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Automated Report

Technical Report for

Anderson, Mulholland & Associates

BMS, Former Brule Area, PR

SGS Accutest Job Number: JC16204

Sampling Date: 03/11/16

Report to:

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Total number of pages in report: 763

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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SGS Accutest

Sample Summary

Anderson, Mulholland & Associates

BMS, Former Brule Area, PR

Job No: JC16204

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC16204-1	03/11/16	13:12	NMR	03/15/16	AQ	Ground Water	BR-1
JC16204-1R	03/11/16	13:12	NMR	03/15/16	AQ	Ground Water	BR-1
JC16204-2	03/11/16	14:58	NMR	03/15/16	AQ	Ground Water	BR-2
JC16204-2R	03/11/16	14:58	NMR	03/15/16	AQ	Ground Water	BR-2
JC16204-3	03/11/16	15:17	NMR	03/15/16	AQ	Ground Water	BR-2D
JC16204-3R	03/11/16	15:17	NMR	03/15/16	AQ	Ground Water	BR-2D
JC16204-4	03/11/16	18:20	NMR	03/15/16	AQ	Ground Water	BR-3
JC16204-4R	03/11/16	18:20	NMR	03/15/16	AQ	Ground Water	BR-3
JC16204-5	03/11/16	12:14	NMR	03/15/16	AQ	Equipment Blank	EB031116
JC16204-5R	03/11/16	12:14	NMR	03/15/16	AQ	Equipment Blank	EB031116
JC16204-6	03/11/16	18:23	NMR	03/15/16	AQ	Field Blank Water	FB031116
JC16204-6R	03/11/16	18:23	NMR	03/15/16	AQ	Field Blank Water	FB031116
JC16204-7	03/11/16	18:23	NMR	03/15/16	AQ	Trip Blank Water	TB031116

SGS Accutest

Sample Summary
(continued)

Anderson, Mulholland & Associates

Job No: JC16204

BMS, Former Brule Area, PR

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC16204-7R	03/11/16	18:23	NMR	03/15/16	AQ	Trip Blank Water	TB031116

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Anderson, Mulholland & Associates	**Job No**	JC16204
Site:	BMS, Former Brule Area, PR	**Report Date**	4/18/2016 2:38:11 PM

On 03/15/2016, 5 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a maximum corrected temperature of 4.6 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JC16204 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.

Volatiles by GCMS By Method SW846 8260C

Matrix: AQ **Batch ID:** V3A6447

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC16254-7MS, JC16254-7MSD were used as the QC samples indicated.

Matrix: AQ **Batch ID:** V3A6450

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC16325-1MS, JC16325-3DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP92132

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC16170-8MS, JC16170-8MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for Acenaphthene, Dibenzofuran, Naphthalene, Phenanthrene, 1-Methylnaphthalene, 2-Methylnaphthalene, 3,3'-Dichlorobenzidine, Fluorene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- Matrix Spike Duplicate Recovery(s) for 1-Methylnaphthalene, 2-Methylnaphthalene, Dibenzofuran, Fluorene, Naphthalene, Phenanthrene, 2,4-Dinitrophenol are outside control limits. Probable cause due to matrix interference.
- RPD(s) for MSD for 2,4-Dinitrophenol, 3,3'-Dichlorobenzidine, Atrazine, Pentachlorophenol are outside control limits for sample OP92132-MSD. Analytical precision exceeds in-house control limits.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix: AQ **Batch ID:** OP92132A

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC16106-9MS, JC16106-9MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846-8015C (DAI)

Matrix: AQ **Batch ID:** GGH5211

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC15796-1MS, JC15796-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's 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.

Accutest Laboratories 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 Accutest Laboratories indicated via signature on the report cover

Summary of Hits

Job Number: JC16204
Account: Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR
Collected: 03/11/16

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Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC16204-1	**BR-1**					
Acetone		6.9 J	10	3.3	ug/l	SW846 8260C
Chlorobenzene		1.2	1.0	0.19	ug/l	SW846 8260C
Cyclohexane		4.0 J	5.0	0.28	ug/l	SW846 8260C
1,2-Dichlorobenzene		0.93 J	1.0	0.19	ug/l	SW846 8260C
1,4-Dichlorobenzene		0.64 J	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		2.8	1.0	0.23	ug/l	SW846 8260C
Methyl Tert Butyl Ether		10.9	1.0	0.24	ug/l	SW846 8260C
Anthracene		0.46 J	1.0	0.25	ug/l	SW846 8270D
4-Chloroaniline		0.97 J	5.0	0.23	ug/l	SW846 8270D
1,4-Dioxane		156	2.0	1.4	ug/l	SW846 8270D
Naphthalene		0.130	0.10	0.013	ug/l	SW846 8270D BY SIM
JC16204-1R	**BR-1**					
No hits reported in this sample.						
JC16204-2	**BR-2**					
Chlorobenzene		0.37 J	1.0	0.19	ug/l	SW846 8260C
Cyclohexane		0.43 J	5.0	0.28	ug/l	SW846 8260C
1,2-Dichlorobenzene		0.84 J	1.0	0.19	ug/l	SW846 8260C
1,4-Dichlorobenzene		0.42 J	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		0.23 J	1.0	0.23	ug/l	SW846 8260C
Methyl Tert Butyl Ether		3.3	1.0	0.24	ug/l	SW846 8260C
1,4-Dioxane		15.8	1.0	0.72	ug/l	SW846 8270D
Fluoranthene		0.76 J	1.0	0.23	ug/l	SW846 8270D
Pyrene		0.42 J	1.0	0.34	ug/l	SW846 8270D
JC16204-2R	**BR-2**					
No hits reported in this sample.						
JC16204-3	**BR-2D**					
Chlorobenzene		0.36 J	1.0	0.19	ug/l	SW846 8260C
Cyclohexane		0.46 J	5.0	0.28	ug/l	SW846 8260C
1,2-Dichlorobenzene		0.81 J	1.0	0.19	ug/l	SW846 8260C
1,4-Dichlorobenzene		0.46 J	1.0	0.27	ug/l	SW846 8260C
Isopropylbenzene		0.26 J	1.0	0.23	ug/l	SW846 8260C
Methyl Tert Butyl Ether		3.5	1.0	0.24	ug/l	SW846 8260C
1,4-Dioxane		17.7	1.0	0.72	ug/l	SW846 8270D
Fluoranthene		0.84 J	1.0	0.23	ug/l	SW846 8270D
Pyrene		0.48 J	1.0	0.34	ug/l	SW846 8270D

Summary of Hits

Job Number: JC16204
Account: Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR
Collected: 03/11/16

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC16204-3R	**BR-2D**					
No hits reported in this sample.						
JC16204-4	**BR-3**					
Chlorobenzene		0.49 J	1.0	0.19	ug/l	SW846 8260C
1,2-Dichlorobenzene		0.31 J	1.0	0.19	ug/l	SW846 8260C
Isopropylbenzene		1.6	1.0	0.23	ug/l	SW846 8260C
Methyl Tert Butyl Ether		1.9	1.0	0.24	ug/l	SW846 8260C
1,4-Dioxane		55.7	1.0	0.72	ug/l	SW846 8270D
JC16204-4R	**BR-3**					
No hits reported in this sample.						
JC16204-5	**EB031116**					
Isopropyl Alcohol		258	100	68	ug/l	SW846-8015C (DAI)
JC16204-5R	**EB031116**					
No hits reported in this sample.						
JC16204-6	**FB031116**					
No hits reported in this sample.						
JC16204-6R	**FB031116**					
No hits reported in this sample.						
JC16204-7	**TB031116**					
No hits reported in this sample.						
JC16204-7R	**TB031116**					
No hits reported in this sample.						

Sample Results

Report of Analysis

SGS Accutest

Report of Analysis

Client Sample ID:	BR-1		
Lab Sample ID:	JC16204-1	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A149430.D	1	03/18/16	TK	n/a	n/a	V3A6450
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	6.9	10	3.3	ug/l	J
71-43-2	Benzene	ND	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	1.2	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	4.0	5.0	0.28	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	0.93	1.0	0.19	ug/l	J
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	0.64	1.0	0.27	ug/l	J
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	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:	BR-1		
Lab Sample ID:	JC16204-1	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	2.8	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	10.9	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	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	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		76-120%
17060-07-0	1,2-Dichloroethane-D4	94%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	93%		78-117%

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 Accutest

Report of Analysis

Client Sample ID:	BR-1		
Lab Sample ID:	JC16204-1	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P57281.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497
Run #2	2P57313.D	2	03/17/16	RL	03/16/16	OP92132	E2P2498

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

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	0.93	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.4	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.3	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	10	1.1	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	5.0	0.87	ug/l	
95-48-7	2-Methylphenol	ND	2.0	0.82	ug/l	
	3&4-Methylphenol	ND	2.0	0.67	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.4	ug/l	
100-02-7	4-Nitrophenol	ND	10	1.1	ug/l	
87-86-5	Pentachlorophenol	ND	5.0	1.4	ug/l	
108-95-2	Phenol	ND	2.0	0.31	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	1.4	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.5	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.4	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.29	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.24	ug/l	
98-86-2	Acetophenone	ND	2.0	0.28	ug/l	
120-12-7	Anthracene	0.46	1.0	0.25	ug/l	J
1912-24-9	Atrazine	ND	2.0	0.42	ug/l	
100-52-7	Benzaldehyde	ND	5.0	0.34	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.32	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.33	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.32	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.41	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.37	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.37	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.27	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.26	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.30	ug/l	
106-47-8	4-Chloroaniline	0.97	5.0	0.23	ug/l	J
86-74-8	Carbazole	ND	1.0	0.29	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:	BR-1		
Lab Sample ID:	JC16204-1	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.0	0.43	ug/l	
218-01-9	Chrysene	ND	1.0	0.35	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.26	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.34	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.28	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.26	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	0.53	ug/l	
123-91-1	1,4-Dioxane	156 [a]	2.0	1.4	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.37	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.79	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.29	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.31	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.77	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.23	ug/l	
86-73-7	Fluorene	ND	1.0	0.29	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.42	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.36	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	0.29	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.22	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.38	ug/l	
78-59-1	Isophorone	ND	2.0	0.29	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.29	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.21	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.24	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.34	ug/l	
91-20-3	Naphthalene	ND	1.0	0.28	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.46	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.31	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.29	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.23	ug/l	
129-00-0	Pyrene	ND	1.0	0.34	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	47%	43%	14-88%

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:	BR-1		
Lab Sample ID:	JC16204-1	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	31%	30%	10-110%
118-79-6	2,4,6-Tribromophenol	95%	77%	39-149%
4165-60-0	Nitrobenzene-d5	82%	76%	32-128%
321-60-8	2-Fluorobiphenyl	102%	85%	35-119%
1718-51-0	Terphenyl-d14	88%	76%	10-126%

(a) Result is from Run# 2

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

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

SGS Accutest

Report of Analysis

Client Sample ID:	BR-1		
Lab Sample ID:	JC16204-1	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P15665.D	1	03/18/16	JJ	03/16/16	OP92132A	E4P805
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
91-20-3	Naphthalene	0.130	0.10	0.013	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	86%		24-125%
321-60-8	2-Fluorobiphenyl	75%		19-127%
1718-51-0	Terphenyl-d14	82%		10-119%

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 Accutest

Report of Analysis

Client Sample ID:	BR-1		
Lab Sample ID:	JC16204-1	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846-8015C (DAI)	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH103798.D	1	03/17/16	XPL	n/a	n/a	GGH5211
Run #2							

Low Molecular Alcohol List

CAS No.	Compound	Result	RL	MDL	Units	Q
64-17-5	Ethanol	ND	100	55	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	36	ug/l	
67-63-0	Isopropyl Alcohol	ND	100	68	ug/l	
71-23-8	n-Propyl Alcohol	ND	100	43	ug/l	
71-36-3	n-Butyl Alcohol	ND	100	87	ug/l	
78-92-2	sec-Butyl Alcohol	ND	100	66	ug/l	
67-56-1	Methanol	ND	200	71	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	89%		56-145%
111-27-3	Hexanol	84%		56-145%

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 Accutest

Report of Analysis

Client Sample ID:	BR-1		
Lab Sample ID:	JC16204-1R	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A149430R.D	1	03/18/16	TK	n/a	n/a	V3A6450
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
100-44-7	Benzyl Chloride	ND	5.0	0.21	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
109-99-9	Tetrahydrofuran	ND	10	1.4	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		76-120%
17060-07-0	1,2-Dichloroethane-D4	94%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	93%		78-117%

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 Accutest

Report of Analysis

Client Sample ID:	BR-1		
Lab Sample ID:	JC16204-1R	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P57281.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
90-12-0	1-Methylnaphthalene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	82%		32-128%
321-60-8	2-Fluorobiphenyl	102%		35-119%
1718-51-0	Terphenyl-d14	88%		10-126%

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 Accutest

Report of Analysis

Client Sample ID:	BR-2		
Lab Sample ID:	JC16204-2	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A149429.D	1	03/18/16	TK	n/a	n/a	V3A6450
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	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	0.37	1.0	0.19	ug/l	J
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	0.43	5.0	0.28	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	0.84	1.0	0.19	ug/l	J
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	0.42	1.0	0.27	ug/l	J
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	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:	BR-2		
Lab Sample ID:	JC16204-2	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	0.23	1.0	0.23	ug/l	J
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.3	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	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	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	95%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	93%		78-117%

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 Accutest

Report of Analysis

Client Sample ID:	BR-2		
Lab Sample ID:	JC16204-2	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P57282.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497
Run #2							

	Initial Volume	Final Volume
Run #1	1000 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	5.0	0.93	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.4	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.3	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	10	1.1	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	5.0	0.87	ug/l	
95-48-7	2-Methylphenol	ND	2.0	0.82	ug/l	
	3&4-Methylphenol	ND	2.0	0.67	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.4	ug/l	
100-02-7	4-Nitrophenol	ND	10	1.1	ug/l	
87-86-5	Pentachlorophenol	ND	5.0	1.4	ug/l	
108-95-2	Phenol	ND	2.0	0.31	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	1.4	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.5	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.4	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.29	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.24	ug/l	
98-86-2	Acetophenone	ND	2.0	0.28	ug/l	
120-12-7	Anthracene	ND	1.0	0.25	ug/l	
1912-24-9	Atrazine	ND	2.0	0.42	ug/l	
100-52-7	Benzaldehyde	ND	5.0	0.34	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.32	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.33	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.32	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.41	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.37	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.37	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.27	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.26	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.30	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.23	ug/l	
86-74-8	Carbazole	ND	1.0	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:	BR-2		
Lab Sample ID:	JC16204-2	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.0	0.43	ug/l	
218-01-9	Chrysene	ND	1.0	0.35	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.26	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.34	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.28	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.26	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	0.53	ug/l	
123-91-1	1,4-Dioxane	15.8	1.0	0.72	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.37	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.79	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.29	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.31	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.77	ug/l	
206-44-0	Fluoranthene	0.76	1.0	0.23	ug/l	J
86-73-7	Fluorene	ND	1.0	0.29	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.42	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.36	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	0.29	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.22	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.38	ug/l	
78-59-1	Isophorone	ND	2.0	0.29	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.29	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.21	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.24	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.34	ug/l	
91-20-3	Naphthalene	ND	1.0	0.28	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.46	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.31	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.29	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.23	ug/l	
129-00-0	Pyrene	0.42	1.0	0.34	ug/l	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	47%		14-88%

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:	BR-2		
Lab Sample ID:	JC16204-2	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	30%		10-110%
118-79-6	2,4,6-Tribromophenol	92%		39-149%
4165-60-0	Nitrobenzene-d5	81%		32-128%
321-60-8	2-Fluorobiphenyl	97%		35-119%
1718-51-0	Terphenyl-d14	87%		10-126%

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 Accutest

Report of Analysis

Client Sample ID:	BR-2		
Lab Sample ID:	JC16204-2	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P15658.D	1	03/17/16	JJ	03/16/16	OP92132A	E4P805
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
91-20-3	Naphthalene	ND	0.10	0.013	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	89%		24-125%
321-60-8	2-Fluorobiphenyl	79%		19-127%
1718-51-0	Terphenyl-d14	86%		10-119%

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 Accutest

Report of Analysis

Client Sample ID:	BR-2		
Lab Sample ID:	JC16204-2	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846-8015C (DAI)	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH103797.D	1	03/17/16	XPL	n/a	n/a	GGH5211
Run #2							

Low Molecular Alcohol List

CAS No.	Compound	Result	RL	MDL	Units	Q
64-17-5	Ethanol	ND	100	55	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	36	ug/l	
67-63-0	Isopropyl Alcohol	ND	100	68	ug/l	
71-23-8	n-Propyl Alcohol	ND	100	43	ug/l	
71-36-3	n-Butyl Alcohol	ND	100	87	ug/l	
78-92-2	sec-Butyl Alcohol	ND	100	66	ug/l	
67-56-1	Methanol	ND	200	71	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	104%		56-145%
111-27-3	Hexanol	95%		56-145%

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 Accutest

Report of Analysis

Client Sample ID:	BR-2		
Lab Sample ID:	JC16204-2R	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A149429R.D	1	03/18/16	TK	n/a	n/a	V3A6450
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
100-44-7	Benzyl Chloride	ND	5.0	0.21	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
109-99-9	Tetrahydrofuran	ND	10	1.4	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	95%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	93%		78-117%

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 Accutest

Report of Analysis

Client Sample ID:	BR-2		
Lab Sample ID:	JC16204-2R	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P57282.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
90-12-0	1-Methylnaphthalene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		32-128%
321-60-8	2-Fluorobiphenyl	97%		35-119%
1718-51-0	Terphenyl-d14	87%		10-126%

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 Accutest

Report of Analysis

Client Sample ID:	BR-2D		
Lab Sample ID:	JC16204-3	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A149375.D	1	03/17/16	TK	n/a	n/a	V3A6447
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	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	0.36	1.0	0.19	ug/l	J
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	0.46	5.0	0.28	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	0.81	1.0	0.19	ug/l	J
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	0.46	1.0	0.27	ug/l	J
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	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:	BR-2D		
Lab Sample ID:	JC16204-3	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	0.26	1.0	0.23	ug/l	J
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.5	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	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	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		76-120%
17060-07-0	1,2-Dichloroethane-D4	97%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	96%		78-117%

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 Accutest

Report of Analysis

Client Sample ID:	BR-2D		
Lab Sample ID:	JC16204-3	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P57283.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497
Run #2							

	Initial Volume	Final Volume
Run #1	1000 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	5.0	0.93	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.4	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.3	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	10	1.1	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	5.0	0.87	ug/l	
95-48-7	2-Methylphenol	ND	2.0	0.82	ug/l	
	3&4-Methylphenol	ND	2.0	0.67	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.4	ug/l	
100-02-7	4-Nitrophenol	ND	10	1.1	ug/l	
87-86-5	Pentachlorophenol	ND	5.0	1.4	ug/l	
108-95-2	Phenol	ND	2.0	0.31	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	1.4	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.5	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.4	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.29	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.24	ug/l	
98-86-2	Acetophenone	ND	2.0	0.28	ug/l	
120-12-7	Anthracene	ND	1.0	0.25	ug/l	
1912-24-9	Atrazine	ND	2.0	0.42	ug/l	
100-52-7	Benzaldehyde	ND	5.0	0.34	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.32	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.33	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.32	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.41	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.37	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.37	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.27	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.26	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.30	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.23	ug/l	
86-74-8	Carbazole	ND	1.0	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:	BR-2D		
Lab Sample ID:	JC16204-3	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.0	0.43	ug/l	
218-01-9	Chrysene	ND	1.0	0.35	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.26	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.34	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.28	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.26	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	0.53	ug/l	
123-91-1	1,4-Dioxane	17.7	1.0	0.72	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.37	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.79	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.29	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.31	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.77	ug/l	
206-44-0	Fluoranthene	0.84	1.0	0.23	ug/l	J
86-73-7	Fluorene	ND	1.0	0.29	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.42	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.36	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	0.29	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.22	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.38	ug/l	
78-59-1	Isophorone	ND	2.0	0.29	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.29	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.21	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.24	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.34	ug/l	
91-20-3	Naphthalene	ND	1.0	0.28	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.46	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.31	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.29	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.23	ug/l	
129-00-0	Pyrene	0.48	1.0	0.34	ug/l	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%		14-88%

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:	BR-2D		
Lab Sample ID:	JC16204-3	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	33%		10-110%
118-79-6	2,4,6-Tribromophenol	100%		39-149%
4165-60-0	Nitrobenzene-d5	88%		32-128%
321-60-8	2-Fluorobiphenyl	106%		35-119%
1718-51-0	Terphenyl-d14	96%		10-126%

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 Accutest

Report of Analysis

Client Sample ID:	BR-2D		
Lab Sample ID:	JC16204-3	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P15659.D	1	03/17/16	JJ	03/16/16	OP92132A	E4P805
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
91-20-3	Naphthalene	ND	0.10	0.013	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	89%		24-125%
321-60-8	2-Fluorobiphenyl	84%		19-127%
1718-51-0	Terphenyl-d14	90%		10-119%

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 Accutest

Report of Analysis

Client Sample ID:	BR-2D		
Lab Sample ID:	JC16204-3	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846-8015C (DAI)	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH103796.D	1	03/17/16	XPL	n/a	n/a	GGH5211
Run #2							

Low Molecular Alcohol List

CAS No.	Compound	Result	RL	MDL	Units	Q
64-17-5	Ethanol	ND	100	55	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	36	ug/l	
67-63-0	Isopropyl Alcohol	ND	100	68	ug/l	
71-23-8	n-Propyl Alcohol	ND	100	43	ug/l	
71-36-3	n-Butyl Alcohol	ND	100	87	ug/l	
78-92-2	sec-Butyl Alcohol	ND	100	66	ug/l	
67-56-1	Methanol	ND	200	71	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	104%		56-145%
111-27-3	Hexanol	96%		56-145%

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 Accutest

Report of Analysis

Client Sample ID:	BR-2D		
Lab Sample ID:	JC16204-3R	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A149375R.D	1	03/17/16	TK	n/a	n/a	V3A6447
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
100-44-7	Benzyl Chloride	ND	5.0	0.21	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
109-99-9	Tetrahydrofuran	ND	10	1.4	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		76-120%
17060-07-0	1,2-Dichloroethane-D4	97%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	96%		78-117%

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 Accutest

Report of Analysis

Client Sample ID:	BR-2D		
Lab Sample ID:	JC16204-3R	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P57283.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
90-12-0	1-Methylnaphthalene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	88%		32-128%
321-60-8	2-Fluorobiphenyl	106%		35-119%
1718-51-0	Terphenyl-d14	96%		10-126%

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 Accutest

Report of Analysis

Client Sample ID:	BR-3		
Lab Sample ID:	JC16204-4	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A149376.D	1	03/17/16	TK	n/a	n/a	V3A6447
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	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	0.49	1.0	0.19	ug/l	J
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	0.31	1.0	0.19	ug/l	J
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	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:	BR-3		
Lab Sample ID:	JC16204-4	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	1.6	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.9	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	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	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	96%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	98%		78-117%

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 Accutest

Report of Analysis

Client Sample ID:	BR-3		
Lab Sample ID:	JC16204-4	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P57284.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497
Run #2							

	Initial Volume	Final Volume
Run #1	1000 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	5.0	0.93	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.4	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.3	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	10	1.1	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	5.0	0.87	ug/l	
95-48-7	2-Methylphenol	ND	2.0	0.82	ug/l	
	3&4-Methylphenol	ND	2.0	0.67	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.4	ug/l	
100-02-7	4-Nitrophenol	ND	10	1.1	ug/l	
87-86-5	Pentachlorophenol	ND	5.0	1.4	ug/l	
108-95-2	Phenol	ND	2.0	0.31	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	1.4	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.5	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.4	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.29	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.24	ug/l	
98-86-2	Acetophenone	ND	2.0	0.28	ug/l	
120-12-7	Anthracene	ND	1.0	0.25	ug/l	
1912-24-9	Atrazine	ND	2.0	0.42	ug/l	
100-52-7	Benzaldehyde	ND	5.0	0.34	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.32	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.33	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.32	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.41	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.37	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.37	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.27	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.26	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.30	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.23	ug/l	
86-74-8	Carbazole	ND	1.0	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:	BR-3		
Lab Sample ID:	JC16204-4	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.0	0.43	ug/l	
218-01-9	Chrysene	ND	1.0	0.35	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.26	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.34	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.28	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.26	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	0.53	ug/l	
123-91-1	1,4-Dioxane	55.7	1.0	0.72	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.37	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.79	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.29	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.31	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.77	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.23	ug/l	
86-73-7	Fluorene	ND	1.0	0.29	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.42	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.36	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	0.29	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.22	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.38	ug/l	
78-59-1	Isophorone	ND	2.0	0.29	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.29	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.21	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.24	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.34	ug/l	
91-20-3	Naphthalene	ND	1.0	0.28	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.46	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.31	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.29	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.23	ug/l	
129-00-0	Pyrene	ND	1.0	0.34	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	53%		14-88%

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:	BR-3		
Lab Sample ID:	JC16204-4	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	36%		10-110%
118-79-6	2,4,6-Tribromophenol	100%		39-149%
4165-60-0	Nitrobenzene-d5	89%		32-128%
321-60-8	2-Fluorobiphenyl	109%		35-119%
1718-51-0	Terphenyl-d14	93%		10-126%

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 Accutest

Report of Analysis

Client Sample ID:	BR-3		
Lab Sample ID:	JC16204-4	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P15660.D	1	03/17/16	JJ	03/16/16	OP92132A	E4P805
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
91-20-3	Naphthalene	ND	0.10	0.013	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	96%		24-125%
321-60-8	2-Fluorobiphenyl	84%		19-127%
1718-51-0	Terphenyl-d14	90%		10-119%

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 Accutest

Report of Analysis

Client Sample ID:	BR-3		
Lab Sample ID:	JC16204-4	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846-8015C (DAI)	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH103795.D	1	03/17/16	XPL	n/a	n/a	GGH5211
Run #2							

Low Molecular Alcohol List

CAS No.	Compound	Result	RL	MDL	Units	Q
64-17-5	Ethanol	ND	100	55	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	36	ug/l	
67-63-0	Isopropyl Alcohol	ND	100	68	ug/l	
71-23-8	n-Propyl Alcohol	ND	100	43	ug/l	
71-36-3	n-Butyl Alcohol	ND	100	87	ug/l	
78-92-2	sec-Butyl Alcohol	ND	100	66	ug/l	
67-56-1	Methanol	ND	200	71	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	102%		56-145%
111-27-3	Hexanol	94%		56-145%

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 Accutest

Report of Analysis

Client Sample ID:	BR-3		
Lab Sample ID:	JC16204-4R	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A149376R.D	1	03/17/16	TK	n/a	n/a	V3A6447
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
100-44-7	Benzyl Chloride	ND	5.0	0.21	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
109-99-9	Tetrahydrofuran	ND	10	1.4	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	96%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	98%		78-117%

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 Accutest

Report of Analysis

Client Sample ID:	BR-3		
Lab Sample ID:	JC16204-4R	**Date Sampled:**	03/11/16
Matrix:	AQ - Ground Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P57284.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
90-12-0	1-Methylnaphthalene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	89%		32-128%
321-60-8	2-Fluorobiphenyl	109%		35-119%
1718-51-0	Terphenyl-d14	93%		10-126%

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 Accutest

Report of Analysis

Client Sample ID:	EB031116		
Lab Sample ID:	JC16204-5	**Date Sampled:**	03/11/16
Matrix:	AQ - Equipment Blank	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A149428.D	1	03/18/16	TK	n/a	n/a	V3A6450
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	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	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:	EB031116		
Lab Sample ID:	JC16204-5	**Date Sampled:**	03/11/16
Matrix:	AQ - Equipment Blank	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	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	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	95%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	95%		78-117%

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 Accutest

Report of Analysis

Client Sample ID:	EB031116		
Lab Sample ID:	JC16204-5	**Date Sampled:**	03/11/16
Matrix:	AQ - Equipment Blank	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P57280.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497
Run #2							

	Initial Volume	Final Volume
Run #1	1000 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	5.0	0.93	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.4	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.3	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	10	1.1	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	5.0	0.87	ug/l	
95-48-7	2-Methylphenol	ND	2.0	0.82	ug/l	
	3&4-Methylphenol	ND	2.0	0.67	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.4	ug/l	
100-02-7	4-Nitrophenol	ND	10	1.1	ug/l	
87-86-5	Pentachlorophenol	ND	5.0	1.4	ug/l	
108-95-2	Phenol	ND	2.0	0.31	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	1.4	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.5	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.4	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.29	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.24	ug/l	
98-86-2	Acetophenone	ND	2.0	0.28	ug/l	
120-12-7	Anthracene	ND	1.0	0.25	ug/l	
1912-24-9	Atrazine	ND	2.0	0.42	ug/l	
100-52-7	Benzaldehyde	ND	5.0	0.34	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.32	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.33	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.32	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.41	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.37	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.37	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.27	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.26	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.30	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.23	ug/l	
86-74-8	Carbazole	ND	1.0	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:	EB031116		
Lab Sample ID:	JC16204-5	**Date Sampled:**	03/11/16
Matrix:	AQ - Equipment Blank	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.0	0.43	ug/l	
218-01-9	Chrysene	ND	1.0	0.35	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.26	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.34	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.28	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.26	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	0.53	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.37	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.79	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.29	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.31	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.77	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.23	ug/l	
86-73-7	Fluorene	ND	1.0	0.29	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.42	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.36	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	0.29	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.22	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.38	ug/l	
78-59-1	Isophorone	ND	2.0	0.29	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.29	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.21	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.24	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.34	ug/l	
91-20-3	Naphthalene	ND	1.0	0.28	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.46	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.31	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.29	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.23	ug/l	
129-00-0	Pyrene	ND	1.0	0.34	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	50%		14-88%
4165-62-2	Phenol-d5	33%		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:	EB031116		
Lab Sample ID:	JC16204-5	**Date Sampled:**	03/11/16
Matrix:	AQ - Equipment Blank	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	91%		39-149%
4165-60-0	Nitrobenzene-d5	81%		32-128%
321-60-8	2-Fluorobiphenyl	98%		35-119%
1718-51-0	Terphenyl-d14	89%		10-126%

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 Accutest

Report of Analysis

Client Sample ID:	EB031116		
Lab Sample ID:	JC16204-5	**Date Sampled:**	03/11/16
Matrix:	AQ - Equipment Blank	**Date Received:**	03/15/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P15661.D	1	03/17/16	JJ	03/16/16	OP92132A	E4P805
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
91-20-3	Naphthalene	ND	0.10	0.013	ug/l	
123-91-1	1,4-Dioxane	ND	0.10	0.053	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	88%		24-125%
321-60-8	2-Fluorobiphenyl	78%		19-127%
1718-51-0	Terphenyl-d14	90%		10-119%

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 Accutest

Report of Analysis

Client Sample ID:	EB031116		
Lab Sample ID:	JC16204-5	**Date Sampled:**	03/11/16
Matrix:	AQ - Equipment Blank	**Date Received:**	03/15/16
Method:	SW846-8015C (DAI)	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH103794.D	1	03/17/16	XPL	n/a	n/a	GGH5211
Run #2							

Low Molecular Alcohol List

CAS No.	Compound	Result	RL	MDL	Units	Q
64-17-5	Ethanol	ND	100	55	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	36	ug/l	
67-63-0	Isopropyl Alcohol	258	100	68	ug/l	
71-23-8	n-Propyl Alcohol	ND	100	43	ug/l	
71-36-3	n-Butyl Alcohol	ND	100	87	ug/l	
78-92-2	sec-Butyl Alcohol	ND	100	66	ug/l	
67-56-1	Methanol	ND	200	71	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	104%		56-145%
111-27-3	Hexanol	98%		56-145%

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 Accutest

Report of Analysis

Client Sample ID:	EB031116		
Lab Sample ID:	JC16204-5R	**Date Sampled:**	03/11/16
Matrix:	AQ - Equipment Blank	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A149428R.D	1	03/18/16	TK	n/a	n/a	V3A6450
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
100-44-7	Benzyl Chloride	ND	5.0	0.21	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
109-99-9	Tetrahydrofuran	ND	10	1.4	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	95%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	95%		78-117%

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 Accutest

Report of Analysis

Client Sample ID:	EB031116		
Lab Sample ID:	JC16204-5R	**Date Sampled:**	03/11/16
Matrix:	AQ - Equipment Blank	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P57280.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
90-12-0	1-Methylnaphthalene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		32-128%
321-60-8	2-Fluorobiphenyl	98%		35-119%
1718-51-0	Terphenyl-d14	89%		10-126%

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 Accutest

Report of Analysis

Client Sample ID:	FB031116		
Lab Sample ID:	JC16204-6	**Date Sampled:**	03/11/16
Matrix:	AQ - Field Blank Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A149371.D	1	03/17/16	TK	n/a	n/a	V3A6447
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	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	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:	FB031116		
Lab Sample ID:	JC16204-6	**Date Sampled:**	03/11/16
Matrix:	AQ - Field Blank Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	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	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	95%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	96%		78-117%

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 Accutest

Report of Analysis

Client Sample ID:	FB031116		
Lab Sample ID:	JC16204-6	**Date Sampled:**	03/11/16
Matrix:	AQ - Field Blank Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P57279.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497
Run #2							

	Initial Volume	Final Volume
Run #1	1000 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	5.0	0.93	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.4	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.3	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	10	1.1	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	5.0	0.87	ug/l	
95-48-7	2-Methylphenol	ND	2.0	0.82	ug/l	
	3&4-Methylphenol	ND	2.0	0.67	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.4	ug/l	
100-02-7	4-Nitrophenol	ND	10	1.1	ug/l	
87-86-5	Pentachlorophenol	ND	5.0	1.4	ug/l	
108-95-2	Phenol	ND	2.0	0.31	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	1.4	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.5	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.4	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.29	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.24	ug/l	
98-86-2	Acetophenone	ND	2.0	0.28	ug/l	
120-12-7	Anthracene	ND	1.0	0.25	ug/l	
1912-24-9	Atrazine	ND	2.0	0.42	ug/l	
100-52-7	Benzaldehyde	ND	5.0	0.34	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.32	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.33	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.32	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.41	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.37	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.37	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.27	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.26	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.30	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.23	ug/l	
86-74-8	Carbazole	ND	1.0	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:	FB031116		
Lab Sample ID:	JC16204-6	**Date Sampled:**	03/11/16
Matrix:	AQ - Field Blank Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.0	0.43	ug/l	
218-01-9	Chrysene	ND	1.0	0.35	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.26	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.34	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.28	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.26	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	0.53	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.37	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.79	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.29	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.31	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.77	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.23	ug/l	
86-73-7	Fluorene	ND	1.0	0.29	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.42	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.36	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	0.29	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.22	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.38	ug/l	
78-59-1	Isophorone	ND	2.0	0.29	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.29	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.21	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.24	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.34	ug/l	
91-20-3	Naphthalene	ND	1.0	0.28	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.46	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.31	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.29	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.23	ug/l	
129-00-0	Pyrene	ND	1.0	0.34	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	47%		14-88%
4165-62-2	Phenol-d5	32%		10-110%

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:	FB031116		
Lab Sample ID:	JC16204-6	**Date Sampled:**	03/11/16
Matrix:	AQ - Field Blank Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	90%		39-149%
4165-60-0	Nitrobenzene-d5	81%		32-128%
321-60-8	2-Fluorobiphenyl	100%		35-119%
1718-51-0	Terphenyl-d14	91%		10-126%

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 Accutest

Report of Analysis

Client Sample ID:	FB031116		
Lab Sample ID:	JC16204-6	**Date Sampled:**	03/11/16
Matrix:	AQ - Field Blank Water	**Date Received:**	03/15/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P15662.D	1	03/17/16	JJ	03/16/16	OP92132A	E4P805
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
91-20-3	Naphthalene	ND	0.10	0.013	ug/l	
123-91-1	1,4-Dioxane	ND	0.10	0.053	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	92%		24-125%
321-60-8	2-Fluorobiphenyl	80%		19-127%
1718-51-0	Terphenyl-d14	94%		10-119%

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 Accutest

Report of Analysis

Client Sample ID:	FB031116		
Lab Sample ID:	JC16204-6	**Date Sampled:**	03/11/16
Matrix:	AQ - Field Blank Water	**Date Received:**	03/15/16
Method:	SW846-8015C (DAI)	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH103793.D	1	03/17/16	XPL	n/a	n/a	GGH5211
Run #2							

Low Molecular Alcohol List

CAS No.	Compound	Result	RL	MDL	Units	Q
64-17-5	Ethanol	ND	100	55	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	36	ug/l	
67-63-0	Isopropyl Alcohol	ND	100	68	ug/l	
71-23-8	n-Propyl Alcohol	ND	100	43	ug/l	
71-36-3	n-Butyl Alcohol	ND	100	87	ug/l	
78-92-2	sec-Butyl Alcohol	ND	100	66	ug/l	
67-56-1	Methanol	ND	200	71	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	102%		56-145%
111-27-3	Hexanol	94%		56-145%

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 Accutest

Report of Analysis

Client Sample ID:	FB031116		
Lab Sample ID:	JC16204-6R	**Date Sampled:**	03/11/16
Matrix:	AQ - Field Blank Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A149371R.D	1	03/17/16	TK	n/a	n/a	V3A6447
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
100-44-7	Benzyl Chloride	ND	5.0	0.21	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
109-99-9	Tetrahydrofuran	ND	10	1.4	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	95%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	96%		78-117%

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 Accutest

Report of Analysis

Client Sample ID:	FB031116		
Lab Sample ID:	JC16204-6R	**Date Sampled:**	03/11/16
Matrix:	AQ - Field Blank Water	**Date Received:**	03/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P57279.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
90-12-0	1-Methylnaphthalene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		32-128%
321-60-8	2-Fluorobiphenyl	100%		35-119%
1718-51-0	Terphenyl-d14	91%		10-126%

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 Accutest

Report of Analysis

Client Sample ID:	TB031116		
Lab Sample ID:	JC16204-7	**Date Sampled:**	03/11/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A149372.D	1	03/17/16	TK	n/a	n/a	V3A6447
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	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	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:	TB031116		
Lab Sample ID:	JC16204-7	**Date Sampled:**	03/11/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	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	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	97%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	99%		78-117%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
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SGS Accutest

Report of Analysis

Client Sample ID:	TB031116		
Lab Sample ID:	JC16204-7	**Date Sampled:**	03/11/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	03/15/16
Method:	SW846-8015C (DAI)	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH103790.D	1	03/17/16	XPL	n/a	n/a	GGH5211
Run #2							

Low Molecular Alcohol List

CAS No.	Compound	Result	RL	MDL	Units	Q
64-17-5	Ethanol	ND	100	55	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	36	ug/l	
67-63-0	Isopropyl Alcohol	ND	100	68	ug/l	
71-23-8	n-Propyl Alcohol	ND	100	43	ug/l	
71-36-3	n-Butyl Alcohol	ND	100	87	ug/l	
78-92-2	sec-Butyl Alcohol	ND	100	66	ug/l	
67-56-1	Methanol	ND	200	71	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	101%		56-145%
111-27-3	Hexanol	93%		56-145%

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 Accutest

Report of Analysis

Client Sample ID:	TB031116		
Lab Sample ID:	JC16204-7R	**Date Sampled:**	03/11/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	03/15/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	BMS, Former Brule Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A149372R.D	1	03/17/16	TK	n/a	n/a	V3A6447
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
100-44-7	Benzyl Chloride	ND	5.0	0.21	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
109-99-9	Tetrahydrofuran	ND	10	1.4	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	97%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	99%		78-117%

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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

GW
FB
WTB

CHAIN OF CUSTODY

Fresh Ponds Corporate Village, Building B
2235 Route 130, Dayton, NJ 08810
732-329-0200 FAX: 732-329-3499/3480

Accutest Job #: JC16204
Accutest Quote #:

Client Information
Anderson Mulholland & Associates
Name: 2700 Westchester Avenue
Address: Purchase NY 10577
City State Zip
Terry Taylor
Send Report to:
Phone #: 914-251-0400

Facility Information
Anderson Mulholland
Project Name
Location
Project/PO #: BMS: Former Brule Area
FAX #: 914-251-1286

Analytical Information

Field ID / Point of Collection	Collection Date	Time	Sampled By	Matrix	# of bottles	Preservation HCL	NaOH	HNO3	H2So4	None	VOCs, 8260C	SVOC, 8270D	Volatile Alcohols, 8015B	SVOC, 8270D SIM							
BR- 1	3/11/16	13:12	NMR	GW	8	X				X	X	X	X	X	1					E20	
BR- 2		14:58	NMR	GW	~~9~~ 8	X				X	X	X	X	X	2					V745	
BR- 2 D		15:17	NMR	GW	8	X				X	X	X	X	X	3						
BR- 3		18:20	NMR	GW	8	X				X	X	X	X	X	4						
EB031116		12:14	NMR	EB	8	X				X	X	X	X	X	5						
~~FB030816~~ FB031116		18:23	NMR	FB	8	X				X	X	X	X	X	6						
TB031116	3/11/16	1820	NMR	TB	6	X					X		X		7						
0				0																	

INITIAL ASESSMENT Am IB
LABEL VERIFICATION OK

Turnaround Information
[X] 21 Day Standard — Approved By:
[ ] 14 Day
[ ] 7 Days *EMERGENCY*
[ ] Other _____ (Days)
RUSH TAT is for FAX data unless previously approved.

Data Deliverable Information
[ ] NJ Reduced
[X] NJ Full
[ ] FULL CLP
[ ] Disk Deliverable
[ ] Other (Specify)
[ ] Commercial "A"
[ ] Commercial "B"
[ ] ASP Category B
[ ] State Forms

Comments / Remarks
VOA QC VIAL 3-15-16 AM
Federal Express ID # 8012 1953 4416
Lab Trip Blank Date 3/27/16 Time 1000
SVOC Analysis by Method 8270D SIM for 1,4 Dioxane and Napthalene only.

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

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 Vesta M. Brown	3/14/16 1021	1 FX	2 FX	3-15-16 950	2
3		3	4		4
5		5			

Seal # 173, 175 Preserved where applicat y On Ice: y 3.5, 4.2°C

SGS Accutest Sample Receipt Summary

Job Number: JC16204 **Client:** _____ **Project:** _____

Date / Time Received: 3/15/2016 9:30:00 AM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (3.5); Cooler 2: (4.2);

Cooler Temps (Corrected) °C: Cooler 1: (3.9); Cooler 2: (4.6);

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

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

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

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

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

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

Comments

5.1

5

JC16204: Chain of Custody

Page 2 of 3

Job Change Order: JC16204

Requested Date:	4/8/2016	**Received Date:**	3/15/2016
Account Name:	Anderson, Mulholland & Associate	**Due Date:**	3/29/2016
Project Description:	BMS, Former Brule Area, PR	**Deliverable:**	FULT1
CSR:	matthews	**TAT (Days):**	3

==========

Sample #: JC16204-1-6

Dept:

TAT: 3

Change:
please relog retrieve on original job for VR8260124TMB, VMS+BNZLCHL, VMS+IPTOLU, VMS+THF, BR8270MNAP

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Sample #: JC16204-7

Dept:

TAT: 3

Change:
please relog retrieve on original job for VR8260124TMB, VMS+BNZLCHL, VMS+IPTOLU, VMS+THF

TB031116

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Above Changes Per: Addison Rice

Date/Time: 4/8/2016 9:53:21 AM

To Client: This Change Order is confirmation of the revisions, previously discussed with the SGS Accutest Client Service Representative.

Internal Sample Tracking Chronicle

Anderson, Mulholland & Associates

Job No: JC16204

BMS, Former Brule Area, PR

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC16204-1 BR-1	Collected: 11-MAR-16 13:12 By: NMR		Received: 15-MAR-16 By: AS			
JC16204-1	SW846 8270D	16-MAR-16 22:08	SD	16-MAR-16	YB	AB8270TCL20-14DX
JC16204-1	SW846 8270D	17-MAR-16 17:02	RL	16-MAR-16	YB	AB8270TCL20-14DX
JC16204-1	SW846-8015C (DAI)	17-MAR-16 17:50	XPL			D8015LMA
JC16204-1	SW846 8270D BY SIM	18-MAR-16 01:09	JJ	16-MAR-16	YB	BSIM + NAP
JC16204-1	SW846 8260C	18-MAR-16 12:48	TK			V8260TCL20
JC16204-2 BR-2	Collected: 11-MAR-16 14:58 By: NMR		Received: 15-MAR-16 By: AS			
JC16204-2	SW846 8270D	16-MAR-16 22:29	SD	16-MAR-16	YB	AB8270TCL20-14DX
JC16204-2	SW846-8015C (DAI)	17-MAR-16 17:35	XPL			D8015LMA
JC16204-2	SW846 8270D BY SIM	17-MAR-16 21:36	JJ	16-MAR-16	YB	BSIM + NAP
JC16204-2	SW846 8260C	18-MAR-16 12:18	TK			V8260TCL20
JC16204-3 BR-2D	Collected: 11-MAR-16 15:17 By: NMR		Received: 15-MAR-16 By: AS			
JC16204-3	SW846 8270D	16-MAR-16 22:49	SD	16-MAR-16	YB	AB8270TCL20-14DX
JC16204-3	SW846 8260C	17-MAR-16 02:15	TK			V8260TCL20
JC16204-3	SW846-8015C (DAI)	17-MAR-16 17:21	XPL			D8015LMA
JC16204-3	SW846 8270D BY SIM	17-MAR-16 22:06	JJ	16-MAR-16	YB	BSIM + NAP
JC16204-4 BR-3	Collected: 11-MAR-16 18:20 By: NMR		Received: 15-MAR-16 By: AS			
JC16204-4	SW846 8270D	16-MAR-16 23:10	SD	16-MAR-16	YB	AB8270TCL20-14DX
JC16204-4	SW846 8260C	17-MAR-16 02:46	TK			V8260TCL20
JC16204-4	SW846-8015C (DAI)	17-MAR-16 17:06	XPL			D8015LMA
JC16204-4	SW846 8270D BY SIM	17-MAR-16 22:37	JJ	16-MAR-16	YB	BSIM + NAP
JC16204-5 EB031116	Collected: 11-MAR-16 12:14 By: NMR		Received: 15-MAR-16 By: AS			
JC16204-5	SW846 8270D	16-MAR-16 21:47	SD	16-MAR-16	YB	AB8270TCL20-14DX
JC16204-5	SW846-8015C (DAI)	17-MAR-16 16:52	XPL			D8015LMA
JC16204-5	SW846 8270D BY SIM	17-MAR-16 23:07	JJ	16-MAR-16	YB	B8270SIM14DIOX,BSIM + NAP
JC16204-5	SW846 8260C	18-MAR-16 11:47	TK			V8260TCL20

Internal Sample Tracking Chronicle

Anderson, Mulholland & Associates

Job No: JC16204

BMS, Former Brule Area, PR

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC16204-6 FB031116	Collected: 11-MAR-16 18:23 By: NMR		Received: 15-MAR-16 By: AS			
JC16204-6	SW846 8270D	16-MAR-16 21:27	SD	16-MAR-16	YB	AB8270TCL20-14DX
JC16204-6	SW846 8260C	17-MAR-16 00:15	TK			V8260TCL20
JC16204-6	SW846-8015C (DAI)	17-MAR-16 16:37	XPL			D8015LMA
JC16204-6	SW846 8270D BY SIM	17-MAR-16 23:37	JJ	16-MAR-16	YB	B8270SIM14DIOX,BSIM+NAP
JC16204-7 TB031116	Collected: 11-MAR-16 18:23 By: NMR		Received: 15-MAR-16 By: AS			
JC16204-7	SW846 8260C	17-MAR-16 00:45	TK			V8260TCL20
JC16204-7	SW846-8015C (DAI)	17-MAR-16 15:27	XPL			D8015LMA
JC16204-1R BR-1	Collected: 11-MAR-16 13:12 By: NMR		Received: 15-MAR-16 By: AS			
JC16204-1R	SW846 8270D	16-MAR-16 22:08	SD	16-MAR-16	YB	BR8270MNAP
JC16204-1R	SW846 8260C	18-MAR-16 12:48	TK			VMS+BNZLCHL,VMS+IPTOLU, VMS+THF,VR8260124TMB
JC16204-2R BR-2	Collected: 11-MAR-16 14:58 By: NMR		Received: 15-MAR-16 By: AS			
JC16204-2R	SW846 8270D	16-MAR-16 22:29	SD	16-MAR-16	YB	BR8270MNAP
JC16204-2R	SW846 8260C	18-MAR-16 12:18	TK			VMS+BNZLCHL,VMS+IPTOLU, VMS+THF,VR8260124TMB
JC16204-3R BR-2D	Collected: 11-MAR-16 15:17 By: NMR		Received: 15-MAR-16 By: AS			
JC16204-3R	SW846 8270D	16-MAR-16 22:49	SD	16-MAR-16	YB	BR8270MNAP
JC16204-3R	SW846 8260C	17-MAR-16 02:15	TK			VMS+BNZLCHL,VMS+IPTOLU, VMS+THF,VR8260124TMB
JC16204-4R BR-3	Collected: 11-MAR-16 18:20 By: NMR		Received: 15-MAR-16 By: AS			
JC16204-4R	SW846 8270D	16-MAR-16 23:10	SD	16-MAR-16	YB	BR8270MNAP

Internal Sample Tracking Chronicle

Anderson, Mulholland & Associates

BMS, Former Brule Area, PR

Job No: JC16204

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC16204-4R	SW846 8260C	17-MAR-16 02:46	TK			VMS + BNZLCHL, VMS + IPTOLU, VMS + THF, VR8260124TMB
JC16204-5R	Collected: 11-MAR-16 12:14 By: NMR		Received: 15-MAR-16 By: AS			
EB031116						
JC16204-5R	SW846 8270D	16-MAR-16 21:47	SD	16-MAR-16	YB	BR8270MNAP
JC16204-5R	SW846 8260C	18-MAR-16 11:47	TK			VMS + BNZLCHL, VMS + IPTOLU, VMS + THF, VR8260124TMB
JC16204-6R	Collected: 11-MAR-16 18:23 By: NMR		Received: 15-MAR-16 By: AS			
FB031116						
JC16204-6R	SW846 8270D	16-MAR-16 21:27	SD	16-MAR-16	YB	BR8270MNAP
JC16204-6R	SW846 8260C	17-MAR-16 00:15	TK			VMS + BNZLCHL, VMS + IPTOLU, VMS + THF, VR8260124TMB
JC16204-7R	Collected: 11-MAR-16 18:23 By: NMR		Received: 15-MAR-16 By: AS			
TB031116						
JC16204-7R	SW846 8260C	17-MAR-16 00:45	TK			VMS + BNZLCHL, VMS + IPTOLU, VMS + THF, VR8260124TMB

SGS Accutest Internal Chain of Custody

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR
Received: 03/15/16

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC16204-1.2	Secured Storage	Brian Johnson	03/16/16 04:04	Retrieve from Storage
JC16204-1.2	Brian Johnson		03/16/16 12:56	Depleted
JC16204-1.2.1	Brian Johnson	Organics Prep	03/16/16 04:16	Extract from JC16204-1.2
JC16204-1.2.1	Organics Prep	Yaw Britwum	03/16/16 17:20	Extract from JC16204-1.2
JC16204-1.2.1	Yaw Britwum	Extract Storage	03/16/16 17:20	Return to Storage
JC16204-1.2.1	Extract Storage	Julius Johnson	03/16/16 20:59	Retrieve from Storage
JC16204-1.2.1	Julius Johnson	GCMS2P	03/16/16 20:59	Load on Instrument
JC16204-1.2.1	GCMS2P	Julius Johnson	03/17/16 17:38	Unload from Instrument
JC16204-1.2.1	Julius Johnson	GCMS4P	03/17/16 17:38	Load on Instrument
JC16204-1.3	Secured Storage	Tracy Karpinski	03/17/16 09:32	Retrieve from Storage
JC16204-1.3	Tracy Karpinski	GCMS3A	03/17/16 09:32	Load on Instrument
JC16204-1.3	GCMS3A	Tracy Karpinski	03/17/16 09:32	Unload from Instrument
JC16204-1.3	Tracy Karpinski	Secured Storage	03/17/16 09:32	Return to Storage
JC16204-1.4	Secured Storage	Xu Liu	03/16/16 10:07	Retrieve from Storage
JC16204-1.4	Xu Liu	Secured Storage	03/16/16 10:34	Return to Storage
JC16204-1.4	Secured Storage	Xu Liu	03/17/16 09:39	Retrieve from Storage
JC16204-1.4	Xu Liu	Secured Storage	03/17/16 15:10	Return to Storage
JC16204-1.4	Secured Storage	Xu Liu	03/18/16 08:10	Retrieve from Storage
JC16204-1.4	Xu Liu	Secured Storage	03/18/16 15:38	Return to Storage
JC16204-1.6	Secured Storage	Tracy Karpinski	03/18/16 11:16	Retrieve from Storage
JC16204-1.6	Tracy Karpinski	GCMS3A	03/18/16 11:16	Load on Instrument
JC16204-1.6	GCMS3A	Tracy Karpinski	03/21/16 09:56	Unload from Instrument
JC16204-1.6	Tracy Karpinski	Secured Storage	03/21/16 09:56	Return to Storage
JC16204-2.2	Secured Storage	Brian Johnson	03/16/16 04:04	Retrieve from Storage
JC16204-2.2	Brian Johnson		03/16/16 12:56	Depleted
JC16204-2.2.1	Brian Johnson	Organics Prep	03/16/16 04:16	Extract from JC16204-2.2
JC16204-2.2.1	Organics Prep	Yaw Britwum	03/16/16 17:20	Extract from JC16204-2.2
JC16204-2.2.1	Yaw Britwum	Extract Storage	03/16/16 17:20	Return to Storage
JC16204-2.2.1	Extract Storage	Julius Johnson	03/16/16 20:59	Retrieve from Storage
JC16204-2.2.1	Julius Johnson	GCMS2P	03/16/16 20:59	Load on Instrument
JC16204-2.2.1	GCMS2P	Julius Johnson	03/17/16 17:33	Unload from Instrument
JC16204-2.2.1	Julius Johnson	GCMS4P	03/17/16 17:33	Load on Instrument
JC16204-2.3	Secured Storage	Tracy Karpinski	03/17/16 09:32	Retrieve from Storage
JC16204-2.3	Tracy Karpinski	GCMS3A	03/17/16 09:32	Load on Instrument
JC16204-2.3	GCMS3A	Tracy Karpinski	03/17/16 09:32	Unload from Instrument
JC16204-2.3	Tracy Karpinski	Secured Storage	03/17/16 09:32	Return to Storage

SGS Accutest Internal Chain of Custody

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR
Received: 03/15/16

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC16204-2.4	Secured Storage	Xu Liu	03/16/16 10:07	Retrieve from Storage
JC16204-2.4	Xu Liu	Secured Storage	03/16/16 10:34	Return to Storage
JC16204-2.4	Secured Storage	Xu Liu	03/17/16 09:39	Retrieve from Storage
JC16204-2.4	Xu Liu	Secured Storage	03/17/16 15:10	Return to Storage
JC16204-2.4	Secured Storage	Xu Liu	03/18/16 08:10	Retrieve from Storage
JC16204-2.4	Xu Liu	Secured Storage	03/18/16 15:38	Return to Storage
JC16204-2.7	Secured Storage	Tracy Karpinski	03/18/16 11:16	Retrieve from Storage
JC16204-2.7	Tracy Karpinski	GCMS3A	03/18/16 11:16	Load on Instrument
JC16204-2.7	GCMS3A	Tracy Karpinski	03/21/16 09:56	Unload from Instrument
JC16204-2.7	Tracy Karpinski	Secured Storage	03/21/16 09:56	Return to Storage
JC16204-3.2	Secured Storage	Brian Johnson	03/16/16 04:04	Retrieve from Storage
JC16204-3.2	Brian Johnson		03/16/16 12:56	Depleted
JC16204-3.2.1	Brian Johnson	Organics Prep	03/16/16 04:16	Extract from JC16204-3.2
JC16204-3.2.1	Organics Prep	Yaw Britwum	03/16/16 17:20	Extract from JC16204-3.2
JC16204-3.2.1	Yaw Britwum	Extract Storage	03/16/16 17:20	Return to Storage
JC16204-3.2.1	Extract Storage	Julius Johnson	03/16/16 20:59	Retrieve from Storage
JC16204-3.2.1	Julius Johnson	GCMS2P	03/16/16 20:59	Load on Instrument
JC16204-3.2.1	GCMS2P	Julius Johnson	03/17/16 17:33	Unload from Instrument
JC16204-3.2.1	Julius Johnson	GCMS4P	03/17/16 17:33	Load on Instrument
JC16204-3.3	Secured Storage	Tracy Karpinski	03/17/16 09:32	Retrieve from Storage
JC16204-3.3	Tracy Karpinski	GCMS3A	03/17/16 09:32	Load on Instrument
JC16204-3.3	GCMS3A	Tracy Karpinski	03/17/16 09:32	Unload from Instrument
JC16204-3.3	Tracy Karpinski	Secured Storage	03/17/16 09:32	Return to Storage
JC16204-3.4	Secured Storage	Xu Liu	03/16/16 10:07	Retrieve from Storage
JC16204-3.4	Xu Liu	Secured Storage	03/16/16 10:34	Return to Storage
JC16204-3.4	Secured Storage	Xu Liu	03/17/16 09:39	Retrieve from Storage
JC16204-3.4	Xu Liu	Secured Storage	03/17/16 15:10	Return to Storage
JC16204-3.4	Secured Storage	Xu Liu	03/18/16 08:10	Retrieve from Storage
JC16204-3.4	Xu Liu	Secured Storage	03/18/16 15:38	Return to Storage
JC16204-4.2	Secured Storage	Brian Johnson	03/16/16 04:04	Retrieve from Storage
JC16204-4.2	Brian Johnson		03/16/16 12:56	Depleted
JC16204-4.2.1	Brian Johnson	Organics Prep	03/16/16 04:16	Extract from JC16204-4.2
JC16204-4.2.1	Organics Prep	Yaw Britwum	03/16/16 17:20	Extract from JC16204-4.2
JC16204-4.2.1	Yaw Britwum	Extract Storage	03/16/16 17:20	Return to Storage
JC16204-4.2.1	Extract Storage	Julius Johnson	03/16/16 20:59	Retrieve from Storage
JC16204-4.2.1	Julius Johnson	GCMS2P	03/16/16 20:59	Load on Instrument
JC16204-4.2.1	GCMS2P	Julius Johnson	03/17/16 17:33	Unload from Instrument

SGS Accutest Internal Chain of Custody

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR
Received: 03/15/16

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC16204-4.2.1	Julius Johnson	GCMS4P	03/17/16 17:33	Load on Instrument
JC16204-4.3	Secured Storage	Tracy Karpinski	03/17/16 09:32	Retrieve from Storage
JC16204-4.3	Tracy Karpinski	GCMS3A	03/17/16 09:32	Load on Instrument
JC16204-4.3	GCMS3A	Tracy Karpinski	03/17/16 09:32	Unload from Instrument
JC16204-4.3	Tracy Karpinski	Secured Storage	03/17/16 09:32	Return to Storage
JC16204-4.4	Secured Storage	Xu Liu	03/16/16 10:07	Retrieve from Storage
JC16204-4.4	Xu Liu	Secured Storage	03/16/16 10:34	Return to Storage
JC16204-4.4	Secured Storage	Xu Liu	03/17/16 09:39	Retrieve from Storage
JC16204-4.4	Xu Liu	Secured Storage	03/17/16 15:10	Return to Storage
JC16204-4.4	Secured Storage	Xu Liu	03/18/16 08:10	Retrieve from Storage
JC16204-4.4	Xu Liu	Secured Storage	03/18/16 15:38	Return to Storage
JC16204-5.2	Secured Storage	Brian Johnson	03/16/16 04:04	Retrieve from Storage
JC16204-5.2	Brian Johnson		03/16/16 12:56	Depleted
JC16204-5.2.1	Brian Johnson	Organics Prep	03/16/16 04:16	Extract from JC16204-5.2
JC16204-5.2.1	Organics Prep	Yaw Britwum	03/16/16 17:20	Extract from JC16204-5.2
JC16204-5.2.1	Yaw Britwum	Extract Storage	03/16/16 17:20	Return to Storage
JC16204-5.2.1	Extract Storage	Julius Johnson	03/16/16 20:59	Retrieve from Storage
JC16204-5.2.1	Julius Johnson	GCMS2P	03/16/16 20:59	Load on Instrument
JC16204-5.2.1	GCMS2P	Julius Johnson	03/17/16 17:33	Unload from Instrument
JC16204-5.2.1	Julius Johnson	GCMS4P	03/17/16 17:33	Load on Instrument
JC16204-5.3	Secured Storage	Tracy Karpinski	03/17/16 09:32	Retrieve from Storage
JC16204-5.3	Tracy Karpinski	GCMS3A	03/17/16 09:32	Load on Instrument
JC16204-5.3	GCMS3A	Tracy Karpinski	03/17/16 09:32	Unload from Instrument
JC16204-5.3	Tracy Karpinski	Secured Storage	03/17/16 09:32	Return to Storage
JC16204-5.4	Secured Storage	Xu Liu	03/16/16 10:07	Retrieve from Storage
JC16204-5.4	Xu Liu	Secured Storage	03/16/16 10:34	Return to Storage
JC16204-5.4	Secured Storage	Xu Liu	03/17/16 09:39	Retrieve from Storage
JC16204-5.4	Xu Liu	Secured Storage	03/17/16 15:10	Return to Storage
JC16204-5.4	Secured Storage	Xu Liu	03/18/16 08:10	Retrieve from Storage
JC16204-5.4	Xu Liu	Secured Storage	03/18/16 15:38	Return to Storage
JC16204-5.7	Secured Storage	Tracy Karpinski	03/18/16 11:16	Retrieve from Storage
JC16204-5.7	Tracy Karpinski	GCMS3A	03/18/16 11:16	Load on Instrument
JC16204-5.7	GCMS3A	Tracy Karpinski	03/21/16 09:56	Unload from Instrument
JC16204-5.7	Tracy Karpinski	Secured Storage	03/21/16 09:56	Return to Storage
JC16204-6.2	Secured Storage	Brian Johnson	03/16/16 04:04	Retrieve from Storage
JC16204-6.2	Brian Johnson		03/16/16 12:56	Depleted

SGS Accutest Internal Chain of Custody

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR
Received: 03/15/16

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC16204-6.2.1	Brian Johnson	Organics Prep	03/16/16 04:16	Extract from JC16204-6.2
JC16204-6.2.1	Organics Prep	Yaw Britwum	03/16/16 17:20	Extract from JC16204-6.2
JC16204-6.2.1	Yaw Britwum	Extract Storage	03/16/16 17:20	Return to Storage
JC16204-6.2.1	Extract Storage	Julius Johnson	03/16/16 20:59	Retrieve from Storage
JC16204-6.2.1	Julius Johnson	GCMS2P	03/16/16 20:59	Load on Instrument
JC16204-6.2.1	GCMS2P	Julius Johnson	03/17/16 17:33	Unload from Instrument
JC16204-6.2.1	Julius Johnson	GCMS4P	03/17/16 17:33	Load on Instrument
JC16204-6.3	Secured Storage	Tracy Karpinski	03/17/16 09:32	Retrieve from Storage
JC16204-6.3	Tracy Karpinski	GCMS3A	03/17/16 09:32	Load on Instrument
JC16204-6.3	GCMS3A	Tracy Karpinski	03/17/16 09:32	Unload from Instrument
JC16204-6.3	Tracy Karpinski	Secured Storage	03/17/16 09:32	Return to Storage
JC16204-6.4	Secured Storage	Xu Liu	03/16/16 10:07	Retrieve from Storage
JC16204-6.4	Xu Liu	Secured Storage	03/16/16 10:34	Return to Storage
JC16204-6.4	Secured Storage	Xu Liu	03/17/16 09:39	Retrieve from Storage
JC16204-6.4	Xu Liu	Secured Storage	03/17/16 15:10	Return to Storage
JC16204-6.4	Secured Storage	Xu Liu	03/18/16 08:10	Retrieve from Storage
JC16204-6.4	Xu Liu	Secured Storage	03/18/16 15:38	Return to Storage
JC16204-7.1	Secured Storage	Xu Liu	03/16/16 10:07	Retrieve from Storage
JC16204-7.1	Xu Liu	Secured Storage	03/16/16 10:34	Return to Storage
JC16204-7.1	Secured Storage	Xu Liu	03/17/16 09:39	Retrieve from Storage
JC16204-7.1	Xu Liu	Secured Storage	03/17/16 15:10	Return to Storage
JC16204-7.1	Secured Storage	Xu Liu	03/18/16 08:10	Retrieve from Storage
JC16204-7.1	Xu Liu	Secured Storage	03/18/16 15:38	Return to Storage
JC16204-7.2	Secured Storage	Tracy Karpinski	03/17/16 09:32	Retrieve from Storage
JC16204-7.2	Tracy Karpinski	GCMS3A	03/17/16 09:32	Load on Instrument
JC16204-7.2	GCMS3A	Tracy Karpinski	03/17/16 09:32	Unload from Instrument
JC16204-7.2	Tracy Karpinski	Secured Storage	03/17/16 09:32	Return to Storage

GC/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: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A6447-MB2	3A149369.D	1	03/16/16	TK	n/a	n/a	V3A6447

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

JC16204-3, JC16204-4, JC16204-6, JC16204-7, JC16204-3R, JC16204-4R, JC16204-6R, JC16204-7R

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
100-44-7	Benzyl Chloride	ND	5.0	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	

Method Blank Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A6447-MB2	3A149369.D	1	03/16/16	TK	n/a	n/a	V3A6447

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

JC16204-3, JC16204-4, JC16204-6, JC16204-7, JC16204-3R, JC16204-4R, JC16204-6R, JC16204-7R

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
109-99-9	Tetrahydrofuran	ND	10	1.4	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	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	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	76-120%
17060-07-0	1,2-Dichloroethane-D4	97%	73-122%
2037-26-5	Toluene-D8	99%	84-119%
460-00-4	4-Bromofluorobenzene	97%	78-117%

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

Method Blank Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A6450-MB1	3A149425.D	1	03/18/16	TK	n/a	n/a	V3A6450

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

JC16204-1, JC16204-2, JC16204-5, JC16204-1R, JC16204-2R, JC16204-5R

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
100-44-7	Benzyl Chloride	ND	5.0	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	

Method Blank Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A6450-MB1	3A149425.D	1	03/18/16	TK	n/a	n/a	V3A6450

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

JC16204-1, JC16204-2, JC16204-5, JC16204-1R, JC16204-2R, JC16204-5R

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
109-99-9	Tetrahydrofuran	ND	10	1.4	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	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	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	76-120%
17060-07-0	1,2-Dichloroethane-D4	95%	73-122%
2037-26-5	Toluene-D8	99%	84-119%
460-00-4	4-Bromofluorobenzene	97%	78-117%

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

Method Blank Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A6447-MB1	3A149346.D	1	03/16/16	TK	n/a	n/a	V3A6447

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

V3A6447-BS, JC16254-7MS, JC16254-7MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
100-44-7	Benzyl Chloride	ND	5.0	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	

Method Blank Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A6447-MB1	3A149346.D	1	03/16/16	TK	n/a	n/a	V3A6447

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

V3A6447-BS, JC16254-7MS, JC16254-7MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
109-99-9	Tetrahydrofuran	ND	10	1.4	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	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	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	76-120%
17060-07-0	1,2-Dichloroethane-D4	98%	73-122%
2037-26-5	Toluene-D8	100%	84-119%
460-00-4	4-Bromofluorobenzene	99%	78-117%

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

Method Blank Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A6450-MB2	3A149476.D	1	03/21/16	TK	n/a	n/a	V3A6450

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

JC16325-3DUP

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	0.50	0.24	ug/l	
100-44-7	Benzyl Chloride	ND	5.0	0.21	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.23	ug/l	
75-25-2	Bromoform	ND	1.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.42	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.34	ug/l	
67-66-3	Chloroform	ND	1.0	0.19	ug/l	
74-87-3	Chloromethane	ND	1.0	0.41	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.99	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.15	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.19	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.23	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.90	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.18	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.51	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.27	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.65	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.39	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
76-13-1	Freon 113	ND	5.0	0.52	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.23	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.21	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.9	ug/l	

Method Blank Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A6450-MB2	3A149476.D	1	03/21/16	TK	n/a	n/a	V3A6450

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

JC16325-3DUP

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.73	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.40	ug/l	
109-99-9	Tetrahydrofuran	ND	10	1.4	ug/l	
108-88-3	Toluene	ND	1.0	0.16	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.23	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.21	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	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.22	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.22	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.15	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.17	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	76-120%
17060-07-0	1,2-Dichloroethane-D4	97%	73-122%
2037-26-5	Toluene-D8	99%	84-119%
460-00-4	4-Bromofluorobenzene	96%	78-117%

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

Blank Spike Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A6447-BS	3A149347.D	1	03/16/16	TK	n/a	n/a	V3A6447

