0906	.0303	.0472	.0902	.6808	-.0073	.0005

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	.2900	-.0004	.0015	.0011	.0014	.0001	.7552	-.0022
Stddev	.0007	.0005	.0003	.0001	.0009	.0002	.0013	.0014
%RSD	.2532	141.5	18.32	7.962	65.49	198.4	.1676	64.56
#1	.2905	-.0008	.0013	.0012	.0020	.0003	.7543	-.0012
#2	.2894	.0000	.0016	.0010	.0007	-.0000	.7561	-.0032

Elem	Li6707	P_1774
Avg	.0015	.0188
Stddev	.0009	.0003
%RSD	58.99	1.827
#1	.0009	.0185
#2	.0022	.0190

Zoom In Zoom Out

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:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	115940.	16301.	5900.7	9082.9
Stddev	282.	32.	40.9	54.2
%RSD	.24343	.19585	.69273	.59629
#1	115740.	16323.	5871.8	9044.6
#2	116140.	16278.	5929.6	9121.2

Zoom In Zoom Out

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**	**.2444**
Stddev	.016	.016	.009	.006	.006	.002	.003	.004	.0003
%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	.2446
#2	2.005	1.983	1.942	1.987	1.982	1.928	2.033	2.002	.2442
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	**1.960**	**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									

Zoom In Zoom Out

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
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	**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

Zoom In Zoom Out

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	**-.0003**	**-.0000**	**.0002**	**-.0000**	**-.0007**	**-.0009**	**.0000**	**.0000**	**.0005**
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	**-.0004**	**-.0002**	**.0002**	**.0012**	**-.0002**	**-.0005**	**.0007**	**-.0236**	**-.0003**
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	-.0004	-.0003	.0009	.0006	.0006	-.0017	.0010	-.0160	-.0011
#2	-.0003	-.0001	-.0004	.0017	-.0010	.0007	.0003	-.0311	.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	**-.0046**	**.0512**	**-.0554**	**-.0475**	**-.0053**	**.0005**	**.0087**	**-.0005**	**-.0000**
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	-.0050	.0528	-.0532	-.0594	-.0050	.0007	.0083	-.0010	-.0001
#2	-.0042	.0496	-.0576	-.0357	-.0055	.0003	.0092	-.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									

Zoom In Zoom Out

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**	**-.0006**	**.0019**	**.0001**	**.0028**
Stddev	.0004	.0006	.0001	.0002	.0006	.0012	.0007
%RSD	89.48	89.66	17.76	28.62	28.81	1361.	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.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	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

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.1800**	**-.0001**	**-.0001**	**.0037**	**.0016**	**.0055**	**1.801**	**.0058**	**.0017**
Stddev	.0018	.0000	.0001	.0002	.0002	.0003	.008	.0002	.0004
%RSD	.9958	45.63	130.6	6.146	11.18	5.986	.4297	3.781	24.56
#1	.1813	-.0001	-.0002	.0035	.0014	.0053	1.796	.0057	.0019
#2	.1788	-.0001	-.0000	.0038	.0017	.0057	1.807	.0060	.0014

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0083**	**.0721**	**.0433**	**.0009**	**.0037**	**.0011**	**.0011**	**.6899**	**221.0**
Stddev	.0002	.0009	.0001	.0002	.0017	.0001	.0014	.0099	2.9
%RSD	2.603	1.269	.3259	22.14	44.98	5.165	120.6	1.442	1.302
#1	.0084	.0715	.0434	.0007	.0049	.0011	.0002	.6969	223.0
#2	.0081	.0727	.0432	.0010	.0025	.0011	.0021	.6829	218.9

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**74.90**	**39.38**	**15.66**	**18.36**	**.0264**	**.0011**	**5.185**	**-.0022**	**.9020**
Stddev	.57	.37	.05	.06	.0004	.0000	.040	.0006	.0063
%RSD	.7578	.9327	.3013	.3188	1.415	.5140	.7752	26.71	.6954
#1	75.30	39.64	15.63	18.41	.0261	.0011	5.157	-.0026	.9065
#2	74.50	39.12	15.69	18.32	.0267	.0010	5.214	-.0018	.8976

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0057**	**.0021**	**-.0015**	**4.667**	**.0029**	**-.0010**	**.4715**
Stddev	.0005	.0021	.0001	.040	.0002	.0014	.0062
%RSD	9.604	98.62	5.761	.8586	5.393	139.3	1.313
#1	.0061	.0006	-.0015	4.639	.0030	-.0020	.4671
#2	.0053	.0036	-.0016	4.695	.0027	-.0000	.4759

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**117440.**	**16504.**	**5873.0**	**8746.3**
Stddev	137.	40.	4.8	11.7
%RSD	.11675	.24531	.08119	.13365
#1	117540.	16475.	5876.4	8754.5
#2	117340.	16533.	5869.7	8738.0

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0243**	**-.0001**	**.0001**	**.0001**	**.0001**	**.0008**	**.0278**	**-.0000**	**.0001**
Stddev	.0000	.0000	.0000	.0002	.0001	.0002	.0000	.0001	.0004
%RSD	.1007	29.85	11.83	124.0	196.8	28.66	.0848	358.8	446.6
#1	.0242	-.0001	.0001	.0000	-.0000	.0006	.0278	-.0001	-.0002
#2	.0243	-.0002	.0001	.0003	.0001	.0010	.0277	.0000	.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0001**	**.0036**	**.0011**	**.0010**	**.0062**	**.0003**	**.0012**	**.4888**	**6.038**
Stddev	.0003	.0001	.0002	.0001	.0001	.0008	.0004	.0003	.019
%RSD	263.8	1.418	22.54	10.24	1.228	256.9	28.80	.0698	.3119
#1	.0003	.0035	.0012	.0009	.0062	-.0003	.0015	.4890	6.051
#2	-.0001	.0036	.0009	.0011	.0061	.0009	.0010	.4885	6.025

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**5.953**	**1.126**	**2.411**	**1.896**	**.0216**	**.0001**	**2.083**	**-.0011**	**.0194**
Stddev	.034	.026	.009	.003	.0007	.0002	.020	.0002	.0001
%RSD	.5661	2.349	.3567	.1390	3.059	335.0	.9662	19.58	.3704
#1	5.977	1.145	2.418	1.898	.0212	.0002	2.068	-.0010	.0195
#2	5.930	1.107	2.405	1.894	.0221	-.0001	2.097	-.0013	.0194

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0040**	**.0010**	**-.0005**	**1.654**	**.0004**	**-.0030**	**.0154**
Stddev	.0002	.0014	.0000	.019	.0001	.0013	.0005
%RSD	5.434	148.5	9.181	1.152	22.74	44.11	3.441
#1	.0042	-.0000	-.0005	1.640	.0004	-.0020	.0150
#2	.0039	.0020	-.0004	1.667	.0003	-.0039	.0157

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**120390.**	**16843.**	**6154.0**	**9407.3**
Stddev	128.	81.	4.0	9.0
%RSD	.10644	.48289	.06560	.09575
#1	120290.	16785.	6151.2	9400.9
#2	120480.	16900.	6156.9	9413.7

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0033**	**-.0000**	**.0002**	**.0001**	**-.0007**	**-.0004**	**.0008**	**.0026**	**.0002**
Stddev	.0003	.0000	.0000	.0001	.0002	.0003	.0000	.0002	.0001
%RSD	8.314	7.086	11.66	103.7	37.44	85.41	5.326	7.407	54.80
#1	.0031	-.0000	.0002	.0002	-.0008	-.0002	.0008	.0025	.0003
#2	.0035	-.0001	.0002	.0000	-.0005	-.0006	.0009	.0028	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0001**	**.0012**	**.0015**	**.0009**	**-.0012**	**-.0000**	**.0016**	**.0088**	**.0694**
Stddev	.0001	.0001	.0009	.0008	.0004	.0004	.0012	.0149	.0006
%RSD	132.1	7.280	57.94	89.55	36.01	6894.	72.15	169.8	.8595
#1	-.0000	.0011	.0022	.0003	-.0009	.0003	.0024	-.0018	.0690
#2	-.0002	.0013	.0009	.0014	-.0015	-.0003	.0008	.0193	.0698

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**-.0018**	**.0558**	**-.1057**	**.1029**	**-.0077**	**.0004**	**.6929**	**.0000**	**.0064**
Stddev	.0033	.0112	.0066	.0106	.0003	.0000	.0071	.0005	.0001
%RSD	183.8	20.02	6.200	10.27	4.551	12.10	1.025	7861.	1.786
#1	.0005	.0479	-.1011	.0954	-.0074	.0004	.6979	.0003	.0065
#2	-.0041	.0637	-.1103	.1104	-.0079	.0004	.6879	-.0003	.0063

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0003**	**.0017**	**-.0000**	**.0051**	**-.0012**	**.0003**	**.0037**
Stddev	.0006	.0012	.0002	.0008	.0009	.0010	.0008
%RSD	194.9	73.61	696.6	15.05	72.71	320.3	20.95
#1	-.0001	.0025	-.0001	.0057	-.0006	.0011	.0043
#2	.0008	.0008	.0001	.0046	-.0018	-.0004	.0032

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**116970.**	**16284.**	**5895.1**	**9061.6**
Stddev	63.	54.	89.6	121.9
%RSD	.05405	.33319	1.5208	1.3449
#1	116920.	16246.	5831.7	8975.4
#2	117010.	16323.	5958.5	9147.7

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**1.216**	**-.0002**	**-.0006**	**.0056**	**-.0028**	**.0017**	**6.708**	**.0052**	**.0008**
Stddev	.010	.0004	.0002	.0013	.0015	.0043	.064	.0019	.0007
%RSD	.8030	171.8	32.65	22.63	51.55	245.9	.9594	37.47	96.78
#1	1.222	-.0005	-.0007	.0065	-.0039	-.0013	6.663	.0066	.0002
#2	1.209	.0000	-.0004	.0047	-.0018	.0048	6.754	.0038	.0013

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0085**	**.0162**	**.0044**	**.0041**	**.0028**	**-.0006**	**.0065**	**.3842**	**484.9**
Stddev	.0000	.0006	.0017	.0014	.0060	.0023	.0044	.0768	5.4
%RSD	.0956	3.432	39.36	35.00	216.9	417.9	67.43	20.00	1.109
#1	.0085	.0166	.0032	.0031	.0070	-.0022	.0096	.3299	488.7
#2	.0085	.0158	.0056	.0051	-.0015	.0011	.0034	.4386	481.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**.0986**	**97.58**	**6.258**	**1054.**	**.2315**	**.0060**	**9.946**	**-.0103**	**2.462**
Stddev	.0059	1.09	.532	33.	.0075	.0003	.099	.0019	.026
%RSD	5.974	1.120	8.507	3.120	3.231	4.992	.9898	18.14	1.046
#1	.1028	98.35	6.634	1077.	.2368	.0058	10.02	-.0090	2.480
#2	.0944	96.80	5.881	1030.	.2262	.0062	9.877	-.0116	2.444

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**-.0010**	**.0075**	**-.0045**	**22.34**	**-.0043**	**.0284**	**.0462**
Stddev	.0010	.0026	.0000	.27	.0063	.0047	.0029
%RSD	94.92	35.16	.8235	1.199	148.6	16.52	6.309
#1	-.0017	.0057	-.0045	22.53	-.0087	.0250	.0441
#2	-.0003	.0094	-.0044	22.15	.0002	.0317	.0482

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**113770.**	**15736.**	**5635.5**	**8346.0**
Stddev	930.	98.	6.7	1.6
%RSD	.81774	.62338	.11910	.01911
#1	114430.	15667.	5640.2	8344.9
#2	113110.	15805.	5630.7	8347.1

Zoom In
Zoom Out

Sample Name: mp7493-mb1 2 Acquired: 6/8/2018 14:26:13 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	**-.0003**	**-.0000**	**.0002**	**-.0002**	**-.0007**	**-.0004**	**.0001**	**-.0003**	**.0003**
Stddev	.0005	.0001	.0002	.0003	.0000	.0003	.0000	.0003	.0003
%RSD	171.3	305.0	97.75	229.9	6.930	76.13	14.50	88.40	95.86
#1	.0001	.0000	.0003	-.0004	-.0007	-.0002	.0001	-.0001	.0006
#2	-.0006	-.0001	.0001	.0001	-.0006	-.0007	.0001	-.0005	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0003**	**.0004**	**-.0001**	**-.0000**	**-.0006**	**.0013**	**.0016**	**-.0166**	**.0032**
Stddev	.0003	.0001	.0009	.0001	.0019	.0003	.0003	.0066	.0017
%RSD	105.1	36.47	1018.	365.5	296.3	20.23	20.66	39.76	53.96
#1	-.0005	.0003	-.0007	-.0001	-.0020	.0011	.0014	-.0119	.0020
#2	-.0001	.0005	.0006	.0001	.0007	.0014	.0018	-.0212	.0044

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**-.0038**	**.0254**	**-.0645**	**-.0191**	**-.0078**	**-.0001**	**.0146**	**-.0007**	**.0002**
Stddev	.0034	.0096	.0495	.0015	.0001	.0000	.0007	.0004	.0001
%RSD	89.02	37.77	76.86	8.099	1.201	3.364	4.604	61.06	45.53
#1	-.0062	.0186	-.0995	-.0180	-.0079	-.0001	.0141	-.0004	.0002
#2	-.0014	.0322	-.0294	-.0202	-.0077	-.0001	.0150	-.0010	.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0001**	**.0017**	**.0003**	**.0037**	**-.0021**	**.0012**	**.0036**
Stddev	.0002	.0013	.0001	.0004	.0019	.0020	.0001
%RSD	281.8	78.68	22.02	12.09	89.94	163.0	1.535
#1	-.0001	.0027	.0004	.0034	-.0034	.0026	.0036
#2	.0002	.0008	.0003	.0040	-.0008	-.0002	.0036

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**116680.**	**16544.**	**6013.6**	**9218.8**
Stddev	339.	6.	64.1	81.4
%RSD	.29043	.03361	1.0660	.88329
#1	116920.	16548.	5968.3	9161.2
#2	116440.	16540.	6058.9	9276.4

Zoom In
Zoom Out

Sample Name: mp7493-b1 Acquired: 6/8/2018 14:29:15 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	**1.995**	**1.975**	**1.918**	**1.957**	**1.931**	**1.871**	**1.983**	**1.976**	**.2406**
Stddev	.018	.019	.015	.017	.002	.002	.000	.016	.0002
%RSD	.8908	.9557	.7814	.8685	.0829	.1293	.0123	.8316	.0834
#1	2.008	1.988	1.908	1.945	1.930	1.872	1.983	1.964	.2407
#2	1.983	1.961	1.929	1.969	1.932	1.869	1.983	1.988	.2405

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.905**	**1.956**	**1.920**	**1.999**	**1.975**	**1.940**	**1.937**	**24.90**	**25.10**
Stddev	.001	.020	.018	.016	.018	.016	.015	.36	.36
%RSD	.0593	1.022	.9393	.8160	.8919	.8198	.7683	1.436	1.439
#1	1.904	1.942	1.907	1.988	1.963	1.929	1.927	25.15	25.35
#2	1.906	1.970	1.933	2.011	1.988	1.951	1.948	24.64	24.84

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**25.14**	**25.44**	**24.38**	**25.10**	**1.923**	**1.955**	**-.0232**	**1.943**	**1.991**
Stddev	.33	.33	.23	.23	.014	.017	.0006	.019	.027
%RSD	1.302	1.284	.9336	.9100	.7505	.8682	2.630	.9660	1.357
#1	25.37	25.67	24.54	25.27	1.913	1.943	-.0237	1.929	2.010
#2	24.91	25.21	24.21	24.94	1.933	1.967	-.0228	1.956	1.972

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.913**	**1.862**	**1.906**	**.0154**	**.0252**	**-.0024**	**1.929**
Stddev	.002	.013	.001	.0016	.0003	.0036	.017
%RSD	.0920	.6792	.0363	10.49	1.273	145.7	.8779
#1	1.914	1.853	1.906	.0165	.0254	.0001	1.917
#2	1.912	1.871	1.905	.0142	.0249	-.0050	1.941

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**115370.**	**16143.**	**5841.1**	**8793.1**
Stddev	543.	293.	3.4	10.3
%RSD	.47074	1.8125	.05758	.11734
#1	115760.	15936.	5843.5	8800.4
#2	114990.	16350.	5838.7	8785.8

Zoom In
Zoom Out

Sample Name: mp7493-s1 Acquired: 6/8/2018 14:32:04 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	**2.174**	**1.972**	**1.959**	**1.968**	**1.908**	**1.925**	**2.514**	**1.978**	**.2487**
Stddev	.013	.007	.020	.019	.009	.010	.009	.021	.0018
%RSD	.5815	.3343	1.030	.9763	.4876	.4968	.3733	1.089	.7072
#1	2.165	1.967	1.945	1.954	1.901	1.918	2.507	1.963	.2475
#2	2.183	1.977	1.974	1.981	1.915	1.932	2.521	1.993	.2500

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.913**	**1.923**	**1.978**	**1.990**	**1.998**	**1.983**	**1.980**	**25.24**	**174.5**
Stddev	.007	.021	.023	.019	.021	.022	.020	.03	.3
%RSD	.3729	1.072	1.180	.9407	1.058	1.136	1.018	.1021	.1804
#1	1.908	1.908	1.962	1.977	1.983	1.968	1.966	25.23	174.2
#2	1.918	1.937	1.995	2.003	2.013	1.999	1.994	25.26	174.7

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**27.91**	**137.2**	**46.26**	**86.17**	**2.401**	**1.973**	**13.26**	**1.927**	**3.353**
Stddev	.08	.0	.22	.53	.029	.021	.15	.018	.009
%RSD	.2944	.0334	.4824	.6183	1.217	1.075	1.123	.9190	.2632
#1	27.85	137.2	46.10	85.79	2.380	1.958	13.15	1.914	3.347
#2	27.96	137.2	46.42	86.54	2.421	1.988	13.36	1.939	3.359

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.929**	**1.947**	**1.917**	**55.78**	**.0270**	**.1109**	**2.451**
Stddev	.005	.027	.006	.60	.0001	.0014	.027
%RSD	.2732	1.373	.3242	1.070	.4835	1.265	1.110
#1	1.925	1.928	1.913	55.36	.0269	.1119	2.432
#2	1.933	1.966	1.922	56.21	.0271	.1099	2.471

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**114610.**	**16112.**	**5666.3**	**8317.7**
Stddev	352.	29.	20.9	33.5
%RSD	.30741	.18039	.36858	.40223
#1	114860.	16092.	5681.0	8341.3
#2	114360.	16133.	5651.5	8294.0

Zoom In
Zoom Out

Sample Name: mp7493-s2 Acquired: 6/8/2018 14:34:53 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	**2.215**	**2.007**	**1.986**	**1.992**	**1.940**	**1.956**	**2.549**	**2.003**	**.2520**
Stddev	.009	.013	.015	.016	.010	.012	.016	.017	.0016
%RSD	.4081	.6674	.7701	.8223	.5331	.5926	.6154	.8450	.6496
#1	2.209	1.998	1.976	1.980	1.933	1.947	2.538	1.991	.2508
#2	2.222	2.017	1.997	2.003	1.948	1.964	2.560	2.015	.2531

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**1.946**	**1.950**	**2.000**	**2.015**	**2.022**	**2.009**	**2.006**	**25.61**	**176.1**
Stddev	.013	.018	.021	.018	.016	.013	.012	.01	.4
%RSD	.6615	.9234	1.048	.8759	.7830	.6503	.6198	.0582	.2031
#1	1.937	1.937	1.985	2.003	2.011	2.000	1.998	25.62	175.8
#2	1.955	1.962	2.015	2.028	2.034	2.018	2.015	25.60	176.3

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**28.27**	**138.6**	**46.75**	**87.14**	**2.427**	**1.994**	**13.33**	**1.949**	**3.407**
Stddev	.10	.5	.19	.52	.020	.017	.11	.016	.008
%RSD	.3510	.3780	.3976	.6009	.8341	.8299	.8273	.8199	.2351
#1	28.20	138.2	46.62	86.77	2.413	1.983	13.25	1.937	3.401
#2	28.34	138.9	46.89	87.51	2.441	2.006	13.41	1.960	3.413

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.953**	**1.964**	**1.946**	**56.10**	**.0254**	**.1136**	**2.480**
Stddev	.009	.022	.011	.48	.0019	.0002	.023
%RSD	.4342	1.111	.5833	.8512	7.355	.1826	.9211
#1	1.947	1.948	1.938	55.77	.0241	.1135	2.463
#2	1.959	1.979	1.954	56.44	.0268	.1138	2.496

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**113790.**	**15923.**	**5634.5**	**8284.5**
Stddev	341.	28.	1.7	1.8
%RSD	.29925	.17593	.03105	.02115
#1	114030.	15903.	5633.2	8285.8
#2	113550.	15942.	5635.7	8283.3

Zoom In Zoom Out

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**	**-.0000**	**.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	-.0000	.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	-.0011	.0162	.0047	-.0009	.1375	153.7

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**3.181**	**115.9**	**21.96**	**62.94**	**.4312**	**.0023**	**13.13**	**-.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	.4298	.0022	13.06	-.0023	1.421
#2	3.152	115.5	21.91	62.85	.4327	.0024	13.19	-.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

Zoom In Zoom Out

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
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.027**	**2.005**	**1.966**	**2.008**	**1.990**	**1.927**	**2.040**	**2.026**	**.2445**
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	.2443
#2	2.029	2.004	1.977	2.019	1.994	1.934	2.045	2.037	.2447
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	**1.964**	**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
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	**40.42**	**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
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 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
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
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
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	**115370.**	**16069.**	**5850.9**	**8745.6**
Stddev	418.	27.	8.2	1.8
%RSD	.36208	.16970	.13961	.02007
#1	115080.	16049.	5845.1	8746.8
#2	115670.	16088.	5856.6	8744.3

Zoom In Zoom Out

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
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0000**	**-.0001**	**-.0000**	**-.0005**	**-.0003**	**.0000**	**-.0001**	**.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	-.0005	.0001	.0000	-.0000	-.0008	-.0003	.0000	.0002	.0009
#2	-.0003	-.0001	-.0001	-.0000	-.0001	-.0003	.0000	-.0003	.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0000**	**.0014**	**.0005**	**.0007**	**.0020**	**.0009**	**.0027**	**.0007**
Stddev	.0005	.0001	.0003	.0004	.0016	.0021	.0004	.0002	.0065
%RSD	262.4	302.7	24.95	69.97	234.9	108.7	40.84	8.254	881.6
#1	-.0006	-.0001	.0011	.0008	-.0005	.0035	.0012	.0028	-.0039
#2	.0002	.0000	.0016	.0003	.0019	.0005	.0007	.0025	.0054
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0020**	**.0424**	**-.0650**	**-.0531**	**-.0039**	**.0003**	**.0044**	**-.0007**	**.0002**
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
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 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**	**-.0004**	**-.0011**	**-.0020**	**.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	-.0017	-.0004	-.0005	.0023
#2	.0005	.0035	.0004	.0010	-.0019	-.0036	.0041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**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

Zoom In Zoom Out

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**	**-.0006**	**-.0003**	**.0009**	**-.0022**	**-.0030**	**.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	-.0008	-.0004	.0019	-.0016	-.0059	.5583	.0011	.0015
#2	.1811	-.0003	-.0002	-.0002	-.0028	-.0001	.5595	.0004	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0021**	**.0090**	**.0091**	**.0006**	**.0167**	**-.0030**	**.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	-.0021	.0090	.0088	-.0012	.0203	-.0069	.0142	.1346	147.2
#2	-.0020	.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**	**-.0073**	**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	.4004	.0013	12.93	-.0061	1.350

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0037**	**.0207**	**-.0041**	**53.82**	**-.0041**	**.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	-.0045	53.47	.0027	.0904	.4536
#2	.0044	.0203	-.0037	54.17	-.0108	.0893	.4649

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
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

Zoom In Zoom Out

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**	**-.0001**	**.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	-.0001	.0003	.0018	.0050	.0025	.6202	.0027	.0011
#2	.0712	-.0000	.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	-.0006	.0060	.0046	-.0008	.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**	**-.0028**	**.2265**
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	-.0023	.2245
#2	2.768	10.22	1.697	3.295	.0599	.0013	15.07	-.0033	.2284

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0180**	**.0009**	**-.0074**	**24.59**	**-.0013**	**.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	-.0074	24.41	-.0014	.0174	.2484
#2	.0179	.0006	-.0074	24.76	-.0012	.0184	.2527

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
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

Zoom In Zoom Out

Sample Name: jc67003-2 Acquired: 6/8/2018 14:52:32 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	**.5361**	**-.0001**	**.0005**	**.0015**	**.0029**	**.0137**	**.1575**	**.0041**	**.0005**
Stddev	.0031	.0001	.0000	.0000	.0002	.0002	.0003	.0000	.0006
%RSD	.5765	102.4	5.488	2.805	6.002	1.735	.1916	.2367	115.5
#1	.5339	-.0001	.0005	.0015	.0031	.0139	.1577	.0041	.0001
#2	.5383	-.0000	.0004	.0015	.0028	.0136	.1573	.0041	.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0027**	**.0534**	**.0012**	**-.0002**	**.0607**	**.0008**	**.0001**	**.5227**	**111.6**
Stddev	.0003	.0006	.0005	.0006	.0028	.0012	.0026	.0169	.8
%RSD	10.49	1.039	41.57	352.0	4.624	162.2	2883.	3.236	.7454
#1	.0029	.0530	.0009	.0002	.0587	-.0001	.0019	.5347	111.1
#2	.0025	.0538	.0016	-.0006	.0627	.0016	-.0018	.5108	112.2

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**2.601**	**62.52**	**9.017**	**36.39**	**.1984**	**.0012**	**14.26**	**.0043**	**.8651**
Stddev	.018	.57	.099	.37	.0009	.0003	.10	.0006	.0055
%RSD	.6880	.9126	1.097	1.004	.4449	28.64	.7327	13.47	.6364
#1	2.588	62.11	8.947	36.13	.1977	.0009	14.19	.0039	.8612
#2	2.614	62.92	9.087	36.65	.1990	.0014	14.34	.0047	.8690

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0117**	**.0138**	**-.0068**	**35.09**	**-.0025**	**.1545**	**.3440**
Stddev	.0004	.0014	.0001	.31	.0007	.0009	.0052
%RSD	3.536	10.21	1.583	.8694	27.04	.5681	1.516
#1	.0120	.0128	-.0069	34.88	-.0030	.1539	.3403
#2	.0114	.0148	-.0068	35.31	-.0021	.1551	.3477

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**114670.**	**15990.**	**5730.5**	**8548.1**
Stddev	746.	139.	15.3	11.9
%RSD	.65040	.87122	.26660	.13919
#1	114140.	16088.	5719.7	8539.6
#2	115200.	15891.	5741.3	8556.5

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0596**	**-.0002**	**-.0007**	**-.0004**	**.0031**	**-.0035**	**2.579**	**.0003**	**.0023**
Stddev	.0004	.0003	.0003	.0004	.0008	.0011	.001	.0022	.0014
%RSD	.7294	148.1	39.78	109.1	27.06	32.07	.0513	806.0	60.26
#1	.0593	-.0004	-.0005	-.0001	.0037	-.0027	2.580	.0018	.0013
#2	.0599	.0000	-.0009	-.0007	.0025	-.0043	2.578	-.0013	.0033

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0021**	**.0100**	**.0062**	**-.0023**	**-.0009**	**.0127**	**-.0018**	**.0433**	**258.9**
Stddev	.0014	.0002	.0007	.0040	.0004	.0048	.0009	.1369	.8
%RSD	63.85	1.509	11.63	176.5	40.53	37.81	52.40	316.3	.3087
#1	.0031	.0099	.0057	.0006	-.0012	.0093	-.0024	-.0535	258.4
#2	.0012	.0101	.0068	-.0051	-.0006	.0161	-.0011	.1401	259.5

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**45.42**	**45.40**	**8.036**	**14.77**	**.1399**	**-.0008**	**17.11**	**-.0078**	**1.447**
Stddev	.08	.06	.043	.01	.0005	.0008	.01	.0012	.002
%RSD	.1860	.1280	.5411	.0554	.3574	107.9	.0469	15.45	.1488
#1	45.37	45.36	8.067	14.78	.1396	-.0002	17.10	-.0087	1.446
#2	45.48	45.44	8.005	14.77	.1403	-.0014	17.11	-.0070	1.449

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0002**	**.0093**	**-.0018**	**242.5**	**-.0038**	**.0125**	**1.464**
Stddev	.0012	.0006	.0007	.1	.0005	.0065	.006
%RSD	556.8	6.706	38.40	.0594	13.92	51.81	.4143
#1	-.0006	.0088	-.0023	242.6	-.0034	.0171	1.468
#2	.0011	.0097	-.0013	242.4	-.0041	.0079	1.459

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**116610.**	**16277.**	**5931.6**	**9054.6**
Stddev	1090.	52.	20.5	23.7
%RSD	.93509	.32222	.34592	.26153
#1	115840.	16315.	5917.1	9037.8
#2	117380.	16240.	5946.1	9071.3

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.2138**	**-.0001**	**.0003**	**.0004**	**.0008**	**.0077**	**.0451**	**.0064**	**.0012**
Stddev	.0019	.0002	.0003	.0001	.0001	.0001	.0001	.0001	.0003
%RSD	.9044	215.4	110.0	31.73	8.812	1.275	.1699	1.615	21.47
#1	.2124	.0000	.0001	.0005	.0008	.0076	.0451	.0063	.0010
#2	.2151	-.0002	.0005	.0003	.0009	.0077	.0452	.0065	.0014

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0007**	**.1120**	**.0032**	**.0006**	**.0241**	**.0027**	**.0019**	**.0302**	**79.17**
Stddev	.0005	.0013	.0007	.0005	.0005	.0013	.0008	.0035	.28
%RSD	66.70	1.157	21.92	78.92	1.894	48.89	42.61	11.60	.3487
#1	.0004	.1111	.0027	.0009	.0244	.0018	.0024	.0327	78.98
#2	.0011	.1129	.0037	.0003	.0238	.0036	.0013	.0277	79.37

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**.8708**	**8.191**	**4.048**	**3.750**	**.0485**	**.0032**	**11.46**	**-.0030**	**.3701**
Stddev	.0017	.056	.029	.036	.0008	.0001	.13	.0001	.0022
%RSD	.1965	.6868	.7270	.9691	1.651	3.119	1.145	1.799	.6061
#1	.8696	8.151	4.069	3.724	.0479	.0033	11.37	-.0029	.3685
#2	.8721	8.231	4.028	3.775	.0491	.0031	11.55	-.0030	.3717

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0006**	**.0013**	**-.0066**	**2.218**	**-.0023**	**.0057**	**.0418**
Stddev	.0003	.0013	.0000	.023	.0019	.0013	.0015
%RSD	44.85	98.12	.5218	1.049	83.41	22.37	3.516
#1	.0008	.0022	-.0066	2.201	-.0010	.0066	.0408
#2	.0004	.0004	-.0066	2.234	-.0037	.0048	.0429

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**119430.**	**16595.**	**6029.3**	**9091.8**
Stddev	162.	1.	26.3	32.9
%RSD	.13531	.00526	.43558	.36172
#1	119310.	16595.	6047.9	9115.1
#2	119540.	16596.	6010.7	9068.6

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.2968**	**-.0002**	**.0009**	**.0060**	**.0008**	**.0275**	**.3501**	**.5007**	**.0018**
Stddev	.0001	.0000	.0000	.0000	.0004	.0001	.0001	.0056	.0003
%RSD	.0176	16.40	2.462	.3651	45.12	.3141	.0380	1.120	15.74
#1	.2969	-.0002	.0009	.0060	.0010	.0274	.3500	.4967	.0020
#2	.2968	-.0002	.0009	.0060	.0005	.0275	.3502	.5047	.0016

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0011**	**2.041**	**.0038**	**.0005**	**.0801**	**.0013**	**.0018**	**.0105**	**151.0**
Stddev	.0002	.022	.0009	.0001	.0004	.0016	.0003	.0094	.4
%RSD	17.55	1.078	22.55	15.89	.4842	130.1	17.61	89.44	.2403
#1	.0009	2.025	.0032	.0005	.0803	.0001	.0020	.0172	151.3
#2	.0012	2.056	.0044	.0006	.0798	.0024	.0016	.0039	150.8

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**2.842**	**13.70**	**4.307**	**4.328**	**.0616**	**.0010**	**11.10**	**-.0030**	**.5920**
Stddev	.013	.03	.025	.001	.0003	.0001	.14	.0004	.0026
%RSD	.4573	.1864	.5740	.0328	.4130	11.01	1.254	12.94	.4374
#1	2.851	13.72	4.290	4.329	.0614	.0011	11.00	-.0027	.5938
#2	2.832	13.68	4.325	4.327	.0618	.0009	11.20	-.0032	.5901

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0001**	**.0028**	**-.0062**	**6.679**	**-.0008**	**.0147**	**.1878**
Stddev	.0001	.0000	.0000	.073	.0004	.0020	.0011
%RSD	162.7	1.677	.4722	1.089	43.88	13.27	.5735
#1	-.0000	.0028	-.0062	6.627	-.0011	.0161	.1886
#2	.0001	.0029	-.0063	6.730	-.0006	.0133	.1871

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**118440.**	**16385.**	**5928.7**	**8900.3**
Stddev	342.	62.	7.3	14.0
%RSD	.28863	.37597	.12379	.15773
#1	118200.	16342.	5933.8	8910.2
#2	118680.	16429.	5923.5	8890.4

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.1071**	**-.0001**	**.0001**	**.0018**	**.0007**	**.0147**	**.5787**	**.0039**	**.0015**
Stddev	.0005	.0001	.0000	.0000	.0000	.0002	.0023	.0003	.0004
%RSD	.4315	91.96	28.91	1.689	.5011	1.334	.3960	6.372	26.00
#1	.1074	-.0001	.0000	.0017	.0007	.0149	.5770	.0041	.0012
#2	.1068	-.0000	.0001	.0018	.0007	.0146	.5803	.0038	.0018

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0008**	**.0141**	**.0038**	**-.0006**	**.0090**	**.0005**	**.0007**	**.0348**	**97.15**
Stddev	.0001	.0002	.0000	.0000	.0002	.0006	.0002	.0050	.08
%RSD	6.943	1.679	.0022	5.667	1.676	119.9	23.55	14.31	.0794
#1	.0008	.0139	.0038	-.0006	.0089	.0001	.0006	.0313	97.20
#2	.0007	.0143	.0038	-.0007	.0091	.0010	.0008	.0384	97.09

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**8.270**	**33.86**	**11.86**	**8.436**	**.1215**	**.0017**	**12.83**	**-.0031**	**.5737**
Stddev	.004	.06	.03	.005	.0008	.0001	.13	.0001	.0016
%RSD	.0494	.1659	.2468	.0565	.6301	7.516	.9885	3.427	.2849
#1	8.267	33.90	11.84	8.439	.1210	.0016	12.74	-.0030	.5748
#2	8.272	33.82	11.88	8.433	.1221	.0018	12.92	-.0031	.5725

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0008**	**.0011**	**-.0072**	**12.13**	**-.0033**	**.0135**	**.0856**
Stddev	.0005	.0023	.0001	.11	.0007	.0017	.0011
%RSD	65.23	210.1	1.727	.9447	21.85	12.26	1.331
#1	.0011	-.0005	-.0071	12.05	-.0028	.0123	.0848
#2	.0004	.0027	-.0073	12.21	-.0038	.0147	.0864

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**118730.**	**16462.**	**6010.1**	**8969.0**
Stddev	467.	2.	11.6	5.5
%RSD	.39312	.01417	.19260	.06162
#1	119060.	16464.	6001.9	8965.1
#2	118400.	16461.	6018.3	8972.9

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	.6030
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

Zoom In Zoom Out

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	.0073	151.8
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

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	.2447
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	.2440
#2	2.026	1.995	1.981	2.023	2.002	1.940	2.044	2.041	.2454
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.970	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
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	40.30	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
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 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
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	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

Zoom In Zoom Out

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	**-.0004**	**-.0000**	**.0001**	**.0000**	**-.0005**	**-.0018**	**-.0000**	**-.0001**	**.0005**
Stddev	.0003	.0001	.0001	.0002	.0003	.0002	.0000	.0001	.0006
%RSD	67.21	236.3	102.0	1018.	57.73	9.392	123.8	171.2	119.0
#1	-.0002	.0000	.0002	.0002	-.0003	-.0019	-.0000	-.0002	.0001
#2	-.0006	-.0001	.0000	-.0001	-.0007	-.0017	-.0000	.0000	.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	**-.0001**	**-.0001**	**.0009**	**-.0002**	**-.0004**	**-.0007**	**.0010**	**-.0090**	**-.0038**
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
#1	-.0004	-.0001	.0001	-.0007	.0008	-.0014	.0015	-.0047	-.0035
#2	.0001	-.0001	.0017	.0003	-.0017	.0001	.0006	-.0134	-.0042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0031**	**.0417**	**-.0699**	**-.0590**	**-.0060**	**.0003**	**.0034**	**-.0004**	**.0002**
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
#1	-.0055	.0538	-.0991	-.0657	-.0067	.0003	.0034	-.0001	.0002
#2	-.0007	.0297	-.0408	-.0523	-.0054	.0003	.0034	-.0006	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 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	**.0005**	**.0014**	**.0004**	**.0000**	**-.0003**	**-.0017**	**.0024**
Stddev	.0001	.0002	.0002	.0012	.0011	.0019	.0002
%RSD	11.11	13.12	47.99	3776.	320.4	112.5	6.270
#1	.0006	.0012	.0005	-.0008	-.0011	-.0030	.0023
#2	.0005	.0015	.0003	.0009	.0004	-.0003	.0025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**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

Zoom In Zoom Out

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
Avg	**.0521**	**-.0002**	**.0003**	**.0049**	**.0010**	**.0077**	**.4764**	**.0105**	**.0011**
Stddev	.0003	.0000	.0001	.0000	.0000	.0002	.0015	.0001	.0002
%RSD	.5035	1.847	28.50	.2641	3.615	2.221	.3102	.6114	18.40
#1	.0520	-.0002	.0003	.0049	.0010	.0076	.4754	.0105	.0009
#2	.0523	-.0002	.0002	.0049	.0009	.0078	.4775	.0106	.0012

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0016**	**.0237**	**.0073**	**-.0004**	**.0053**	**.0037**	**.0009**	**.0875**	**161.0**
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	-.0003	.0050	.0031	.0003	.1012	160.5
#2	.0018	.0240	.0063	-.0006	.0056	.0044	.0015	.0738	161.5

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**5.915**	**95.08**	**11.31**	**17.08**	**.2462**	**.0078**	**14.42**	**-.0029**	**.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	-.0029	.8679
#2	5.941	95.25	11.38	17.17	.2480	.0080	14.53	-.0030	.8721

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0024**	**.0005**	**-.0065**	**53.87**	**-.0017**	**.0235**	**.1371**
Stddev	.0000	.0015	.0002	.52	.0008	.0006	.0014
%RSD	.0052	280.2	2.755	.9730	45.31	2.464	1.026
#1	.0024	-.0005	-.0064	53.50	-.0022	.0231	.1361
#2	.0024	.0016	-.0066	54.24	-.0011	.0239	.1381

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**117690.**	**16299.**	**5864.3**	**8701.8**
Stddev	164.	13.	4.2	10.5
%RSD	.13928	.07701	.07148	.12063
#1	117580.	16290.	5867.3	8709.2
#2	117810.	16308.	5861.4	8694.4

Zoom In Zoom Out

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
Avg	**.3478**	**-.0001**	**.0001**	**.0008**	**.0015**	**.0021**	**.3967**	**.0007**	**.0009**
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	-.0001	-.0001	.0007	.0016	.0022	.3945	.0007	.0012
#2	.3487	-.0001	.0004	.0009	.0015	.0020	.3989	.0008	.0007

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0017**	**.0037**	**.0072**	**-.0000**	**.0048**	**-.0001**	**-.0008**	**.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	-.0015	.0046	-.0001	-.0009	.6792	102.3
#2	.0015	.0037	.0071	.0014	.0051	-.0002	-.0007	.6701	103.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**3.560**	**73.68**	**14.84**	**47.02**	**.3088**	**.0001**	**10.98**	**-.0026**	**.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	-.0001	10.91	-.0023	.9860
#2	3.562	73.87	14.98	47.20	.3109	.0004	11.04	-.0028	.9902

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0228**	**.0025**	**-.0057**	**.6318**	**-.0014**	**.1563**	**.7263**
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	-.0057	.6261	-.0037	.1549	.7215
#2	.0230	.0024	-.0058	.6375	.0008	.1578	.7311

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**113600.**	**16022.**	**5660.3**	**8425.1**
Stddev	497.	93.	7.9	17.4
%RSD	.43728	.58311	.14014	.20658
#1	113950.	15956.	5654.6	8412.8
#2	113250.	16088.	5665.9	8437.4

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.3316**	**-.0002**	**.0001**	**.0007**	**.0008**	**-.0004**	**.3656**	**.0004**	**.0005**
Stddev	.0024	.0000	.0001	.0003	.0001	.0002	.0026	.0005	.0003
%RSD	.7318	12.16	77.54	47.28	14.11	51.39	.7193	106.2	58.90
#1	.3299	-.0002	.0002	.0009	.0009	-.0006	.3637	.0001	.0008
#2	.3334	-.0002	.0001	.0004	.0007	-.0003	.3674	.0008	.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0011**	**.0017**	**.0068**	**-.0003**	**.0024**	**-.0010**	**.0006**	**.2547**	**98.95**
Stddev	.0003	.0000	.0003	.0013	.0002	.0013	.0007	.0059	.87
%RSD	27.03	.7303	4.322	407.4	8.327	131.0	121.5	2.317	.8793
#1	.0009	.0017	.0066	-.0013	.0023	-.0020	.0001	.2505	98.33
#2	.0013	.0017	.0070	.0006	.0026	-.0001	.0011	.2588	99.56

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**2.793**	**71.25**	**14.29**	**45.27**	**.2934**	**.0003**	**9.787**	**-.0024**	**.9548**
Stddev	.016	.45	.24	.47	.0032	.0001	.111	.0003	.0083
%RSD	.5867	.6363	1.707	1.028	1.102	36.63	1.131	13.10	.8680
#1	2.781	70.93	14.12	44.94	.2911	.0003	9.709	-.0026	.9490
#2	2.804	71.57	14.46	45.60	.2957	.0002	9.865	-.0022	.9607

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0078**	**.0029**	**-.0055**	**.5544**	**-.0025**	**.1523**	**.6747**
Stddev	.0002	.0004	.0001	.0063	.0016	.0018	.0089
%RSD	2.471	14.67	1.980	1.139	64.22	1.165	1.315
#1	.0079	.0026	-.0054	.5500	-.0013	.1510	.6684
#2	.0077	.0032	-.0056	.5589	-.0036	.1536	.6810

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**118190.**	**16405.**	**5870.2**	**8697.0**
Stddev	314.	88.	2.6	6.2
%RSD	.26542	.53889	.04498	.07095
#1	118410.	16468.	5872.1	8701.4
#2	117970.	16343.	5868.4	8692.7

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0928**	**.0001**	**.0117**	**.0810**	**.0020**	**.0365**	**7.562**	**.0895**	**.0010**
Stddev	.0000	.0000	.0002	.0009	.0003	.0011	.096	.0011	.0001
%RSD	.0273	18.14	2.051	1.057	14.76	2.994	1.274	1.216	8.884
#1	.0928	.0000	.0119	.0804	.0018	.0357	7.494	.0887	.0011
#2	.0928	.0001	.0115	.0817	.0022	.0372	7.631	.0902	.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0087**	**.1489**	**-.0006**	**.0020**	**.0068**	**.0004**	**-.0003**	**2.822**	**80.42**
Stddev	.0001	.0024	.0030	.0003	.0030	.0036	.0021	.019	.18
%RSD	1.657	1.627	519.2	14.07	43.32	868.5	786.7	.6856	.2251
#1	.0086	.1472	-.0027	.0022	.0047	.0030	.0012	2.836	80.55
#2	.0088	.1506	.0015	.0018	.0089	-.0021	-.0017	2.808	80.30

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**3.248**	**40.52**	**3.798**	**95.66**	**.0384**	**-.0001**	**17.32**	**.0159**	**.1459**
Stddev	.011	.02	.080	.32	.0007	.0005	.20	.0020	.0003
%RSD	.3289	.0540	2.105	.3350	1.850	546.2	1.182	12.52	.2117
#1	3.255	40.50	3.742	95.44	.0389	.0003	17.18	.0145	.1461
#2	3.240	40.53	3.855	95.89	.0379	-.0005	17.47	.0173	.1457

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0753**	**.0014**	**-.0054**	**89.05**	**-.0022**	**-.0027**	**.2588**
Stddev	.0007	.0024	.0001	1.11	.0013	.0077	.0012
%RSD	.8791	178.9	1.843	1.244	56.32	278.8	.4487
#1	.0749	.0031	-.0053	88.27	-.0013	.0027	.2597
#2	.0758	-.0004	-.0054	89.84	-.0031	-.0082	.2580

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**117010.**	**16169.**	**5899.9**	**8819.3**
Stddev	254.	34.	22.7	23.4
%RSD	.21679	.21302	.38426	.26529
#1	117190.	16144.	5915.9	8835.9
#2	116830.	16193.	5883.8	8802.8

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.3419**	**-.0002**	**-.0000**	**.0007**	**.0013**	**.0020**	**.3836**	**.0011**	**.0008**
Stddev	.0024	.0002	.0001	.0000	.0007	.0004	.0020	.0000	.0006
%RSD	.6936	92.75	335.3	2.606	50.36	19.11	.5336	1.862	79.35
#1	.3403	-.0001	-.0001	.0007	.0009	.0017	.3821	.0011	.0012
#2	.3436	-.0003	.0000	.0007	.0018	.0023	.3850	.0010	.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0017**	**.0037**	**.0063**	**-.0006**	**.0044**	**-.0007**	**-.0010**	**.6904**	**101.0**
Stddev	.0003	.0001	.0014	.0007	.0025	.0010	.0011	.0129	.8
%RSD	15.05	2.233	22.46	119.0	55.97	140.8	112.8	1.868	.8037
#1	.0018	.0037	.0073	-.0001	.0062	-.0000	-.0002	.6813	100.5
#2	.0015	.0036	.0053	-.0010	.0027	-.0014	-.0018	.6995	101.6

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**3.533**	**72.26**	**14.58**	**45.94**	**.2987**	**.0000**	**10.69**	**-.0023**	**.9733**
Stddev	.031	.36	.23	.43	.0023	.0001	.12	.0001	.0074
%RSD	.8707	.5032	1.560	.9315	.7701	172.1	1.078	3.963	.7615
#1	3.511	72.00	14.42	45.64	.2971	-.0000	10.61	-.0022	.9681
#2	3.555	72.51	14.74	46.24	.3003	.0001	10.77	-.0024	.9786

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0254**	**.0042**	**-.0056**	**.6109**	**-.0002**	**.1518**	**.6996**
Stddev	.0015	.0004	.0000	.0118	.0002	.0011	.0096
%RSD	5.833	9.978	.6218	1.936	84.50	.7207	1.371
#1	.0243	.0045	-.0056	.6025	-.0004	.1510	.6928
#2	.0264	.0039	-.0057	.6193	-.0001	.1526	.7064

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**115770.**	**16243.**	**5782.6**	**8576.2**
Stddev	247.	1.	21.8	32.5
%RSD	.21337	.00611	.37648	.37850
#1	115940.	16243.	5767.2	8553.3
#2	115600.	16242.	5798.0	8599.2

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**.0896**	**-.0185**	**-.0051**	**2.230**	**-.0343**	**-.0022**	**167.7**	**2.170**	**.0115**
Stddev	.0120	.0061	.0097	.017	.0105	.0993	2.9	.002	.0103
%RSD	13.45	33.23	190.8	.7626	30.53	4418.	1.712	.0894	90.35
#1	.0810	-.0228	-.0120	2.242	-.0269	-.0724	165.7	2.171	.0041
#2	.0981	-.0141	.0018	2.218	-.0417	.0679	169.8	2.169	.0188

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.1784**	**.8740**	**.0011**	**.0417**	**.0579**	**.1784**	**.0668**	**.1789**	**143.2**
Stddev	.0074	.0267	.0533	.0341	.0574	.0692	.2087	.1859	1.2
%RSD	4.161	3.049	4722.	81.70	99.05	38.80	312.6	104.0	.8317
#1	.1732	.8552	-.0366	.0176	.0985	.1295	-.0808	.3103	142.3
#2	.1837	.8929	.0389	.0658	.0174	.2274	.2143	.0474	144.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**52.48**	**49.13**	**470.9**	**5534.**	**-.8133**	**-.0299**	**88.95**	**.3580**	**.5816**
Stddev	.26	2.09	18.2	117.	.0080	.0448	1.09	.0201	.0035
%RSD	.5028	4.257	3.869	2.121	.9802	149.9	1.225	5.627	.5981
#1	52.29	47.65	458.1	5451.	-.8190	.0018	89.72	.3438	.5792
#2	52.67	50.61	483.8	5617.	-.8077	-.0616	88.18	.3723	.5841

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.1335**	**.0160**	**.1678**	**6526.**	**-.0795**	**-.0189**	**86.28**
Stddev	.0234	.0711	.0109	25.	.0736	.2750	.20
%RSD	17.49	444.5	6.512	.3883	92.67	1455.	.2285
#1	.1170	.0663	.1755	6508.	-.1315	.1755	86.14
#2	.1500	-.0343	.1601	6544.	-.0274	-.2133	86.42

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**115100.**	**16110.**	**5998.2**	**9054.2**
Stddev	1358.	277.	31.8	43.4
%RSD	1.1795	1.7194	.52964	.47907
#1	116060.	16306.	5975.8	9023.5
#2	114140.	15914.	6020.7	9084.8

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Avg	**.1176**	**.0011**	**.0150**	**.0814**	**.1226**	**.0473**	**3.723**	**.1858**
Stddev	.0003	.0000	.0002	.0007	.0015	.0006	.019	.0028
%RSD	.2851	.9731	1.051	.9056	1.204	1.203	.5187	1.528
#1	.1178	.0011	.0149	.0809	.1215	.0468	3.709	.1838
#2	.1174	.0011	.0151	.0820	.1236	.0477	3.737	.1878

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Avg	**.0010**	**.0226**	**.3099**	**-.0018**	**-.0011**	**.0053**	**.0060**	F **-.0040**
Stddev	.0006	.0001	.0026	.0003	.0003	.0000	.0015	.0005
%RSD	65.39	.4258	.8461	17.35	28.69	.2027	24.78	12.18
#1	.0014	.0226	.3080	-.0016	-.0014	.0053	.0049	-.0044
#2	.0005	.0227	.3118	-.0020	-.0009	.0053	.0071	-.0037

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Avg	**11.44**	**105.9**	**18.85**	**63.33**	**13.99**	**228.5**	**.0292**	**.0030**
Stddev	.02	.4	.03	.17	.20	3.0	.0004	.0004
%RSD	.1502	.3452	.1340	.2632	1.457	1.328	1.223	14.40
#1	11.43	105.7	18.83	63.21	13.84	226.3	.0289	.0033
#2	11.45	106.2	18.86	63.45	14.13	230.6	.0294	.0027

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Avg	**30.56**	**.0074**	**.1714**	**.8519**	**-.0002**	**-.0051**	F **234.1**	**.0090**
Stddev	.24	.0003	.0004	.0062	.0010	.0002	1.6	.0002
%RSD	.7771	3.785	.2503	.7336	459.3	4.788	.6940	2.524
#1	30.39	.0076	.1711	.8475	.0005	-.0049	233.0	.0092
#2	30.73	.0072	.1717	.8563	-.0009	-.0053	235.3	.0089

Elem	Li6707	P_1774
Avg	**.0077**	**2.333**
Stddev	.0015	.018
%RSD	18.90	.7747
#1	.0067	2.320
#2	.0087	2.346

Zoom In Zoom Out

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:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**125160.**	**17392.**	**6233.2**	**8491.4**
Stddev	623.	56.	19.6	12.7
%RSD	.49742	.32205	.31505	.15011
#1	125600.	17431.	6219.3	8482.3
#2	124720.	17352.	6247.0	8500.4

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2013**	**.0019**	**.0031**	**.0511**	**.0097**	**.0088**	**.0157**	**.0108**
Stddev	.0001	.0001	.0002	.0005	.0002	.0007	.0001	.0004
%RSD	.0609	3.733	6.123	1.017	1.991	7.986	.8725	3.740
#1	.2014	.0018	.0033	.0508	.0096	.0083	.0156	.0105
#2	.2012	.0019	.0030	.0515	.0099	.0093	.0158	.0110
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	**.0053**	**.0494**	**.0205**	**.0080**	**.0083**	W **.0023**	**.0085**	**.0062**
Stddev	.0001	.0007	.0002	.0012	.0005	.0012	.0005	.0002
%RSD	1.424	1.431	.7981	14.79	6.399	51.06	5.300	3.997
#1	.0052	.0489	.0204	.0072	.0087	.0015	.0082	.0060
#2	.0053	.0499	.0206	.0088	.0080	.0031	.0089	.0064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
Value						.0030		
Range						-20.00%		

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1820**	**5.144**	**.0969**	**5.238**	**4.976**	**5.106**	**.0920**	**.0205**
Stddev	.0110	.010	.0009	.035	.069	.006	.0013	.0005
%RSD	6.064	.1998	.8839	.6584	1.388	.1140	1.408	2.667
#1	.1742	5.151	.0975	5.263	4.927	5.102	.0911	.0201
#2	.1898	5.137	.0963	5.214	5.025	5.110	.0929	.0209
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Zoom In Zoom Out

Sample Name: cri Acquired: 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:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2068**	**.0090**	**.0100**	**.0098**	**.0504**	**.0107**	**.0558**	**.0212**
Stddev	.0012	.0003	.0000	.0002	.0023	.0001	.0008	.0007
%RSD	.5943	3.109	.0508	2.009	4.598	1.326	1.380	3.296
#1	.2060	.0088	.0100	.0097	.0487	.0106	.0563	.0217
#2	.2077	.0092	.0100	.0100	.0520	.0108	.0552	.0207
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	**.0493**	**.0530**
Stddev	.0003	.0005
%RSD	.5158	.8930
#1	.0495	.0533
#2	.0491	.0527
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	**115710.**	**16168.**	**5886.7**	**8998.1**
Stddev	50.	52.	27.6	38.5
%RSD	.04328	.31888	.46929	.42819
#1	115740.	16132.	5906.2	9025.3
#2	115670.	16205.	5867.2	8970.8

Zoom In Zoom Out

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	.0339	.017	.0054	.0001	.0003
%RSD	10.45	1.230	4.718	24.77	.8690	.5671	.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%				

Zoom In Zoom Out

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

Zoom In Zoom Out

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**	**.2352**
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	.2332
#2	1.924	1.904	1.934	1.977	1.926	1.869	1.966	1.998	.2373
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									

Zoom In Zoom Out

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

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0001**	**.0001**	**-.0001**	**-.0009**	**-.0004**	**-.0000**	**.0002**	**.0001**
Stddev	.0001	.0000	.0001	.0003	.0000	.0004	.0000	.0002	.0001
%RSD	118.9	53.41	82.36	283.2	4.586	87.70	634.0	111.5	35.29
#1	-.0002	-.0000	.0002	-.0003	-.0009	-.0007	.0000	.0000	.0002
#2	-.0000	-.0001	.0001	.0001	-.0009	-.0002	-.0000	.0003	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**-.0001**	**.0005**	**-.0015**	**.0008**	**.0008**	**.0024**	**-.0007**	**-.0050**
Stddev	.0000	.0002	.0006	.0001	.0006	.0020	.0008	.0107	.0019
%RSD	5.262	249.3	126.5	6.884	77.21	257.0	33.49	1439.	38.57
#1	-.0004	.0001	.0009	-.0014	.0013	.0021	.0030	-.0083	-.0063
#2	-.0004	-.0002	.0001	-.0016	.0004	-.0006	.0019	.0068	-.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	**-.0017**	**.0298**	**-.0813**	**-.0520**	**-.0067**	**.0000**	**.0029**	**-.0009**	**.0001**
Stddev	.0009	.0123	.0190	.0066	.0003	.0001	.0008	.0002	.0003
%RSD	54.23	41.31	23.32	12.78	3.998	304.6	28.27	22.46	181.3
#1	-.0023	.0211	-.0679	-.0567	-.0065	-.0000	.0035	-.0008	-.0000
#2	-.0010	.0385	-.0947	-.0473	-.0069	.0001	.0023	-.0010	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