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

JC16204-3, JC16204-4, JC16204-6, JC16204-7, JC16204-3R, JC16204-4R, JC16204-6R, JC16204-7R

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	51.1	102	47-144
71-43-2	Benzene	50	46.5	93	81-119
100-44-7	Benzyl Chloride	50	50.9	102	40-157
74-97-5	Bromochloromethane	50	50.0	100	84-120
75-27-4	Bromodichloromethane	50	47.7	95	81-125
75-25-2	Bromoform	50	49.9	100	74-128
74-83-9	Bromomethane	50	39.5	79	52-146
78-93-3	2-Butanone (MEK)	50	44.4	89	68-130
75-15-0	Carbon disulfide	50	47.1	94	71-129
56-23-5	Carbon tetrachloride	50	48.6	97	77-140
108-90-7	Chlorobenzene	50	48.7	97	84-116
75-00-3	Chloroethane	50	41.5	83	70-148
67-66-3	Chloroform	50	45.7	91	81-120
74-87-3	Chloromethane	50	34.9	70	50-143
110-82-7	Cyclohexane	50	47.8	96	77-125
96-12-8	1,2-Dibromo-3-chloropropane	50	42.1	84	66-132
124-48-1	Dibromochloromethane	50	48.9	98	81-122
106-93-4	1,2-Dibromoethane	50	48.3	97	81-120
95-50-1	1,2-Dichlorobenzene	50	49.3	99	80-117
541-73-1	1,3-Dichlorobenzene	50	48.0	96	81-116
106-46-7	1,4-Dichlorobenzene	50	48.7	97	80-115
75-71-8	Dichlorodifluoromethane	50	39.4	79	36-169
75-34-3	1,1-Dichloroethane	50	48.5	97	80-125
107-06-2	1,2-Dichloroethane	50	48.4	97	78-131
75-35-4	1,1-Dichloroethene	50	47.5	95	73-127
156-59-2	cis-1,2-Dichloroethene	50	45.6	91	77-118
156-60-5	trans-1,2-Dichloroethene	50	46.4	93	75-118
78-87-5	1,2-Dichloropropane	50	47.6	95	80-124
10061-01-5	cis-1,3-Dichloropropene	50	49.7	99	72-121
10061-02-6	trans-1,3-Dichloropropene	50	48.2	96	73-122
100-41-4	Ethylbenzene	50	46.9	94	80-118
76-13-1	Freon 113	50	53.0	106	76-140
591-78-6	2-Hexanone	50	50.1	100	66-128
98-82-8	Isopropylbenzene	50	46.2	92	78-125
99-87-6	p-Isopropyltoluene	50	48.8	98	81-124
79-20-9	Methyl Acetate	50	42.8	86	63-120

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A6447-BS	3A149347.D	1	03/16/16	TK	n/a	n/a	V3A6447

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

JC16204-3, JC16204-4, JC16204-6, JC16204-7, JC16204-3R, JC16204-4R, JC16204-6R, JC16204-7R

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-87-2	Methylcyclohexane	50	48.1	96	69-132
1634-04-4	Methyl Tert Butyl Ether	100	93.0	93	73-122
108-10-1	4-Methyl-2-pentanone(MIBK)	50	50.5	101	73-129
75-09-2	Methylene chloride	50	47.1	94	75-122
100-42-5	Styrene	50	49.1	98	81-121
79-34-5	1,1,2,2-Tetrachloroethane	50	46.5	93	69-116
127-18-4	Tetrachloroethene	50	48.8	98	69-138
109-99-9	Tetrahydrofuran	50	45.3	91	56-132
108-88-3	Toluene	50	46.4	93	80-122
87-61-6	1,2,3-Trichlorobenzene	50	49.0	98	74-137
120-82-1	1,2,4-Trichlorobenzene	50	50.4	101	75-135
71-55-6	1,1,1-Trichloroethane	50	49.7	99	80-131
79-00-5	1,1,2-Trichloroethane	50	47.7	95	78-122
79-01-6	Trichloroethene	50	47.7	95	83-122
75-69-4	Trichlorofluoromethane	50	46.8	94	66-143
95-63-6	1,2,4-Trimethylbenzene	50	47.8	96	82-125
75-01-4	Vinyl chloride	50	38.9	78	57-138
	m,p-Xylene	100	96.3	96	82-119
95-47-6	o-Xylene	50	48.2	96	82-119
1330-20-7	Xylene (total)	150	145	97	82-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	76-120%
17060-07-0	1,2-Dichloroethane-D4	97%	73-122%
2037-26-5	Toluene-D8	101%	84-119%
460-00-4	4-Bromofluorobenzene	96%	78-117%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A6450-BS	3A149426.D	1	03/18/16	TK	n/a	n/a	V3A6450

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

JC16204-1, JC16204-2, JC16204-5, JC16204-1R, JC16204-2R, JC16204-5R

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	50.8	102	47-144
71-43-2	Benzene	50	46.3	93	81-119
100-44-7	Benzyl Chloride	50	49.7	99	40-157
74-97-5	Bromochloromethane	50	51.0	102	84-120
75-27-4	Bromodichloromethane	50	47.5	95	81-125
75-25-2	Bromoform	50	52.3	105	74-128
74-83-9	Bromomethane	50	49.9	100	52-146
78-93-3	2-Butanone (MEK)	50	43.1	86	68-130
75-15-0	Carbon disulfide	50	46.1	92	71-129
56-23-5	Carbon tetrachloride	50	49.7	99	77-140
108-90-7	Chlorobenzene	50	49.8	100	84-116
75-00-3	Chloroethane	50	48.2	96	70-148
67-66-3	Chloroform	50	45.9	92	81-120
74-87-3	Chloromethane	50	43.3	87	50-143
110-82-7	Cyclohexane	50	46.7	93	77-125
96-12-8	1,2-Dibromo-3-chloropropane	50	40.8	82	66-132
124-48-1	Dibromochloromethane	50	50.3	101	81-122
106-93-4	1,2-Dibromoethane	50	49.7	99	81-120
95-50-1	1,2-Dichlorobenzene	50	50.3	101	80-117
541-73-1	1,3-Dichlorobenzene	50	49.4	99	81-116
106-46-7	1,4-Dichlorobenzene	50	50.5	101	80-115
75-71-8	Dichlorodifluoromethane	50	49.1	98	36-169
75-34-3	1,1-Dichloroethane	50	46.9	94	80-125
107-06-2	1,2-Dichloroethane	50	49.2	98	78-131
75-35-4	1,1-Dichloroethene	50	45.2	90	73-127
156-59-2	cis-1,2-Dichloroethene	50	45.2	90	77-118
156-60-5	trans-1,2-Dichloroethene	50	45.2	90	75-118
78-87-5	1,2-Dichloropropane	50	46.7	93	80-124
10061-01-5	cis-1,3-Dichloropropene	50	49.1	98	72-121
10061-02-6	trans-1,3-Dichloropropene	50	47.2	94	73-122
100-41-4	Ethylbenzene	50	47.8	96	80-118
76-13-1	Freon 113	50	60.4	121	76-140
591-78-6	2-Hexanone	50	47.8	96	66-128
98-82-8	Isopropylbenzene	50	46.5	93	78-125
99-87-6	p-Isopropyltoluene	50	48.8	98	81-124
79-20-9	Methyl Acetate	50	44.5	89	63-120

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A6450-BS	3A149426.D	1	03/18/16	TK	n/a	n/a	V3A6450

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

JC16204-1, JC16204-2, JC16204-5, JC16204-1R, JC16204-2R, JC16204-5R

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-87-2	Methylcyclohexane	50	51.7	103	69-132
1634-04-4	Methyl Tert Butyl Ether	100	92.6	93	73-122
108-10-1	4-Methyl-2-pentanone(MIBK)	50	49.0	98	73-129
75-09-2	Methylene chloride	50	46.2	92	75-122
100-42-5	Styrene	50	49.8	100	81-121
79-34-5	1,1,2,2-Tetrachloroethane	50	45.9	92	69-116
127-18-4	Tetrachloroethene	50	51.8	104	69-138
109-99-9	Tetrahydrofuran	50	42.5	85	56-132
108-88-3	Toluene	50	46.5	93	80-122
87-61-6	1,2,3-Trichlorobenzene	50	50.3	101	74-137
120-82-1	1,2,4-Trichlorobenzene	50	52.7	105	75-135
71-55-6	1,1,1-Trichloroethane	50	50.3	101	80-131
79-00-5	1,1,2-Trichloroethane	50	47.4	95	78-122
79-01-6	Trichloroethene	50	47.9	96	83-122
75-69-4	Trichlorofluoromethane	50	51.6	103	66-143
95-63-6	1,2,4-Trimethylbenzene	50	47.1	94	82-125
75-01-4	Vinyl chloride	50	47.2	94	57-138
	m,p-Xylene	100	99.4	99	82-119
95-47-6	o-Xylene	50	48.9	98	82-119
1330-20-7	Xylene (total)	150	148	99	82-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	76-120%
17060-07-0	1,2-Dichloroethane-D4	94%	73-122%
2037-26-5	Toluene-D8	99%	84-119%
460-00-4	4-Bromofluorobenzene	92%	78-117%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC16325-1MS	3A149436.D	1	03/18/16	TK	n/a	n/a	V3A6450
JC16325-1	3A149431.D	1	03/18/16	TK	n/a	n/a	V3A6450

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

JC16204-1, JC16204-2, JC16204-5, JC16204-1R, JC16204-2R, JC16204-5R

CAS No.	Compound	JC16325-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
67-64-1	Acetone	ND		50	50.7	101	33-158
71-43-2	Benzene	ND		50	53.4	107	43-138
100-44-7	Benzyl Chloride	ND		50	52.0	104	48-155
74-97-5	Bromochloromethane	ND		50	55.6	111	75-127
75-27-4	Bromodichloromethane	ND		50	53.1	106	72-128
75-25-2	Bromoform	ND		50	56.3	113	70-131
74-83-9	Bromomethane	ND		50	55.1	110	47-142
78-93-3	2-Butanone (MEK)	ND		50	44.4	89	56-146
75-15-0	Carbon disulfide	ND		50	52.9	106	38-136
56-23-5	Carbon tetrachloride	ND		50	59.5	119	45-149
108-90-7	Chlorobenzene	ND		50	56.1	112	70-124
75-00-3	Chloroethane	ND		50	55.0	110	47-139
67-66-3	Chloroform	ND		50	51.5	103	66-126
74-87-3	Chloromethane	ND		50	46.6	93	41-140
110-82-7	Cyclohexane	ND		50	55.5	111	30-148
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	43.1	86	64-136
124-48-1	Dibromochloromethane	ND		50	54.8	110	75-126
106-93-4	1,2-Dibromoethane	ND		50	53.3	107	77-124
95-50-1	1,2-Dichlorobenzene	ND		50	54.6	109	71-124
541-73-1	1,3-Dichlorobenzene	ND		50	55.2	110	69-125
106-46-7	1,4-Dichlorobenzene	ND		50	55.8	112	69-122
75-71-8	Dichlorodifluoromethane	ND		50	57.4	115	24-161
75-34-3	1,1-Dichloroethane	ND		50	53.4	107	60-129
107-06-2	1,2-Dichloroethane	ND		50	54.3	109	72-133
75-35-4	1,1-Dichloroethene	ND		50	53.0	106	40-137
156-59-2	cis-1,2-Dichloroethene	ND		50	51.0	102	57-128
156-60-5	trans-1,2-Dichloroethene	ND		50	51.3	103	53-128
78-87-5	1,2-Dichloropropane	ND		50	52.2	104	69-127
10061-01-5	cis-1,3-Dichloropropene	ND		50	54.7	109	67-129
10061-02-6	trans-1,3-Dichloropropene	ND		50	52.2	104	68-130
100-41-4	Ethylbenzene	ND		50	53.6	107	38-139
76-13-1	Freon 113	ND		50	59.8	120	34-154
591-78-6	2-Hexanone	ND		50	51.9	104	55-148
98-82-8	Isopropylbenzene	ND		50	53.3	107	54-137
99-87-6	p-Isopropyltoluene	ND		50	55.8	112	57-135
79-20-9	Methyl Acetate	ND		50	39.6	79	60-137

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC16325-1MS	3A149436.D	1	03/18/16	TK	n/a	n/a	V3A6450
JC16325-1	3A149431.D	1	03/18/16	TK	n/a	n/a	V3A6450

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

JC16204-1, JC16204-2, JC16204-5, JC16204-1R, JC16204-2R, JC16204-5R

CAS No.	Compound	JC16325-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
108-87-2	Methylcyclohexane	ND		50	51.3	103	30-152
1634-04-4	Methyl Tert Butyl Ether	ND		100	92.4	92	64-132
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50	52.6	105	68-139
75-09-2	Methylene chloride	ND		50	50.8	102	63-128
100-42-5	Styrene	ND		50	55.2	110	61-134
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	48.7	97	67-126
127-18-4	Tetrachloroethene	ND		50	60.0	120	43-145
109-99-9	Tetrahydrofuran	ND		50	41.8	84	49-135
108-88-3	Toluene	ND		50	52.7	105	51-136
87-61-6	1,2,3-Trichlorobenzene	ND		50	54.3	109	66-140
120-82-1	1,2,4-Trichlorobenzene	ND		50	57.2	114	65-138
71-55-6	1,1,1-Trichloroethane	ND		50	59.5	119	51-141
79-00-5	1,1,2-Trichloroethane	ND		50	51.4	103	71-127
79-01-6	Trichloroethene	ND		50	55.8	112	55-136
75-69-4	Trichlorofluoromethane	ND		50	60.7	121	33-157
95-63-6	1,2,4-Trimethylbenzene	ND		50	53.9	108	40-143
75-01-4	Vinyl chloride	ND		50	54.2	108	34-147
	m,p-Xylene	ND		100	113	113	42-139
95-47-6	o-Xylene	ND		50	54.5	109	56-134
1330-20-7	Xylene (total)	ND		150	167	111	46-137

CAS No.	Surrogate Recoveries	MS	JC16325-1	Limits
1868-53-7	Dibromofluoromethane	98%	98%	76-120%
17060-07-0	1,2-Dichloroethane-D4	93%	95%	73-122%
2037-26-5	Toluene-D8	99%	98%	84-119%
460-00-4	4-Bromofluorobenzene	92%	95%	78-117%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC16254-7MS	3A149354.D	20	03/16/16	TK	n/a	n/a	V3A6447
JC16254-7MSD	3A149355.D	20	03/16/16	TK	n/a	n/a	V3A6447
JC16254-7	3A149349.D	20	03/16/16	TK	n/a	n/a	V3A6447
JC16254-7	3A149356.D	200	03/16/16	TK	n/a	n/a	V3A6447

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

JC16204-3, JC16204-4, JC16204-6, JC16204-7, JC16204-3R, JC16204-4R, JC16204-6R, JC16204-7R

CAS No.	Compound	JC16254-7 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		1000	1060	106	1000	1010	101	5	33-158/19
71-43-2	Benzene	4730 [a]		1000	5280	55	1000	5360	63	2	43-138/12
100-44-7	Benzyl Chloride	ND		1000	951	95	1000	927	93	3	48-155/17
74-97-5	Bromochloromethane	ND		1000	1020	102	1000	1010	101	1	75-127/12
75-27-4	Bromodichloromethane	ND		1000	982	98	1000	988	99	1	72-128/13
75-25-2	Bromoform	ND		1000	1050	105	1000	1050	105	0	70-131/12
74-83-9	Bromomethane	ND		1000	835	84	1000	793	79	5	47-142/16
78-93-3	2-Butanone (MEK)	ND		1000	905	91	1000	866	87	4	56-146/12
75-15-0	Carbon disulfide	ND		1000	990	99	1000	977	98	1	38-136/17
56-23-5	Carbon tetrachloride	ND		1000	1020	102	1000	1040	104	2	45-149/17
108-90-7	Chlorobenzene	ND		1000	1010	101	1000	1020	102	1	70-124/12
75-00-3	Chloroethane	ND		1000	875	88	1000	848	85	3	47-139/15
67-66-3	Chloroform	ND		1000	969	97	1000	956	96	1	66-126/13
74-87-3	Chloromethane	ND		1000	699	70	1000	670	67	4	41-140/15
110-82-7	Cyclohexane	280		1000	1300	101	1000	1270	98	2	30-148/17
96-12-8	1,2-Dibromo-3-chloropropane	ND		1000	848	85	1000	854	85	1	64-136/14
124-48-1	Dibromochloromethane	ND		1000	1000	100	1000	1010	101	1	75-126/12
106-93-4	1,2-Dibromoethane	ND		1000	997	100	1000	1010	101	1	77-124/11
95-50-1	1,2-Dichlorobenzene	ND		1000	1010	101	1000	1010	101	0	71-124/12
541-73-1	1,3-Dichlorobenzene	ND		1000	994	99	1000	1000	100	1	69-125/12
106-46-7	1,4-Dichlorobenzene	ND		1000	994	99	1000	1020	102	3	69-122/12
75-71-8	Dichlorodifluoromethane	ND		1000	802	80	1000	780	78	3	24-161/20
75-34-3	1,1-Dichloroethane	ND		1000	972	97	1000	987	99	2	60-129/13
107-06-2	1,2-Dichloroethane	ND		1000	1090	109	1000	1100	110	1	72-133/12
75-35-4	1,1-Dichloroethene	ND		1000	1010	101	1000	997	100	1	40-137/17
156-59-2	cis-1,2-Dichloroethene	ND		1000	939	94	1000	917	92	2	57-128/13
156-60-5	trans-1,2-Dichloroethene	ND		1000	961	96	1000	948	95	1	53-128/15
78-87-5	1,2-Dichloropropane	ND		1000	983	98	1000	988	99	1	69-127/12
10061-01-5	cis-1,3-Dichloropropene	ND		1000	1010	101	1000	1020	102	1	67-129/14
10061-02-6	trans-1,3-Dichloropropene	ND		1000	970	97	1000	987	99	2	68-130/14
100-41-4	Ethylbenzene	1490		1000	2340	86	1000	2390	91	2	38-139/12
76-13-1	Freon 113	ND		1000	1150	115	1000	1120	112	3	34-154/18
591-78-6	2-Hexanone	ND		1000	1010	101	1000	1020	102	1	55-148/15
98-82-8	Isopropylbenzene	123		1000	1080	96	1000	1090	97	1	54-137/15
99-87-6	p-Isopropyltoluene	11.5	J	1000	1020	102	1000	1020	102	0	57-135/16
79-20-9	Methyl Acetate	ND		1000	827	83	1000	821	82	1	60-137/13

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC16254-7MS	3A149354.D	20	03/16/16	TK	n/a	n/a	V3A6447
JC16254-7MSD	3A149355.D	20	03/16/16	TK	n/a	n/a	V3A6447
JC16254-7	3A149349.D	20	03/16/16	TK	n/a	n/a	V3A6447
JC16254-7	3A149356.D	200	03/16/16	TK	n/a	n/a	V3A6447

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

JC16204-3, JC16204-4, JC16204-6, JC16204-7, JC16204-3R, JC16204-4R, JC16204-6R, JC16204-7R

CAS No.	Compound	JC16254-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-87-2	Methylcyclohexane	114		1000	1110	100	1000	1120	101	1	30-152/17
1634-04-4	Methyl Tert Butyl Ether	376		2000	2260	92	2000	2250	92	0	64-132/13
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		1000	1020	102	1000	1030	103	1	68-139/12
75-09-2	Methylene chloride	ND		1000	1000	100	1000	984	98	2	63-128/13
100-42-5	Styrene	ND		1000	1020	102	1000	1020	102	0	61-134/13
79-34-5	1,1,2,2-Tetrachloroethane	ND		1000	954	95	1000	948	95	1	67-126/13
127-18-4	Tetrachloroethene	ND		1000	1020	102	1000	1020	102	0	43-145/15
109-99-9	Tetrahydrofuran	ND		1000	880	88	1000	840	84	5	49-135/14
108-88-3	Toluene	56.3		1000	1010	94	1000	1020	95	1	51-136/13
87-61-6	1,2,3-Trichlorobenzene	ND		1000	986	99	1000	996	100	1	66-140/14
120-82-1	1,2,4-Trichlorobenzene	ND		1000	1030	103	1000	1040	104	1	65-138/15
71-55-6	1,1,1-Trichloroethane	ND		1000	1060	106	1000	1050	105	1	51-141/16
79-00-5	1,1,2-Trichloroethane	ND		1000	977	98	1000	979	98	0	71-127/12
79-01-6	Trichloroethene	ND		1000	978	98	1000	990	99	1	55-136/14
75-69-4	Trichlorofluoromethane	ND		1000	973	97	1000	965	97	1	33-157/21
95-63-6	1,2,4-Trimethylbenzene	2060		1000	2920	80	1000	2960	84	1	40-143/13
75-01-4	Vinyl chloride	ND		1000	814	81	1000	790	79	3	34-147/17
	m,p-Xylene	2170		2000	4030	92	2000	4080	95	1	42-139/13
95-47-6	o-Xylene	120		1000	1110	99	1000	1120	100	1	56-134/13
1330-20-7	Xylene (total)	2290		3000	5140	94	3000	5200	96	1	46-137/12

CAS No.	Surrogate Recoveries	MS	MSD	JC16254-7	JC16254-7	Limits
1868-53-7	Dibromofluoromethane	98%	98%	99%	97%	76-120%
17060-07-0	1,2-Dichloroethane-D4	96%	95%	95%	96%	73-122%
2037-26-5	Toluene-D8	100%	99%	97%	100%	84-119%
460-00-4	4-Bromofluorobenzene	96%	95%	93%	97%	78-117%

(a) Result is from Run #2.

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC16325-3DUP	3A149479.D	1	03/21/16	TK	n/a	n/a	V3A6450
JC16325-3	3A149443.D	1	03/18/16	TK	n/a	n/a	V3A6450

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

JC16204-1, JC16204-2, JC16204-5, JC16204-1R, JC16204-2R, JC16204-5R

CAS No.	Compound	JC16325-3 ug/l	Q	DUP ug/l	Q	RPD	Limits
67-64-1	Acetone	ND		ND		nc	30
71-43-2	Benzene	ND		ND		nc	30
100-44-7	Benzyl Chloride	ND		ND		nc	30
74-97-5	Bromochloromethane	ND		ND		nc	30
75-27-4	Bromodichloromethane	ND		ND		nc	30
75-25-2	Bromoform	ND		ND		nc	30
74-83-9	Bromomethane	ND		ND		nc	30
78-93-3	2-Butanone (MEK)	ND		ND		nc	30
75-15-0	Carbon disulfide	ND		ND		nc	30
56-23-5	Carbon tetrachloride	ND		ND		nc	30
108-90-7	Chlorobenzene	ND		ND		nc	30
75-00-3	Chloroethane	ND		ND		nc	30
67-66-3	Chloroform	ND		ND		nc	30
74-87-3	Chloromethane	ND		ND		nc	30
110-82-7	Cyclohexane	ND		ND		nc	30
96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		nc	30
124-48-1	Dibromochloromethane	ND		ND		nc	30
106-93-4	1,2-Dibromoethane	ND		ND		nc	30
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	30
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	30
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	30
75-71-8	Dichlorodifluoromethane	ND		ND		nc	30
75-34-3	1,1-Dichloroethane	ND		ND		nc	30
107-06-2	1,2-Dichloroethane	ND		ND		nc	30
75-35-4	1,1-Dichloroethene	ND		ND		nc	30
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	30
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	30
78-87-5	1,2-Dichloropropane	ND		ND		nc	30
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	30
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	30
100-41-4	Ethylbenzene	ND		ND		nc	30
76-13-1	Freon 113	ND		ND		nc	30
591-78-6	2-Hexanone	ND		ND		nc	30
98-82-8	Isopropylbenzene	ND		ND		nc	30
99-87-6	p-Isopropyltoluene	ND		ND		nc	30
79-20-9	Methyl Acetate	ND		ND		nc	30

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC16325-3DUP	3A149479.D	1	03/21/16	TK	n/a	n/a	V3A6450
JC16325-3	3A149443.D	1	03/18/16	TK	n/a	n/a	V3A6450

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

JC16204-1, JC16204-2, JC16204-5, JC16204-1R, JC16204-2R, JC16204-5R

CAS No.	Compound	JC16325-3 ug/l	Q	DUP ug/l	Q	RPD	Limits
108-87-2	Methylcyclohexane	ND		ND		nc	30
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	30
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		ND		nc	30
75-09-2	Methylene chloride	ND		ND		nc	30
100-42-5	Styrene	ND		ND		nc	30
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	30
127-18-4	Tetrachloroethene	ND		ND		nc	30
109-99-9	Tetrahydrofuran	ND		ND		nc	30
108-88-3	Toluene	ND		ND		nc	30
87-61-6	1,2,3-Trichlorobenzene	ND		ND		nc	30
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	30
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	30
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	30
79-01-6	Trichloroethene	ND		ND		nc	30
75-69-4	Trichlorofluoromethane	ND		ND		nc	30
95-63-6	1,2,4-Trimethylbenzene	ND		ND		nc	30
75-01-4	Vinyl chloride	ND		ND		nc	30
	m,p-Xylene	ND		ND		nc	30
95-47-6	o-Xylene	ND		ND		nc	30
1330-20-7	Xylene (total)	ND		ND		nc	30

CAS No.	Surrogate Recoveries	DUP	JC16325-3	Limits
1868-53-7	Dibromofluoromethane	98%	98%	76-120%
17060-07-0	1,2-Dichloroethane-D4	97%	96%	73-122%
2037-26-5	Toluene-D8	98%	98%	84-119%
460-00-4	4-Bromofluorobenzene	94%	96%	78-117%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample: V3A6446-BFB
Lab File ID: 3A149327.D
Instrument ID: GCMS3A
Injection Date: 03/15/16
Injection Time: 15:11

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	29677	17.4		Pass
75	30.0 - 60.0% of mass 95	78632	46.1		Pass
95	Base peak, 100% relative abundance	170752	100.0		Pass
96	5.0 - 9.0% of mass 95	11083	6.49		Pass
173	Less than 2.0% of mass 174	468	0.27	(0.33) [a]	Pass
174	50.0 - 120.0% of mass 95	142336	83.4		Pass
175	5.0 - 9.0% of mass 174	10826	6.34	(7.61) [a]	Pass
176	95.0 - 101.0% of mass 174	138485	81.1	(97.3) [a]	Pass
177	5.0 - 9.0% of mass 176	9198	5.39	(6.64) [b]	Pass

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

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3A6446-IC6446	3A149328.D	03/15/16	15:48	00:37	Initial cal 0.2
V3A6446-IC6446	3A149329.D	03/15/16	16:19	01:08	Initial cal 0.5
V3A6446-IC6446	3A149330.D	03/15/16	16:49	01:38	Initial cal 1
V3A6446-IC6446	3A149331.D	03/15/16	17:20	02:09	Initial cal 2
V3A6446-IC6446	3A149332.D	03/15/16	17:50	02:39	Initial cal 5
V3A6446-IC6446	3A149333.D	03/15/16	18:20	03:09	Initial cal 10
V3A6446-IC6446	3A149334.D	03/15/16	18:50	03:39	Initial cal 20
V3A6446-ICC6446	3A149335.D	03/15/16	19:21	04:10	Initial cal 50
V3A6446-IC6446	3A149336.D	03/15/16	19:51	04:40	Initial cal 100
V3A6446-IC6446	3A149337.D	03/15/16	20:21	05:10	Initial cal 200
V3A6446-ICV6446	3A149340.D	03/15/16	21:52	06:41	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample: V3A6447-BFB
Lab File ID: 3A149342.D
Instrument ID: GCMS3A
Injection Date: 03/16/16
Injection Time: 09:22

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	40498	17.4		Pass
75	30.0 - 60.0% of mass 95	106669	45.9		Pass
95	Base peak, 100% relative abundance	232149	100.0		Pass
96	5.0 - 9.0% of mass 95	14922	6.43		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	190208	81.9		Pass
175	5.0 - 9.0% of mass 174	13917	5.99	(7.32) [a]	Pass
176	95.0 - 101.0% of mass 174	182698	78.7	(96.1) [a]	Pass
177	5.0 - 9.0% of mass 176	12406	5.34	(6.79) [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
V3A6447-CC6446	3A149344.D	03/16/16	10:33	01:11	Continuing cal 20
V3A6447-MB1	3A149346.D	03/16/16	11:39	02:17	Method Blank
V3A6447-BS	3A149347.D	03/16/16	12:09	02:47	Blank Spike
JC16254-7	3A149349.D	03/16/16	15:09	05:47	(used for QC only; not part of job JC16204)
ZZZZZZ	3A149350.D	03/16/16	15:38	06:16	(unrelated sample)
ZZZZZZ	3A149352.D	03/16/16	16:39	07:17	(unrelated sample)
ZZZZZZ	3A149353.D	03/16/16	17:10	07:48	(unrelated sample)
JC16254-7MS	3A149354.D	03/16/16	17:40	08:18	Matrix Spike
JC16254-7MSD	3A149355.D	03/16/16	18:10	08:48	Matrix Spike Duplicate
JC16254-7	3A149356.D	03/16/16	18:41	09:19	(used for QC only; not part of job JC16204)
ZZZZZZ	3A149358.D	03/16/16	19:41	10:19	(unrelated sample)
ZZZZZZ	3A149360.D	03/16/16	20:42	11:20	(unrelated sample)
ZZZZZZ	3A149361.D	03/16/16	21:13	11:51	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample: V3A6447-BFB2
Lab File ID: 3A149366.D
Instrument ID: GCMS3A
Injection Date: 03/16/16
Injection Time: 21:43

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	33632	17.2		Pass
75	30.0 - 60.0% of mass 95	91088	46.5		Pass
95	Base peak, 100% relative abundance	195733	100.0		Pass
96	5.0 - 9.0% of mass 95	12725	6.50		Pass
173	Less than 2.0% of mass 174	1040	0.53	(0.64) [a]	Pass
174	50.0 - 120.0% of mass 95	161941	82.7		Pass
175	5.0 - 9.0% of mass 174	11960	6.11	(7.39) [a]	Pass
176	95.0 - 101.0% of mass 174	157568	80.5	(97.3) [a]	Pass
177	5.0 - 9.0% of mass 176	10500	5.36	(6.66) [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
V3A6447-CC6446	3A149367.D	03/16/16	22:13	00:30	Continuing cal 50
V3A6447-MB2	3A149369.D	03/16/16	23:14	01:31	Method Blank
JC16204-6	3A149371.D	03/17/16	00:15	02:32	FB031116
JC16204-6R	3A149371R.D	03/17/16	00:15	02:32	FB031116
JC16204-7R	3A149372R.D	03/17/16	00:45	03:02	TB031116
JC16204-7	3A149372.D	03/17/16	00:45	03:02	TB031116
JC16204-3R	3A149375R.D	03/17/16	02:15	04:32	BR-2D
JC16204-3	3A149375.D	03/17/16	02:15	04:32	BR-2D
JC16204-4	3A149376.D	03/17/16	02:46	05:03	BR-3
JC16204-4R	3A149376R.D	03/17/16	02:46	05:03	BR-3

Instrument Performance Check (BFB)

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample: V3A6450-BFB
Lab File ID: 3A149422.D
Instrument ID: GCMS3A
Injection Date: 03/18/16
Injection Time: 08:32

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	34298	17.0		Pass
75	30.0 - 60.0% of mass 95	93424	46.3		Pass
95	Base peak, 100% relative abundance	201642	100.0		Pass
96	5.0 - 9.0% of mass 95	13380	6.64		Pass
173	Less than 2.0% of mass 174	1589	0.79	(0.91) [a]	Pass
174	50.0 - 120.0% of mass 95	174677	86.6		Pass
175	5.0 - 9.0% of mass 174	12521	6.21	(7.17) [a]	Pass
176	95.0 - 101.0% of mass 174	167829	83.2	(96.1) [a]	Pass
177	5.0 - 9.0% of mass 176	11017	5.46	(6.56) [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
V3A6450-CC6446	3A149423.D	03/18/16	09:08	00:36	Continuing cal 20
V3A6450-MB1	3A149425.D	03/18/16	10:17	01:45	Method Blank
V3A6450-BS	3A149426.D	03/18/16	10:47	02:15	Blank Spike
JC16204-5	3A149428.D	03/18/16	11:47	03:15	EB031116
JC16204-5R	3A149428R.D	03/18/16	11:47	03:15	EB031116
JC16204-2R	3A149429R.D	03/18/16	12:18	03:46	BR-2
JC16204-2	3A149429.D	03/18/16	12:18	03:46	BR-2
JC16204-1R	3A149430R.D	03/18/16	12:48	04:16	BR-1
JC16204-1	3A149430.D	03/18/16	12:48	04:16	BR-1
JC16325-1	3A149431.D	03/18/16	13:17	04:45	(used for QC only; not part of job JC16204)
ZZZZZZ	3A149432.D	03/18/16	13:48	05:16	(unrelated sample)
ZZZZZZ	3A149433.D	03/18/16	14:55	06:23	(unrelated sample)
ZZZZZZ	3A149434.D	03/18/16	15:26	06:54	(unrelated sample)
ZZZZZZ	3A149435.D	03/18/16	15:55	07:23	(unrelated sample)
JC16325-1MS	3A149436.D	03/18/16	16:25	07:53	Matrix Spike
ZZZZZZ	3A149439.D	03/18/16	17:57	09:25	(unrelated sample)
ZZZZZZ	3A149440.D	03/18/16	18:28	09:56	(unrelated sample)
ZZZZZZ	3A149441.D	03/18/16	18:58	10:26	(unrelated sample)
ZZZZZZ	3A149442.D	03/18/16	19:28	10:56	(unrelated sample)
JC16325-3	3A149443.D	03/18/16	19:59	11:27	(used for QC only; not part of job JC16204)

Instrument Performance Check (BFB)

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample: V3A6452-BFB
Lab File ID: 3A149473.D
Instrument ID: GCMS3A
Injection Date: 03/21/16
Injection Time: 09:06

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	41136	17.4		Pass
75	30.0 - 60.0% of mass 95	108920	46.0		Pass
95	Base peak, 100% relative abundance	236821	100.0		Pass
96	5.0 - 9.0% of mass 95	15551	6.57		Pass
173	Less than 2.0% of mass 174	1834	0.77	(0.92) [a]	Pass
174	50.0 - 120.0% of mass 95	198421	83.8		Pass
175	5.0 - 9.0% of mass 174	14360	6.06	(7.24) [a]	Pass
176	95.0 - 101.0% of mass 174	191701	80.9	(96.6) [a]	Pass
177	5.0 - 9.0% of mass 176	12675	5.35	(6.61) [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
V3A6452-CC6446	3A149474.D	03/21/16	09:42	00:36	Continuing cal 20
V3A6452-CC6446	3A149475.D	03/21/16	10:30	01:24	Continuing cal 1
V3A6450-MB2	3A149476.D	03/21/16	11:00	01:54	Method Blank
V3A6450-BS2	3A149477.D	03/21/16	11:30	02:24	Blank Spike
JC16325-3DUP	3A149479.D	03/21/16	12:31	03:25	Duplicate
V3A6452-MB1	3A149480.D	03/21/16	13:02	03:56	Method Blank
V3A6452-BS	3A149481.D	03/21/16	13:32	04:26	Blank Spike
JC16492-2	3A149483.D	03/21/16	14:33	05:27	(used for QC only; not part of job JC16204)
ZZZZZZ	3A149485.D	03/21/16	15:34	06:28	(unrelated sample)
ZZZZZZ	3A149486.D	03/21/16	16:05	06:59	(unrelated sample)
JC16492-2MS	3A149487.D	03/21/16	16:35	07:29	Matrix Spike
JC16492-2MSD	3A149488.D	03/21/16	17:05	07:59	Matrix Spike Duplicate
ZZZZZZ	3A149490.D	03/21/16	18:07	09:01	(unrelated sample)
ZZZZZZ	3A149491.D	03/21/16	18:37	09:31	(unrelated sample)
ZZZZZZ	3A149492.D	03/21/16	19:08	10:02	(unrelated sample)
ZZZZZZ	3A149493.D	03/21/16	19:38	10:32	(unrelated sample)
ZZZZZZ	3A149494.D	03/21/16	20:08	11:02	(unrelated sample)
ZZZZZZ	3A149495.D	03/21/16	20:39	11:33	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Check Std:	V3A6447-CC6446	**Injection Date:**	03/16/16
Lab File ID:	3A149344.D	**Injection Time:**	10:33
Instrument ID:	GCMS3A	**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	432017	8.18	444832	10.64	714902	11.61	684423	14.95	384553	17.44
Upper Limit [a]	864034	8.68	889664	11.14	1429804	12.11	1368846	15.45	769106	17.94
Lower Limit [b]	216009	7.68	222416	10.14	357451	11.11	342212	14.45	192277	16.94

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V3A6447-MB1	423540	8.17	463621	10.64	744037	11.61	726520	14.95	382968	17.44
V3A6447-BS	439901	8.18	456618	10.64	734656	11.61	721983	14.95	395918	17.44
JC16254-7	431157	8.17	487115	10.65	761100	11.61	685844	14.96	390847	17.44
ZZZZZZ	418643	8.17	467297	10.64	742687	11.61	742838	14.95	397782	17.44
ZZZZZZ	419903	8.17	490095	10.64	768572	11.61	755769	14.95	402051	17.44
ZZZZZZ	412457	8.17	467335	10.64	725216	11.61	717208	14.95	382688	17.44
JC16254-7MS	394460	8.17	450692	10.64	727616	11.61	718777	14.95	395808	17.44
JC16254-7MSD	407045	8.18	466668	10.64	735522	11.61	723794	14.95	398771	17.44
JC16254-7	413743	8.17	462564	10.65	725233	11.61	716897	14.95	389573	17.44
ZZZZZZ	399993	8.17	454747	10.64	711149	11.61	709687	14.95	385079	17.44
ZZZZZZ	414269	8.17	474580	10.64	738416	11.61	725612	14.95	396309	17.44
ZZZZZZ	398322	8.17	476600	10.65	750365	11.61	727434	14.95	393222	17.44

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.

Volatile Internal Standard Area Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Check Std:	V3A6447-CC6446	**Injection Date:**	03/16/16
Lab File ID:	3A149367.D	**Injection Time:**	22:13
Instrument ID:	GCMS3A	**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	419193	8.18	464808	10.64	744650	11.61	724123	14.95	401338	17.44
Upper Limit [a]	838386	8.68	929616	11.14	1489300	12.11	1448246	15.45	802676	17.94
Lower Limit [b]	209597	7.68	232404	10.14	372325	11.11	362062	14.45	200669	16.94

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V3A6447-MB2	396273	8.17	473892	10.64	743411	11.61	731230	14.95	392778	17.44
JC16204-6	411833	8.17	484883	10.64	758084	11.61	736071	14.95	400436	17.44
JC16204-6R	411833	8.17	484883	10.64	758084	11.61	736071	14.95	400436	17.44
JC16204-7R	396604	8.17	461911	10.64	726108	11.61	707924	14.95	378156	17.44
JC16204-7	396604	8.17	461911	10.64	726108	11.61	707924	14.95	378156	17.44
JC16204-3	378128	8.17	474768	10.64	750037	11.61	733600	14.95	390062	17.44
JC16204-3R	378128	8.17	474768	10.64	750037	11.61	733600	14.95	390062	17.44
JC16204-4R	407479	8.17	482589	10.65	754749	11.61	737841	14.95	399918	17.44
JC16204-4	407479	8.17	482589	10.65	754749	11.61	737841	14.95	399918	17.44

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.

Volatile Internal Standard Area Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Check Std:	V3A6450-CC6446	**Injection Date:**	03/18/16
Lab File ID:	3A149423.D	**Injection Time:**	09:08
Instrument ID:	GCMS3A	**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	480296	8.18	515517	10.64	814242	11.61	774057	14.95	446200	17.44
Upper Limit [a]	960592	8.68	1031034	11.14	1628484	12.11	1548114	15.45	892400	17.94
Lower Limit [b]	240148	7.68	257759	10.14	407121	11.11	387029	14.45	223100	16.94

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V3A6450-MB1	467846	8.18	521432	10.64	811507	11.60	794264	14.95	420698	17.44
V3A6450-BS	461328	8.19	504567	10.64	798573	11.60	773498	14.95	436628	17.44
JC16204-5	427560	8.18	521136	10.64	806920	11.61	798310	14.95	431760	17.44
JC16204-5R	427560	8.18	521136	10.64	806920	11.61	798310	14.95	431760	17.44
JC16204-2R	469456	8.18	522861	10.64	808105	11.60	803101	14.95	438199	17.44
JC16204-2	469456	8.18	522861	10.64	808105	11.60	803101	14.95	438199	17.44
JC16204-1	441124	8.18	526468	10.64	814745	11.60	802750	14.95	439825	17.44
JC16204-1R	441124	8.18	526468	10.64	814745	11.60	802750	14.95	439825	17.44
JC16325-1	460498	8.18	532531	10.64	825666	11.60	806970	14.95	432841	17.44
ZZZZZZ	478063	8.18	524061	10.64	818993	11.60	789525	14.95	427194	17.44
ZZZZZZ	463694	8.18	519570	10.64	795475	11.60	780048	14.95	437115	17.44
ZZZZZZ	465836	8.18	518619	10.64	808167	11.60	781099	14.95	427998	17.44
ZZZZZZ	438674	8.18	503056	10.64	790652	11.60	765388	14.95	422403	17.44
JC16325-1MS	462642	8.18	501921	10.64	784800	11.60	771710	14.95	437377	17.44
ZZZZZZ	463584	8.18	530641	10.64	819197	11.60	793726	14.95	436389	17.44
ZZZZZZ	445138	8.18	531201	10.64	836426	11.61	807107	14.95	442191	17.44
ZZZZZZ	459983	8.19	524682	10.64	813947	11.60	807635	14.95	427427	17.44
ZZZZZZ	441802	8.18	528089	10.64	814127	11.60	799134	14.95	438567	17.44
JC16325-3	463462	8.18	516237	10.64	808260	11.60	786760	14.95	425656	17.44

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.

Volatile Internal Standard Area Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Check Std:	V3A6452-CC6446	**Injection Date:**	03/21/16
Lab File ID:	3A149474.D	**Injection Time:**	09:42
Instrument ID:	GCMS3A	**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	524291	8.17	572143	10.64	928853	11.60	910907	14.95	501083	17.44
Upper Limit [a]	1048582	8.67	1144286	11.14	1857706	12.10	1821814	15.45	1002166	17.94
Lower Limit [b]	262146	7.67	286072	10.14	464427	11.10	455454	14.45	250542	16.94

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V3A6450-MB2	488387	8.16	577853	10.64	921964	11.60	896845	14.95	480809	17.44
V3A6450-BS2	488446	8.17	569004	10.64	915188	11.60	894441	14.95	488423	17.44
JC16325-3DUP	490564	8.17	567638	10.64	890140	11.60	870576	14.95	477126	17.43
V3A6452-MB1	447625	8.17	556952	10.64	869946	11.60	856690	14.95	464900	17.44
V3A6452-BS	481125	8.17	557939	10.64	876851	11.60	858659	14.95	483975	17.44
JC16492-2	490026	8.16	557091	10.64	868220	11.60	861002	14.95	453635	17.44
ZZZZZZ	490076	8.17	562936	10.64	875700	11.60	856212	14.95	462099	17.44
ZZZZZZ	441199	8.18	535354	10.64	829576	11.60	816573	14.95	450408	17.44
JC16492-2MS	518787	8.17	555708	10.64	870935	11.60	853876	14.95	465826	17.44
JC16492-2MSD	505156	8.17	567800	10.64	883125	11.60	852694	14.95	476759	17.44
ZZZZZZ	477865	8.17	570400	10.64	881471	11.60	870836	14.95	472742	17.44
ZZZZZZ	471769	8.18	564155	10.64	871979	11.60	851466	14.95	461650	17.44
ZZZZZZ	442891	8.18	567745	10.64	887559	11.60	869420	14.95	473860	17.44
ZZZZZZ	486407	8.17	584836	10.64	900478	11.60	889063	14.95	478350	17.44
ZZZZZZ	469387	8.18	575213	10.64	875712	11.60	867511	14.95	464819	17.44
ZZZZZZ	375522	8.16	550291	10.64	850021	11.60	824281	14.95	469924	17.44

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.

Volatile Surrogate Recovery Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

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
JC16204-1	3A149430.D	97	94	99	93
JC16204-2	3A149429.D	98	95	100	93
JC16204-3	3A149375.D	100	97	99	96
JC16204-4	3A149376.D	99	96	99	98
JC16204-5	3A149428.D	98	95	98	95
JC16204-6	3A149371.D	98	95	99	96
JC16204-7	3A149372.D	99	97	100	99
JC16204-1R	3A149430R.D	97	94	99	93
JC16204-2R	3A149429R.D	98	95	100	93
JC16204-3R	3A149375R.D	100	97	99	96
JC16204-4R	3A149376R.D	99	96	99	98
JC16204-5R	3A149428R.D	98	95	98	95
JC16204-6R	3A149371R.D	98	95	99	96
JC16204-7R	3A149372R.D	99	97	100	99
JC16254-7MS	3A149354.D	98	96	100	96
JC16254-7MSD	3A149355.D	98	95	99	95
JC16325-1MS	3A149436.D	98	93	99	92
JC16325-3DUP	3A149479.D	98	97	98	94
V3A6447-BS	3A149347.D	100	97	101	96
V3A6447-MB2	3A149369.D	100	97	99	97
V3A6450-BS	3A149426.D	99	94	99	92
V3A6450-MB1	3A149425.D	98	95	99	97
V3A6447-MB1	3A149346.D	99	98	100	99
V3A6450-MB2	3A149476.D	97	97	99	96

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	76-120%
S2 = 1,2-Dichloroethane-D4	73-122%
S3 = Toluene-D8	84-119%
S4 = 4-Bromofluorobenzene	78-117%

Initial Calibration Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR
Sample: V3A6446-ICC6446
Lab FileID: 3A149335.D

Response Factor Report MS3A

```
Method       : C:\MSDCHEM\1\METHODS\M3A6446.M (RTE Integrator)
Title        : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update  : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Calibration Files
1   =3a149330.D  2   =3a149331.D  100 =3a149336.D  50  =3a149335.D
20  =3a149334.D  200 =3a149337.D  5   =3a149332.D  0.5 =3a149329.D
10  =3a149333.D  0.2 =3a149328.D      =                 =

Compound
        1     2     100   50    20    200   5     0.5   10    0.2    Avg   %RSD
-------------------------------------------------------------------------------

1) I   Tert Butyl Alcohol-d9 ----------------ISTD---------------------
2)  tertiary butyl alcohol
     0.789 0.857 0.840 0.847 0.942 0.787 0.858       0.849        0.846    5.71
3)  ethanol
                                                                  0.000#  -1.00
4)  1,4-dioxane
     0.044 0.057 0.057 0.060 0.069 0.054 0.060       0.060        0.058   11.96

5) I   pentafluorobenzene    ----------------ISTD---------------------
6)  FREON 115
                                                                  0.000#  -1.00
7)  FREON 152A
                                                                  0.000#  -1.00
8)  chlorodifluoromethane
     0.283 0.236 0.248 0.234 0.246 0.266 0.224       0.247        0.248    7.60
9)  dichlorodifluoromethane
     0.345 0.479 0.465 0.462 0.493 0.437 0.461       0.496        0.455   10.60
10)  chloromethane
     0.539 0.703 0.592 0.596 0.640 0.578 0.637 0.612 0.664 0.821  0.638   12.41
11)  vinyl chloride
     0.455 0.603 0.576 0.571 0.603 0.552 0.571 0.476 0.613        0.558   10.05
12)  bromomethane
            0.424 0.263 0.272 0.303 0.250 0.335       0.317        0.309   19.14
13)  FREON 123A
                                                                  0.000#  -1.00
14)  FREON 123
                                                                  0.000#  -1.00
15)  2-CHLOROPROPANE
     0.702 0.785 0.579 0.586 0.628 0.563 0.680       0.669        0.649   11.54
16)  chloroethane
     0.300 0.370 0.312 0.314 0.338 0.277 0.327 0.319 0.341        0.322    8.22
17)  trichlorofluoromethane
     0.343 0.489 0.577 0.546 0.579 0.559 0.508       0.581        0.523   15.36
18)  Pentane
                                                                  0.000#  -1.00
19)  1-chloropropane
            0.338 0.385 0.392 0.391 0.383 0.311       0.349        0.364    8.68
20)  ethyl ether
     0.227 0.249 0.246 0.248 0.262 0.239 0.248       0.263        0.248    4.63
21)  acrolein
     0.099 0.103 0.122 0.108 0.105 0.127 0.091       0.102        0.107   11.24
22)  1,1-dichloroethene
     0.599 0.624 0.601 0.615 0.589 0.601 0.594 0.535 0.633 0.652  0.604    5.19
23)  acetone
```

			0.061	0.061	0.062	0.057	0.054		0.050		0.057	8.24
24)	allyl chloride											
	0.235	0.239	0.241	0.251	0.248	0.239	0.252		0.261		0.246	3.53
25)	acetonitrile											
			0.055	0.050	0.049	0.056	0.045	0.050	0.044		0.050	9.47
26)	iodomethane											
	0.601	0.627	0.639	0.635	0.651	0.642	0.638	0.574	0.657	0.601	0.627	4.19
27)	iso-butyl alcohol											
			0.013	0.013	0.013	0.014	0.013	0.014	0.014		0.014	4.35
28)	carbon disulfide											
	1.322	1.345	1.235	1.266	1.258	1.234	1.280	1.401	1.325		1.296	4.32
29)	methylene chloride											
	0.439	0.444	0.412	0.412	0.425	0.415	0.443	0.475	0.441		0.434	4.71
30)	methyl acetate											
	0.488	0.624	0.508	0.500	0.563	0.482	0.552		0.524		0.530	9.03
31)	methyl tert butyl ether											
	1.287	1.369	1.310	1.308	1.402	1.306	1.347	1.361	1.437	1.731	1.386	9.39
32)	trans-1,2-dichloroethene											
	0.577	0.599	0.557	0.573	0.578	0.549	0.584	0.520	0.605		0.571	4.57
33)	di-isopropyl ether											
	1.377	1.388	1.407	1.432	1.513	1.386	1.456	1.463	1.508		1.437	3.61
34)	2-butanone											
			0.128	0.082	0.080	0.084	0.079	0.098	0.092		0.092	18.90
35)	1,1-dichloroethane											
	0.709	0.746	0.710	0.728	0.761	0.715	0.761	0.742	0.792	0.763	0.743	3.67
36)	chloroprene											
	0.582	0.565	0.576	0.592	0.595	0.567	0.557	0.553	0.606		0.577	3.14
37)	acrylonitrile											
	0.240	0.262	0.246	0.246	0.263	0.239	0.255	0.226	0.262		0.249	5.15
38)	vinyl acetate											
			0.067	0.092	0.091	0.097	0.092	0.082	0.095		0.088	11.69
39)	ethyl tert-butyl ether											
	1.231	1.283	1.314	1.327	1.404	1.289	1.328	1.169	1.381	1.326	1.305	5.22
40)	ethyl acetate											
			0.099	0.092	0.094	0.100	0.089	0.092	0.098		0.095	4.51
41)	2,2-dichloropropane											
	0.457	0.451	0.319	0.349	0.374	0.281	0.407	0.498	0.401		0.393	17.75
42)	cis-1,2-dichloroethene											
	0.465	0.469	0.437	0.451	0.478	0.431	0.478	0.542	0.495		0.472	7.05
43)	methylacrylate											
	0.067	0.088	0.093	0.091	0.099	0.092	0.088		0.091		0.089	10.55
44)	propionitrile											
	0.106	0.113	0.107	0.106	0.114	0.104	0.107		0.110		0.108	3.30
45)	bromochloromethane											
	0.200	0.211	0.211	0.212	0.223	0.211	0.218	0.194	0.227		0.212	4.87
46)	tetrahydrofuran											
			0.299	0.242	0.233	0.266	0.231	0.260	0.270		0.257	9.41
47)	chloroform											
	0.468	0.480	0.456	0.462	0.478	0.452	0.476	0.486	0.495	0.712	0.497	15.49
48)	t-butyl formate											
	0.413	0.419	0.450	0.438	0.481	0.441	0.424		0.468		0.442	5.41
49)	dibromofluoromethane (s)											
	0.483	0.486	0.477	0.473	0.479	0.471	0.485	0.485	0.488	0.498	0.482	1.62
50)	1,2-dichloroethane-d4 (s)											
	0.592	0.600	0.583	0.576	0.586	0.571	0.594	0.593	0.599	0.614	0.591	2.10
51)	freon 113											
	0.227	0.208	0.237	0.244	0.244	0.232	0.226		0.248		0.233	5.61
52)	methacrylonitrile											
	0.276	0.274	0.260	0.258	0.272	0.257	0.267	0.270	0.273		0.267	2.66
53)	1,1,1-trichloroethane											

```
      0.551 0.571 0.531 0.536 0.548 0.525 0.557 0.545 0.583        0.550    3.42
54)  Cyclohexane
      0.570 0.563 0.546 0.554 0.519 0.541 0.546 0.640 0.578        0.562    6.08

55) I   1,4-difluorobenzene   ----------------ISTD--------------------
56)  epichlorohydrin
      0.050 0.048 0.049 0.049 0.053 0.048 0.050       0.050        0.049    3.70
57)  n-butyl alcohol
      0.015 0.015 0.015 0.015 0.017 0.013 0.015 0.016 0.014        0.015    7.24
58)  carbon tetrachloride
      0.319 0.327 0.315 0.324 0.314 0.313 0.328 0.312 0.338        0.321    2.78
59)  1,1-dichloropropene
      0.350 0.337 0.322 0.335 0.331 0.318 0.336 0.332 0.346 0.337  0.334    2.82
60)  Tert Amyl Alcohol
                                                                   0.000#  -1.00
61)  hexane
      0.356 0.285 0.275 0.293 0.298 0.266 0.282 0.409 0.312        0.308   14.87
62)  2,2,4-TRIMETHYLPENTANE
      0.914 0.776 0.826 0.880 0.861 0.807 0.789 0.895 0.891        0.849    5.93
63)  benzene
      1.061 1.097 1.004 1.044 1.063 0.994 1.074 1.042 1.093 1.264  1.073    6.97
64)  tert-amyl methyl ether
      0.156 0.175 0.173 0.174 0.184 0.171 0.175 0.145 0.190        0.172    7.76
65)  heptane
      0.197 0.168 0.165 0.177 0.176 0.161 0.171       0.186        0.175    6.58
66)  isopropyl acetate
      0.060 0.063 0.073 0.072 0.076 0.072 0.069       0.073        0.070    7.73
67)  1,2-dichloroethane
      0.355 0.365 0.340 0.354 0.367 0.340 0.370 0.317 0.371        0.353    5.13
68)  Ethyl acrylate
                                                                   0.000#  -1.00
69)  trichloroethene
      0.260 0.274 0.257 0.264 0.267 0.258 0.269 0.262 0.274 0.308  0.269    5.54
70)  tert-Amyl Ethyl Ether
                                                                   0.000#  -1.00
71)  methyl methacrylate
      0.072 0.086 0.093 0.094 0.097 0.093 0.087 0.085 0.097        0.089    9.04
72)  2-nitropropane
             0.191 0.142 0.142 0.159 0.137 0.161       0.161        0.156   11.76
73)  2-chloroethyl vinyl ether
      0.195 0.199 0.212 0.212 0.226 0.206 0.208 0.185 0.219        0.207    6.00
74)  1,2-dichloropropane
      0.271 0.286 0.272 0.285 0.288 0.274 0.289 0.274 0.293        0.281    3.01
75)  dibromomethane
      0.178 0.185 0.179 0.182 0.188 0.181 0.189 0.173 0.191 0.172  0.182    3.57
76)  methylcyclohexane
      0.389 0.331 0.366 0.381 0.379 0.366 0.338 0.363 0.396        0.368    5.96
77)  bromodichloromethane
      0.364 0.384 0.370 0.378 0.386 0.377 0.382 0.365 0.400 0.474  0.388    8.25
78)  cis-1,3-dichloropropene
      0.478 0.484 0.457 0.470 0.486 0.466 0.481 0.425 0.493 0.470  0.471    4.12
79)  toluene-d8 (s)
      1.181 1.171 1.162 1.162 1.171 1.172 1.174 1.179 1.173 1.167  1.171    0.54
80)  4-methyl-2-pentanone
      0.180 0.184 0.174 0.175 0.186 0.172 0.183 0.138 0.184        0.175    8.36
81)  toluene
      1.153 1.144 1.079 1.117 1.155 1.086 1.127 1.152 1.172 1.521  1.171   10.83
82)  3-methyl-1-butanol
      0.025 0.025 0.025 0.024 0.027 0.022 0.025 0.032 0.024        0.025   10.83
83)  trans-1,3-dichloropropene
```

```
      0.452 0.464 0.444 0.458 0.475 0.446 0.472 0.463 0.477        0.461    2.67
 84)  ethyl methacrylate
      0.491 0.464 0.456 0.467 0.489 0.457 0.467 0.462 0.473        0.470    2.73
 85)  1,1,2-trichloroethane
      0.242 0.256 0.233 0.240 0.246 0.238 0.245 0.261 0.248        0.245    3.58
 86)  2-hexanone
      0.181 0.181 0.177 0.177 0.189 0.174 0.188 0.142 0.191        0.178    8.21

 87) I   chlorobenzene-d5      ----------------ISTD---------------------
 88)  tetrachloroethene
      0.278 0.297 0.275 0.289 0.280 0.277 0.287 0.280 0.297        0.284    2.92
 89)  BUTYL ACRYLATE
                                                                   0.000#  -1.00
 90)  1,3-dichloropropane
      0.435 0.473 0.457 0.475 0.480 0.463 0.482 0.431 0.488 0.476  0.466    4.20
 91)  butyl acetate
      0.314 0.301 0.276 0.278 0.303 0.270 0.284 0.258 0.285        0.285    6.24
 92)  3,3-dimethyl-1-butanol
      0.052 0.055 0.055 0.055 0.058 0.051 0.053 0.056 0.053        0.054    4.20
 93)  dibromochloromethane
      0.324 0.339 0.325 0.336 0.339 0.333 0.330 0.304 0.343        0.330    3.59
 94)  1,2-dibromoethane
      0.295 0.315 0.310 0.318 0.327 0.316 0.318 0.297 0.330 0.352  0.318    5.16
 95)  chlorobenzene
      0.735 0.772 0.747 0.764 0.775 0.747 0.767 0.703 0.804 0.868  0.768    5.76
 96)  1,1,1,2-tetrachloroethane
      0.299 0.288 0.282 0.290 0.292 0.284 0.290 0.235 0.301        0.285    6.84
 97)  ethylbenzene
      1.339 1.384 1.322 1.371 1.382 1.306 1.377 1.361 1.423 1.690  1.396    7.79
 98)  m,p-xylene
      0.492 0.525 0.495 0.523 0.526 0.497 0.516 0.496 0.536 0.551  0.516    3.89
 99)  o-xylene
      1.131 1.166 1.100 1.153 1.159 1.093 1.150 1.124 1.190 1.455  1.172    8.86
100)  styrene
      0.877 0.930 0.898 0.947 0.947 0.887 0.932 0.828 0.955 0.985  0.919    5.01
101)  bromoform
      0.250 0.268 0.278 0.284 0.286 0.279 0.283 0.230 0.284        0.271    7.11

102) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
103)  isopropylbenzene
      2.552 2.609 2.477 2.577 2.605 2.608 2.531 2.374 2.711 2.859  2.590    5.02
104)  4-bromofluorobenzene (s)
      1.016 1.011 1.002 0.972 1.001 1.024 0.986 1.021 1.001 1.001  1.003    1.57
105)  cyclohexanone
                    0.013 0.014 0.017 0.012 0.019       0.018        0.015   19.25
106)  bromobenzene
      0.695 0.734 0.672 0.684 0.718 0.691 0.698 0.647 0.736        0.697    4.15
107)  1,1,2,2-tetrachloroethane
      0.907 0.983 0.920 0.923 0.983 0.934 0.933 0.957 0.984        0.947    3.21
108)  trans-1,4-dichloro-2-butene
      0.224 0.231 0.266 0.260 0.266 0.273 0.245       0.275        0.255    7.53
109)  1,2,3-trichloropropane
      0.226 0.268 0.240 0.242 0.260 0.243 0.255       0.265        0.250    5.73
110)  n-propylbenzene
      3.088 3.168 2.984 3.074 3.178 3.046 3.114 3.124 3.330        3.123    3.14
111)  2-chlorotoluene
      0.619 0.686 0.619 0.632 0.659 0.622 0.647 0.618 0.677        0.642    4.13
112)  4-chlorotoluene
      2.108 2.117 1.957 1.996 2.121 2.028 2.041 2.177 2.146        2.077    3.57
113)  1,3,5-trimethylbenzene
```

Initial Calibration Summary

Job Number: JC16204 **Sample:** V3A6446-ICC6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149335.D
Project: BMS, Former Brule Area, PR

```
       2.216 2.258 2.166 2.239 2.307 2.148 2.220 2.175 2.344        2.230    2.92
114)  tert-butylbenzene
       0.403 0.447 0.408 0.424 0.428 0.420 0.409 0.373 0.445        0.417    5.42
115)  pentachloroethane
       0.379 0.419 0.398 0.405 0.428 0.417 0.410 0.346 0.433        0.404    6.71
116)  1,2,4-trimethylbenzene
       2.315 2.310 2.221 2.303 2.427 2.222 2.300 2.249 2.461        2.312    3.62
117)  sec-butylbenzene
       2.797 2.959 2.708 2.854 2.865 2.771 2.796 2.765 3.045        2.840    3.71
118)  1,3-dichlorobenzene
       1.291 1.359 1.285 1.344 1.377 1.306 1.334 1.214 1.403        1.324    4.28
119)  p-isopropyltoluene
       2.329 2.398 2.279 2.398 2.455 2.287 2.355 2.295 2.532        2.370    3.59
120)  1,4-dichlorobenzene
       1.265 1.344 1.286 1.329 1.381 1.306 1.328 1.236 1.400        1.319    4.01
121)  1,2-dichlorobenzene
       1.253 1.310 1.243 1.287 1.353 1.256 1.268 1.180 1.358        1.279    4.40
122)  benzyl chloride
       2.037 1.879 1.768 1.815 1.991 1.721 1.829 2.088 1.945        1.897    6.62
123)  n-butylbenzene
       1.281 1.286 1.225 1.290 1.307 1.233 1.250 1.173 1.379        1.269    4.59
124)  1,2-dibromo-3-chloropropane
       0.284 0.244 0.177 0.189 0.212 0.179 0.213       0.210        0.213   16.81
125)  1,3,5-TRICHLOROBENZENE
       0.942 0.995 0.874 0.959 1.016 0.879 0.963 0.865 1.033        0.947    6.63
126)  1,2,4-trichlorobenzene
       0.774 0.871 0.777 0.850 0.892 0.794 0.843 0.717 0.896        0.824    7.46
127)  hexachlorobutadiene
       0.411 0.448 0.374 0.408 0.431 0.369 0.416       0.445        0.413    7.19
128)  naphthalene
       2.294 2.381 2.265 2.442 2.658 2.301 2.419       2.672        2.429    6.52
129)  1,2,3-trichlorobenzene
       0.696 0.785 0.706 0.760 0.844 0.722 0.767       0.821        0.763    7.00
130)  hexachloroethane
       0.366 0.385 0.370 0.387 0.395 0.389 0.376       0.408        0.385    3.63
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          M3A6446.M         Wed Mar 16 11:18:25 2016   ACCUNJ
```

Initial Calibration Verification

Job Number: JC16204 **Sample:** V3A6446-ICV6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149340.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\3A149340.D Vial: 14
Acq On : 15 Mar 2016 9:52 pm Operator: tracyk
Sample : icv6446-50 Inst : MS3A
Misc : MS99317,V3A6446,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M3A6446.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Wed Mar 16 11:16:12 2016
Response via : Multiple Level Calibration

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

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	101	0.00	8.17
2	M	tertiary butyl alcohol	0.846	0.763	9.8	91	0.00	8.31
3		ethanol		----------NA----------				
4	M	1,4-dioxane	0.058	0.057	1.7	96	0.00	12.37
5	I	pentafluorobenzene	1.000	1.000	0.0	103	0.00	10.64
6		FREON 115		----------NA----------				
7		FREON 152A		----------NA----------				
8	M	chlorodifluoromethane	0.248	0.259	-4.4	114	0.00	4.20
9	M	dichlorodifluoromethane	0.455	0.397	12.7	88	0.00	4.17
10	M	chloromethane	0.638	0.539	15.5	93	0.00	4.61
11	M	vinyl chloride	0.558	0.519	7.0	93	0.00	4.90
12	M	bromomethane	0.309	0.285	7.8	108	0.00	5.67
13		FREON 123A		----------NA----------				
14		FREON 123		----------NA----------				
15		2-CHLOROPROPANE	0.649	0.551	15.1	96	0.00	7.11
16	M	chloroethane	0.322	0.306	5.0	100	-0.01	5.89
17	M	trichlorofluoromethane	0.523	0.532	-1.7	100	0.00	6.41
18	M	Pentane		----------NA----------				
19		1-chloropropane	0.364	0.397	-9.1	104	0.00	8.26
20	M	ethyl ether	0.248	0.232	6.5	96	0.00	6.89
21	M	acrolein	0.107	0.115	-7.5	109	0.00	7.20
22	M	1,1-dichloroethene	0.604	0.537	11.1	90	0.00	7.38
23	M	acetone	0.057	0.061	-7.0	102	0.00	7.46
24	M	allyl chloride	0.246	0.225	8.5	92	0.00	8.00
25	M	acetonitrile	0.050	0.044	12.0	91	-0.01	7.97
26	M	iodomethane	0.627	0.568	9.4	92	0.00	7.70
27	M	iso-butyl alcohol	0.014	0.013	7.1	104	0.00	11.22
28	M	carbon disulfide	1.296	1.109	14.4	90	0.00	7.83
29	M	methylene chloride	0.434	0.393	9.4	98	0.00	8.22
30	M	methyl acetate	0.530	0.465	12.3	95	0.00	7.99
31	M	methyl tert butyl ether	1.386	1.284	7.4	101	0.00	8.58
32	M	trans-1,2-dichloroethene	0.571	0.514	10.0	92	0.00	8.64
33	M	di-isopropyl ether	1.437	1.413	1.7	101	0.00	9.25
34	M	2-butanone	0.092	0.081	12.0	104	0.00	10.06
35	M	1,1-dichloroethane	0.743	0.709	4.6	100	0.00	9.28
36	M	chloroprene	0.577	0.542	6.1	94	0.00	9.39
37	M	acrylonitrile	0.249	0.244	2.0	102	0.00	8.60
38	M	vinyl acetate	0.088	0.094	-6.8	105	0.00	9.27
39	M	ethyl tert-butyl ether	1.305	1.355	-3.8	105	0.00	9.76
40	M	ethyl acetate	0.095	0.088	7.4	97	0.00	10.07
41	M	2,2-dichloropropane	0.393	0.322	18.1	95	0.00	10.08

Initial Calibration Verification

Job Number: JC16204 **Sample:** V3A6446-ICV6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149340.D
Project: BMS, Former Brule Area, PR

42	M	cis-1,2-dichloroethene	0.472	0.421	10.8	96	0.00	10.09
43		methylacrylate	0.089	0.092	-3.4	104	0.00	10.15
44	M	propionitrile	0.108	0.106	1.9	103	0.00	10.17
45	M	bromochloromethane	0.212	0.208	1.9	101	0.00	10.42
46	M	tetrahydrofuran	0.257	0.234	8.9	103	0.00	10.46
47	M	chloroform	0.497	0.464	6.6	103	0.00	10.49
48		t-butyl formate	0.442	0.313	29.2	73	0.00	10.51
49	S	dibromofluoromethane (s)	0.482	0.485	-0.6	105	0.00	10.70
50	S	1,2-dichloroethane-d4 (s)	0.591	0.578	2.2	103	0.00	11.15
51	M	freon 113	0.233	0.243	-4.3	102	0.00	7.34
52	M	methacrylonitrile	0.267	0.249	6.7	99	0.00	10.36
53	M	1,1,1-trichloroethane	0.550	0.541	1.6	104	0.00	10.74
54	M	Cyclohexane	0.562	0.504	10.3	93	0.00	10.82
55	I	1,4-difluorobenzene	1.000	1.000	0.0	103	0.00	11.61
56	M	epichlorohydrin	0.049	0.049	0.0	103	0.00	12.93
57	M	n-butyl alcohol	0.015	0.014	6.7	97	0.00	11.74
58	M	carbon tetrachloride	0.321	0.304	5.3	97	0.00	10.96
59	M	1,1-dichloropropene	0.334	0.329	1.5	101	0.00	10.94
60		Tert Amyl Alcohol		----------NA----------				
61	M	hexane	0.308	0.229	25.6	80	0.00	8.98
62		2,2,4-TRIMETHYLPENTANE	0.849	0.807	4.9	94	0.00	11.20
63	M	benzene	1.073	0.992	7.5	98	0.00	11.21
64	M	tert-amyl methyl ether	0.172	0.184	-7.0	109	0.00	11.23
65	M	heptane	0.175	0.148	15.4	86	0.00	11.38
66	M	isopropyl acetate	0.070	0.069	1.4	99	0.00	11.14
67	M	1,2-dichloroethane	0.353	0.341	3.4	99	0.00	11.24
68	m	Ethyl acrylate		----------NA----------				
69	M	trichloroethene	0.269	0.257	4.5	100	0.00	11.96
70		tert-Amyl Ethyl Ether		----------NA----------				
71	M	methyl methacrylate	0.089	0.090	-1.1	99	0.00	12.24
72	M	2-nitropropane	0.156	0.143	8.3	104	0.00	12.79
73	M	2-chloroethyl vinyl ether	0.207	0.215	-3.9	104	0.00	12.80
74	M	1,2-dichloropropane	0.281	0.271	3.6	98	0.00	12.24
75	M	dibromomethane	0.182	0.177	2.7	100	0.00	12.41
76	M	methylcyclohexane	0.368	0.352	4.3	95	0.00	12.18
77	M	bromodichloromethane	0.388	0.369	4.9	100	0.00	12.55
78	M	cis-1,3-dichloropropene	0.471	0.458	2.8	100	0.00	13.03
79	S	toluene-d8 (s)	1.171	1.166	0.4	103	0.00	13.33
80	M	4-methyl-2-pentanone	0.175	0.178	-1.7	104	0.00	13.12
81	M	toluene	1.171	1.081	7.7	99	0.00	13.41
82	M	3-methyl-1-butanol	0.025	0.024	4.0	101	0.00	13.15
83	M	trans-1,3-dichloropropene	0.461	0.435	5.6	98	0.00	13.63
84	M	ethyl methacrylate	0.470	0.451	4.0	99	0.00	13.60
85	M	1,1,2-trichloroethane	0.245	0.231	5.7	99	0.00	13.86
86	M	2-hexanone	0.178	0.178	0.0	103	0.00	14.03
87	I	chlorobenzene-d5	1.000	1.000	0.0	104	0.00	14.95
88	M	tetrachloroethene	0.284	0.281	1.1	101	0.00	14.03
89		BUTYL ACRYLATE		----------NA----------				
90	M	1,3-dichloropropane	0.466	0.453	2.8	99	0.00	14.05
91	M	butyl acetate	0.285	0.281	1.4	105	0.00	14.10
92		3,3-dimethyl-1-butanol	0.054	0.054	0.0	101	0.00	14.22
93	M	dibromochloromethane	0.330	0.320	3.0	99	0.00	14.34
94	M	1,2-dibromoethane	0.318	0.301	5.3	98	0.00	14.50
95	M	chlorobenzene	0.768	0.741	3.5	100	0.00	14.99
96	M	1,1,1,2-tetrachloroethane	0.285	0.281	1.4	100	0.00	15.05
97	M	ethylbenzene	1.396	1.322	5.3	100	0.00	15.04
98	M	m,p-xylene	0.516	0.506	1.9	100	0.00	15.15
99	M	o-xylene	1.172	1.139	2.8	102	0.00	15.60