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:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0008**	**.0004**	**.0031**	**.0001**	**-.0026**	**.0029**
Stddev	.0003	.0007	.0003	.0017	.0006	.0005	.0010
%RSD	92.87	81.35	78.20	52.94	663.2	18.12	34.26
#1	.0001	.0003	.0002	.0020	.0005	-.0023	.0036
#2	.0006	.0013	.0006	.0043	-.0003	-.0029	.0022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**117690.**	**16285.**	**6064.7**	**9303.0**
Stddev	216.	202.	12.2	20.6
%RSD	.18384	1.2399	.20062	.22102
#1	117530.	16428.	6056.1	9288.5
#2	117840.	16142.	6073.4	9317.6

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**-.0006**	**-.0002**	**.0000**	**.0000**	**-.0002**	**-.0009**	**-.0001**	**-.0000**	**.0004**
Stddev	.0002	.0000	.0001	.0000	.0003	.0008	.0000	.0001	.0003
%RSD	39.25	6.231	345.2	45.78	146.1	88.36	36.35	123.8	84.84
#1	-.0004	-.0002	.0001	.0001	-.0004	-.0003	-.0000	-.0001	.0006
#2	-.0007	-.0002	-.0000	.0000	.0000	-.0014	-.0001	-.0000	.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0001**	**.0001**	**.0005**	**-.0004**	**-.0010**	**-.0001**	**.0000**	**-.0156**	**.0012**
Stddev	.0006	.0002	.0002	.0001	.0010	.0007	.0007	.0030	.0003
%RSD	408.0	294.4	40.40	32.51	97.69	1211.	3264.	19.43	27.80
#1	.0003	.0002	.0007	-.0004	-.0017	-.0005	.0006	-.0134	.0010
#2	-.0005	-.0001	.0004	-.0003	-.0003	.0004	-.0005	-.0177	.0015

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**-.0047**	**.0217**	**-.0605**	**-.0686**	**-.0073**	**-.0000**	**.0037**	**.0004**	**.0001**
Stddev	.0030	.0038	.0366	.0017	.0005	.0003	.0013	.0002	.0001
%RSD	64.67	17.72	60.47	2.536	6.255	1582.	35.55	40.10	68.21
#1	-.0025	.0244	-.0346	-.0674	-.0076	-.0002	.0028	.0005	.0002
#2	-.0068	.0190	-.0863	-.0698	-.0070	.0002	.0047	.0003	.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**-.0001**	**.0012**	**.0002**	**.0012**	**-.0012**	**-.0027**	**.0034**
Stddev	.0002	.0011	.0001	.0014	.0015	.0010	.0014
%RSD	453.9	92.59	80.41	115.8	125.3	35.71	41.05
#1	-.0002	.0019	.0003	.0002	-.0023	-.0034	.0024
#2	.0001	.0004	.0001	.0021	-.0001	-.0020	.0043

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**119540.**	**16574.**	**6108.8**	**9365.1**
Stddev	9.	46.	16.4	18.2
%RSD	.00718	.27980	.26927	.19458
#1	119550.	16607.	6097.2	9352.2
#2	119540.	16542.	6120.4	9378.0

Zoom In Zoom Out

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	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0037**	**.0009**	**.0011**	**.0032**	**.0017**	F **-.0001**	**.0033**	**.0043**
Stddev	.0000	.0000	.0001	.0002	.0004	.0000	.0000	.0001
%RSD	1.152	2.159	9.031	6.874	26.65	11.67	.6493	1.209
#1	.0037	.0009	.0010	.0034	.0020	-.0001	.0033	.0043
#2	.0037	.0009	.0012	.0031	.0014	-.0001	.0033	.0042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value						.0020		
Range						-30.00%		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0006**	**.0022**	**.0106**	**.0031**	**.0019**	F **-.0001**	**.0044**	F **.0006**
Stddev	.0002	.0002	.0000	.0001	.0001	.0004	.0022	.0019
%RSD	43.15	11.47	.4276	1.658	3.326	798.7	50.42	319.5
#1	.0007	.0023	.0106	.0031	.0019	.0002	.0059	.0019
#2	.0004	.0020	.0107	.0030	.0020	-.0003	.0028	-.0008
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	**.1066**	**1.088**	**-.0016**	F **.1314**	**2.009**	**1.031**	**-.0076**	**-.0001**
Stddev	.0001	.007	.0019	.0079	.039	.025	.0003	.0004
%RSD	.0721	.6594	119.1	5.996	1.945	2.427	4.004	352.4
#1	.1065	1.083	-.0029	.1258	1.982	1.013	-.0078	.0002
#2	.1066	1.093	-.0002	.1369	2.037	1.049	-.0074	-.0004
Check ?	Chk Pass	Chk Pass	None	Chk Fail	Chk Pass	Chk Pass	None	None
Value				.1000				
Range				30.00%				

Zoom In Zoom Out

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	-.0002	.0002	-.0000	.0008	.0002	-.0008	-.0011
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	-.0000	.0004	.0001	-.0030	-.0005
#2	.0009	-.0006	.0002	.0000	.0011	.0002	.0014	-.0016
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	-.0033	.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

Zoom In Zoom Out

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	.2466	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								.0060
Range								20.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1828	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								

Zoom In Zoom Out

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

Zoom In Zoom Out

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									

Zoom In Zoom Out

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 ?	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	**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

Zoom In Zoom Out

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	**-.0000**	**-.0000**	**-.0000**	**-.0002**	**-.0003**	**-.0007**	**.0001**	**-.0000**
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	.0000	-.0000	-.0000	-.0002	-.0001	-.0010	.0001	.0001
#2	-.0001	-.0001	-.0000	-.0002	-.0005	-.0005	.0001	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0002**	**-.0001**	**.0009**	**.0015**	**.0001**	**-.0004**	**-.0004**
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	-.0004	-.0000	-.0001	.0009	.0020	.0001	-.0015	-.0006
#2	.0001	-.0004	-.0002	.0008	.0009	.0000	.0008	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0113**	**-.0019**	**-.0029**	**.0365**	**-.1169**	**-.0604**	**-.0072**	**.0002**
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	-.0041	.0005	-.0045	.0285	-.1146	-.0569	-.0074	.0004
#2	-.0184	-.0042	-.0013	.0445	-.1193	-.0639	-.0069	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Zoom In Zoom Out

Sample Name: ccb Acquired: 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**	**-.0009**	**.0003**	**-.0002**	**.0013**	**.0003**	**-.0011**	**-.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	-.0009	.0003	-.0004	.0006	.0002	-.0035	-.0014
#2	.0012	-.0009	.0002	-.0000	.0020	.0005	.0013	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **-.0040**	**.0036**
Stddev	.0012	.0005
%RSD	30.45	14.73
#1	-.0032	.0032
#2	-.0049	.0040
Check ?	Chk Fail	Chk Pass
High Limit	.0040	
Low Limit	-.0040	

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**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

Zoom In Zoom Out

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
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

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0002**	**.0132**	**.0003**	**-.0008**	**.0002**	**-.0000**	**.0016**	**.0271**	**.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	-.0007	.0004	.0009	-.0010	.0012	.0421	.1952
#2	.0000	.0131	.0013	-.0019	-.0004	.0010	.0020	.0121	.1982

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**.0336**	**.0730**	**-.0946**	**.0557**	**-.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	-.0828	.0546	-.0068	.0006	.0577	.0178	.0011
#2	.0332	.0682	-.1064	.0569	-.0069	.0006	.0574	.0175	.0011

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0012**	**.0006**	**.0007**	**.0130**	**-.0004**	**-.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	-.0009	-.0013	.0245
#2	.0009	.0005	.0007	.0149	.0002	-.0017	.0232

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
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

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**	**.2749**	**.0245**	**5.657**	**.0779**	**.2868**
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	.2858
#2	326.5	68.71	4.971	2.203	.2762	.0249	5.678	.0791	.2877

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

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**	**.2460**	**.1947**	**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	.2435	.1920	13.91	.2434	-.0007
#2	1.486	.0075	-.0001	.1036	.2484	.1974	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**	**.1082**	**0.0166**	**6.459**	**0.0202**	**.2499**
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	.2454
#2	241.1	59.25	24.95	1.786	.1085	.0159	6.477	.0212	.2544

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**2.901**	**.0011**	**.0498**	**.3822**	**.0380**	**.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	.2677	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

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**	**.1485**	**.1193**	**3.993**	**.1493**	**.0022**
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	.1480	.1187	3.944	.1482	.0022
#2	1.026	.0043	.0001	.0659	.1490	.1199	4.042	.1504	.0022

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.1952**	**.3237**	**.0184**	**.0013**	**.0639**	**.0019**	**-.0017**	**72.17**	**90.80**
Stddev	.0017	.0042	.0011	.0001	.0001	.0016	.0006	.36	.52
%RSD	.8834	1.295	5.798	11.21	.1893	81.25	38.32	.4939	.5752
#1	.1940	.3207	.0177	.0012	.0638	.0008	-.0021	71.91	90.43
#2	.1964	.3267	.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**	**.0616**	**.0066**	**7.621**	**.0181**	**.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**	**.0373**	**.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

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	**.0001**	**-.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**	**.1112**
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	**.0175**	**.0547**	**-.0481**	**.0896**	**-.0076**	**.0003**	**.0465**	**.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	.0174	.0540	-.0210	.0876	-.0076	.0002	.0463	.0189	.0006
#2	.0177	.0553	-.0752	.0917	-.0076	.0004	.0468	.0181	.0007

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**.0006**	**.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	.0244

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**119720.**	**16578.**	**6205.7**	**9463.5**
Stddev	287.	92.	27.7	37.1
%RSD	.23986	.55348	.44715	.39174
#1	119920.	16642.	6186.1	9437.3
#2	119520.	16513.	6225.3	9489.7

Zoom In Zoom Out

Sample Name: jc67031-18conf Acquired: 6/8/2018 16:28:56 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	**4.043**	**.0015**	**.0047**	**.0444**	**.1059**	**.1486**	**1.558**	**.0871**	**.0038**
Stddev	.105	.0007	.0007	.0042	.0019	.0008	.022	.0043	.0013
%RSD	2.602	48.58	14.50	9.502	1.816	.5255	1.438	4.972	35.43
#1	3.969	.0020	.0042	.0414	.1072	.1492	1.543	.0840	.0028
#2	4.117	.0010	.0052	.0474	.1045	.1481	1.574	.0902	.0047

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.1468**	**2.272**	**.0277**	**-.0098**	**37.67**	**-.0085**	**.0194**	**75.04**	**54.52**
Stddev	.0012	.021	.0094	.0028	.44	.0018	.0138	2.13	1.64
%RSD	.8416	.9362	33.92	28.41	1.158	21.77	70.98	2.832	3.002
#1	.1460	2.257	.0344	-.0078	37.36	-.0098	.0097	73.54	53.36
#2	.1477	2.287	.0211	-.0117	37.98	-.0072	.0291	76.54	55.68

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**136.0**	**52.81**	**14.22**	**3.655**	**-.0671**	**.0080**	**1.348**	**.0411**	**.0751**
Stddev	4.1	1.34	.63	.038	.0126	.0003	.036	.0024	.0020
%RSD	3.050	2.537	4.431	1.029	18.73	3.459	2.669	5.953	2.608
#1	133.1	51.86	13.77	3.681	-.0760	.0078	1.323	.0429	.0738
#2	138.9	53.75	14.66	3.628	-.0582	.0082	1.373	.0394	.0765

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**5.050**	**.0164**	**.0042**	**3.122**	**.0694**	**.0630**	**4.892**
Stddev	.052	.0013	.0003	.021	.0223	.0026	.058
%RSD	1.027	7.722	7.911	.6642	32.07	4.123	1.194
#1	5.014	.0173	.0039	3.107	.0852	.0648	4.851
#2	5.087	.0155	.0044	3.136	.0537	.0611	4.933

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**115310.**	**16084.**	**5965.0**	**9036.1**
Stddev	595.	315.	17.4	18.4
%RSD	.51565	1.9609	.29210	.20351
#1	115730.	16307.	5952.7	9023.1
#2	114890.	15861.	5977.3	9049.1

Zoom In Zoom Out

Sample Name: jc67195-3 Acquired: 6/8/2018 16:31:56 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	**.4788**	**.0067**	**-.0007**	**.0946**	**1.059**	**.1591**	**3.985**	**.1902**	**.0031**
Stddev	.0001	.0001	.0001	.0004	.009	.0001	.036	.0013	.0002
%RSD	.0248	1.127	17.46	.3956	.8912	.0326	.9081	.6675	6.301
#1	.4789	.0067	-.0008	.0944	1.052	.1592	3.960	.1893	.0030
#2	.4788	.0066	-.0007	.0949	1.066	.1591	4.011	.1911	.0033

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.5119**	**.2936**	**.0412**	**.0012**	**.0792**	**.0014**	**-.0003**	**136.9**	**12.50**
Stddev	.0063	.0026	.0019	.0018	.0036	.0033	.0004	.2	.01
%RSD	1.225	.8848	4.539	145.2	4.552	230.6	123.0	.1202	.1152
#1	.5074	.2917	.0426	-.0000	.0767	-.0009	-.0006	136.8	12.49
#2	.5163	.2954	.0399	.0025	.0818	.0037	-.0000	137.0	12.51

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**281.5**	**46.81**	**6.372**	**4.996**	**.0082**	**.0031**	**2.355**	**.0173**	**.0665**
Stddev	.1	.10	.154	.007	.0024	.0002	.021	.0001	.0002
%RSD	.0216	.2206	2.416	.1351	28.83	7.251	.8838	.8652	.2278
#1	281.4	46.73	6.263	4.991	.0065	.0032	2.341	.0174	.0664
#2	281.5	46.88	6.481	5.001	.0099	.0029	2.370	.0172	.0666

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**10.25**	**.0035**	**.1353**	**.2112**	**.1518**	**.0786**	**3.306**
Stddev	.11	.0004	.0001	.0007	.0029	.0017	.022
%RSD	1.034	12.36	.0419	.3261	1.944	2.227	.6781
#1	10.18	.0032	.1353	.2117	.1497	.0773	3.290
#2	10.33	.0038	.1354	.2107	.1538	.0798	3.322

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**119320.**	**16565.**	**6113.8**	**8988.5**
Stddev	200.	126.	16.7	22.4
%RSD	.16771	.76067	.27332	.24918
#1	119180.	16476.	6125.6	9004.3
#2	119460.	16654.	6102.0	8972.7

Zoom In Zoom Out

Sample Name: jc67289-4 Acquired: 6/8/2018 16:34:53 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 3.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**1.103**	**-.0006**	**-.0014**	**.0384**	**-.0035**	**-.0005**	**19.23**	**.0113**	**.0022**
Stddev	.010	.0003	.0003	.0001	.0013	.0004	.23	.0008	.0013
%RSD	.9415	52.19	18.63	.1424	38.65	67.12	1.176	7.151	58.26
#1	1.096	-.0004	-.0012	.0385	-.0025	-.0003	19.07	.0107	.0013
#2	1.111	-.0008	-.0016	.0384	-.0044	-.0008	19.39	.0119	.0031

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0099**	**.0116**	**.0075**	**.0002**	**.0036**	**.0031**	**-.0005**	**-.0254**	**67.79**
Stddev	.0005	.0002	.0019	.0045	.0001	.0015	.0072	.0352	.39
%RSD	4.642	1.505	24.90	2534.	3.377	49.30	1529.	138.2	.5723
#1	.0102	.0118	.0062	-.0030	.0035	.0020	.0046	-.0006	67.52
#2	.0096	.0115	.0088	.0033	.0037	.0042	-.0056	-.0503	68.07

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**138.8**	**7.299**	**2.406**	**39.39**	**.0868**	**.0019**	**11.67**	**-.0054**	**.4582**
Stddev	.8	.110	.158	.41	.0021	.0004	.10	.0007	.0043
%RSD	.5860	1.510	6.556	1.044	2.379	19.36	.8599	12.88	.9376
#1	138.2	7.221	2.517	39.10	.0854	.0016	11.60	-.0049	.4551
#2	139.4	7.377	2.294	39.68	.0883	.0021	11.74	-.0059	.4612

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**-.0002**	**-.0009**	**-.0055**	**.1263**	**.0014**	**-.0088**	**.1553**
Stddev	.0017	.0025	.0005	.0000	.0017	.0011	.0086
%RSD	702.6	263.2	10.03	.0286	123.1	12.96	5.545
#1	-.0014	.0008	-.0051	.1263	.0026	-.0080	.1492
#2	.0009	-.0027	-.0059	.1264	.0002	-.0097	.1614

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**118680.**	**16221.**	**6047.6**	**9194.2**
Stddev	277.	111.	8.6	13.9
%RSD	.23332	.68724	.14182	.15087
#1	118880.	16300.	6041.5	9184.4
#2	118490.	16142.	6053.6	9204.0

Zoom In Zoom Out

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	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.950**	**1.920**	**1.892**	**1.941**	**1.936**	**1.878**	**1.977**	**1.966**	**.2379**
Stddev	.010	.008	.020	.019	.014	.012	.012	.019	.0021
%RSD	.5344	.4271	1.049	.9772	.7208	.6252	.6171	.9806	.8988
#1	1.943	1.914	1.878	1.928	1.926	1.870	1.968	1.953	.2364
#2	1.957	1.926	1.907	1.955	1.946	1.887	1.986	1.980	.2394
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	**1.902**	**1.942**	**1.910**	**1.987**	**1.962**	**1.926**	**1.905**	**38.63**	**39.03**
Stddev	.012	.019	.017	.019	.019	.021	.019	.16	.14
%RSD	.6225	.9659	.8798	.9671	.9706	1.085	.9840	.4249	.3603
#1	1.894	1.929	1.899	1.973	1.949	1.911	1.892	38.51	38.93
#2	1.911	1.955	1.922	2.000	1.976	1.941	1.919	38.75	39.13
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	**38.77**	**39.27**	**38.40**	**38.90**	**1.908**	**1.934**	**4.769**	**1.917**	**1.957**
Stddev	.11	.13	.31	.27	.023	.018	.054	.019	.009
%RSD	.2822	.3392	.8103	.6937	1.200	.9590	1.128	.9838	.4782
#1	38.69	39.18	38.18	38.71	1.891	1.921	4.731	1.903	1.950
#2	38.85	39.36	38.62	39.09	1.924	1.947	4.807	1.930	1.964
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 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 ?	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	**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

Zoom In Zoom Out

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**	**-.0001**	**.0000**	**.0002**	**-.0006**	**-.0007**	**.0001**	**.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	-.0001	-.0000	.0002	-.0004	-.0010	.0000	.0007	.0004
#2	.0001	-.0000	.0001	.0002	-.0008	-.0004	.0001	-.0000	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**-.0002**	**.0012**	**.0003**	**.0002**	**-.0009**	**-.0001**	**-.0124**	**-.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	-.0002	-.0001	.0012	-.0001	.0005	-.0025	-.0004	-.0069	-.0039
#2	-.0005	-.0003	.0011	.0006	-.0001	.0006	.0002	-.0179	.0018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0018**	**.0209**	**-.1004**	**-.0638**	**-.0078**	**.0002**	**.0029**	**-.0012**	**.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	-.0016	.0210	-.1021	-.0671	-.0067	.0002	.0019	-.0015	.0003
#2	-.0020	.0208	-.0988	-.0606	-.0089	.0001	.0040	-.0009	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 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**	**-.0003**	**-.0017**	**-.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	-.0024	.0035
#2	-.0000	-.0004	.0004	-.0008	-.0043	-.0049	.0026
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	**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

Zoom In Zoom Out

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
Avg	**-.0006**	**-.0001**	**.0001**	**-.0002**	**-.0005**	**-.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	-.0006	-.0001	.0001	-.0001	-.0007	-.0007	-.0000	.0000	.0001
#2	-.0007	-.0001	.0001	-.0002	-.0004	-.0003	.0000	.0000	-.0000

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**-.0004**	**.0005**	**.0002**	**.0008**	**-.0009**	**-.0009**	**.0025**	**-.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	-.0005	.0006	.0008	.0015	-.0017	-.0015	.0018	-.0024	.0030
#2	-.0004	.0005	-.0004	.0002	-.0001	-.0003	.0032	-.0117	.0055

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**-.0029**	**.0339**	**-.0882**	**-.0754**	**-.0081**	**.0003**	**.0105**	**-.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	-.0005	.0403	-.0740	-.0722	-.0078	.0000	.0108	-.0005	.0001
#2	-.0053	.0274	-.1025	-.0787	-.0083	.0005	.0102	-.0010	-.0001

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**-.0000**	**.0002**	**.0005**	**.0040**	**-.0005**	**-.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	-.0018	-.0041	.0032
#2	-.0002	.0001	.0006	.0045	.0007	-.0001	.0038

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
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

Zoom In Zoom Out

Sample Name: mp7545-mb1 2 Acquired: 6/8/2018 16:46:57 Type: Unk
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**	**-.0006**	**.0009**	**.0010**	**-.0036**	**-.0023**	**.0032**	**-.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	-.0009	.0007	.0015	-.0027	-.0026	.0031	-.0014	.0032
#2	.0032	-.0003	.0010	.0006	-.0045	-.0020	.0034	.0004	.0033

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.0002**	**.0842**	**-.0035**	**-.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	-.0080	.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	1.907	.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

Zoom In Zoom Out

Sample Name: mp7545-b1 Acquired: 6/8/2018 16:50:00 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	**1.969**	**1.909**	**1.871**	**1.916**	**1.938**	**1.778**	**1.991**	**1.952**	**.2336**
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	.2304
#2	1.963	1.906	1.873	1.919	1.942	1.782	1.994	1.953	.2367

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**	**.2106**	**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	.2301
#1	25.38	26.06	24.50	25.12	1.818	1.917	.2169	1.884	1.982
#2	25.05	25.69	24.38	24.93	1.820	1.918	.2043	1.892	1.976

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**1.874**	**1.799**	**1.870**	**.2756**	**.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	.2729	.0341	-.0072	1.879
#2	1.877	1.806	1.872	.2784	.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

Zoom In Zoom Out

Sample Name: mp7545-s1 Acquired: 6/8/2018 16:52:50 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	**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	**.2365**	**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	.2360	1.851	12.33	1.882	1.902	4.530	1.909	1.890
#2	.2369	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

Zoom In Zoom Out

Sample Name: mp7545-s1 Acquired: 6/8/2018 16:52:50 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	**116040.**	**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

Zoom In Zoom Out

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**	**.2450**
Stddev	.009	.012	.002	.001	.001	.007	.02	.006	.0009
%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	.2456
#2	2.201	1.915	2.283	1.956	1.903	3.926	13.73	2.441	.2443

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**	F **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	.4250
#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	.42889	.36663	.15108	.07672
#1	115070.	15871.	5749.3	8600.2
#2	115770.	15954.	5737.0	8590.9

Zoom In Zoom Out

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
Avg	**.2220**	**-.0003**	**.3613**	**.0511**	**.0101**	**2.000**	**11.51**	**.4898**
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	.4884
#2	.2216	-.0003	.3622	.0505	.0092	1.991	11.45	.4911

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	**.2960**	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

Zoom In Zoom Out

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

Zoom In Zoom Out

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	**.2291**	**-.0025**	**.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	**.1431**	**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	.48707	2.2697	.15107	.14683
#1	118560.	15926.	6062.8	9228.7
#2	119380.	16445.	6075.8	9247.9

Zoom In Zoom Out

Sample Name: jc67031-18 Acquired: 6/8/2018 17:04:46 Type: Unk
Method: Accutest XPress(v426) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment: check

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	**4.875**	**.0029**	**.0066**	**.0527**	**.1287**	**.1763**	**1.834**	**.1039**	**.0049**
Stddev	.090	.0008	.0006	.0064	.0103	.0001	.007	.0033	.0024
%RSD	1.852	27.69	9.593	12.06	7.997	.0407	.3876	3.192	50.00
#1	4.811	.0035	.0071	.0482	.1214	.1764	1.839	.1015	.0032
#2	4.939	.0023	.0062	.0572	.1360	.1763	1.829	.1062	.0066

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	**.1784**	**2.710**	**.0322**	**.0077**	**45.39**	**.0047**	**.0183**	**90.44**	**65.69**
Stddev	.0033	.079	.0109	.0250	1.19	.0037	.0053	1.56	.93
%RSD	1.855	2.921	33.89	322.2	2.633	78.26	29.00	1.727	1.416
#1	.1807	2.654	.0245	.0254	44.54	.0074	.0220	89.33	65.03
#2	.1761	2.766	.0399	-.0099	46.23	.0021	.0145	91.54	66.35

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Avg	**164.4**	**64.25**	**16.38**	**4.541**	**-.0715**	**.0078**	**1.668**	**.0508**	**.0904**
Stddev	2.6	.80	.11	.076	.0122	.0025	.073	.0026	.0005
%RSD	1.573	1.248	.6716	1.678	17.00	32.58	4.357	5.029	.5566
#1	162.6	63.68	16.31	4.487	-.0801	.0096	1.617	.0490	.0900
#2	166.3	64.81	16.46	4.595	-.0629	.0060	1.719	.0526	.0908

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Avg	**5.968**	**.0127**	**.0075**	**3.800**	**.1022**	**.1091**	**5.876**
Stddev	.030	.0112	.0014	.105	.0005	.0022	.159
%RSD	.4965	88.31	18.52	2.756	.5146	2.032	2.701
#1	5.989	.0206	.0065	3.726	.1018	.1107	5.764
#2	5.947	.0048	.0085	3.874	.1025	.1075	5.988

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Avg	**119240.**	**16421.**	**6107.1**	**9215.6**
Stddev	491.	225.	82.0	126.1
%RSD	.41209	1.3718	1.3431	1.3678
#1	118890.	16580.	6165.1	9304.8
#2	119590.	16262.	6049.1	9126.5

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.942**	**1.918**	**1.876**	**1.926**	**1.920**	**1.864**	**1.956**	**1.951**	**.2357**
Stddev	.001	.003	.011	.011	.007	.012	.009	.011	.0022
%RSD	.0665	.1770	.5623	.5489	.3675	.6242	.4737	.5584	.9144
#1	1.941	1.921	1.869	1.918	1.915	1.855	1.949	1.943	.2342
#2	1.943	1.916	1.883	1.933	1.925	1.872	1.962	1.959	.2372
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	**1.883**	**1.924**	**1.894**	**1.975**	**1.947**	**1.917**	**1.893**	**38.67**	**39.09**
Stddev	.007	.007	.008	.008	.009	.012	.011	.00	.06
%RSD	.3927	.3510	.4326	.3855	.4395	.6215	.5550	.0000	.1580
#1	1.878	1.919	1.888	1.970	1.941	1.908	1.886	38.67	39.04
#2	1.888	1.929	1.899	1.981	1.953	1.925	1.901	38.67	39.13
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	**38.85**	**39.25**	**38.36**	**38.84**	**1.897**	**1.920**	**4.733**	**1.897**	**1.957**
Stddev	.02	.06	.29	.07	.013	.009	.032	.007	.002
%RSD	.0518	.1415	.7543	.1904	.6873	.4740	.6645	.3553	.0984
#1	38.86	39.21	38.15	38.79	1.888	1.914	4.711	1.892	1.956
#2	38.83	39.29	38.56	38.89	1.906	1.927	4.755	1.902	1.958
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 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:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.900**	**1.890**	**1.893**	**1.862**	**1.916**	**1.896**	**1.910**
Stddev	.007	.006	.006	.012	.010	.002	.011
%RSD	.3949	.3199	.3440	.6575	.5031	.0837	.5620
#1	1.894	1.886	1.888	1.853	1.909	1.895	1.902
#2	1.905	1.894	1.897	1.870	1.923	1.897	1.917
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	**118020.**	**16313.**	**6033.3**	**8956.5**
Stddev	69.	20.	19.2	14.7
%RSD	.05814	.12203	.31887	.16374
#1	117970.	16299.	6019.7	8946.1
#2	118070.	16327.	6046.9	8966.9