Initial Calibration Verification

Job Number: JC16204 **Sample:** V3A6446-ICV6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149340.D
Project: BMS, Former Brule Area, PR

100	M	styrene	0.919	0.901	2.0	98	0.00	15.61
101	M	bromoform	0.271	0.271	0.0	99	0.00	15.91
102	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	17.44
103	M	isopropylbenzene	2.590	2.463	4.9	98	0.00	15.96
104	S	4-bromofluorobenzene (s)	1.003	0.970	3.3	102	0.00	16.19
105		cyclohexanone	0.015	0.012	20.0	89	0.00	16.17
106	M	bromobenzene	0.697	0.664	4.7	99	0.00	16.40
107	M	1,1,2,2-tetrachloroethane	0.947	0.889	6.1	99	0.00	16.30
108	M	trans-1,4-dichloro-2-bute	0.255	0.267	-4.7	105	0.00	16.34
109	M	1,2,3-trichloropropane	0.250	0.234	6.4	99	0.00	16.38
110	M	n-propylbenzene	3.123	3.058	2.1	102	0.00	16.40
111	M	2-chlorotoluene	0.642	0.597	7.0	97	0.00	16.57
112	M	4-chlorotoluene	2.077	1.950	6.1	100	0.00	16.67
113	M	1,3,5-trimethylbenzene	2.230	2.162	3.0	99	0.00	16.55
114	M	tert-butylbenzene	0.417	0.415	0.5	100	0.00	16.93
115	M	pentachloroethane	0.404	0.401	0.7	101	0.00	17.03
116	M	1,2,4-trimethylbenzene	2.312	2.236	3.3	99	0.00	16.98
117	M	sec-butylbenzene	2.840	2.760	2.8	99	0.00	17.16
118	M	1,3-dichlorobenzene	1.324	1.290	2.6	98	0.00	17.38
119	M	p-isopropyltoluene	2.370	2.343	1.1	100	0.00	17.29
120	M	1,4-dichlorobenzene	1.319	1.296	1.7	100	0.00	17.47
121	M	1,2-dichlorobenzene	1.279	1.255	1.9	100	0.00	17.90
122	M	benzyl chloride	1.897	1.682	11.3	95	0.00	17.59
123	M	n-butylbenzene	1.269	1.239	2.4	98	0.00	17.73
124	M	1,2-dibromo-3-chloropropa	0.213	0.183	14.1	99	0.00	18.75
125		1,3,5-TRICHLOROBENZENE	0.947	0.942	0.5	100	0.00	18.94
126	M	1,2,4-trichlorobenzene	0.824	0.825	-0.1	99	0.00	19.64
127	M	hexachlorobutadiene	0.413	0.383	7.3	96	0.00	19.75
128	M	naphthalene	2.429	2.351	3.2	98	0.00	19.95
129	M	1,2,3-trichlorobenzene	0.763	0.743	2.6	100	0.00	20.22
130	M	hexachloroethane	0.385	0.391	-1.6	103	0.00	18.18

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3a149335.D M3A6446.M Wed Mar 16 11:19:20 2016 ACCUNJ

Continuing Calibration Summary

Job Number: JC16204 **Sample:** V3A6447-CC6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149344.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\3A149344.D                    Vial: 3
Acq On    : 16 Mar 2016  10:33 am                       Operator: tracyk
Sample    : cc6446-20                                   Inst    : MS3A
Misc      : MS99317,V3A6447,5,,,,1                      Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\M3A6446.M (RTE Integrator)
Title        : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update  : Wed Mar 16 11:16:12 2016
Response via : Multiple Level Calibration

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

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	105	0.00	8.18
2	M	tertiary butyl alcohol	0.846	0.833	1.5	93	0.00	8.31
3		ethanol		----------NA----------				
4	M	1,4-dioxane	0.058	0.060	-3.4	92	0.00	12.37
5	I	pentafluorobenzene	1.000	1.000	0.0	110	0.00	10.64
6		FREON 115		----------NA----------				
7		FREON 152A		----------NA----------				
8	M	chlorodifluoromethane	0.248	0.206	16.9	92	0.00	4.20
9	M	dichlorodifluoromethane	0.455	0.444	2.4	99	0.00	4.16
10	M	chloromethane	0.638	0.605	5.2	104	0.00	4.61
11	M	vinyl chloride	0.558	0.570	-2.2	104	0.00	4.90
12	M	bromomethane	0.309	0.264	14.6	95	0.00	5.68
13		FREON 123A		----------NA----------				
14		FREON 123		----------NA----------				
15		2-CHLOROPROPANE	0.649	0.586	9.7	102	0.00	7.11
16	M	chloroethane	0.322	0.319	0.9	104	0.00	5.90
17	M	trichlorofluoromethane	0.523	0.521	0.4	99	0.00	6.41
18	M	Pentane		----------NA----------				
19		1-chloropropane	0.364	0.383	-5.2	107	0.00	8.26
20	M	ethyl ether	0.248	0.245	1.2	103	0.00	6.89
21	M	acrolein	0.107	0.122	-14.0	128	0.00	7.20
22	M	1,1-dichloroethene	0.604	0.569	5.8	106	0.00	7.38
23	M	acetone	0.057	0.106	-86.0#	187	0.00	7.47
24	M	allyl chloride	0.246	0.243	1.2	108	0.00	8.00
25	M	acetonitrile	0.050	0.048	4.0	93	0.00	7.98
26	M	iodomethane	0.627	0.617	1.6	104	0.00	7.70
27	M	iso-butyl alcohol	0.014	0.013	7.1	103	0.00	11.22
28	M	carbon disulfide	1.296	1.189	8.3	104	0.00	7.83
29	M	methylene chloride	0.434	0.419	3.5	108	0.00	8.22
30	M	methyl acetate	0.530	0.492	7.2	96	0.00	7.99
31	M	methyl tert butyl ether	1.386	1.332	3.9	104	0.00	8.58
32	M	trans-1,2-dichloroethene	0.571	0.563	1.4	107	0.00	8.64
33	M	di-isopropyl ether	1.437	1.386	3.5	100	0.00	9.25
34	M	2-butanone	0.092	0.112	-21.7#	145	0.00	10.06
35	M	1,1-dichloroethane	0.743	0.731	1.6	105	0.00	9.28
36	M	chloroprene	0.577	0.542	6.1	100	0.00	9.39
37	M	acrylonitrile	0.249	0.256	-2.8	107	0.00	8.60
38	M	vinyl acetate	0.088	0.088	0.0	100	0.00	9.27
39	M	ethyl tert-butyl ether	1.305	1.275	2.3	100	0.00	9.76
40	M	ethyl acetate	0.095	0.100	-5.3	110	0.00	10.08
41	M	2,2-dichloropropane	0.393	0.390	0.8	114	0.00	10.08

Continuing Calibration Summary

Job Number: JC16204 **Sample:** V3A6447-CC6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149344.D
Project: BMS, Former Brule Area, PR

42	M	cis-1,2-dichloroethene	0.472	0.446	5.5	102	0.00	10.09
43		methylacrylate	0.089	0.091	-2.2	100	0.00	10.16
44	M	propionitrile	0.108	0.108	0.0	104	0.00	10.18
45	M	bromochloromethane	0.212	0.211	0.5	104	0.00	10.42
46	M	tetrahydrofuran	0.257	0.251	2.3	104	0.00	10.46
47	M	chloroform	0.497	0.460	7.4	106	0.00	10.49
48		t-butyl formate	0.442	0.419	5.2	96	0.00	10.51
49	S	dibromofluoromethane (s)	0.482	0.490	-1.7	112	0.00	10.70
50	S	1,2-dichloroethane-d4 (s)	0.591	0.590	0.2	110	0.00	11.15
51	M	freon 113	0.233	0.216	7.3	97	0.00	7.36
52	M	methacrylonitrile	0.267	0.259	3.0	104	0.00	10.36
53	M	1,1,1-trichloroethane	0.550	0.521	5.3	104	0.00	10.74
54	M	Cyclohexane	0.562	0.486	13.5	103	0.00	10.82
55	I	1,4-difluorobenzene	1.000	1.000	0.0	109	0.00	11.61
56	M	epichlorohydrin	0.049	0.048	2.0	97	0.00	12.93
57	M	n-butyl alcohol	0.015	0.014	6.7	93	0.00	11.74
58	M	carbon tetrachloride	0.321	0.307	4.4	107	0.00	10.96
59	M	1,1-dichloropropene	0.334	0.317	5.1	104	0.00	10.94
60		Tert Amyl Alcohol		----------NA----------				
61	M	hexane	0.308	0.265	14.0	97	0.00	8.98
62		2,2,4-TRIMETHYLPENTANE	0.849	0.754	11.2	95	0.00	11.20
63	M	benzene	1.073	1.032	3.8	106	0.00	11.21
64	M	tert-amyl methyl ether	0.172	0.171	0.6	102	0.00	11.24
65	M	heptane	0.175	0.154	12.0	95	0.00	11.39
66	M	isopropyl acetate	0.070	0.068	2.9	98	0.00	11.14
67	M	1,2-dichloroethane	0.353	0.354	-0.3	105	0.00	11.24
68	m	Ethyl acrylate		----------NA----------				
69	M	trichloroethene	0.269	0.259	3.7	106	0.00	11.96
70		tert-Amyl Ethyl Ether		----------NA----------				
71	M	methyl methacrylate	0.089	0.089	0.0	100	0.00	12.24
72	M	2-nitropropane	0.156	0.143	8.3	98	0.00	12.79
73	M	2-chloroethyl vinyl ether	0.207	0.198	4.3	96	0.00	12.80
74	M	1,2-dichloropropane	0.281	0.277	1.4	105	0.00	12.25
75	M	dibromomethane	0.182	0.182	0.0	106	0.00	12.41
76	M	methylcyclohexane	0.368	0.330	10.3	95	0.00	12.18
77	M	bromodichloromethane	0.388	0.375	3.4	106	0.00	12.55
78	M	cis-1,3-dichloropropene	0.471	0.465	1.3	104	0.00	13.03
79	S	toluene-d8 (s)	1.171	1.157	1.2	108	0.00	13.33
80	M	4-methyl-2-pentanone	0.175	0.173	1.1	101	0.00	13.13
81	M	toluene	1.171	1.078	7.9	102	0.00	13.41
82	M	3-methyl-1-butanol	0.025	0.024	4.0	96	0.00	13.15
83	M	trans-1,3-dichloropropene	0.461	0.449	2.6	103	0.00	13.63
84	M	ethyl methacrylate	0.470	0.434	7.7	97	0.00	13.60
85	M	1,1,2-trichloroethane	0.245	0.229	6.5	101	0.00	13.86
86	M	2-hexanone	0.178	0.202	-13.5	116	0.00	14.03
87	I	chlorobenzene-d5	1.000	1.000	0.0	106	0.00	14.95
88	M	tetrachloroethene	0.284	0.280	1.4	106	0.00	14.03
89		BUTYL ACRYLATE		----------NA----------				
90	M	1,3-dichloropropane	0.466	0.459	1.5	101	0.00	14.05
91	M	butyl acetate	0.285	0.268	6.0	93	0.00	14.10
92		3,3-dimethyl-1-butanol	0.054	0.054	0.0	97	0.00	14.22
93	M	dibromochloromethane	0.330	0.327	0.9	102	0.00	14.34
94	M	1,2-dibromoethane	0.318	0.313	1.6	101	0.00	14.50
95	M	chlorobenzene	0.768	0.758	1.3	103	0.00	14.99
96	M	1,1,1,2-tetrachloroethane	0.285	0.289	-1.4	104	0.00	15.05
97	M	ethylbenzene	1.396	1.331	4.7	102	0.00	15.04
98	M	m,p-xylene	0.516	0.503	2.5	101	0.00	15.15
99	M	o-xylene	1.172	1.132	3.4	103	0.00	15.60

Continuing Calibration Summary

Job Number: JC16204 **Sample:** V3A6447-CC6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149344.D
Project: BMS, Former Brule Area, PR

100	M	styrene	0.919	0.914	0.5	102	0.00	15.61
101	M	bromoform	0.271	0.274	-1.1	101	0.00	15.91
102	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	111	0.00	17.44
103	M	isopropylbenzene	2.590	2.437	5.9	104	0.00	15.96
104	S	4-bromofluorobenzene (s)	1.003	0.934	6.9	104	0.00	16.19
105		cyclohexanone	0.015	0.086	-473.3#	563#	0.00	16.16
106	M	bromobenzene	0.697	0.657	5.7	101	0.00	16.40
107	M	1,1,2,2-tetrachloroethane	0.947	0.894	5.6	101	0.00	16.30
108	M	trans-1,4-dichloro-2-bute	0.255	0.258	-1.2	108	0.00	16.34
109	M	1,2,3-trichloropropane	0.250	0.237	5.2	101	0.00	16.38
110	M	n-propylbenzene	3.123	2.916	6.6	102	0.00	16.40
111	M	2-chlorotoluene	0.642	0.614	4.4	103	0.00	16.57
112	M	4-chlorotoluene	2.077	1.916	7.8	100	0.00	16.67
113	M	1,3,5-trimethylbenzene	2.230	2.141	4.0	103	0.00	16.55
114	M	tert-butylbenzene	0.417	0.395	5.3	102	0.00	16.93
115	M	pentachloroethane	0.404	0.405	-0.2	105	0.00	17.03
116	M	1,2,4-trimethylbenzene	2.312	2.218	4.1	101	0.00	16.98
117	M	sec-butylbenzene	2.840	2.710	4.6	105	0.00	17.16
118	M	1,3-dichlorobenzene	1.324	1.313	0.8	106	0.00	17.38
119	M	p-isopropyltoluene	2.370	2.300	3.0	104	0.00	17.29
120	M	1,4-dichlorobenzene	1.319	1.305	1.1	105	0.00	17.47
121	M	1,2-dichlorobenzene	1.279	1.273	0.5	104	0.00	17.90
122	M	benzyl chloride	1.897	1.986	-4.7	111	0.00	17.59
123	M	n-butylbenzene	1.269	1.244	2.0	106	0.00	17.73
124	M	1,2-dibromo-3-chloropropa	0.213	0.193	9.4	101	0.00	18.75
125		1,3,5-TRICHLOROBENZENE	0.947	0.989	-4.4	108	0.00	18.94
126	M	1,2,4-trichlorobenzene	0.824	0.888	-7.8	110	0.00	19.64
127	M	hexachlorobutadiene	0.413	0.416	-0.7	107	0.00	19.75
128	M	naphthalene	2.429	2.604	-7.2	109	0.00	19.95
129	M	1,2,3-trichlorobenzene	0.763	0.811	-6.3	107	0.00	20.22
130	M	hexachloroethane	0.385	0.386	-0.3	108	0.00	18.18

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3a149334.D M3A6446.M Wed Mar 16 15:23:44 2016 ACCUNJ

Continuing Calibration Summary

Job Number: JC16204 **Sample:** V3A6447-CC6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149367.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\3A149367.D                    Vial: 26
Acq On    : 16 Mar 2016  10:13 pm                       Operator: tracyk
Sample    : cc6446-50                                   Inst    : MS3A
Misc      : MS99718,V3A6447,5,,,,1                      Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\M3A6446.M (RTE Integrator)
Title        : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update  : Thu Mar 17 11:30:00 2016
Response via : Multiple Level Calibration

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

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	99	0.00	8.18
2	M	tertiary butyl alcohol	0.846	0.802	5.2	94	0.00	8.31
3		ethanol		----------NA----------				
4	M	1,4-dioxane	0.058	0.062	-6.9	103	0.00	12.37
5	I	pentafluorobenzene	1.000	1.000	0.0	107	0.00	10.64
6		FREON 115		----------NA----------				
7		FREON 152A		----------NA----------				
8	M	chlorodifluoromethane	0.248	0.246	0.8	113	0.00	4.21
9	M	dichlorodifluoromethane	0.455	0.486	-6.8	113	0.00	4.16
10	M	chloromethane	0.638	0.622	2.5	112	0.00	4.61
11	M	vinyl chloride	0.558	0.601	-7.7	113	0.00	4.90
12	M	bromomethane	0.309	0.296	4.2	117	0.00	5.68
13		FREON 123A		----------NA----------				
14		FREON 123		----------NA----------				
15		2-CHLOROPROPANE	0.649	0.625	3.7	114	0.00	7.11
16	M	chloroethane	0.322	0.330	-2.5	113	0.00	5.90
17	M	trichlorofluoromethane	0.523	0.597	-14.1	117	0.01	6.41
18	M	Pentane		----------NA----------				
19		1-chloropropane	0.364	0.404	-11.0	110	0.00	8.26
20	M	ethyl ether	0.248	0.244	1.6	106	0.00	6.90
21	M	acrolein	0.107	0.128	-19.6	127	0.00	7.20
22	M	1,1-dichloroethene	0.604	0.585	3.1	102	0.00	7.38
23	M	acetone	0.057	0.058	-1.8	102	0.00	7.47
24	M	allyl chloride	0.246	0.236	4.1	101	0.00	8.00
25	M	acetonitrile	0.050	0.044	12.0	96	0.00	7.98
26	M	iodomethane	0.627	0.643	-2.6	109	0.00	7.70
27	M	iso-butyl alcohol	0.014	0.013	7.1	107	0.00	11.22
28	M	carbon disulfide	1.296	1.186	8.5	101	0.00	7.83
29	M	methylene chloride	0.434	0.418	3.7	109	0.00	8.22
30	M	methyl acetate	0.530	0.500	5.7	107	0.00	7.99
31	M	methyl tert butyl ether	1.386	1.309	5.6	107	0.00	8.58
32	M	trans-1,2-dichloroethene	0.571	0.552	3.3	103	0.00	8.64
33	M	di-isopropyl ether	1.437	1.452	-1.0	109	0.00	9.25
34	M	2-butanone	0.092	0.080	13.0	107	0.00	10.06
35	M	1,1-dichloroethane	0.743	0.717	3.5	106	0.00	9.28
36	M	chloroprene	0.577	0.594	-2.9	108	0.00	9.39
37	M	acrylonitrile	0.249	0.239	4.0	104	0.00	8.61
38	M	vinyl acetate	0.088	0.096	-9.1	113	0.00	9.27
39	M	ethyl tert-butyl ether	1.305	1.361	-4.3	110	0.00	9.76
40	M	ethyl acetate	0.095	0.091	4.2	104	0.00	10.08
41	M	2,2-dichloropropane	0.393	0.352	10.4	108	0.00	10.08

Continuing Calibration Summary

Job Number: JC16204 **Sample:** V3A6447-CC6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149367.D
Project: BMS, Former Brule Area, PR

42	M	cis-1,2-dichloroethene	0.472	0.451	4.4	107	0.00	10.09
43		methylacrylate	0.089	0.088	1.1	104	0.00	10.15
44	M	propionitrile	0.108	0.103	4.6	104	0.00	10.17
45	M	bromochloromethane	0.212	0.216	-1.9	109	0.00	10.42
46	M	tetrahydrofuran	0.257	0.231	10.1	107	0.00	10.46
47	M	chloroform	0.497	0.459	7.6	107	0.00	10.49
48		t-butyl formate	0.442	0.462	-4.5	113	0.00	10.51
49	S	dibromofluoromethane (s)	0.482	0.475	1.5	108	0.00	10.70
50	S	1,2-dichloroethane-d4 (s)	0.591	0.556	5.9	104	0.00	11.14
51	M	freon 113	0.233	0.256	-9.9	112	0.00	7.35
52	M	methacrylonitrile	0.267	0.250	6.4	104	0.00	10.36
53	M	1,1,1-trichloroethane	0.550	0.549	0.2	110	0.00	10.74
54	M	Cyclohexane	0.562	0.546	2.8	106	0.00	10.81
55	I	1,4-difluorobenzene	1.000	1.000	0.0	107	0.00	11.61
56	M	epichlorohydrin	0.049	0.048	2.0	106	0.00	12.93
57	M	n-butyl alcohol	0.015	0.015	0.0	103	0.00	11.74
58	M	carbon tetrachloride	0.321	0.332	-3.4	109	0.00	10.95
59	M	1,1-dichloropropene	0.334	0.330	1.2	105	0.00	10.94
60		Tert Amyl Alcohol		----------NA----------				
61	M	hexane	0.308	0.300	2.6	109	0.00	8.98
62		2,2,4-TRIMETHYLPENTANE	0.849	0.887	-4.5	108	0.00	11.21
63	M	benzene	1.073	1.018	5.1	104	0.00	11.21
64	M	tert-amyl methyl ether	0.172	0.182	-5.8	111	0.00	11.23
65	M	heptane	0.175	0.182	-4.0	110	0.00	11.38
66	M	isopropyl acetate	0.070	0.072	-2.9	108	0.00	11.14
67	M	1,2-dichloroethane	0.353	0.341	3.4	103	0.00	11.23
68	m	Ethyl acrylate		----------NA----------				
69	M	trichloroethene	0.269	0.260	3.3	105	0.00	11.96
70		tert-Amyl Ethyl Ether		----------NA----------				
71	M	methyl methacrylate	0.089	0.091	-2.2	104	0.00	12.24
72	M	2-nitropropane	0.156	0.140	10.3	105	0.00	12.79
73	M	2-chloroethyl vinyl ether	0.207	0.217	-4.8	109	0.00	12.80
74	M	1,2-dichloropropane	0.281	0.278	1.1	104	0.00	12.25
75	M	dibromomethane	0.182	0.184	-1.1	108	0.00	12.41
76	M	methylcyclohexane	0.368	0.396	-7.6	111	0.00	12.18
77	M	bromodichloromethane	0.388	0.380	2.1	107	0.00	12.55
78	M	cis-1,3-dichloropropene	0.471	0.471	0.0	107	0.00	13.03
79	S	toluene-d8 (s)	1.171	1.161	0.9	107	0.00	13.33
80	M	4-methyl-2-pentanone	0.175	0.172	1.7	105	0.00	13.13
81	M	toluene	1.171	1.105	5.6	106	0.00	13.41
82	M	3-methyl-1-butanol	0.025	0.024	4.0	104	0.00	13.15
83	M	trans-1,3-dichloropropene	0.461	0.447	3.0	104	0.00	13.63
84	M	ethyl methacrylate	0.470	0.448	4.7	102	0.00	13.60
85	M	1,1,2-trichloroethane	0.245	0.239	2.4	106	0.00	13.86
86	M	2-hexanone	0.178	0.171	3.9	103	0.00	14.03
87	I	chlorobenzene-d5	1.000	1.000	0.0	107	0.00	14.95
88	M	tetrachloroethene	0.284	0.292	-2.8	109	0.00	14.03
89		BUTYL ACRYLATE		----------NA----------				
90	M	1,3-dichloropropane	0.466	0.466	0.0	105	0.00	14.05
91	M	butyl acetate	0.285	0.285	0.0	110	0.00	14.10
92		3,3-dimethyl-1-butanol	0.054	0.053	1.9	104	0.00	14.22
93	M	dibromochloromethane	0.330	0.340	-3.0	108	0.00	14.34
94	M	1,2-dibromoethane	0.318	0.319	-0.3	107	0.00	14.50
95	M	chlorobenzene	0.768	0.770	-0.3	108	0.00	14.99
96	M	1,1,1,2-tetrachloroethane	0.285	0.293	-2.8	108	0.00	15.05
97	M	ethylbenzene	1.396	1.358	2.7	106	0.00	15.04
98	M	m,p-xylene	0.516	0.519	-0.6	106	0.00	15.15
99	M	o-xylene	1.172	1.153	1.6	107	0.00	15.60

Continuing Calibration Summary

Job Number: JC16204 **Sample:** V3A6447-CC6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149367.D
Project: BMS, Former Brule Area, PR

100	M	styrene	0.919	0.944	-2.7	107	0.00	15.61
101	M	bromoform	0.271	0.288	-6.3	108	0.00	15.91
102	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	108	0.00	17.44
103	M	isopropylbenzene	2.590	2.522	2.6	106	0.00	15.96
104	S	4-bromofluorobenzene (s)	1.003	0.954	4.9	106	0.00	16.19
105		cyclohexanone	0.015	0.015	0.0	118	0.00	16.17
106	M	bromobenzene	0.697	0.687	1.4	109	0.00	16.40
107	M	1,1,2,2-tetrachloroethane	0.947	0.922	2.6	108	0.00	16.30
108	M	trans-1,4-dichloro-2-bute	0.255	0.249	2.4	103	0.00	16.34
109	M	1,2,3-trichloropropane	0.250	0.241	3.6	108	0.00	16.38
110	M	n-propylbenzene	3.123	3.039	2.7	107	0.00	16.40
111	M	2-chlorotoluene	0.642	0.622	3.1	107	0.00	16.57
112	M	4-chlorotoluene	2.077	1.950	6.1	106	0.00	16.67
113	M	1,3,5-trimethylbenzene	2.230	2.189	1.8	106	0.00	16.55
114	M	tert-butylbenzene	0.417	0.417	0.0	107	0.00	16.93
115	M	pentachloroethane	0.404	0.413	-2.2	110	0.00	17.03
116	M	1,2,4-trimethylbenzene	2.312	2.267	1.9	107	0.00	16.98
117	M	sec-butylbenzene	2.840	2.806	1.2	106	0.00	17.16
118	M	1,3-dichlorobenzene	1.324	1.357	-2.5	109	0.00	17.38
119	M	p-isopropyltoluene	2.370	2.363	0.3	107	0.00	17.29
120	M	1,4-dichlorobenzene	1.319	1.334	-1.1	109	0.00	17.47
121	M	1,2-dichlorobenzene	1.279	1.294	-1.2	109	0.00	17.90
122	M	benzyl chloride	1.897	1.923	-1.4	115	0.00	17.59
123	M	n-butylbenzene	1.269	1.262	0.6	106	0.00	17.73
124	M	1,2-dibromo-3-chloropropa	0.213	0.183	14.1	105	0.00	18.75
125		1,3,5-TRICHLOROBENZENE	0.947	0.967	-2.1	109	0.00	18.94
126	M	1,2,4-trichlorobenzene	0.824	0.862	-4.6	110	0.00	19.64
127	M	hexachlorobutadiene	0.413	0.408	1.2	108	0.00	19.75
128	M	naphthalene	2.429	2.462	-1.4	109	0.00	19.95
129	M	1,2,3-trichlorobenzene	0.763	0.774	-1.4	110	0.00	20.22
130	M	hexachloroethane	0.385	0.398	-3.4	111	0.00	18.18

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3a149335.D M3A6446.M Thu Mar 17 11:39:32 2016 ACCUNJ

Continuing Calibration Summary

Job Number: JC16204 **Sample:** V3A6450-CC6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149423.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\3A149423.D                    Vial: 2
Acq On    : 18 Mar 2016   9:08 am                       Operator: tracyk
Sample    : cc6446-20                                   Inst    : MS3A
Misc      : MS99767,V3A6450,5,,,,1                      Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\M3A6446.M (RTE Integrator)
Title        : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update  : Fri Mar 18 12:36:01 2016
Response via : Multiple Level Calibration

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

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	117	0.00	8.18
2	M	tertiary butyl alcohol	0.846	0.843	0.4	105	0.02	8.33
3		ethanol		----------NA----------				
4	M	1,4-dioxane	0.058	0.059	-1.7	100	0.00	12.37
5	I	pentafluorobenzene	1.000	1.000	0.0	127	0.00	10.64
6		FREON 115		----------NA----------				
7		FREON 152A		----------NA----------				
8	M	chlorodifluoromethane	0.248	0.236	4.8	122	0.00	4.20
9	M	dichlorodifluoromethane	0.455	0.426	6.4	110	0.00	4.17
10	M	chloromethane	0.638	0.537	15.8	107	0.00	4.61
11	M	vinyl chloride	0.558	0.513	8.1	108	0.00	4.90
12	M	bromomethane	0.309	0.250	19.1	105	0.00	5.68
13		FREON 123A		----------NA----------				
14		FREON 123		----------NA----------				
15		2-CHLOROPROPANE	0.649	0.553	14.8	112	0.00	7.12
16	M	chloroethane	0.322	0.287	10.9	108	0.00	5.90
17	M	trichlorofluoromethane	0.523	0.478	8.6	105	0.00	6.40
18	M	Pentane		----------NA----------				
19		1-chloropropane	0.364	0.354	2.7	115	0.00	8.26
20	M	ethyl ether	0.248	0.237	4.4	115	0.00	6.89
21	M	acrolein	0.107	0.130	-21.5#	158	0.00	7.20
22	M	1,1-dichloroethene	0.604	0.539	10.8	116	0.00	7.38
23	M	acetone	0.057	0.057	0.0	116	0.02	7.48
24	M	allyl chloride	0.246	0.229	6.9	117	0.00	8.00
25	M	acetonitrile	0.050	0.047	6.0	105	0.00	7.98
26	M	iodomethane	0.627	0.625	0.3	122	0.00	7.69
27	M	iso-butyl alcohol	0.014	0.012	14.3	113	0.00	11.22
28	M	carbon disulfide	1.296	1.182	8.8	119	0.00	7.83
29	M	methylene chloride	0.434	0.398	8.3	119	0.00	8.22
30	M	methyl acetate	0.530	0.504	4.9	114	0.00	7.99
31	M	methyl tert butyl ether	1.386	1.265	8.7	115	0.00	8.58
32	M	trans-1,2-dichloroethene	0.571	0.530	7.2	117	0.00	8.64
33	M	di-isopropyl ether	1.437	1.336	7.0	112	0.00	9.25
34	M	2-butanone	0.092	0.078	15.2	118	0.01	10.07
35	M	1,1-dichloroethane	0.743	0.680	8.5	114	0.00	9.28
36	M	chloroprene	0.577	0.543	5.9	116	0.00	9.39
37	M	acrylonitrile	0.249	0.235	5.6	114	0.00	8.61
38	M	vinyl acetate	0.088	0.092	-4.5	120	0.00	9.27
39	M	ethyl tert-butyl ether	1.305	1.249	4.3	113	0.00	9.76
40	M	ethyl acetate	0.095	0.082	13.7	105	0.01	10.08
41	M	2,2-dichloropropane	0.393	0.364	7.4	124	0.00	10.08

Continuing Calibration Summary

Job Number: JC16204 **Sample:** V3A6450-CC6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149423.D
Project: BMS, Former Brule Area, PR

42	M	cis-1,2-dichloroethene	0.472	0.432	8.5	115	0.00	10.09
43		methylacrylate	0.089	0.085	4.5	109	0.01	10.17
44	M	propionitrile	0.108	0.100	7.4	112	0.00	10.18
45	M	bromochloromethane	0.212	0.212	0.0	121	0.00	10.42
46	M	tetrahydrofuran	0.257	0.221	14.0	106	0.00	10.46
47	M	chloroform	0.497	0.431	13.3	115	0.00	10.49
48		t-butyl formate	0.442	0.411	7.0	109	0.00	10.51
49	S	dibromofluoromethane (s)	0.482	0.477	1.0	127	0.00	10.70
50	S	1,2-dichloroethane-d4 (s)	0.591	0.564	4.6	122	0.00	11.14
51	M	freon 113	0.233	0.261	-12.0	136	0.00	7.36
52	M	methacrylonitrile	0.267	0.239	10.5	112	0.00	10.36
53	M	1,1,1-trichloroethane	0.550	0.517	6.0	120	0.00	10.74
54	M	Cyclohexane	0.562	0.506	10.0	124	0.00	10.81
55	I	1,4-difluorobenzene	1.000	1.000	0.0	124	0.00	11.61
56	M	epichlorohydrin	0.049	0.044	10.2	103	0.00	12.93
57	M	n-butyl alcohol	0.015	0.014	6.7	101	0.00	11.75
58	M	carbon tetrachloride	0.321	0.314	2.2	124	0.00	10.96
59	M	1,1-dichloropropene	0.334	0.312	6.6	117	0.00	10.94
60		Tert Amyl Alcohol		----------NA----------				
61	M	hexane	0.308	0.301	2.3	125	0.00	8.98
62		2,2,4-TRIMETHYLPENTANE	0.849	0.834	1.8	120	0.00	11.20
63	M	benzene	1.073	0.993	7.5	116	0.00	11.21
64	M	tert-amyl methyl ether	0.172	0.172	0.0	116	0.00	11.24
65	M	heptane	0.175	0.168	4.0	118	0.00	11.39
66	M	isopropyl acetate	0.070	0.068	2.9	111	0.00	11.14
67	M	1,2-dichloroethane	0.353	0.346	2.0	117	0.00	11.23
68	m	Ethyl acrylate		----------NA----------				
69	M	trichloroethene	0.269	0.250	7.1	116	0.00	11.96
70		tert-Amyl Ethyl Ether		----------NA----------				
71	M	methyl methacrylate	0.089	0.085	4.5	109	0.00	12.24
72	M	2-nitropropane	0.156	0.136	12.8	106	0.00	12.79
73	M	2-chloroethyl vinyl ether	0.207	0.190	8.2	104	0.00	12.80
74	M	1,2-dichloropropane	0.281	0.258	8.2	111	0.00	12.24
75	M	dibromomethane	0.182	0.177	2.7	117	0.00	12.41
76	M	methylcyclohexane	0.368	0.366	0.5	120	0.00	12.18
77	M	bromodichloromethane	0.388	0.364	6.2	117	0.00	12.55
78	M	cis-1,3-dichloropropene	0.471	0.441	6.4	113	0.00	13.03
79	S	toluene-d8 (s)	1.171	1.141	2.6	121	0.00	13.33
80	M	4-methyl-2-pentanone	0.175	0.162	7.4	108	0.00	13.13
81	M	toluene	1.171	1.028	12.2	110	0.00	13.41
82	M	3-methyl-1-butanol	0.025	0.023	8.0	103	0.00	13.15
83	M	trans-1,3-dichloropropene	0.461	0.420	8.9	110	0.00	13.63
84	M	ethyl methacrylate	0.470	0.402	14.5	102	0.00	13.60
85	M	1,1,2-trichloroethane	0.245	0.220	10.2	111	0.00	13.86
86	M	2-hexanone	0.178	0.155	12.9	102	0.00	14.03
87	I	chlorobenzene-d5	1.000	1.000	0.0	119	0.00	14.95
88	M	tetrachloroethene	0.284	0.284	0.0	121	0.00	14.03
89		BUTYL ACRYLATE		----------NA----------				
90	M	1,3-dichloropropane	0.466	0.442	5.2	110	0.00	14.05
91	M	butyl acetate	0.285	0.251	11.9	99	0.00	14.10
92		3,3-dimethyl-1-butanol	0.054	0.053	1.9	108	0.00	14.22
93	M	dibromochloromethane	0.330	0.327	0.9	115	0.00	14.34
94	M	1,2-dibromoethane	0.318	0.303	4.7	110	0.00	14.50
95	M	chlorobenzene	0.768	0.729	5.1	112	0.00	14.99
96	M	1,1,1,2-tetrachloroethane	0.285	0.284	0.4	116	0.00	15.05
97	M	ethylbenzene	1.396	1.286	7.9	111	0.00	15.04
98	M	m,p-xylene	0.516	0.491	4.8	111	0.00	15.15
99	M	o-xylene	1.172	1.082	7.7	111	0.00	15.60

Continuing Calibration Summary

Job Number: JC16204 **Sample:** V3A6450-CC6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149423.D
Project: BMS, Former Brule Area, PR

100	M	styrene	0.919	0.875	4.8	110	0.00	15.61
101	M	bromoform	0.271	0.273	-0.7	114	0.00	15.91
102	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	129	0.00	17.44
103	M	isopropylbenzene	2.590	2.280	12.0	113	0.00	15.96
104	S	4-bromofluorobenzene (s)	1.003	0.906	9.7	117	0.00	16.19
105		cyclohexanone	0.015	0.033	-120.0#	251#	0.00	16.17
106	M	bromobenzene	0.697	0.642	7.9	115	0.00	16.40
107	M	1,1,2,2-tetrachloroethane	0.947	0.852	10.0	112	0.00	16.30
108	M	trans-1,4-dichloro-2-bute	0.255	0.221	13.3	107	0.00	16.34
109	M	1,2,3-trichloropropane	0.250	0.230	8.0	114	0.00	16.38
110	M	n-propylbenzene	3.123	2.756	11.8	112	0.00	16.40
111	M	2-chlorotoluene	0.642	0.587	8.6	115	0.00	16.57
112	M	4-chlorotoluene	2.077	1.809	12.9	110	0.00	16.67
113	M	1,3,5-trimethylbenzene	2.230	2.008	10.0	112	0.00	16.55
114	M	tert-butylbenzene	0.417	0.381	8.6	114	0.00	16.93
115	M	pentachloroethane	0.404	0.390	3.5	117	0.00	17.03
116	M	1,2,4-trimethylbenzene	2.312	2.119	8.3	112	0.00	16.98
117	M	sec-butylbenzene	2.840	2.594	8.7	117	0.00	17.16
118	M	1,3-dichlorobenzene	1.324	1.280	3.3	120	0.00	17.38
119	M	p-isopropyltoluene	2.370	2.215	6.5	116	0.00	17.29
120	M	1,4-dichlorobenzene	1.319	1.278	3.1	119	0.00	17.47
121	M	1,2-dichlorobenzene	1.279	1.238	3.2	118	0.00	17.90
122	M	benzyl chloride	1.897	1.812	4.5	117	0.00	17.59
123	M	n-butylbenzene	1.269	1.174	7.5	116	0.00	17.73
124	M	1,2-dibromo-3-chloropropa	0.213	0.186	12.7	113	0.00	18.75
125		1,3,5-TRICHLOROBENZENE	0.947	0.957	-1.1	121	0.00	18.94
126	M	1,2,4-trichlorobenzene	0.824	0.860	-4.4	124	0.00	19.64
127	M	hexachlorobutadiene	0.413	0.406	1.7	121	0.00	19.75
128	M	naphthalene	2.429	2.481	-2.1	120	0.00	19.95
129	M	1,2,3-trichlorobenzene	0.763	0.799	-4.7	122	0.00	20.22
130	M	hexachloroethane	0.385	0.373	3.1	121	0.00	18.18

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3a149334.D M3A6446.M Fri Mar 18 13:12:08 2016 ACCUNJ

Continuing Calibration Summary

Job Number: JC16204 **Sample:** V3A6452-CC6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149474.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\3A149474.D                    Vial: 2
Acq On    : 21 Mar 2016   9:42 am                       Operator: tracyk
Sample    : cc6446-20                                   Inst    : MS3A
Misc      : MS99820,V3A6452,5,,,,1                      Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\M3A6446.M (RTE Integrator)
Title        : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update  : Wed Mar 16 11:16:12 2016
Response via : Multiple Level Calibration

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

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	128	-0.01	8.17
2	M	tertiary butyl alcohol	0.846	0.857	-1.3	116	-0.02	8.30
3		ethanol		----------NA----------				
4	M	1,4-dioxane	0.058	0.065	-12.1	121	0.00	12.36
5	I	pentafluorobenzene	1.000	1.000	0.0	141	0.00	10.64
6		FREON 115		----------NA----------				
7		FREON 152A		----------NA----------				
8	M	chlorodifluoromethane	0.248	0.293	-18.1	168	0.00	4.20
9	M	dichlorodifluoromethane	0.455	0.429	5.7	123	0.00	4.17
10	M	chloromethane	0.638	0.527	17.4	116	0.00	4.62
11	M	vinyl chloride	0.558	0.484	13.3	113	0.00	4.90
12	M	bromomethane	0.309	0.228	26.2#	106	0.00	5.68
13		FREON 123A		----------NA----------				
14		FREON 123		----------NA----------				
15		2-CHLOROPROPANE	0.649	0.543	16.3	122	0.00	7.11
16	M	chloroethane	0.322	0.274	14.9	114	0.00	5.90
17	M	trichlorofluoromethane	0.523	0.485	7.3	118	0.00	6.41
18	M	Pentane		----------NA----------				
19		1-chloropropane	0.364	0.309	15.1	112	0.00	8.25
20	M	ethyl ether	0.248	0.235	5.2	127	-0.01	6.89
21	M	acrolein	0.107	0.104	2.8	140	-0.01	7.19
22	M	1,1-dichloroethene	0.604	0.561	7.1	135	0.00	7.38
23	M	acetone	0.057	0.062	-8.8	141	-0.01	7.45
24	M	allyl chloride	0.246	0.240	2.4	137	-0.02	7.99
25	M	acetonitrile	0.050	0.047	6.0	118	0.00	7.98
26	M	iodomethane	0.627	0.614	2.1	133	-0.01	7.69
27	M	iso-butyl alcohol	0.014	0.013	7.1	127	0.00	11.21
28	M	carbon disulfide	1.296	1.197	7.6	134	0.00	7.83
29	M	methylene chloride	0.434	0.397	8.5	132	0.00	8.21
30	M	methyl acetate	0.530	0.461	13.0	116	-0.01	7.98
31	M	methyl tert butyl ether	1.386	1.243	10.3	125	0.00	8.57
32	M	trans-1,2-dichloroethene	0.571	0.529	7.4	129	0.00	8.63
33	M	di-isopropyl ether	1.437	1.297	9.7	121	0.00	9.24
34	M	2-butanone	0.092	0.078	15.2	131	0.00	10.06
35	M	1,1-dichloroethane	0.743	0.694	6.6	129	0.00	9.27
36	M	chloroprene	0.577	0.539	6.6	128	0.00	9.39
37	M	acrylonitrile	0.249	0.224	10.0	120	0.00	8.60
38	M	vinyl acetate	0.088	0.089	-1.1	129	0.00	9.27
39	M	ethyl tert-butyl ether	1.305	1.206	7.6	121	0.00	9.75
40	M	ethyl acetate	0.095	0.084	11.6	118	0.00	10.07
41	M	2,2-dichloropropane	0.393	0.355	9.7	134	0.00	10.08

Continuing Calibration Summary

Job Number: JC16204 **Sample:** V3A6452-CC6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149474.D
Project: BMS, Former Brule Area, PR

42	M	cis-1,2-dichloroethene	0.472	0.420	11.0	124	0.00	10.08
43		methylacrylate	0.089	0.087	2.2	123	0.00	10.16
44	M	propionitrile	0.108	0.097	10.2	120	-0.01	10.17
45	M	bromochloromethane	0.212	0.208	1.9	132	0.00	10.42
46	M	tetrahydrofuran	0.257	0.222	13.6	118	0.00	10.45
47	M	chloroform	0.497	0.438	11.9	129	0.00	10.48
48		t-butyl formate	0.442	0.406	8.1	119	0.00	10.51
49	S	dibromofluoromethane (s)	0.482	0.483	-0.2	142	0.00	10.69
50	S	1,2-dichloroethane-d4 (s)	0.591	0.603	-2.0	145	0.00	11.14
51	M	freon 113	0.233	0.253	-8.6	146	0.00	7.35
52	M	methacrylonitrile	0.267	0.239	10.5	124	0.00	10.36
53	M	1,1,1-trichloroethane	0.550	0.522	5.1	135	0.00	10.74
54	M	Cyclohexane	0.562	0.502	10.7	136	0.00	10.81
55	I	1,4-difluorobenzene	1.000	1.000	0.0	142	0.00	11.60
56	M	epichlorohydrin	0.049	0.044	10.2	116	0.00	12.93
57	M	n-butyl alcohol	0.015	0.013	13.3	111	0.00	11.74
58	M	carbon tetrachloride	0.321	0.307	4.4	139	0.00	10.95
59	M	1,1-dichloropropene	0.334	0.306	8.4	131	0.00	10.93
60		Tert Amyl Alcohol		----------NA----------				
61	M	hexane	0.308	0.290	5.8	138	0.00	8.98
62		2,2,4-TRIMETHYLPENTANE	0.849	0.803	5.4	132	0.00	11.20
63	M	benzene	1.073	0.972	9.4	129	0.00	11.21
64	M	tert-amyl methyl ether	0.172	0.160	7.0	123	-0.01	11.23
65	M	heptane	0.175	0.166	5.1	133	0.00	11.38
66	M	isopropyl acetate	0.070	0.066	5.7	122	0.00	11.13
67	M	1,2-dichloroethane	0.353	0.340	3.7	131	0.00	11.23
68	m	Ethyl acrylate		----------NA----------				
69	M	trichloroethene	0.269	0.246	8.6	130	0.00	11.96
70		tert-Amyl Ethyl Ether		----------NA----------				
71	M	methyl methacrylate	0.089	0.088	1.1	128	0.00	12.24
72	M	2-nitropropane	0.156	0.142	9.0	127	0.00	12.78
73	M	2-chloroethyl vinyl ether	0.207	0.195	5.8	122	0.00	12.79
74	M	1,2-dichloropropane	0.281	0.261	7.1	128	0.00	12.24
75	M	dibromomethane	0.182	0.174	4.4	131	0.00	12.41
76	M	methylcyclohexane	0.368	0.350	4.9	131	0.00	12.17
77	M	bromodichloromethane	0.388	0.356	8.2	131	0.00	12.55
78	M	cis-1,3-dichloropropene	0.471	0.444	5.7	129	0.00	13.02
79	S	toluene-d8 (s)	1.171	1.148	2.0	139	0.00	13.33
80	M	4-methyl-2-pentanone	0.175	0.158	9.7	121	0.00	13.12
81	M	toluene	1.171	1.059	9.6	130	0.00	13.41
82	M	3-methyl-1-butanol	0.025	0.021	16.0	110	0.00	13.14
83	M	trans-1,3-dichloropropene	0.461	0.434	5.9	129	0.00	13.62
84	M	ethyl methacrylate	0.470	0.420	10.6	121	0.00	13.60
85	M	1,1,2-trichloroethane	0.245	0.224	8.6	129	0.00	13.85
86	M	2-hexanone	0.178	0.160	10.1	120	0.00	14.03
87	I	chlorobenzene-d5	1.000	1.000	0.0	141	0.00	14.95
88	M	tetrachloroethene	0.284	0.272	4.2	136	0.00	14.03
89		BUTYL ACRYLATE		----------NA----------				
90	M	1,3-dichloropropane	0.466	0.445	4.5	130	0.00	14.05
91	M	butyl acetate	0.285	0.241	15.4	112	0.00	14.10
92		3,3-dimethyl-1-butanol	0.054	0.045	16.7	110	-0.01	14.21
93	M	dibromochloromethane	0.330	0.318	3.6	132	0.00	14.33
94	M	1,2-dibromoethane	0.318	0.302	5.0	130	0.00	14.50
95	M	chlorobenzene	0.768	0.725	5.6	131	0.00	14.98
96	M	1,1,1,2-tetrachloroethane	0.285	0.276	3.2	133	0.00	15.05
97	M	ethylbenzene	1.396	1.259	9.8	128	0.00	15.04
98	M	m,p-xylene	0.516	0.485	6.0	130	0.00	15.15
99	M	o-xylene	1.172	1.063	9.3	129	0.00	15.60

Continuing Calibration Summary

Job Number: JC16204 **Sample:** V3A6452-CC6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149474.D
Project: BMS, Former Brule Area, PR

100	M	styrene	0.919	0.872	5.1	129	0.00	15.61
101	M	bromoform	0.271	0.266	1.8	131	0.00	15.91
102	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	145	0.00	17.44
103	M	isopropylbenzene	2.590	2.347	9.4	130	0.00	15.96
104	S	4-bromofluorobenzene (s)	1.003	0.949	5.4	137	0.00	16.18
105		cyclohexanone	0.015	0.032	-113.3#	270#	0.00	16.16
106	M	bromobenzene	0.697	0.660	5.3	133	0.00	16.40
107	M	1,1,2,2-tetrachloroethane	0.947	0.863	8.9	127	0.00	16.29
108	M	trans-1,4-dichloro-2-bute	0.255	0.219	14.1	119	0.00	16.34
109	M	1,2,3-trichloropropane	0.250	0.230	8.0	128	0.00	16.38
110	M	n-propylbenzene	3.123	2.847	8.8	130	0.00	16.39
111	M	2-chlorotoluene	0.642	0.594	7.5	130	0.00	16.56
112	M	4-chlorotoluene	2.077	1.830	11.9	125	0.00	16.67
113	M	1,3,5-trimethylbenzene	2.230	2.043	8.4	128	0.00	16.55
114	M	tert-butylbenzene	0.417	0.396	5.0	134	0.00	16.93
115	M	pentachloroethane	0.404	0.393	2.7	133	0.00	17.03
116	M	1,2,4-trimethylbenzene	2.312	2.123	8.2	127	0.00	16.98
117	M	sec-butylbenzene	2.840	2.620	7.7	132	0.00	17.15
118	M	1,3-dichlorobenzene	1.324	1.265	4.5	133	0.00	17.37
119	M	p-isopropyltoluene	2.370	2.217	6.5	131	0.00	17.28
120	M	1,4-dichlorobenzene	1.319	1.273	3.5	133	0.00	17.46
121	M	1,2-dichlorobenzene	1.279	1.223	4.4	131	0.00	17.89
122	M	benzyl chloride	1.897	1.762	7.1	128	0.00	17.59
123	M	n-butylbenzene	1.269	1.182	6.9	131	0.00	17.73
124	M	1,2-dibromo-3-chloropropa	0.213	0.175	17.8	120	-0.01	18.74
125		1,3,5-TRICHLOROBENZENE	0.947	0.929	1.9	132	0.00	18.94
126	M	1,2,4-trichlorobenzene	0.824	0.824	0.0	134	0.00	19.63
127	M	hexachlorobutadiene	0.413	0.392	5.1	132	0.00	19.74
128	M	naphthalene	2.429	2.399	1.2	131	0.00	19.95
129	M	1,2,3-trichlorobenzene	0.763	0.760	0.4	130	0.00	20.22
130	M	hexachloroethane	0.385	0.376	2.3	138	0.00	18.18

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3a149334.D M3A6446.M Mon Mar 21 13:34:55 2016 ACCUNJ

Continuing Calibration Summary

Job Number: JC16204 **Sample:** V3A6452-CC6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149475.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\3A149475.D                    Vial: 3
Acq On    : 21 Mar 2016  10:30 am                       Operator: tracyk
Sample    : cc6446-1                                    Inst    : MS3A
Misc      : MS99820,V3A6452,5,,,,1                      Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\M3A6446.M (RTE Integrator)
Title        : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update  : Wed Mar 16 11:16:12 2016
Response via : Multiple Level Calibration

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

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	109	-0.01	8.17
2	M	tertiary butyl alcohol		----------NA----------				
3		ethanol		----------NA----------				
4	M	1,4-dioxane		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	137	0.00	10.64
6		FREON 115		----------NA----------				
7		FREON 152A		----------NA----------				
8	M	chlorodifluoromethane		----------NA----------				
9	M	dichlorodifluoromethane		----------NA----------				
10	M	chloromethane		----------NA----------				
11	M	vinyl chloride		----------NA----------				
12	M	bromomethane	0.309	0.315	-1.9	0	0.00	5.68
13		FREON 123A		----------NA----------				
14		FREON 123		----------NA----------				
15		2-CHLOROPROPANE		----------NA----------				
16	M	chloroethane		----------NA----------				
17	M	trichlorofluoromethane		----------NA----------				
18	M	Pentane		----------NA----------				
19		1-chloropropane		----------NA----------				
20	M	ethyl ether		----------NA----------				
21	M	acrolein		----------NA----------				
22	M	1,1-dichloroethene		----------NA----------				
23	M	acetone		----------NA----------				
24	M	allyl chloride		----------NA----------				
25	M	acetonitrile		----------NA----------				
26	M	iodomethane		----------NA----------				
27	M	iso-butyl alcohol		----------NA----------				
28	M	carbon disulfide		----------NA----------				
29	M	methylene chloride		----------NA----------				
30	M	methyl acetate		----------NA----------				
31	M	methyl tert butyl ether		----------NA----------				
32	M	trans-1,2-dichloroethene		----------NA----------				
33	M	di-isopropyl ether		----------NA----------				
34	M	2-butanone		----------NA----------				
35	M	1,1-dichloroethane		----------NA----------				
36	M	chloroprene		----------NA----------				
37	M	acrylonitrile		----------NA----------				
38	M	vinyl acetate		----------NA----------				
39	M	ethyl tert-butyl ether		----------NA----------				
40	M	ethyl acetate		----------NA----------				
41	M	2,2-dichloropropane		----------NA----------				

Continuing Calibration Summary

Job Number: JC16204 **Sample:** V3A6452-CC6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149475.D
Project: BMS, Former Brule Area, PR

42	M	cis-1,2-dichloroethene		----------NA----------				
43		methylacrylate		----------NA----------				
44	M	propionitrile		----------NA----------				
45	M	bromochloromethane		----------NA----------				
46	M	tetrahydrofuran		----------NA----------				
47	M	chloroform		----------NA----------				
48		t-butyl formate		----------NA----------				
49	S	dibromofluoromethane (s)	0.482	0.496	-2.9	141	0.00	10.69
50	S	1,2-dichloroethane-d4 (s)	0.591	0.604	-2.2	140	0.00	11.14
51	M	freon 113		----------NA----------				
52	M	methacrylonitrile		----------NA----------				
53	M	1,1,1-trichloroethane		----------NA----------				
54	M	Cyclohexane		----------NA----------				
55	I	1,4-difluorobenzene	1.000	1.000	0.0	138	0.00	11.60
56	M	epichlorohydrin		----------NA----------				
57	M	n-butyl alcohol		----------NA----------				
58	M	carbon tetrachloride		----------NA----------				
59	M	1,1-dichloropropene		----------NA----------				
60		Tert Amyl Alcohol		----------NA----------				
61	M	hexane		----------NA----------				
62		2,2,4-TRIMETHYLPENTANE		----------NA----------				
63	M	benzene		----------NA----------				
64	M	tert-amyl methyl ether		----------NA----------				
65	M	heptane		----------NA----------				
66	M	isopropyl acetate		----------NA----------				
67	M	1,2-dichloroethane		----------NA----------				
68	m	Ethyl acrylate		----------NA----------				
69	M	trichloroethene		----------NA----------				
70		tert-Amyl Ethyl Ether		----------NA----------				
71	M	methyl methacrylate		----------NA----------				
72	M	2-nitropropane		----------NA----------				
73	M	2-chloroethyl vinyl ether		----------NA----------				
74	M	1,2-dichloropropane		----------NA----------				
75	M	dibromomethane		----------NA----------				
76	M	methylcyclohexane		----------NA----------				
77	M	bromodichloromethane		----------NA----------				
78	M	cis-1,3-dichloropropene		----------NA----------				
79	S	toluene-d8 (s)	1.171	1.124	4.0	132	0.00	13.33
80	M	4-methyl-2-pentanone		----------NA----------				
81	M	toluene		----------NA----------				
82	M	3-methyl-1-butanol		----------NA----------				
83	M	trans-1,3-dichloropropene		----------NA----------				
84	M	ethyl methacrylate		----------NA----------				
85	M	1,1,2-trichloroethane		----------NA----------				
86	M	2-hexanone		----------NA----------				
87	I	chlorobenzene-d5	1.000	1.000	0.0	131	0.00	14.95
88	M	tetrachloroethene		----------NA----------				
89		BUTYL ACRYLATE		----------NA----------				
90	M	1,3-dichloropropane		----------NA----------				
91	M	butyl acetate		----------NA----------				
92		3,3-dimethyl-1-butanol		----------NA----------				
93	M	dibromochloromethane		----------NA----------				
94	M	1,2-dibromoethane		----------NA----------				
95	M	chlorobenzene		----------NA----------				
96	M	1,1,1,2-tetrachloroethane		----------NA----------				
97	M	ethylbenzene		----------NA----------				
98	M	m,p-xylene		----------NA----------				
99	M	o-xylene		----------NA----------				

Continuing Calibration Summary

Job Number: JC16204 **Sample:** V3A6452-CC6446
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 3A149475.D
Project: BMS, Former Brule Area, PR

100	M	styrene		----------NA----------				
101	M	bromoform		----------NA----------				
102	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	142	0.00	17.44
103	M	isopropylbenzene		----------NA----------				
104	S	4-bromofluorobenzene (s)	1.003	0.921	8.2	128	0.00	16.18
105		cyclohexanone		----------NA----------				
106	M	bromobenzene		----------NA----------				
107	M	1,1,2,2-tetrachloroethane		----------NA----------				
108	M	trans-1,4-dichloro-2-bute		----------NA----------				
109	M	1,2,3-trichloropropane		----------NA----------				
110	M	n-propylbenzene		----------NA----------				
111	M	2-chlorotoluene		----------NA----------				
112	M	4-chlorotoluene		----------NA----------				
113	M	1,3,5-trimethylbenzene		----------NA----------				
114	M	tert-butylbenzene		----------NA----------				
115	M	pentachloroethane		----------NA----------				
116	M	1,2,4-trimethylbenzene		----------NA----------				
117	M	sec-butylbenzene		----------NA----------				
118	M	1,3-dichlorobenzene		----------NA----------				
119	M	p-isopropyltoluene		----------NA----------				
120	M	1,4-dichlorobenzene		----------NA----------				
121	M	1,2-dichlorobenzene		----------NA----------				
122	M	benzyl chloride		----------NA----------				
123	M	n-butylbenzene		----------NA----------				
124	M	1,2-dibromo-3-chloropropa		----------NA----------				
125		1,3,5-TRICHLOROBENZENE		----------NA----------				
126	M	1,2,4-trichlorobenzene		----------NA----------				
127	M	hexachlorobutadiene		----------NA----------				
128	M	naphthalene		----------NA----------				
129	M	1,2,3-trichlorobenzene		----------NA----------				
130	M	hexachloroethane		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3a149330.D M3A6446.M Mon Mar 21 13:36:13 2016 ACCUNJ

GC/MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149430.D
Acq On : 18 Mar 2016 12:48 pm
Operator : tracyk
Sample : jc16204-1
Misc : MS99687,V3A6450,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 18 13:20:40 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Fri Mar 18 13:18:15 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.18	65	441124	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	526468	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.60	114	814745	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	802750	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	439825	50.00	ug/L	0.00

System Monitoring Compounds						
49) dibromofluoromethane (s)	10.69	113	245775	48.38	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 96.76%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	293370	47.16	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 94.32%			
79) toluene-d8 (s)	13.33	98	948671	49.70	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.40%			
104) 4-bromofluorobenzene (s)	16.19	95	410973	46.56	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 93.12%			

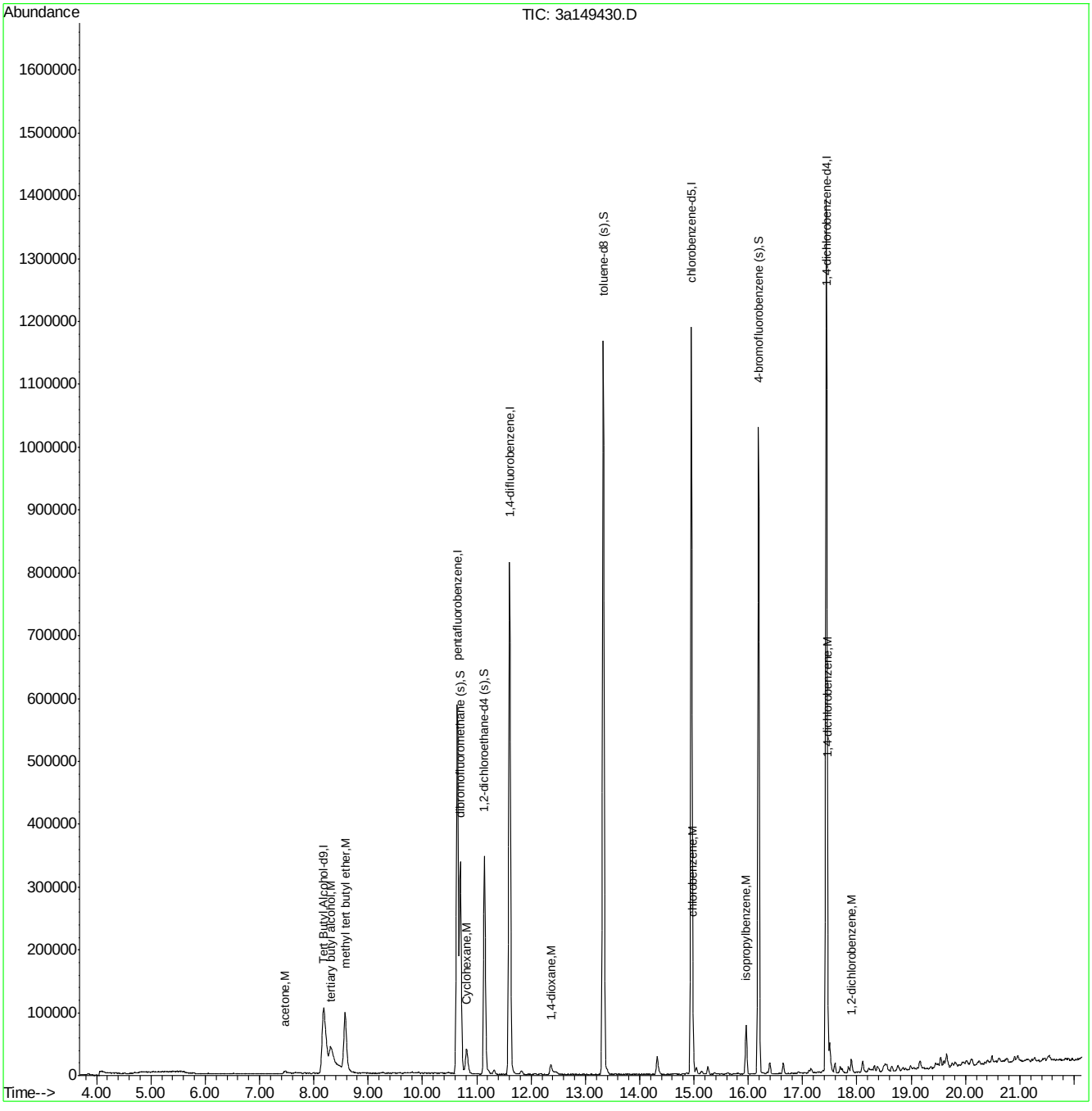
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.31	59	108462	145.29	ug/L	84
4) 1,4-dioxane	12.37	88	25346	499.54	ug/L	98
23) acetone	7.47	58	4154	6.87	ug/L #	79
31) methyl tert butyl ether	8.58	73	158476	10.86	ug/L #	56
54) Cyclohexane	10.81	84	23797	4.02	ug/L #	56
95) chlorobenzene	14.98	112	15403	1.25	ug/L	91
103) isopropylbenzene	15.96	105	63315	2.78	ug/L	98
120) 1,4-dichlorobenzene	17.46	146	7411	0.64	ug/L	95
121) 1,2-dichlorobenzene	17.90	146	10457	0.93	ug/L	98

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

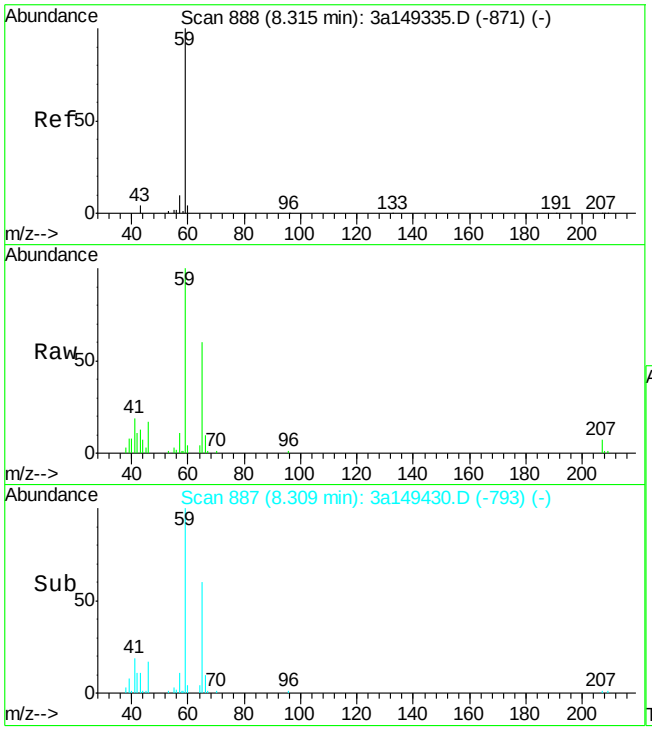
Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149430.D
Acq On : 18 Mar 2016 12:48 pm
Operator : tracyk
Sample : jc16204-1
Misc : MS99687,V3A6450,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 18 13:20:40 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Fri Mar 18 13:18:15 2016
Response via : Initial Calibration



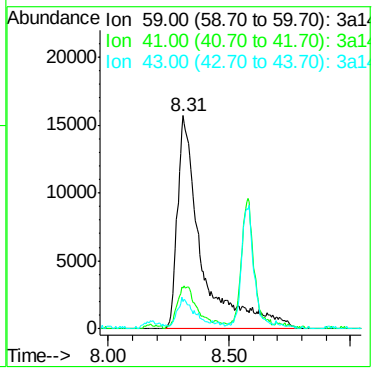
M3A6446.M Fri Mar 18 13:20:47 2016 ACCUNJ Page: 2

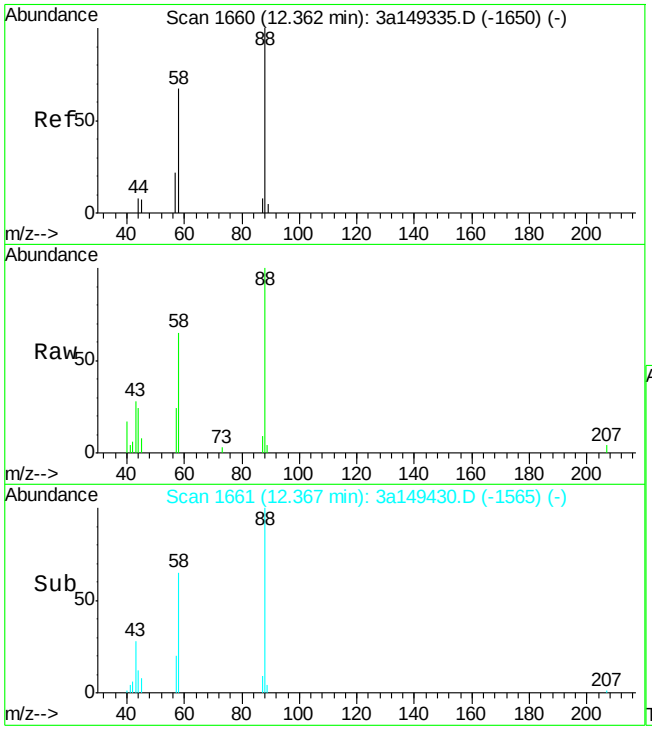


#2
tertiary butyl alcohol
Concen: 145.29 ug/L
RT: 8.31 min Scan# 887
Delta R.T. -0.00 min
Lab File: 3a149430.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion: 59 Resp: 108462

Ion	Ratio	Lower	Upper
59	100		
41	19.0	1.1	61.1
43	12.9	0.0	44.3

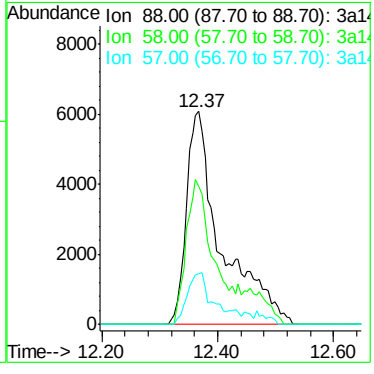


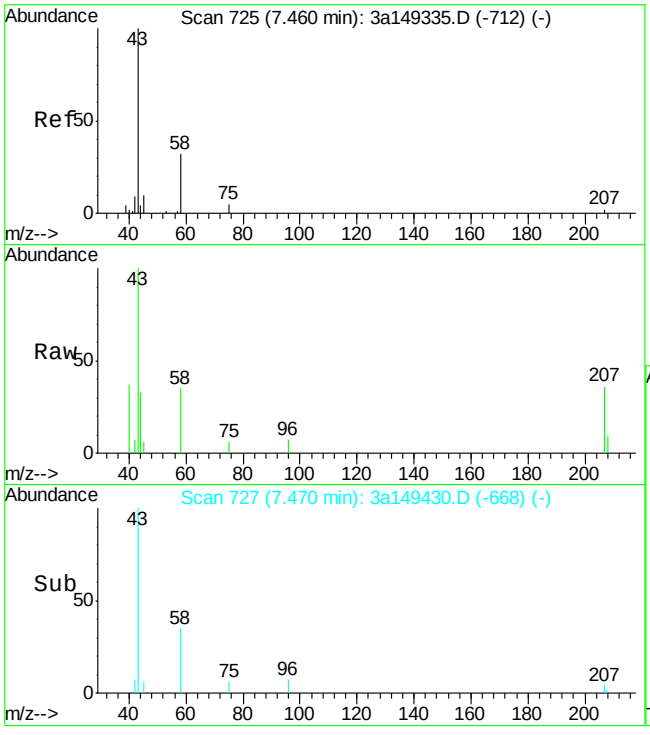


#4
1,4-dioxane
Concen: 499.54 ug/L
RT: 12.37 min Scan# 1661
Delta R.T. 0.01 min
Lab File: 3a149430.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion: 88 Resp: 25346

Ion	Ratio	Lower	Upper
88	100		
58	65.1	37.2	97.2
57	23.6	0.0	53.0

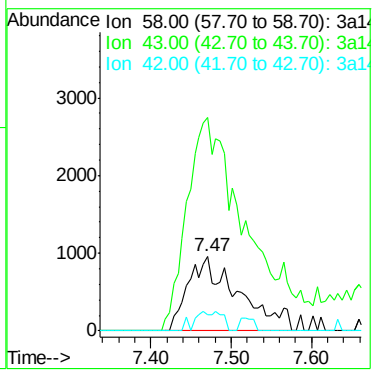


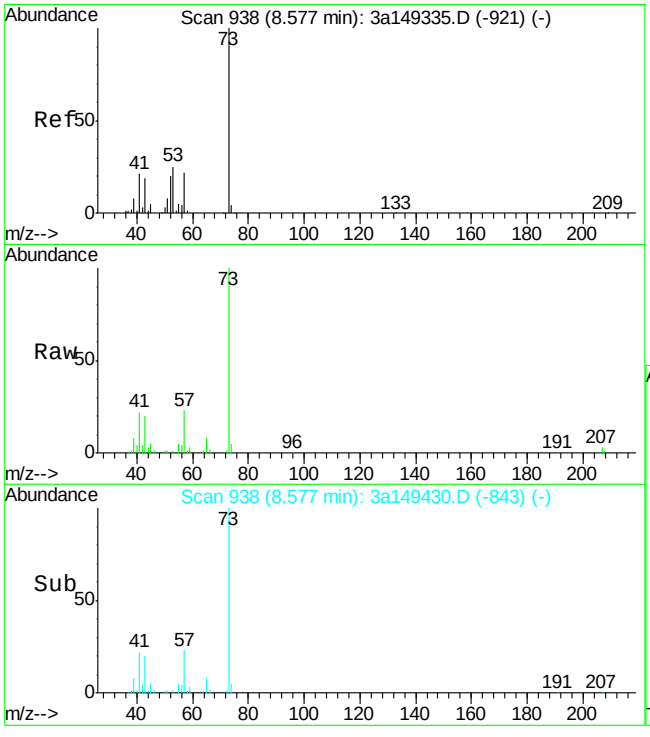


#23
acetone
Concen: 6.87 ug/L
RT: 7.47 min Scan# 727
Delta R.T. 0.01 min
Lab File: 3a149430.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion: 58 Resp: 4154

Ion	Ratio	Lower	Upper
58	100		
43	269.4	283.0	343.0#
42	21.2	0.0	58.6

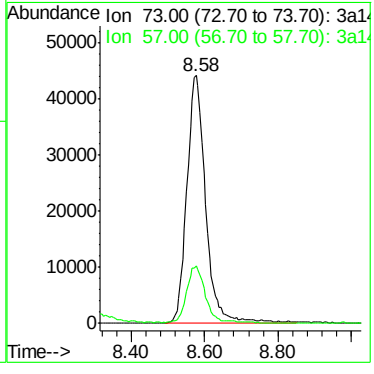


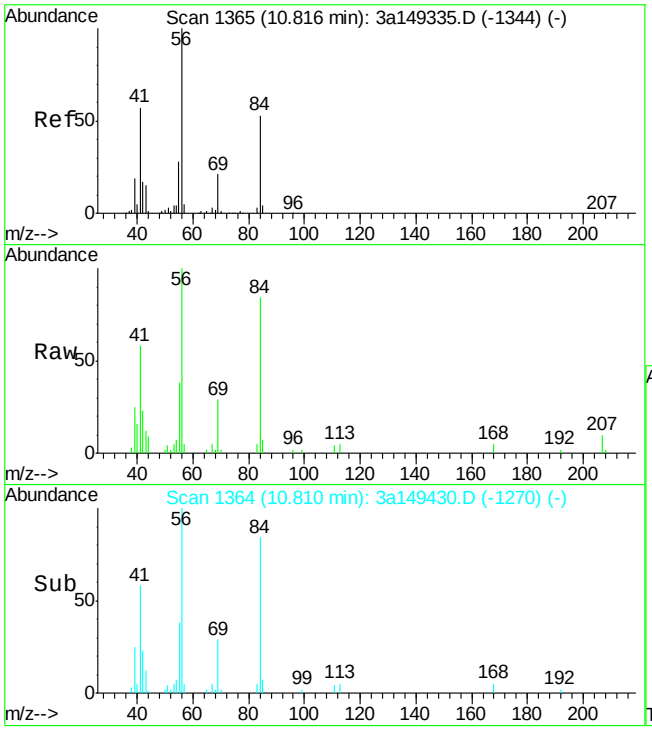


#31
methyl tert butyl ether
Concen: 10.86 ug/L
RT: 8.58 min Scan# 938
Delta R.T. 0.00 min
Lab File: 3a149430.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion: 73 Resp: 158476

Ion	Ratio	Lower	Upper
73	100		
57	23.1	25.0	85.0#

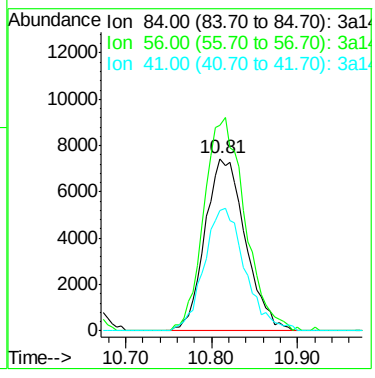


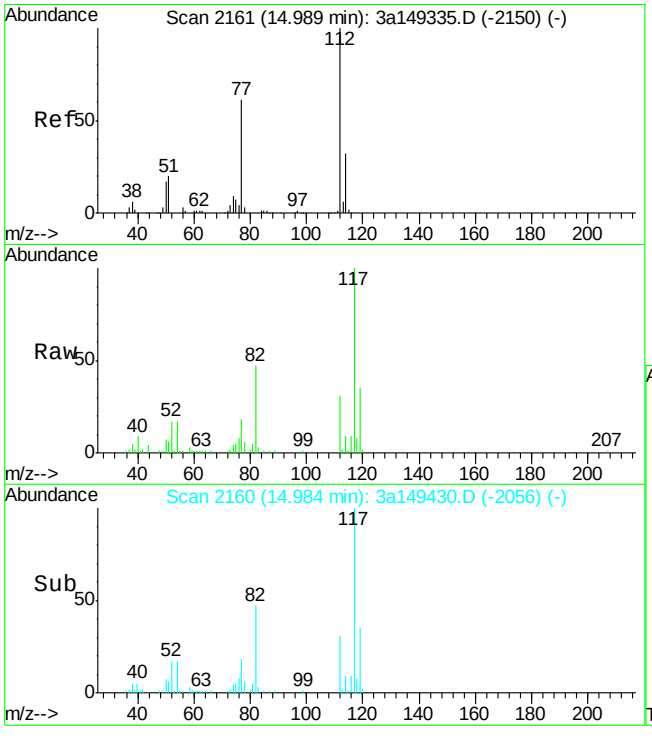


#54
Cyclohexane
Concen: 4.02 ug/L
RT: 10.81 min Scan# 1364
Delta R.T. -0.01 min
Lab File: 3a149430.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion: 84 Resp: 23797

Ion	Ratio	Lower	Upper
84	100		
56	119.2	159.0	219.0#
41	69.6	78.4	138.4#

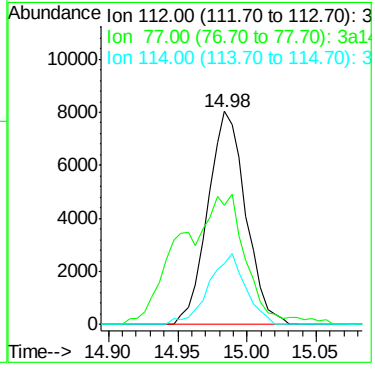


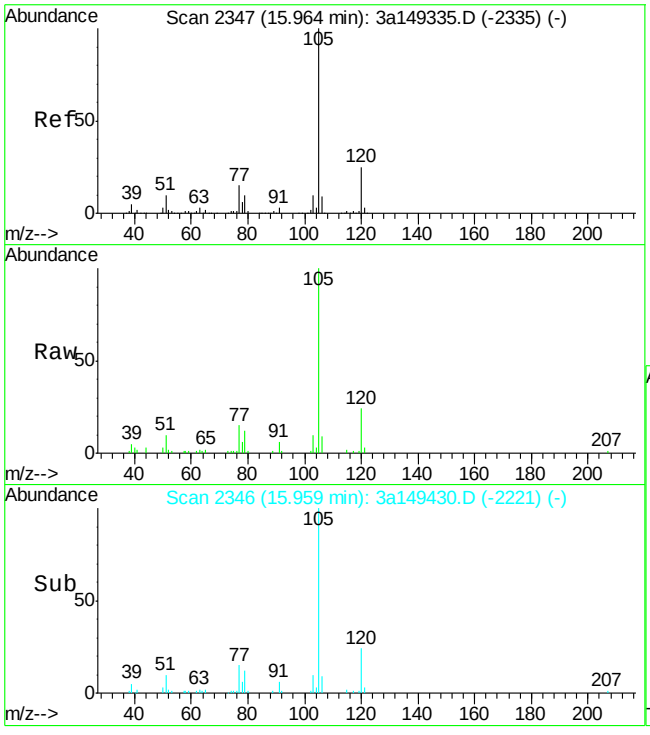


#95
chlorobenzene
Concen: 1.25 ug/L
RT: 14.98 min Scan# 2160
Delta R.T. -0.01 min
Lab File: 3a149430.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion:112 Resp: 15403

Ion	Ratio	Lower	Upper
112	100		
77	52.6	30.8	90.8
114	28.3	1.6	61.6

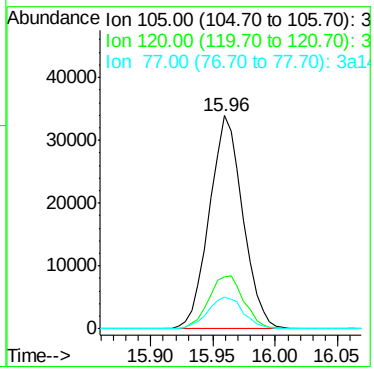


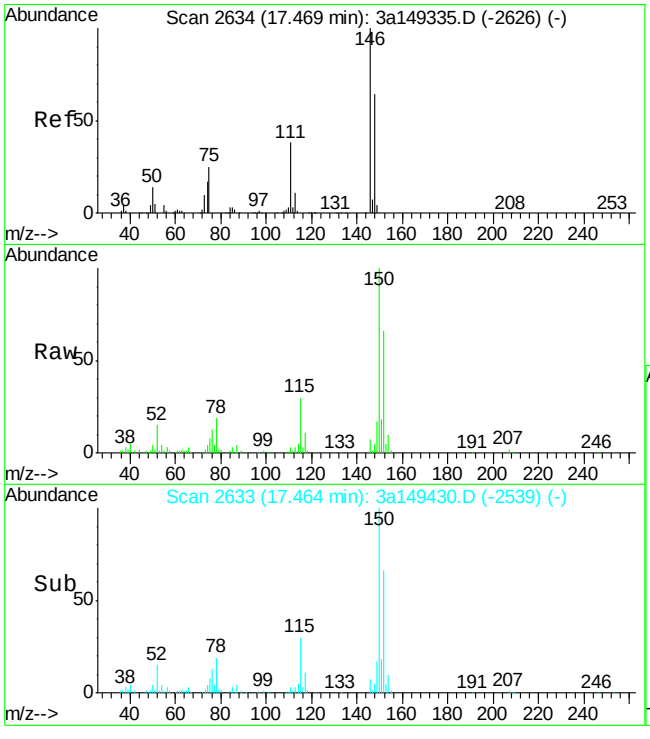


#103
isopropylbenzene
Concen: 2.78 ug/L
RT: 15.96 min Scan# 2346
Delta R.T. -0.01 min
Lab File: 3a149430.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion:105 Resp: 63315

Ion	Ratio	Lower	Upper
105	100		
120	24.3	0.0	55.3
77	15.2	0.0	44.8

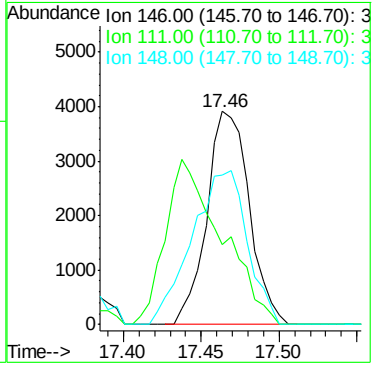


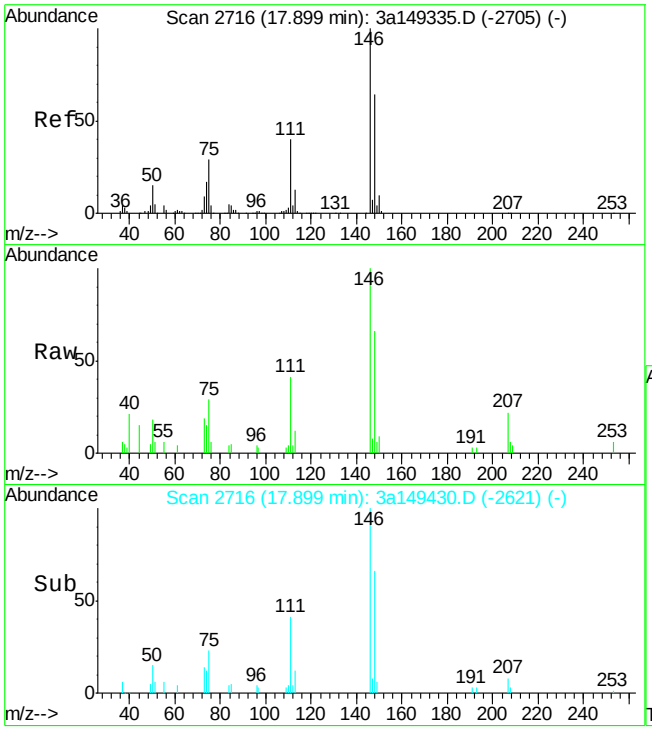


#120
1,4-dichlorobenzene
Concen: 0.64 ug/L
RT: 17.46 min Scan# 2633
Delta R.T. -0.01 min
Lab File: 3a149430.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion:146 Resp: 7411

Ion	Ratio	Lower	Upper
146	100		
111	37.8	8.2	68.2
148	70.2	34.2	94.2

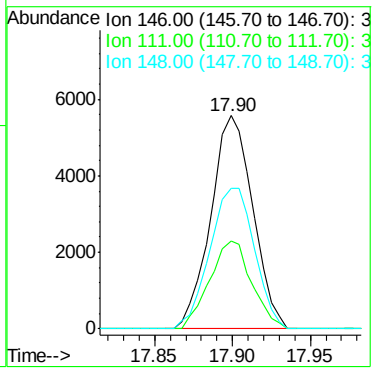




#121
1,2-dichlorobenzene
Concen: 0.93 ug/L
RT: 17.90 min Scan# 2716
Delta R.T. -0.00 min
Lab File: 3a149430.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion:146 Resp: 10457

Ion	Ratio	Lower	Upper
146	100		
111	41.2	10.3	70.3
148	65.9	33.5	93.5



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\relog\
Data File : 3a149430r.D
Acq On : 18 Mar 2016 12:48 pm
Operator : tracyk
Sample : jc16204-1r
Misc : MS99687,V3A6450,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 08 13:33:32 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Fri Mar 18 13:18:15 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.18	65	441124	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	526468	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.60	114	814745	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	802750	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	439825	50.00	ug/L	0.00

System Monitoring Compounds						
49) dibromofluoromethane (s)	10.69	113	245775	48.38	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 96.76%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	293370	47.16	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 94.32%			
79) toluene-d8 (s)	13.33	98	948671	49.70	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.40%			
104) 4-bromofluorobenzene (s)	16.19	95	410973	46.56	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 93.12%			

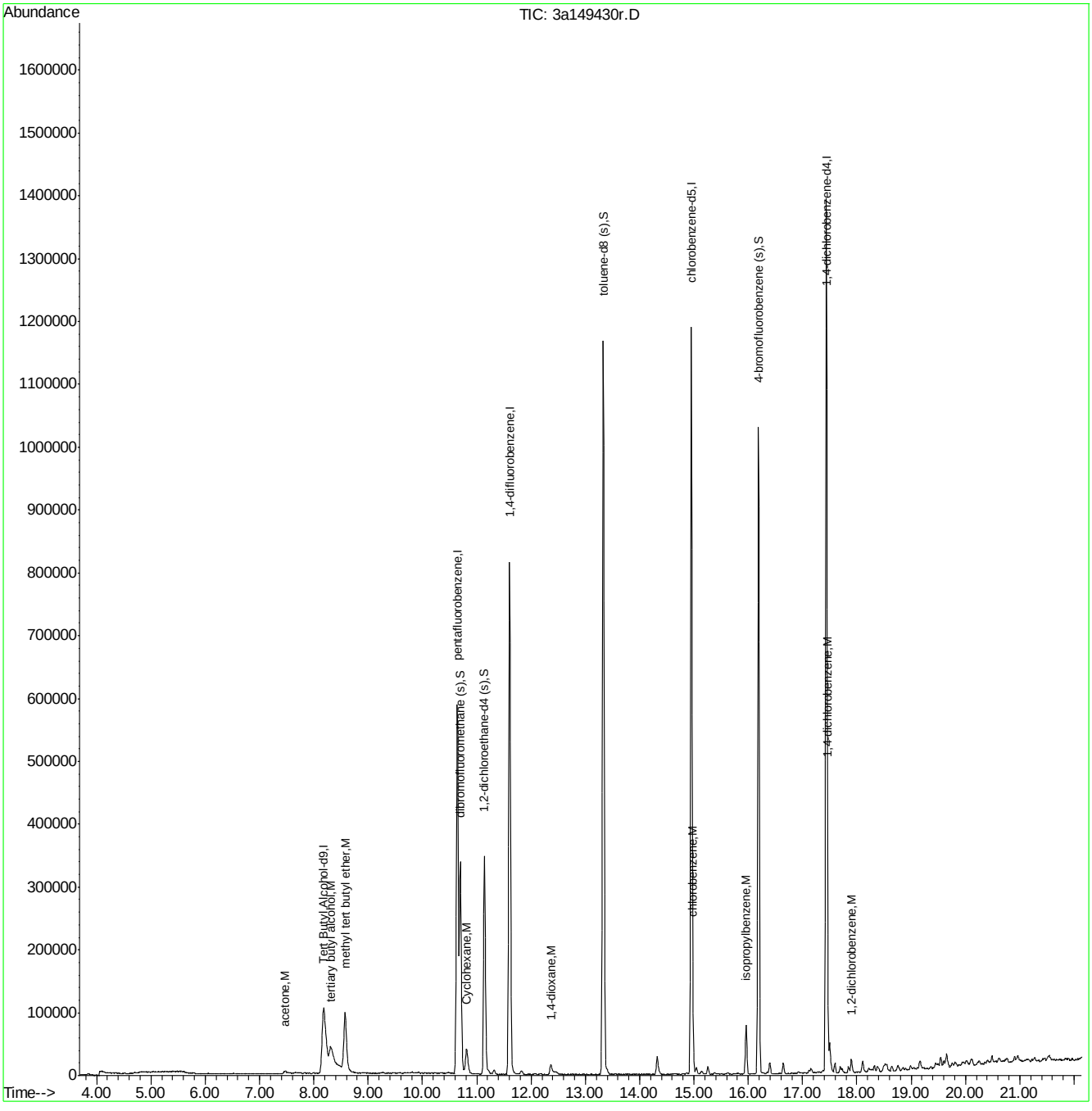
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.31	59	108462	145.29	ug/L	84
4) 1,4-dioxane	12.37	88	25346	499.54	ug/L	98
23) acetone	7.47	58	4154	6.87	ug/L #	79
31) methyl tert butyl ether	8.58	73	158476	10.86	ug/L #	56
54) Cyclohexane	10.81	84	23797	4.02	ug/L #	56
95) chlorobenzene	14.98	112	15403	1.25	ug/L	91
103) isopropylbenzene	15.96	105	63315	2.78	ug/L	98
120) 1,4-dichlorobenzene	17.46	146	7411	0.64	ug/L	95
121) 1,2-dichlorobenzene	17.90	146	10457	0.93	ug/L	98

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

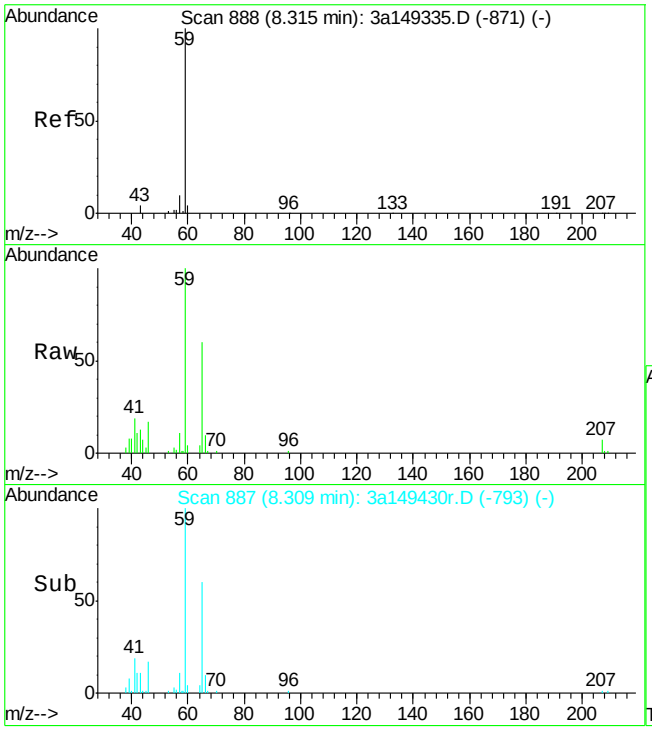
Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\relog\
Data File : 3a149430r.D
Acq On : 18 Mar 2016 12:48 pm
Operator : tracyk
Sample : jc16204-1r
Misc : MS99687,V3A6450,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 08 13:33:32 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Fri Mar 18 13:18:15 2016
Response via : Initial Calibration



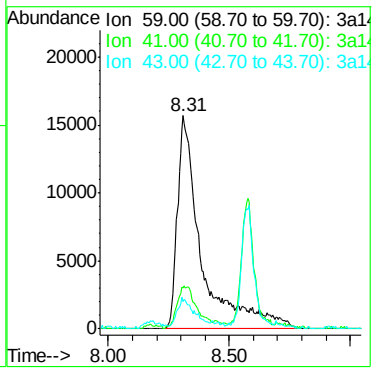
M3A6446.M Fri Apr 08 13:33:59 2016 ACCUNJ Page: 2

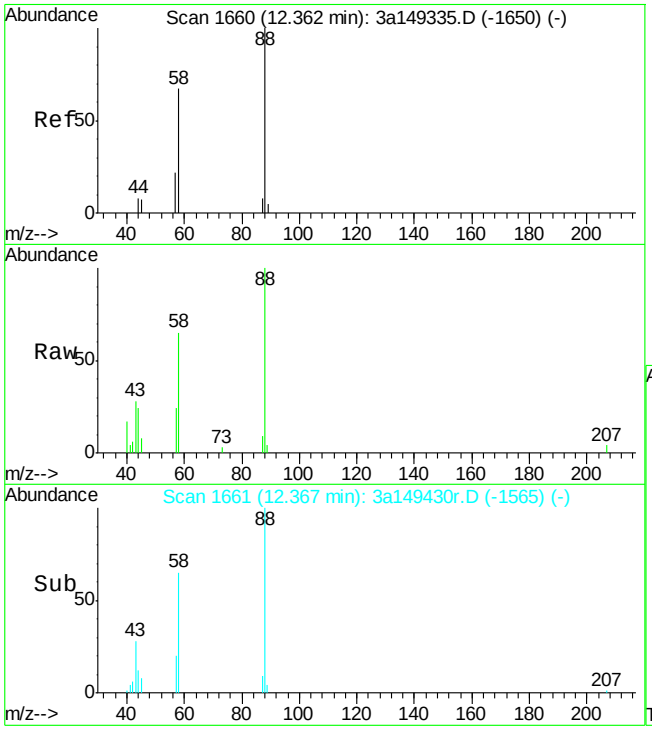


#2
tertiary butyl alcohol
Concen: 145.29 ug/L
RT: 8.31 min Scan# 887
Delta R.T. -0.00 min
Lab File: 3a149430r.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion: 59 Resp: 108462

Ion	Ratio	Lower	Upper
59	100		
41	19.0	1.1	61.1
43	12.9	0.0	44.3

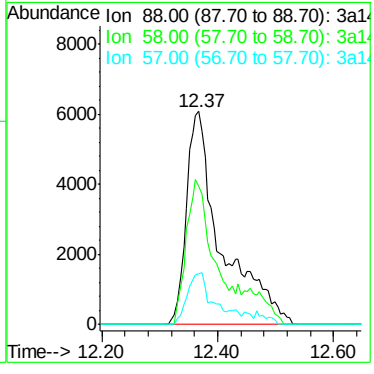


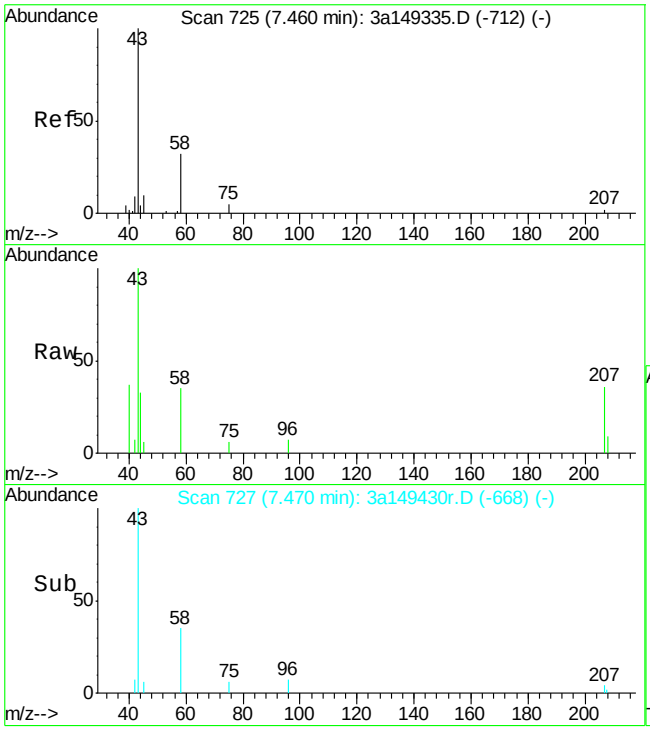


#4
1,4-dioxane
Concen: 499.54 ug/L
RT: 12.37 min Scan# 1661
Delta R.T. 0.01 min
Lab File: 3a149430r.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion: 88 Resp: 25346

Ion	Ratio	Lower	Upper
88	100		
58	65.1	37.2	97.2
57	23.6	0.0	53.0

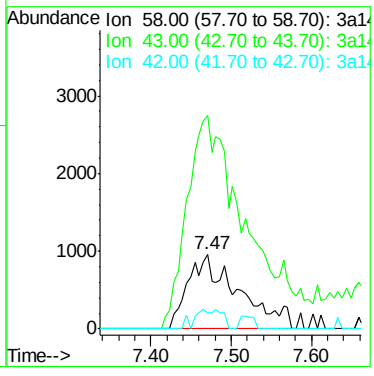


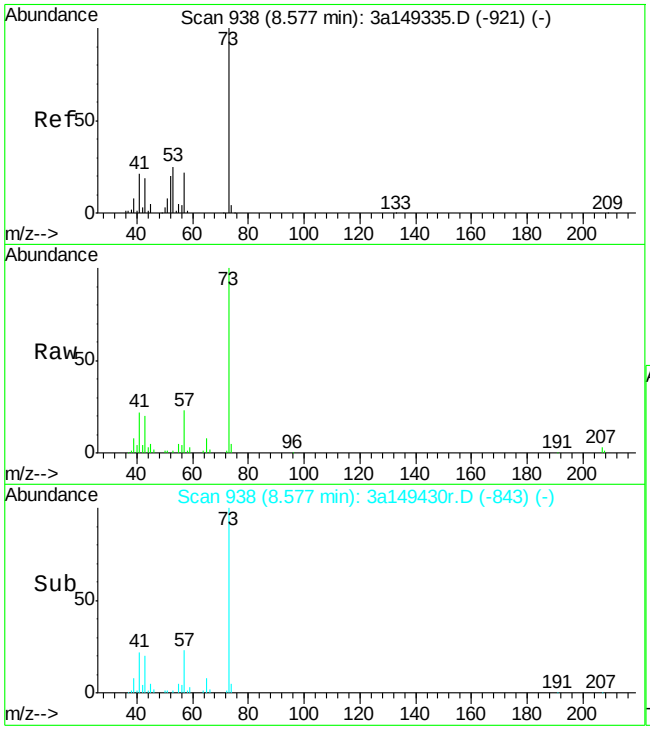


#23
acetone
Concen: 6.87 ug/L
RT: 7.47 min Scan# 727
Delta R.T. 0.01 min
Lab File: 3a149430r.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion: 58 Resp: 4154

Ion	Ratio	Lower	Upper
58	100		
43	269.4	283.0	343.0#
42	21.2	0.0	58.6

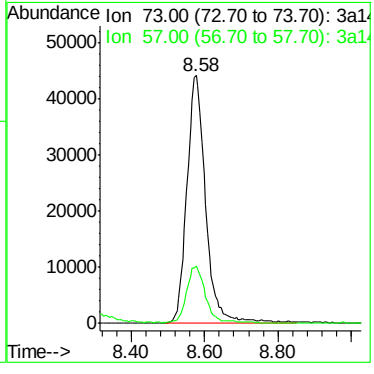


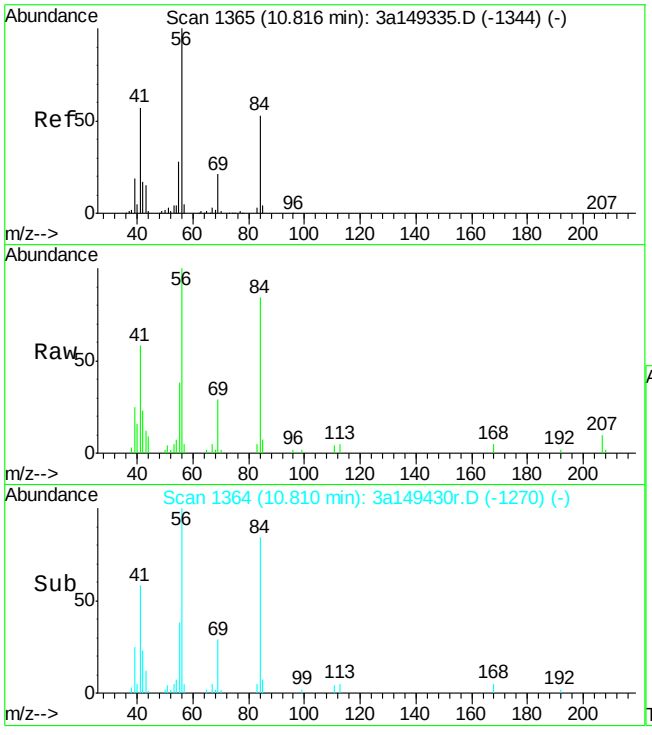


#31
methyl tert butyl ether
Concen: 10.86 ug/L
RT: 8.58 min Scan# 938
Delta R.T. 0.00 min
Lab File: 3a149430r.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion: 73 Resp: 158476

Ion	Ratio	Lower	Upper
73	100		
57	23.1	25.0	85.0#

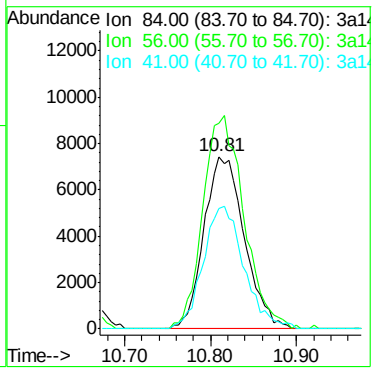


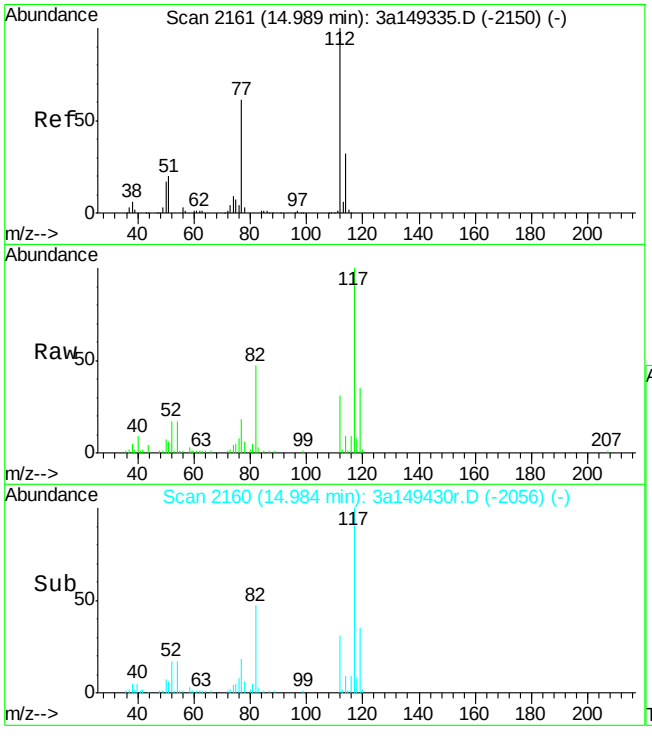


#54
Cyclohexane
Concen: 4.02 ug/L
RT: 10.81 min Scan# 1364
Delta R.T. -0.01 min
Lab File: 3a149430r.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion: 84 Resp: 23797

Ion	Ratio	Lower	Upper
84	100		
56	119.2	159.0	219.0#
41	69.6	78.4	138.4#

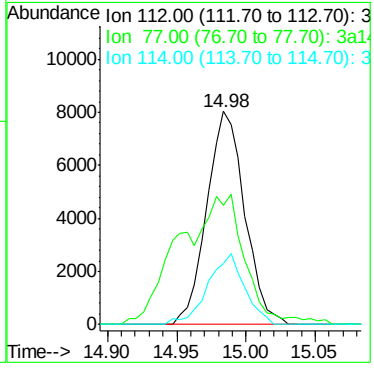




#95
chlorobenzene
Concen: 1.25 ug/L
RT: 14.98 min Scan# 2160
Delta R.T. -0.01 min
Lab File: 3a149430r.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion:112 Resp: 15403

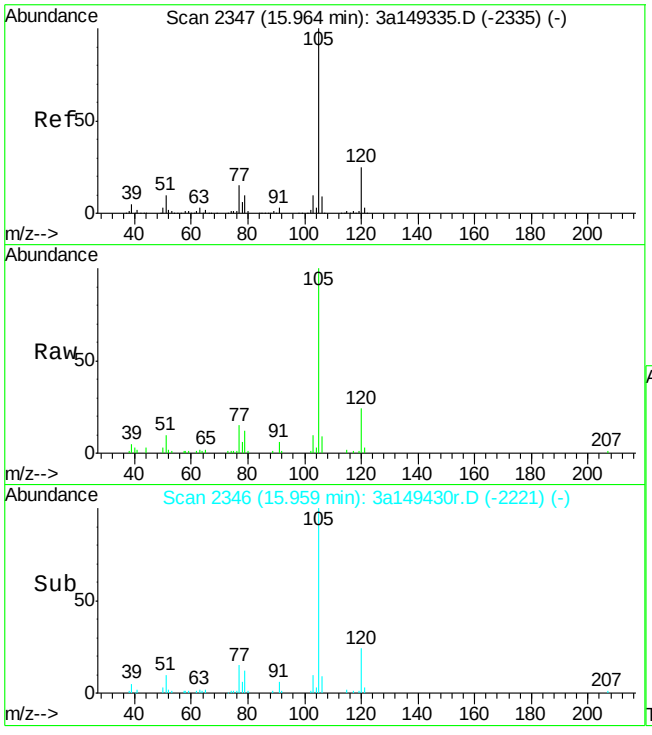
Ion	Ratio	Lower	Upper
112	100		
77	52.6	30.8	90.8
114	28.3	1.6	61.6



7.1.2

7

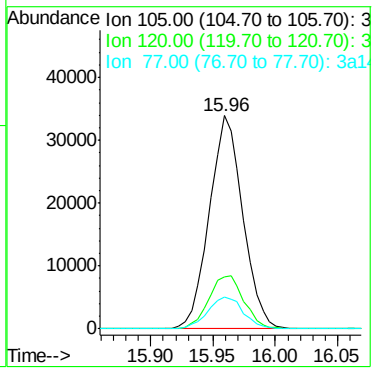
SGS ACCUTEST JC16204

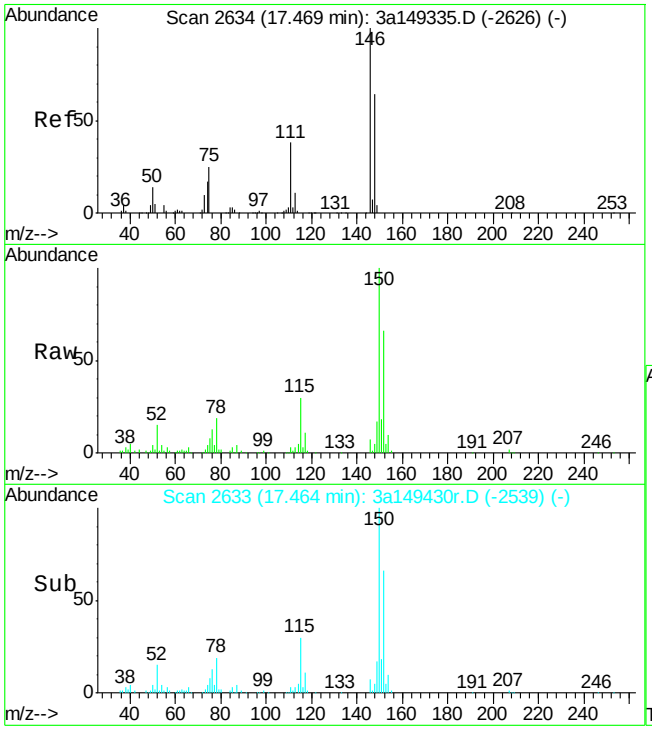


#103
isopropylbenzene
Concen: 2.78 ug/L
RT: 15.96 min Scan# 2346
Delta R.T. -0.01 min
Lab File: 3a149430r.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion:105 Resp: 63315

Ion	Ratio	Lower	Upper
105	100		
120	24.3	0.0	55.3
77	15.2	0.0	44.8

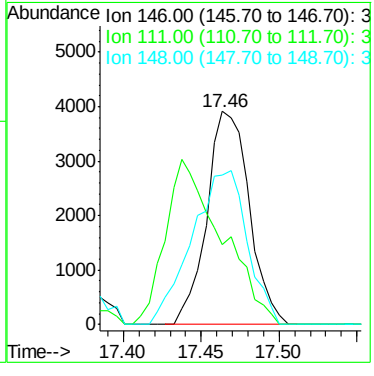


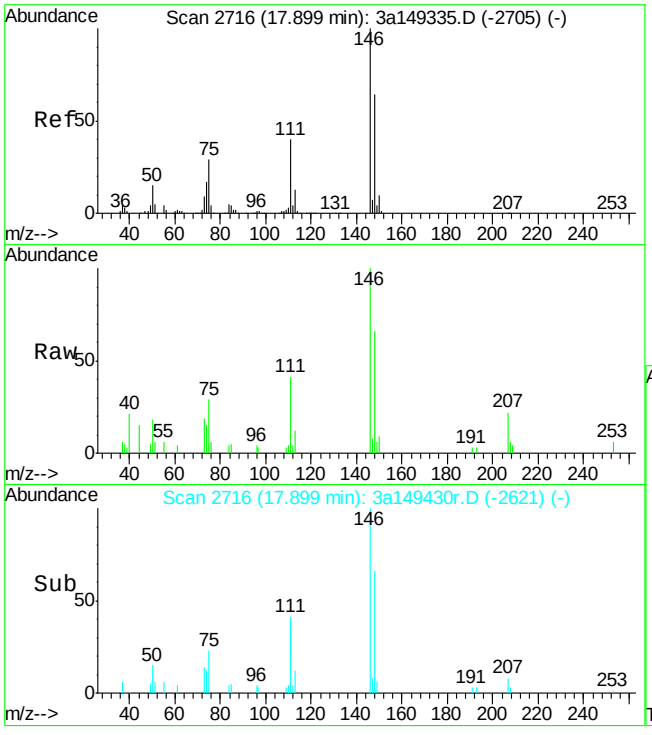


#120
1,4-dichlorobenzene
Concen: 0.64 ug/L
RT: 17.46 min Scan# 2633
Delta R.T. -0.01 min
Lab File: 3a149430r.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion:146 Resp: 7411

Ion	Ratio	Lower	Upper
146	100		
111	37.8	8.2	68.2
148	70.2	34.2	94.2

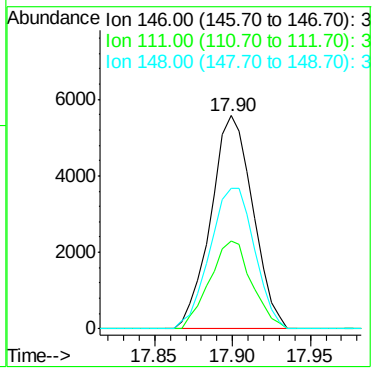




#121
1,2-dichlorobenzene
Concen: 0.93 ug/L
RT: 17.90 min Scan# 2716
Delta R.T. -0.00 min
Lab File: 3a149430r.D
Acq: 18 Mar 2016 12:48 pm

Tgt Ion:146 Resp: 10457

Ion	Ratio	Lower	Upper
146	100		
111	41.2	10.3	70.3
148	65.9	33.5	93.5



7.1.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149429.D
Acq On : 18 Mar 2016 12:18 pm
Operator : tracyk
Sample : jc16204-2
Misc : MS99687,V3A6450,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 18 13:17:15 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Fri Mar 18 12:36:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.18	65	469456	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	522861	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.60	114	808105	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	803101	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	438199	50.00	ug/L	0.00

System Monitoring Compounds						
49) dibromofluoromethane (s)	10.69	113	246899	48.94	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.88%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	295010	47.75	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 95.50%			
79) toluene-d8 (s)	13.33	98	950736	50.22	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.44%			
104) 4-bromofluorobenzene (s)	16.19	95	409310	46.55	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 93.10%			

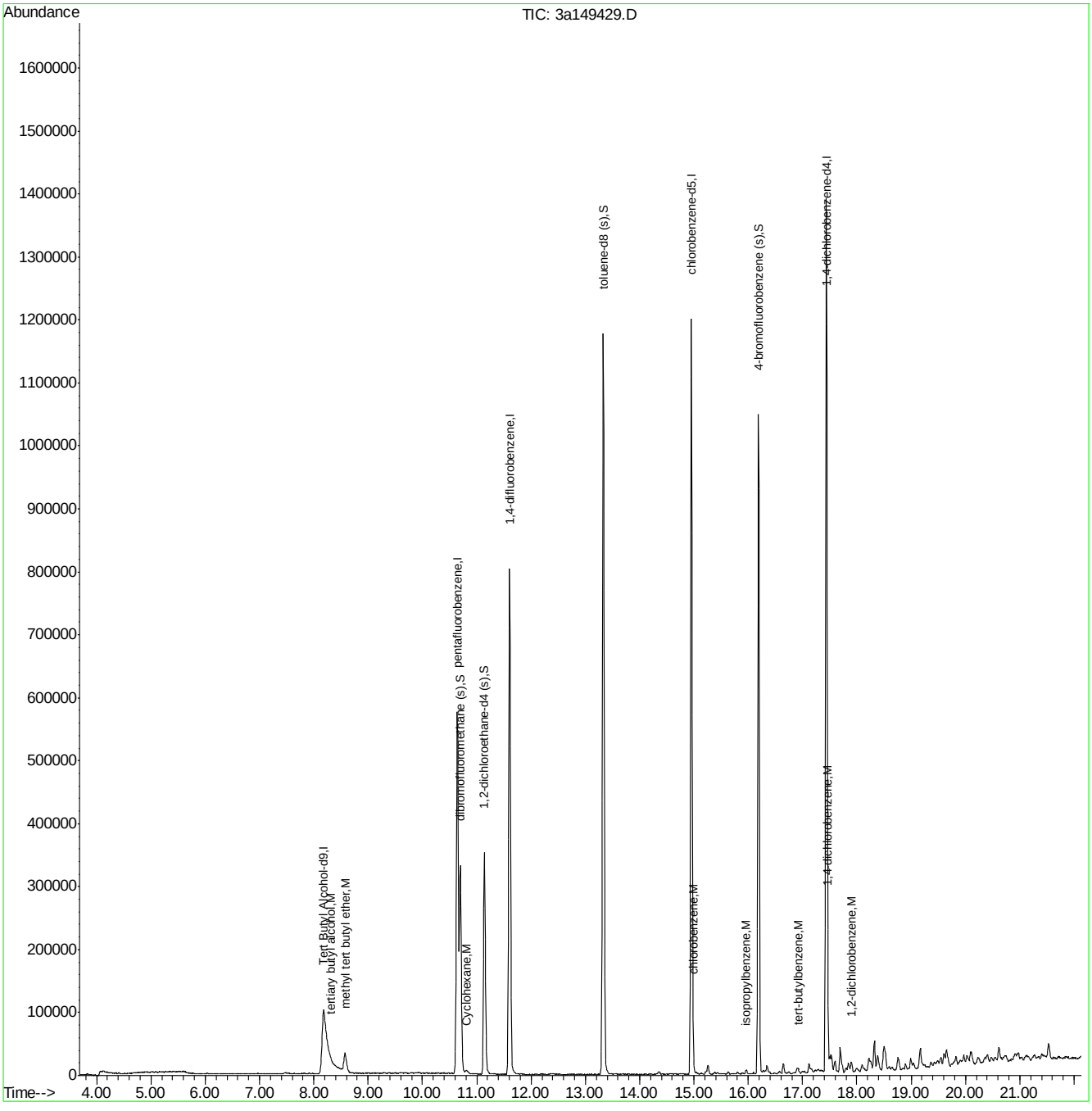
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.32	59	15354	19.33	ug/L	87
31) methyl tert butyl ether	8.58	73	48194	3.33	ug/L #	57
54) Cyclohexane	10.82	84	2520	0.43	ug/L #	44
95) chlorobenzene	14.99	112	4575	0.37	ug/L	88
103) isopropylbenzene	15.96	105	5305	0.23	ug/L	88
114) tert-butylbenzene	16.92	134	612	0.17	ug/L	98
120) 1,4-dichlorobenzene	17.47	146	4828	0.42	ug/L	86
121) 1,2-dichlorobenzene	17.90	146	9400	0.84	ug/L	93

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

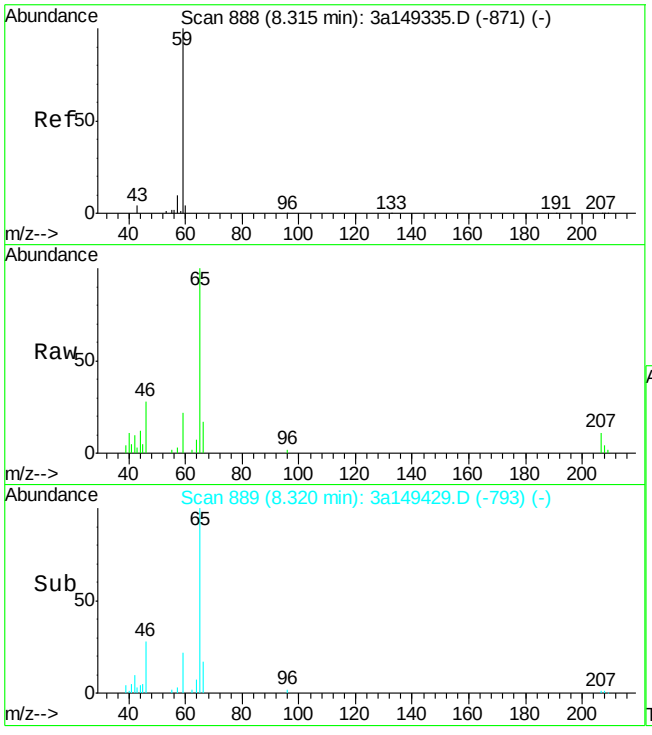
Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149429.D
Acq On : 18 Mar 2016 12:18 pm
Operator : tracyk
Sample : jc16204-2
Misc : MS99687,V3A6450,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 18 13:17:15 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Fri Mar 18 12:36:01 2016
Response via : Initial Calibration



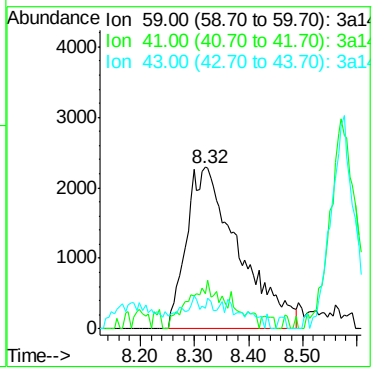
M3A6446.M Fri Mar 18 13:17:22 2016 ACCUNJ Page: 2

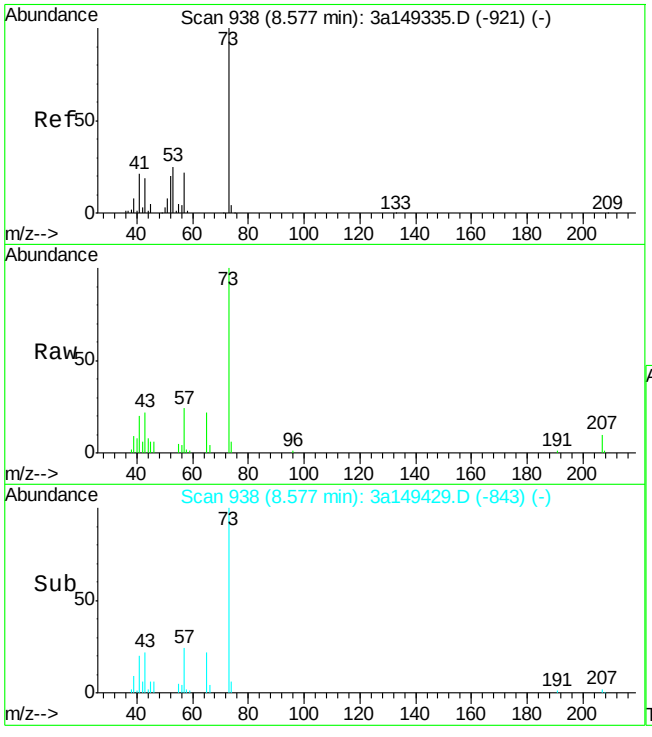


#2
tertiary butyl alcohol
Concen: 19.33 ug/L
RT: 8.32 min Scan# 889
Delta R.T. 0.01 min
Lab File: 3a149429.D
Acq: 18 Mar 2016 12:18 pm

Tgt Ion: 59 Resp: 15354

Ion	Ratio	Lower	Upper
59	100		
41	21.9	1.1	61.1
43	12.9	0.0	44.3

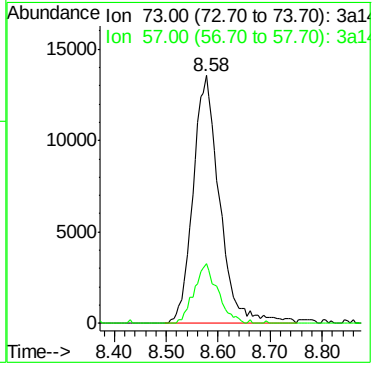


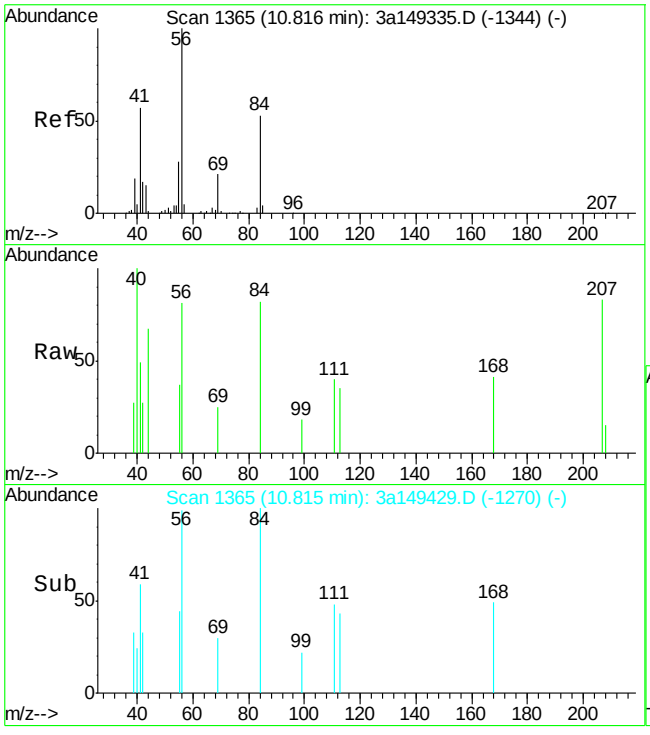


#31
methyl tert butyl ether
Concen: 3.33 ug/L
RT: 8.58 min Scan# 938
Delta R.T. 0.00 min
Lab File: 3a149429.D
Acq: 18 Mar 2016 12:18 pm

Tgt Ion: 73 Resp: 48194

Ion	Ratio	Lower	Upper
73	100		
57	24.0	25.0	85.0#

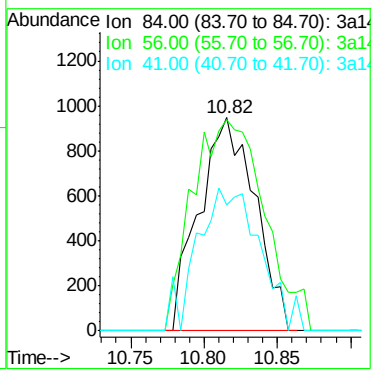


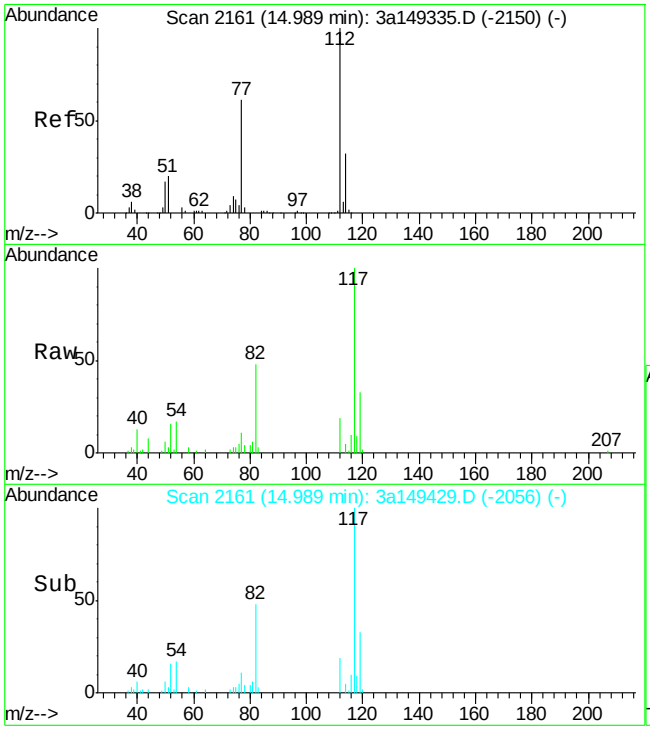


#54
Cyclohexane
Concen: 0.43 ug/L
RT: 10.82 min Scan# 1365
Delta R.T. -0.00 min
Lab File: 3a149429.D
Acq: 18 Mar 2016 12:18 pm

Tgt Ion: 84 Resp: 2520

Ion	Ratio	Lower	Upper
84	100		
56	98.8	159.0	219.0#
41	59.0	78.4	138.4#

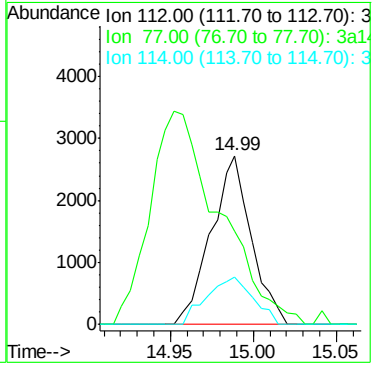




#95
chlorobenzene
Concen: 0.37 ug/L
RT: 14.99 min Scan# 2161
Delta R.T. -0.00 min
Lab File: 3a149429.D
Acq: 18 Mar 2016 12:18 pm

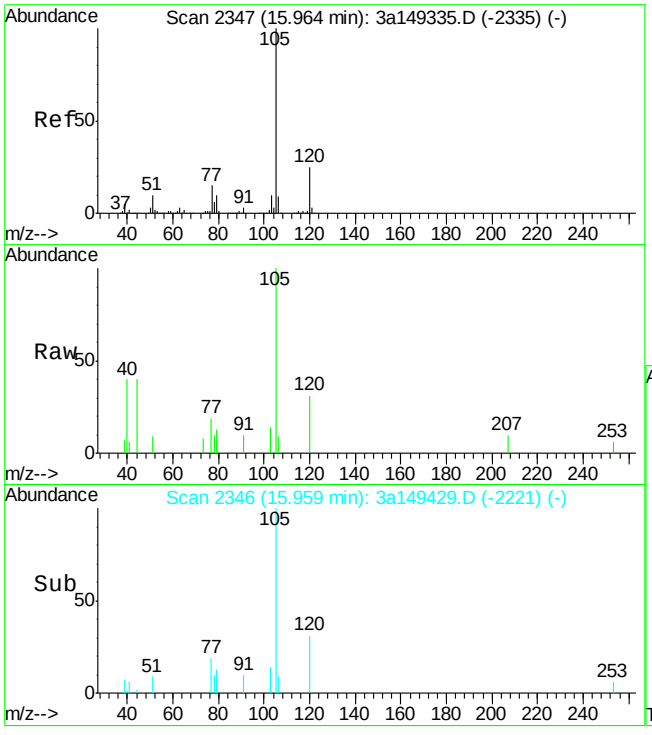
Tgt Ion:112 Resp: 4575

Ion	Ratio	Lower	Upper
112	100		
77	49.3	30.8	90.8
114	28.0	1.6	61.6



7.1.3

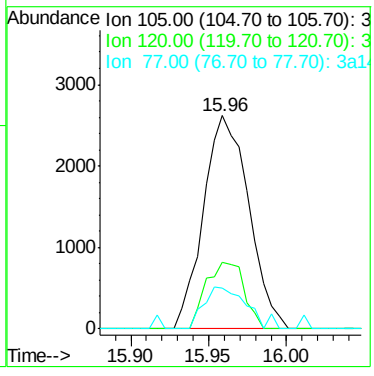
7

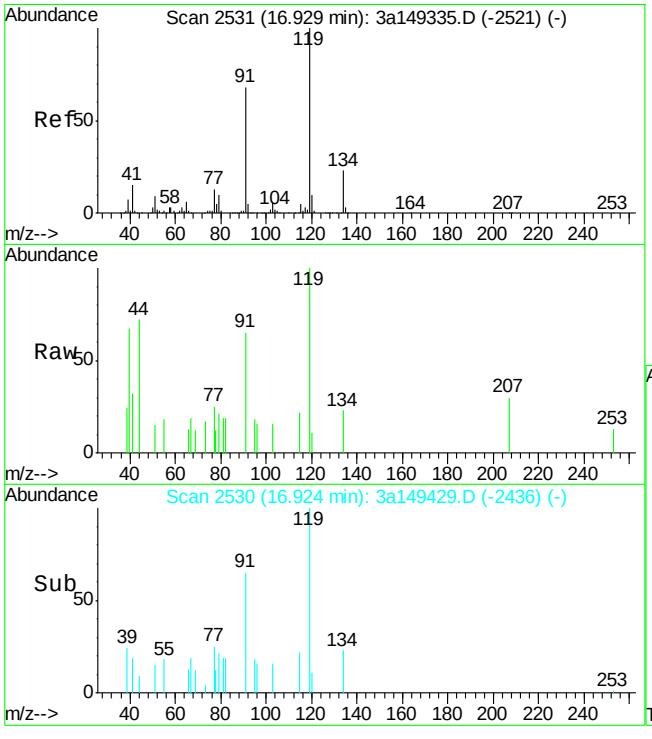


#103
isopropylbenzene
Concen: 0.23 ug/L
RT: 15.96 min Scan# 2346
Delta R.T. -0.01 min
Lab File: 3a149429.D
Acq: 18 Mar 2016 12:18 pm

Tgt Ion:105 Resp: 5305

Ion	Ratio	Lower	Upper
105	100		
120	31.4	0.0	55.3
77	19.2	0.0	44.8

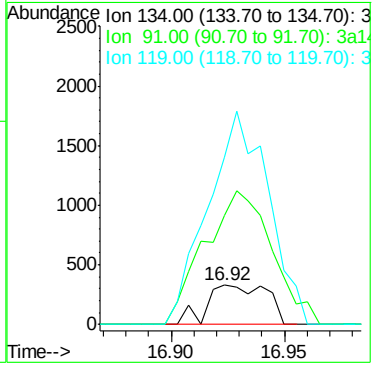


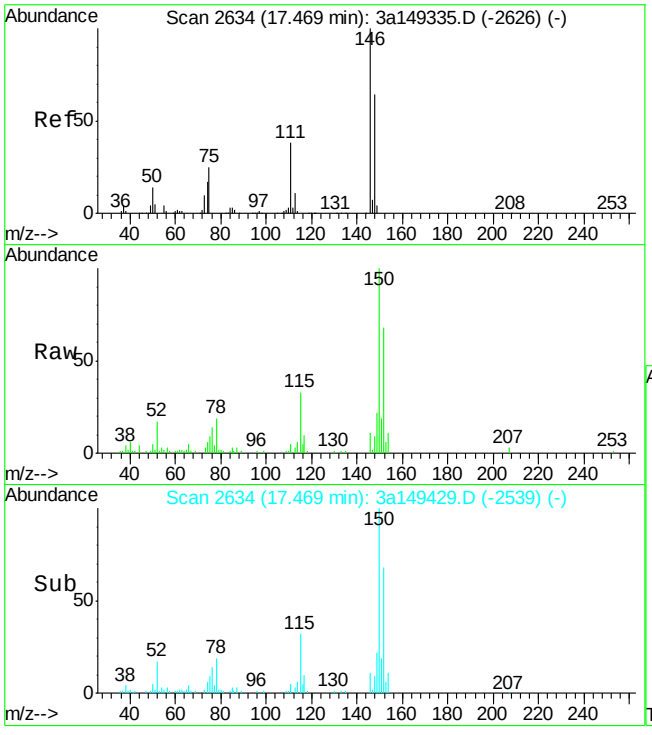


#114
tert-butylbenzene
Concen: 0.17 ug/L
RT: 16.92 min Scan# 2530
Delta R.T. -0.01 min
Lab File: 3a149429.D
Acq: 18 Mar 2016 12:18 pm

Tgt Ion:134 Resp: 612

Ion	Ratio	Lower	Upper
134	100		
91	278.1	258.5	318.5
119	426.7	396.6	456.6

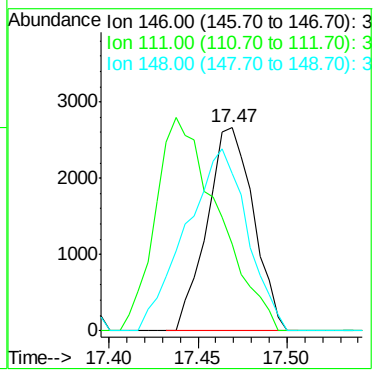


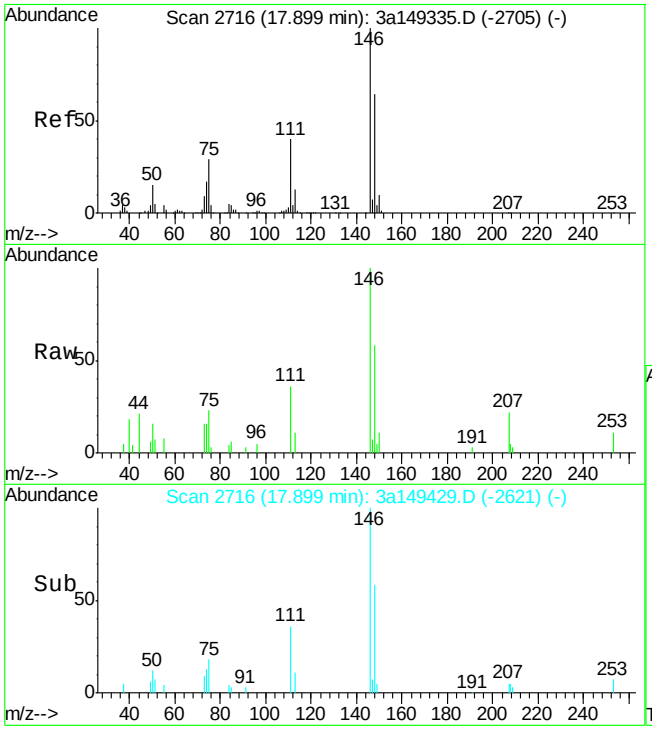


#120
1,4-dichlorobenzene
Concen: 0.42 ug/L
RT: 17.47 min Scan# 2634
Delta R.T. -0.00 min
Lab File: 3a149429.D
Acq: 18 Mar 2016 12:18 pm

Tgt Ion:146 Resp: 4828

Ion	Ratio	Lower	Upper
146	100		
111	42.9	8.2	68.2
148	77.6	34.2	94.2

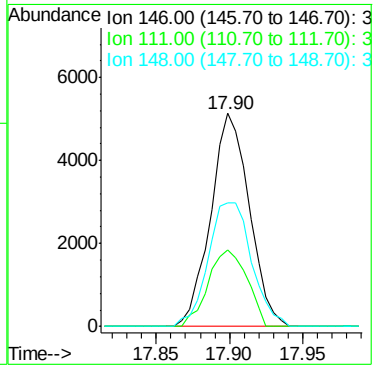




#121
1,2-dichlorobenzene
Concen: 0.84 ug/L
RT: 17.90 min Scan# 2716
Delta R.T. -0.00 min
Lab File: 3a149429.D
Acq: 18 Mar 2016 12:18 pm

Tgt Ion:146 Resp: 9400

Ion	Ratio	Lower	Upper
146	100		
111	35.8	10.3	70.3
148	58.1	33.5	93.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\relog\
Data File : 3a149429r.D
Acq On : 18 Mar 2016 12:18 pm
Operator : tracyk
Sample : jc16204-2r
Misc : MS99687,V3A6450,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 18 13:17:15 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Fri Mar 18 12:36:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.18	65	469456	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	522861	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.60	114	808105	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	803101	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	438199	50.00	ug/L	0.00

System Monitoring Compounds						
49) dibromofluoromethane (s)	10.69	113	246899	48.94	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.88%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	295010	47.75	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 95.50%			
79) toluene-d8 (s)	13.33	98	950736	50.22	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.44%			
104) 4-bromofluorobenzene (s)	16.19	95	409310	46.55	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 93.10%			