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0000**	**.0001**	**.0001**	**-.0009**	**-.0007**	**.0000**	**.0002**
Stddev	.0001	.0001	.0000	.0003	.0001	.0004	.0000	.0001
%RSD	83.90	1154.	39.54	260.7	16.25	60.64	279.1	85.33
#1	-.0001	-.0001	.0000	-.0001	-.0008	-.0010	-.0000	.0003
#2	-.0003	.0001	.0001	.0004	-.0010	-.0004	.0000	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0004**	**-.0002**	**.0003**	**.0005**	**-.0012**	**.0006**	**.0008**
Stddev	.0001	.0001	.0001	.0004	.0006	.0001	.0016	.0008
%RSD	35.45	30.43	36.08	112.2	119.8	4.875	296.5	108.0
#1	.0003	-.0005	-.0003	.0001	.0001	-.0012	.0017	.0013
#2	.0004	-.0003	-.0002	.0006	.0010	-.0013	-.0006	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0033**	**.0085**	**-.0029**	**.0180**	**-.0824**	**-.0582**	**-.0070**	**.0003**
Stddev	.0232	.0198	.0006	.0121	.0096	.0182	.0000	.0001
%RSD	710.9	233.6	20.55	67.12	11.70	31.21	.4866	18.08
#1	-.0131	-.0055	-.0033	.0266	-.0756	-.0454	-.0070	.0003
#2	.0196	.0224	-.0025	.0095	-.0892	-.0710	-.0071	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Zoom In Zoom Out

Sample Name: ccb Acquired: 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:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0023**	**-.0006**	**.0004**	**.0002**	**.0013**	**.0002**	**.0020**	**.0003**
Stddev	.0003	.0006	.0004	.0001	.0000	.0003	.0014	.0032
%RSD	12.04	97.89	86.91	60.60	.0781	157.0	70.02	994.0
#1	.0021	-.0010	.0002	.0001	.0013	.0004	.0030	.0026
#2	.0025	-.0002	.0007	.0003	.0013	-.0000	.0010	-.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	F **-.0043**	**.0029**
Stddev	.0026	.0008
%RSD	61.41	26.81
#1	-.0062	.0035
#2	-.0024	.0024
Check ?	Chk Fail	Chk Pass
High Limit	.0040	
Low Limit	-.0040	

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**118400.**	**16233.**	**6075.9**	**9282.8**
Stddev	221.	46.	29.8	38.9
%RSD	.18684	.28107	.49118	.41885
#1	118250.	16201.	6097.0	9310.3
#2	118560.	16265.	6054.8	9255.3

Zoom In Zoom Out

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:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1960**	**.0018**	**.0029**	**.0483**	**.0092**	W **.0079**	**.0151**	**.0097**
Stddev	.0003	.0001	.0003	.0008	.0000	.0007	.0001	.0003
%RSD	.1339	3.135	9.503	1.681	.2404	8.539	.9835	3.562
#1	.1962	.0019	.0027	.0477	.0092	.0074	.0150	.0094
#2	.1959	.0018	.0031	.0489	.0092	.0083	.0152	.0099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
Value						.0100		
Range						-20.00%		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0056**	**.0479**	**.0195**	**.0083**	**.0098**	**.0032**	**.0105**	W **.0074**
Stddev	.0003	.0002	.0002	.0010	.0003	.0013	.0004	.0001
%RSD	4.897	.3601	1.221	11.59	3.317	39.80	3.369	.7095
#1	.0054	.0477	.0193	.0076	.0100	.0023	.0102	.0075
#2	.0058	.0480	.0196	.0090	.0095	.0040	.0107	.0074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn
Value								.0060
Range								20.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1855**	**5.050**	**.0961**	**5.139**	**4.883**	**4.951**	**.0862**	**.0193**
Stddev	.0001	.015	.0007	.014	.025	.016	.0023	.0001
%RSD	.0667	.2872	.7596	.2798	.5035	.3140	2.679	.4714
#1	.1854	5.040	.0956	5.149	4.901	4.940	.0846	.0193
#2	.1856	5.061	.0966	5.128	4.866	4.962	.0878	.0194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Zoom In Zoom Out

Sample Name: cri Acquired: 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:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1910**	**.0089**	**.0098**	**.0093**	**.0472**	**.0114**	**.0460**	**.0206**
Stddev	.0031	.0006	.0002	.0001	.0025	.0000	.0006	.0010
%RSD	1.625	7.175	2.423	1.398	5.207	.1686	1.214	4.843
#1	.1888	.0093	.0097	.0093	.0455	.0114	.0456	.0213
#2	.1932	.0084	.0100	.0094	.0490	.0113	.0464	.0199
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	**.0476**	**.0511**
Stddev	.0027	.0004
%RSD	5.768	.7645
#1	.0457	.0514
#2	.0496	.0508
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	**118780.**	**16322.**	**6188.7**	**9388.1**
Stddev	481.	76.	17.4	22.1
%RSD	.40511	.46449	.28066	.23574
#1	119120.	16376.	6201.0	9403.7
#2	118440.	16269.	6176.4	9372.4

Zoom In Zoom Out

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	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0036**	**.0009**	**.0010**	**.0032**	**.0016**	F **-.0005**	**.0032**	**.0042**
Stddev	.0001	.0000	.0001	.0004	.0001	.0000	.0000	.0001
%RSD	4.162	4.688	9.760	13.32	4.244	3.817	.4187	2.011
#1	.0037	.0009	.0011	.0029	.0016	-.0005	.0032	.0043
#2	.0035	.0010	.0009	.0035	.0017	-.0005	.0032	.0042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value						.0020		
Range						-30.00%		

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0002**	**.0015**	**.0104**	**.0036**	**.0018**	F **.0002**	F **.0031**	F **.0007**
Stddev	.0000	.0004	.0001	.0009	.0006	.0024	.0008	.0008
%RSD	1.012	28.82	.6015	26.11	35.13	1028.	26.12	125.3
#1	-.0002	.0012	.0104	.0029	.0023	-.0015	.0025	.0013
#2	-.0002	.0018	.0105	.0042	.0014	.0020	.0036	.0001
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	**.0882**	**1.060**	**.0007**	F **.1388**	**2.007**	**.9861**	**-.0085**	**.0000**
Stddev	.0238	.002	.0012	.0203	.061	.0130	.0001	.0001
%RSD	26.93	.2143	167.4	14.63	3.040	1.319	.8296	345.2
#1	.1050	1.059	-.0001	.1244	2.050	.9769	-.0086	.0001
#2	.0714	1.062	.0016	.1531	1.964	.9953	-.0085	-.0000
Check ?	Chk Pass	Chk Pass	None	Chk Fail	Chk Pass	Chk Pass	None	None
Value				.1000				
Range				30.00%				

Zoom In Zoom Out

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	**-.0002**	**-.0004**	**.0000**	**-.0000**	**.0010**	**-.0001**	**.0005**	**-.0006**
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	-.0000	.0001	.0014	-.0002	.0006	-.0002
#2	-.0010	-.0010	.0000	-.0001	.0005	.0001	.0003	-.0010
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Li6707	P_1774
Units	ppm	ppm
Avg	**-.0019**	**.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

Zoom In Zoom Out

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						.0100		
Range						-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	.8566	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							.0100	.0060
Range							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								

Zoom In Zoom Out

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

Zoom In Zoom Out

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	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**-.0002**	**.0004**	**.0003**	**.0000**	**-.0014**	**-.0010**	**-.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	-.0002	.0004	.0004	.0000	-.0011	-.0008	-.0004	.0014
#2	.0010	-.0001	.0003	.0002	.0001	-.0016	-.0013	-.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**	**-.0015**	**.0002**	**.0055**	**.0049**	**-.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	-.0028	-.0009	.0034	.0062	-.0022	518.0	378.7
#2	.0015	.0007	-.0002	.0013	.0075	.0036	-.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**	**-.0156**	**-.0627**	**-.0105**	**-.0000**	**.0039**	**-.0033**	**-.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	-.0373	-.0659	-.0100	.0005	.0065	-.0037	-.0025
#2	184.9	496.3	.0061	-.0595	-.0110	-.0005	.0013	-.0028	-.0026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: icsa Acquired: 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	**-.0023**	**.0052**	**-.0029**	**-.0274**	**.0051**	**-.0019**	**.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	-.0020	.0051	-.0026	-.0292	.0047	-.0006	.0066
#2	-.0025	.0052	-.0031	-.0255	.0054	-.0032	.0093
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	**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

Zoom In Zoom Out

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 ?	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	**.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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**195.3**	**499.6**	**.0199**	**-.0630**	**.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 ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 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 ?	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	**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

Zoom In Zoom Out

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**	**.2487**
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	.2472
#2	2.040	2.011	1.935	1.977	2.034	1.976	2.076	2.006	.2502
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	**1.986**	**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 ?	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	**40.45**	**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 ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 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 ?	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	**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

Zoom In Zoom Out

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	**-.0003**	**-.0001**	**-.0001**	**.0002**	**-.0006**	**-.0007**	**.0000**	**.0005**	**.0003**
Stddev	.0003	.0001	.0001	.0002	.0003	.0004	.0000	.0007	.0001
%RSD	97.49	92.89	72.48	110.6	50.56	55.90	.3763	143.9	36.16
#1	-.0001	-.0002	-.0002	.0000	-.0004	-.0004	.0000	-.0000	.0004
#2	-.0005	-.0000	-.0001	.0003	-.0008	-.0010	.0000	.0010	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0001**	**.0005**	**.0006**	**-.0010**	**.0016**	**.0019**	**.0025**	**-.0055**
Stddev	.0004	.0001	.0008	.0004	.0009	.0008	.0004	.0019	.0059
%RSD	189.1	160.3	162.6	63.97	96.18	51.26	19.96	77.14	107.8
#1	-.0004	.0000	-.0001	.0003	-.0016	.0022	.0016	.0038	-.0013
#2	.0001	-.0001	.0011	.0009	-.0003	.0010	.0022	.0011	-.0096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0019**	**.0250**	**-.1337**	**-.0847**	**-.0073**	**.0004**	**.0032**	**-.0005**	**.0002**
Stddev	.0018	.0173	.0118	.0059	.0002	.0000	.0015	.0003	.0000
%RSD	97.84	69.33	8.854	6.950	2.943	5.377	45.77	66.27	11.40
#1	-.0006	.0373	-.1421	-.0889	-.0071	.0003	.0022	-.0003	.0002
#2	-.0032	.0128	-.1253	-.0806	-.0074	.0004	.0043	-.0008	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 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	**.0006**	**.0019**	**.0004**	**.0009**	**-.0011**	**-.0024**	**.0034**
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 ?	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

NOTE: The remaining raw data for this batch is not relevant to this job. As such it has been omitted.

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ba 455.403 { 74}	☒	1	Zr	0.000941	0.000000	No
Be 313.042 {108}	☒	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}	☒	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}	☒	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}	☒	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	☒	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}	☒	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}	☒	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?
			Se	0.000100	0.000000	No
Ag 328.068 {103}	☒	14	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
			W	-0.000010	0.000000	No
V 292.402 {115}	☒	6	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
			Mn	-0.002700	0.000000	No
Zn 206.200 {464}	☒	9	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
			Be	0.000364	0.000000	No
As 189.042 {478}	☒	17	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
			Mn	-0.000080	0.000000	No
			S	0.000007	0.000000	No
Tl 190.856 {477}	☒	24	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}	☒	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
			Zn	-0.000106	0.000000	No
Se 196.090 {472}	☒	22	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}	☒	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}	☒	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}	☒	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}	☒	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}	☒	3	Mo	-0.020250	0.000000	No
			W	-0.006578	0.000000	No
			Mn	-0.002445	0.000000	No
K 766.490 { 44}	☒	11	Fe	-0.000440	0.000000	No
			Al	0.000077	0.000000	No
			Ca	-0.000121	0.000000	No
			Mn	-0.000570	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}	☒	4	K	-0.000560	0.000000	No
			Ba	0.000900	0.000000	No
			Ca	0.000180	0.000000	No
			V	-0.005000	0.000000	No
B 208.959 {462}	☒	1	Mo	0.038137	0.000000	No
Mo 202.030 {467}	☒	2	Al	-0.000004	0.000000	No
			Fe	-0.000010	0.000000	No
Si 212.412 {459}	☒	12	Sr	0.000366	0.000000	No
			Ni	0.002092	0.000000	No
			Mo	0.031190	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}	☒	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}	☒	2	Ca	0.000043	0.000000	No
			Si	0.000033	0.000000	No
Ti 334.904 {101}	☒	3	Cr	0.000189	0.000000	No
			Mo	0.001070	0.000000	No
			Si	0.000035	0.000000	No
Y 360.073 { 94}*	☒	None				
Y 371.030 { 91}*	☒	None				
Y 224.306 {451}*	☒	None				
In 230.606 {446}*	☒	None				
W 207.911 {462}	☒	20	Si	0.000105	0.000000	No
			As	0.000100	0.000000	No
			Mn	0.000066	0.000000	No
			Mo	-0.000300	0.000000	No
			Ti	0.000080	0.000000	No
			Sr	-0.000850	0.000000	No
			V	-0.000140	0.000000	No
			Cd	-0.000650	0.000000	No
			Cr	-0.000390	0.000000	No
			Zn	0.009921	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
			Tl	-0.002600	0.000000	No
Zr 339.198 { 99}	☒	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}	☒	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}	☒	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}	☒	2	Ca	0.000003	0.000000	No
				Fe	0.000004	0.000000	No
	P 177.495 {490}	☒	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 MQL	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

ACCUTEST LABORATORIES

Mercury Hot Block Digestion Log

Product HG / EHG / HGCLP
Matrix: Aq / Liq / DW

MA Batch #: MA44592
Analyst: DP
Date: 6/6/2018
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: 7:30 End Time: 9:30 Tube # 1-32
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 Amount Spiked	Spiked Used Added-Y or N	Spikelot and Conc (mg/L)	MP Number	Comments/Lot # and Vendor
1	ICV (External)	N	30	30	3.0 ml	Y	0.03		HG-18-138-104-HGB3, Ultra Scientific
2	ICB	N	30	30					
CCV	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
CCB	CCB	N	30	30					
3	CRI	N	30	30	2.0 ml	Y	0.003		HG-18-138-103-HGA4, Inorganic Venture
* 4	MP7511-MB1	N	30	30				MP7511	SW846 7470A / TCLP
* 5	MP7511-B1	N	30	30	2.0 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
* 6	MP7511-S1	N	30	30	2.0 ml	Y	0.03		JC67191-1,HG-18-138-102-HGA3,(IV)
* 7	MP7511-S2	N	30	30	2.0 ml	Y	0.03		JC67191-1,HG-18-138-102-HGA3,(IV)
* 8	JC67191-1	N	30	30					
9	JC67191-2	Y	30	30					
10	JC67191-3	Y	30	30					
11	JC67193-1A	Y	30	30					
12	JC67156-1A	Y	30	30					
CCV	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
CCB	CCB	N	30	30					
13	JC67194-1A	Y	30	30					
14	JC67194-2A	Y	30	30					
15	JC67194-3A	Y	30	30					
16	JC67194-4A	Y	30	30					
17	JC67195-1A	Y	30	30					
18	JC67195-2A	Y	30	30					
19	JC67195-3A	Y	30	30					
20	JC67195-4A	Y	30	30					
21	JC67196-1A	Y	30	30					
22	JC67196-2A	Y	30	30					
CCV	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
CCB	CCB	N	30	30					
23	TD21920-1A	Y	30	30					
24	TD21842-1A	Y	30	30					
25	TD21769-1B	Y	30	30					
26	TD21771-1B	Y	30	30					
27	JC67164-2	Y	30	30					
* 28	MP7512-MB1	N	30	30				MP7512	SW846 7470A / TCLP
* 29	MP7512-B1	N	30	30	2.0 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
* 30	MP7512-S1	N	1.0	30	2.0 ml	Y	0.03		JC67222-5,HG-18-138-102-HGA3,(IV)
* 31	MP7512-S2	N	1.0	30	2.0 ml	Y	0.03		JC67222-5,HG-18-138-102-HGA3,(IV)
* 32	JC67222-5	N	1.0	30					BROWN/FOAMMY
CCV	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
CCB	CCB	N	30	30					

* 0.5 ml of con HNO3 added at 7:15 on 6/6

ANALYST: DP DATE: 6/6/18
Spike witness: JA DATE: 6/6/18
QC: REVIEWER: DATE:

Form HG022-03
Revision Date: 8/24/15

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ACCUTEST LABORATORIES

Mercury Hot Block Digestion Log

Product **HG / EHG / HGCLP**
Matrix: Aq / Liq / DW

Methods (Circle as appropriate)
EPA 245.1 **SW846 7470A**

MA Batch #: MA44592
Analyst: DP
Date: 6/6/2018
Balance ID: B24
Reagents: See attached sheet
Auto pipet ID: M-72

Required corrected Temp. Range is 90-95 C.
Hot Block # 8 Start Time: 8:00 End Time: 10:00 Tube # 33-50
Start Temp: 96C Corrected Start Temp: 94C Correction: -2 Thermometer ID: 11517
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 Amount Spiked	Spiked Used Added- Y or N	Spikelot and Conc (mg/L)	MP Number	Comments/Lot # and Vendor
33	MP7513-MB1	N	30	30				MP7513	SW846 7470A
34	MP7513-B1	N	30	30	2.0 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
35	MP7513-S1	Y	30	30	2.0 ml	Y	0.03		JC67110-4,HG-18-138-102-HGA3,(IV)
36	MP7513-S2	Y	30	30	2.0 ml	Y	0.03		JC67110-4,HG-18-138-102-HGA3,(IV)
37	JC67110-4	Y	30	30					
38	JC67110-1	Y	30	30					
39	JC67110-2	Y	30	30					
40	JC67110-3	Y	30	30					
41	JC67110-5	Y	30	30					
42	JC67254-1	Y	30	30					
CCV	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
CCB	CCB	N	30	30					
43	JC67087-1	Y	30	30					
44	JC67259-4	Y	5.0	30					BROWN
45	JC67259-8	Y	30	30					
46	JC67259-4F	Y	30	30					
47	JC67259-8F	Y	30	30					
48	JC67297-4	Y	30	30					
49	JC67309-1Q	Y	30	30					
50	JC67308-6	Y	30	30					
* 51	MP7518-MB1	N	30	30				MP7518	SW846 7470A / TCLP
* 52	MP7518-B1	N	30	30	2.0 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
CCV	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
CCB	CCB	N	30	30					
* 53	MP7518-S1	N	30	30	2.0 ml	Y	0.03		JC67229-2A,HG-18-138-102-HGA3,(IV)
* 54	MP7518-S2	N	30	30	2.0 ml	Y	0.03		JC67229-2A,HG-18-138-102-HGA3,(IV)
* 55	JC67229-2A	N	30	30					
56	JC67262-1	Y	30	30					
57	JC67278-1A	Y	30	30					
58	JC67222-1	Y	30	30					
59	JC67222-2	Y	30	30					
60	JC67222-3	Y	30	30					
* 61	MP7518-MB2	N	30	30					
* 62	MP7518-B2	N	30	30	2.0 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
CCV	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
CCB	CCB	N	30	30					

* 0.5 ml of con HNO_3 was added at 10:30 on 6/6.

ANALYST: DP DATE: 6/6/18
Spike witness: DP DATE: 6/6/18
QC: REVIEWER: DATE:

Form HG022-03
Revision Date: 8/24/15

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ACCUTEST LABORATORIES

Mercury Hot Block Digestion Log

Product HG / EHG / HGCLP
Matrix: (Aq) / Liq / DW

MA Batch #: MA44592
Analyst: DP
Date: 6/6/2018
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: 10:45 End Time: 12:45 Tube # 51-74
Start Temp: 97 i Corrected Start Temp: 94 i Correction: -3 Thermometer ID: 4156488
End Temp: 97 i Corrected End Temp: 94 i Correction: -3 Thermometer ID: 4156488

Bot #	Sample ID	pH <2 Y/N	Initial Sample Vol ml	Final Samp Vol ml	Spiked Used Amount Spiked	Spiked Used Added-Y or N	Spikelot and Conc (mg/L)	MP Number	Comments/Lot # and Vendor
* 63	MP7519-MB1	N	30	30				MP7519	SW846 7470A
* 64	MP7519-B1	N	30	30	2.0 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
* 65	MP7519-S1	N	30	30	2.0 ml	Y	0.03		TD21956-1,HG-18-138-102-HGA3,(IV)
* 66	MP7519-S2	N	30	30	2.0 ml	Y	0.03		TD21956-1,HG-18-138-102-HGA3,(IV)
* 67	TD21956-1	N	30	30					
68	JC67351-1	Y	6/6 JA (2) 30	30					
69	JC67351-2	Y	~~30~~ 150	30					decolorized at higher volumes
70	TD21957-1	Y	30	30					
71	JC67308-6A	Y	30	30					
72	JC66602-62CONF	Y	30	30					
CCV	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
CCB	CCB	N	30	30					
73	MP7504-FMBCONF	Y	30	30				MP7504	FILTERMET 6/5/18
74	MP7504-FLCCONF	Y	30	30	2.0 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
75									
76									
77									
78									
79									
80									
81									
82									
CCV	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
CCB	CCB	N	30	30					
83									
84									
85									
86									
87									
88									
89									
90									
91									
92									
CCV	CCV	N	30	30	2.5 ml	Y	0.03		HG-18-138-102-HGA3, Inorganic Venture
CCB	CCB	N	30	30					

* 0.5 ml of con HNO3 was added at 10:30 on 6/6.

ANALYST: DP DATE: 6/6/18
Spike witness: JA DATE: 6/6/18
QC: REVIEWER: DATE:

Form HG022-03
Revision Date: 8/24/15

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ACCUTEST LABORATORIES

Mercury Hot Block Digestion Log

Product HG / EHG / HGCLP
Matrix: Aq / Liq / DW

MA Batch #: MA44592
Analyst: DP
Date: 6/6/2018
Balance ID: B-24
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 # 8 Start Time: 7:35 End Time: 9:35 Tube # 1-6
Start Temp: 96C Corrected Start Temp: 94C Correction: -2 Thermometer ID: 11517
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 Amount Spiked	Spiked Used Added-Y or N	Spikelot and Conc (mg/L)	MP Number	Comments/Lot # and Vendor
S-1	Calibration Blank	N	30 ml	30 ml	0.0 ml	N			
S-2	0.2 ug/l Standard	N	30 ml	30 ml	2.0 ml	Y	0.003		HG-18-138-103-HGA4, Inorganic Venture
S-3	0.5 ug/l Standard	N	30 ml	30 ml	5.0 ml	Y	0.003		HG-18-138-103-HGA4, Inorganic Venture
S-4	1.0 ug/l Standard	N	30 ml	30 ml	1.0 ml	Y	0.030		HG-18-138-102-HGA3, Inorganic Venture
S-5	2.5 ug/l Standard	N	30 ml	30 ml	2.5 ml	Y	0.030		HG-18-138-102-HGA3, Inorganic Venture
S-6	5.0 ug/l Standard	N	30 ml	30 ml	5.0 ml	Y	0.030		HG-18-138-102-HGA3, Inorganic Venture

Form HG022-03
Revision Date: 8/24/15

ANALYST: DP
QC: REVIEWER:

DATE: 6/6/18
DATE:

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SGS

Reagent Information Log- Hg Waters

MA # MA44592

Reagents	Exp. Date	Reagent # or manufacturer lot #
Conc. Sulfuric Acid	5/22/2020	Fisher -177436
Conc. Nitric Acid	5/26/2020	Baker - 193289
Sodium Chloride-Hydroxylamine Hydrochloride	11/30/2018	HG-18-136- 320 -HGHCL
Potassium Permanganate 5%	11/30/2018	HG-18-136- 318 -HGKM2
Potassium Persulfate	11/30/2018	HG-18-136- 319 -HGKS
Stannous Chloride	6/7/2018	HG-18-138- 105 -HGS
STD Hg standard solution 1000 ppm	3/1/2019	Inorganic Ventures K2-HG653768
STD Hg standard solu tion 30 ppb	6/7/2018	HG-18-138- 102 -HGA3
STD Hg standard solu tion 3ppb	6/7/2018	HG-18-138- 103 -HGA4
ICV Hg standard solution 1000 ppm	6/30/2021	Ultra T00601
ICV Hg standard solution 30ppb	6/7/2018	HG-18-138- 104 -HGB3
Dilution Acid	11/22/2018	HG-18-138- 57 -HGD2
Digestion Tubes Lot	N/A	Envrionmental Express 1802043
ph Paper	11/30/2018	Hydrion - 232515

Form:GN087A79-03
Rev. Date: 6/6/17

SGS North America Inc.

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

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Document Control #: NJ-MET-PREP-AQ-01 (2456468.4378704432) Validated by: Validated on:

SGS

Metals Digestion Reagents Information Log

Digestion Batch ID: MP 7493 **Date:** 6/15/18

Matrix: ALL

Standard/Reagent Type	Exp. Date	Standard/Reagent ID
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: RP

Validated By: _____

Validated On: _____

AA014-06 (Metals Digest Stds)-DAYT-MET-0039-06-FORM-Metals Digestion Reagants Info Log.xls
1/17/18

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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: JC67110
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	GP13543/GN81048	0.010	0.0	mg/l	0.0833	0.0900	108.0	90-110%

Associated Samples:
Batch GP13543: JC67110-3, JC67110-4, JC67110-5
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Cyanide	GP13543/GN81048	JC67110-4	mg/l	0.0	0.0	0.0	0-32%

Associated Samples:
Batch GP13543: JC67110-3, JC67110-4, JC67110-5
(*) Outside of QC limits

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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC67110
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	GP13543/GN81190	JC67110-4	mg/l	0.0	0.0833	0.099	118.8N(a)	90-110%
Cyanide	GP13543/GN81190	JC67110-3	mg/l	0.0	0.0833	0.058	69.6N(a)	90-110%

Associated Samples:
Batch GP13543: JC67110-3, JC67110-4, JC67110-5
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery indicates possible matrix interference.