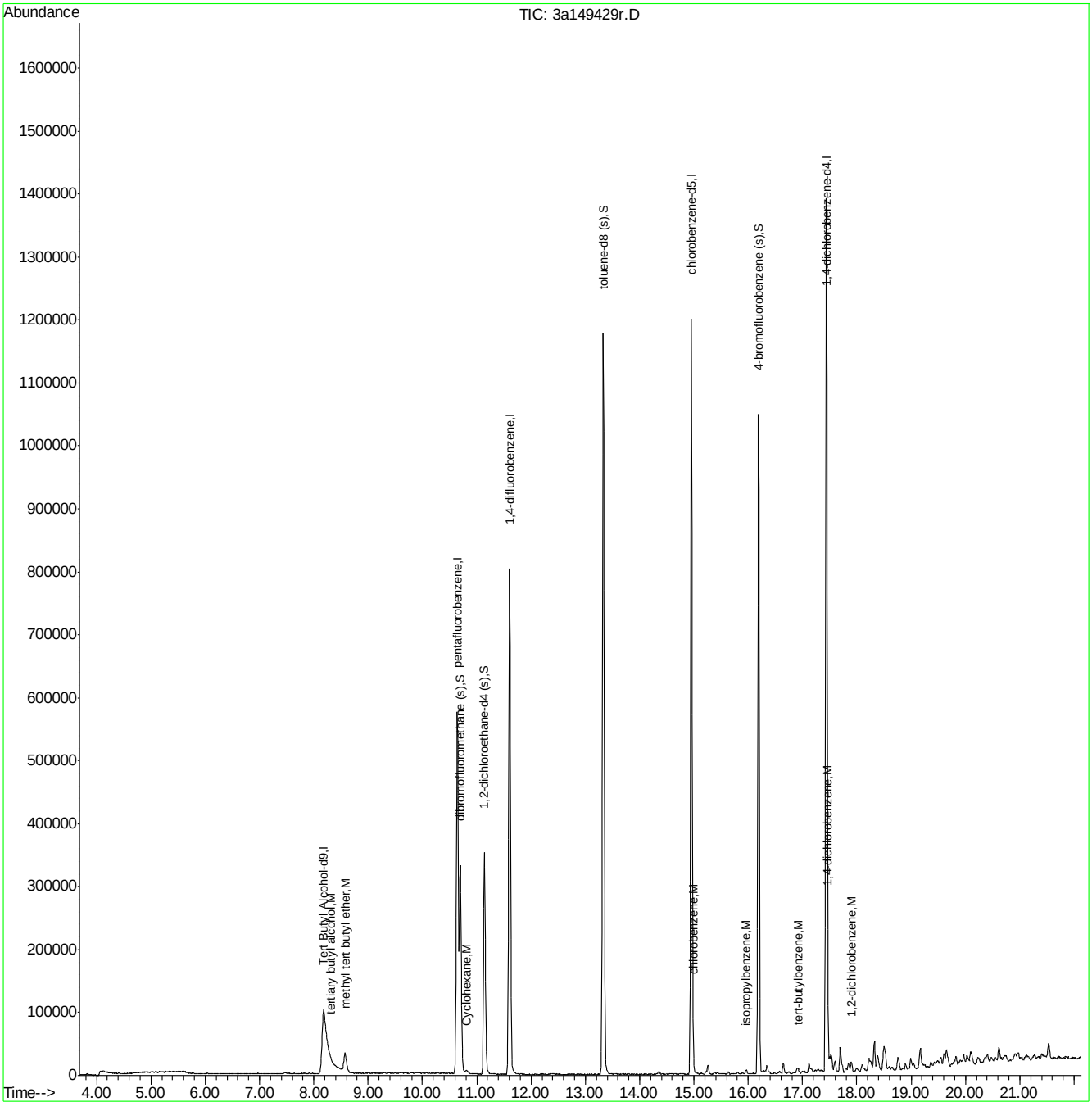
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.32	59	15354	19.33	ug/L	87
31) methyl tert butyl ether	8.58	73	48194	3.33	ug/L #	57
54) Cyclohexane	10.82	84	2520	0.43	ug/L #	44
95) chlorobenzene	14.99	112	4575	0.37	ug/L	88
103) isopropylbenzene	15.96	105	5305	0.23	ug/L	88
114) tert-butylbenzene	16.92	134	612	0.17	ug/L	98
120) 1,4-dichlorobenzene	17.47	146	4828	0.42	ug/L	86
121) 1,2-dichlorobenzene	17.90	146	9400	0.84	ug/L	93

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

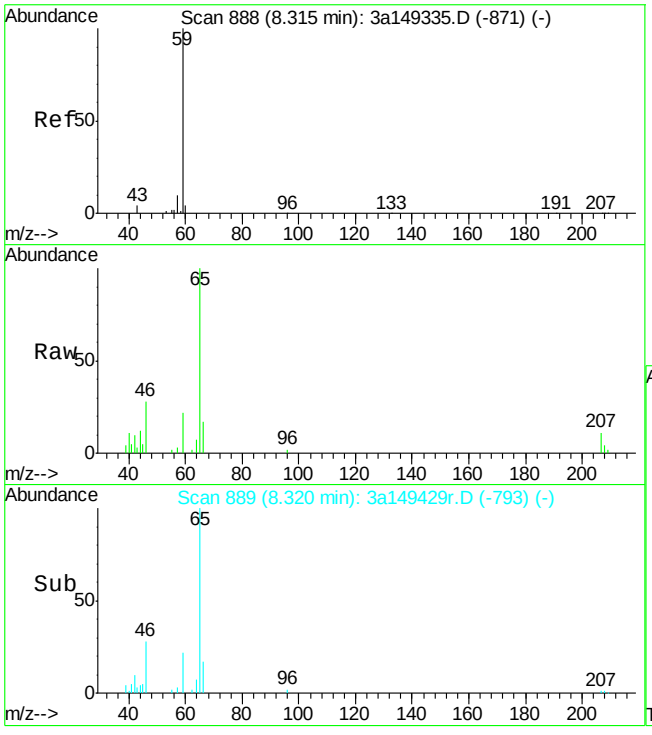
Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\relog\
Data File : 3a149429r.D
Acq On : 18 Mar 2016 12:18 pm
Operator : tracyk
Sample : jc16204-2r
Misc : MS99687,V3A6450,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 18 13:17:15 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Fri Mar 18 12:36:01 2016
Response via : Initial Calibration



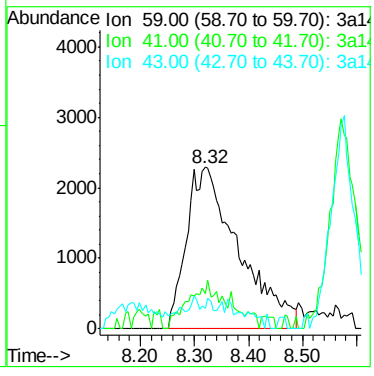
M3A6446.M Fri Apr 08 13:32:44 2016 ACCUNJ Page: 2

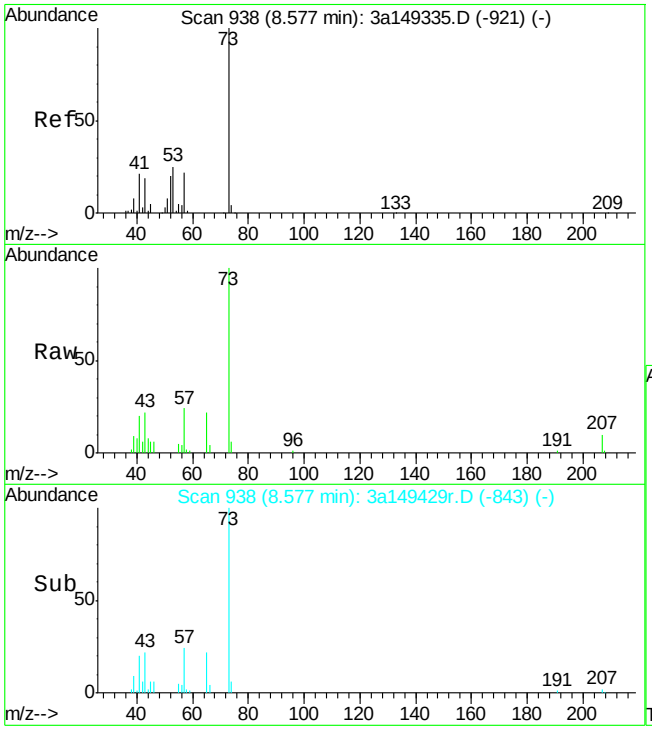


#2
tertiary butyl alcohol
Concen: 19.33 ug/L
RT: 8.32 min Scan# 889
Delta R.T. 0.01 min
Lab File: 3a149429r.D
Acq: 18 Mar 2016 12:18 pm

Tgt Ion: 59 Resp: 15354

Ion	Ratio	Lower	Upper
59	100		
41	21.9	1.1	61.1
43	12.9	0.0	44.3

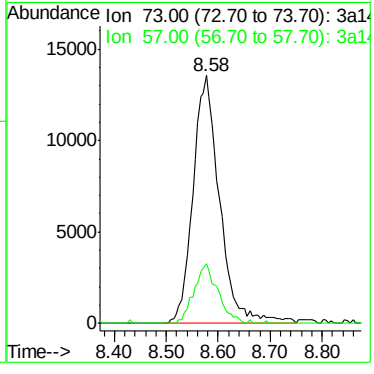


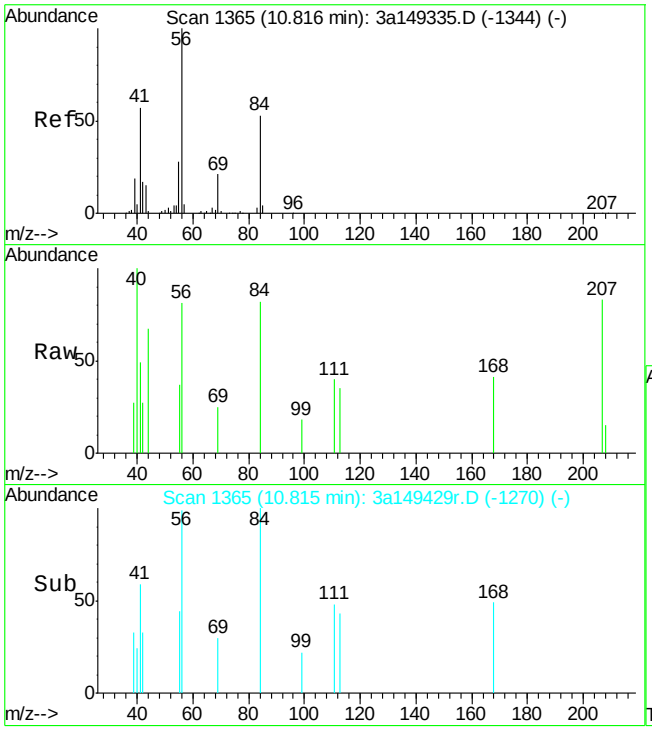


#31
methyl tert butyl ether
Concen: 3.33 ug/L
RT: 8.58 min Scan# 938
Delta R.T. 0.00 min
Lab File: 3a149429r.D
Acq: 18 Mar 2016 12:18 pm

Tgt Ion: 73 Resp: 48194

Ion	Ratio	Lower	Upper
73	100		
57	24.0	25.0	85.0#

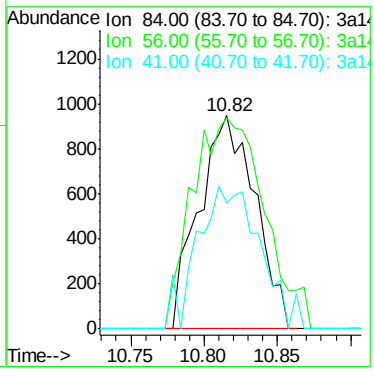


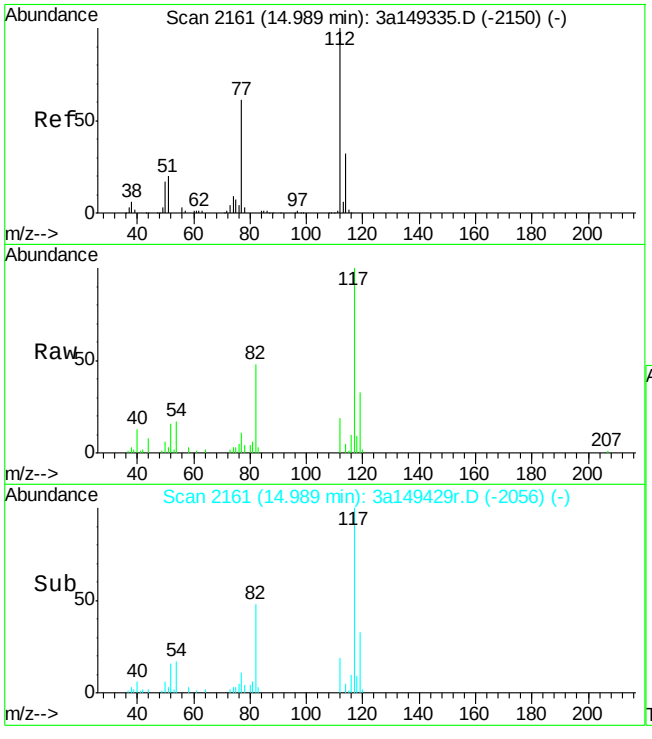


#54
Cyclohexane
Concen: 0.43 ug/L
RT: 10.82 min Scan# 1365
Delta R.T. -0.00 min
Lab File: 3a149429r.D
Acq: 18 Mar 2016 12:18 pm

Tgt Ion: 84 Resp: 2520

Ion	Ratio	Lower	Upper
84	100		
56	98.8	159.0	219.0#
41	59.0	78.4	138.4#

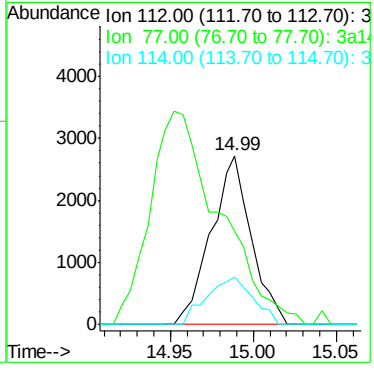




#95
chlorobenzene
Concen: 0.37 ug/L
RT: 14.99 min Scan# 2161
Delta R.T. -0.00 min
Lab File: 3a149429r.D
Acq: 18 Mar 2016 12:18 pm

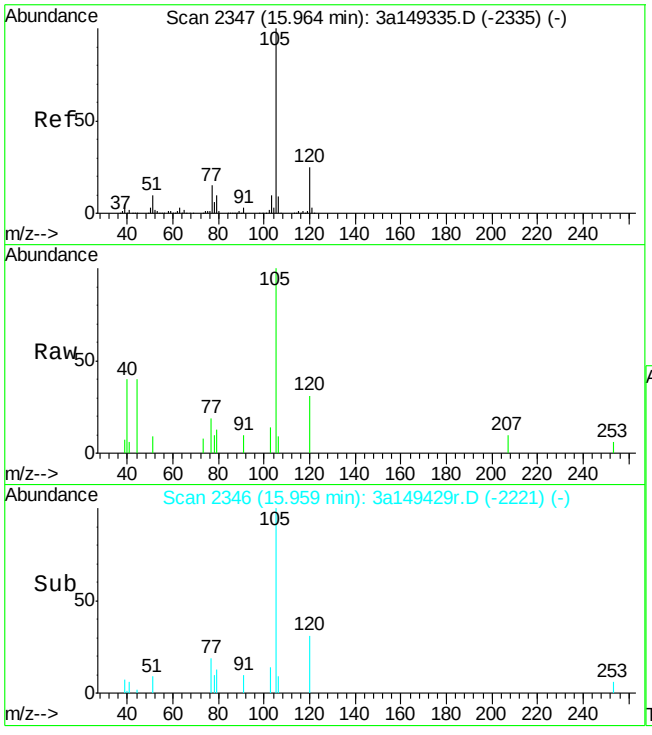
Tgt Ion:112 Resp: 4575

Ion	Ratio	Lower	Upper
112	100		
77	49.3	30.8	90.8
114	28.0	1.6	61.6



7.1.4

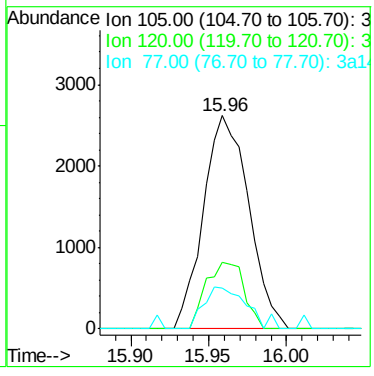
7

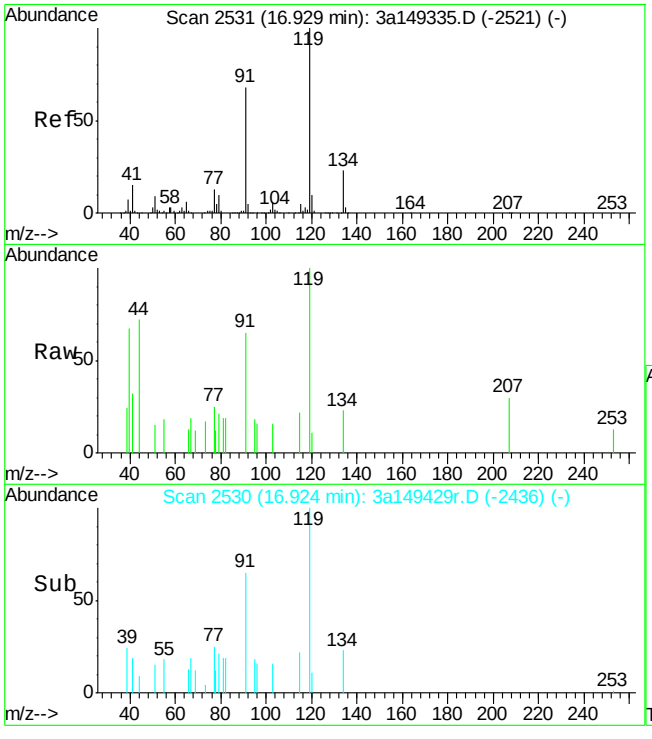


#103
isopropylbenzene
Concen: 0.23 ug/L
RT: 15.96 min Scan# 2346
Delta R.T. -0.01 min
Lab File: 3a149429r.D
Acq: 18 Mar 2016 12:18 pm

Tgt Ion:105 Resp: 5305

Ion	Ratio	Lower	Upper
105	100		
120	31.4	0.0	55.3
77	19.2	0.0	44.8

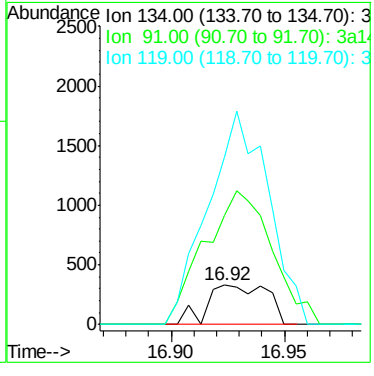


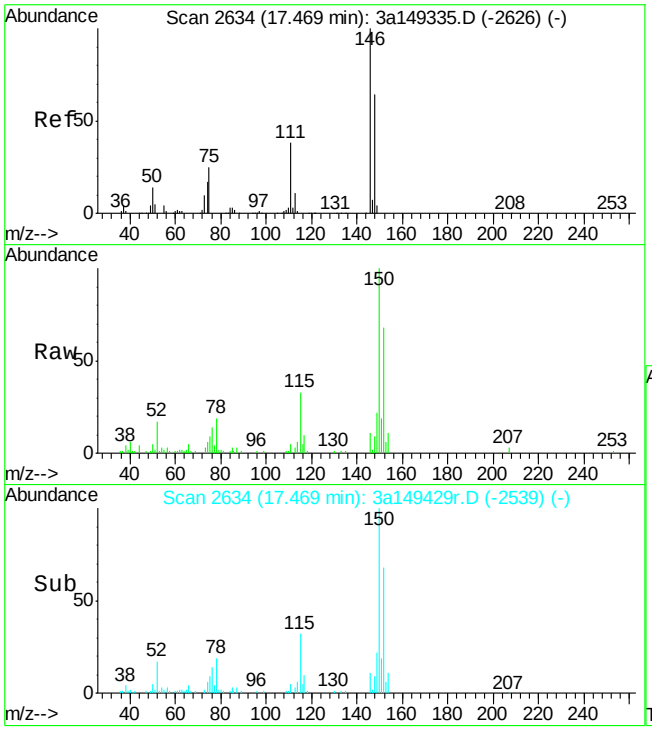


#114
tert-butylbenzene
Concen: 0.17 ug/L
RT: 16.92 min Scan# 2530
Delta R.T. -0.01 min
Lab File: 3a149429r.D
Acq: 18 Mar 2016 12:18 pm

Tgt Ion:134 Resp: 612

Ion	Ratio	Lower	Upper
134	100		
91	278.1	258.5	318.5
119	426.7	396.6	456.6

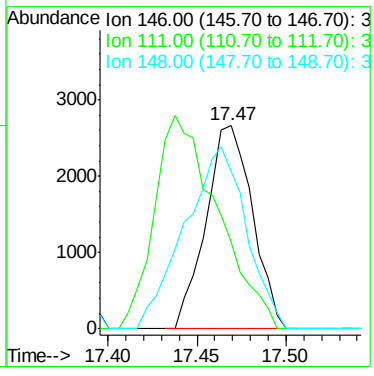


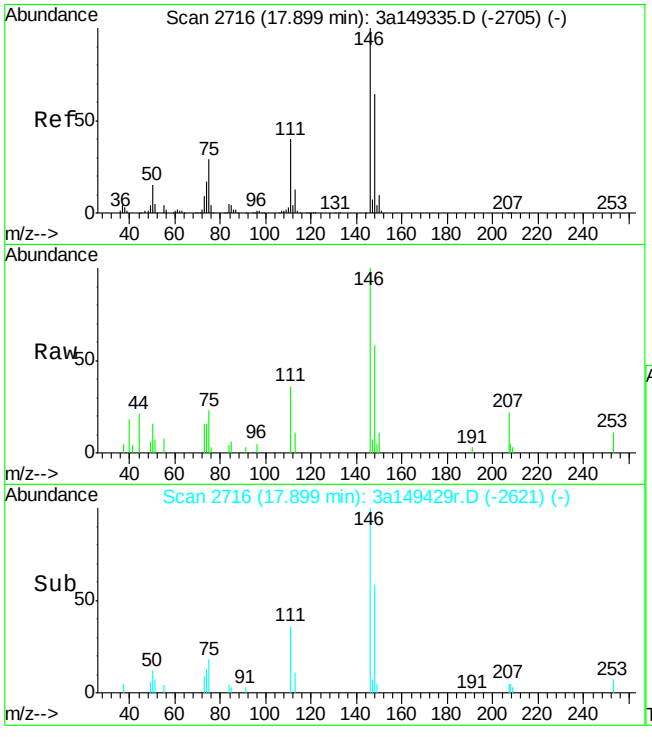


#120
1,4-dichlorobenzene
Concen: 0.42 ug/L
RT: 17.47 min Scan# 2634
Delta R.T. -0.00 min
Lab File: 3a149429r.D
Acq: 18 Mar 2016 12:18 pm

Tgt Ion:146 Resp: 4828

Ion	Ratio	Lower	Upper
146	100		
111	42.9	8.2	68.2
148	77.6	34.2	94.2

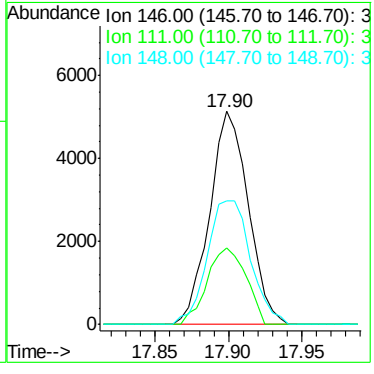




#121
1,2-dichlorobenzene
Concen: 0.84 ug/L
RT: 17.90 min Scan# 2716
Delta R.T. -0.00 min
Lab File: 3a149429r.D
Acq: 18 Mar 2016 12:18 pm

Tgt Ion:146 Resp: 9400

Ion	Ratio	Lower	Upper
146	100		
111	35.8	10.3	70.3
148	58.1	33.5	93.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149375.D
Acq On : 17 Mar 2016 2:15 am
Operator : tracyk
Sample : jc16204-3
Misc : MS99687,V3A6447,5,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Mar 17 11:45:19 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	378128	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	474768	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	750037	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	733600	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	390062	50.00	ug/L	0.00

System Monitoring Compounds						
49) dibromofluoromethane (s)	10.70	113	228585	49.90	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 99.80%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	272387	48.55	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 97.10%			
79) toluene-d8 (s)	13.33	98	871004	49.57	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.14%			
104) 4-bromofluorobenzene (s)	16.19	95	376243	48.07	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 96.14%			

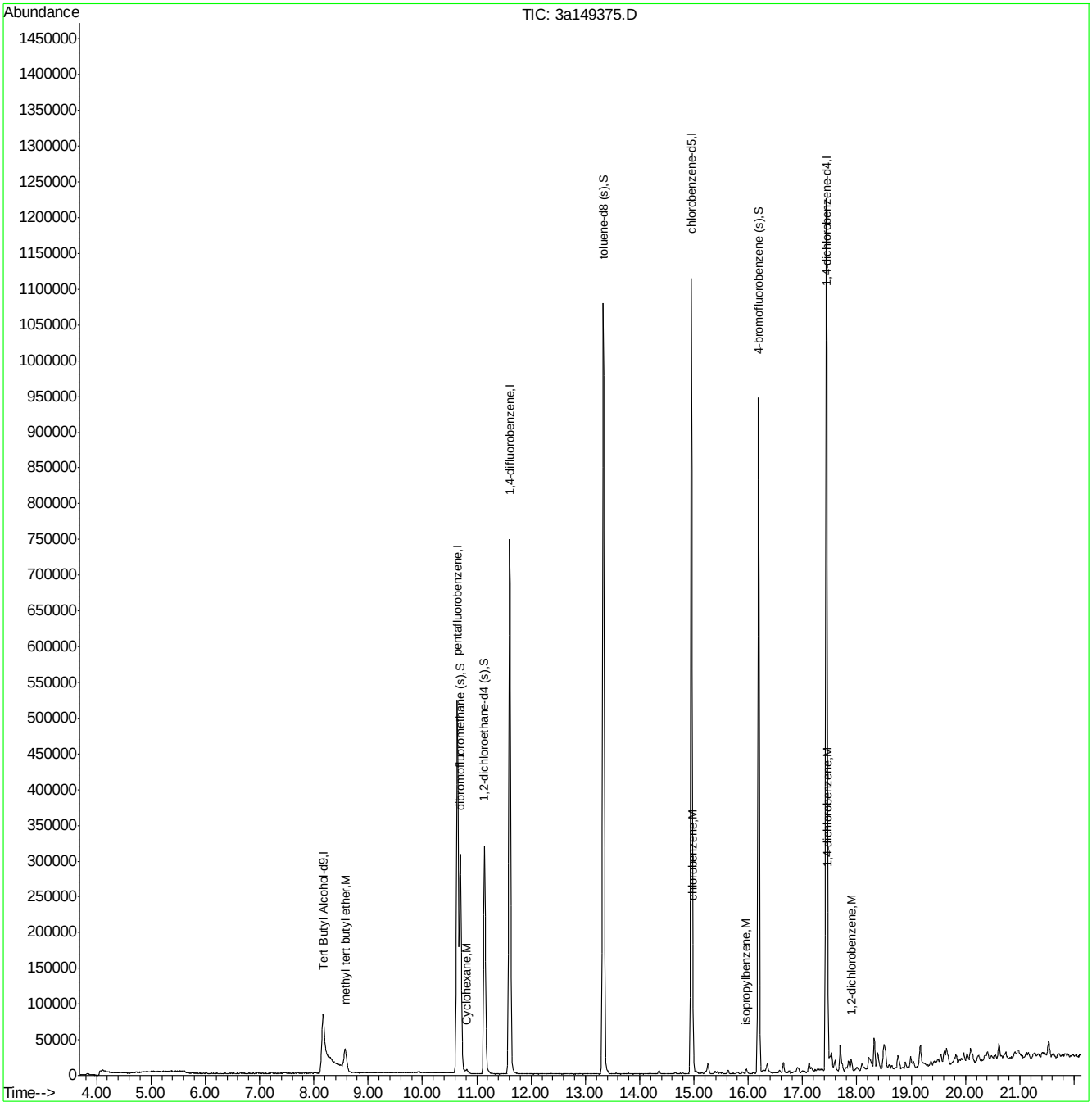
Target Compounds						Qvalue
31) methyl tert butyl ether	8.58	73	45896	3.49	ug/L	100
54) Cyclohexane	10.82	84	2460	0.46	ug/L #	49
95) chlorobenzene	14.98	112	4102	0.36	ug/L	97
103) isopropylbenzene	15.96	105	5162	0.26	ug/L	94
120) 1,4-dichlorobenzene	17.47	146	4766	0.46	ug/L	94
121) 1,2-dichlorobenzene	17.90	146	8089	0.81	ug/L	98

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

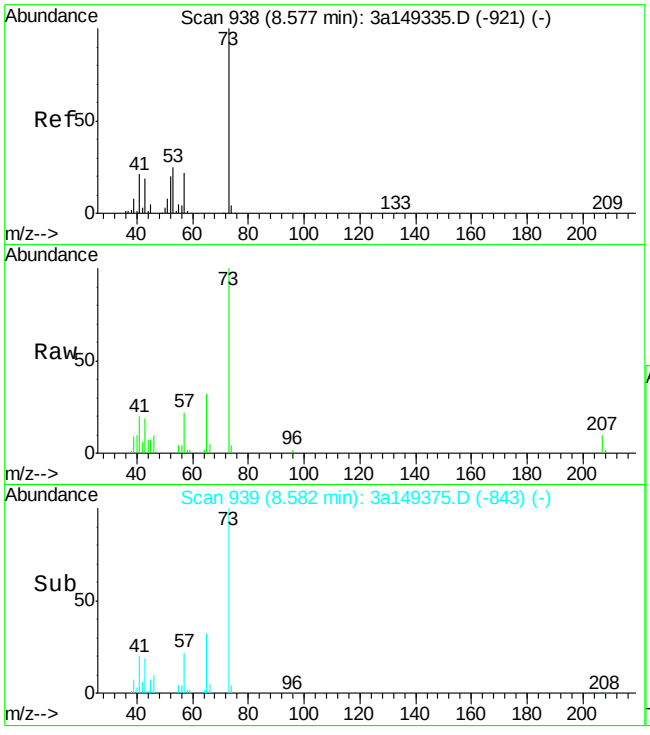
Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149375.D
Acq On : 17 Mar 2016 2:15 am
Operator : tracyk
Sample : jc16204-3
Misc : MS99687,V3A6447,5,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Mar 17 11:45:19 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



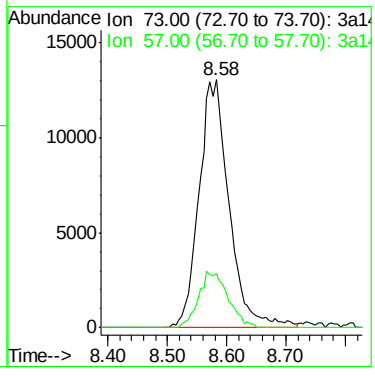
M3A6446.M Thu Mar 17 11:45:24 2016 ACCUNJ Page: 2

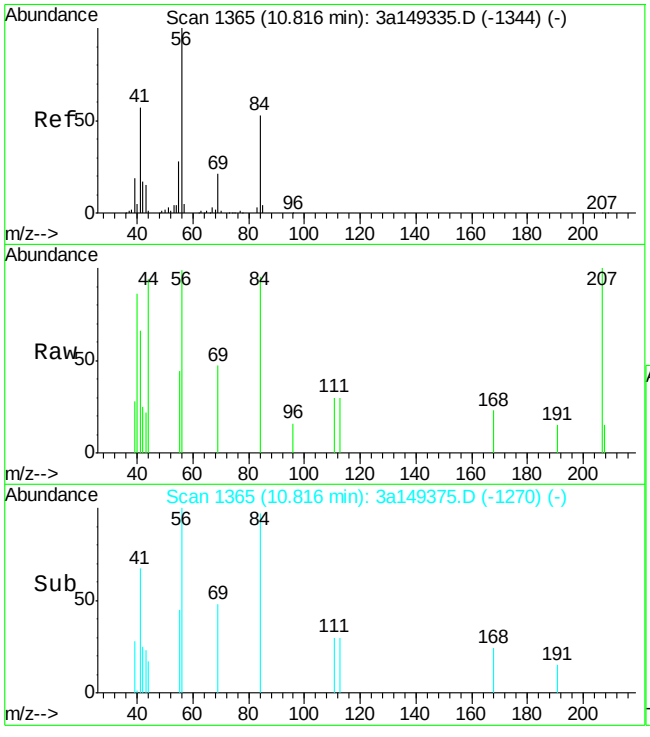


#31
methyl tert butyl ether
Concen: 3.49 ug/L
RT: 8.58 min Scan# 939
Delta R.T. 0.01 min
Lab File: 3a149375.D
Acq: 17 Mar 2016 2:15 am

Tgt Ion: 73 Resp: 45896

Ion	Ratio	Lower	Upper
73	100		
57	22.1	0.0	52.1

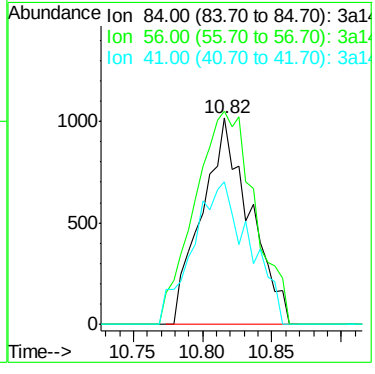


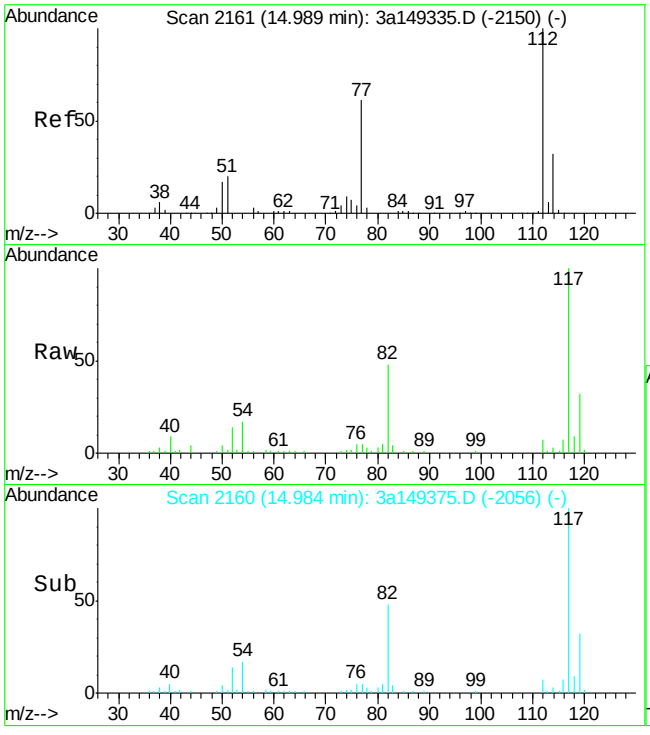


#54
Cyclohexane
Concen: 0.46 ug/L
RT: 10.82 min Scan# 1365
Delta R.T. 0.00 min
Lab File: 3a149375.D
Acq: 17 Mar 2016 2:15 am

Tgt Ion: 84 Resp: 2460

Ion	Ratio	Lower	Upper
84	100		
56	103.4	159.0	219.0#
41	69.0	78.4	138.4#

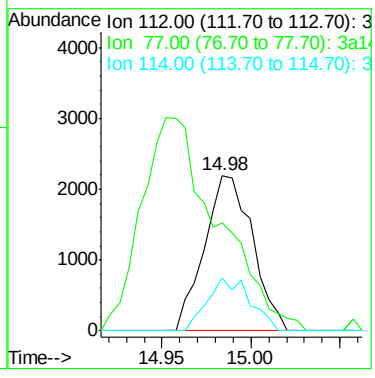


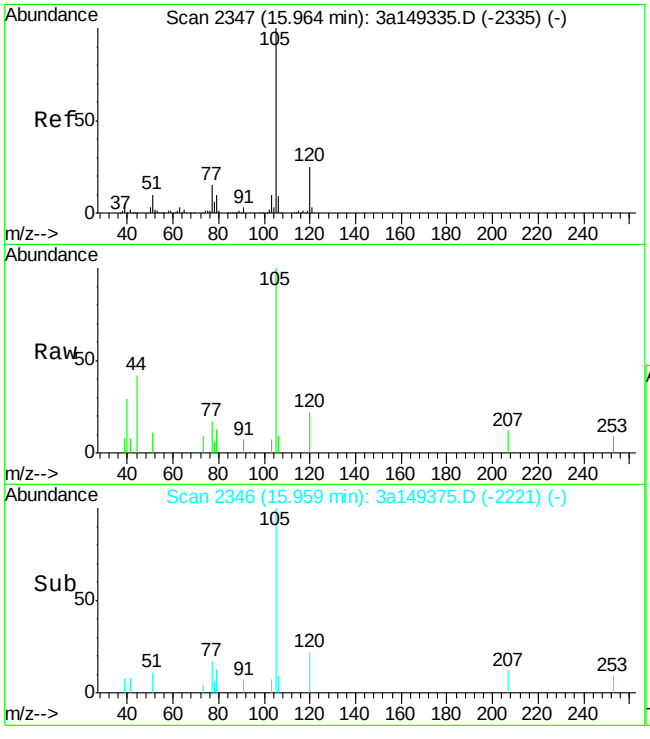


#95
chlorobenzene
Concen: 0.36 ug/L
RT: 14.98 min Scan# 2160
Delta R.T. -0.01 min
Lab File: 3a149375.D
Acq: 17 Mar 2016 2:15 am

Tgt Ion:112 Resp: 4102

Ion	Ratio	Lower	Upper
112	100		
77	62.7	30.8	90.8
114	34.2	1.6	61.6

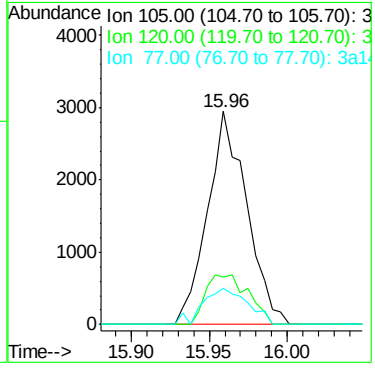


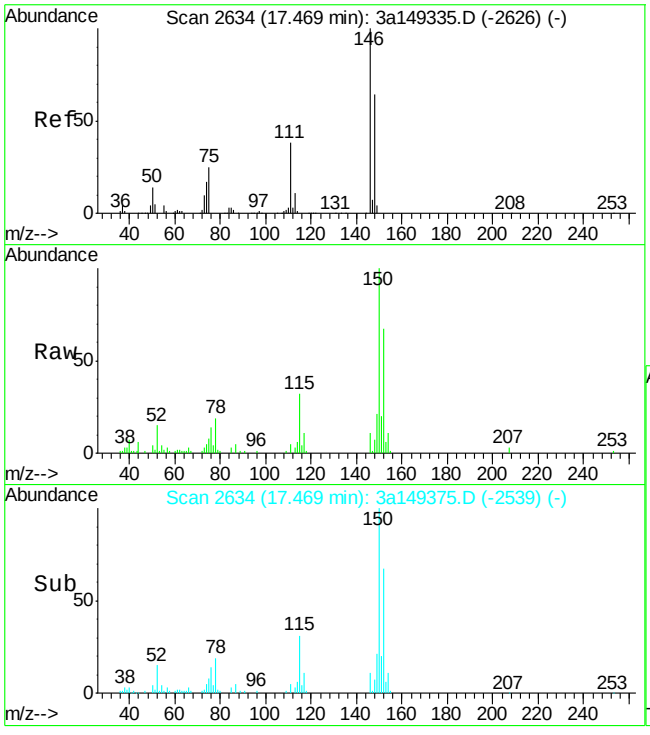


#103
isopropylbenzene
Concen: 0.26 ug/L
RT: 15.96 min Scan# 2346
Delta R.T. -0.01 min
Lab File: 3a149375.D
Acq: 17 Mar 2016 2:15 am

Tgt Ion:105 Resp: 5162

Ion	Ratio	Lower	Upper
105	100		
120	22.1	0.0	55.3
77	17.1	0.0	44.8

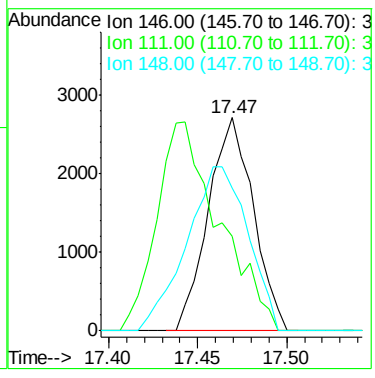


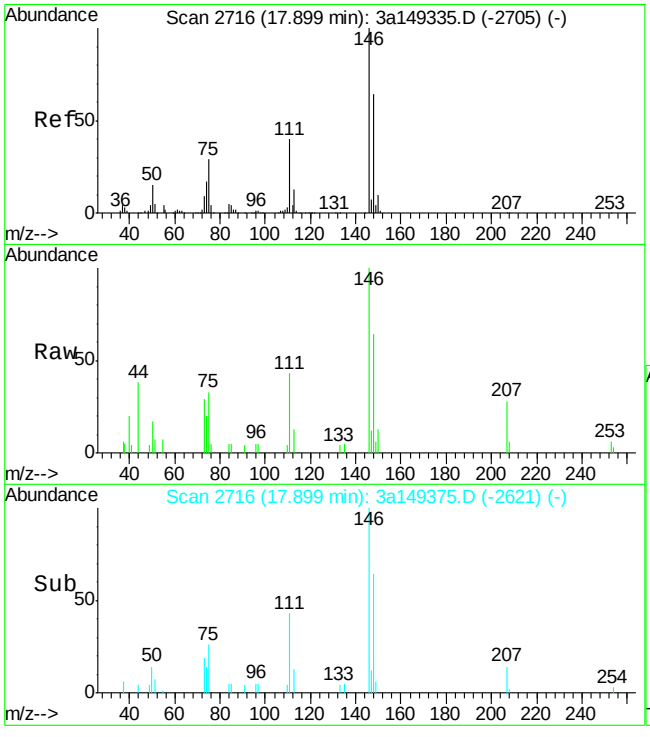


#120
1,4-dichlorobenzene
Concen: 0.46 ug/L
RT: 17.47 min Scan# 2634
Delta R.T. 0.00 min
Lab File: 3a149375.D
Acq: 17 Mar 2016 2:15 am

Tgt Ion:146 Resp: 4766

Ion	Ratio	Lower	Upper
146	100		
111	44.4	8.2	68.2
148	66.8	34.2	94.2

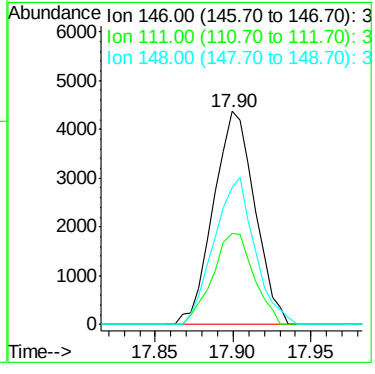




#121
1,2-dichlorobenzene
Concen: 0.81 ug/L
RT: 17.90 min Scan# 2716
Delta R.T. 0.00 min
Lab File: 3a149375.D
Acq: 17 Mar 2016 2:15 am

Tgt Ion:146 Resp: 8089

Ion	Ratio	Lower	Upper
146	100		
111	42.5	10.3	70.3
148	64.4	33.5	93.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\relog\
Data File : 3a149375r.D
Acq On : 17 Mar 2016 2:15 am
Operator : tracyk
Sample : jc16204-3r
Misc : MS99687,V3A6447,5,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Apr 08 13:30:34 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	378128	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	474768	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	750037	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	733600	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	390062	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	228585	49.90	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 99.80%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	272387	48.55	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 97.10%			
79) toluene-d8 (s)	13.33	98	871004	49.57	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.14%			
104) 4-bromofluorobenzene (s)	16.19	95	376243	48.07	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 96.14%			

Target Compounds

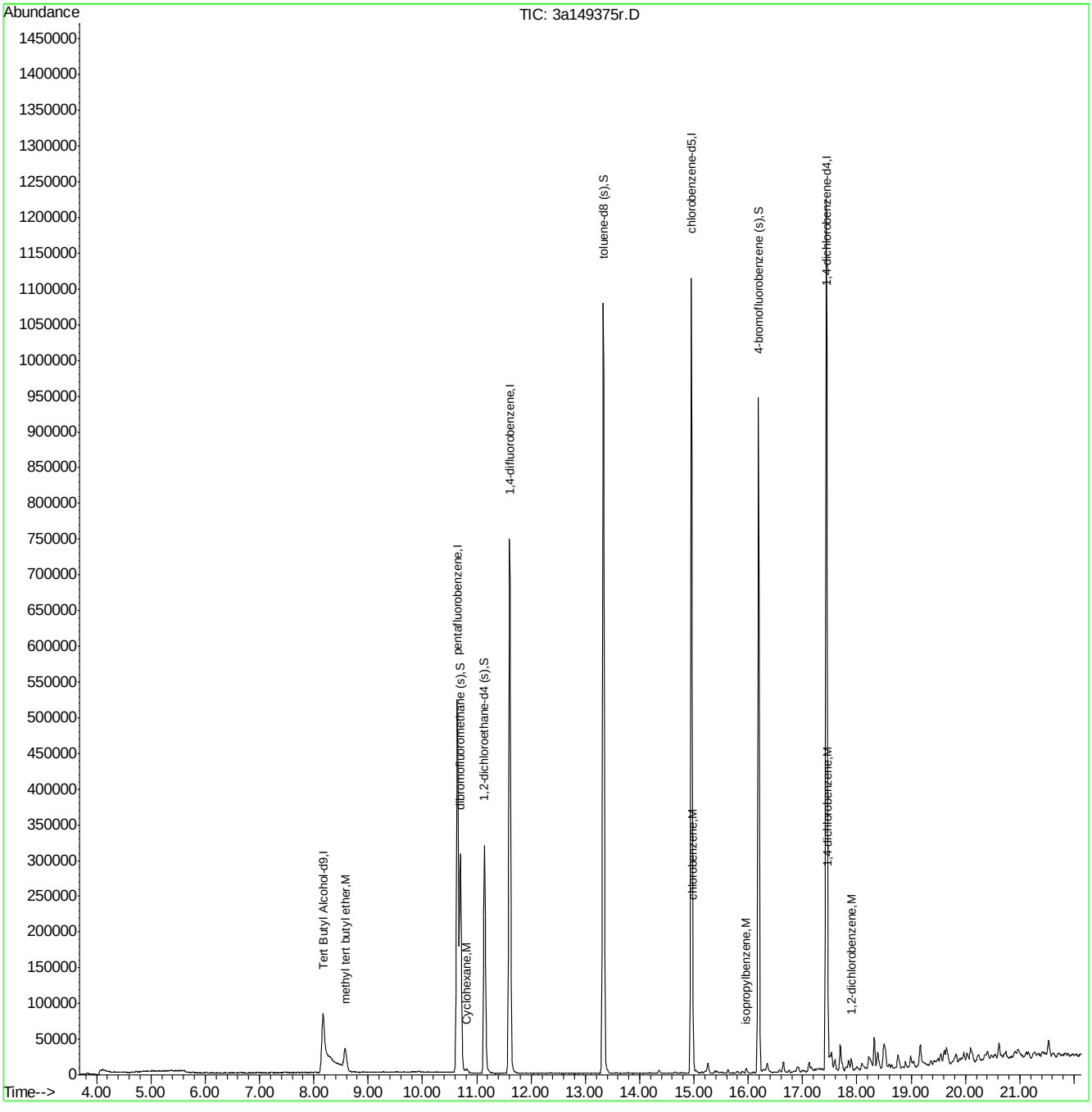
						Qvalue
31) methyl tert butyl ether	8.58	73	45896	3.49	ug/L	100
54) Cyclohexane	10.82	84	2460	0.46	ug/L #	49
95) chlorobenzene	14.98	112	4102	0.36	ug/L	97
103) isopropylbenzene	15.96	105	5162	0.26	ug/L	94
120) 1,4-dichlorobenzene	17.47	146	4766	0.46	ug/L	94
121) 1,2-dichlorobenzene	17.90	146	8089	0.81	ug/L	98

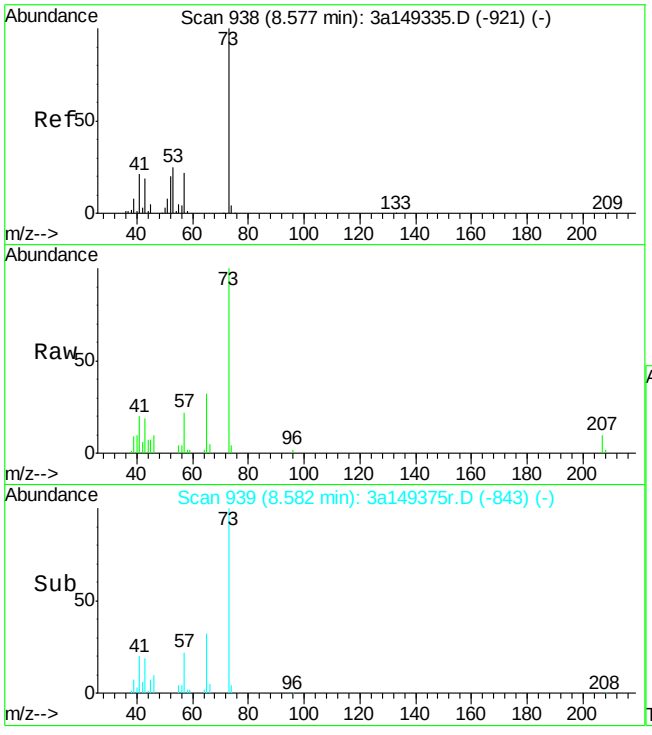
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\relog\
Data File : 3a149375r.D
Acq On : 17 Mar 2016 2:15 am
Operator : tracyk
Sample : jc16204-3r
Misc : MS99687,V3A6447,5,,,,1
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Apr 08 13:30:34 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

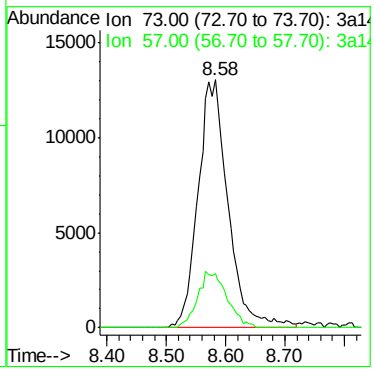


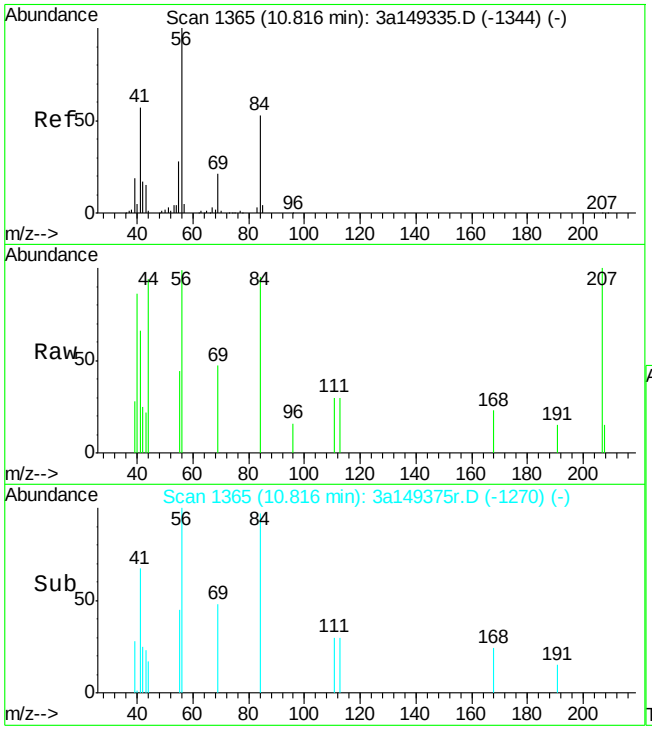


#31
methyl tert butyl ether
Concen: 3.49 ug/L
RT: 8.58 min Scan# 939
Delta R.T. 0.01 min
Lab File: 3a149375r.D
Acq: 17 Mar 2016 2:15 am

Tgt Ion: 73 Resp: 45896

Ion	Ratio	Lower	Upper
73	100		
57	22.1	0.0	52.1

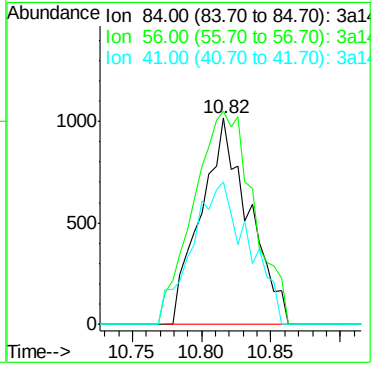


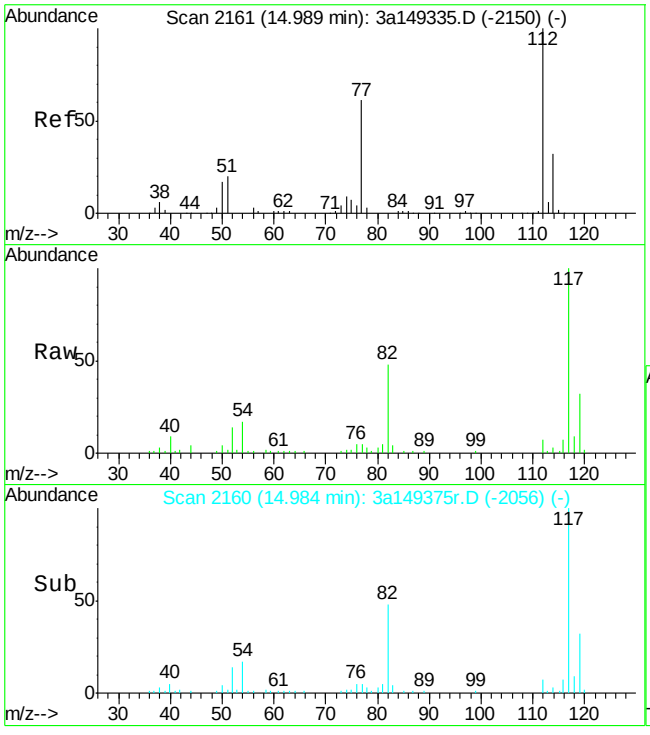


#54
Cyclohexane
Concen: 0.46 ug/L
RT: 10.82 min Scan# 1365
Delta R.T. 0.00 min
Lab File: 3a149375r.D
Acq: 17 Mar 2016 2:15 am

Tgt Ion: 84 Resp: 2460

Ion	Ratio	Lower	Upper
84	100		
56	103.4	159.0	219.0#
41	69.0	78.4	138.4#

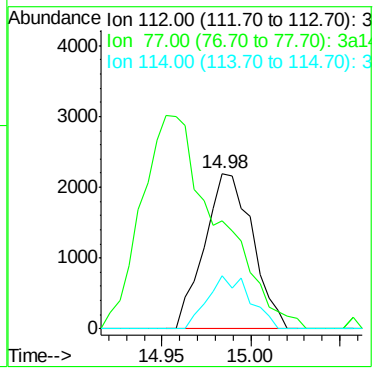


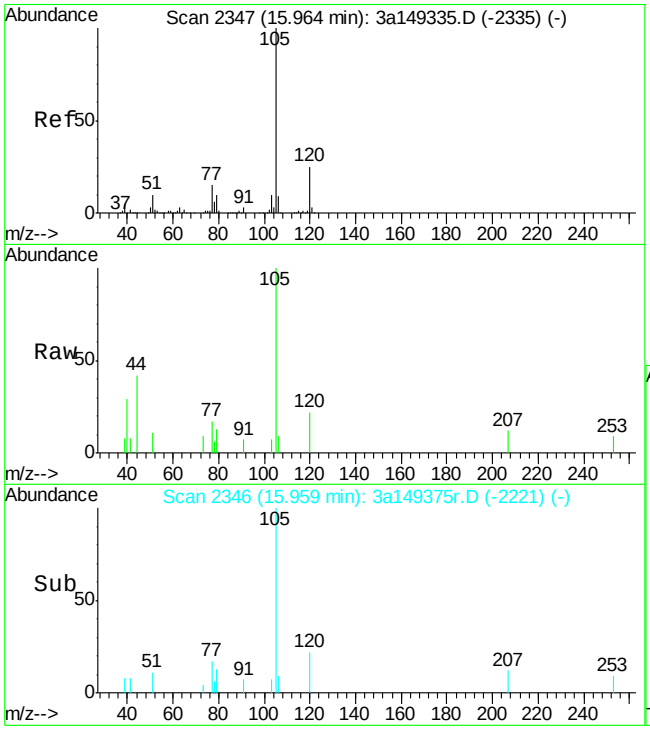


#95
chlorobenzene
Concen: 0.36 ug/L
RT: 14.98 min Scan# 2160
Delta R.T. -0.01 min
Lab File: 3a149375r.D
Acq: 17 Mar 2016 2:15 am

Tgt Ion:112 Resp: 4102

Ion	Ratio	Lower	Upper
112	100		
77	62.7	30.8	90.8
114	34.2	1.6	61.6

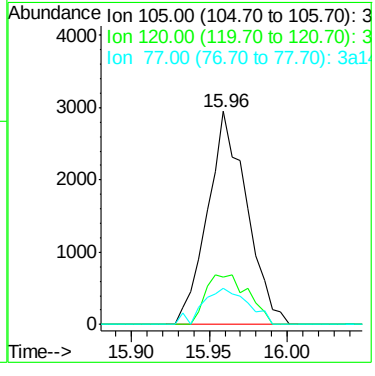


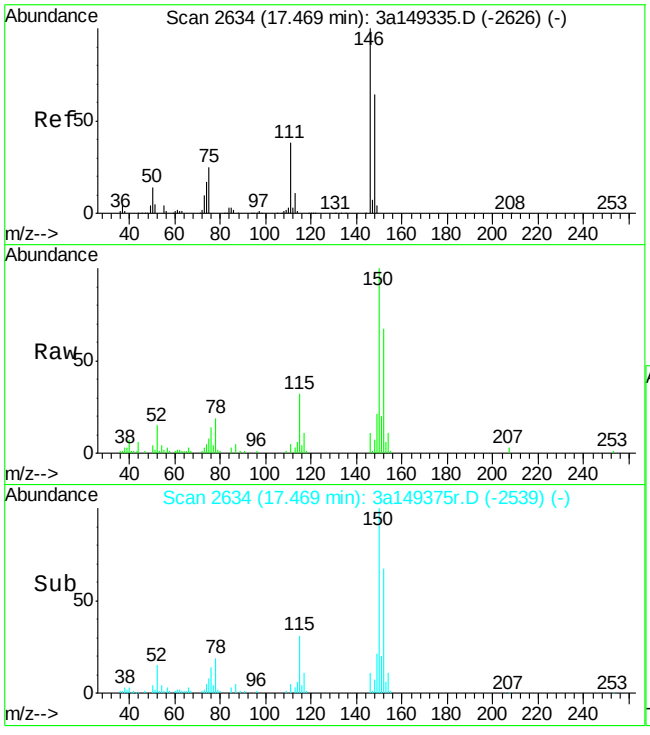


#103
isopropylbenzene
Concen: 0.26 ug/L
RT: 15.96 min Scan# 2346
Delta R.T. -0.01 min
Lab File: 3a149375r.D
Acq: 17 Mar 2016 2:15 am

Tgt Ion:105 Resp: 5162

Ion	Ratio	Lower	Upper
105	100		
120	22.1	0.0	55.3
77	17.1	0.0	44.8

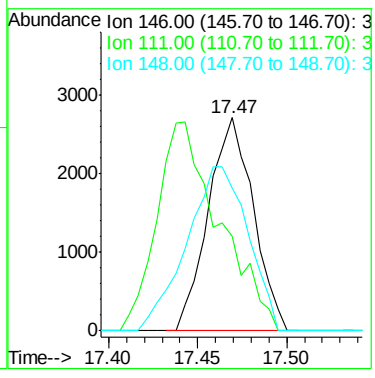


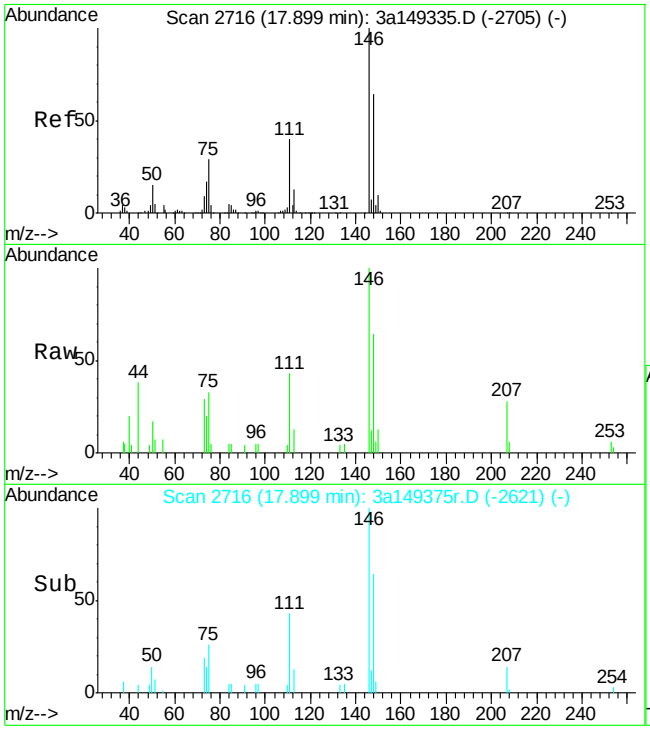


#120
1,4-dichlorobenzene
Concen: 0.46 ug/L
RT: 17.47 min Scan# 2634
Delta R.T. 0.00 min
Lab File: 3a149375r.D
Acq: 17 Mar 2016 2:15 am

Tgt Ion:146 Resp: 4766

Ion	Ratio	Lower	Upper
146	100		
111	44.4	8.2	68.2
148	66.8	34.2	94.2

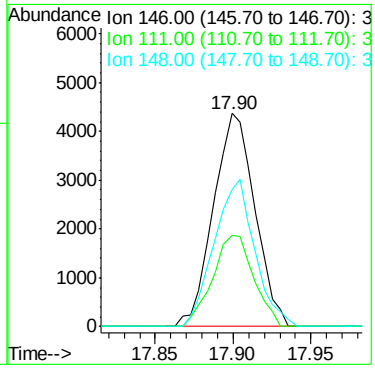




#121
1,2-dichlorobenzene
Concen: 0.81 ug/L
RT: 17.90 min Scan# 2716
Delta R.T. 0.00 min
Lab File: 3a149375r.D
Acq: 17 Mar 2016 2:15 am

Tgt Ion:146 Resp: 8089

Ion	Ratio	Lower	Upper
146	100		
111	42.5	10.3	70.3
148	64.4	33.5	93.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149376.D
Acq On : 17 Mar 2016 2:46 am
Operator : tracyk
Sample : jc16204-4
Misc : MS99687,V3A6447,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Mar 17 11:46:29 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	407479	500.00	ug/L	0.00
5) pentafluorobenzene	10.65	168	482589	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	754749	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	737841	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	399918	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	231122	49.63	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 99.26%			
50) 1,2-dichloroethane-d4 (s)	11.15	65	273518	47.96	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 95.92%			
79) toluene-d8 (s)	13.33	98	875704	49.53	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.06%			
104) 4-bromofluorobenzene (s)	16.19	95	391719	48.81	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 97.62%			

Target Compounds

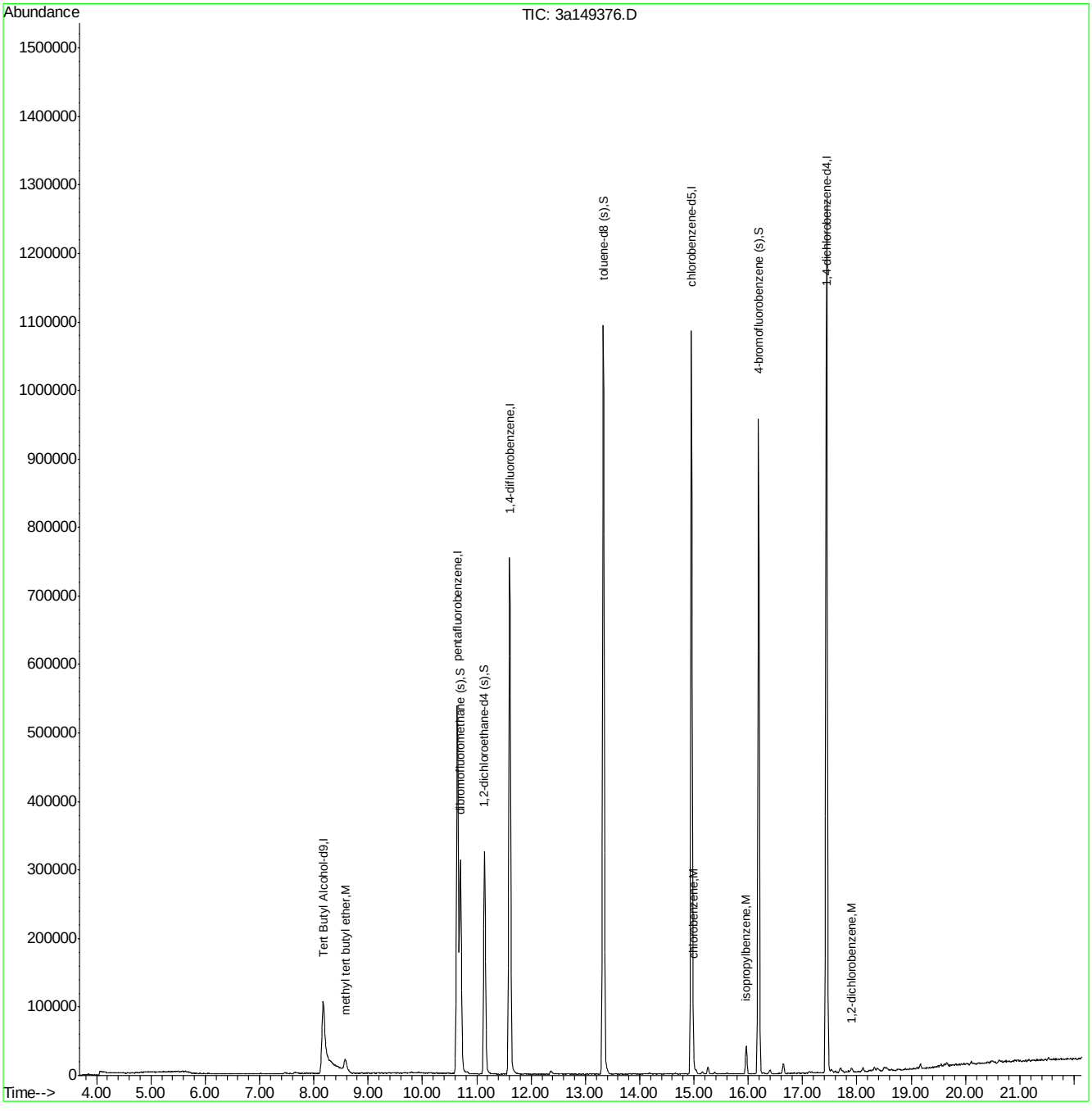
						Qvalue
31) methyl tert butyl ether	8.57	73	26058	1.95	ug/L	93
95) chlorobenzene	14.99	112	5503	0.49	ug/L	91
103) isopropylbenzene	15.96	105	33265	1.61	ug/L	98
121) 1,2-dichlorobenzene	17.90	146	3199	0.31	ug/L	95

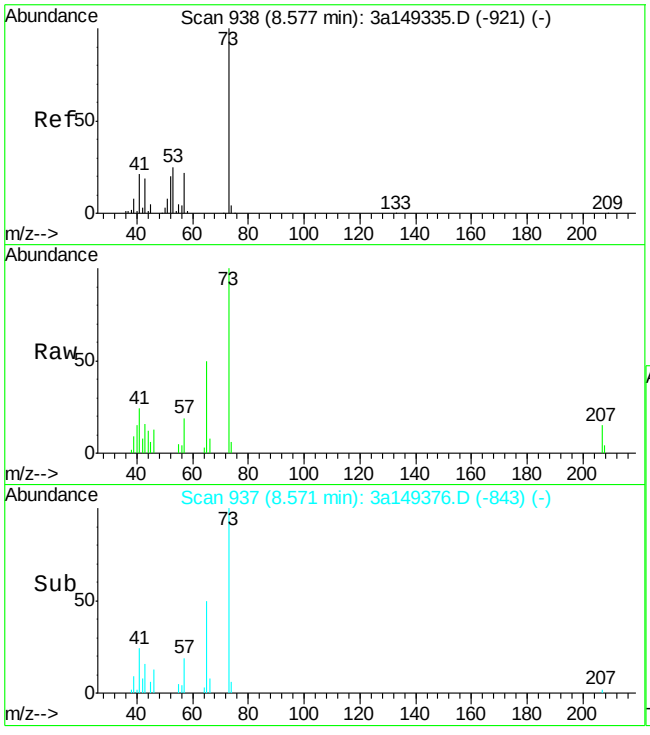
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149376.D
Acq On : 17 Mar 2016 2:46 am
Operator : tracyk
Sample : jc16204-4
Misc : MS99687,V3A6447,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Mar 17 11:46:29 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