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E060718W1.CN Date Analyzed: 06/07/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Analyst: BM Run ID: GN81048
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:10	GN81048-STD1	1		STDA
09:12	GN81048-STD2	1		STDB
09:13	GN81048-STD3	1		STDC
09:15	GN81048-STD4	1		STDD
09:16	GN81048-STD5	1		STDE
09:17	GN81048-STD6	1		STDF
09:19	GN81048-STD7	1		STDG
09:20	GN81048-ICV1	1		
09:21	GN81048-ICB1	1		
09:23	GN81048-CCV1	1		
09:24	GN81048-CCB1	1		
09:25	GP13354-MB3	1		
09:27	GP13354-B3	1		
09:28	GP13354-S1	1		
09:30	GP13354-S2	1		
09:31	GP13491-MB2	1		
09:32	GP13491-B2	1		
09:34	GP13491-S1	1		
09:35	GP13467-MB2	1		
09:36	GP13467-B2	1		
09:38	GP13467-S1	1		
09:39	GN81048-CCV2	1		
09:40	GN81048-CCB2	1		
09:42	GP13355-MB3	1		
09:43	GP13355-B3	1		
09:45	GP13355-S1	1		
09:46	GP13544-MB1	1		
09:47	GP13544-B1	1		
09:49	GP13544-S1	1		
09:50	GP13544-S2	1		
09:51	GP13544-D1	1		
09:53	JC67146-1	1		(sample used for QC only; not part of login JC67110)
09:54	JC67146-2	1		(sample used for QC only; not part of login JC67110)

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E060718W1.CN Date Analyzed: 06/07/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Analyst: BM Run ID: GN81048
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:55	GN81048-CCV3	1		
09:57	GN81048-CCB3	1		
09:58	ZZZZZZ	1		
09:59	ZZZZZZ	1		
10:01	ZZZZZZ	1		
10:02	ZZZZZZ	1		
10:04	ZZZZZZ	1		
10:05	ZZZZZZ	1		
10:06	ZZZZZZ	1		
10:08	ZZZZZZ	1		
10:09	ZZZZZZ	1		
10:10	ZZZZZZ	1		
10:12	GN81048-CCV4	1		
10:13	GN81048-CCB4	1		
10:14	ZZZZZZ	1		
10:16	ZZZZZZ	1		
10:17	ZZZZZZ	1		
10:19	ZZZZZZ	1		
10:20	ZZZZZZ	1		
10:21	ZZZZZZ	1		
10:23	ZZZZZZ	1		
10:24	GP13543-MB1	1		
10:25	GP13543-B1	1		
10:27	GP13543-S1	1		to rerun for confirmation
10:28	GN81048-CCV5	1		
10:29	GN81048-CCB5	1		
10:31	GP13543-S2	1		to rerun for confirmation
10:32	GP13543-D1	1		
10:34	ZZZZZZ	1		
10:35	JC67110-3	1		
10:36	JC67110-4	1		
10:38	JC67110-5	1		
10:39	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E060718W1.CN Date Analyzed: 06/07/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Analyst: BM Run ID: GN81048
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:40	ZZZZZZ	1		
10:42	ZZZZZZ	1		
10:43	ZZZZZZ	1		
10:44	GN81048-CCV6	1		
10:46	GN81048-CCB6	1		
10:47	ZZZZZZ	1		
10:48	ZZZZZZ	1		
10:50	ZZZZZZ	1		
10:51	ZZZZZZ	1		
10:53	ZZZZZZ	1		
10:54	ZZZZZZ	1		
10:55	ZZZZZZ	1		
10:57	ZZZZZZ	1		
10:58	ZZZZZZ	1		
10:59	ZZZZZZ	1		
11:01	GN81048-CCV7	1		
11:02	GN81048-CCB7	1		
11:03	ZZZZZZ	1		
11:07	GN81048-CCV8	1		
11:08	GN81048-CCB8	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E060718W1.CN Date Analyzed: 06/07/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT
Run ID: GN81048 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN81048-ICV1	Cyanide	0.298	0.010	0.0058	.3	99.3	90-110
GN81048-ICB1	Cyanide	0.0058 U	0.010	0.0058			
GN81048-CCV1	Cyanide	0.425	0.010	0.0058	.4	106.3	90-110
GN81048-CCB1	Cyanide	0.0058 U	0.010	0.0058			
GN81048-CCV2	Cyanide	0.426	0.010	0.0058	.4	106.5	90-110
GN81048-CCB2	Cyanide	0.0058 U	0.010	0.0058			
GN81048-CCV3	Cyanide	0.425	0.010	0.0058	.4	106.3	90-110
GN81048-CCB3	Cyanide	0.0058 U	0.010	0.0058			
GN81048-CCV4	Cyanide	0.425	0.010	0.0058	.4	106.3	90-110
GN81048-CCB4	Cyanide	0.0058 U	0.010	0.0058			
GN81048-CCV5	Cyanide	0.425	0.010	0.0058	.4	106.3	90-110
GN81048-CCB5	Cyanide	0.0058 U	0.010	0.0058			
GN81048-CCV6	Cyanide	0.426	0.010	0.0058	.4	106.5	90-110
GN81048-CCB6	Cyanide	0.0058 U	0.010	0.0058			
GN81048-CCV7	Cyanide	0.426	0.010	0.0058	.4	106.5	90-110
GN81048-CCB7	Cyanide	0.0058 U	0.010	0.0058			
GN81048-CCV8	Cyanide	0.427	0.010	0.0058	.4	106.8	90-110
GN81048-CCB8	Cyanide	0.0058 U	0.010	0.0058			

(!) Outside of QC limits

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E061118W1.CN Date Analyzed: 06/11/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT, SW846 CHAP
Analyst: BM Run ID: GN81190
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:44	GN81190-STD1	1		STDA
10:45	GN81190-STD2	1		STDB
10:46	GN81190-STD3	1		STDC
10:48	GN81190-STD4	1		STDD
10:49	GN81190-STD5	1		STDE
10:50	GN81190-STD6	1		STDF
10:52	GN81190-STD7	1		STDG
10:53	GN81190-ICV1	1		
10:55	GN81190-ICB1	1		
10:56	GN81190-CCV1	1		
10:57	GN81190-CCB1	1		
10:59	GP13543-MB2	1		
11:00	GP13543-B2	1		
11:01	GP13543-S1	1		
11:03	GP13543-S2	1		
11:04	GP13620-MB1	1		
11:05	GP13620-B1	1		
11:07	GP13620-S1	1		
11:08	GP13620-D1	1		
11:10	ZZZZZZ	1		
11:11	ZZZZZZ	1		
11:12	GN81190-CCV2	1		
11:14	GN81190-CCB2	1		
11:15	JC67585-1	1		(sample used for QC only; not part of login JC67110)
11:16	ZZZZZZ	1		
11:18	GP13636-MB1	1		
11:19	GP13636-B1	1		
11:20	GP13636-S1	1		
11:22	GP13636-S2	1		
11:23	GP13636-D1	1		
11:25	ZZZZZZ	1		
11:26	ZZZZZZ	1		
11:27	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E061118W1.CN Date Analyzed: 06/11/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT, SW846 CHAP
Analyst: BM Run ID: GN81190
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:29	GN81190-CCV3	1		
11:30	GN81190-CCB3	1		
11:31	ZZZZZZ	1		
11:33	ZZZZZZ	1		
11:34	ZZZZZZ	1		
11:35	JC67706-5	1		(sample used for QC only; not part of login JC67110)
11:37	JC67706-6	1		(sample used for QC only; not part of login JC67110)
11:38	ZZZZZZ	1		
11:40	ZZZZZZ	1		
11:41	ZZZZZZ	1		
11:42	ZZZZZZ	1		
11:44	ZZZZZZ	1		
11:45	GN81190-CCV4	1		
11:46	GN81190-CCB4	1		
11:48	ZZZZZZ	1		
11:49	ZZZZZZ	1		
11:50	ZZZZZZ	1		
11:52	ZZZZZZ	1		
11:53	ZZZZZZ	1		
11:54	GP13619-MB1	1		
11:56	GP13619-B1	1		
11:57	GP13619-S1	1		
11:59	GP13619-S2	1		
12:00	GP13619-D1	1		
12:01	GN81190-CCV5	1		
12:03	GN81190-CCB5	1		
12:04	JC66897-21	1		(sample used for QC only; not part of login JC67110)
12:05	JC67543-1	1		(sample used for QC only; not part of login JC67110)
12:07	ZZZZZZ	1		
12:08	ZZZZZZ	1		
12:09	ZZZZZZ	1		
12:11	ZZZZZZ	1		
12:12	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E061118W1.CN Date Analyzed: 06/11/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT, SW846 CHAP
Analyst: BM Run ID: GN81190
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:13	ZZZZZZ	1		
12:15	ZZZZZZ	1		
12:16	ZZZZZZ	1		
12:18	GN81190-CCV6	1		
12:19	GN81190-CCB6	1		
12:20	ZZZZZZ	1		
12:22	ZZZZZZ	1		
12:23	ZZZZZZ	1		
12:24	ZZZZZZ	1		
12:26	ZZZZZZ	1		
12:27	ZZZZZZ	1		
12:28	ZZZZZZ	1		
12:30	GP13625-MB1	1		
12:31	GP13625-B1	1		
12:33	GP13625-D1	1		
12:34	GN81190-CCV7	1		
12:35	GN81190-CCB7	1		
12:37	JC67504-1	1		(sample used for QC only; not part of login JC67110)
12:38	ZZZZZZ	1		
12:39	GP13640-MB1	1		
12:41	GP13640-B1	1		
12:42	GP13640-D1	1		
12:43	JC67112-75	1		(sample used for QC only; not part of login JC67110)
12:45	ZZZZZZ	1		
12:46	ZZZZZZ	1		
12:48	ZZZZZZ	1		
12:49	ZZZZZZ	1		
12:50	GN81190-CCV8	1		
12:52	GN81190-CCB8	1		
12:53	ZZZZZZ	1		
12:54	ZZZZZZ	1		
12:56	ZZZZZZ	1		
12:57	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E061118W1.CN Date Analyzed: 06/11/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT, SW846 CHAP
Analyst: BM Run ID: GN81190
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:58	ZZZZZZ	1		
13:00	ZZZZZZ	1		
13:01	ZZZZZZ	1		
13:03	ZZZZZZ	1		
13:04	ZZZZZZ	1		
13:05	GP13642-MB1	1		
13:07	GN81190-CCV9	1		
13:08	GN81190-CCB9	1		
13:09	GP13642-B1	1		
13:11	GP13642-D1	1		
13:12	JC67619-1A	1		(sample used for QC only; not part of login JC67110)
13:13	ZZZZZZ	1		
13:16	GN81190-CCV10	1		
13:18	GN81190-CCB10	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JC67110
Account: BBLNYS - Arcadis
Project: National Grid, Philly Coke, Philadelphia PA

File ID: E061118W1.CN Date Analyzed: 06/11/18 Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT, SW846 CHAP
Run ID: GN81190 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN81190-ICV1	Cyanide	0.289	0.010	0.0058	.3	96.3	90-110
GN81190-ICB1	Cyanide	0.0058 U	0.010	0.0058			
GN81190-CCV1	Cyanide	0.388	0.010	0.0058	.4	97.0	90-110
GN81190-CCB1	Cyanide	0.0058 U	0.010	0.0058			
GN81190-CCV2	Cyanide	0.388	0.010	0.0058	.4	97.0	90-110
GN81190-CCB2	Cyanide	0.0058 U	0.010	0.0058			
GN81190-CCV3	Cyanide	0.386	0.010	0.0058	.4	96.5	90-110
GN81190-CCB3	Cyanide	0.0058 U	0.010	0.0058			
GN81190-CCV4	Cyanide	0.386	0.010	0.0058	.4	96.5	90-110
GN81190-CCB4	Cyanide	0.0058 U	0.010	0.0058			
GN81190-CCV5	Cyanide	0.389	0.010	0.0058	.4	97.3	90-110
GN81190-CCB5	Cyanide	0.0058 U	0.010	0.0058			
GN81190-CCV6	Cyanide	0.387	0.010	0.0058	.4	96.8	90-110
GN81190-CCB6	Cyanide	0.0058 U	0.010	0.0058			
GN81190-CCV7	Cyanide	0.389	0.010	0.0058	.4	97.3	90-110
GN81190-CCB7	Cyanide	0.0058 U	0.010	0.0058			
GN81190-CCV8	Cyanide	0.391	0.010	0.0058	.4	97.8	90-110
GN81190-CCB8	Cyanide	0.0058 U	0.010	0.0058			
GN81190-CCV9	Cyanide	0.391	0.010	0.0058	.4	97.8	90-110
GN81190-CCB9	Cyanide	0.0058 U	0.010	0.0058			
GN81190-CCV10	Cyanide	0.390	0.010	0.0058	.4	97.5	90-110
GN81190-CCB10	Cyanide	0.0058 U	0.010	0.0058			

(!) Outside of QC limits

General Chemistry

Raw Data

LABORATORY REVIEW SIGNATURE FORM
(To be stored with the raw data)

File ID: E060718W1.CN
Analyst: BM

Date Analyzed: 06/07/18
Run ID: GN81048

Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT

The following analyst(s) have reviewd this run and attest that, to the best of their knowledge, this documentation is complete and correct:

Analyst: BM Date 6/7/18

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 6/7/18

e060718wi.CN

Author: chemistry

Date : 6/7/2018

GN81048

Original Run Filename: OM_6-7-2018_09-09-46AM.OMN Created: 6/7/2018 9:09:46 AM
Original Run Author's Signature: [chemistry]
Current Run Filename: OM_6-7-2018_09-09-46AM.OMN Last Modified: 6/7/2018 11:21:46 AM
Current Run Author's Signature: [chemistry]
Description: Default new Run

Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF	% REC
STDA	1	1	0.800	6/7/2018@9:10:55 AM		
STDB	1	2	0.600	6/7/2018@9:12:18 AM		
STDC	1	3	0.400	6/7/2018@9:13:40 AM		
STDD	1	4	0.100	6/7/2018@9:15:02 AM		
STDE	1	5	0.0200	6/7/2018@9:16:24 AM		
STDF	1	6	0.0100	6/7/2018@9:17:46 AM		
STDG	1	7	0.00	6/7/2018@9:19:08 AM		
ICV	1	8	0.298	6/7/2018@9:20:30 AM		99.3%
	Known Conc:		0.300			
ICB	1	9	-5.47e-3	6/7/2018@9:21:51 AM		
	Known Conc:		0.00			
CCV	1	S9	0.425	6/7/2018@9:23:13 AM		106.2%
	Known Conc:		0.400			
CCB	1	S10	-3.14e-3	6/7/2018@9:24:35 AM		
	Known Conc:		0.00			
GP13354-MB3	1	10	1.76e-3	6/7/2018@9:25:56 AM		
GP13354-B3	1	11	0.0906	6/7/2018@9:27:17 AM		108.7%
GP13354-S1	1	12	0.0736	6/7/2018@9:28:39 AM		
GP13354-S2	1	13	0.0799	6/7/2018@9:30:00 AM		
GP13491-MB2	1	14	1.61e-4	6/7/2018@9:31:21 AM		
GP13491-B2	1	15	0.0912	6/7/2018@9:32:42 AM		109.4%
GP13491-S1	1	16	0.0185	6/7/2018@9:34:04 AM		
GP13467-MB2	1	17	6.96e-4	6/7/2018@9:35:27 AM		
GP13467-B2	1	18	0.0913	6/7/2018@9:36:49 AM		109.8%
GP13467-S1	1	19	-1.64e-3	6/7/2018@9:38:11 AM		
CCV	1	S9	0.426	6/7/2018@9:39:33 AM		106.5%
	Known Conc:		0.400			
CCB	1	S10	-3.54e-3	6/7/2018@9:40:55 AM		
	Known Conc:		0.00			
GP13355-MB3	1	20	7.46e-4	6/7/2018@9:42:16 AM		
GP13355-B3	1	21	0.0905	6/7/2018@9:43:39 AM		108.6%
GP13355-S1	1	22	0.0774	6/7/2018@9:45:00 AM		
GP13544-MB1	1	23	1.60e-3	6/7/2018@9:46:22 AM		
GP13544-B1	1	24	0.0907	6/7/2018@9:47:43 AM		108.8%
GP13544-S1	1	25	0.0938	6/7/2018@9:49:05 AM		
GP13544-S2	1	26	0.0809	6/7/2018@9:50:26 AM		
GP13544-D1	1	27	0.0160	6/7/2018@9:51:47 AM		
JC67146-1	1	28	0.0184	6/7/2018@9:53:09 AM		
JC67146-2	1	29	0.0106	6/7/2018@9:54:29 AM		
CCV	1	S9	0.425	6/7/2018@9:55:51 AM		106.2%
	Known Conc:		0.400			
CCB	1	S10	-4.39e-3	6/7/2018@9:57:13 AM		
	Known Conc:		0.00			
JC67252-3	1	30	-1.59e-3	6/7/2018@9:58:33 AM		
JC67108-10	1	31	2.03e-3	6/7/2018@9:59:56 AM		
JC67108-11	1	32	8.81e-3	6/7/2018@10:01:18 AM		
JC67108-12	1	33	-5.79e-4	6/7/2018@10:02:40 AM		
JC67108-13	1	34	-2.83e-4	6/7/2018@10:04:02 AM		
JC67108-14	1	35	-1.03e-3	6/7/2018@10:05:24 AM		
JC67108-15	1	36	3.94e-3	6/7/2018@10:06:46 AM		
JC67108-16	1	37	0.0162	6/7/2018@10:08:08 AM		
JC67108-17	1	38	1.54e-3	6/7/2018@10:09:30 AM		
JC67156-1	1	39	-8.84e-4	6/7/2018@10:10:51 AM		
CCV	1	S9	0.425	6/7/2018@10:12:13 AM		106.2%
	Known Conc:		0.400			
CCB	1	S10	-4.54e-3	6/7/2018@10:13:35 AM		
	Known Conc:		0.00			
JC67194-1	1	40	7.18e-4	6/7/2018@10:14:56 AM		
JC67194-2	1	41	5.46e-4	6/7/2018@10:16:18 AM		
JC67194-3	1	42	1.65e-3	6/7/2018@10:17:39 AM		

Author: chemistry

Date : 6/7/2018

JC67194-4	1	43	5.03e-4	6/7/2018@10:19:00 AM	
JC67195-1	1	44	5.03e-3	6/7/2018@10:20:21 AM	
JC67195-2	1	45	6.34e-5	6/7/2018@10:21:42 AM	
JC67252-1	1	46	-1.96e-3	6/7/2018@10:23:04 AM	
GP13543-MB1	1	47	1.42e-3	6/7/2018@10:24:27 AM	
GP13543-B1	1	48	0.0900	6/7/2018@10:25:49 AM	108%
GP13543-S1	1	49	-2.31e-3	6/7/2018@10:27:11 AM	
CCV	1	S9	0.425	6/7/2018@10:28:33 AM	106.2%
	Known Conc:		0.400		
CCB	1	S10	-2.23e-3	6/7/2018@10:29:55 AM	
	Known Conc:		0.00		
GP13543-S2	1	50	-1.16e-3	6/7/2018@10:31:17 AM	
GP13543-D1	1	51	-3.88e-3	6/7/2018@10:32:39 AM	
JC67309-1Q	1	52	-2.79e-4	6/7/2018@10:34:01 AM	
JC67110-3	1	53	-1.05e-3	6/7/2018@10:35:22 AM	
JC67110-4	1	54	-2.74e-3	6/7/2018@10:36:44 AM	
	Calibration:		Table/Fig. : 1		
JC67110-5	1	55	-2.16e-3	6/7/2018@10:38:05 AM	
JC66897-22	1	56	0.0140	6/7/2018@10:39:26 AM	
JC66897-23	1	57	-1.49e-3	6/7/2018@10:40:47 AM	
JC66897-24	1	58	-6.45e-4	6/7/2018@10:42:08 AM	
JC66897-25	1	59	-1.57e-3	6/7/2018@10:43:29 AM	
CCV	1	S9	0.426	6/7/2018@10:44:51 AM	106.5%
	Known Conc:		0.400		
CCB	1	S10	-3.27e-3	6/7/2018@10:46:13 AM	
	Known Conc:		0.00		
JC66897-26	1	60	-4.45e-4	6/7/2018@10:47:34 AM	
JC66897-27	1	61	0.0125	6/7/2018@10:48:56 AM	
JC66897-29	1	62	-6.26e-4	6/7/2018@10:50:19 AM	
JC66897-30	1	63	-2.84e-3	6/7/2018@10:51:41 AM	
JC66897-31	1	64	-1.84e-3	6/7/2018@10:53:03 AM	
JC66897-32	1	65	-1.74e-3	6/7/2018@10:54:25 AM	
JC66897-33	1	66	-1.81e-3	6/7/2018@10:55:47 AM	
JC67156-2	1	67	-1.14e-3	6/7/2018@10:57:09 AM	
JC67293-2	1	68	2.65e-3	6/7/2018@10:58:30 AM	
JC67294-1	1	69	8.09e-3	6/7/2018@10:59:52 AM	
CCV	1	S9	0.426	6/7/2018@11:01:13 AM	106.5%
	Known Conc:		0.400		
CCB	1	S10	-5.54e-3	6/7/2018@11:02:35 AM	
	Known Conc:		0.00		
JC67295-2	1	70	6.13e-3	6/7/2018@11:03:57 AM	
CCV	1	S9	0.427	6/7/2018@11:07:00 AM	106.7%
	Known Conc:		0.400		
CCB	1	S10	-2.40e-3	6/7/2018@11:08:22 AM	
	Known Conc:		0.00		

15.1

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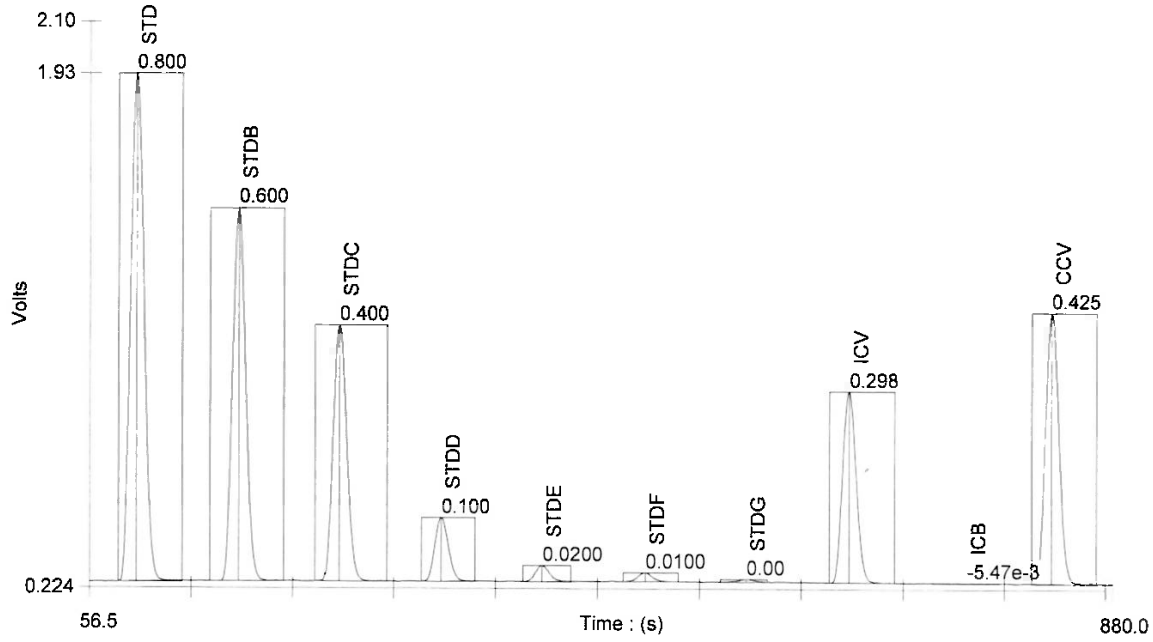
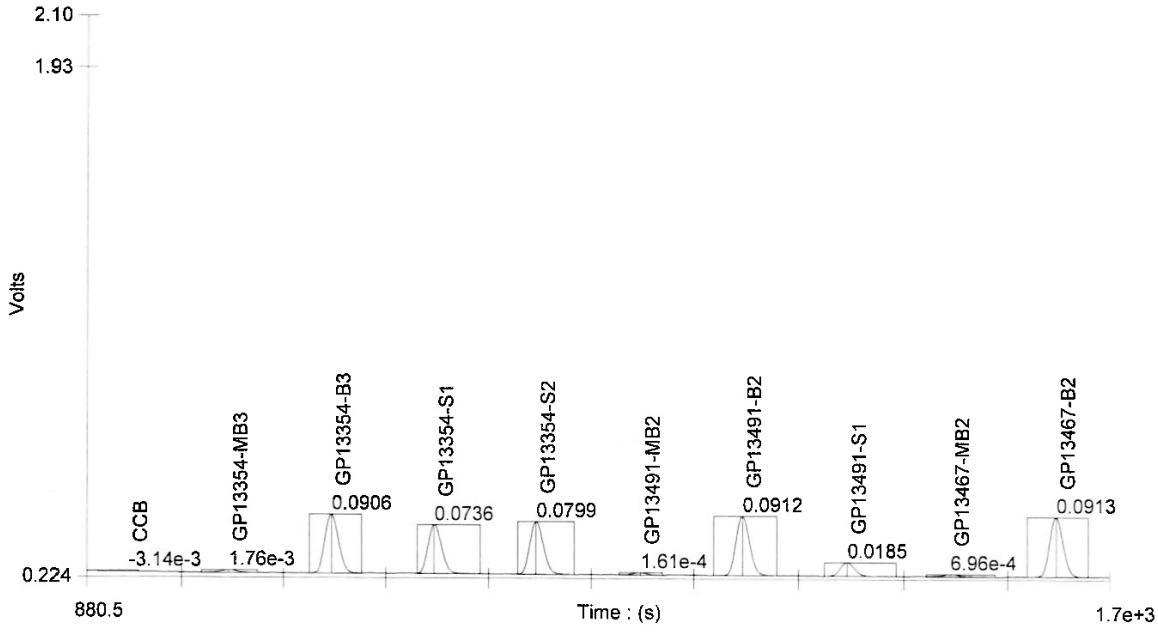
Author: chemistry

Date : 6/7/2018

Channel 1 - Set: 1 / 9



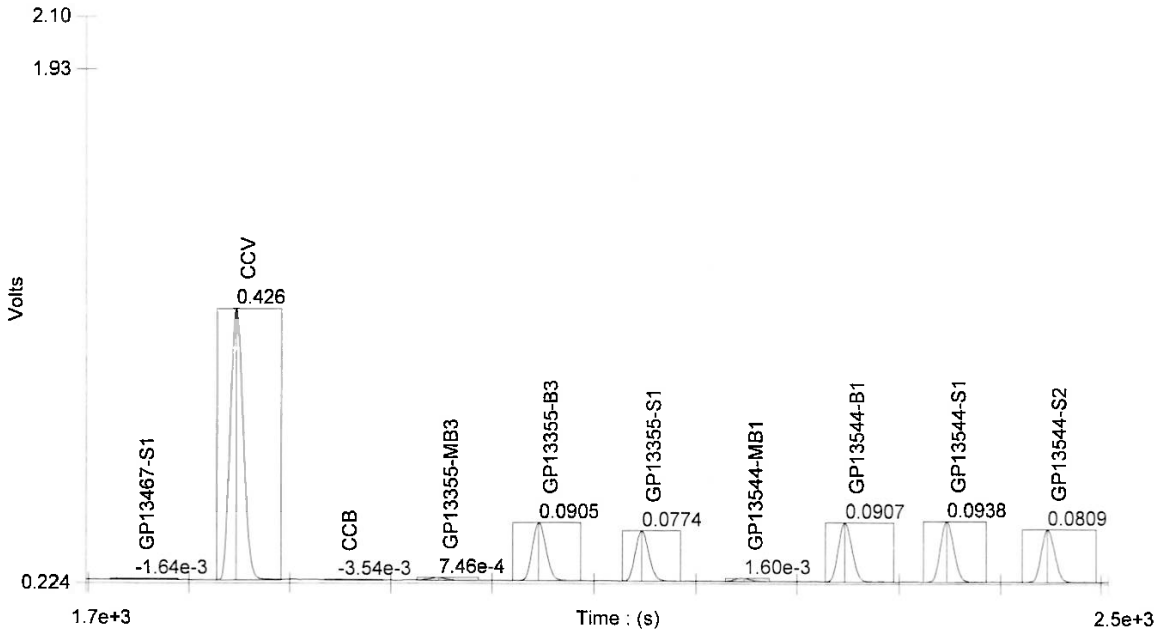
Channel 1 - Set: 2 / 9



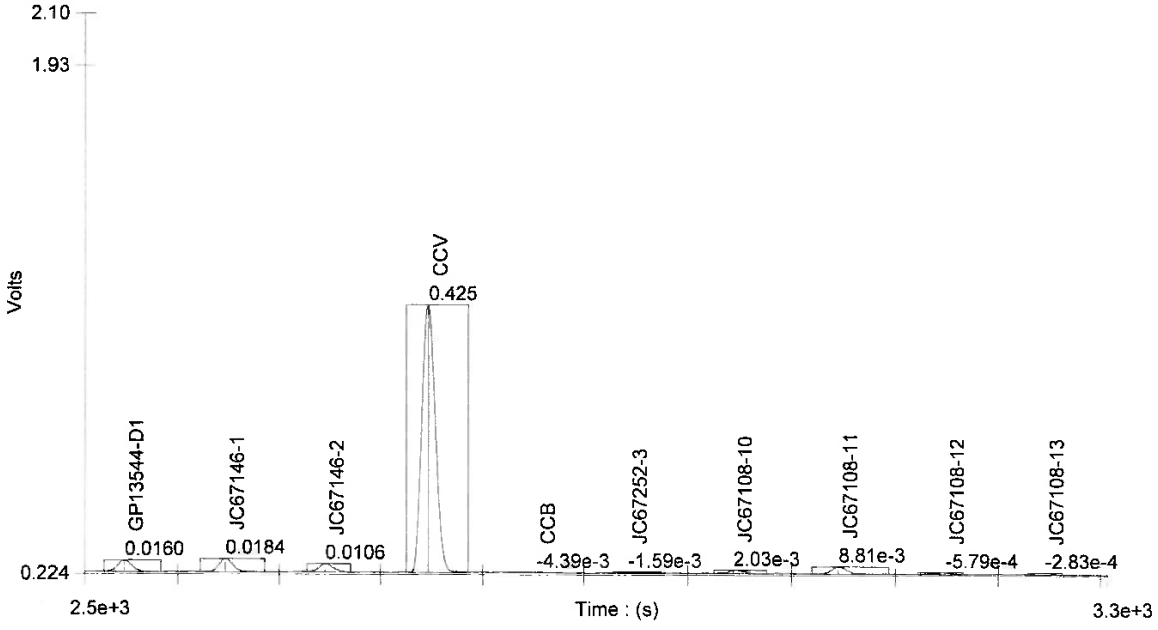
Author: chemistry

Date : 6/7/2018

Channel 1 - Set: 3 / 9



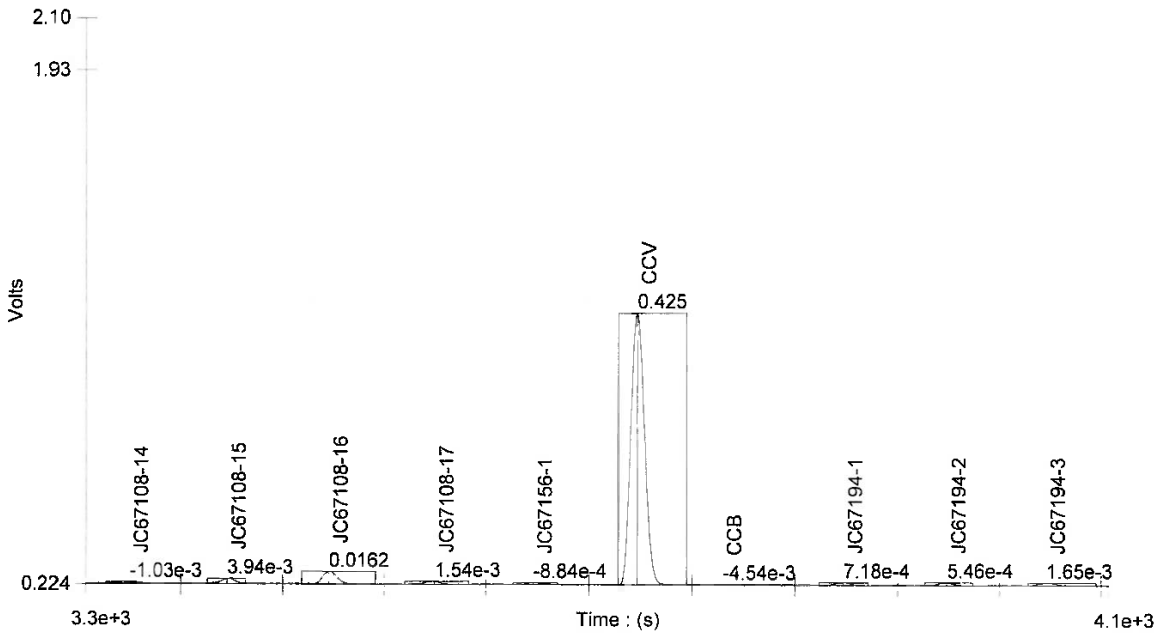
Channel 1 - Set: 4 / 9



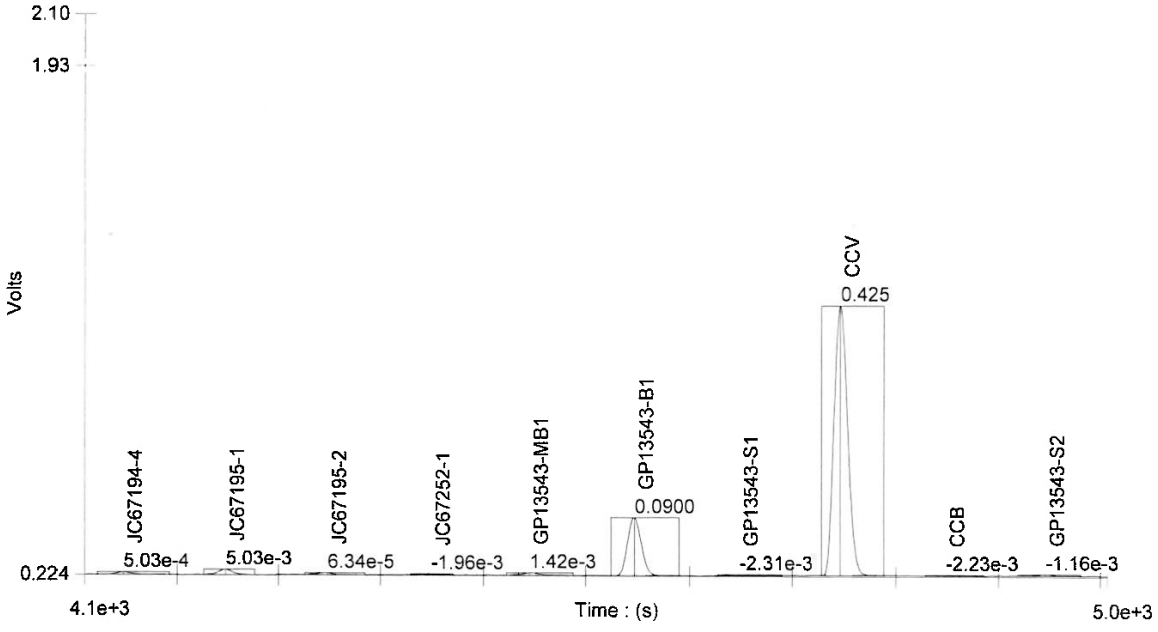
Author: chemistry

Date : 6/7/2018

Channel 1 - Set: 5 / 9



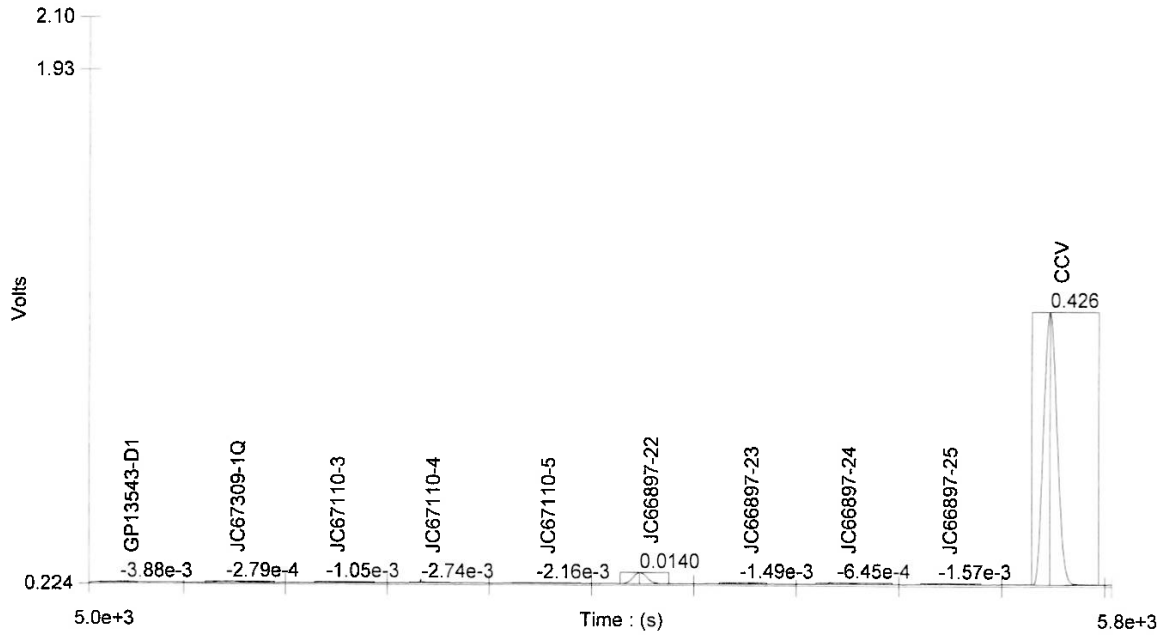
Channel 1 - Set: 6 / 9



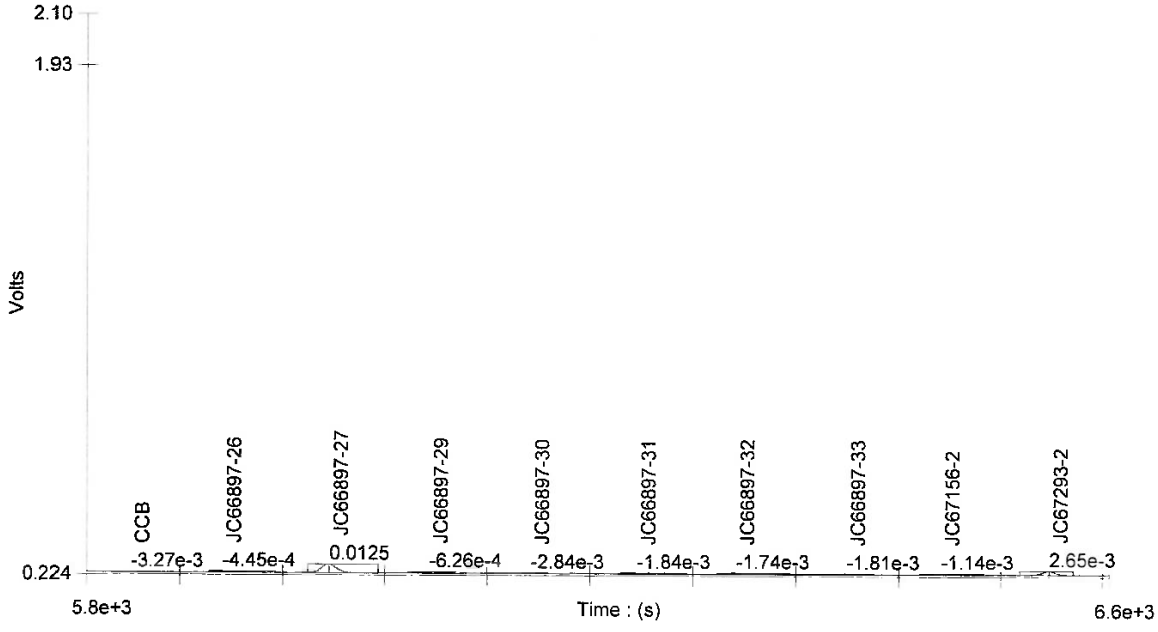
Author: chemistry

Date : 6/7/2018

Channel 1 - Set: 7 / 9



Channel 1 - Set: 8 / 9



Author: chemistry

Date : 6/7/2018

Channel 1 - Set: 9 / 9

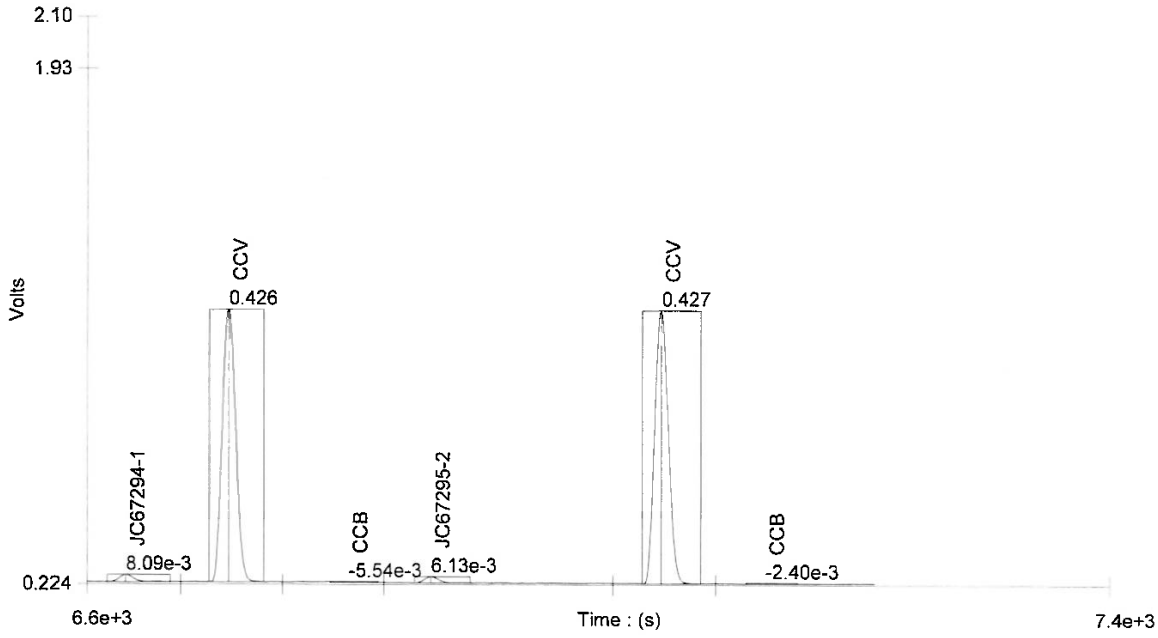
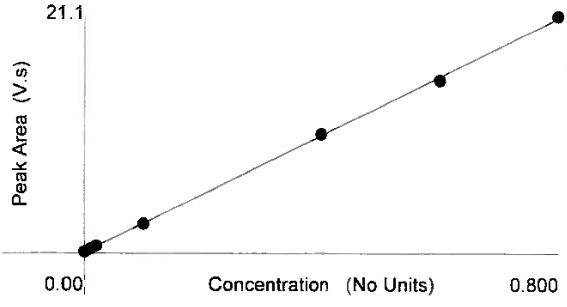


Table : 1 (CN)

	Known Conc. ()	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc ()	Detection Date	Detection Time
1	0.800	1	21.1	1.68	0.0	-0.9	0.807	6/7/2018	9:10:55 AM
2	0.600	1	15.4	1.24	0.0	2.0	0.588	6/7/2018	9:12:18 AM
3	0.400	1	10.7	0.854	0.0	-1.2	0.405	6/7/2018	9:13:40 AM
4	0.100	1	2.65	0.212	0.0	2.4	0.0976	6/7/2018	9:15:02 AM
5	0.0200	1	0.675	0.0526	0.0	-6.5	0.0217	6/7/2018	9:16:24 AM
6	0.0100	1	0.384	0.0294	0.0	-3.1	0.0105	6/7/2018	9:17:46 AM
7	0.00	1	0.131	8.02e-3			8.35e-4	6/7/2018	9:19:08 AM

Figure : 1 (CN)



Area = 26.1 * Conc + 0.112
Conc = 0.0384 * Area - 4.20e-3
Correlation Coefficient (r) = 0.99982

Weighting : None

ACCUTEST LABORATORIES

GP13354

Redo

Batch ID:

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	Analys
	2	MB3	12	–	✓	6	6	120C	9:15	9:45	6/6/18	GP -MB1			
8	✓	B3	✓	✓	✓	✓	✓	✓	✓	✓	✓	GP -B1	0.10 ml of 5.0 mg/l (c)		✓
8	✓	S1 J66538-21	✓	✓	✓	✓	✓	✓	✓	✓	✓	GP -S1	0.10 ml of 5.0 mg/l		✓
	✓	S2 J66538-22	✓	✓	✓	✓	✓	✓	✓	✓	✓	GP -S2	0.10 ml of 5.0 mg/l		✓
												GP -D1			✓

(a) Check if sulfamic acid was added.

(b) Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

(c) If the calibration curve is not distilled, then in addition to the blank spike, the analyst must also prepare two distilled standards using 0.12 ml of 1.0 mgl 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

ACCUTEST

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP13354

Intermediate Standard Description	Stock used to prepare standard	Standard-ization 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	GNE5-54740-CN	6/4/18	1000	1.000	41	.25 N NaOH	200	5.00	11/21/18	fo	6/4/18
Undistilled ICV Int.	GNE2-53657-CN	6/4/18	996	2.00	41	.25 N NaOH	100	20.00	8/5/18	bm	
Undistilled CCV Int.	GNE5-54740-CN	6/4/18	1000	2.00	41	.25 N NaOH	100	20.00	11/21/18	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 maxiumum of 28 days before analysis.

*If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the approcpriate Accutest ID number.

Reason codes for data corrections: 1-reviewer error correction; 2-transciption error; 3-computer error; 4-analyst error

Form: GN193-02

Rev. Date:1/6/2014

ACCUTEST.

Batch ID:

Autopipette ID: 34

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	Analy:
												GP -MB1			
												GP -B1	0.10 ml of 5.0 mg/l (c)		
												GP -S1	0.10 ml of 5.0 mg/l		
												GP -S2	0.10 ml of 5.0 mg/l		
												GP -D1			
	2	Calibration Curve	12	–	✓	6	6	120C	9:15	9:45	6/6/18				
		0.00 ppm										0.0 ml of	5 ppm CN Std T	100 ml	
		0.01 ppm										0.2 ml of	" "	"	
		0.02 ppm										0.4 ml of	" "	"	
		0.10 ppm										0.0 ml of	" "	"	
		0.40 ppm										8.0 ml of	" "	"	
		0.60 ppm										12.0 ml of	" "	"	
	✓	0.80 ppm	✓	✓	✓	✓	✓	✓	✓	✓	✓	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 mgl 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

SGS

Reagent Information Log - CN - Distillation

GP Numbers: GP13354

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE2-53817-CN	8/22/2018
Magnesium Chloride Solution	GNE6-54891-CN	12/6/2018
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

ACCUTEST LABORATORIES

GP13491

Redo

Batch ID: _____

Autopipette ID: 41

Balance ID: B-27

CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION)

Method: SW8469012B M

Bottle #	Block #	Sample ID	pH	S2-	Add (a)	Initial Weight (g)	Final Volume (ml)	Temp. in Deg. C (b)	Start Time	End Time	Date	QC ID	Spike Amounts and Comments	Spike Lot	Analyst
	2	MB2	12	—	✓	0.29	6	120C	9:15	9:45	6/6/18	GP -MB1			
	↓	B2	↓	↓	↓	0.27	↓	↓	↓	↓	↓	GP -B1	0.10 ml of 5.0 mg/l (c)		
1	↓	S, JC67053-1	↓	↓	↓	0.30	↓	↓	↓	↓	↓	GP -S1	0.10 ml of 5.0 mg/l		
												GP -S2	0.10 ml of 5.0 mg/l		↓
												GP -D1			

(a) Check if sulfamic acid was added.

(b) Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

(c) If the calibration curve is not distilled, then in addition to the blank spike, the analyst must also prepare two distilled standards using 0.12 ml of 1.0 mgl 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

SGS

Reagent Information Log - CN - Distillation

GP Numbers: GP13491

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE2-53817-CN	8/22/2018
Magnesium Chloride Solution	GNE6-54891-CN	12/6/2018
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

ACCUTEST LABORATORIES

GP13467

Redo

Batch ID: _____

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	Analys
	2	MB2	12	-	✓	6	6	120C	9:15	9:45	6/6/18	GP -MB1			
	↓	B2	↓	↓	↓	↓	↓	↓	↓	↓	↓	GP -B1	0.10 ml of 5.0 mg/l (c)		
7	✓	S, JC66897-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	GP -S1	0.10 ml of 5.0 mg/l		
												GP -S2	0.10 ml of 5.0 mg/l		
												GP -D1			

(a) Check if sulfamic acid was added.

(b) Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

(c) If the calibration curve is not distilled, then in addition to the blank spike, the analyst must also prepare two distilled standards using 0.12 ml of 1.0 mgl 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

SGS

Reagent Information Log - CN - Distillation

GP Numbers: GP13467

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE2-53817-CN	8/22/2018
Magnesium Chloride Solution	GNE6-54891-CN	12/6/2018
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

ACCUTEST LABORATORIES

GP13355

Redo

Batch ID: _____

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	Analys
	2	MB3	12	-	✓	6	6	120C	9:15	9:45	6/6/18	GP -MB1			
8	↓	B3	↓	↓	↓	↓	↓	↓	↓	↓	↓	GP -B1	0.10 ml of 5.0 mg/l (c)		
		S, JC66538-36										GP -S1	0.10 ml of 5.0 mg/l		
												GP -S2	0.10 ml of 5.0 mg/l		✓
												GP -D1			

(a) Check if sulfamic acid was added.

(b) Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

(c) If the calibration curve is not distilled, then in addition to the blank spike, the analyst must also prepare two distilled standards using 0.12 ml of 1.0 mgl 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

SGS

Reagent Information Log - CN - Distillation

GP Numbers: GP13355

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE2-53817-CN	8/22/2018
Magnesium Chloride Solution	GNE6-54891-CN	12/6/2018
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

ACCUTEST LABORATORIES

GP13544

Batch ID:

Autopipette ID: 41

Balance ID: B-27

CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION)

Method: SW8469012B M

Bottle #	Block #	Sample ID	pH	S2-	Add (a)	Initial Weight (g)	Final Volume (ml)	Temp. in Deg. C (b)	Start Time	End Time	Date	QC ID	Spike Amounts and Comments	Spike Lot	Analyst
	2	MB1	12	–	✓	0.30	6	120C	10:50	11:20	6/6/18	GP -MB1			
		B1 –				0.32						GP -B1	0.10 ml of 5.0 mg/l (c)		
		S1 JC67146-1				0.33						GP -S1	0.10 ml of 5.0 mg/l		
		S2 ✓ -2				0.28						GP -S2	0.10 ml of 5.0 mg/l		
		D1 JC67146-1				0.29						GP -D1			
1		JC67146-1				0.30									
1		-2				0.34									
1		JC67252-3				0.28									
2		JC67108-10				0.33									
		-11				0.27									
		-12				0.27									
		-13				0.32									
		-14				0.26									
		-15				0.36									
		-16				0.36									
✓		-17				0.28									
		-18													
2		JC67156-1				0.29									
1		JC67194-1				0.33									
2		-3				0.35									
1		-3				0.29									
2		-4				0.28									
3	✓	JC67195-1				0.29									
1	4	-2				0.30									
1	✓	JC67252-1	✓	✓	✓	0.31	✓	✓	✓	✓	✓				✓

(a) Check if sulfamic acid was added.

(b) Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

(c) If the calibration curve is not distilled, then in addition to the blank spike, the analyst must also prepare two distilled standards using 0.12 ml of 1.0 mgl for one and 0.15 ml of 20.0 mg/l for the other.

Comments:

QC Reviewer: Date:

Form: GN0012-05

Rev. Date: 06/8/13

SGS

Reagent Information Log - CN - Distillation

GP Numbers: GP13524

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE2-53817-CN	8/22/2018
Magnesium Chloride Solution	GNE6-54891-CN	12/6/2018
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

ACCUTEST LABORATORIES

GP13543

Batch ID:

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	Analys
	4	MB	12	–	✓	6	6	120C	10:50	11:20	6/6/18	GP -MB1			
		B										GP -B1	0.10 ml of 5.0 mg/l (c)		
		S1 JC67110-4										GP -S1	0.10 ml of 5.0 mg/l		
		S2 ↓ -3										GP -S2	0.10 ml of 5.0 mg/l		
		D JC67110-4										GP -D1			
5		JC67309-10													
9		JC67110-3													
27		-4													
9		-5													
7		JC66897-22													
10		-23													
8		-24													
10		-25													
10		-26													
10		-27													
9		-29													
9		-30													
9		-31													
9		-32													
9		-33													
11		JC67156-2													
		~~JC67258-2~~													
8		JC67293-2													
2		JC67294-1													
6		JC67295-2													
		JC67252-(twice)													

(a) Check if sulfamic acid was added.

(b) Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

(c) If the calibration curve is not distilled, then in addition to the blank spike, the analyst must also prepare two distilled standards using 0.12 ml of 1.0 mgl for one and 0.15 ml of 20.0 mg/l for the other.

Comments:

QC Reviewer:

Form: GN0012-04

Rev. Date: 03/09/13

Date:

ACCUTEST

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP13543

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	GNE5-54740-CN	6/4/18	1000	1.000	41	.25 N NaOH	200	5.00	11/21/18	fo	6/4/18
Undistilled ICV Int.	GNE2-53657-CN	6/4/18	996	2.00	41	.25 N NaOH	100	20.00	8/5/18	bm	
Undistilled CCV Int.	GNE5-54740-CN	6/4/18	1000	2.00	41	.25 N NaOH	100	20.00	11/21/18	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 maxiumum of 28 days before analysis.

*If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the approcpriate Accutest ID number.

Reason codes for data corrections: 1-reviewer error correction; 2-transciption error; 3-computer error; 4-analyst error

Form: GN193-02

Rev. Date:1/6/2014

ACCUTEST.

Batch ID: _____

Autopipette ID: 34

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	Analy:
												GP -MB1			
												GP -B1	0.10 ml of 5.0 mg/l (c)		
												GP -S1	0.10 ml of 5.0 mg/l		
												GP -S2	0.10 ml of 5.0 mg/l		
												GP -D1			
		Calibration Curve	12	—	✓	6	6	120C	10:50	11:20	6/6/18				RP
		0.00 ppm										0.0 ml of	5 ppm CN Std	100 ml	
		0.01 ppm										0.2 ml of	" "	"	
		0.02 ppm										0.4 ml of	" "	"	
		0.10 ppm										2.0 ml of	" "	"	
		0.40 ppm										8.0 ml of	" "	"	
		0.60 ppm										12.0 ml of	" "	"	
	✓	0.80 ppm	✓	✓	✓	✓	✓	✓	✓	✓	✓	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 mgl 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

SGS

Reagent Information Log - CN - Distillation

GP Numbers: GP13543

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE2-53817-CN	8/22/2018
Magnesium Chloride Solution	GNE6-54891-CN	12/6/2018
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

ACCUTEST

GN81048

Reagent Information Log - CN Lachat Autoanalyzer

GN Number:

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Pyridine-Bartituric 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

15.1 15

Form: GN087A-27
Rev. Date: 7/19/06

LABORATORY REVIEW SIGNATURE FORM
(To be stored with the raw data)

File ID: E061118W1.CN
Analyst: BM

Date Analyzed: 06/11/18
Run ID: GN81190

Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT, SW846

The following analyst(s) have reviewd this run and attest that, to the best of their knowledge, this documentation is complete and correct:

Analyst: BM Date 6/11/18

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): _____ Date 6/11/18

e061118W1. CN

Author: chemistry

GN81190

Date : 6/11/2018

Original Run Filename: OM_6-11-2018_10-42-59AM.OMN Created: 6/11/2018 10:42:59 AM
Original Run Author's Signature: [chemistry]
Current Run Filename: OM_6-11-2018_10-42-59AM.OMN Last Modified: 6/11/2018 1:20:26 PM
Current Run Author's Signature: [chemistry]
Description: Default new Run

Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF	% REC
STDA	1	1	0.800	6/11/2018@10:44:09 AM		
STDB	1	2	0.600	6/11/2018@10:45:31 AM		
STDC	1	3	0.400	6/11/2018@10:46:53 AM		
STDD	1	4	0.100	6/11/2018@10:48:15 AM		
STDE	1	5	0.0200	6/11/2018@10:49:37 AM		
STDF	1	6	0.0100	6/11/2018@10:50:59 AM		
STDG	1	7	0.00	6/11/2018@10:52:21 AM		
ICV	1	8	0.289	6/11/2018@10:53:42 AM		96.3%
	Known Conc:		0.300			
	Calibration:		Table/Fig. : 1			
ICB	1	9	-2.26e-3	6/11/2018@10:55:03 AM		
	Known Conc:		0.00			
CCV	1	S9	0.388	6/11/2018@10:56:25 AM		97%
	Known Conc:		0.400			
CCB	1	S10	-1.24e-3	6/11/2018@10:57:47 AM		
	Known Conc:		0.00			
GP13543-MB2	1	10	-1.91e-3	6/11/2018@10:59:09 AM		
GP13543-B2	1	11	0.0879	6/11/2018@11:00:30 AM		105.5%
GP13543-S1	1	12	0.0994	6/11/2018@11:01:51 AM		
GP13543-S2	1	13	0.0578	6/11/2018@11:03:12 AM		
GP13620-MB1	1	14	1.89e-3	6/11/2018@11:04:34 AM		
GP13620-B1	1	15	0.0880	6/11/2018@11:05:55 AM		105.6%
GP13620-S1	1	16	0.265	6/11/2018@11:07:17 AM		
GP13620-D1	1	17	0.187	6/11/2018@11:08:39 AM		
JC67587-1A	1	18	2.75e-3	6/11/2018@11:10:02 AM		
JC67587-7A	1	19	3.89e-3	6/11/2018@11:11:24 AM		
CCV	1	S9	0.388	6/11/2018@11:12:46 AM		97%
	Known Conc:		0.400			
CCB	1	S10	-3.10e-3	6/11/2018@11:14:08 AM		
	Known Conc:		0.00			
JC67585-1	1	20	0.207	6/11/2018@11:15:30 AM		
JC67585-2	1	21	0.185	6/11/2018@11:16:52 AM		
GP13636-MB1	1	22	6.70e-4	6/11/2018@11:18:13 AM		
GP13636-B1	1	23	0.0819	6/11/2018@11:19:35 AM		98.3%
GP13636-S1	1	24	0.0822	6/11/2018@11:20:56 AM		
GP13636-S2	1	25	0.0803	6/11/2018@11:22:18 AM		
GP13636-D1	1	26	1.71e-3	6/11/2018@11:23:39 AM		
JC67664-1	1	27	3.15e-4	6/11/2018@11:25:00 AM		
JC67664-4	1	28	5.42e-3	6/11/2018@11:26:21 AM		
JC67706-1	1	29	4.58e-4	6/11/2018@11:27:42 AM		
CCV	1	S9	0.386	6/11/2018@11:29:04 AM		96.5%
	Known Conc:		0.400			
CCB	1	S10	-2.40e-3	6/11/2018@11:30:26 AM		
	Known Conc:		0.00			
JC67706-2	1	30	8.62e-4	6/11/2018@11:31:47 AM		
JC67706-3	1	31	1.23e-3	6/11/2018@11:33:09 AM		
JC67706-4	1	32	3.03e-3	6/11/2018@11:34:31 AM		
JC67706-5	1	33	1.97e-3	6/11/2018@11:35:53 AM		
JC67706-6	1	34	1.76e-3	6/11/2018@11:37:16 AM		
JC67706-7	1	35	3.58e-4	6/11/2018@11:38:38 AM		
JC67706-8	1	36	1.07e-3	6/11/2018@11:40:00 AM		
JC67581-1	1	37	2.92e-3	6/11/2018@11:41:21 AM		
JC67581-2	1	38	2.27e-3	6/11/2018@11:42:43 AM		
JC67581-3	1	39	1.76e-3	6/11/2018@11:44:04 AM		
CCV	1	S9	0.386	6/11/2018@11:45:26 AM		96.5%
	Known Conc:		0.400			
CCB	1	S10	-2.67e-3	6/11/2018@11:46:48 AM		
	Known Conc:		0.00			
JC67581-4	1	40	1.31e-3	6/11/2018@11:48:09 AM		
JC67704-1	1	41	5.25e-4	6/11/2018@11:49:31 AM		