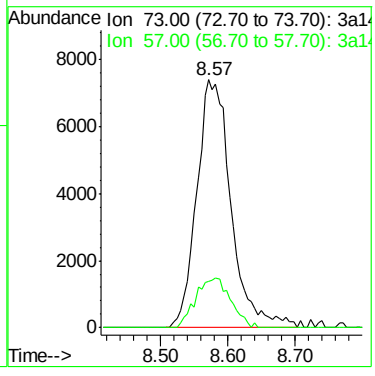


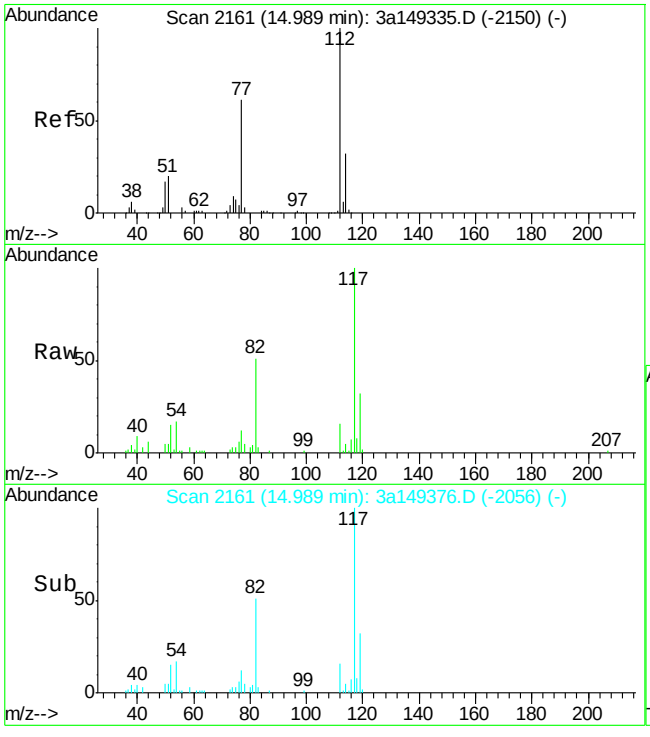


#31
methyl tert butyl ether
Concen: 1.95 ug/L
RT: 8.57 min Scan# 937
Delta R.T. -0.01 min
Lab File: 3a149376.D
Acq: 17 Mar 2016 2:46 am

Tgt Ion: 73 Resp: 26058

Ion	Ratio	Lower	Upper
73	100		
57	18.6	0.0	52.1

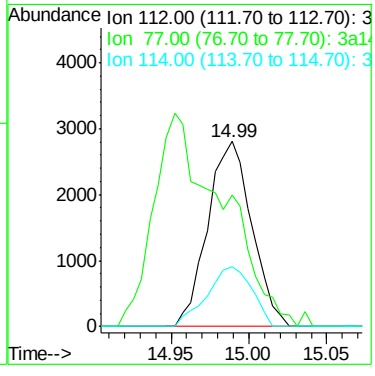


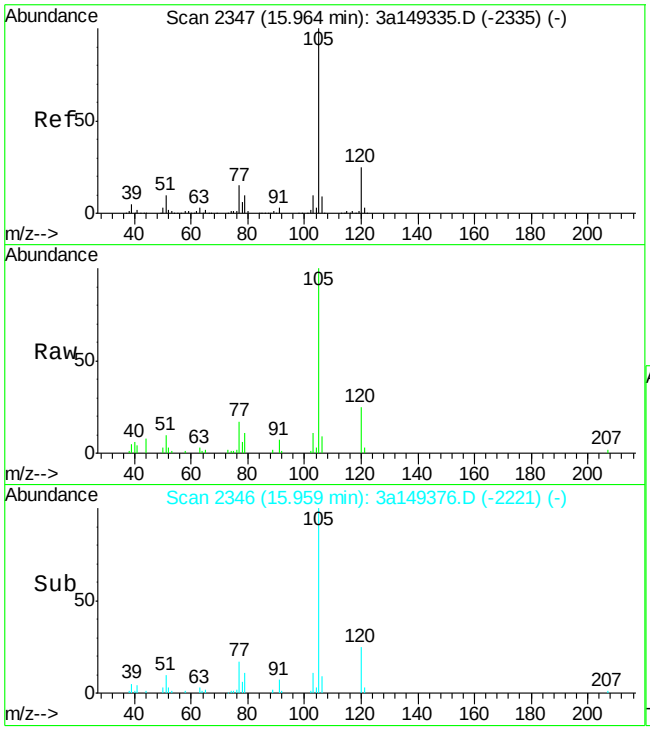


#95
chlorobenzene
Concen: 0.49 ug/L
RT: 14.99 min Scan# 2161
Delta R.T. -0.00 min
Lab File: 3a149376.D
Acq: 17 Mar 2016 2:46 am

Tgt Ion:112 Resp: 5503

Ion	Ratio	Lower	Upper
112	100		
77	71.0	30.8	90.8
114	32.5	1.6	61.6

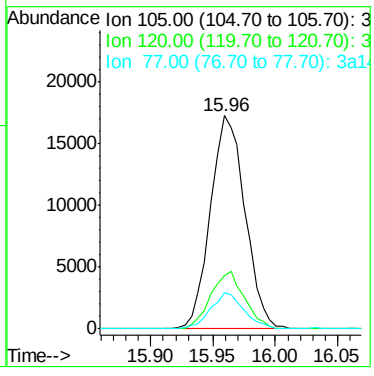


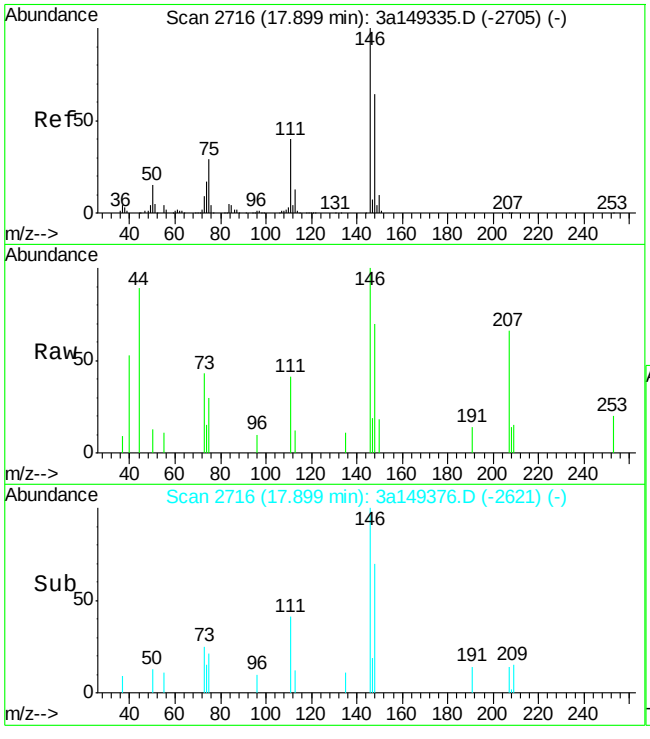


#103
isopropylbenzene
Concen: 1.61 ug/L
RT: 15.96 min Scan# 2346
Delta R.T. -0.01 min
Lab File: 3a149376.D
Acq: 17 Mar 2016 2:46 am

Tgt Ion:105 Resp: 33265

Ion	Ratio	Lower	Upper
105	100		
120	25.1	0.0	55.3
77	16.8	0.0	44.8

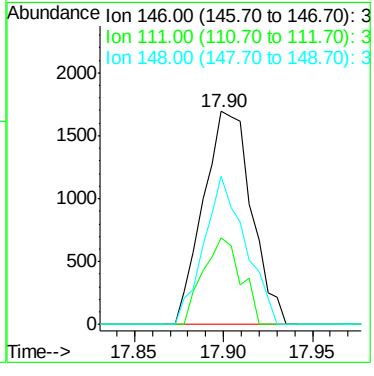




#121
1,2-dichlorobenzene
Concen: 0.31 ug/L
RT: 17.90 min Scan# 2716
Delta R.T. -0.00 min
Lab File: 3a149376.D
Acq: 17 Mar 2016 2:46 am

Tgt Ion:146 Resp: 3199

Ion	Ratio	Lower	Upper
146	100		
111	40.9	10.3	70.3
148	69.8	33.5	93.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\relog\
Data File : 3a149376r.D
Acq On : 17 Mar 2016 2:46 am
Operator : tracyk
Sample : jc16204-4r
Misc : MS99687,V3A6447,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Mar 17 11:46:29 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	407479	500.00	ug/L	0.00
5) pentafluorobenzene	10.65	168	482589	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	754749	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	737841	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	399918	50.00	ug/L	0.00

System Monitoring Compounds						
49) dibromofluoromethane (s)	10.70	113	231122	49.63	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 99.26%			
50) 1,2-dichloroethane-d4 (s)	11.15	65	273518	47.96	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 95.92%			
79) toluene-d8 (s)	13.33	98	875704	49.53	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.06%			
104) 4-bromofluorobenzene (s)	16.19	95	391719	48.81	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 97.62%			

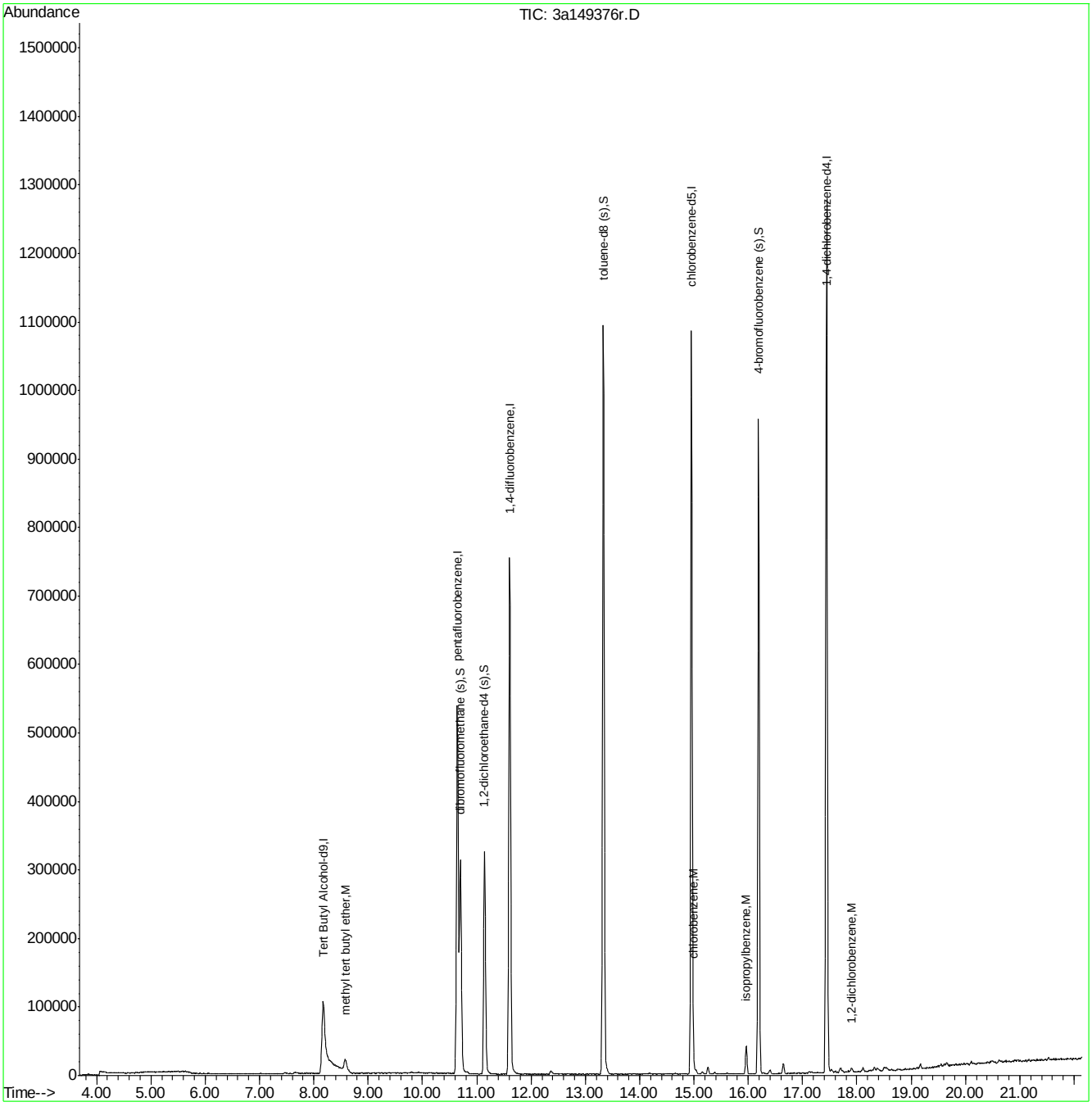
Target Compounds						Qvalue
31) methyl tert butyl ether	8.57	73	26058	1.95	ug/L	93
95) chlorobenzene	14.99	112	5503	0.49	ug/L	91
103) isopropylbenzene	15.96	105	33265	1.61	ug/L	98
121) 1,2-dichlorobenzene	17.90	146	3199	0.31	ug/L	95

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

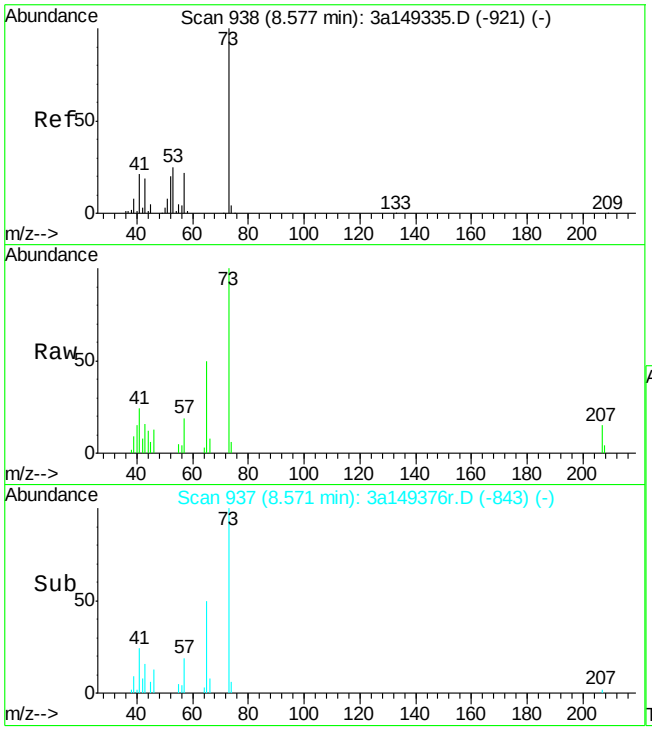
Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\relog\
Data File : 3a149376r.D
Acq On : 17 Mar 2016 2:46 am
Operator : tracyk
Sample : jc16204-4r
Misc : MS99687,V3A6447,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Mar 17 11:46:29 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



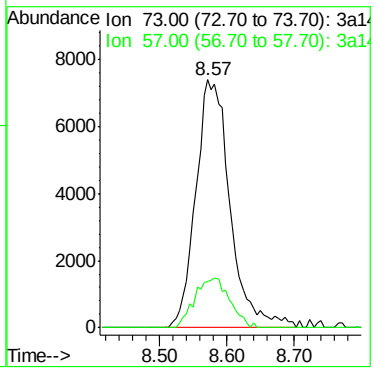
M3A6446.M Fri Apr 08 13:31:12 2016 ACCUNJ Page: 2

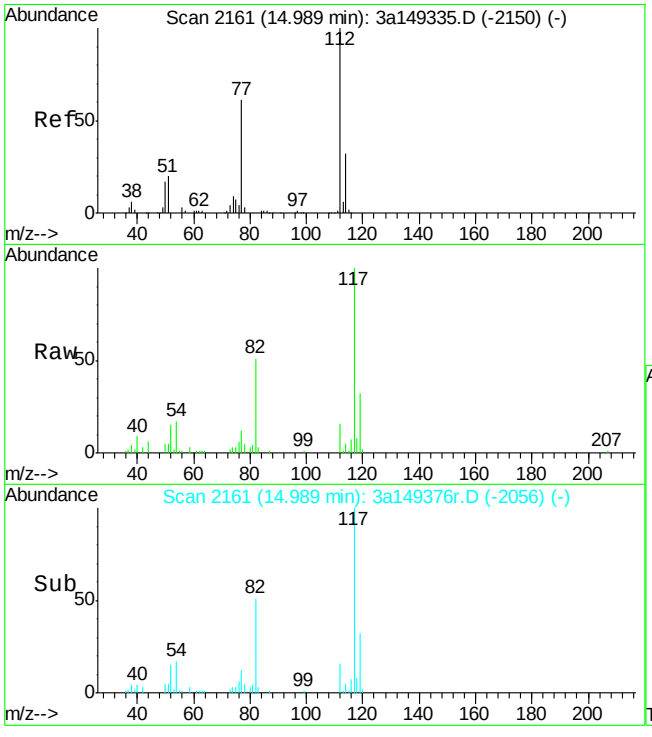


#31
methyl tert butyl ether
Concen: 1.95 ug/L
RT: 8.57 min Scan# 937
Delta R.T. -0.01 min
Lab File: 3a149376r.D
Acq: 17 Mar 2016 2:46 am

Tgt Ion: 73 Resp: 26058

Ion	Ratio	Lower	Upper
73	100		
57	18.6	0.0	52.1

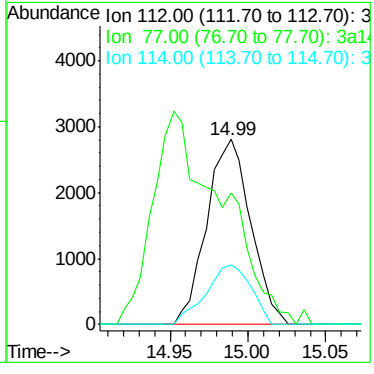


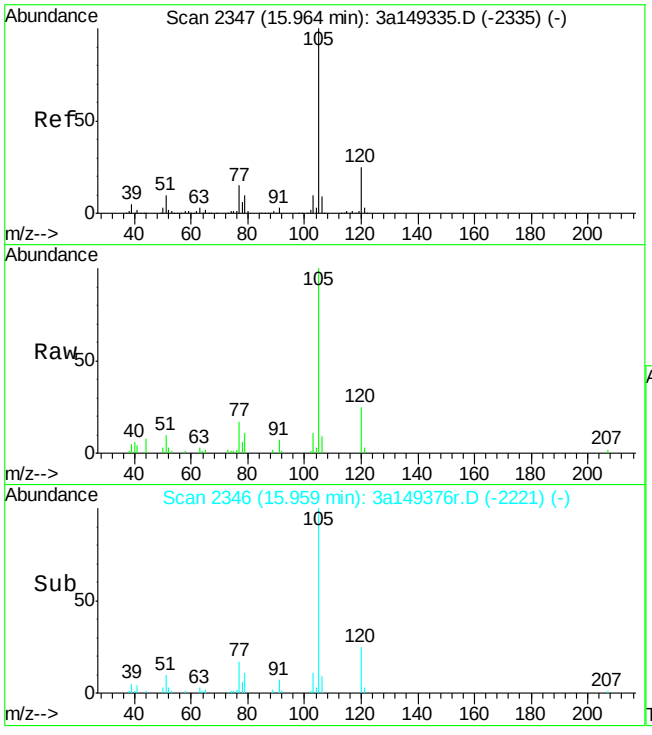


#95
chlorobenzene
Concen: 0.49 ug/L
RT: 14.99 min Scan# 2161
Delta R.T. -0.00 min
Lab File: 3a149376r.D
Acq: 17 Mar 2016 2:46 am

Tgt Ion:112 Resp: 5503

Ion	Ratio	Lower	Upper
112	100		
77	71.0	30.8	90.8
114	32.5	1.6	61.6

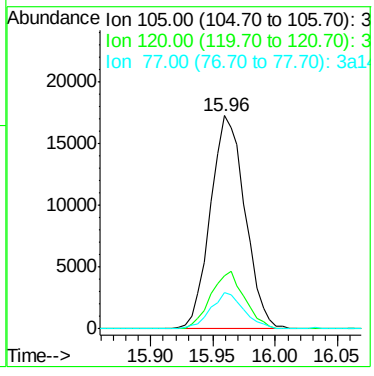


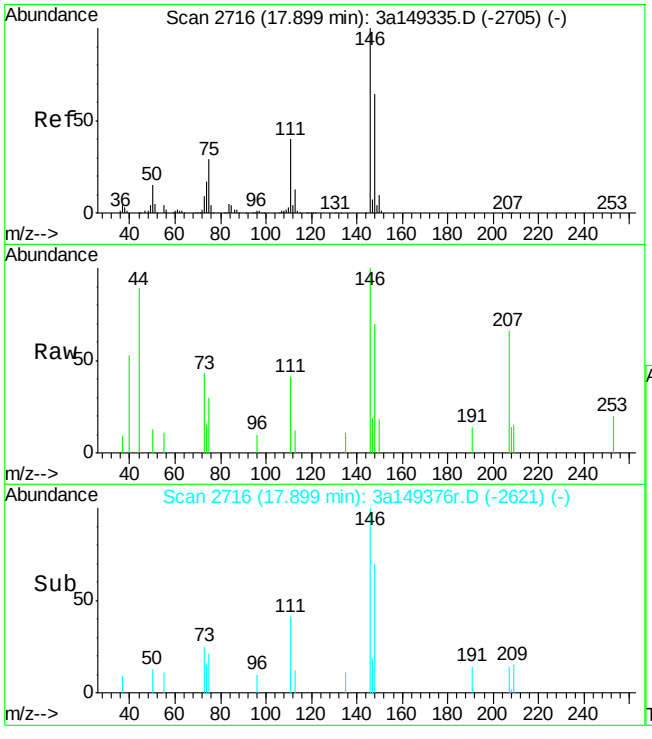


#103
isopropylbenzene
Concen: 1.61 ug/L
RT: 15.96 min Scan# 2346
Delta R.T. -0.01 min
Lab File: 3a149376r.D
Acq: 17 Mar 2016 2:46 am

Tgt Ion:105 Resp: 33265

Ion	Ratio	Lower	Upper
105	100		
120	25.1	0.0	55.3
77	16.8	0.0	44.8

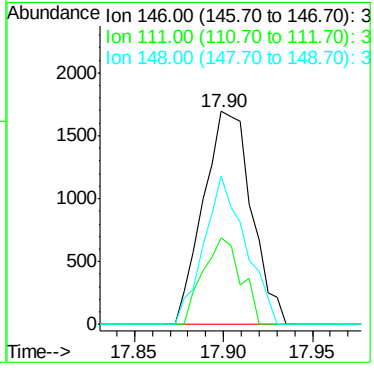




#121
1,2-dichlorobenzene
Concen: 0.31 ug/L
RT: 17.90 min Scan# 2716
Delta R.T. -0.00 min
Lab File: 3a149376r.D
Acq: 17 Mar 2016 2:46 am

Tgt Ion:146 Resp: 3199

Ion	Ratio	Lower	Upper
146	100		
111	40.9	10.3	70.3
148	69.8	33.5	93.5



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149428.D
Acq On : 18 Mar 2016 11:47 am
Operator : tracyk
Sample : jc16204-5
Misc : MS99687,V3A6450,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 18 13:15:41 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Fri Mar 18 12:36:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.18	65	427560	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	521136	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	806920	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	798310	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	431760	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	246437	49.01	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.02%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	293532	47.67	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 95.34%			
79) toluene-d8 (s)	13.33	98	925441	48.95	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 97.90%			
104) 4-bromofluorobenzene (s)	16.19	95	410334	47.36	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 94.72%			

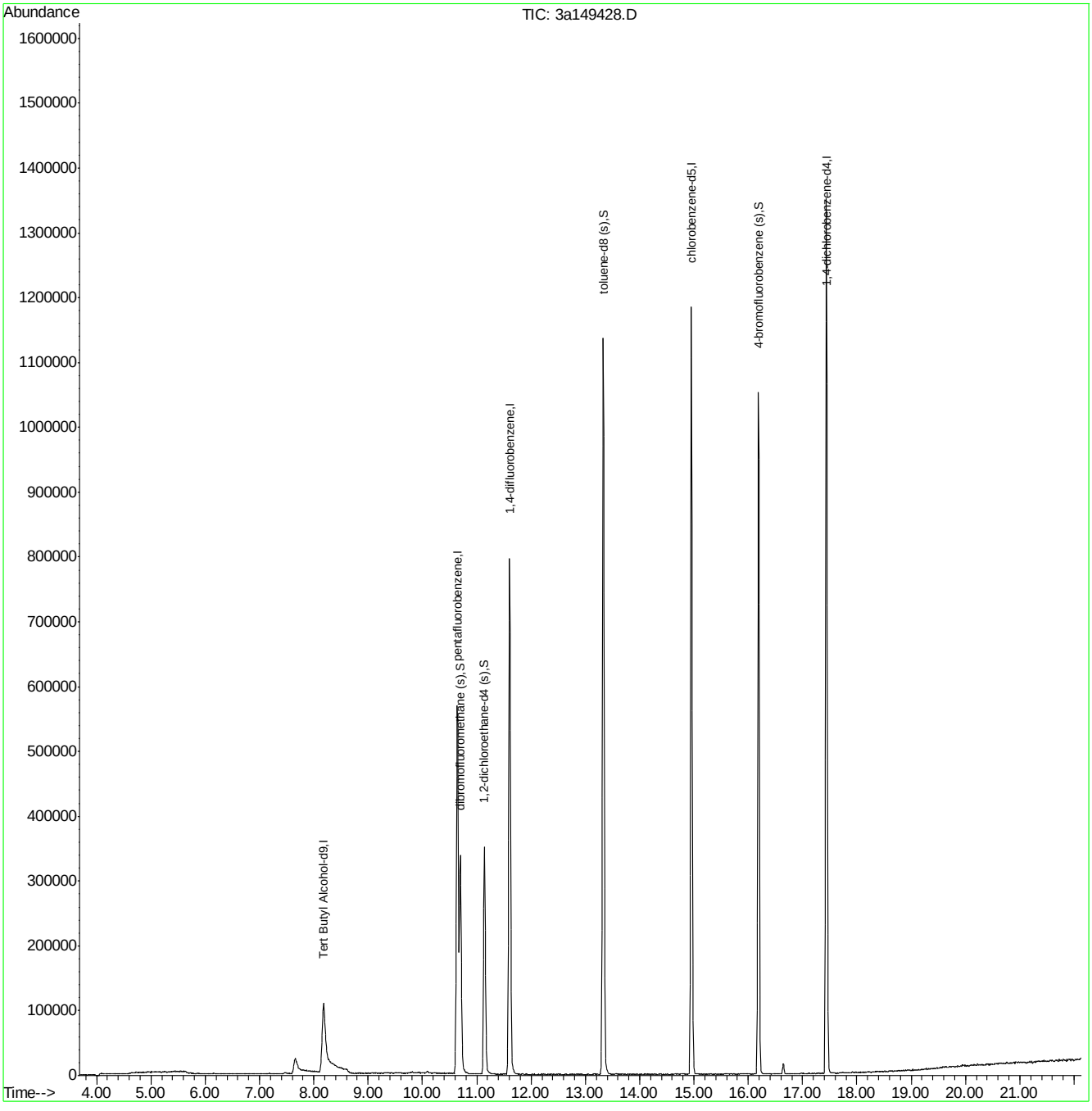
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149428.D
Acq On : 18 Mar 2016 11:47 am
Operator : tracyk
Sample : jc16204-5
Misc : MS99687,V3A6450,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 18 13:15:41 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Fri Mar 18 12:36:01 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\relog\
Data File : 3a149428r.D
Acq On : 18 Mar 2016 11:47 am
Operator : tracyk
Sample : jc16204-5r
Misc : MS99687,V3A6450,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 08 13:31:40 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Fri Mar 18 12:36:01 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.18	65	427560	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	521136	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	806920	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	798310	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	431760	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	246437	49.01	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.02%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	293532	47.67	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 95.34%			
79) toluene-d8 (s)	13.33	98	925441	48.95	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 97.90%			
104) 4-bromofluorobenzene (s)	16.19	95	410334	47.36	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 94.72%			

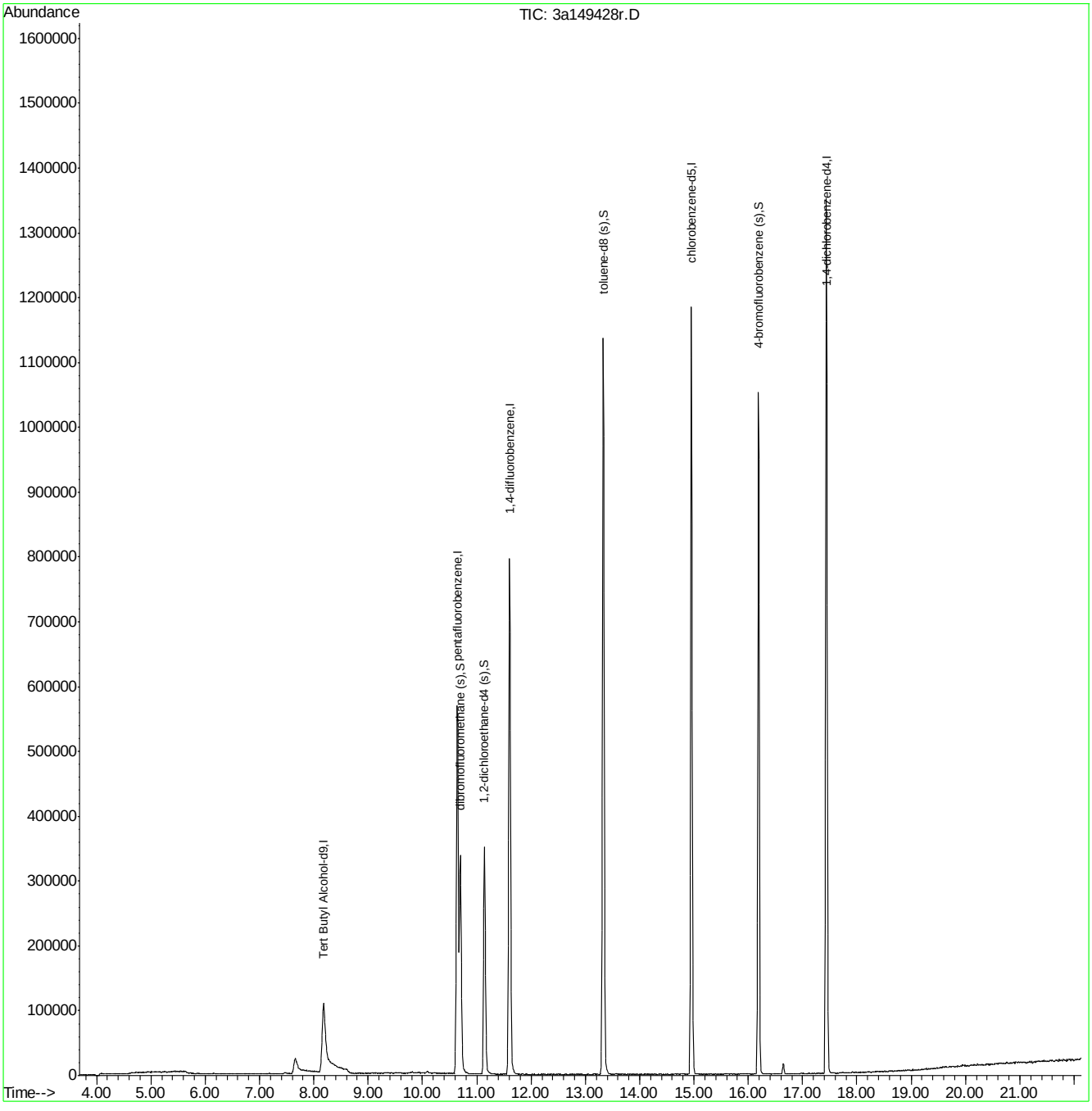
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\relog\
Data File : 3a149428r.D
Acq On : 18 Mar 2016 11:47 am
Operator : tracyk
Sample : jc16204-5r
Misc : MS99687,V3A6450,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 08 13:31:40 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Fri Mar 18 12:36:01 2016
Response via : Initial Calibration



M3A6446.M Fri Apr 08 13:31:53 2016 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149371.D
Acq On : 17 Mar 2016 12:15 am
Operator : tracyk
Sample : jc16204-6
Misc : MS99687,V3A6447,5,,,,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Mar 17 11:41:43 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	411833	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	484883	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	758084	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	736071	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	400436	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	228677	48.88	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.76%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	271146	47.32	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 94.64%			
79) toluene-d8 (s)	13.33	98	879476	49.52	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.04%			
104) 4-bromofluorobenzene (s)	16.19	95	385275	47.94	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 95.88%			

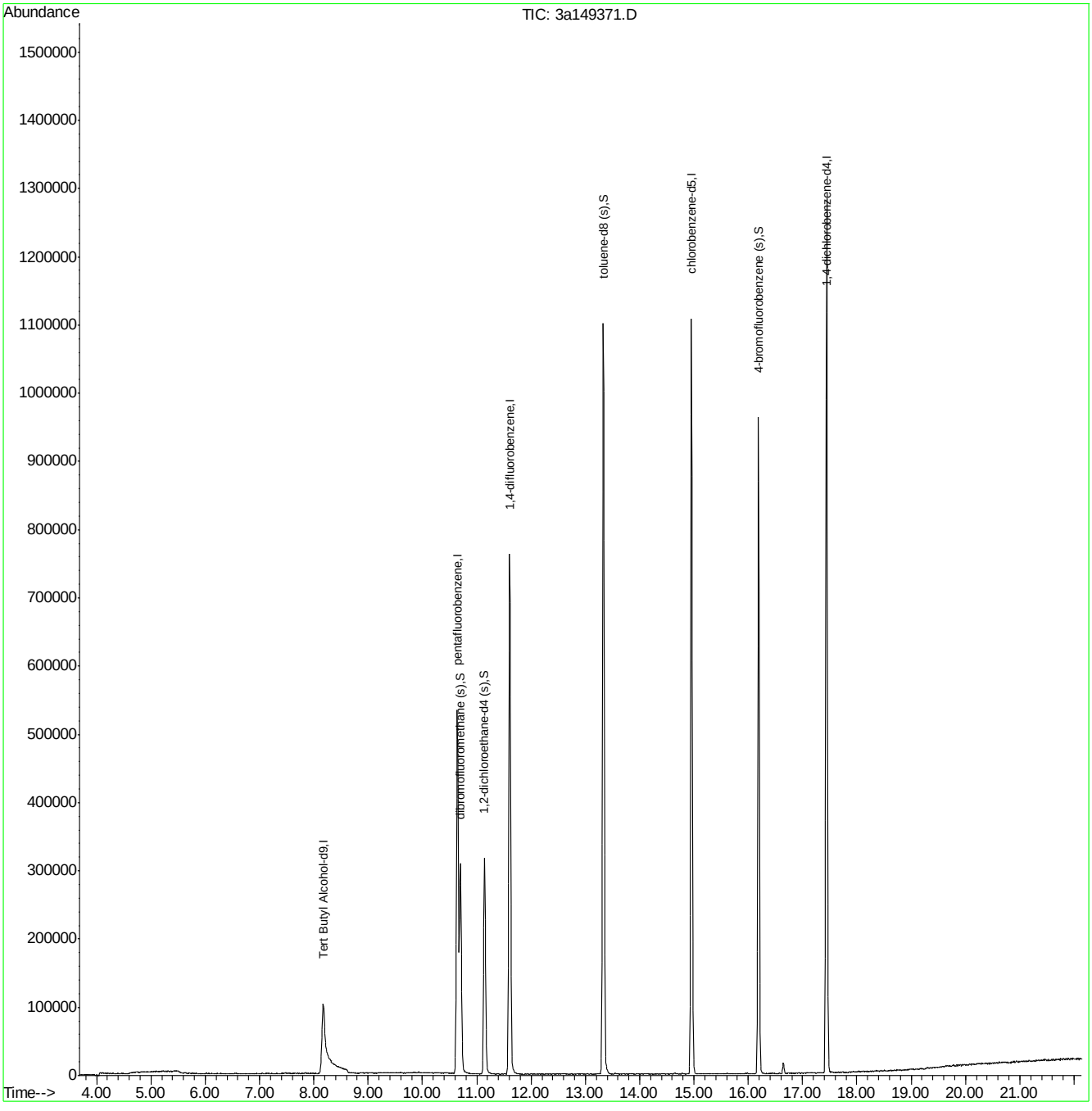
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149371.D
Acq On : 17 Mar 2016 12:15 am
Operator : tracyk
Sample : jc16204-6
Misc : MS99687,V3A6447,5,,,,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Mar 17 11:41:43 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



M3A6446.M Thu Mar 17 11:42:08 2016 ACCUNJ

Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\relog\
Data File : 3a149371r.D
Acq On : 17 Mar 2016 12:15 am
Operator : tracyk
Sample : jc16204-6r
Misc : MS99687,V3A6447,5,,,,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Mar 17 11:41:43 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	411833	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	484883	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	758084	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	736071	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	400436	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	228677	48.88	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.76%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	271146	47.32	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 94.64%			
79) toluene-d8 (s)	13.33	98	879476	49.52	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.04%			
104) 4-bromofluorobenzene (s)	16.19	95	385275	47.94	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 95.88%			

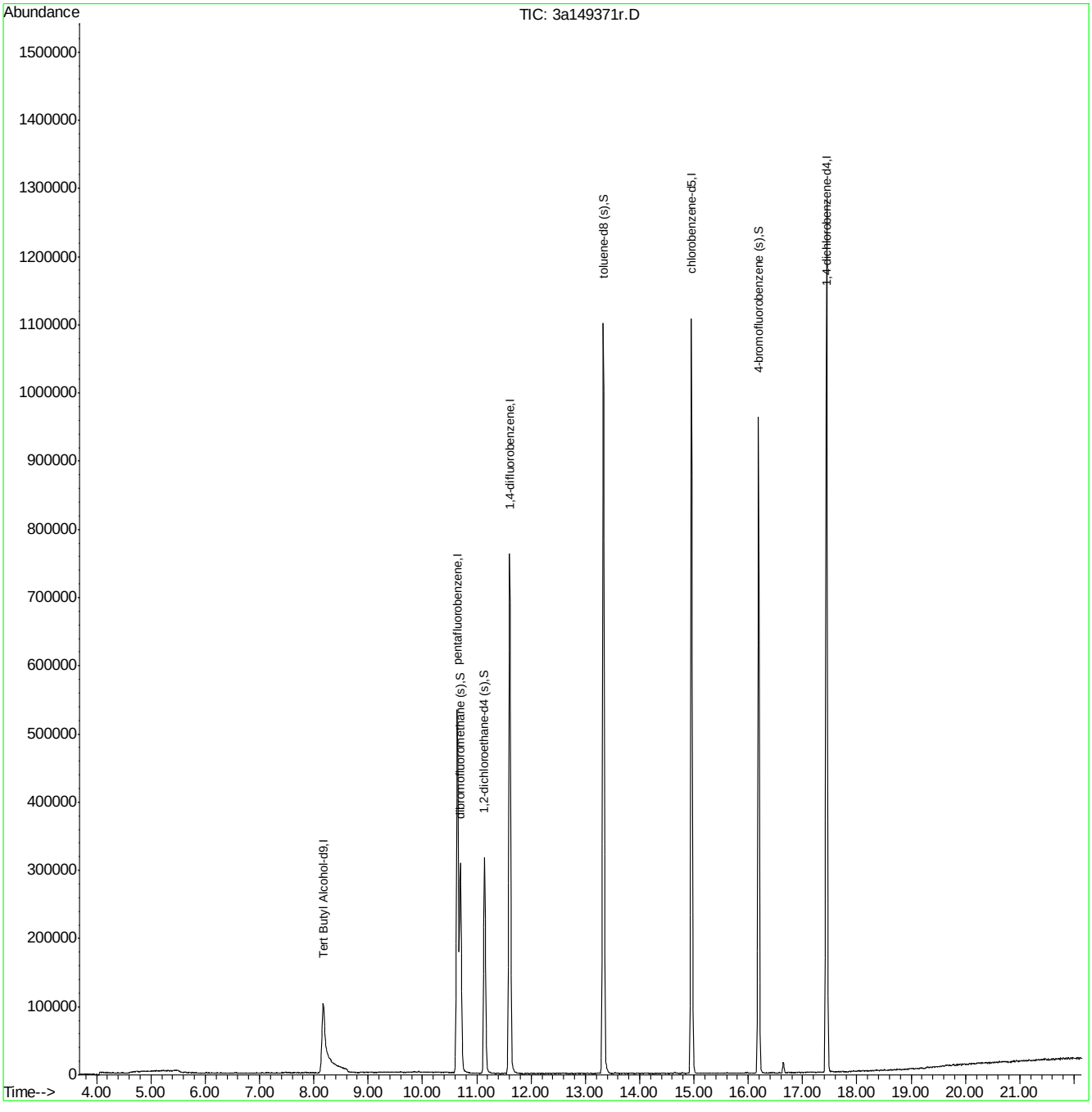
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\relog\
Data File : 3a149371r.D
Acq On : 17 Mar 2016 12:15 am
Operator : tracyk
Sample : jc16204-6r
Misc : MS99687,V3A6447,5,,,,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Mar 17 11:41:43 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



M3A6446.M Fri Apr 08 13:29:00 2016 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149372.D
Acq On : 17 Mar 2016 12:45 am
Operator : tracyk
Sample : jc16204-7
Misc : MS99687,V3A6447,5,,,,1
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Mar 17 11:42:30 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	396604	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	461911	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	726108	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	707924	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	378156	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	220011	49.36	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.72%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	263628	48.30	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 96.60%			
79) toluene-d8 (s)	13.33	98	847683	49.83	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.66%			
104) 4-bromofluorobenzene (s)	16.19	95	373969	49.28	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 98.56%			

Target Compounds Qvalue

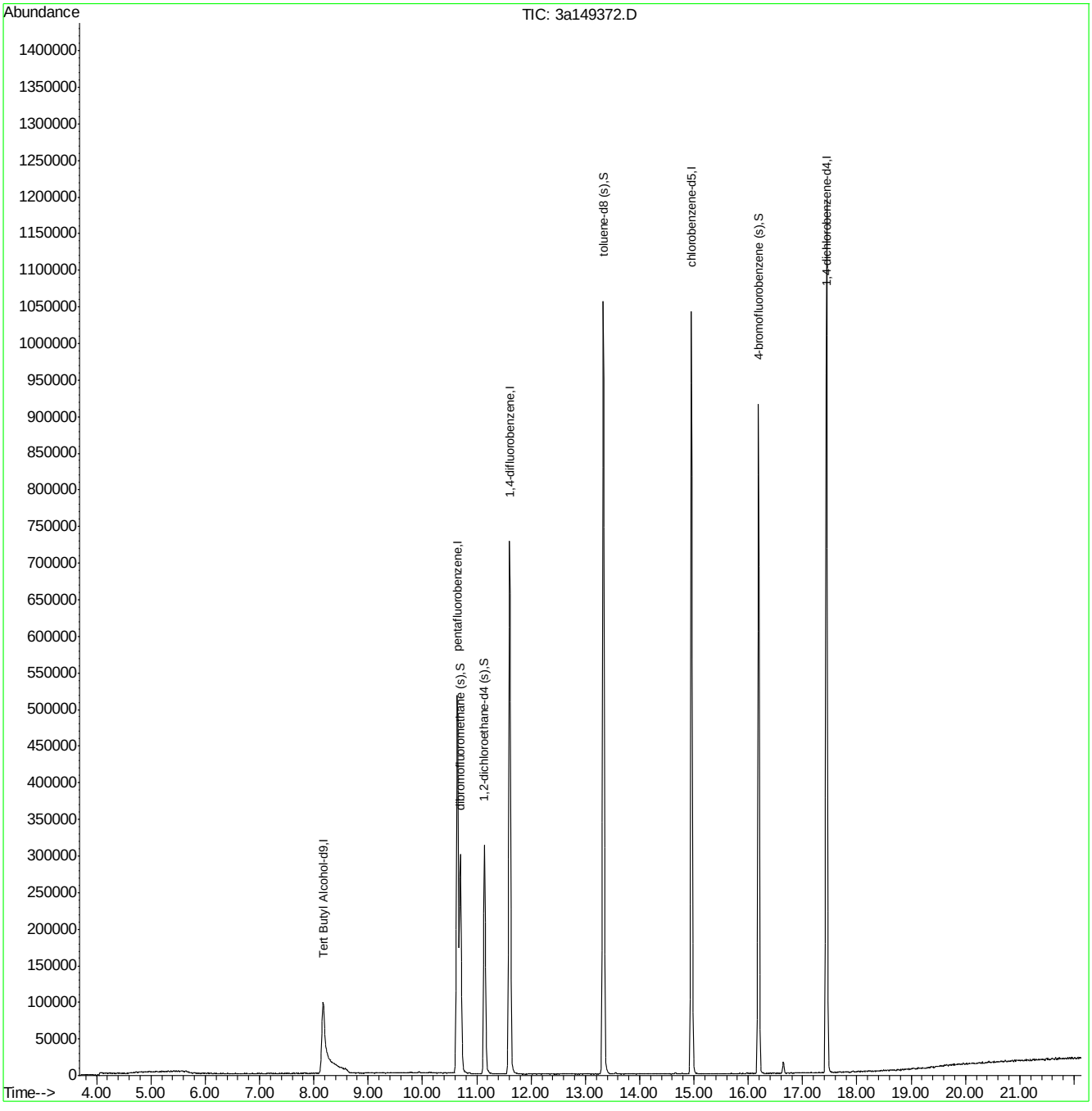
(#) = qualifier out of range (m) = manual integration (+) = signals summed

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149372.D
Acq On : 17 Mar 2016 12:45 am
Operator : tracyk
Sample : jc16204-7
Misc : MS99687,V3A6447,5,,,,1
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Mar 17 11:42:30 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\relog\
Data File : 3a149372r.D
Acq On : 17 Mar 2016 12:45 am
Operator : tracyk
Sample : jc16204-7r
Misc : MS99687,V3A6447,5,,,,1
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Mar 17 11:42:30 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	396604	500.00 ug/L	0.00
5) pentafluorobenzene	10.64	168	461911	50.00 ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	726108	50.00 ug/L	0.00
87) chlorobenzene-d5	14.95	117	707924	50.00 ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	378156	50.00 ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	220011	49.36 ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.72%		
50) 1,2-dichloroethane-d4 (s)	11.14	65	263628	48.30 ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 96.60%		
79) toluene-d8 (s)	13.33	98	847683	49.83 ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.66%		
104) 4-bromofluorobenzene (s)	16.19	95	373969	49.28 ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 98.56%		

Target Compounds Qvalue

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

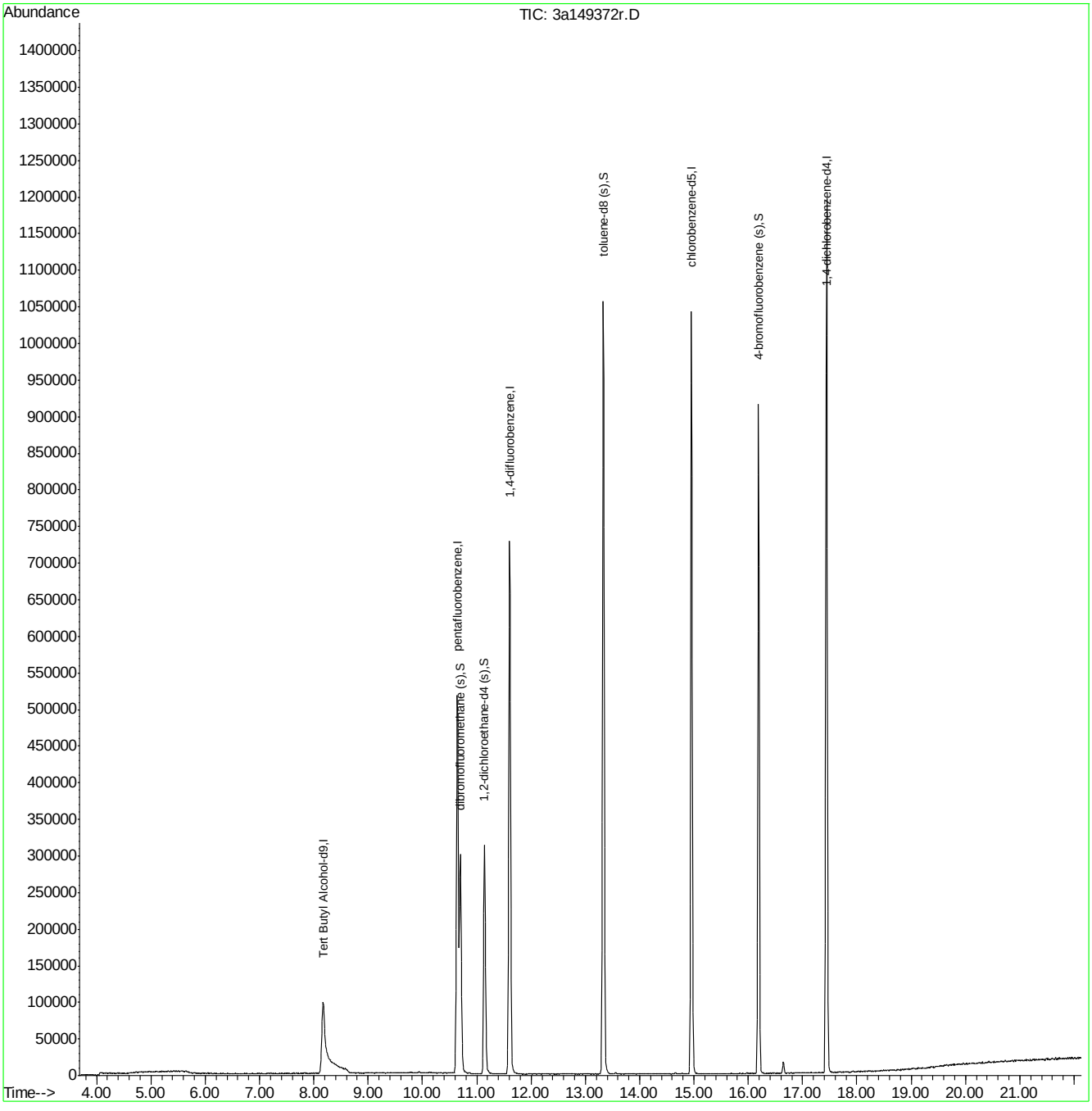
7.1.14

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\relog\
Data File : 3a149372r.D
Acq On : 17 Mar 2016 12:45 am
Operator : tracyk
Sample : jc16204-7r
Misc : MS99687,V3A6447,5,,,,1
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Mar 17 11:42:30 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149369.D
Acq On : 16 Mar 2016 11:14 pm
Operator : tracyk
Sample : mb2
Misc : MS99718,V3A6447,5,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Mar 17 11:40:39 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	396273	500.00	ug/L	-0.01
5) pentafluorobenzene	10.64	168	473892	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	743411	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	731230	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	392778	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	227668	49.79	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 99.58%			
50) 1,2-dichloroethane-d4 (s)	11.15	65	272944	48.74	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 97.48%			
79) toluene-d8 (s)	13.33	98	860626	49.42	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 98.84%			
104) 4-bromofluorobenzene (s)	16.19	95	384181	48.74	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 97.48%			

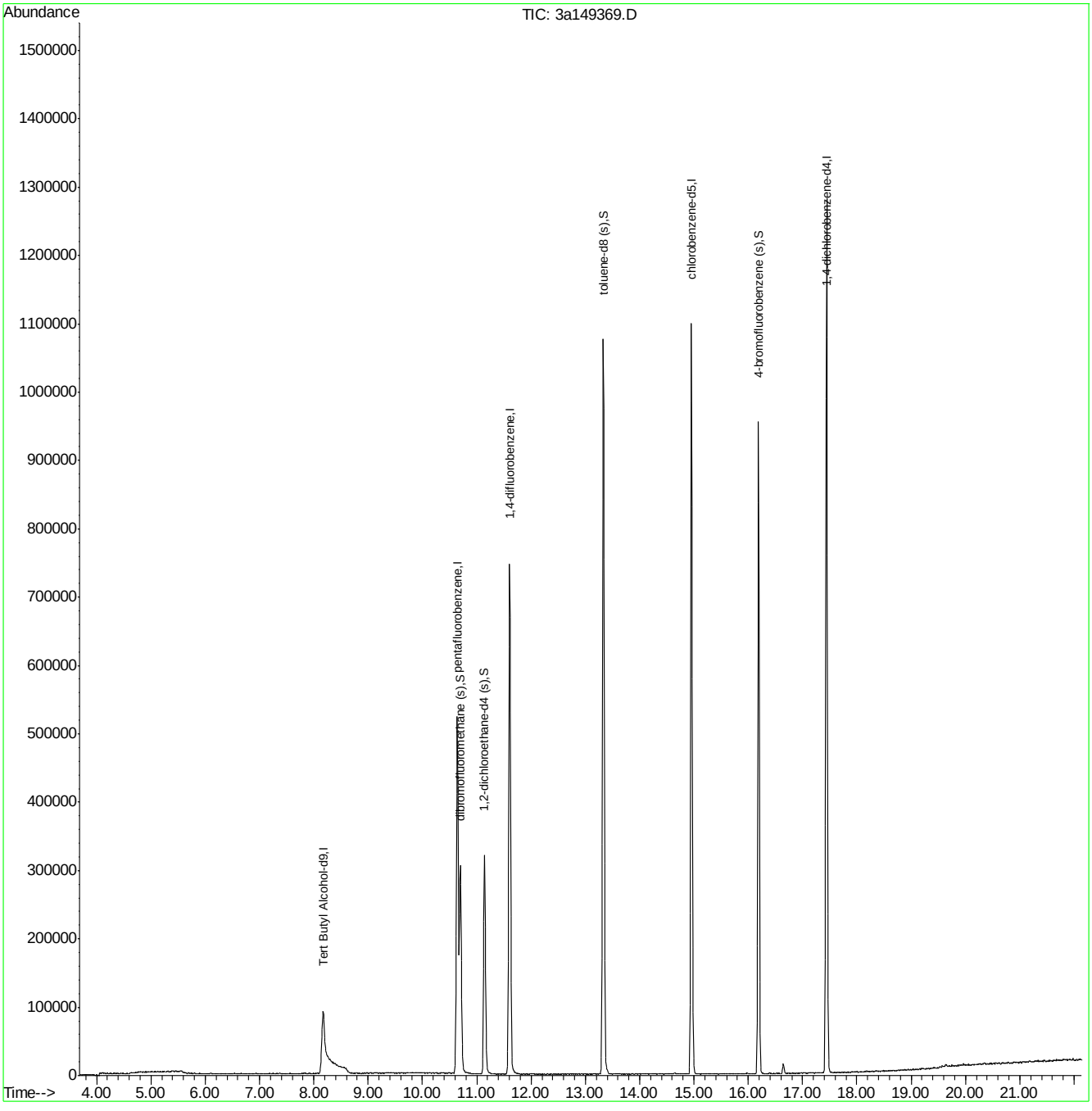
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149369.D
Acq On : 16 Mar 2016 11:14 pm
Operator : tracyk
Sample : mb2
Misc : MS99718,V3A6447,5,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Mar 17 11:40:39 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149425.D
Acq On : 18 Mar 2016 10:17 am
Operator : tracyk
Sample : mb1
Misc : MS99767,V3A6450,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 18 13:13:15 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Mar 17 11:30:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.18	65	467846	500.00 ug/L	0.00
5) pentafluorobenzene	10.64	168	521432	50.00 ug/L	0.00
55) 1,4-difluorobenzene	11.60	114	811507	50.00 ug/L	0.00
87) chlorobenzene-d5	14.95	117	794264	50.00 ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	420698	50.00 ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.69	113	247375	49.17 ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.34%		
50) 1,2-dichloroethane-d4 (s)	11.14	65	292942	47.54 ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 95.08%		
79) toluene-d8 (s)	13.33	98	942518	49.58 ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.16%		
104) 4-bromofluorobenzene (s)	16.19	95	407508	48.27 ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 96.54%		

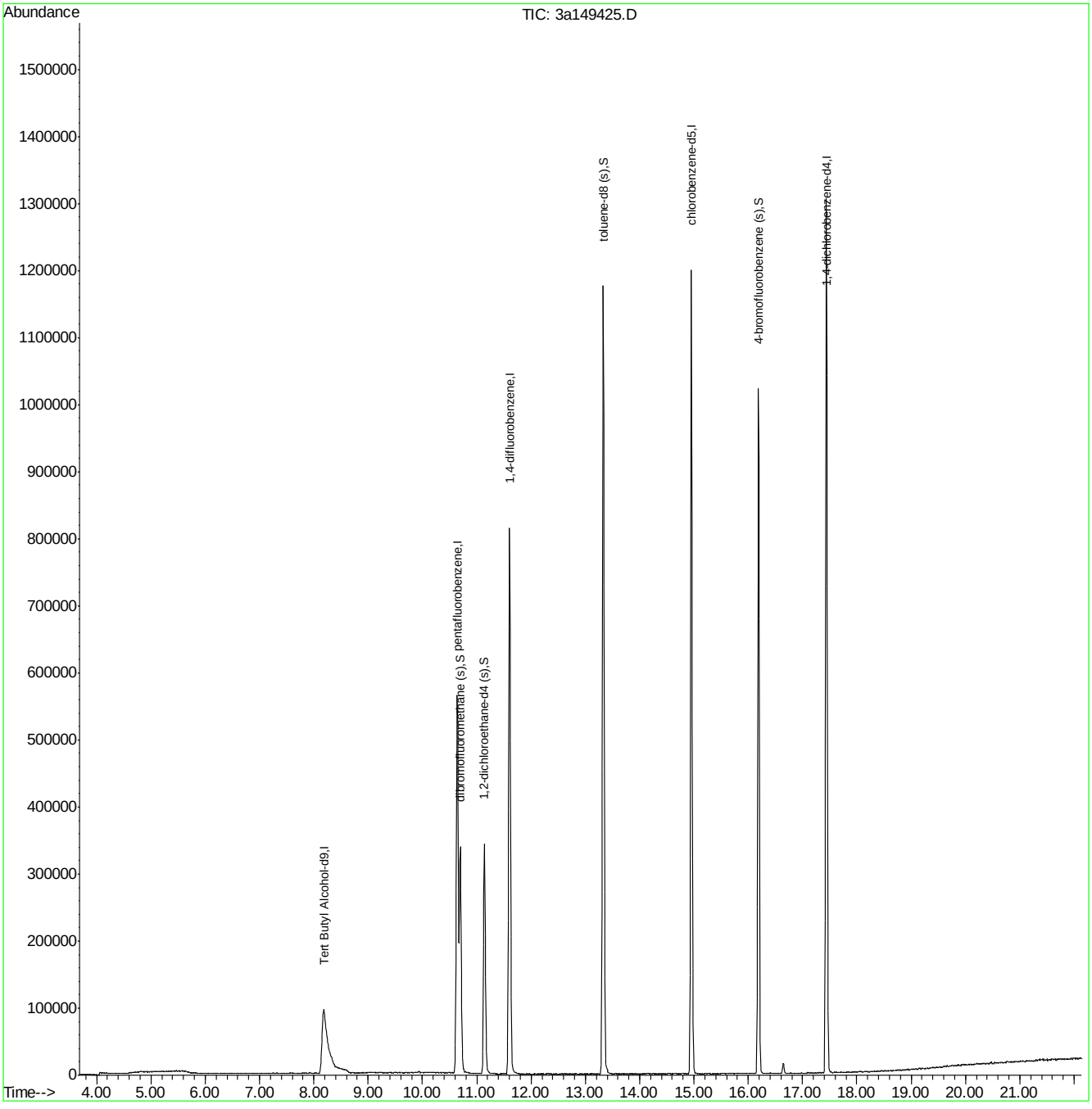
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149425.D
Acq On : 18 Mar 2016 10:17 am
Operator : tracyk
Sample : mb1
Misc : MS99767,V3A6450,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 18 13:13:15 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Mar 17 11:30:00 2016
Response via : Initial Calibration



M3A6446.M Fri Mar 18 13:13:22 2016 ACCUNJ

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SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149346.D
Acq On : 16 Mar 2016 11:39 am
Operator : tracyk
Sample : mb1
Misc : MS99694,V3A6447,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 16 15:25:36 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	423540	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	463621	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	744037	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	726520	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	382968	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	222177	49.66	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 99.32%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	267256	48.78	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 97.56%			
79) toluene-d8 (s)	13.33	98	870906	49.96	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.92%			
104) 4-bromofluorobenzene (s)	16.19	95	382247	49.74	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 99.48%			

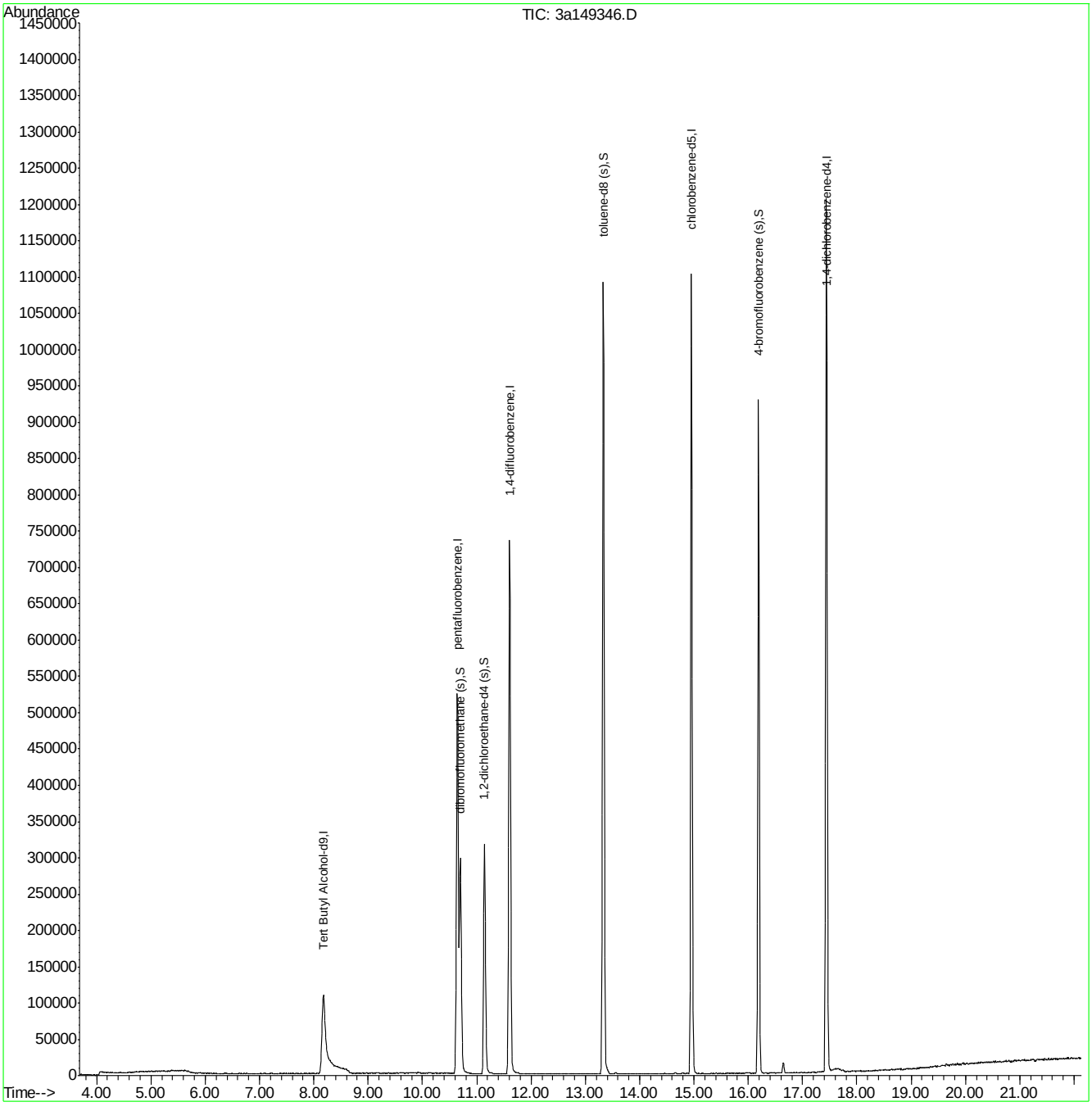
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149346.D
Acq On : 16 Mar 2016 11:39 am
Operator : tracyk
Sample : mb1
Misc : MS99694,V3A6447,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 16 15:25:36 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149476.D
Acq On : 21 Mar 2016 11:00 am
Operator : tracyk
Sample : mb2
Misc : MS99820,V3A6450,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 21 13:36:43 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.16	65	488387	500.00 ug/L	-0.02
5) pentafluorobenzene	10.64	168	577853	50.00 ug/L	0.00
55) 1,4-difluorobenzene	11.60	114	921964	50.00 ug/L	0.00
87) chlorobenzene-d5	14.95	117	896845	50.00 ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	480809	50.00 ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.69	113	271301	48.66 ug/L	-0.01
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.32%		
50) 1,2-dichloroethane-d4 (s)	11.14	65	330624	48.42 ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 96.84%		
79) toluene-d8 (s)	13.33	98	1070258	49.55 ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.10%		
104) 4-bromofluorobenzene (s)	16.18	95	462031	47.89 ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 95.78%		

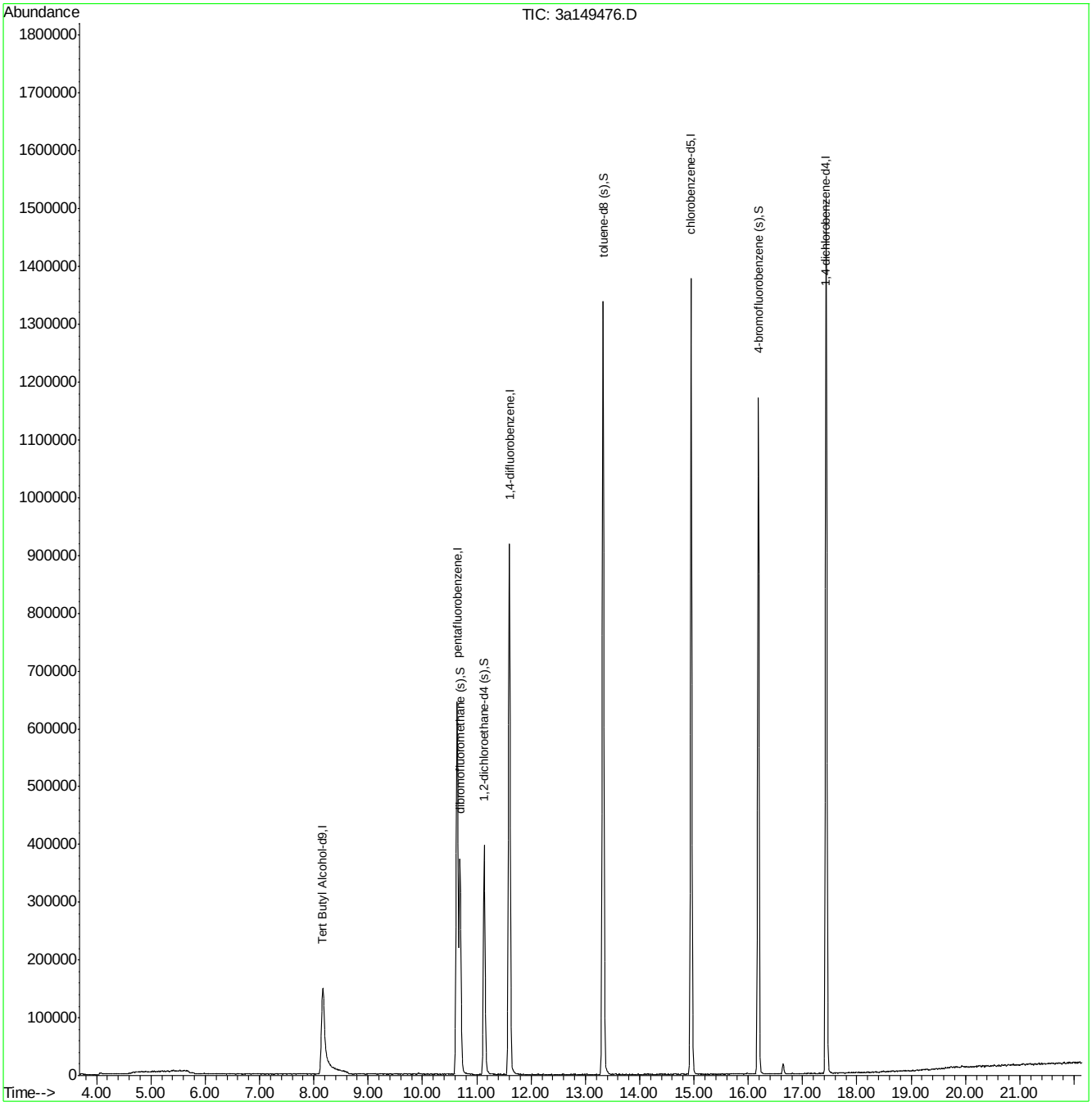
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149476.D
Acq On : 21 Mar 2016 11:00 am
Operator : tracyk
Sample : mb2
Misc : MS99820,V3A6450,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 21 13:36:43 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