Author: chemistry

Date : 6/11/2018

JC67707-1	1	42	-2.37e-3	6/11/2018@11:50:52 AM	
JC67707-2	1	43	2.37e-3	6/11/2018@11:52:13 AM	
JC67707-3	1	44	2.92e-3	6/11/2018@11:53:34 AM	
GP13619-MB1	1	45	4.14e-3	6/11/2018@11:54:54 AM	
GP13619-B1	1	46	0.0901	6/11/2018@11:56:17 AM	108.1%
GP13619-S1	1	47	-1.19e-3	6/11/2018@11:57:39 AM	
GP13619-S2	1	48	0.103	6/11/2018@11:59:01 AM	
GP13619-D1	1	49	1.30e-3	6/11/2018@12:00:23 PM	
CCV	1	S9	0.389	6/11/2018@12:01:45 PM	97.2%
	Known Conc:		0.400		
CCB	1	S10	-2.44e-3	6/11/2018@12:03:07 PM	
	Known Conc:		0.00		
JC66897-21	1	50	-8.66e-4	6/11/2018@12:04:29 PM	
JC67543-1	1	51	0.0200	6/11/2018@12:05:51 PM	
JC67543-2	1	52	2.20e-4	6/11/2018@12:07:13 PM	
JC67543-3	1	53	-1.17e-3	6/11/2018@12:08:34 PM	
JC67501-1	1	54	3.97e-3	6/11/2018@12:09:55 PM	
JC67529-1	1	55	5.06e-3	6/11/2018@12:11:17 PM	
JC67557-6A	1	56	-1.28e-3	6/11/2018@12:12:38 PM	
JC67557-7A	1	57	-1.66e-3	6/11/2018@12:13:59 PM	
JC67557-8A	1	58	-1.13e-3	6/11/2018@12:15:20 PM	
JC67570-1	1	59	-2.06e-3	6/11/2018@12:16:41 PM	
CCV	1	S9	0.387	6/11/2018@12:18:03 PM	96.7%
	Known Conc:		0.400		
CCB	1	S10	-2.53e-3	6/11/2018@12:19:25 PM	
	Known Conc:		0.00		
JC67508-1	1	60	8.94e-3	6/11/2018@12:20:46 PM	
JC67569-1	1	61	0.0774	6/11/2018@12:22:09 PM	
JC67569-2	1	62	1.18e-3	6/11/2018@12:23:31 PM	
JC67569-3	1	63	3.68e-4	6/11/2018@12:24:53 PM	
JC67569-20	1	64	0.0199	6/11/2018@12:26:15 PM	
JC67569-21	1	65	0.0768	6/11/2018@12:27:37 PM	
JC67585-3	1	66	-1.51e-3	6/11/2018@12:28:59 PM	
GP13625-MB1	1	67	-3.33e-3	6/11/2018@12:30:21 PM	
GP13625-B1	1	68	0.166	6/11/2018@12:31:42 PM	8.3%
GP13625-D1	1	69	-4.57e-3	6/11/2018@12:33:04 PM	
CCV	1	S9	0.389	6/11/2018@12:34:26 PM	97.2%
	Known Conc:		0.400		
CCB	1	S10	-5.32e-3	6/11/2018@12:35:47 PM	
	Known Conc:		0.00		
JC67504-1	1	70	-5.23e-3	6/11/2018@12:37:09 PM	
JC67504-2	1	71	-1.38e-3	6/11/2018@12:38:30 PM	
~~JC67639-~~MB1	1	72	-3.07e-3	6/11/2018@12:39:51 PM	
~~JC67639-~~B1	1	73	0.278	6/11/2018@12:41:13 PM	14.3%
~~JC67639-~~D1	1	74	-2.40e-3	6/11/2018@12:42:34 PM	
JC67112-75	1	75	-2.85e-3	6/11/2018@12:43:55 PM	
JC67112-76	1	76	-2.24e-3	6/11/2018@12:45:17 PM	
JC67112-77	1	77	-4.05e-3	6/11/2018@12:46:39 PM	
JC67112-79	1	78	-4.38e-3	6/11/2018@12:48:02 PM	
JC67112-80	1	79	-4.12e-3	6/11/2018@12:49:24 PM	
CCV	1	S9	0.391	6/11/2018@12:50:45 PM	97.7%
	Known Conc:		0.400		
CCB	1	S10	-1.25e-3	6/11/2018@12:52:07 PM	
	Known Conc:		0.00		
JC67112-81	1	80	-2.57e-3	6/11/2018@12:53:29 PM	
JC67112-82	1	81	-2.96e-3	6/11/2018@12:54:51 PM	
JC67371-6A	1	82	-2.05e-3	6/11/2018@12:56:13 PM	
JC67371-12A	1	83	0.0206	6/11/2018@12:57:35 PM	
JC67371-18A	1	84	-2.47e-3	6/11/2018@12:58:56 PM	
JC67371-24A	1	85	-2.71e-3	6/11/2018@1:00:18 PM	
JC67587-1AB	1	86	-2.15e-3	6/11/2018@1:01:39 PM	
JC67587-7AB	1	87	-4.68e-3	6/11/2018@1:03:00 PM	
JC67592-2	1	88	-5.01e-3	6/11/2018@1:04:21 PM	
GP13641-MB1	1	89	-1.66e-3	6/11/2018@1:05:43 PM	
CCV	1	S9	0.391	6/11/2018@1:07:05 PM	97.7%
	Known Conc:		0.400		
CCB	1	S10	-1.94e-3	6/11/2018@1:08:26 PM	
	Known Conc:		0.00		

GP13640 #41/81

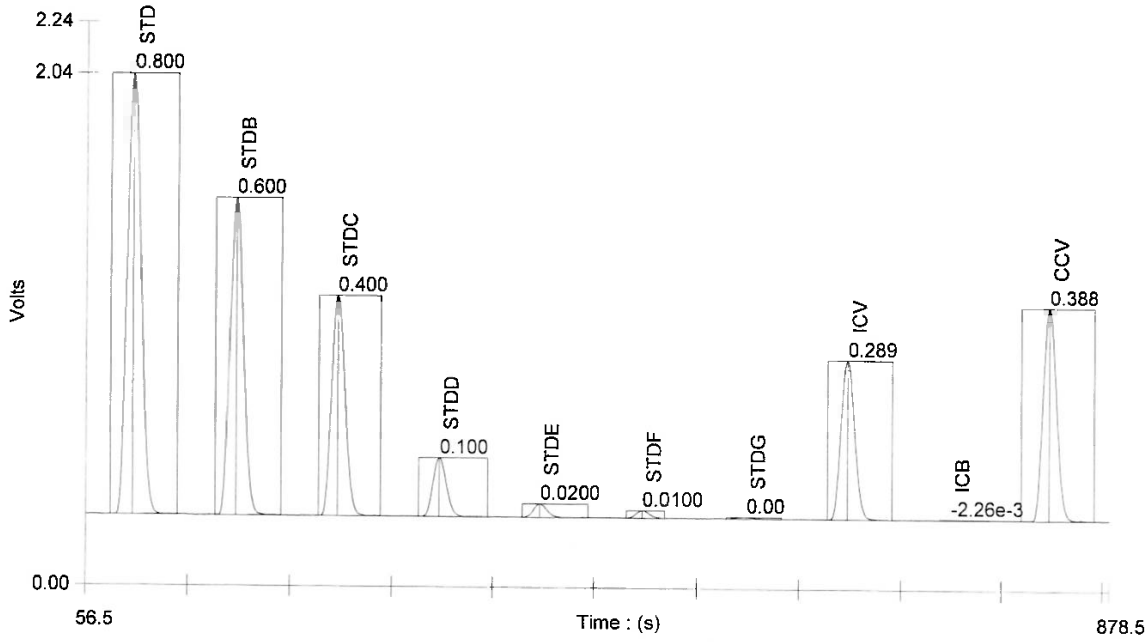
15.2 15

Author: chemistry

Date : 6/11/2018

GP13642-B1	1	90	0.279	6/11/2018@1:09:48 PM	13.9%
GP13642-D1	1	91	-2.72e-3	6/11/2018@1:11:10 PM	
JC67619-1A	1	92	-3.32e-3	6/11/2018@1:12:33 PM	
JC67619-2A	1	93	-2.02e-3	6/11/2018@1:13:55 PM	
CCV	1	S9	0.390	6/11/2018@1:16:58 PM	97.5%
	Known Conc:		0.400		
CCB	1	S10	-4.97e-3	6/11/2018@1:18:20 PM	
	Known Conc:		0.00		

Channel 1 - Set: 1 / 12

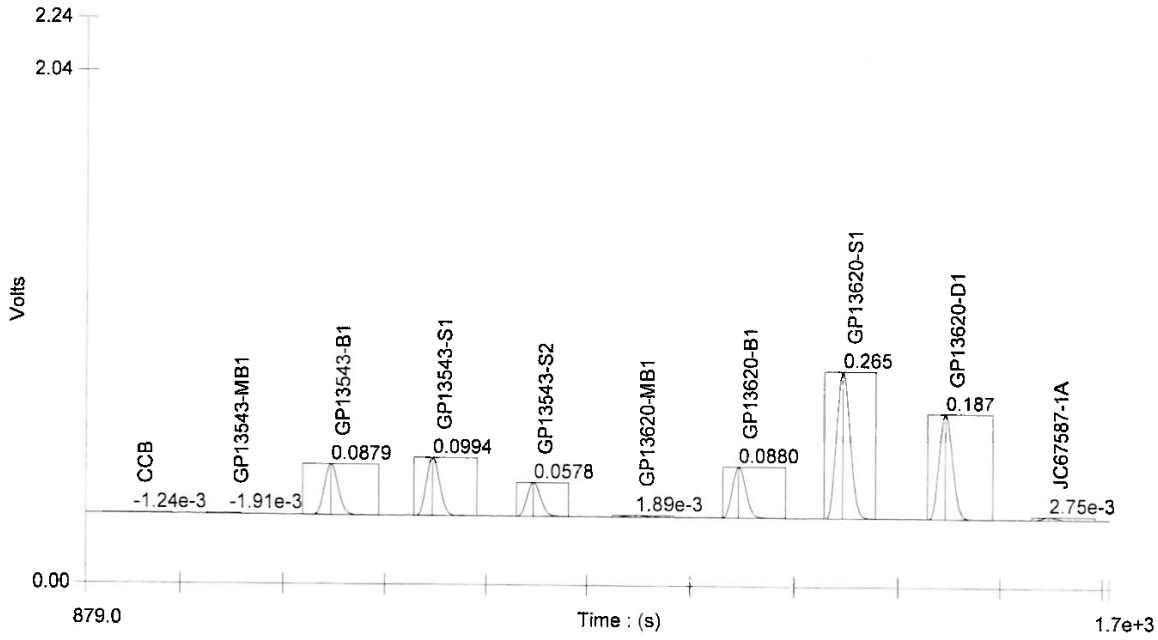


15.2 15

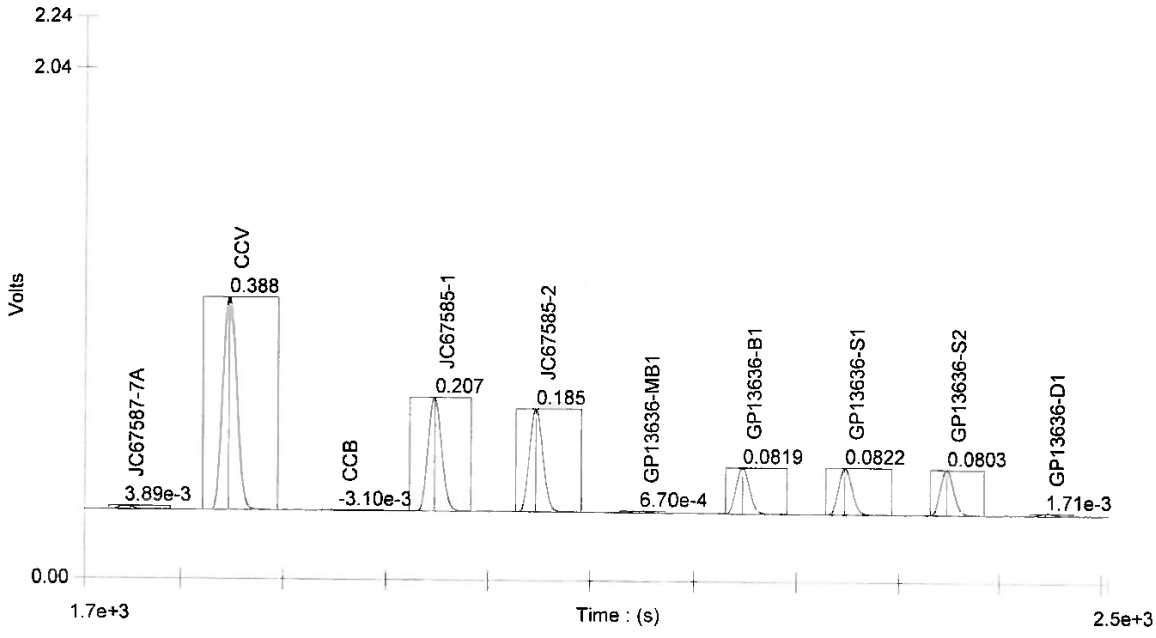
Author: chemistry

Date : 6/11/2018

Channel 1 - Set: 2 / 12



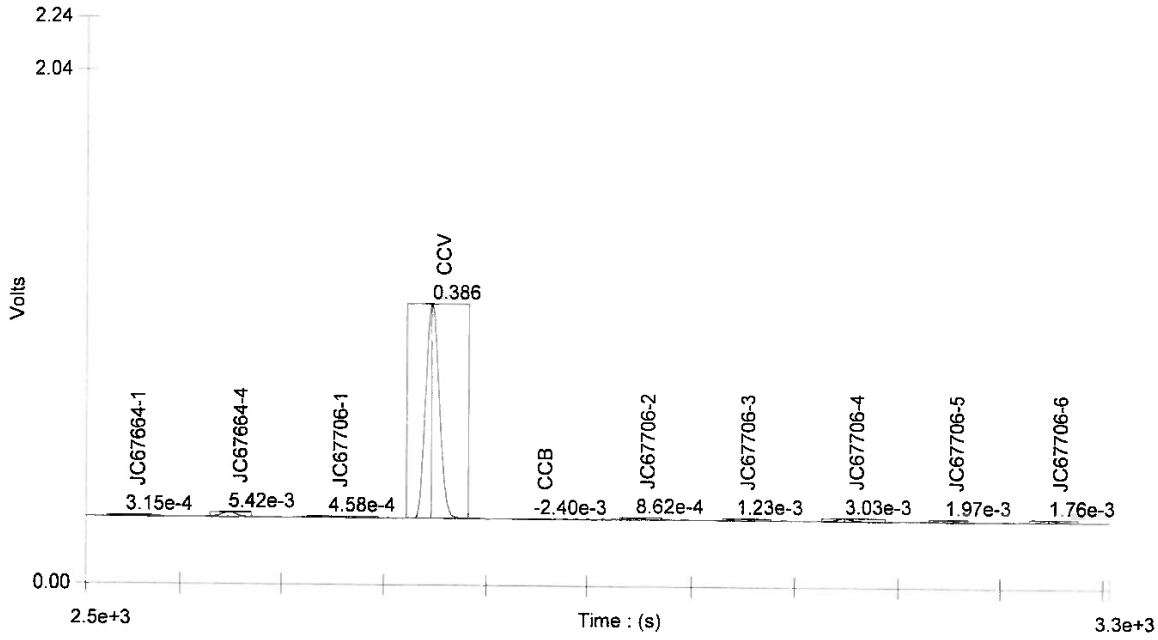
Channel 1 - Set: 3 / 12



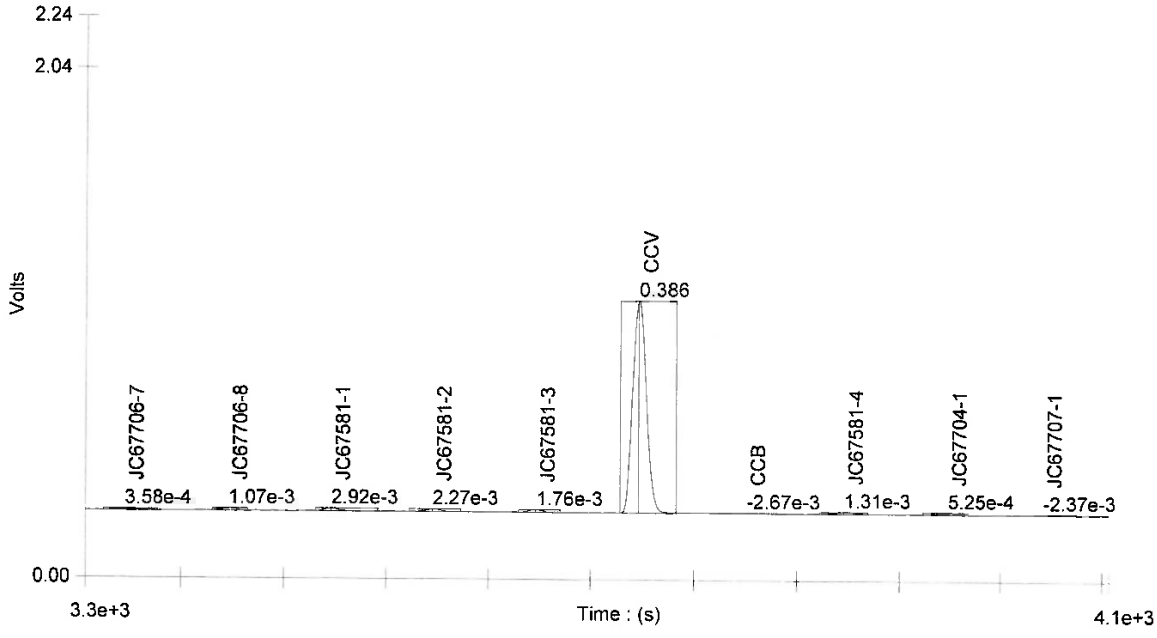
Author: chemistry

Date : 6/11/2018

Channel 1 - Set: 4 / 12



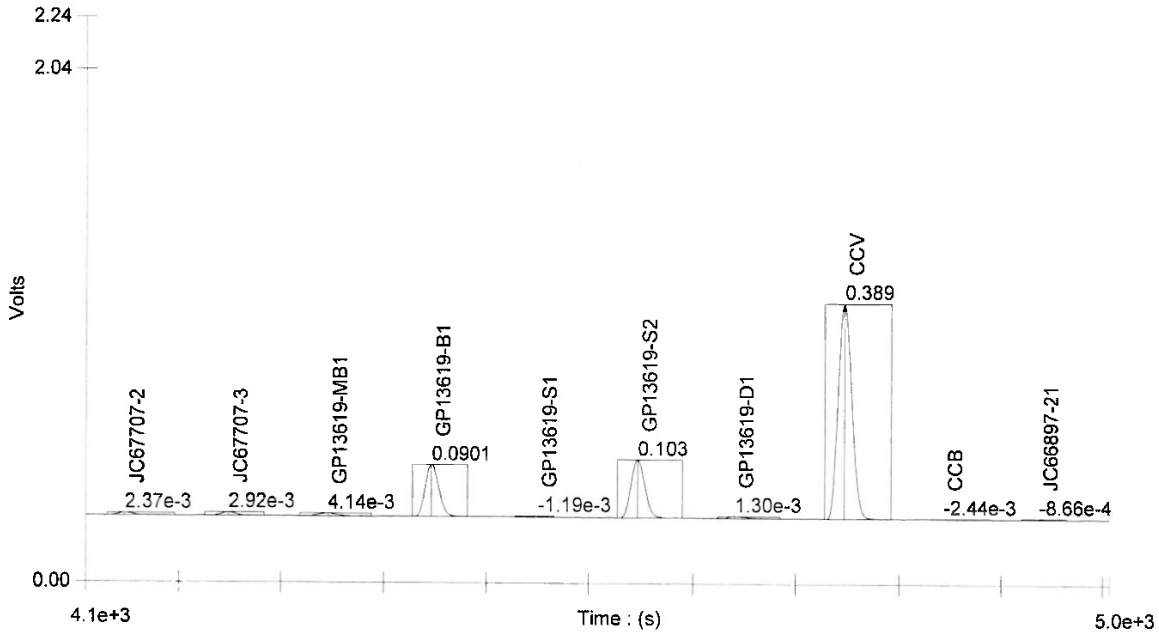
Channel 1 - Set: 5 / 12



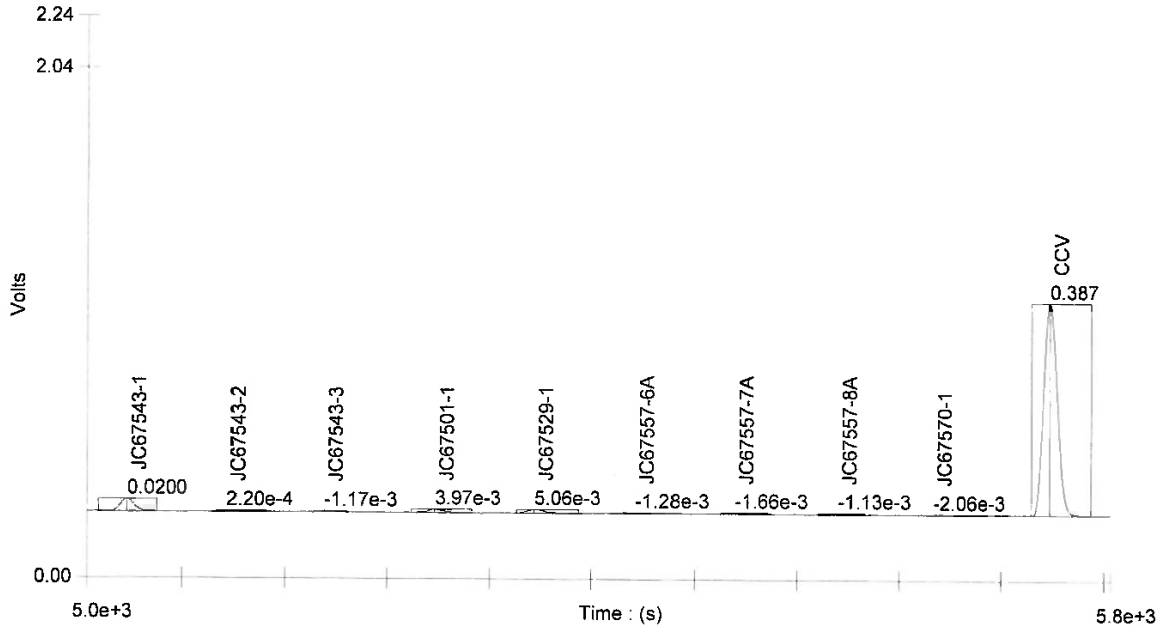
Author: chemistry

Date : 6/11/2018

Channel 1 - Set: 6 / 12



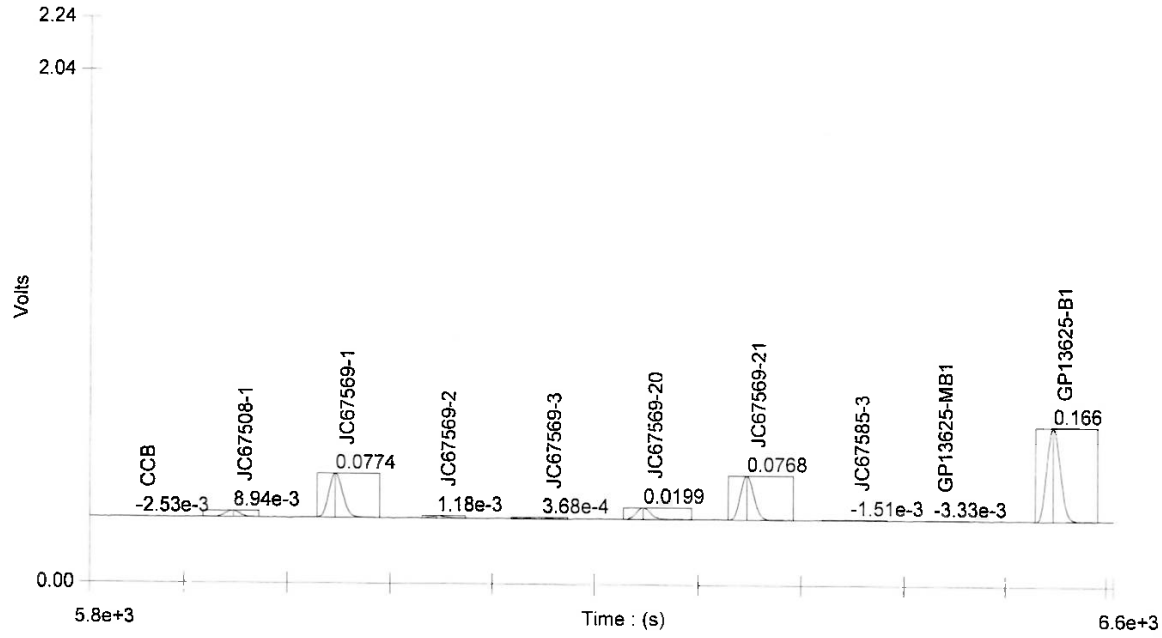
Channel 1 - Set: 7 / 12



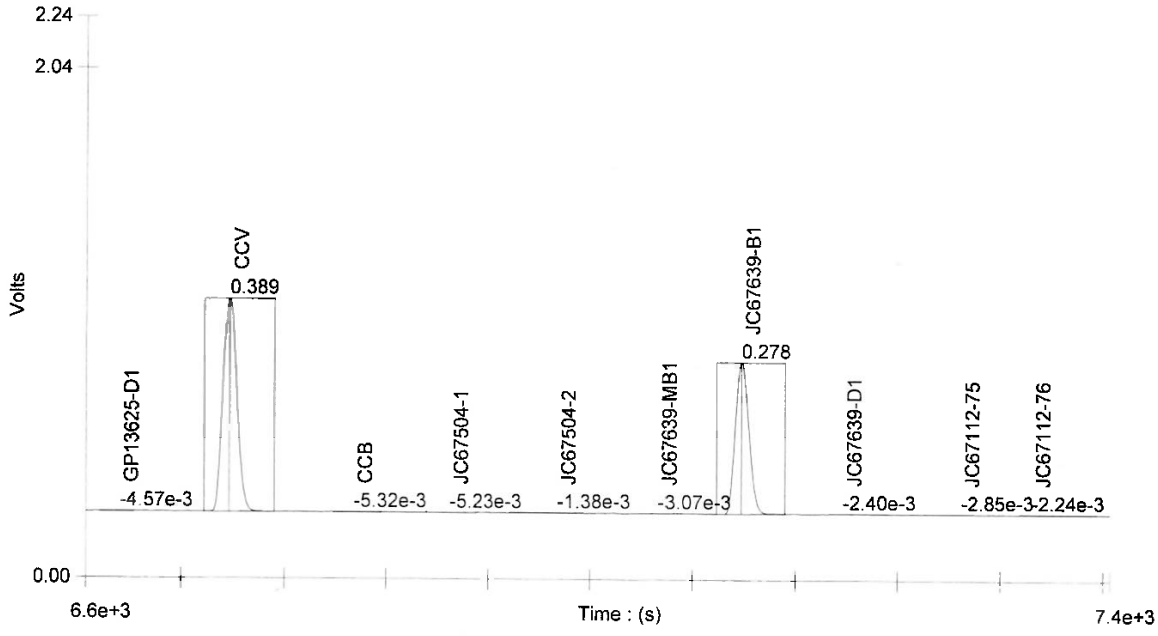
Author: chemistry

Date : 6/11/2018

Channel 1 - Set: 8 / 12



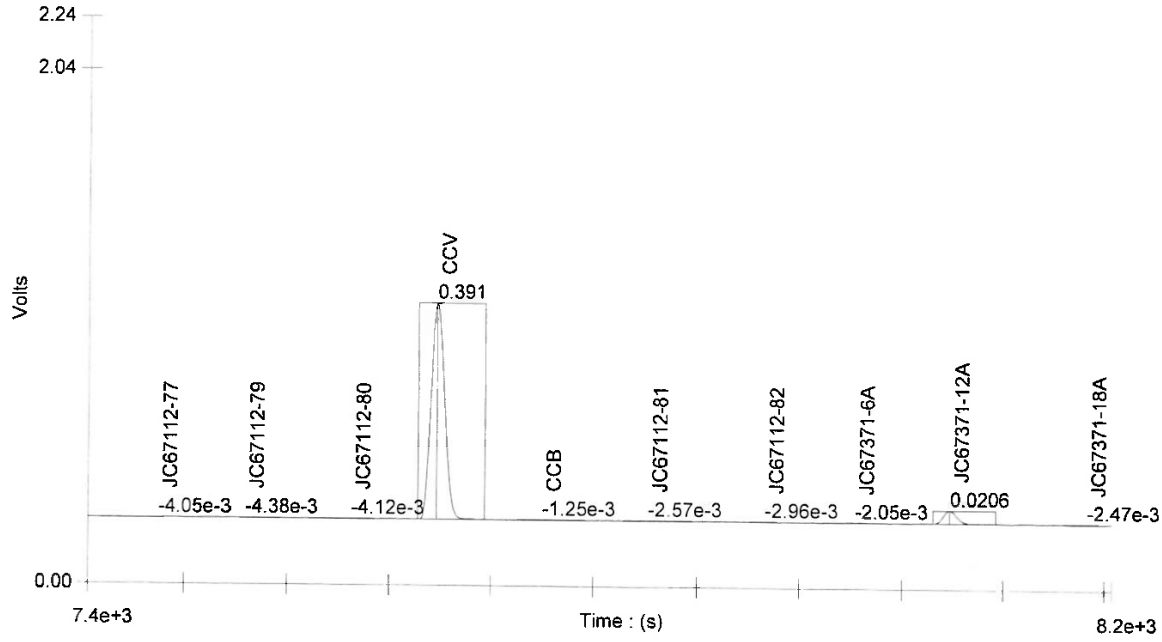
Channel 1 - Set: 9 / 12



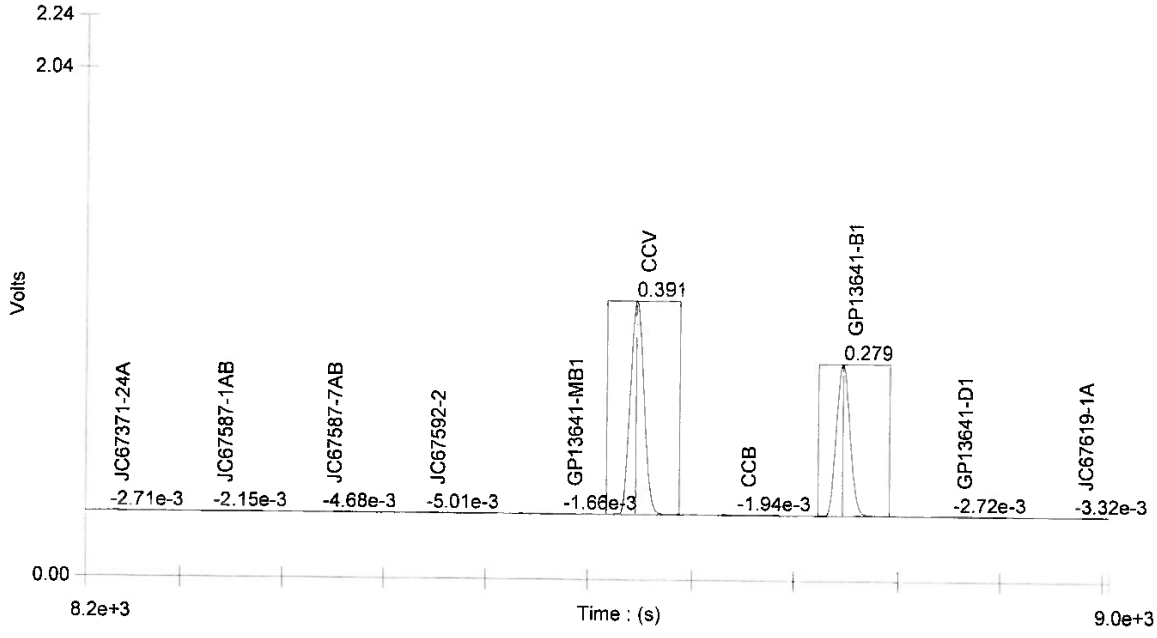
Author: chemistry

Date : 6/11/2018

Channel 1 - Set: 10 / 12



Channel 1 - Set: 11 / 12



Author: chemistry

Date : 6/11/2018

Channel 1 - Set: 12 / 12

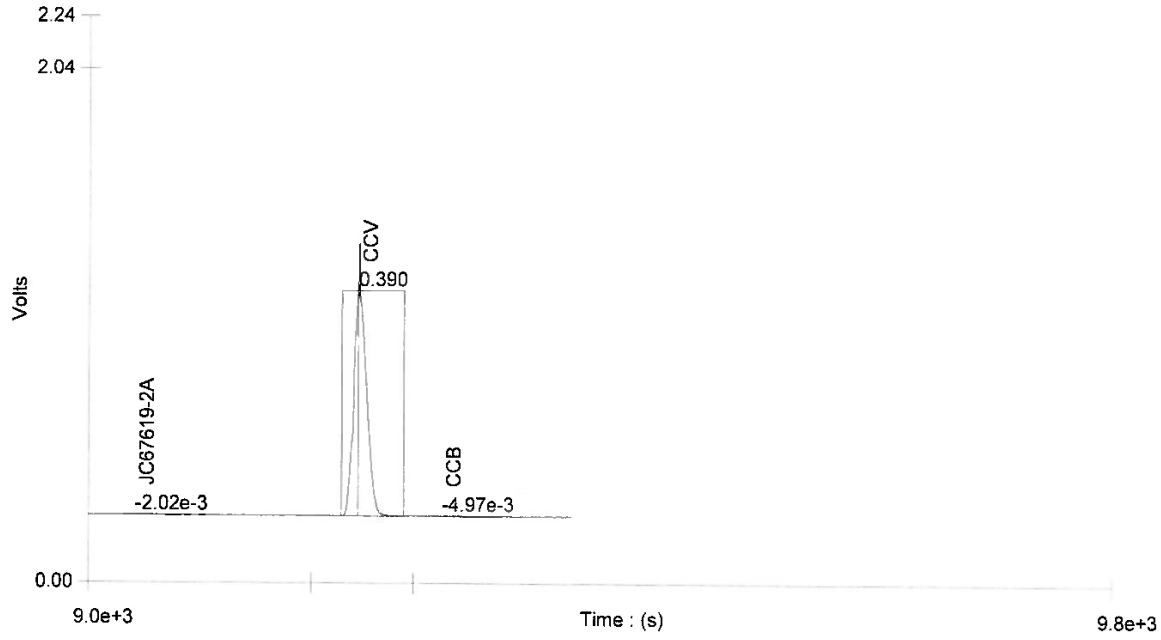
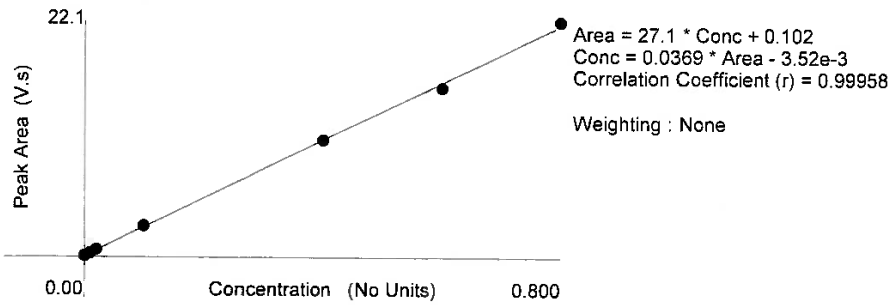


Table : 1 (CN)

	Known Conc. ()	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc ()	Detection Date	Detection Time
1	0.800	1	22.1	1.76	0.0	-1.7	0.813	6/11/2018	10:44:09 AM
2	0.600	1	15.9	1.26	0.0	3.0	0.582	6/11/2018	10:45:31 AM
3	0.400	1	10.9	0.881	0.0	0.3	0.399	6/11/2018	10:46:53 AM
4	0.100	1	2.91	0.233	0.0	-3.7	0.104	6/11/2018	10:48:15 AM
5	0.0200	1	0.685	0.0537	0.0	-6.5	0.0217	6/11/2018	10:49:37 AM
6	0.0100	1	0.374	0.0298	0.0	-0.4	0.0103	6/11/2018	10:50:59 AM
7	0.00	1	0.106	6.15e-3			3.80e-4	6/11/2018	10:52:21 AM

Figure : 1 (CN)



ACCUTEST LABORATORIES

GP13543 - Redo

Batch ID:

Autopipette ID: A1

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	Analys
		MB1	12	—	✓	6	6	120	9:43	10:13	6/8/18	GP -MB1			FO
27	1	1167110-4 S1	↓	↓	↓	↓	↓	↓	↓	↓	↓	GP -B1	0.10 ml of 5.0 mg/l (c)	✓	↓
9	↓	1167110-3 S2	↓	↓	↓	↓	↓	↓	↓	↓	↓	GP -S1	0.10 ml of 5.0 mg/l	✓	
												GP -S2	0.10 ml of 5.0 mg/l		
												GP -D1			

(a) Check if sulfamic acid was added.

(b) Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

(c) If the calibration curve is not distilled, then in addition to the blank spike, the analyst must also prepare two distilled standards using 0.12 ml of 1.0 mgl 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:

SGS

Reagent Information Log - CN - Distillation

GP Numbers:

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE2-53817-CN	8/22/2018
Magnesium Chloride Solution	GNE6-54891-CN	12/6/2018
Sulfamic Acid	RICCA 1705K24	2/29/2020
Sulfuric Acid	FISHER 177436	6/1/2023
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 812020-8141-DS	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

ACCUTEST

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: _____

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	GNE5-54740-CN	6/4/18	1000	1.000	41	.25 N NaOH	200	5.00	11/21/18	fo	6/4/18
Undistilled ICV Int.	GNE2-53657-CN	6/4/18	996	2.00	41	.25 N NaOH	100	20.00	8/5/18	bm	
Undistilled CCV Int.	GNE5-54740-CN	6/4/18	1000	2.00	41	.25 N NaOH	100	20.00	11/21/18	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 maxiumum of 28 days before analysis.
*If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the approcpriate Accutest ID number.
Reason codes for data corrections: 1-reviewer error correction; 2-transciption error; 3-computer error; 4-analyst error

Form: GN193-02
Rev. Date:1/6/2014

ACCUTEST LABORATORIES

Batch ID:_____

Autopipette ID: 41

Balance ID: B27

CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION)

Method: SW8469012B M

GP13620

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
		MB1	12	–	✓	0.25	6	120	13:08	13:38	6/8/18	GP -MB1			PO
		B1	↓	↓	↓	0.28	↓	↓	↓	↓	↓	GP -B1	0.10 ml of 5.0 mg/l (c)	✓	↓
2		JC67585-1 S1	↓	↓	↓	0.34	↓	↓	↓	↓	↓	GP -S1	0.10 ml of 5.0 mg/l	✓	↓
												GP -S2	0.10 ml of 5.0 mg/l		↓
2		D1	↓	↓	↓	0.42	↓	↓	↓	↓	↓	GP -D1			↓
2		JC67587-1A	↓	↓	↓	0.40	↓	↓	↓	↓	↓				↓
2		-7A	↓	↓	↓	0.33	↓	↓	↓	↓	↓				↓
2		BC JC67585-1	↓	↓	↓	0.39	↓	↓	↓	↓	↓				↓
1		(10) ~~-3~~ -1	↓	↓	↓	0.37	↓	↓	↓	↓	↓				↓

(a) Check if sulfamic acid was added.

(b) Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

(c) If the calibration curve is not distilled, then in addition to the blank spike, the analyst must also prepare two distilled standards using 0.12 ml of 1.0 mgl for one and 0.15 ml of 20.0 mg/l for the other.

Comments:

QC Reviewer: _____ Date: _____

Form: GN0012-05

Rev. Date: 06/8/13

SGS

Reagent Information Log - CN - Distillation

GP Numbers: GP 13620

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE2-53817-CN	8/22/2018
Magnesium Chloride Solution	GNE6-54891-CN	12/6/2018
Sulfamic Acid	RICCA 1705K24	2/29/2020
Sulfuric Acid	FISHER 177436	6/1/2023
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 812020-8141-DS	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

ACCUTEST.

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP13620

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	GNE5-54740-CN	6/4/18	1000	1.000	41	.25 N NaOH	200	5.00	11/21/18	fo	6/4/18
Undistilled ICV Int.	GNE2-53657-CN	6/4/18	996	2.00	41	.25 N NaOH	100	20.00	8/5/18	bm	6/4/18
Undistilled CCV Int.	GNE5-54740-CN	6/4/18	1000	2.00	41	.25 N NaOH	100	20.00	11/21/18	bm	6/4/18

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	6/11/18	bm	6/4/18
Undistilled CCV	CCV Int.		20.0	2.00	41	.25 N NaOH	100	0.40	6/11/18	bm	6/4/18

(a) Concentration will change with standardization concentration.
(b) Diluent reagent reference number: SEE ATTACHED Expiration Date: SEE ATTACHED
(c) Standards must be made fresh (daily) before distillation. After distillation, they may be held under refrigeration for a maxiumum of 28 days before analysis.
*If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the approcpriate Accutest ID number.
Reason codes for data corrections: 1-reviewer error correction; 2-transciption error; 3-computer error; 4-analyst error

Form: GN193-02
Rev. Date:1/6/2014

ACCUTEST LABORATORIES

GP13636

Batch ID:

Autopipette ID: 41

Balance ID: B-27

CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION)

Method: SW8469012B M

Bottle #	Block #	Sample ID	pH	S2-	Add (a)	Initial Weight (g)	Final Volume (ml)	Temp. in Deg. C (b)	Start Time	End Time	Date	QC ID	Spike Amounts and Comments	Spike Lot	Analyst
	2	MB1	12	-	✓	0.31	6	120C	14:00	14:30	6/9/18	GP -MB1			
		B1				0.27						GP -B1	0.10 ml of 5.0 mg/l (c)		
		S1 JC67706-5				0.30						GP -S1	0.10 ml of 5.0 mg/l		
		S2 -6				0.31						GP -S2	0.10 ml of 5.0 mg/l		
		D1 -5				0.29						GP -D1			
2		JC67664-1				0.30									
2		-4				0.27									
1		JC67706-1				0.28									
1		-2				0.32									
3		-3				0.27									
1		-4				0.26									
1		-5				0.27									
2		-6				0.31									
3		-7				0.27									
1		-8				0.28									
2		JC67581-1				0.30									
2		-2				0.30									
2		-3				0.32									
2		-4				0.29									
2		JC67704-1				0.28									
3		JC67707-1				0.32									
2		-2				0.27									
3	4	-3				0.30									

(a) Check if sulfamic acid was added.

(b) Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

(c) If the calibration curve is not distilled, then in addition to the blank spike, the analyst must also prepare two distilled standards using 0.12 ml of 1.0 mgl for one and 0.15 ml of 20.0 mg/l for the other.

Comments:

QC Reviewer: Date:

Form: GN0012-05

Rev. Date: 06/8/13

ACCUTEST

Batch ID: 7wAP

Autopipette ID: 3441

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	Analy:
												GP -MB1			
												GP -B1	0.10 ml of 5.0 mg/l (c)		
												GP -S1	0.10 ml of 5.0 mg/l		
												GP -S2	0.10 ml of 5.0 mg/l		
												GP -D1			
	4	Calibration Curve	12	–	✓	6	6	120°C	14:00	14:30	6/9/18				
		0.00 ppm										0.0 ml of	5 ppm CN Std	100 ml	RP
		0.01 ppm										0.2 ml of	" "	"	
		0.02 ppm										0.4 ml of	" "	"	
		0.10 ppm										2.0 ml of	" "	"	
		0.40 ppm										8.0 ml of	" "	"	
		0.60 ppm										12.0 ml of	" "	"	
	✓	0.80 ppm	✓	✓	✓	✓	✓	✓	✓	✓	✓	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 mgl 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

ACCUTEST

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP13636

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	GNE5-54740-CN	6/4/18	1000	1.000	41	.25 N NaOH	200	5.00	11/21/18	fo	6/4/18
Undistilled ICV Int.	GNE2-53657-CN	6/4/18	996	2.00	41	.25 N NaOH	100	20.00	8/5/18	bm	6/4/18
Undistilled CCV Int.	GNE5-54740-CN	6/4/18	1000	2.00	41	.25 N NaOH	100	20.00	11/21/18	bm	6/4/18

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	6/11/18	bm	6/4/18
Undistilled CCV	CCV Int.		20.0	2.00	41	.25 N NaOH	100	0.40	6/11/18	bm	6/4/18

(a) Concentration will change with standardization concentration.
(b) Diluent reagent reference number: SEE ATTACHED Expiration Date: SEE ATTACHED
(c) Standards must be made fresh (daily) before distillation. After distillation, they may be held under refrigeration for a maxiumum of 28 days before analysis.
*If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the approcpriate Accutest ID number.
Reason codes for data corrections: 1-reviewer error correction; 2-transciption error; 3-computer error; 4-analyst error

Form: GN193-02
Rev. Date:1/6/2014

SGS

Reagent Information Log - CN - Distillation

GP Numbers: GP13636

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE2-53817-CN	8/22/2018
Magnesium Chloride Solution	GNE6-54891-CN	12/6/2018
Sulfamic Acid	RICCA 1705K24	2/29/2020
Sulfuric Acid	FISHER 177436	6/1/2023
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 812020-8141-DS	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

ACCUTEST Laboratories

CYANIDE DISTILLATION LOG (WATERS- MICRO DISTILLATION)

Method: EPA 335.4 or SW-846 9012 M (Circle Method)

GP13614

Batch ID:

Autopipette ID: 41

Balance ID: HB

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
	4	MB1	12	–	✓	6	6	120	12:24	12:54	6/8/18	GP -MB1			
		131										GP -B1	0.10 ml of 5.0 mg/l (c)	✓	
10		JC66897-21 S1										GP -S1	0.10 ml of 5.0 mg/l	✓	
4		JC67543-1 S2										GP -S2	0.10 ml of 5.0 mg/l	✓	
10		JC66897-21 D1										GP -D1			
10		JC66897-21													
4		JC67543-1													
		-2													
4		-3													
10		JC67501-1													
14		JC67529-1													
6		JC67557-6A													
6		-7A													
6		-8A													
16		JC67570-1													
2		JC67508-1													
1		JC67564-1													
1		-2													
1		-3													
2		-20													
1		-21													
8	2	JC67585-3													

(a) Check if sulfamic acid was added.

(b) Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

(c) If the calibration curve is not distilled, then in addition to the blank spike, the analyst must also prepare two distilled standards using 0.12 ml of 1.0 mgl for one and 0.15 ml of 20.0 mg/l for the other.

Comments:

QC Reviewer:

Form: GN0012-04
Rev. Date: 03/09/13

Date:

38 -> 06

SGS

Reagent Information Log - CN - Distillation

GP Numbers: GP 13619

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE2-53817-CN	8/22/2018
Magnesium Chloride Solution	GNE6-54891-CN	12/6/2018
Sulfamic Acid	RICCA 1705K24	2/29/2020
Sulfuric Acid	FISHER 177436	6/1/2023
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 812020-8141-DS	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

ACCUTEST

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: CN

GN or GP Number: GP13619

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	GNE5-54740-CN	6/4/18	1000	1.000	41	.25 N NaOH	200	5.00	11/21/18	fo	6/4/18
Undistilled ICV Int.	GNE2-53657-CN	6/4/18	996	2.00	41	.25 N NaOH	100	20.00	8/5/18	bm	6/4/18
Undistilled CCV Int.	GNE5-54740-CN	6/4/18	1000	2.00	41	.25 N NaOH	100	20.00	11/21/18	bm	6/4/18

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	6/11/18	bm	6/4/18
Undistilled CCV	CCV Int.		20.0	2.00	41	.25 N NaOH	100	0.40	6/11/18	bm	6/4/18

(a) Concentration will change with standardization concentration.
(b) Diluent reagent reference number: SEE ATTACHED Expiration Date: SEE ATTACHED
(c) Standards must be made fresh (daily) before distillation. After distillation, they may be held under refrigeration for a maxiumum of 28 days before analysis.
*If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the approcpriate Accutest ID number.
Reason codes for data corrections: 1-reviewer error correction; 2-transciption error; 3-computer error; 4-analyst error

Form: GN193-02
Rev. Date:1/6/2014

ACCUTEST LABORATORIES

REACTIVITY DISTILLATION LOG (WATERS)

Method: SW846 Chapter 7

CREAC GP13625 / SREAC GP13626

Batch ID: _____

Autopipette ID: N/A

Balance ID: N/A

Bottle #	Sample ID	Initial Volume (ml)	Final Volume (ml)	Start Time	End Time	Date	QC ID	Product (SREAC, CREAC, or both)	Check when spike added	Spike Amounts and Comments including Spike Lots	Analyst
	MB1	10:00	500	2:26	15:05	6/8/18	GP -MB1				FO
	B1	↓	↓	↓	↓	↓	GP -B1	CREAC	✓	10mL of 100ppm	↓
	B1						GP -B1	SREAC	✓	10mL of 537ppm	
3	SL67504-1 S1						GP -S1	SREAC	✓	10mL of 537ppm	
3	↓ D1						GP -D1				
3	SL67504-1										
3	↓ -2										

Comments: Creac Spike: 20 ml of 1000ppm cyanide stock diluted up to 200ml w/ 0.25N NaOH
Sreac Spike: 2.0g of Sodium Sulfide Nonahydrate diluted up to 500ml w/ DI H20

QC Reviewer: _____ Date: _____

Form: GN282-01a
Rev. Date: 02/28/13

ACCUTEST

Reagent Information Log - CREAC and SREAC Distillations

GP Numbers: GP 13625 GP13626

Reagent	Reagent # or Manufacturer/Lot	Expiration date	Standardization Date
Cyanide Spike Solution	GNE5-54740-CN	11/21/2018	6/4/2018
Sulfide Spike Solution	FISHER # 161566	1/11/2022	NA
Sulfuric Acid, 0.010 N	gne6-54917-reac	12/8/2018	NA
Sodium Hydroxide, 0.25 N	gne6-54918-reac	12/8/2018	NA
Sodium Hydroxide, 0.25 N	gne6-54918-reac	12/8/2018	NA

Form: GN087A-64
Rev. Date: 3/12/04

ACCUTEST LABORATORIES

Sreac / Creac

GP13639 / GP13640

Batch ID:_____

Autopipette ID:_____

Balance ID:_____B-27_____

REACTIVITY DISTILLATION LOG (SOILS)

Method: SW846 Chapter 7

Bottle #	Sample ID	Initial Volume (ml)	Final Volume (ml)	Start Time	End Time	Date	QC ID	Product (SREAC, CREAC, or both)	Check when spike added	Spike Amounts and Comments including Spike Lots	Analyst
	MB1	10	500	18:30	19:00	6/10/2018	GP -MB	BOTH			CB
	B1 CREAC	10					GP -B	CREAC	✓	10ml of 100ppm	
	B1 SREAC	10					GP -B	SREAC	✓	10ml of 537ppm	
1	JC67112-75 S1	10.03					GP -S	SREAC	✓	10ml of 537 ppm	
1	JC67112-75 D1	10.00					GP -D	BOTH			
1	JC67112-75 QC	10.01									
1	JC67112-76	10.57									
1	JC67112-77	10.33									
1	JC67112-79	10.40									
1	JC67112-80	10.76		19:30	20:00						
1	JC67112-81	10.42									
1	JC67112-82	10.78									
1	JC67371-6A	10.39									
1	JC67371-12A	10.56									
1	JC67371-18A	10.76									
1	JC67371-24A	10.18									
1	JC67587-1AB	10.94									
1	JC67587-7AB	10.88									
5	JC67592-2	10.00		20:30	21:00						✓

Comments: Creac Spike: 20 ml of 1000ppm cyanide stock diluted up to 200ml w/ 0.25N NaOH
Sreac Spike: 2.0g of Sodium Sulfide Nonahydrate diluted up to 500ml w/ DI H20

QC Reviewer: _____ Date: _____

Form: GN282-01b
Rev. Date: 02/28/13

ACCUTEST

Reagent Information Log - CREAC and SREAC Distillations

GP Numbers:

Reagent	Reagent # or Manufacturer/Lot	Expiration date	Standardization Date
Cyanide Spike Solution	GNE5-54740-CN	11/21/2018	6/4/2018
Sulfide Spike Solution	FISHER # 161566	1/11/2022	NA
Sulfuric Acid, 0.010 N	gne6-54917-reac	12/8/2018	NA
Sodium Hydroxide, 0.25 N	gne6-54918-reac	12/8/2018	NA
Sodium Hydroxide, 0.25 N	gne6-54918-reac	12/8/2018	NA

Form: GN087A-64
Rev. Date: 3/12/04

JTEST LABORATORIES

SREAC / CREAC

ACTIVITY DISTILLATION LOG (AQ) GP13641 / GP13642

Method: SW846 Chapter 7

Batch ID:_____

Autopipette ID:_____

Balance ID:_____B-27_____

Bottle #	Sample ID	Initial Volume (ml)	Final Volume (ml)	Start Time	End Time	Date	QC ID	Product (SREAC, CREAC, or both)	Check when spike added	Spike Amounts and Comments including Spike Lots	Analyst
	MB1	10	500	2030	2100	6/10/2018	GP -MB	BOTH			CB
	B1 CREAC						GP -B	CREAC	✓	10ml of 100ppm	
	B1 SREAC						GP -B	SREAC	✓	10ml of 537ppm	
6	JC67619-1A S1						GP -S	SREAC	✓	10ml of 537 ppm	
6	JC67619-1A D1						GP -D	BOTH			
6	JC67619-1A QC										
6	JC67619-2A										

Comments: Creac Spike: 20 ml of 1000ppm cyanide stock diluted up to 200ml w/ 0.25N NaOH
Sreac Spike: 2.0g of Sodium Sulfide Nonahydrate diluted up to 500ml w/ DI H20

QC Reviewer: _____ Date: _____

Form: GN282-01b
Rev. Date: 02/28/13

ACCUTEST

Reagent Information Log - CREAC and SREAC Distillations

GP Numbers:

Reagent	Reagent # or Manufacturer/Lot	Expiration date	Standardization Date
Cyanide Spike Solution	GNE5-54740-CN	11/21/2018	6/4/2018
Sulfide Spike Solution	FISHER # 161566	1/11/2022	NA
Sulfuric Acid, 0.010 N	gne6-54917-reac	12/8/2018	NA
Sodium Hydroxide, 0.25 N	gne6-54918-reac	12/8/2018	NA
Sodium Hydroxide, 0.25 N	gne6-54918-reac	12/8/2018	NA

rm: GN087A-64
Rev. Date: 3/12/04

ACCUTEST

GN81190

Reagent Information Log - CN Lachat Autoanalyzer

GN Number:

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Pyridine-Bartituric 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	10/9/2018

Reason codes for data corrections: 1-reviewer error correction: 2-transcription error; 3-computer error; 4-analyst error

15.2 15

Form: GN087A-27
Rev. Date: 7/19/06