M3A6446.M Mon Mar 21 13:36:48 2016 ACCUNJ

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149347.D
Acq On : 16 Mar 2016 12:09 pm
Operator : tracyk
Sample : bs
Misc : MS99317,V3A6447,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 16 15:26:38 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.18	65	439901	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	456618	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	734656	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	721983	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	395918	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	220131	49.96	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 99.92%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	262755	48.70	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 97.40%			
79) toluene-d8 (s)	13.33	98	865934	50.31	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 100.62%			
104) 4-bromofluorobenzene (s)	16.19	95	381616	48.03	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 96.06%			

Target Compounds

						Qvalue
2) tertiary butyl alcohol	8.31	59	181260	243.49	ug/L	98
4) 1,4-dioxane	12.36	88	64428	1273.34	ug/L	97
8) chlorodifluoromethane	4.20	51	121306	53.57	ug/L	91
9) dichlorodifluoromethane	4.16	85	163568	39.40	ug/L	98
10) chloromethane	4.61	50	203222	34.87	ug/L	99
11) vinyl chloride	4.90	62	197908	38.85	ug/L	98
12) bromomethane	5.68	96	111443	39.49	ug/L	97
15) 2-CHLOROPROPANE	7.11	43	277709	46.86	ug/L	98
16) chloroethane	5.90	64	122112	41.52	ug/L	96
17) trichlorofluoromethane	6.40	101	223530	46.84	ug/L	98
19) 1-chloropropane	8.26	41	169591	50.99	ug/L	92
20) ethyl ether	6.89	74	111086	49.10	ug/L	99
21) acrolein	7.20	56	596918	609.80	ug/L	100
22) 1,1-dichloroethene	7.38	61	261838	47.46	ug/L	100
23) acetone	7.45	58	26784	51.08	ug/L	86
24) allyl chloride	8.00	76	109588	48.80	ug/L	98
25) acetonitrile	7.98	40	214069	470.75	ug/L	97
26) iodomethane	7.69	142	276522	48.33	ug/L	98
27) iso-butyl alcohol	11.22	74	59984	484.98	ug/L	95
28) carbon disulfide	7.83	76	557652	47.11	ug/L	99
29) methylene chloride	8.22	84	186901	47.15	ug/L	98
30) methyl acetate	7.99	43	207154	42.79	ug/L	98
31) methyl tert butyl ether	8.57	73	1176248	92.95	ug/L	95
32) trans-1,2-dichloroethene	8.64	61	241960	46.37	ug/L	100
33) di-isopropyl ether	9.25	45	636514	48.51	ug/L	98
34) 2-butanone	10.06	72	37288	44.41	ug/L #	88
35) 1,1-dichloroethane	9.28	63	328731	48.46	ug/L	99
36) chloroprene	9.39	53	236592	44.89	ug/L	97
37) acrylonitrile	8.60	53	566668	249.52	ug/L	98
38) vinyl acetate	9.27	86	41965	52.23	ug/L	90
39) ethyl tert-butyl ether	9.76	59	618418	51.88	ug/L	100
40) ethyl acetate	10.07	45	41095	47.40	ug/L	94
41) 2,2-dichloropropane	10.07	77	160370	44.69	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149347.D
Acq On : 16 Mar 2016 12:09 pm
Operator : tracyk
Sample : bs
Misc : MS99317,V3A6447,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 16 15:26:38 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
42) cis-1,2-dichloroethene	10.09	96	196432	45.60 ug/L	97
43) methylacrylate	10.15	85	42484	52.46 ug/L	95
44) propionitrile	10.17	54	490704	496.02 ug/L	89
45) bromochloromethane	10.42	128	96584	49.96 ug/L	99
46) tetrahydrofuran	10.46	42	106320	45.27 ug/L	97
47) chloroform	10.49	85	207411	45.74 ug/L	99
48) t-butyl formate	10.51	59	147951	36.68 ug/L	99
51) freon 113	7.34	151	112870	52.96 ug/L	98
52) methacrylonitrile	10.36	67	115749	47.40 ug/L	98
53) 1,1,1-trichloroethane	10.74	97	249495	49.71 ug/L	99
54) Cyclohexane	10.82	84	245045	47.76 ug/L	97
56) epichlorohydrin	12.93	57	182197	250.66 ug/L	98
57) n-butyl alcohol	11.74	56	520944	2357.55 ug/L	99
58) carbon tetrachloride	10.95	117	229413	48.62 ug/L	97
59) 1,1-dichloropropene	10.94	75	248029	50.47 ug/L	98
61) hexane	8.97	57	98920	21.83 ug/L	99
62) 2,2,4-TRIMETHYLPENTANE	11.21	57	609653	48.89 ug/L	99
63) benzene	11.21	78	733105	46.48 ug/L	98
64) tert-amyl methyl ether	11.24	87	133377	52.93 ug/L	98
65) heptane	11.38	57	116148	45.10 ug/L	98
66) isopropyl acetate	11.14	87	51803	50.50 ug/L #	78
67) 1,2-dichloroethane	11.23	62	251263	48.44 ug/L	99
69) trichloroethene	11.96	95	188639	47.68 ug/L	98
71) methyl methacrylate	12.24	100	66533	50.67 ug/L	95
72) 2-nitropropane	12.79	41	106130	46.24 ug/L	100
73) 2-chloroethyl vinyl ether	12.80	63	784074	257.79 ug/L	99
74) 1,2-dichloropropane	12.24	63	196857	47.62 ug/L	98
75) dibromomethane	12.41	93	130483	48.87 ug/L	100
76) methylcyclohexane	12.18	83	260094	48.12 ug/L	99
77) bromodichloromethane	12.55	83	271758	47.68 ug/L	100
78) cis-1,3-dichloropropene	13.03	75	343812	49.69 ug/L	99
80) 4-methyl-2-pentanone	13.12	58	129883	50.46 ug/L	93
81) toluene	13.41	91	798753	46.44 ug/L	99
82) 3-methyl-1-butanol	13.15	55	346212	924.41 ug/L	99
83) trans-1,3-dichloropropene	13.63	75	326160	48.16 ug/L	98
84) ethyl methacrylate	13.60	69	329270	47.72 ug/L	97
85) 1,1,2-trichloroethane	13.86	83	172100	47.71 ug/L	99
86) 2-hexanone	14.03	58	130970	50.11 ug/L	99
88) tetrachloroethene	14.03	166	200493	48.81 ug/L	98
90) 1,3-dichloropropane	14.05	76	330653	49.13 ug/L	98
91) butyl acetate	14.10	56	202346	49.09 ug/L	99
92) 3,3-dimethyl-1-butanol	14.21	57	371595	474.34 ug/L	99
93) dibromochloromethane	14.34	129	233009	48.87 ug/L	99
94) 1,2-dibromoethane	14.50	107	221422	48.26 ug/L	100
95) chlorobenzene	14.98	112	540112	48.70 ug/L	98
96) 1,1,1,2-tetrachloroethane	15.05	131	201369	49.01 ug/L	99
97) ethylbenzene	15.04	91	946004	46.94 ug/L	100
98) m,p-xylene	15.15	106	716898	96.30 ug/L	97
99) o-xylene	15.60	91	816259	48.22 ug/L	99
100) styrene	15.61	104	651666	49.12 ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149347.D
Acq On : 16 Mar 2016 12:09 pm
Operator : tracyk
Sample : bs
Misc : MS99317,V3A6447,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 16 15:26:38 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
101) bromoform	15.91	173	195582	49.89 ug/L	98
103) isopropylbenzene	15.96	105	947447	46.19 ug/L	100
105) cyclohexanone	16.16	98	50267	411.59 ug/L	97
106) bromobenzene	16.40	156	262134	47.47 ug/L	97
107) 1,1,2,2-tetrachloroethane	16.30	83	348855	46.52 ug/L	99
108) trans-1,4-dichloro-2-buten	16.34	53	109367	54.18 ug/L	97
109) 1,2,3-trichloropropane	16.38	110	91661	46.32 ug/L	97
110) n-propylbenzene	16.40	91	1177988	47.64 ug/L	99
111) 2-chlorotoluene	16.57	126	232655	45.75 ug/L	97
112) 4-chlorotoluene	16.67	91	757404	46.06 ug/L	98
113) 1,3,5-trimethylbenzene	16.55	105	833267	47.18 ug/L	99
114) tert-butylbenzene	16.93	134	159924	48.38 ug/L	100
115) pentachloroethane	17.03	167	158647	49.61 ug/L	98
116) 1,2,4-trimethylbenzene	16.98	105	875115	47.80 ug/L	99
117) sec-butylbenzene	17.16	105	1058291	47.06 ug/L	100
118) 1,3-dichlorobenzene	17.38	146	503274	48.02 ug/L	99
119) p-isopropyltoluene	17.28	119	914966	48.76 ug/L	100
120) 1,4-dichlorobenzene	17.47	146	508926	48.71 ug/L	99
121) 1,2-dichlorobenzene	17.90	146	498676	49.26 ug/L	100
122) benzyl chloride	17.59	91	765149	50.94 ug/L	99
123) n-butylbenzene	17.73	92	487456	48.50 ug/L	99
124) 1,2-dibromo-3-chloropropan	18.75	75	71139	42.11 ug/L	99
125) 1,3,5-TRICHLOROBENZENE	18.94	180	372253	49.63 ug/L	100
126) 1,2,4-trichlorobenzene	19.64	180	328881	50.41 ug/L	97
127) hexachlorobutadiene	19.75	225	153691	47.03 ug/L	99
128) naphthalene	19.95	128	932517	48.48 ug/L	100
129) 1,2,3-trichlorobenzene	20.22	180	295696	48.96 ug/L	97
130) hexachloroethane	18.18	201	152122	49.95 ug/L	99

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

7.3.1

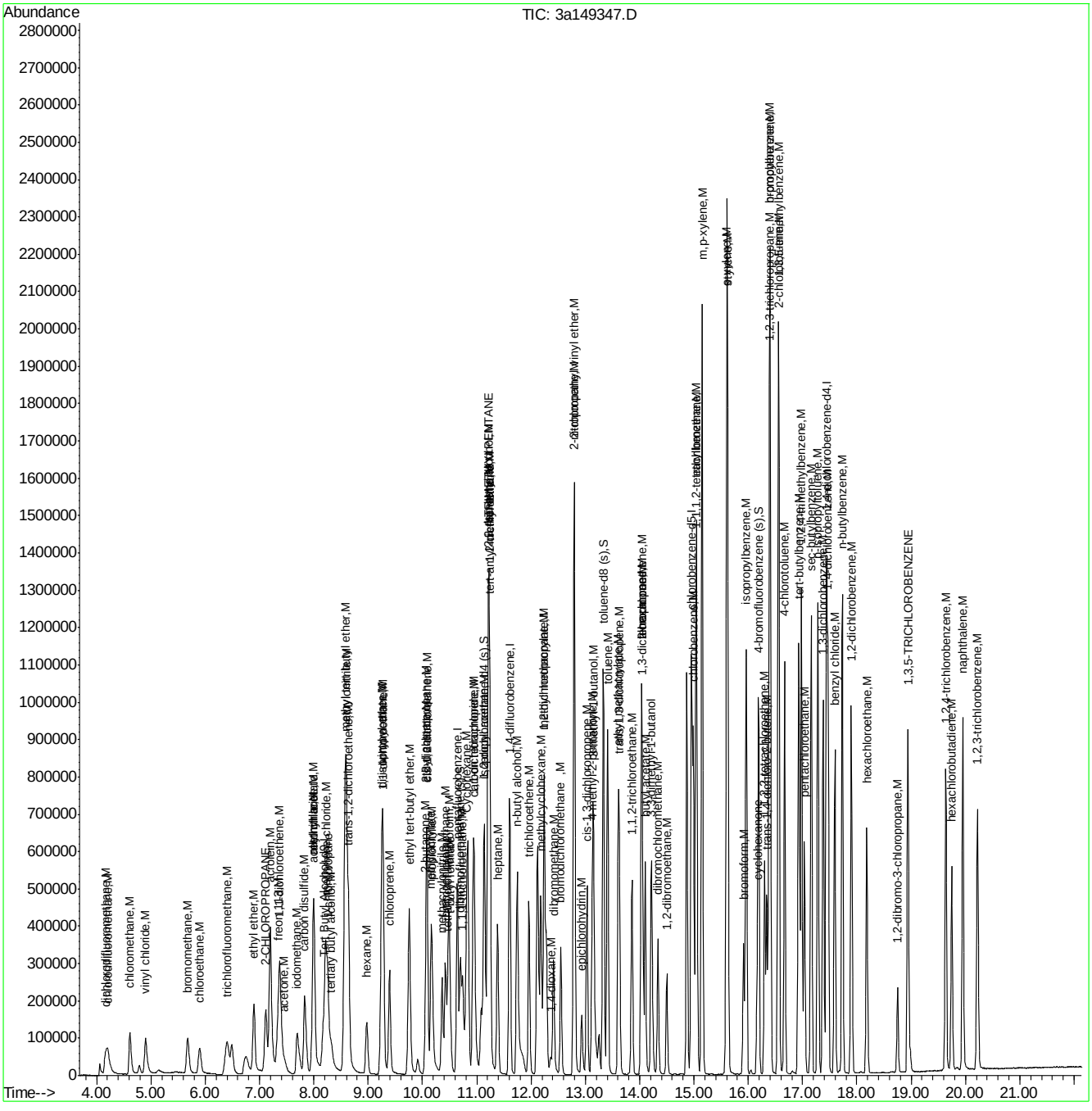
7

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149347.D
Acq On : 16 Mar 2016 12:09 pm
Operator : tracyk
Sample : bs
Misc : MS99317,V3A6447,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 16 15:26:38 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149426.D
Acq On : 18 Mar 2016 10:47 am
Operator : tracyk
Sample : bs
Misc : MS99767,V3A6450,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 18 13:13:35 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Mar 17 11:30:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.19	65	461328	500.00	ug/L	0.01
5) pentafluorobenzene	10.64	168	504567	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.60	114	798573	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	773498	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	436628	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.69	113	241117	49.52	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 99.04%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	280067	46.97	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 93.94%			
79) toluene-d8 (s)	13.33	98	921536	49.26	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 98.52%			
104) 4-bromofluorobenzene (s)	16.19	95	401853	45.86	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 91.72%			

Target Compounds

						Qvalue
2) tertiary butyl alcohol	8.31	59	205006	262.60	ug/L	99
4) 1,4-dioxane	12.37	88	72569	1367.62	ug/L	96
8) chlorodifluoromethane	4.20	51	135388	54.11	ug/L	95
9) dichlorodifluoromethane	4.16	85	225365	49.12	ug/L	99
10) chloromethane	4.61	50	279130	43.34	ug/L	98
11) vinyl chloride	4.90	62	265753	47.22	ug/L	99
12) bromomethane	5.67	96	155707	49.93	ug/L	96
15) 2-CHLOROPROPANE	7.11	43	287124	43.84	ug/L	99
16) chloroethane	5.89	64	156528	48.16	ug/L	98
17) trichlorofluoromethane	6.40	101	272026	51.58	ug/L	99
19) 1-chloropropane	8.25	41	168970	45.98	ug/L	98
20) ethyl ether	6.89	74	120109	48.04	ug/L	98
21) acrolein	7.20	56	484274	447.71	ug/L	99
22) 1,1-dichloroethene	7.38	61	275808	45.24	ug/L	98
23) acetone	7.47	58	29437	50.81	ug/L	89
24) allyl chloride	8.00	76	118210	47.63	ug/L	97
25) acetonitrile	7.99	40	238111	473.86	ug/L #	53
26) iodomethane	7.69	142	315589	49.91	ug/L	99
27) iso-butyl alcohol	11.21	74	66235	484.63	ug/L #	76
28) carbon disulfide	7.83	76	603535	46.14	ug/L	100
29) methylene chloride	8.22	84	202511	46.23	ug/L	96
30) methyl acetate	7.99	43	238196	44.53	ug/L	99
31) methyl tert butyl ether	8.57	73	1295193	92.63	ug/L #	58
32) trans-1,2-dichloroethene	8.64	61	260783	45.23	ug/L	95
33) di-isopropyl ether	9.25	45	678534	46.80	ug/L	90
34) 2-butanone	10.05	72	39951	43.06	ug/L #	63
35) 1,1-dichloroethane	9.27	63	351405	46.88	ug/L	99
36) chloroprene	9.39	53	263555	45.26	ug/L	100
37) acrylonitrile	8.60	53	608074	242.30	ug/L	98
38) vinyl acetate	9.27	86	46956	52.89	ug/L	77
39) ethyl tert-butyl ether	9.76	59	664079	50.42	ug/L	99
40) ethyl acetate	10.07	45	42522	44.39	ug/L	83
41) 2,2-dichloropropane	10.07	77	178666	45.06	ug/L	97

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149426.D
Acq On : 18 Mar 2016 10:47 am
Operator : tracyk
Sample : bs
Misc : MS99767,V3A6450,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 18 13:13:35 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Mar 17 11:30:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
42) cis-1,2-dichloroethene	10.08	96	215005	45.17 ug/L	99
43) methylacrylate	10.15	85	45880	51.27 ug/L	94
44) propionitrile	10.17	54	520019	475.70 ug/L	84
45) bromochloromethane	10.42	128	108950	51.00 ug/L	89
46) tetrahydrofuran	10.46	42	110426	42.55 ug/L	99
47) chloroform	10.49	85	229795	45.86 ug/L	98
48) t-butyl formate	10.51	59	159881	35.87 ug/L	96
51) freon 113	7.34	151	142277	60.41 ug/L	97
52) methacrylonitrile	10.36	67	122565	45.42 ug/L	96
53) 1,1,1-trichloroethane	10.74	97	279163	50.33 ug/L	99
54) Cyclohexane	10.81	84	264668	46.68 ug/L	87
56) epichlorohydrin	12.93	57	190499	241.11 ug/L	99
57) n-butyl alcohol	11.75	56	567521	2362.77 ug/L	97
58) carbon tetrachloride	10.95	117	254701	49.66 ug/L	97
59) 1,1-dichloropropene	10.93	75	267747	50.12 ug/L	98
61) hexane	8.98	57	176035	35.73 ug/L	96
62) 2,2,4-TRIMETHYLPENTANE	11.20	57	686999	50.68 ug/L	99
63) benzene	11.21	78	794044	46.32 ug/L	99
64) tert-amyl methyl ether	11.24	87	147644	53.90 ug/L	99
65) heptane	11.38	57	132385	47.29 ug/L	97
66) isopropyl acetate	11.14	87	56791	50.93 ug/L #	72
67) 1,2-dichloroethane	11.24	62	277299	49.18 ug/L	97
69) trichloroethene	11.96	95	206159	47.93 ug/L	96
71) methyl methacrylate	12.24	100	70777	49.59 ug/L	96
72) 2-nitropropane	12.79	41	112921	45.27 ug/L	100
73) 2-chloroethyl vinyl ether	12.79	63	840296	254.16 ug/L	100
74) 1,2-dichloropropane	12.24	63	210068	46.75 ug/L	98
75) dibromomethane	12.41	93	145683	50.20 ug/L	99
76) methylcyclohexane	12.18	83	303916	51.73 ug/L	98
77) bromodichloromethane	12.55	83	294189	47.48 ug/L	99
78) cis-1,3-dichloropropene	13.03	75	369557	49.13 ug/L	99
80) 4-methyl-2-pentanone	13.12	58	137156	49.02 ug/L	90
81) toluene	13.41	91	870099	46.54 ug/L	99
82) 3-methyl-1-butanol	13.15	55	373680	917.89 ug/L	98
83) trans-1,3-dichloropropene	13.63	75	347651	47.22 ug/L	97
84) ethyl methacrylate	13.60	69	347015	46.26 ug/L	97
85) 1,1,2-trichloroethane	13.86	83	186020	47.44 ug/L	99
86) 2-hexanone	14.03	58	135926	47.85 ug/L	99
88) tetrachloroethene	14.03	166	227913	51.79 ug/L	97
90) 1,3-dichloropropane	14.05	76	349852	48.52 ug/L	96
91) butyl acetate	14.10	56	208483	47.21 ug/L	97
92) 3,3-dimethyl-1-butanol	14.21	57	401180	478.00 ug/L	98
93) dibromochloromethane	14.34	129	256725	50.25 ug/L	99
94) 1,2-dibromoethane	14.50	107	244495	49.74 ug/L	100
95) chlorobenzene	14.98	112	591786	49.80 ug/L	99
96) 1,1,1,2-tetrachloroethane	15.05	131	226811	51.52 ug/L	99
97) ethylbenzene	15.04	91	1032465	47.82 ug/L	100
98) m,p-xylene	15.15	106	793010	99.43 ug/L	97
99) o-xylene	15.60	91	887100	48.92 ug/L	98
100) styrene	15.61	104	707662	49.79 ug/L	95

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149426.D
Acq On : 18 Mar 2016 10:47 am
Operator : tracyk
Sample : bs
Misc : MS99767,V3A6450,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 18 13:13:35 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Mar 17 11:30:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
101) bromoform	15.91	173	219842	52.34 ug/L	100
103) isopropylbenzene	15.96	105	1051137	46.47 ug/L	99
105) cyclohexanone	16.17	98	56721	421.13 ug/L	94
106) bromobenzene	16.40	156	292999	48.11 ug/L	91
107) 1,1,2,2-tetrachloroethane	16.30	83	379299	45.86 ug/L	100
108) trans-1,4-dichloro-2-buten	16.34	53	108835	48.89 ug/L	98
109) 1,2,3-trichloropropane	16.38	110	101749	46.62 ug/L	100
110) n-propylbenzene	16.40	91	1289880	47.30 ug/L	99
111) 2-chlorotoluene	16.57	126	262320	46.77 ug/L	92
112) 4-chlorotoluene	16.67	91	827016	45.60 ug/L	100
113) 1,3,5-trimethylbenzene	16.55	105	909045	46.68 ug/L	98
114) tert-butylbenzene	16.93	134	174781	47.95 ug/L	99
115) pentachloroethane	17.03	167	176006	49.91 ug/L	97
116) 1,2,4-trimethylbenzene	16.98	105	950785	47.09 ug/L	100
117) sec-butylbenzene	17.16	105	1164766	46.96 ug/L	99
118) 1,3-dichlorobenzene	17.38	146	571398	49.44 ug/L	99
119) p-isopropyltoluene	17.28	119	1009278	48.77 ug/L	99
120) 1,4-dichlorobenzene	17.47	146	581500	50.47 ug/L	99
121) 1,2-dichlorobenzene	17.90	146	561113	50.26 ug/L	98
122) benzyl chloride	17.59	91	823396	49.71 ug/L	99
123) n-butylbenzene	17.73	92	527881	47.63 ug/L	99
124) 1,2-dibromo-3-chloropropan	18.75	75	76060	40.82 ug/L	95
125) 1,3,5-TRICHLOROBENZENE	18.94	180	427974	51.74 ug/L	99
126) 1,2,4-trichlorobenzene	19.64	180	378888	52.66 ug/L	99
127) hexachlorobutadiene	19.75	225	173675	48.19 ug/L	96
128) naphthalene	19.95	128	1037020	48.89 ug/L	100
129) 1,2,3-trichlorobenzene	20.22	180	334825	50.27 ug/L	96
130) hexachloroethane	18.18	201	173063	51.52 ug/L	99

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

7.3.2

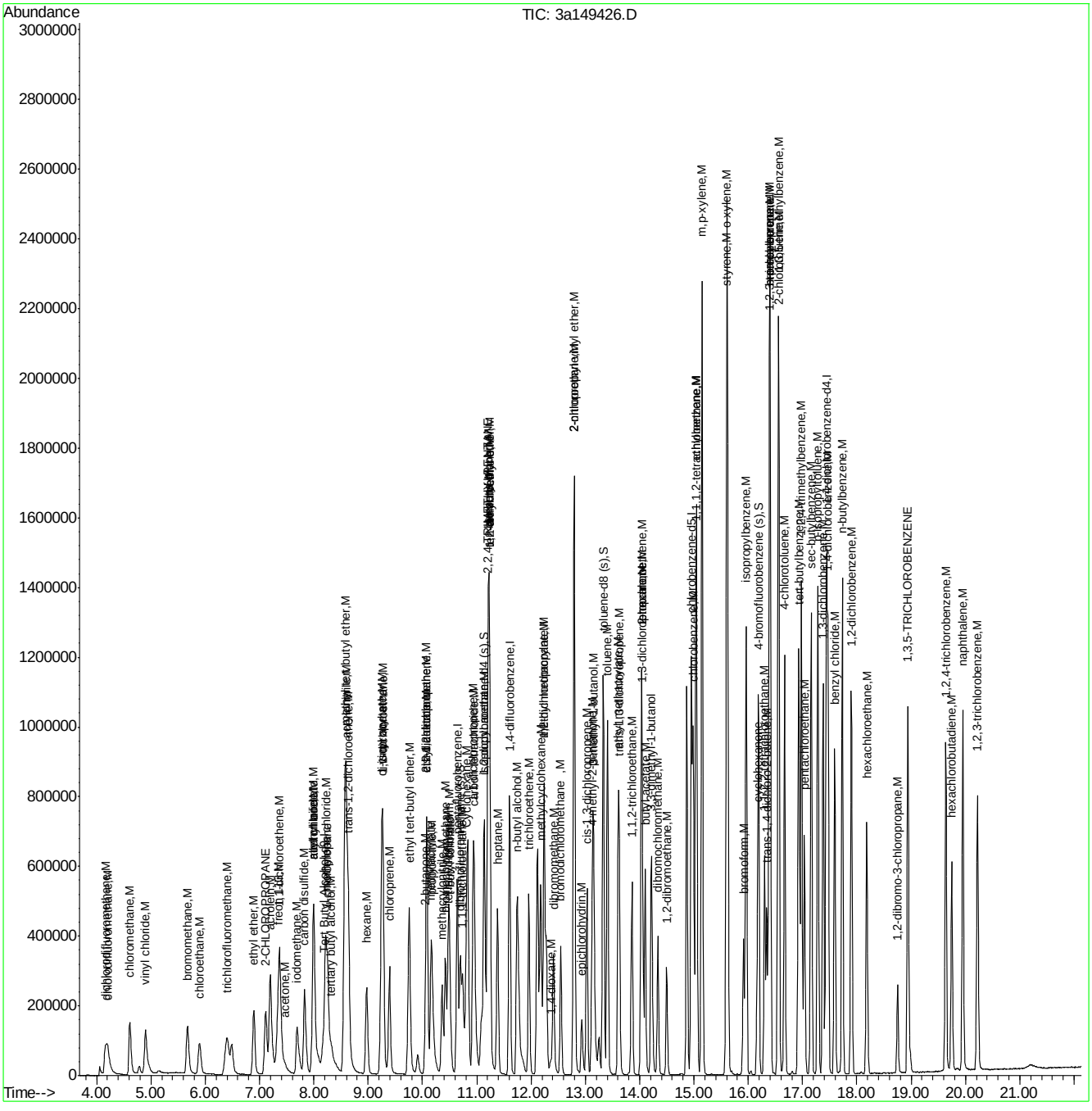
7

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149426.D
Acq On : 18 Mar 2016 10:47 am
Operator : tracyk
Sample : bs
Misc : MS99767,V3A6450,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 18 13:13:35 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Mar 17 11:30:00 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149354.D
Acq On : 16 Mar 2016 5:40 pm
Operator : tracyk
Sample : jc16254-7ms
Misc : MS99718,V3A6447,5,,,,20
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 17 11:28:38 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	394460	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	450692	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	727616	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	718777	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	395808	50.00	ug/L	0.00

System Monitoring Compounds						
49) dibromofluoromethane (s)	10.70	113	213892	49.18	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.36%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	255890	48.05	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 96.10%			
79) toluene-d8 (s)	13.33	98	850860	49.92	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.84%			
104) 4-bromofluorobenzene (s)	16.19	95	381238	48.00	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 96.00%			

Target Compounds						Qvalue
2) tertiary butyl alcohol	8.31	59	150292	225.15	ug/L #	50
4) 1,4-dioxane	12.36	88	55225	1217.19	ug/L	98
8) chlorodifluoromethane	4.21	51	132446	59.26	ug/L	92
9) dichlorodifluoromethane	4.17	85	164427	40.12	ug/L	97
10) chloromethane	4.61	50	201056	34.95	ug/L	99
11) vinyl chloride	4.90	62	204561	40.69	ug/L	99
12) bromomethane	5.67	96	116225	41.73	ug/L	97
15) 2-CHLOROPROPANE	7.11	43	272450	46.57	ug/L	99
16) chloroethane	5.90	64	127025	43.76	ug/L	98
17) trichlorofluoromethane	6.40	101	229286	48.67	ug/L	99
19) 1-chloropropane	8.26	41	223635	68.13	ug/L	82
20) ethyl ether	6.89	74	112492	50.38	ug/L	99
21) acrolein	7.20	56	592420	613.16	ug/L	99
22) 1,1-dichloroethene	7.38	61	274451	50.40	ug/L	99
23) acetone	7.45	58	27367	52.88	ug/L #	80
24) allyl chloride	7.99	76	111653	50.37	ug/L #	83
25) acetonitrile	7.98	40	188117	419.12	ug/L	98
26) iodomethane	7.69	142	291488	51.61	ug/L	99
27) iso-butyl alcohol	11.21	74	221931	1817.94	ug/L #	1
28) carbon disulfide	7.83	76	578232	49.49	ug/L	99
29) methylene chloride	8.22	84	195847	50.05	ug/L	97
30) methyl acetate	7.99	43	197571	41.35	ug/L	99
31) methyl tert butyl ether	8.58	73	1414228	113.23	ug/L	80
32) trans-1,2-dichloroethene	8.64	61	247431	48.04	ug/L	99
33) di-isopropyl ether	9.25	45	634158	48.97	ug/L	95
34) 2-butanone	10.06	72	37508	45.26	ug/L	98
35) 1,1-dichloroethane	9.28	63	325488	48.61	ug/L	99
36) chloroprene	9.39	53	245677	47.23	ug/L	99
37) acrylonitrile	8.60	53	567966	253.38	ug/L	99
38) vinyl acetate	9.27	86	41453	52.27	ug/L	87
39) ethyl tert-butyl ether	9.76	59	615504	52.31	ug/L	100
40) ethyl acetate	10.07	45	38588	45.10	ug/L	90
41) 2,2-dichloropropane	10.08	77	150849	42.59	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149354.D
Acq On : 16 Mar 2016 5:40 pm
Operator : tracyk
Sample : jc16254-7ms
Misc : MS99718,V3A6447,5,,,,20
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 17 11:28:38 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) cis-1,2-dichloroethene	10.09	96	199663	46.96	ug/L		95
43) methylacrylate	10.16	85	43830	54.83	ug/L	#	75
44) propionitrile	10.17	54	483007	494.66	ug/L		84
45) bromochloromethane	10.42	128	97480	51.08	ug/L		98
46) tetrahydrofuran	10.46	42	101999	44.00	ug/L		97
47) chloroform	10.49	85	216813	48.44	ug/L		97
48) t-butyl formate	10.51	59	134078	33.67	ug/L		96
51) freon 113	7.35	151	120706	57.38	ug/L		98
52) methacrylonitrile	10.36	67	116043	48.14	ug/L		98
53) 1,1,1-trichloroethane	10.74	97	261680	52.82	ug/L		97
54) Cyclohexane	10.82	84	328874	64.94	ug/L		92
56) epichlorohydrin	12.93	57	174525	242.43	ug/L		99
57) n-butyl alcohol	11.74	56	460913	2106.06	ug/L		98
58) carbon tetrachloride	10.96	117	237363	50.79	ug/L		95
59) 1,1-dichloropropene	10.94	75	254649	52.32	ug/L		99
61) hexane	8.98	57	242501	54.03	ug/L		98
62) 2,2,4-TRIMETHYLPENTANE	11.21	57	629267	50.95	ug/L		98
63) benzene	11.21	78	4121718	263.86	ug/L		98
64) tert-amyl methyl ether	11.23	87	135299	54.21	ug/L		95
65) heptane	11.38	57	117588	46.10	ug/L		99
66) isopropyl acetate	11.14	87	51512	50.70	ug/L	#	77
67) 1,2-dichloroethane	11.23	62	279915	54.48	ug/L		91
69) trichloroethene	11.96	95	191611	48.90	ug/L		100
71) methyl methacrylate	12.24	100	68276	52.50	ug/L		99
72) 2-nitropropane	12.78	41	81292	35.76	ug/L		90
74) 1,2-dichloropropane	12.24	63	201218	49.15	ug/L		96
75) dibromomethane	12.41	93	133736	50.57	ug/L		99
76) methylcyclohexane	12.18	83	297263	55.53	ug/L		98
77) bromodichloromethane	12.55	83	277059	49.08	ug/L		99
78) cis-1,3-dichloropropene	13.03	75	346599	50.57	ug/L		99
80) 4-methyl-2-pentanone	13.12	58	129418	50.76	ug/L		93
81) toluene	13.41	91	863326	50.68	ug/L		100
82) 3-methyl-1-butanol	13.15	55	326946	881.41	ug/L		100
83) trans-1,3-dichloropropene	13.63	75	325478	48.52	ug/L		98
84) ethyl methacrylate	13.60	69	337256	49.35	ug/L		98
85) 1,1,2-trichloroethane	13.86	83	174477	48.84	ug/L		99
86) 2-hexanone	14.03	58	131058	50.63	ug/L		99
88) tetrachloroethene	14.03	166	208151	50.90	ug/L		96
90) 1,3-dichloropropane	14.05	76	329459	49.17	ug/L		98
91) butyl acetate	14.10	56	204333	49.79	ug/L		100
92) 3,3-dimethyl-1-butanol	14.22	57	354903	455.05	ug/L		99
93) dibromochloromethane	14.34	129	238400	50.22	ug/L		99
94) 1,2-dibromoethane	14.50	107	227623	49.83	ug/L		99
95) chlorobenzene	14.99	112	558804	50.61	ug/L		99
96) 1,1,1,2-tetrachloroethane	15.05	131	204833	50.07	ug/L		99
97) ethylbenzene	15.04	91	2349866	117.13	ug/L		100
98) m,p-xylene	15.15	106	1492949	201.43	ug/L		98
99) o-xylene	15.60	91	932391	55.33	ug/L		99
100) styrene	15.61	104	670408	50.76	ug/L		98
101) bromoform	15.91	173	204145	52.31	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149354.D
Acq On : 16 Mar 2016 5:40 pm
Operator : tracyk
Sample : jc16254-7ms
Misc : MS99718,V3A6447,5,,,,20
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 17 11:28:38 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
103) isopropylbenzene	15.96	105	1104269	53.85 ug/L	99
105) cyclohexanone	16.17	98	42188	345.53 ug/L	96
106) bromobenzene	16.40	156	271491	49.18 ug/L	94
107) 1,1,2,2-tetrachloroethane	16.30	83	357800	47.72 ug/L	100
108) trans-1,4-dichloro-2-buten	16.34	53	105885	52.47 ug/L	98
109) 1,2,3-trichloropropane	16.38	110	95065	48.05 ug/L	99
110) n-propylbenzene	16.40	91	1574503	63.69 ug/L	99
111) 2-chlorotoluene	16.57	126	242218	47.64 ug/L	98
112) 4-chlorotoluene	16.67	91	779478	47.41 ug/L	99
113) 1,3,5-trimethylbenzene	16.55	105	1150836	65.19 ug/L	97
114) tert-butylbenzene	16.93	134	167910	50.81 ug/L	97
115) pentachloroethane	17.03	167	162022	50.68 ug/L	99
116) 1,2,4-trimethylbenzene	16.98	105	2668672	145.81 ug/L	99
117) sec-butylbenzene	17.16	105	1119890	49.81 ug/L	100
118) 1,3-dichlorobenzene	17.38	146	520733	49.70 ug/L	99
119) p-isopropyltoluene	17.29	119	954172	50.86 ug/L	99
120) 1,4-dichlorobenzene	17.47	146	519336	49.72 ug/L	100
121) 1,2-dichlorobenzene	17.90	146	509673	50.36 ug/L	100
122) benzyl chloride	17.59	91	714129	47.56 ug/L	100
123) n-butylbenzene	17.73	92	511048	50.87 ug/L	94
124) 1,2-dibromo-3-chloropropan	18.75	75	71641	42.42 ug/L	97
125) 1,3,5-TRICHLOROBENZENE	18.94	180	371983	49.61 ug/L	100
126) 1,2,4-trichlorobenzene	19.64	180	337440	51.74 ug/L	99
127) hexachlorobutadiene	19.75	225	155695	47.66 ug/L	98
128) naphthalene	19.95	128	1471699	76.54 ug/L	99
129) 1,2,3-trichlorobenzene	20.22	180	297699	49.30 ug/L	98
130) hexachloroethane	18.18	201	156279	51.32 ug/L	97

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

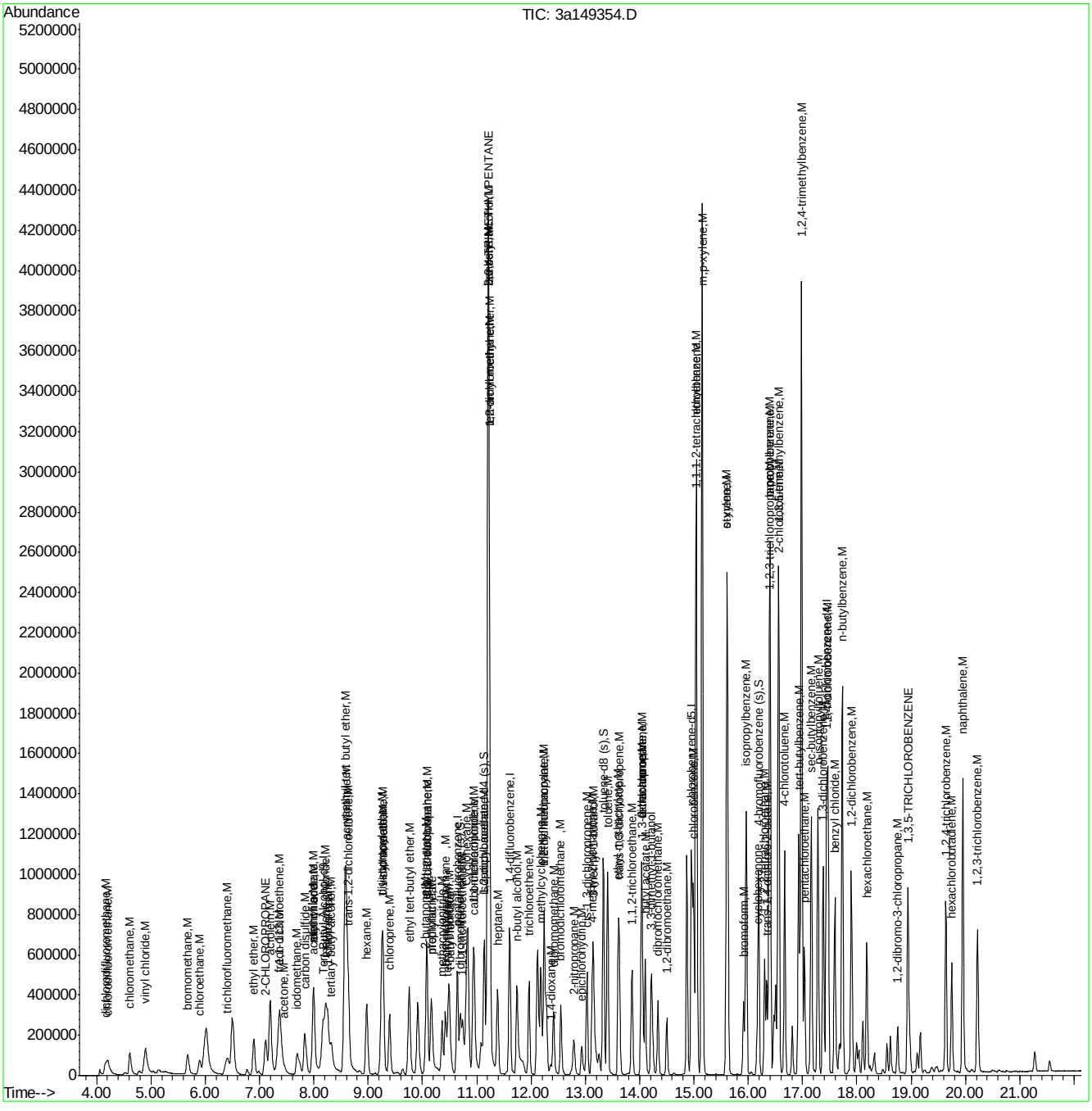
7.4.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149354.D
Acq On : 16 Mar 2016 5:40 pm
Operator : tracyk
Sample : jc16254-7ms
Misc : MS99718,V3A6447,5,,,,20
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 17 11:28:38 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149355.D
Acq On : 16 Mar 2016 6:10 pm
Operator : tracyk
Sample : jc16254-7msd
Misc : MS99718,V3A6447,5,,,,20
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 17 11:29:04 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.18	65	407045	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	466668	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	735522	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	723794	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	398771	50.00	ug/L	0.00

System Monitoring Compounds						
49) dibromofluoromethane (s)	10.70	113	220244	48.91	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.82%			
50) 1,2-dichloroethane-d4 (s)	11.15	65	261557	47.43	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 94.86%			
79) toluene-d8 (s)	13.33	98	850714	49.37	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 98.74%			
104) 4-bromofluorobenzene (s)	16.19	95	378881	47.35	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 94.70%			

Target Compounds						Qvalue
2) tertiary butyl alcohol	8.31	59	166976	242.41	ug/L #	54
4) 1,4-dioxane	12.36	88	63652	1359.55	ug/L	98
8) chlorodifluoromethane	4.20	51	131639	56.89	ug/L	94
9) dichlorodifluoromethane	4.17	85	165475	39.00	ug/L	98
10) chloromethane	4.61	50	199467	33.49	ug/L	99
11) vinyl chloride	4.91	62	205728	39.52	ug/L	99
12) bromomethane	5.68	96	114298	39.63	ug/L	98
15) 2-CHLOROPROPANE	7.11	43	275021	45.40	ug/L	98
16) chloroethane	5.90	64	127472	42.41	ug/L	97
17) trichlorofluoromethane	6.41	101	235362	48.25	ug/L	97
19) 1-chloropropane	8.26	41	220535	64.88	ug/L	89
20) ethyl ether	6.90	74	115363	49.89	ug/L	95
21) acrolein	7.20	56	607638	607.38	ug/L	100
22) 1,1-dichloroethene	7.38	61	280978	49.83	ug/L	98
23) acetone	7.45	58	26928	50.25	ug/L	90
24) allyl chloride	8.00	76	115642	50.38	ug/L #	81
25) acetonitrile	7.98	40	199864	430.04	ug/L	93
26) iodomethane	7.70	142	299304	51.18	ug/L	98
27) iso-butyl alcohol	11.21	74	226599	1792.63	ug/L #	1
28) carbon disulfide	7.83	76	591102	48.86	ug/L	100
29) methylene chloride	8.22	84	199309	49.19	ug/L	95
30) methyl acetate	7.99	43	203021	41.04	ug/L	99
31) methyl tert butyl ether	8.58	73	1456186	112.60	ug/L	80
32) trans-1,2-dichloroethene	8.64	61	252727	47.39	ug/L	98
33) di-isopropyl ether	9.25	45	642155	47.89	ug/L	99
34) 2-butanone	10.06	72	37146	43.28	ug/L #	79
35) 1,1-dichloroethane	9.28	63	342183	49.36	ug/L	98
36) chloroprene	9.39	53	253492	47.07	ug/L	98
37) acrylonitrile	8.60	53	564144	243.06	ug/L	97
38) vinyl acetate	9.27	86	42556	51.82	ug/L	92
39) ethyl tert-butyl ether	9.76	59	624792	51.29	ug/L	98
40) ethyl acetate	10.08	45	39085	44.11	ug/L	70
41) 2,2-dichloropropane	10.08	77	148447	40.47	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149355.D
Acq On : 16 Mar 2016 6:10 pm
Operator : tracyk
Sample : jc16254-7msd
Misc : MS99718,V3A6447,5,,,,20
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 17 11:29:04 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) cis-1,2-dichloroethene	10.09	96	201905	45.86	ug/L		96
43) methylacrylate	10.16	85	42721	51.62	ug/L		83
44) propionitrile	10.17	54	483492	478.21	ug/L		79
45) bromochloromethane	10.43	128	99981	50.60	ug/L		94
46) tetrahydrofuran	10.46	42	100780	41.98	ug/L		96
47) chloroform	10.49	85	221420	47.78	ug/L		99
48) t-butyl formate	10.51	59	130905	31.75	ug/L		97
51) freon 113	7.36	151	121630	55.84	ug/L		98
52) methacrylonitrile	10.36	67	118091	47.32	ug/L		98
53) 1,1,1-trichloroethane	10.74	97	268855	52.41	ug/L		98
54) Cyclohexane	10.82	84	332522	63.41	ug/L		88
56) epichlorohydrin	12.93	57	175765	241.53	ug/L		97
57) n-butyl alcohol	11.74	56	501850	2268.47	ug/L		99
58) carbon tetrachloride	10.96	117	246079	52.09	ug/L		99
59) 1,1-dichloropropene	10.94	75	262908	53.44	ug/L		99
61) hexane	8.98	57	250417	55.19	ug/L		97
62) 2,2,4-TRIMETHYLPENTANE	11.21	57	630058	50.47	ug/L		97
63) benzene	11.21	78	4229470	267.84	ug/L		99
64) tert-amyl methyl ether	11.24	87	139255	55.19	ug/L		98
65) heptane	11.38	57	119027	46.16	ug/L		98
66) isopropyl acetate	11.14	87	52226	50.85	ug/L	#	83
67) 1,2-dichloroethane	11.24	62	285590	54.99	ug/L		85
69) trichloroethene	11.96	95	195997	49.48	ug/L		98
71) methyl methacrylate	12.24	100	69533	52.89	ug/L		97
72) 2-nitropropane	12.78	41	83048	36.14	ug/L		95
74) 1,2-dichloropropane	12.24	63	204356	49.38	ug/L		98
75) dibromomethane	12.41	93	136278	50.98	ug/L		96
76) methylcyclohexane	12.18	83	302652	55.93	ug/L		99
77) bromodichloromethane	12.55	83	281809	49.38	ug/L		98
78) cis-1,3-dichloropropene	13.03	75	354643	51.19	ug/L		99
80) 4-methyl-2-pentanone	13.13	58	133345	51.74	ug/L		96
81) toluene	13.41	91	881977	51.22	ug/L		100
82) 3-methyl-1-butanol	13.15	55	344057	917.57	ug/L		96
83) trans-1,3-dichloropropene	13.63	75	334595	49.35	ug/L		99
84) ethyl methacrylate	13.60	69	341054	49.37	ug/L		99
85) 1,1,2-trichloroethane	13.86	83	176823	48.96	ug/L		99
86) 2-hexanone	14.03	58	133237	50.92	ug/L		100
88) tetrachloroethene	14.03	166	210756	51.18	ug/L		98
90) 1,3-dichloropropane	14.05	76	336508	49.88	ug/L		99
91) butyl acetate	14.10	56	206566	49.99	ug/L		99
92) 3,3-dimethyl-1-butanol	14.22	57	365514	465.41	ug/L		99
93) dibromochloromethane	14.34	129	242531	50.73	ug/L		98
94) 1,2-dibromoethane	14.50	107	231856	50.41	ug/L		100
95) chlorobenzene	14.99	112	564737	50.79	ug/L		100
96) 1,1,1,2-tetrachloroethane	15.05	131	209037	50.75	ug/L		98
97) ethylbenzene	15.04	91	2410395	119.31	ug/L		99
98) m,p-xylene	15.15	106	1523560	204.14	ug/L		98
99) o-xylene	15.60	91	949778	55.97	ug/L		99
100) styrene	15.61	104	680440	51.16	ug/L		99
101) bromoform	15.91	173	207254	52.73	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149355.D
Acq On : 16 Mar 2016 6:10 pm
Operator : tracyk
Sample : jc16254-7msd
Misc : MS99718,V3A6447,5,,,,20
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 17 11:29:04 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
103) isopropylbenzene	15.96	105	1127269	54.57	ug/L	99
105) cyclohexanone	16.17	98	46054	374.39	ug/L	96
106) bromobenzene	16.40	156	273449	49.16	ug/L	93
107) 1,1,2,2-tetrachloroethane	16.30	83	358081	47.40	ug/L	100
108) trans-1,4-dichloro-2-buten	16.34	53	107583	52.91	ug/L	95
109) 1,2,3-trichloropropane	16.38	110	95762	48.04	ug/L	98
110) n-propylbenzene	16.40	91	1588404	63.77	ug/L	99
111) 2-chlorotoluene	16.57	126	246401	48.10	ug/L	97
112) 4-chlorotoluene	16.67	91	782757	47.26	ug/L	100
113) 1,3,5-trimethylbenzene	16.55	105	1177040	66.17	ug/L	99
114) tert-butylbenzene	16.93	134	171532	51.52	ug/L	97
115) pentachloroethane	17.03	167	167039	51.86	ug/L	99
116) 1,2,4-trimethylbenzene	16.98	105	2724571	147.76	ug/L	99
117) sec-butylbenzene	17.16	105	1127932	49.80	ug/L	100
118) 1,3-dichlorobenzene	17.38	146	529013	50.12	ug/L	99
119) p-isopropyltoluene	17.29	119	964882	51.05	ug/L	99
120) 1,4-dichlorobenzene	17.47	146	534673	50.81	ug/L	99
121) 1,2-dichlorobenzene	17.90	146	517019	50.70	ug/L	98
122) benzyl chloride	17.59	91	701389	46.36	ug/L	99
123) n-butylbenzene	17.73	92	516529	51.03	ug/L	95
124) 1,2-dibromo-3-chloropropan	18.75	75	72700	42.72	ug/L	98
125) 1,3,5-TRICHLOROBENZENE	18.94	180	380585	50.38	ug/L	99
126) 1,2,4-trichlorobenzene	19.64	180	340715	51.85	ug/L	99
127) hexachlorobutadiene	19.75	225	158752	48.24	ug/L	98
128) naphthalene	19.95	128	1491438	76.99	ug/L	100
129) 1,2,3-trichlorobenzene	20.22	180	302976	49.81	ug/L	98
130) hexachloroethane	18.18	201	160164	52.21	ug/L	99

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

7.4.2

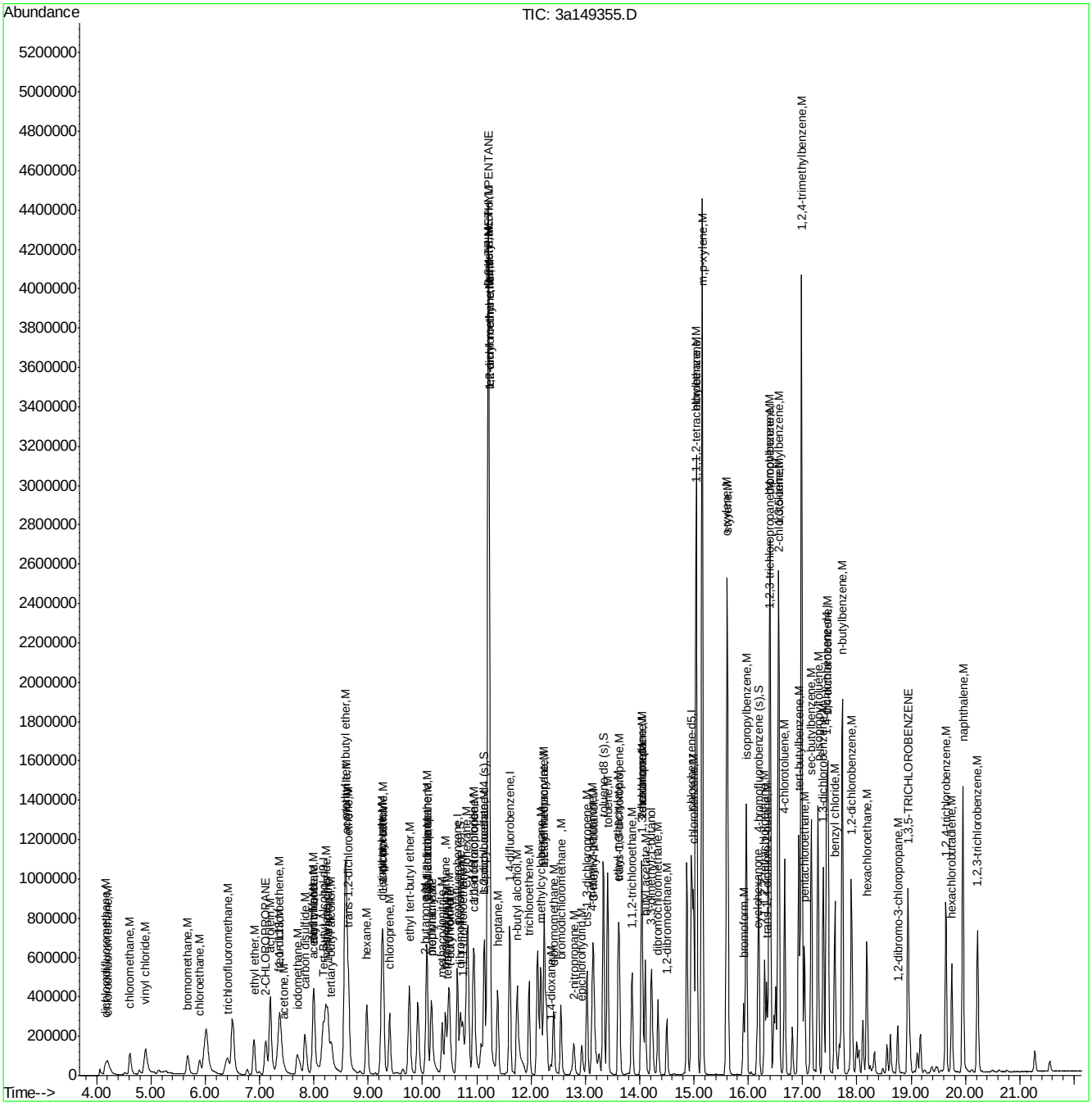
7

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149355.D
Acq On : 16 Mar 2016 6:10 pm
Operator : tracyk
Sample : jc16254-7msd
Misc : MS99718,V3A6447,5,,,,20
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 17 11:29:04 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149436.D
Acq On : 18 Mar 2016 4:25 pm
Operator : tracyk
Sample : jc16325-1ms
Misc : MS99798,V3A6450,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 21 12:55:27 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.18	65	462642	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	501921	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.60	114	784800	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	771710	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	437377	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	237375	49.01	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.02%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	276436	46.61	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 93.22%			
79) toluene-d8 (s)	13.33	98	913468	49.68	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.36%			
104) 4-bromofluorobenzene (s)	16.19	95	401999	45.80	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 91.60%			

Target Compounds

						Qvalue
2) tertiary butyl alcohol	8.32	59	204423	261.11	ug/L	96
4) 1,4-dioxane	12.36	88	72783	1367.76	ug/L	98
8) chlorodifluoromethane	4.20	51	137839	55.38	ug/L	97
9) dichlorodifluoromethane	4.17	85	262161	57.44	ug/L	98
10) chloromethane	4.61	50	298655	46.62	ug/L	99
11) vinyl chloride	4.91	62	303190	54.15	ug/L	98
12) bromomethane	5.67	96	170901	55.09	ug/L	99
15) 2-CHLOROPROPANE	7.11	43	341555	52.43	ug/L	99
16) chloroethane	5.89	64	177779	54.99	ug/L	98
17) trichlorofluoromethane	6.41	101	318446	60.70	ug/L	98
19) 1-chloropropane	8.25	41	191472	52.38	ug/L	97
20) ethyl ether	6.89	74	126935	51.04	ug/L	96
21) acrolein	7.20	56	464686	431.87	ug/L	99
22) 1,1-dichloroethene	7.37	61	321398	52.99	ug/L	99
23) acetone	7.46	58	29230	50.71	ug/L	97
24) allyl chloride	8.00	76	134201	54.36	ug/L #	91
25) acetonitrile	7.99	40	220732	441.59	ug/L #	60
26) iodomethane	7.69	142	352273	56.01	ug/L	99
27) iso-butyl alcohol	11.22	74	70338	517.36	ug/L #	85
28) carbon disulfide	7.83	76	688200	52.89	ug/L	100
29) methylene chloride	8.22	84	221352	50.80	ug/L	94
30) methyl acetate	7.99	43	210849	39.62	ug/L	97
31) methyl tert butyl ether	8.57	73	1285919	92.45	ug/L	93
32) trans-1,2-dichloroethene	8.63	61	294263	51.30	ug/L	99
33) di-isopropyl ether	9.24	45	682241	47.31	ug/L	94
34) 2-butanone	10.05	72	40994	44.41	ug/L #	63
35) 1,1-dichloroethane	9.27	63	398507	53.44	ug/L	99
36) chloroprene	9.39	53	271048	46.79	ug/L	99
37) acrylonitrile	8.60	53	617094	247.19	ug/L	97
38) vinyl acetate	9.26	86	44905	50.84	ug/L	82
39) ethyl tert-butyl ether	9.75	59	658388	50.25	ug/L	99
40) ethyl acetate	10.07	45	41804	43.87	ug/L #	72
41) 2,2-dichloropropane	10.07	77	197906	50.17	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149436.D
Acq On : 18 Mar 2016 4:25 pm
Operator : tracyk
Sample : jc16325-1ms
Misc : MS99798,V3A6450,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 21 12:55:27 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
42) cis-1,2-dichloroethene	10.08	96	241660	51.04 ug/L	97
43) methylacrylate	10.16	85	48914	54.95 ug/L	88
44) propionitrile	10.17	54	536411	493.29 ug/L	92
45) bromochloromethane	10.42	128	118067	55.55 ug/L	92
46) tetrahydrofuran	10.46	42	107975	41.82 ug/L	97
47) chloroform	10.48	85	256837	51.53 ug/L	97
48) t-butyl formate	10.51	59	112533	25.38 ug/L #	91
51) freon 113	7.36	151	140002	59.76 ug/L	94
52) methacrylonitrile	10.36	67	129791	48.35 ug/L	99
53) 1,1,1-trichloroethane	10.74	97	328137	59.47 ug/L	100
54) Cyclohexane	10.82	84	312861	55.47 ug/L	89
56) epichlorohydrin	12.93	57	178832	230.31 ug/L	99
57) n-butyl alcohol	11.74	56	571312	2420.30 ug/L	99
58) carbon tetrachloride	10.95	117	299650	59.45 ug/L	96
59) 1,1-dichloropropene	10.93	75	310742	59.19 ug/L	98
61) hexane	8.97	57	234420	48.42 ug/L	96
62) 2,2,4-TRIMETHYLPENTANE	11.21	57	689931	51.79 ug/L	99
63) benzene	11.21	78	899052	53.36 ug/L	97
64) tert-amyl methyl ether	11.24	87	148186	55.05 ug/L	99
65) heptane	11.38	57	122262	44.44 ug/L	99
66) isopropyl acetate	11.13	87	55887	51.00 ug/L #	71
67) 1,2-dichloroethane	11.24	62	300697	54.26 ug/L	97
69) trichloroethene	11.96	95	235777	55.78 ug/L	97
71) methyl methacrylate	12.24	100	76389	54.46 ug/L	99
72) 2-nitropropane	12.78	41	88675	36.17 ug/L	96
74) 1,2-dichloropropane	12.24	63	230474	52.19 ug/L	95
75) dibromomethane	12.41	93	154754	54.26 ug/L	98
76) methylcyclohexane	12.18	83	296380	51.33 ug/L	97
77) bromodichloromethane	12.55	83	323333	53.10 ug/L	99
78) cis-1,3-dichloropropene	13.03	75	404561	54.73 ug/L	98
80) 4-methyl-2-pentanone	13.12	58	144626	52.59 ug/L	91
81) toluene	13.41	91	967911	52.68 ug/L	100
82) 3-methyl-1-butanol	13.15	55	385253	962.93 ug/L	98
83) trans-1,3-dichloropropene	13.62	75	377315	52.15 ug/L	98
84) ethyl methacrylate	13.60	69	376989	51.14 ug/L	97
85) 1,1,2-trichloroethane	13.86	83	198213	51.44 ug/L	97
86) 2-hexanone	14.03	58	144871	51.89 ug/L	96
88) tetrachloroethene	14.03	166	263412	60.00 ug/L	98
90) 1,3-dichloropropane	14.05	76	376463	52.33 ug/L	97
91) butyl acetate	14.10	56	213192	48.39 ug/L	97
92) 3,3-dimethyl-1-butanol	14.21	57	428294	511.48 ug/L	97
93) dibromochloromethane	14.33	129	279493	54.84 ug/L	98
94) 1,2-dibromoethane	14.50	107	261566	53.34 ug/L	100
95) chlorobenzene	14.98	112	665061	56.10 ug/L	97
96) 1,1,1,2-tetrachloroethane	15.05	131	247824	56.43 ug/L	97
97) ethylbenzene	15.04	91	1154717	53.61 ug/L	100
98) m,p-xylene	15.15	106	895396	112.52 ug/L	97
99) o-xylene	15.60	91	986092	54.50 ug/L	99
100) styrene	15.61	104	782985	55.22 ug/L	95
101) bromoform	15.91	173	236026	56.33 ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149436.D
Acq On : 18 Mar 2016 4:25 pm
Operator : tracyk
Sample : jc16325-1ms
Misc : MS99798,V3A6450,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 21 12:55:27 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

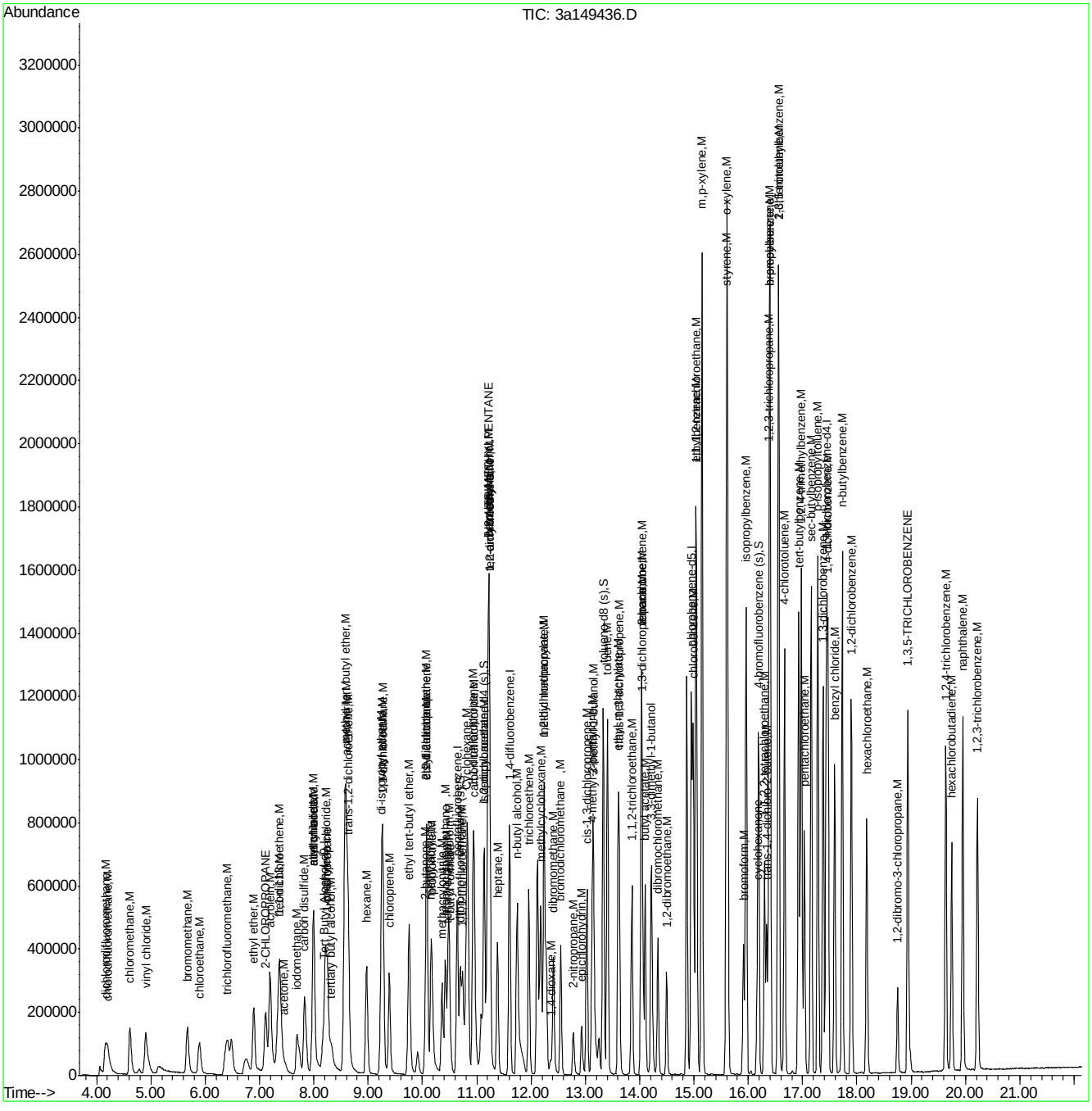
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
103) isopropylbenzene	15.96	105	1208692	53.34 ug/L	99
105) cyclohexanone	16.16	98	54435	403.46 ug/L	93
106) bromobenzene	16.40	156	323183	52.98 ug/L	92
107) 1,1,2,2-tetrachloroethane	16.30	83	403765	48.73 ug/L	98
108) trans-1,4-dichloro-2-buten	16.34	53	107459	48.19 ug/L	95
109) 1,2,3-trichloropropane	16.38	110	108557	49.66 ug/L	100
110) n-propylbenzene	16.39	91	1484132	54.33 ug/L	99
111) 2-chlorotoluene	16.56	126	298048	53.05 ug/L	99
112) 4-chlorotoluene	16.67	91	931740	51.29 ug/L	100
113) 1,3,5-trimethylbenzene	16.55	105	1048917	53.77 ug/L	98
114) tert-butylbenzene	16.93	134	208238	57.03 ug/L	98
115) pentachloroethane	17.03	167	198195	56.10 ug/L	98
116) 1,2,4-trimethylbenzene	16.98	105	1089728	53.88 ug/L	99
117) sec-butylbenzene	17.16	105	1355145	54.55 ug/L	99
118) 1,3-dichlorobenzene	17.38	146	638684	55.16 ug/L	98
119) p-isopropyltoluene	17.28	119	1156379	55.78 ug/L	99
120) 1,4-dichlorobenzene	17.47	146	643820	55.78 ug/L	98
121) 1,2-dichlorobenzene	17.90	146	610892	54.62 ug/L	99
122) benzyl chloride	17.59	91	863554	52.04 ug/L	100
123) n-butylbenzene	17.73	92	612036	55.13 ug/L	99
124) 1,2-dibromo-3-chloropropan	18.75	75	80455	43.11 ug/L	95
125) 1,3,5-TRICHLOROBENZENE	18.94	180	472153	56.98 ug/L	98
126) 1,2,4-trichlorobenzene	19.63	180	412517	57.24 ug/L	98
127) hexachlorobutadiene	19.74	225	202123	55.99 ug/L	98
128) naphthalene	19.95	128	1135793	53.46 ug/L	100
129) 1,2,3-trichlorobenzene	20.22	180	362621	54.35 ug/L	96
130) hexachloroethane	18.18	201	196541	58.41 ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149436.D
Acq On : 18 Mar 2016 4:25 pm
Operator : tracyk
Sample : jc16325-1ms
Misc : MS99798,V3A6450,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 21 12:55:27 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149479.D
Acq On : 21 Mar 2016 12:31 pm
Operator : tracyk
Sample : jc16325-3dup
Misc : MS99798,V3A6450,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 21 13:37:46 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	490564	500.00	ug/L	-0.01
5) pentafluorobenzene	10.64	168	567638	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.60	114	890140	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	870576	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.43	152	477126	50.00	ug/L	-0.01

System Monitoring Compounds

49) dibromofluoromethane (s)	10.69	113	269125	49.13	ug/L	-0.01
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.26%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	323646	48.25	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 96.50%			
79) toluene-d8 (s)	13.33	98	1021130	48.97	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 97.94%			
104) 4-bromofluorobenzene (s)	16.18	95	451659	47.17	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 94.34%			

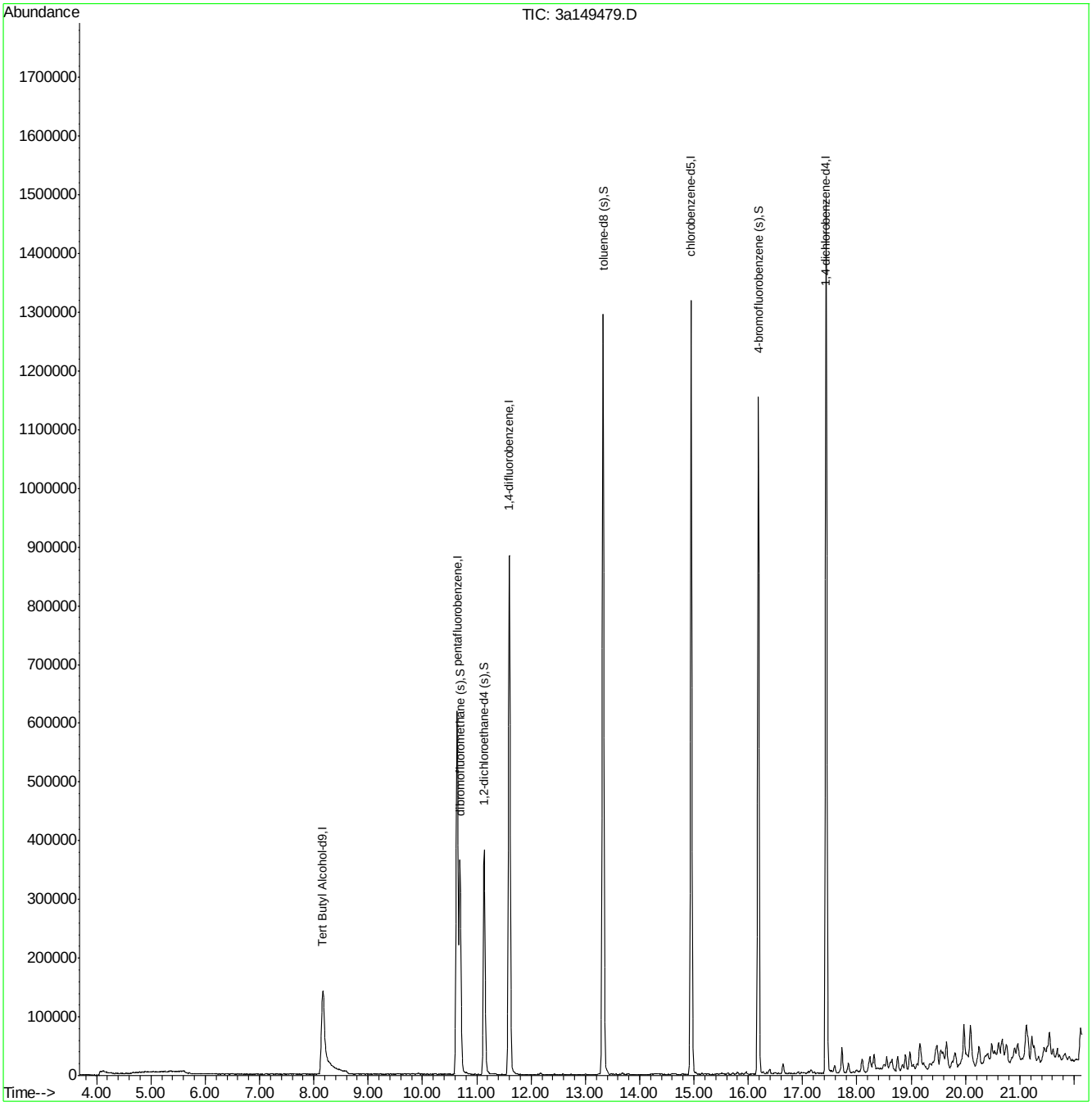
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149479.D
Acq On : 21 Mar 2016 12:31 pm
Operator : tracyk
Sample : jc16325-3dup
Misc : MS99798,V3A6450,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 21 13:37:46 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

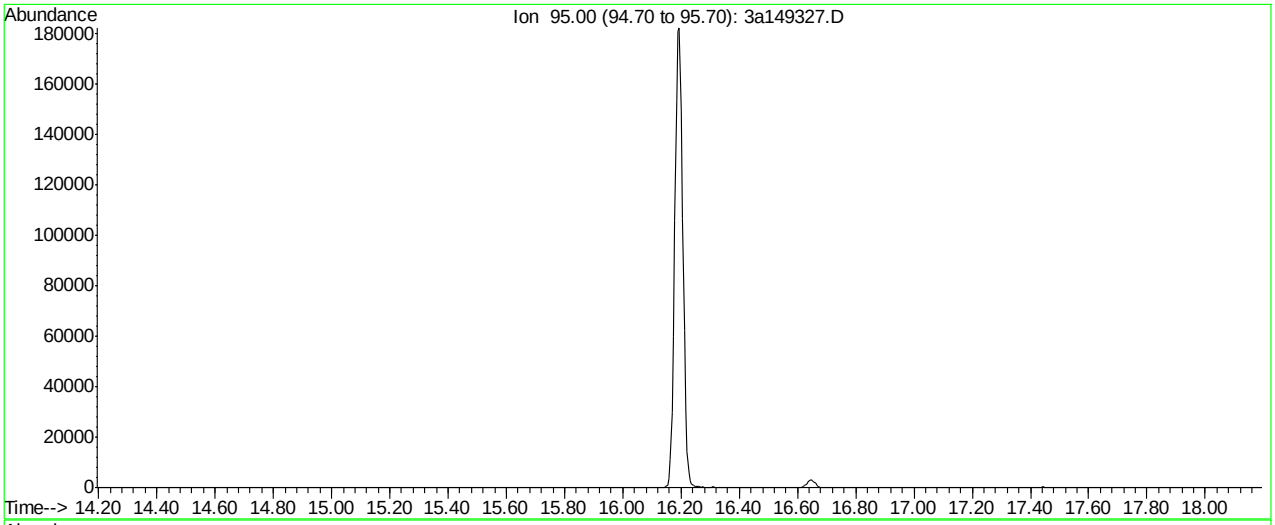


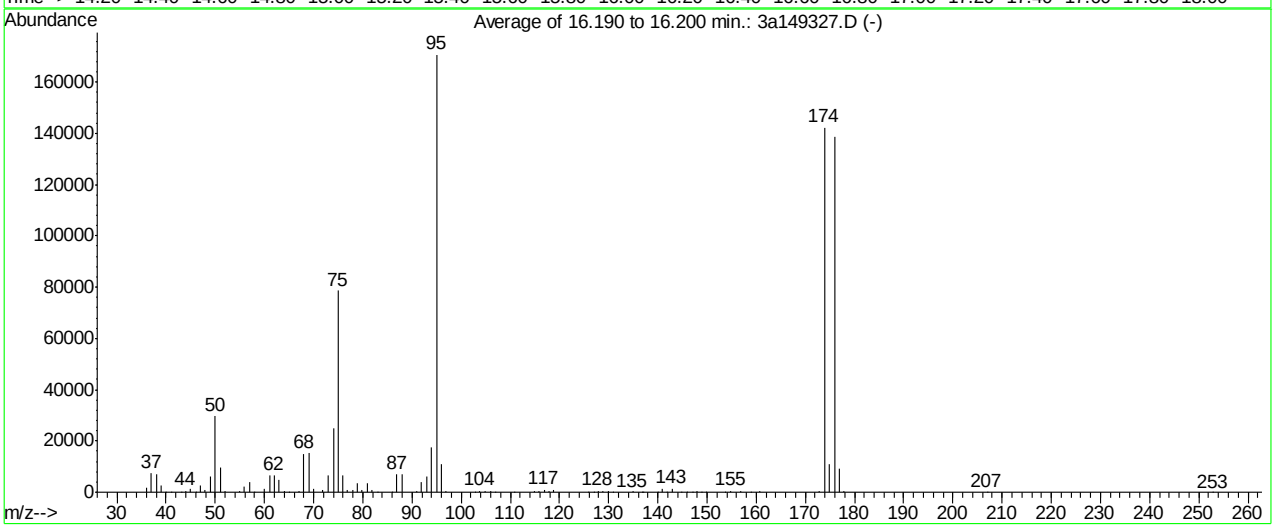
M3A6446.M Mon Mar 21 13:37:53 2016 ACCUNJ Page: 2

SW-846 Method 8260

Data File : C:\MSDChem\1\DATA\3a149327.D Vial: 1
Acq On : 15 Mar 2016 3:11 pm Operator: tracyk
Sample : bfb Inst : MS3A
Misc : MS99317,V3A6446,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M3A6442.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um





AutoFind: Scans 2390, 2391, 2392; Background Corrected with Scan 2379

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.4	29677	PASS
75	95	30	60	46.1	78632	PASS
95	95	100	100	100.0	170752	PASS
96	95	5	9	6.5	11083	PASS
173	174	0.00	2	0.3	468	PASS
174	95	50	120	83.4	142336	PASS
175	174	5	9	7.6	10826	PASS
176	174	95	101	97.3	138485	PASS
177	176	5	9	6.6	9198	PASS

3a149327.D M3A6442.M Wed Mar 16 07:54:59 2016 ACCUNJ

Average of 16.190 to 16.200 min.: 3a149327.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1605	47.90	810	62.00	6722	75.00	78632
37.00	7499	49.00	6138	63.00	4992	76.00	6733
38.00	6816	50.00	29677	63.95	513	76.90	1048
38.95	2626	51.00	9419	65.00	50	77.90	874
39.90	136	52.00	503	67.00	592	78.90	3301
41.00	28	55.00	490	68.00	14994	79.90	1109
43.00	81	55.95	2114	69.00	15438	80.90	3446
44.00	503	57.00	3879	70.00	1245	81.90	869
45.00	1313	57.85	235	71.90	716	82.90	37
45.95	124	59.95	1443	73.00	6734	85.95	175
47.00	2616	61.00	6679	74.00	25082	86.90	7168

Average of 16.190 to 16.200 min.: 3a149327.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.90	6995	105.90	566	128.85	281	145.80	190
90.95	424	106.85	175	129.85	537	146.95	177
91.90	4119	110.90	86	130.85	194	147.85	409
93.00	6055	114.85	241	134.95	353	148.80	123
94.00	17604	115.80	403	136.70	89	149.80	142
95.00	170752	116.90	893	136.90	175	153.70	51
96.00	11083	117.90	554	139.90	59	154.85	457
96.95	430	118.85	673	140.90	1377	156.90	310
102.80	66	125.95	108	141.85	161	158.85	138
103.80	618	126.90	110	142.85	1379	160.80	246
104.95	285	127.85	601	144.85	122	172.90	468

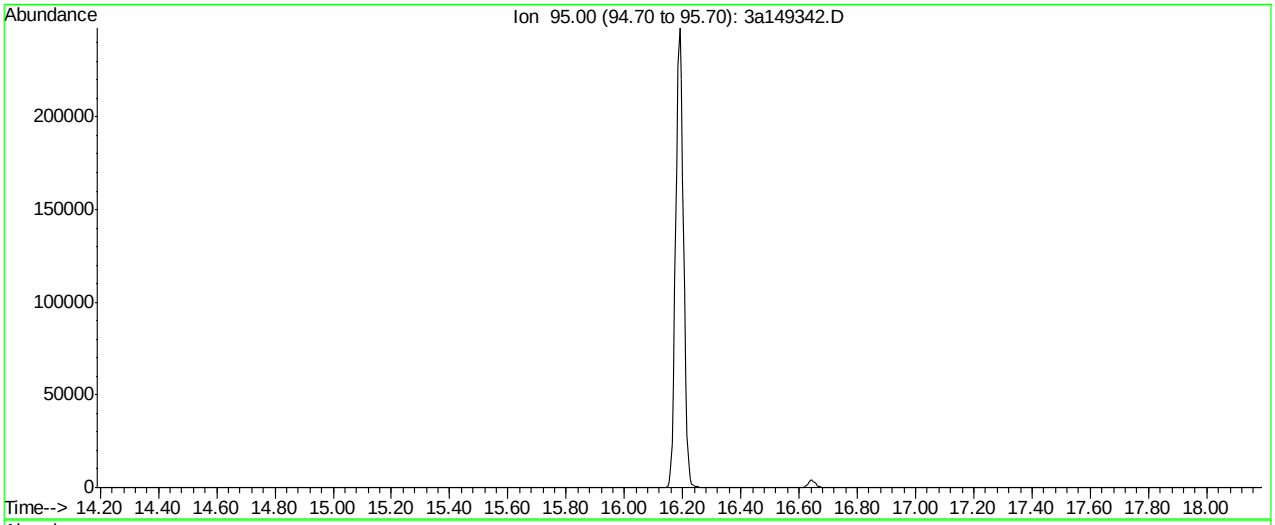
Average of 16.190 to 16.200 min.: 3a149327.D
bfb
Modified:subtracted

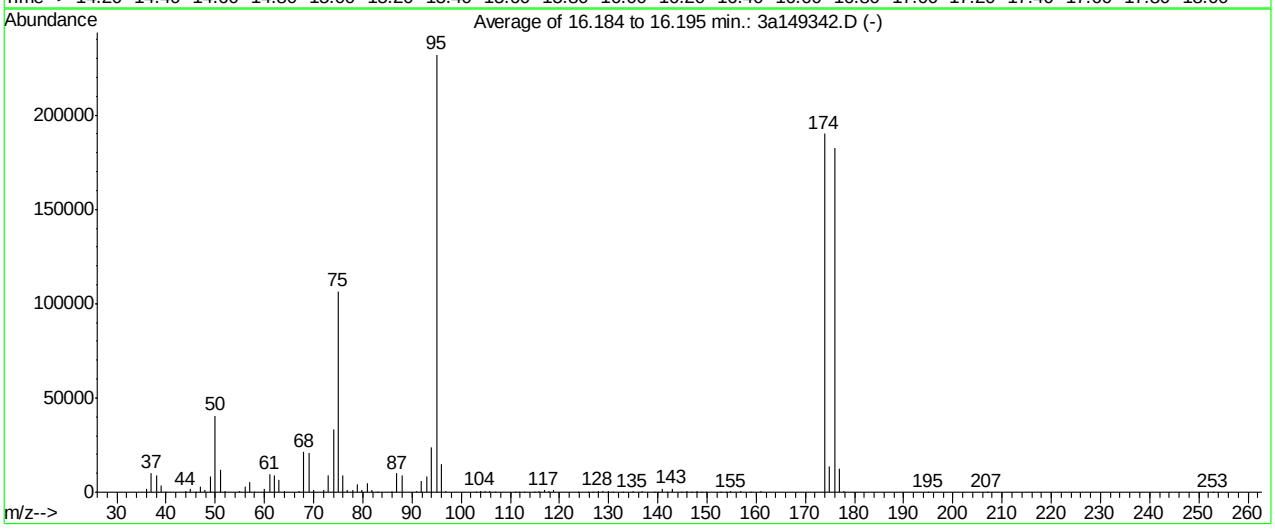
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
173.90	142336						
174.90	10826						
175.90	138485						
176.90	9198						
177.85	262						
206.95	26						
252.90	5						

SW-846 Method 8260

Data File : C:\MSDChem\1\DATA\3a149342.D Vial: 15
Acq On : 16 Mar 2016 9:22 am Operator: tracyk
Sample : bfb Inst : MS3A
Misc : MS99317,V3A6447,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M3A6446.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um





AutoFind: Scans 2389, 2390, 2391; Background Corrected with Scan 2378

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.4	40498	PASS
75	95	30	60	45.9	106669	PASS
95	95	100	100	100.0	232149	PASS
96	95	5	9	6.4	14922	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	81.9	190208	PASS
175	174	5	9	7.3	13917	PASS
176	174	95	101	96.1	182698	PASS
177	176	5	9	6.8	12406	PASS

3a149342.D M3A6446.M Wed Mar 16 15:22:18 2016 ACCUNJ

Average of 16.184 to 16.195 min.: 3a149342.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1865	50.00	40498	64.00	635	77.90	941
37.00	10172	51.00	12181	67.00	653	78.90	4472
38.00	8923	52.00	580	68.00	21170	79.90	1382
39.00	3508	54.95	651	69.00	20784	80.90	4502
39.90	54	56.00	3041	70.00	1509	81.90	1007
44.00	780	57.00	5083	71.95	1115	83.00	57
45.00	1879	57.95	280	73.00	8904	85.80	126
46.00	67	59.95	1862	74.00	33266	86.00	103
47.00	3286	61.00	9521	75.00	106669	86.90	10078
47.95	1223	62.00	9007	76.00	9229	87.90	9180
49.00	8310	63.00	6703	76.90	1158	90.90	594

Average of 16.184 to 16.195 min.: 3a149342.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
91.95	5719	111.00	51	127.80	761	142.90	1829
92.95	8131	111.70	54	128.90	335	144.85	163
94.00	23973	112.95	140	129.85	720	145.85	332
95.00	232149	114.90	251	130.90	287	146.80	28
96.00	14922	115.85	659	132.90	205	147.85	611
96.95	458	116.90	1188	134.90	485	148.85	165
103.00	63	117.85	630	136.85	321	149.85	220
103.85	775	118.85	932	139.30	63	152.80	110
104.90	336	123.90	87	139.90	255	153.80	68
105.85	764	125.80	168	140.90	1771	154.90	519
106.85	154	126.70	50	141.85	264	156.80	477

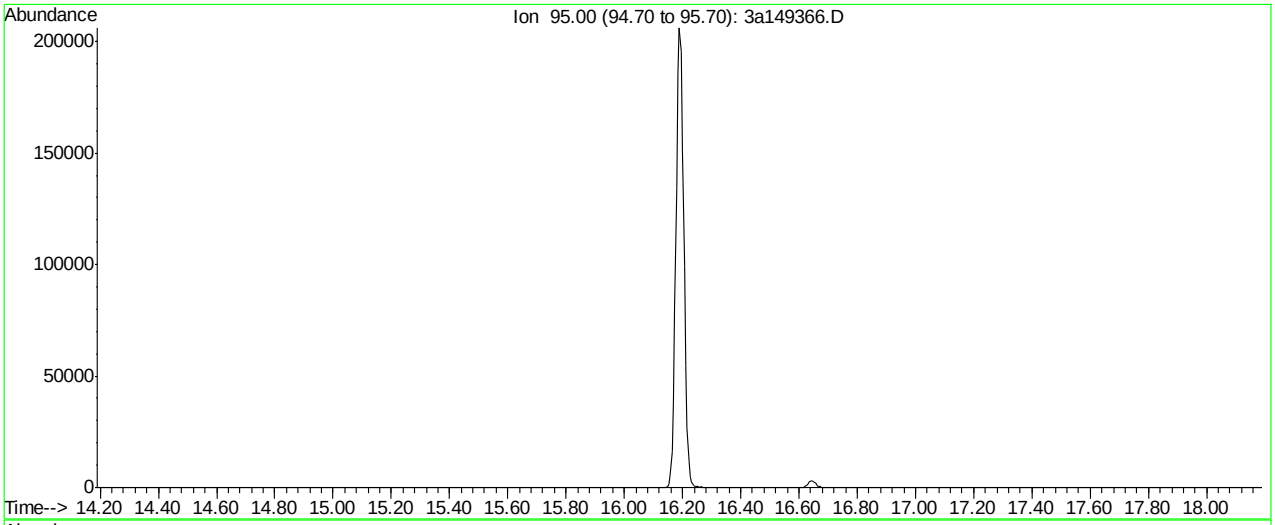
Average of 16.184 to 16.195 min.: 3a149342.D
bfb
Modified:subtracted

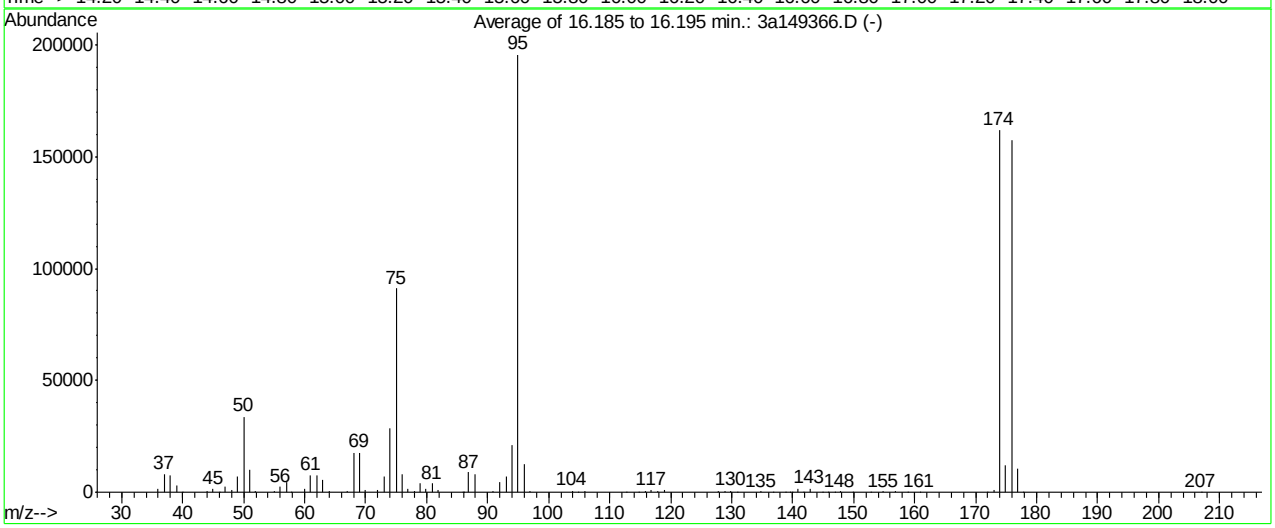
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
158.85	276						
160.85	323						
173.90	190208						
174.90	13917						
175.90	182698						
176.90	12406						
177.85	328						
195.00	130						
206.90	57						
252.90	118						

SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\3a149366.D Vial: 25
Acq On : 16 Mar 2016 9:43 pm Operator: tracyk
Sample : bfb2 Inst : MS3A
Misc : MS99718,V3A6447,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M3A6446.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um





AutoFind: Scans 2389, 2390, 2391; Background Corrected with Scan 2379

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.2	33632	PASS
75	95	30	60	46.5	91088	PASS
95	95	100	100	100.0	195733	PASS
96	95	5	9	6.5	12725	PASS
173	174	0.00	2	0.6	1040	PASS
174	95	50	120	82.7	161941	PASS
175	174	5	9	7.4	11960	PASS
176	174	95	101	97.3	157568	PASS
177	176	5	9	6.7	10500	PASS

3a149366.D M3A6446.M Thu Mar 17 11:38:39 2016 ACCUNJ

Average of 16.185 to 16.195 min.: 3a149366.D
bfb2
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1653	50.00	33632	63.95	549	77.95	743
37.00	8221	51.00	10225	66.95	554	78.90	3813
38.00	7534	51.95	419	68.00	17442	79.90	1298
39.00	2874	54.95	415	69.00	17696	80.90	3865
39.90	60	56.00	2365	69.95	1235	81.85	849
44.00	616	57.00	4379	71.95	946	85.85	133
45.00	1498	57.85	185	73.00	7167	86.10	73
46.10	60	59.95	1627	74.00	28629	86.90	8897
47.00	2628	61.00	7761	75.00	91088	87.90	7882
48.00	986	62.00	7749	76.00	7859	90.85	633
49.00	7023	63.00	5677	76.95	1274	91.95	4672

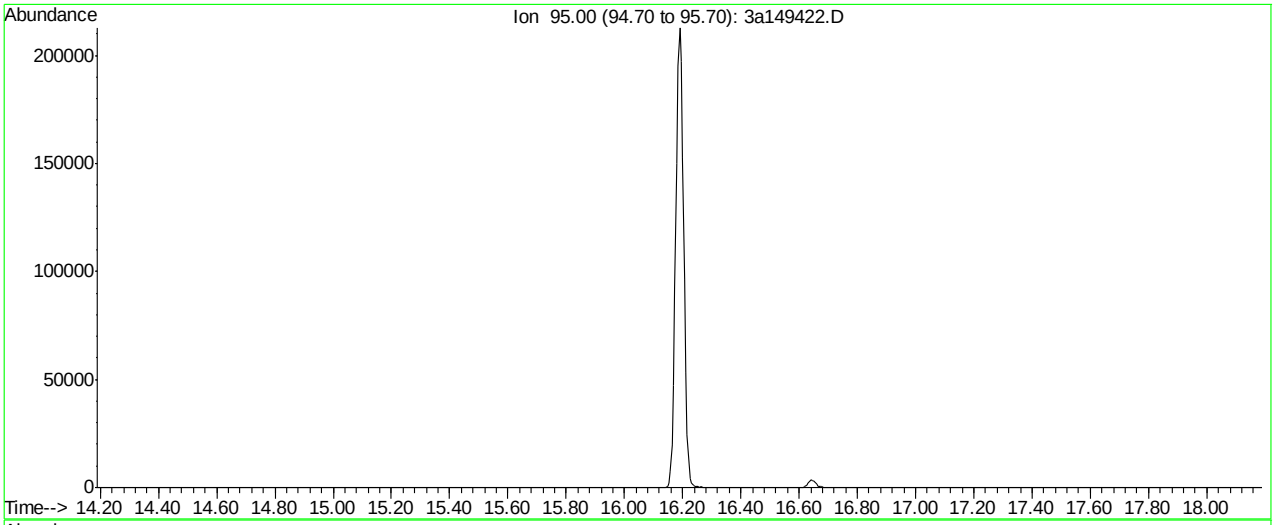
Average of 16.185 to 16.195 min.: 3a149366.D
bfb2
Modified:subtracted

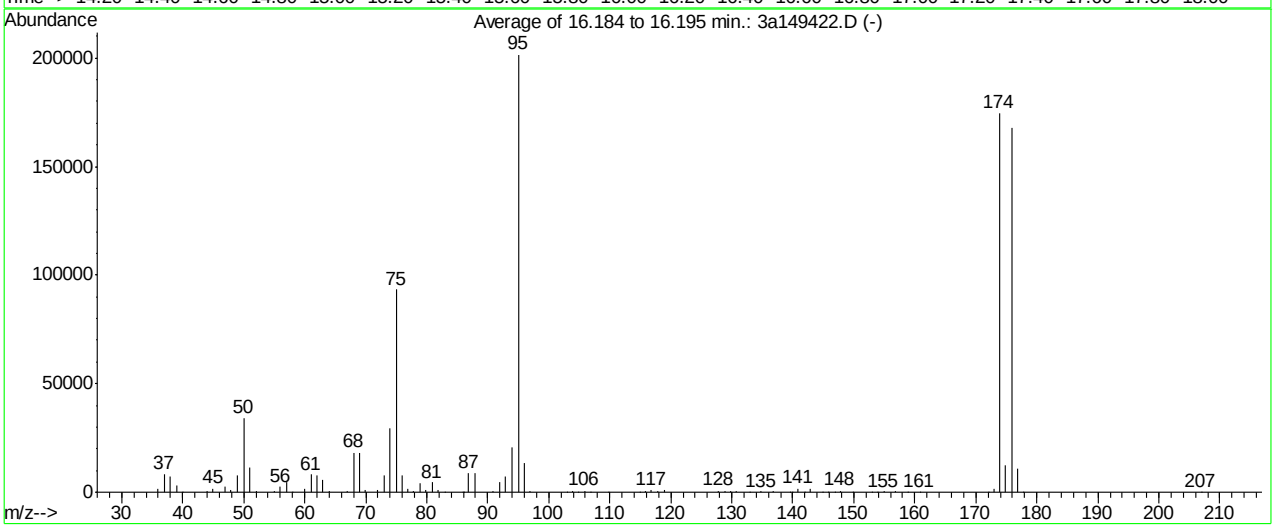
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.00	6941	116.85	912	140.00	50	156.85	295
94.00	20898	117.85	565	140.90	1519	158.80	89
95.00	195733	118.90	791	141.80	196	160.85	238
96.00	12725	127.80	570	142.85	1703	172.00	62
96.95	325	128.85	282	144.90	58	173.00	1040
103.85	715	129.85	673	145.80	201	173.90	161941
104.85	261	130.85	236	146.95	121	174.90	11960
105.85	628	134.85	329	147.80	433	175.90	157568
112.80	52	136.85	251	149.80	176	176.90	10500
114.80	71	138.90	51	152.75	107	177.85	218
115.90	565	139.50	61	154.85	492	206.95	36

SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\3a149422.D Vial: 1
Acq On : 18 Mar 2016 8:32 am Operator: tracyk
Sample : bfb Inst : MS3A
Misc : MS99767,V3A6450,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M3A6446.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um





AutoFind: Scans 2389, 2390, 2391; Background Corrected with Scan 2378

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.0	34298	PASS
75	95	30	60	46.3	93424	PASS
95	95	100	100	100.0	201642	PASS
96	95	5	9	6.6	13380	PASS
173	174	0.00	2	0.9	1589	PASS
174	95	50	120	86.6	174677	PASS
175	174	5	9	7.2	12521	PASS
176	174	95	101	96.1	167829	PASS
177	176	5	9	6.6	11017	PASS

3a149422.D M3A6446.M Fri Mar 18 13:11:21 2016 ACCUNJ

Average of 16.184 to 16.195 min.: 3a149422.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1614	51.00	11120	67.00	497	78.90	4256
37.00	8314	52.00	531	68.00	18293	79.90	1153
38.00	7431	54.95	481	69.00	18224	80.90	4570
39.00	3042	56.00	2566	69.95	1271	81.85	924
39.90	102	57.00	4734	71.95	892	82.90	53
43.95	643	58.00	202	73.00	7568	85.80	67
45.00	1590	60.00	1500	74.00	29384	86.00	161
47.00	2551	61.00	8165	75.00	93424	86.90	8908
47.95	1045	62.00	7964	76.00	7946	87.90	8594
49.00	7566	63.00	5775	76.95	1314	90.85	644
50.00	34298	63.95	565	77.85	743	91.95	4596

Average of 16.184 to 16.195 min.: 3a149422.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
92.95	7340	114.85	205	136.85	342	152.90	130
94.00	20821	115.85	563	139.60	73	153.80	131
95.00	201642	116.85	991	140.00	88	154.90	452
96.00	13380	117.85	632	140.85	1697	156.80	361
96.90	447	118.90	859	141.90	208	158.85	233
102.90	52	127.85	653	142.90	1659	160.85	221
103.90	640	128.80	322	144.85	123	172.00	93
104.80	223	129.85	619	145.85	252	172.95	1589
105.90	730	130.80	304	146.95	175	173.90	174677
106.90	118	132.90	111	147.80	523	174.90	12521
109.80	63	134.85	346	149.85	145	175.90	167829

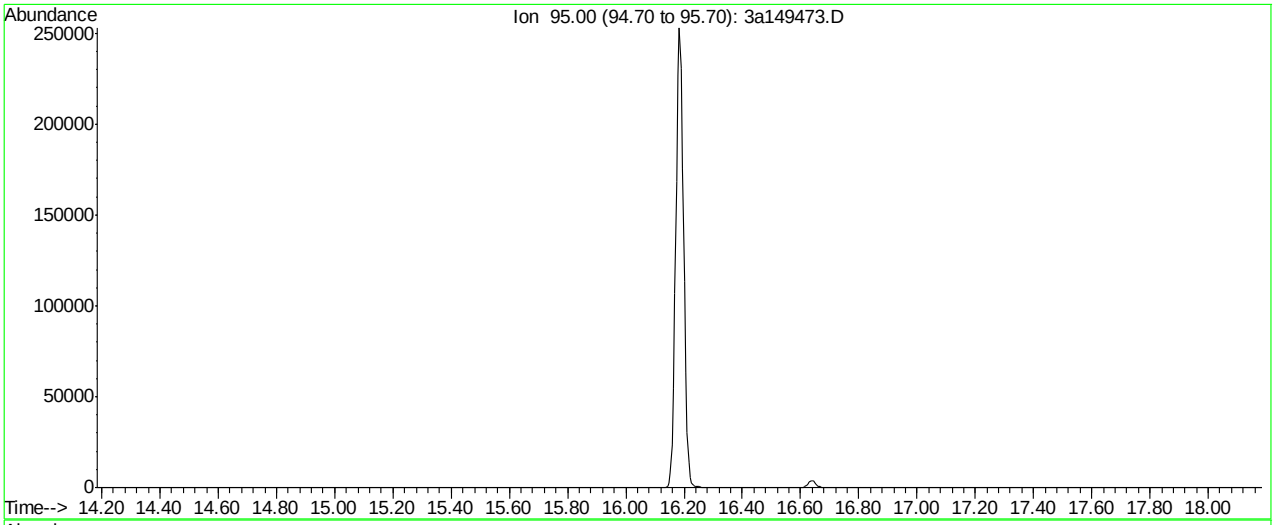
Average of 16.184 to 16.195 min.: 3a149422.D
bfb
Modified:subtracted

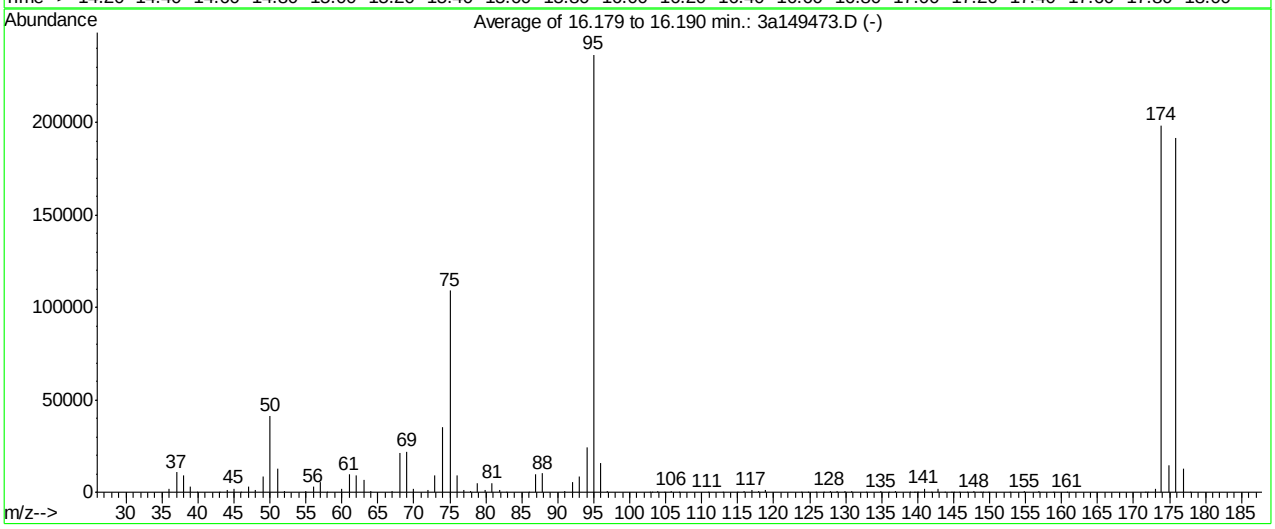
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
176.90	11017						
177.85	265						
206.90	21						

SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\3a149473.D Vial: 1
Acq On : 21 Mar 2016 9:06 am Operator: tracyk
Sample : bfb Inst : MS3A
Misc : MS99820,V3A6452,5,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M3A6446.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um





AutoFind: Scans 2388, 2389, 2390; Background Corrected with Scan 2378

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.4	41136	PASS
75	95	30	60	46.0	108920	PASS
95	95	100	100	100.0	236821	PASS
96	95	5	9	6.6	15551	PASS
173	174	0.00	2	0.9	1834	PASS
174	95	50	120	83.8	198421	PASS
175	174	5	9	7.2	14360	PASS
176	174	95	101	96.6	191701	PASS
177	176	5	9	6.6	12675	PASS

3a149473.D M3A6446.M Tue Mar 22 09:34:53 2016 ACCUNJ

Average of 16.179 to 16.190 min.: 3a149473.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	2026	49.00	8807	63.00	6753	76.90	1309
37.00	10679	50.00	41136	63.95	682	77.90	867
38.00	9302	51.00	12819	67.00	619	78.85	4873
39.00	3287	52.00	544	68.00	21504	79.90	1439
39.90	30	54.95	559	69.00	21917	80.90	5157
43.00	57	56.00	2836	70.00	1708	81.90	1105
44.00	986	57.00	5203	71.95	1227	82.90	56
44.95	1961	57.95	251	72.95	9014	85.95	245
45.90	66	60.00	1979	74.00	35021	86.90	9952
47.00	3190	61.00	9594	75.00	108920	87.90	10157
48.00	1354	62.00	9410	76.00	9388	90.90	788

Average of 16.179 to 16.190 min.: 3a149473.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
92.00	5564	106.80	205	126.95	122	139.80	54
93.00	8573	110.85	141	127.85	751	140.10	56
94.00	24461	112.85	116	128.85	403	140.90	2010
95.00	236821	114.95	245	129.85	730	141.90	288
96.00	15551	115.85	744	130.80	347	142.85	1810
96.95	456	116.90	1163	132.85	118	143.80	62
102.80	55	117.85	685	134.90	406	144.70	83
103.10	50	118.85	1046	135.90	67	145.00	113
103.85	734	123.80	54	136.85	372	145.75	319
104.85	266	124.80	51	138.90	55	146.85	69
105.80	805	125.80	54	139.60	77	147.85	533

Average of 16.179 to 16.190 min.: 3a149473.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
148.80	54	173.90	198421				
149.00	69	174.90	14360				
149.85	253	175.90	191701				
152.80	68	176.90	12675				
154.85	486	177.85	327				
156.85	395						
158.80	274						
160.80	238						
171.70	50						
172.00	92						
173.00	1834						

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149328.D
Acq On : 15 Mar 2016 3:48 pm
Operator : tracyk
Sample : ic6446-0.2
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 16 08:37:53 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	374242	500.00	ug/L	0.00
5) pentafluorobenzene	10.65	168	421627	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	678448	50.00	ug/L	0.00
87) chlorobenzene-d5	14.96	117	659772	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	353991	50.00	ug/L	0.00

System Monitoring Compounds						
49) dibromofluoromethane (s)	10.70	113	209905	44.17	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 88.34%			
50) 1,2-dichloroethane-d4 (s)	11.15	65	258757	44.42	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 88.84%			
79) toluene-d8 (s)	13.33	98	791947	52.70	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 105.40%			
104) 4-bromofluorobenzene (s)	16.19	95	354294	63.85	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 127.70%#			

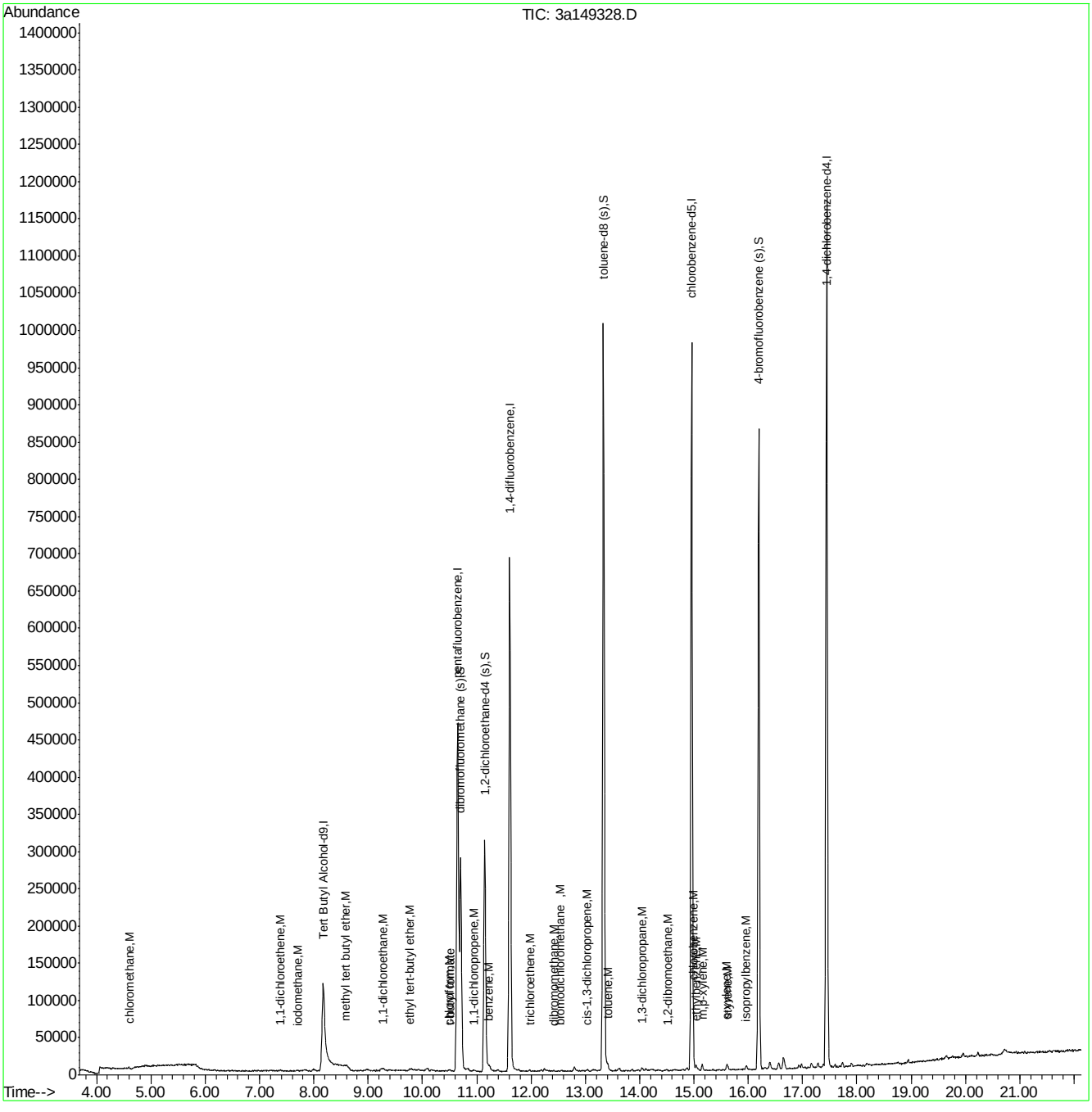
Target Compounds						Qvalue
10) chloromethane	4.61	50	1385	0.19	ug/L	75
22) 1,1-dichloroethene	7.39	61	1100	0.18	ug/L #	56
26) iodomethane	7.70	142	1013	0.15	ug/L	71
31) methyl tert butyl ether	8.58	73	2919	0.22	ug/L	57
35) 1,1-dichloroethane	9.28	63	1286	0.17	ug/L	70
39) ethyl tert-butyl ether	9.76	59	2236	0.17	ug/L	90
47) chloroform	10.49	85	1201	0.25	ug/L #	76
48) t-butyl formate	10.51	59	516	0.12	ug/L #	69
59) 1,1-dichloropropene	10.95	75	914	0.17	ug/L #	59
63) benzene	11.22	78	3429	0.22	ug/L	93
69) trichloroethene	11.97	95	836	0.21	ug/L	87
75) dibromomethane	12.42	93	467	0.17	ug/L	85
77) bromodichloromethane	12.54	83	1286	0.23	ug/L	88
78) cis-1,3-dichloropropene	13.03	75	1275	0.22	ug/L	76
81) toluene	13.41	91	4128	0.29	ug/L	90
90) 1,3-dichloropropane	14.05	76	1257	0.21	ug/L	84
94) 1,2-dibromoethane	14.51	107	928	0.23	ug/L	98
95) chlorobenzene	14.99	112	2290	0.22	ug/L	77
97) ethylbenzene	15.04	91	4460	0.22	ug/L	95
98) m,p-xylene	15.15	106	2908	0.39	ug/L #	80
99) o-xylene	15.60	91	3841	0.22	ug/L	87
100) styrene	15.61	104	2600	0.21	ug/L	90
103) isopropylbenzene	15.96	105	4048	0.23	ug/L	87

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3a149328.D
Acq On : 15 Mar 2016 3:48 pm
Operator : tracyk
Sample : ic6446-0.2
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 16 08:37:53 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration



M3A6446.M Wed Mar 16 11:21:23 2016 ACCUNJ Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149329.D
Acq On : 15 Mar 2016 4:19 pm
Operator : tracyk
Sample : ic6446-0.5
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 16 09:11:15 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	386015	500.00	ug/L	0.00
5) pentafluorobenzene	10.65	168	420477	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	675312	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	670409	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	350689	50.00	ug/L	0.00

System Monitoring Compounds						
49) dibromofluoromethane (s)	10.70	113	203795	43.00	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 86.00%			
50) 1,2-dichloroethane-d4 (s)	11.15	65	249311	42.91	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 85.82%			
79) toluene-d8 (s)	13.33	98	796516	53.25	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 106.50%			
104) 4-bromofluorobenzene (s)	16.19	95	358098	65.14	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 130.28%#			

Target Compounds						Qvalue
10) chloromethane	4.60	50	2572	0.35	ug/L	90
11) vinyl chloride	4.90	62	2000	0.25	ug/L	86
16) chloroethane	5.89	64	1341	0.44	ug/L	52
22) 1,1-dichloroethene	7.37	61	2248	0.37	ug/L	87
26) iodomethane	7.70	142	2413	0.37	ug/L	89
28) carbon disulfide	7.84	76	5892	0.45	ug/L	81
29) methylene chloride	8.23	84	1997	0.46	ug/L	80
31) methyl tert butyl ether	8.57	73	5721	0.43	ug/L	93
32) trans-1,2-dichloroethene	8.65	61	2187	0.36	ug/L	88
33) di-isopropyl ether	9.25	45	6152	0.47	ug/L	81
35) 1,1-dichloroethane	9.28	63	3122	0.42	ug/L	90
36) chloroprene	9.41	53	2325	0.41	ug/L	93
37) acrylonitrile	8.61	53	4745	2.13	ug/L	98
39) ethyl tert-butyl ether	9.75	59	4915	0.38	ug/L	87
41) 2,2-dichloropropane	10.09	77	2094	0.38	ug/L	88
42) cis-1,2-dichloroethene	10.09	96	2278	0.48	ug/L	86
45) bromochloromethane	10.43	128	814	0.38	ug/L	80
47) chloroform	10.49	85	2045	0.43	ug/L	81
52) methacrylonitrile	10.38	67	1134	0.57	ug/L #	45
53) 1,1,1-trichloroethane	10.74	97	2292	0.38	ug/L	80
54) Cyclohexane	10.82	84	2693	0.48	ug/L	96
57) n-butyl alcohol	11.75	56	5505	29.57	ug/L	75
58) carbon tetrachloride	10.96	117	2104	0.36	ug/L	94
59) 1,1-dichloropropene	10.94	75	2240	0.42	ug/L	88
61) hexane	8.97	57	2760	0.63	ug/L	87
62) 2,2,4-TRIMETHYLPENTANE	11.20	57	6043	0.47	ug/L	90
63) benzene	11.21	78	7037	0.45	ug/L	95
64) tert-amyl methyl ether	11.25	87	982	0.34	ug/L #	52
67) 1,2-dichloroethane	11.24	62	2138	0.34	ug/L	92
69) trichloroethene	11.96	95	1768	0.45	ug/L	84
71) methyl methacrylate	12.25	100	575	0.63	ug/L #	29
73) 2-chloroethyl vinyl ether	12.80	63	6254	2.76	ug/L	98
74) 1,2-dichloropropane	12.24	63	1848	0.48	ug/L	66

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149329.D
Acq On : 15 Mar 2016 4:19 pm
Operator : tracyk
Sample : ic6446-0.5
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 16 09:11:15 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
75) dibromomethane	12.42	93	1167	0.43	ug/L		85
76) methylcyclohexane	12.18	83	2451	0.42	ug/L		87
77) bromodichloromethane	12.55	83	2462	0.44	ug/L		96
78) cis-1,3-dichloropropene	13.03	75	2867	0.51	ug/L		92
80) 4-methyl-2-pentanone	13.13	58	935	0.44	ug/L	#	51
81) toluene	13.41	91	7778	0.55	ug/L		91
82) 3-methyl-1-butanol	13.16	55	4322	13.97	ug/L		85
83) trans-1,3-dichloropropene	13.63	75	3124	0.59	ug/L		85
84) ethyl methacrylate	13.61	69	3121	0.67	ug/L		95
85) 1,1,2-trichloroethane	13.86	83	1765	0.65	ug/L		86
86) 2-hexanone	14.03	58	961	0.56	ug/L	#	60
88) tetrachloroethene	14.03	166	1880	0.42	ug/L		85
90) 1,3-dichloropropane	14.05	76	2890	0.48	ug/L		94
91) butyl acetate	14.11	56	1729	0.56	ug/L	#	70
92) 3,3-dimethyl-1-butanol	14.22	57	3779	4.11	ug/L	#	81
93) dibromochloromethane	14.34	129	2036	0.43	ug/L		94
94) 1,2-dibromoethane	14.51	107	1988	0.48	ug/L		89
95) chlorobenzene	14.99	112	4710	0.44	ug/L		91
96) 1,1,1,2-tetrachloroethane	15.05	131	1578	0.31	ug/L		95
97) ethylbenzene	15.04	91	9127	0.45	ug/L		97
98) m,p-xylene	15.15	106	6657	0.89	ug/L		86
99) o-xylene	15.60	91	7533	0.42	ug/L		96
100) styrene	15.61	104	5552	0.45	ug/L		89
101) bromoform	15.91	173	1544	0.41	ug/L		82
103) isopropylbenzene	15.96	105	8326	0.48	ug/L		96
105) cyclohexanone	16.16	98	1258	9.34	ug/L		80
106) bromobenzene	16.40	156	2269	0.50	ug/L		96
107) 1,1,2,2-tetrachloroethane	16.30	83	3357	0.58	ug/L		94
110) n-propylbenzene	16.39	91	10955	0.50	ug/L		95
111) 2-chlorotoluene	16.56	126	2169	0.48	ug/L		86
112) 4-chlorotoluene	16.67	91	7636	0.59	ug/L		94
113) 1,3,5-trimethylbenzene	16.56	105	7626	0.47	ug/L		95
114) tert-butylbenzene	16.93	134	1309	0.43	ug/L	#	62
115) pentachloroethane	17.03	167	1213	0.39	ug/L		92
116) 1,2,4-trimethylbenzene	16.98	105	7886	0.46	ug/L		95
117) sec-butylbenzene	17.16	105	9697	0.47	ug/L		98
118) 1,3-dichlorobenzene	17.38	146	4258	0.45	ug/L		97
119) p-isopropyltoluene	17.29	119	8049	0.43	ug/L		95
120) 1,4-dichlorobenzene	17.47	146	4334	0.44	ug/L		82
121) 1,2-dichlorobenzene	17.90	146	4137	0.41	ug/L		90
122) benzyl chloride	17.60	91	7322	0.57	ug/L		96
123) n-butylbenzene	17.73	92	4115	0.40	ug/L		97
125) 1,3,5-TRICHLOROBENZENE	18.95	180	3033	0.30	ug/L		94
126) 1,2,4-trichlorobenzene	19.64	180	2513	0.27	ug/L		88

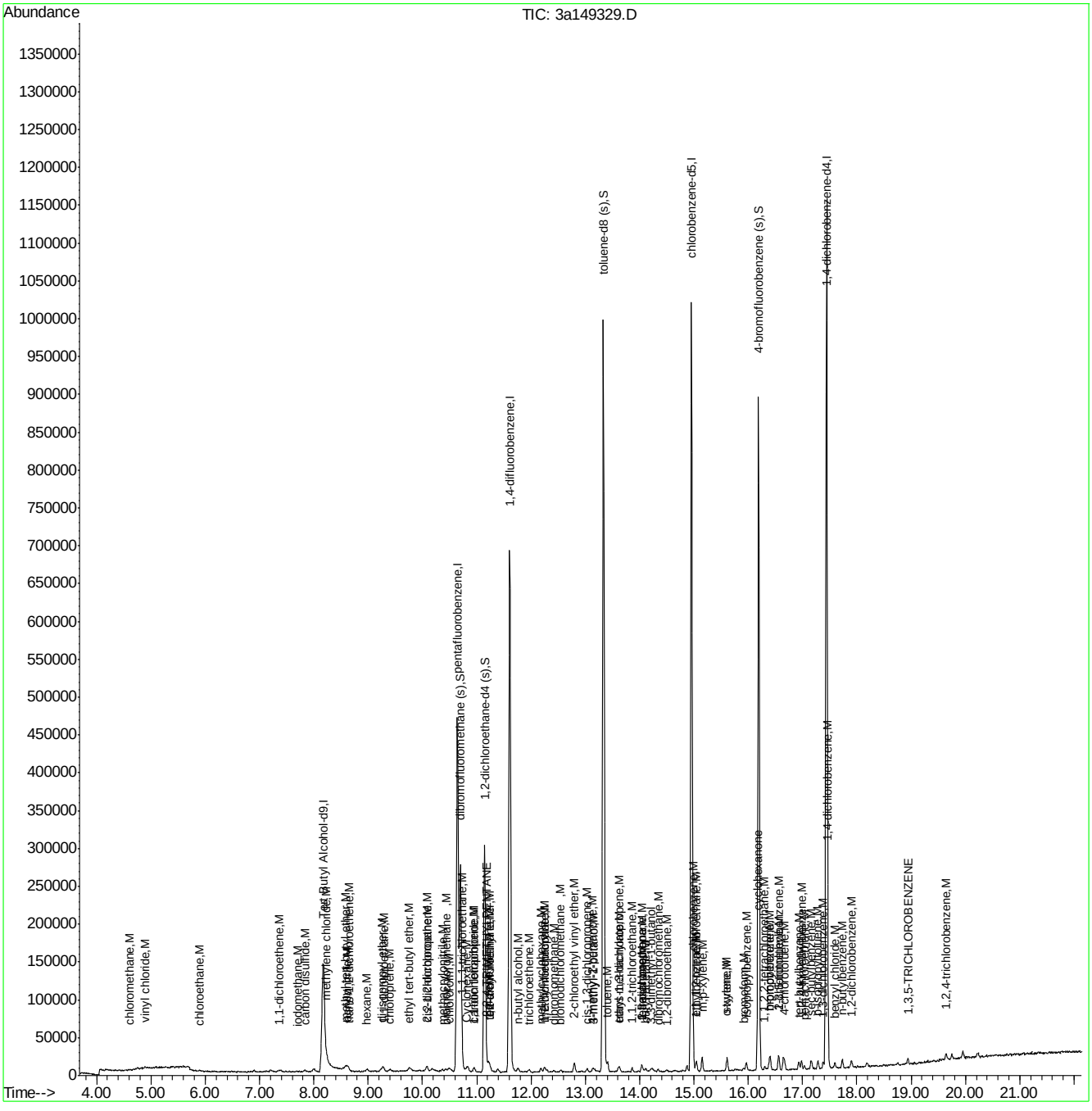
(#) = qualifier out of range (m) = manual integration (+) = signals summed

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149329.D
Acq On : 15 Mar 2016 4:19 pm
Operator : tracyk
Sample : ic6446-0.5
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 16 09:11:15 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149330.D
Acq On : 15 Mar 2016 4:49 pm
Operator : tracyk
Sample : ic6446-1
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 16 11:15:45 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	395728	500.00	ug/L	0.00
5) pentafluorobenzene	10.65	168	406622	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	649018	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	646615	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	340677	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	196249	42.82	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 85.64%			
50) 1,2-dichloroethane-d4 (s)	11.15	65	240644	42.83	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 85.66%			
79) toluene-d8 (s)	13.33	98	766426	53.31	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 106.62%			
104) 4-bromofluorobenzene (s)	16.19	95	346013	64.79	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 129.58%#			

Target Compounds

						Qvalue
2) tertiary butyl alcohol	8.31	59	3122	4.36	ug/L #	46
4) 1,4-dioxane	12.37	88	876	21.80	ug/L	72
8) chlorodifluoromethane	4.20	51	2300	0.79	ug/L	71
9) dichlorodifluoromethane	4.15	85	2807	0.54	ug/L	83
10) chloromethane	4.61	50	4387	0.61	ug/L	95
11) vinyl chloride	4.89	62	3700	0.49	ug/L	87
15) 2-CHLOROPROPANE	7.11	43	5706	0.79	ug/L #	92
16) chloroethane	5.90	64	2443	0.82	ug/L	92
17) trichlorofluoromethane	6.40	101	2787	0.45	ug/L	88
20) ethyl ether	6.89	74	1848	0.83	ug/L	94
21) acrolein	7.20	56	8031	7.17	ug/L	84
22) 1,1-dichloroethene	7.39	61	4870	0.83	ug/L	80
24) allyl chloride	8.01	76	1911	0.81	ug/L #	86
26) iodomethane	7.70	142	4891	0.78	ug/L	90
28) carbon disulfide	7.84	76	10750	0.84	ug/L	98
29) methylene chloride	8.23	84	3572	0.86	ug/L	88
30) methyl acetate	8.01	43	3967	0.89	ug/L	86
31) methyl tert butyl ether	8.57	73	10463	0.81	ug/L	97
32) trans-1,2-dichloroethene	8.64	61	4691	0.81	ug/L	93
33) di-isopropyl ether	9.25	45	11200	0.89	ug/L	76
35) 1,1-dichloroethane	9.28	63	5767	0.80	ug/L	89
36) chloroprene	9.39	53	4733	0.86	ug/L	96
37) acrylonitrile	8.61	53	9747	4.52	ug/L	95
39) ethyl tert-butyl ether	9.76	59	10015	0.81	ug/L	96
41) 2,2-dichloropropane	10.07	77	3716	0.70	ug/L	82
42) cis-1,2-dichloroethene	10.09	96	3780	0.83	ug/L	96
43) methylacrylate	10.16	85	547	0.83	ug/L #	4
44) propionitrile	10.18	54	8659	9.87	ug/L	91
45) bromochloromethane	10.42	128	1628	0.78	ug/L	85
47) chloroform	10.49	85	3807	0.83	ug/L	94
48) t-butyl formate	10.51	59	3355	0.83	ug/L #	92
51) freon 113	7.33	151	1843	0.72	ug/L #	66
52) methacrylonitrile	10.36	67	2241	1.16	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149330.D
Acq On : 15 Mar 2016 4:49 pm
Operator : tracyk
Sample : ic6446-1
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 16 11:15:45 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
53) 1,1,1-trichloroethane	10.74	97	4482	0.77	ug/L		90
54) Cyclohexane	10.82	84	4632	0.85	ug/L		95
56) epichlorohydrin	12.93	57	3259	6.18	ug/L		98
57) n-butyl alcohol	11.75	56	9644	53.90	ug/L		91
58) carbon tetrachloride	10.96	117	4140	0.74	ug/L		93
59) 1,1-dichloropropene	10.93	75	4541	0.90	ug/L		94
61) hexane	8.98	57	4624	1.10	ug/L		90
62) 2,2,4-TRIMETHYLPENTANE	11.20	57	11859	0.96	ug/L		99
63) benzene	11.21	78	13766	0.92	ug/L		92
64) tert-amyl methyl ether	11.24	87	2031	0.74	ug/L	#	80
65) heptane	11.38	57	2554	1.16	ug/L		86
66) isopropyl acetate	11.13	87	784	0.90	ug/L	#	29
67) 1,2-dichloroethane	11.24	62	4602	0.77	ug/L		97
69) trichloroethene	11.96	95	3369	0.89	ug/L		91
71) methyl methacrylate	12.25	100	931	1.06	ug/L	#	81
73) 2-chloroethyl vinyl ether	12.80	63	12684	5.82	ug/L		95
74) 1,2-dichloropropane	12.25	63	3516	0.94	ug/L		98
75) dibromomethane	12.41	93	2312	0.88	ug/L		97
76) methylcyclohexane	12.18	83	5055	0.89	ug/L		85
77) bromodichloromethane	12.55	83	4729	0.88	ug/L		98
78) cis-1,3-dichloropropene	13.03	75	6204	1.14	ug/L		90
80) 4-methyl-2-pentanone	13.12	58	2333	1.14	ug/L	#	75
81) toluene	13.41	91	14960	1.10	ug/L		98
82) 3-methyl-1-butanol	13.16	55	6367	21.41	ug/L		96
83) trans-1,3-dichloropropene	13.63	75	5861	1.16	ug/L		98
84) ethyl methacrylate	13.61	69	6377	1.42	ug/L		92
85) 1,1,2-trichloroethane	13.86	83	3136	1.21	ug/L		91
86) 2-hexanone	14.03	58	2344	1.42	ug/L		89
88) tetrachloroethene	14.03	166	3594	0.83	ug/L		90
90) 1,3-dichloropropane	14.06	76	5625	0.97	ug/L		88
91) butyl acetate	14.10	56	4066	1.35	ug/L	#	80
92) 3,3-dimethyl-1-butanol	14.22	57	6786	7.65	ug/L		94
93) dibromochloromethane	14.34	129	4193	0.92	ug/L		87
94) 1,2-dibromoethane	14.50	107	3816	0.96	ug/L		95
95) chlorobenzene	14.98	112	9502	0.92	ug/L		86
96) 1,1,1,2-tetrachloroethane	15.06	131	3866	0.80	ug/L		90
97) ethylbenzene	15.04	91	17320	0.88	ug/L		96
98) m,p-xylene	15.15	106	12720	1.76	ug/L		97
99) o-xylene	15.60	91	14631	0.85	ug/L		98
100) styrene	15.61	104	11341	0.95	ug/L		98
101) bromoform	15.91	173	3228	0.88	ug/L		94
103) isopropylbenzene	15.96	105	17386	1.03	ug/L		97
105) cyclohexanone	16.17	98	2142	16.36	ug/L		83
106) bromobenzene	16.40	156	4737	1.07	ug/L		99
107) 1,1,2,2-tetrachloroethane	16.30	83	6179	1.11	ug/L		84
108) trans-1,4-dichloro-2-buten	16.34	53	1529	1.33	ug/L	#	67
109) 1,2,3-trichloropropane	16.38	110	1540	0.98	ug/L		96
110) n-propylbenzene	16.40	91	21043	1.00	ug/L		99
111) 2-chlorotoluene	16.57	126	4216	0.97	ug/L		71
112) 4-chlorotoluene	16.67	91	14363	1.15	ug/L		96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149330.D
Acq On : 15 Mar 2016 4:49 pm
Operator : tracyk
Sample : ic6446-1
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 16 11:15:45 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
113) 1,3,5-trimethylbenzene	16.56	105	15097	0.96	ug/L	98
114) tert-butylbenzene	16.93	134	2745	0.93	ug/L #	88
115) pentachloroethane	17.03	167	2582	0.86	ug/L	90
116) 1,2,4-trimethylbenzene	16.98	105	15772	0.96	ug/L	98
117) sec-butylbenzene	17.16	105	19060	0.94	ug/L	98
118) 1,3-dichlorobenzene	17.38	146	8795	0.95	ug/L	97
119) p-isopropyltoluene	17.29	119	15871	0.88	ug/L	98
120) 1,4-dichlorobenzene	17.47	146	8616	0.90	ug/L	83
121) 1,2-dichlorobenzene	17.90	146	8540	0.87	ug/L	95
122) benzyl chloride	17.59	91	13878	1.11	ug/L	97
123) n-butylbenzene	17.73	92	8725	0.88	ug/L	98
124) 1,2-dibromo-3-chloropropan	18.75	75	1934	1.05	ug/L	80
125) 1,3,5-TRICHLOROBENZENE	18.94	180	6418	0.66	ug/L	99
126) 1,2,4-trichlorobenzene	19.64	180	5276	0.59	ug/L	99
127) hexachlorobutadiene	19.75	225	2800	0.69	ug/L	87
128) naphthalene	19.95	128	15627	0.60	ug/L	100
129) 1,2,3-trichlorobenzene	20.23	180	4742	0.59	ug/L	93
130) hexachloroethane	18.18	201	2491	0.80	ug/L	88

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

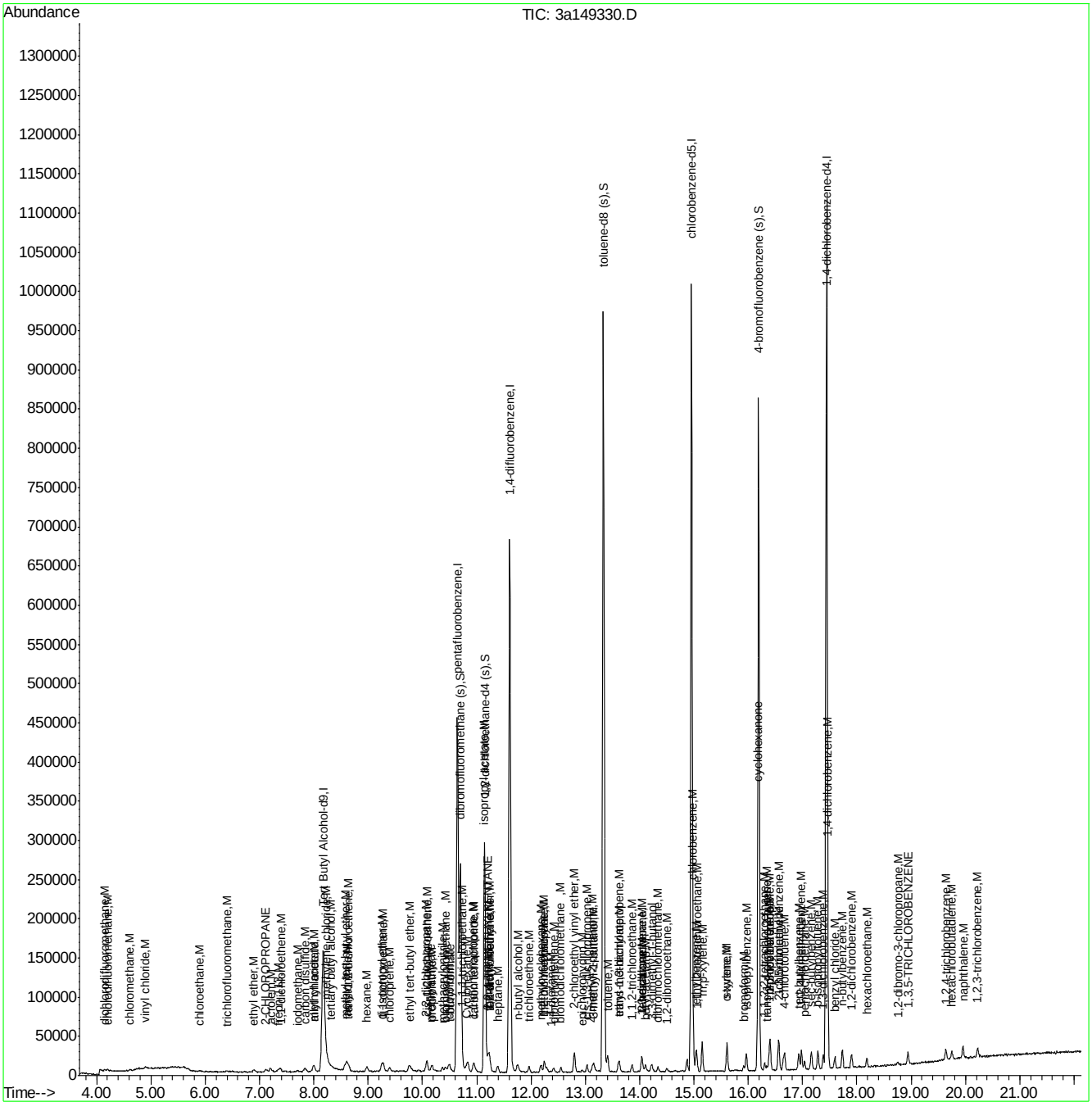
7.7.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149330.D
Acq On : 15 Mar 2016 4:49 pm
Operator : tracyk
Sample : ic6446-1
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 16 11:15:45 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149331.D
Acq On : 15 Mar 2016 5:20 pm
Operator : tracyk
Sample : ic6446-2
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 16 08:32:55 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	391911	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	410350	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	666262	50.00	ug/L	0.00
87) chlorobenzene-d5	14.96	117	654597	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	344669	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	199464	43.12	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 86.24%			
50) 1,2-dichloroethane-d4 (s)	11.15	65	246362	43.45	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 86.90%			
79) toluene-d8 (s)	13.33	98	780057	52.85	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 105.70%			
104) 4-bromofluorobenzene (s)	16.19	95	348334	64.47	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 128.94%#			

Target Compounds

						Qvalue
2) tertiary butyl alcohol	8.31	59	6720	9.48	ug/L	76
4) 1,4-dioxane	12.37	88	2226	55.93	ug/L	81
8) chlorodifluoromethane	4.21	51	3871	1.32	ug/L	61
9) dichlorodifluoromethane	4.17	85	7861	1.50	ug/L	85
10) chloromethane	4.61	50	11547	1.59	ug/L	96
11) vinyl chloride	4.90	62	9898	1.29	ug/L	95
12) bromomethane	5.68	96	6958	2.14	ug/L	94
15) 2-CHLOROPROPANE	7.11	43	12887	1.77	ug/L #	95
16) chloroethane	5.90	64	6075	2.03	ug/L	95
17) trichlorofluoromethane	6.39	101	8022	1.28	ug/L	91
19) 1-chloropropane	8.26	41	5556	1.45	ug/L #	95
20) ethyl ether	6.90	74	4087	1.83	ug/L	95
21) acrolein	7.21	56	16846	14.91	ug/L	97
22) 1,1-dichloroethene	7.38	61	10236	1.72	ug/L	94
24) allyl chloride	7.99	76	3930	1.66	ug/L	98
25) acetonitrile	7.99	40	9005	19.24	ug/L #	86
26) iodomethane	7.69	142	10298	1.62	ug/L	91
27) iso-butyl alcohol	11.21	74	2137	16.78	ug/L #	13
28) carbon disulfide	7.83	76	22077	1.71	ug/L	95
29) methylene chloride	8.22	84	7294	1.73	ug/L	93
30) methyl acetate	7.99	43	10250	2.29	ug/L	99
31) methyl tert butyl ether	8.57	73	22473	1.72	ug/L	95
32) trans-1,2-dichloroethene	8.64	61	9834	1.68	ug/L	93
33) di-isopropyl ether	9.24	45	22776	1.79	ug/L	81
34) 2-butanone	10.07	72	2103	3.59	ug/L #	47
35) 1,1-dichloroethane	9.27	63	12253	1.69	ug/L	98
36) chloroprene	9.39	53	9275	1.67	ug/L	97
37) acrylonitrile	8.60	53	21490	9.88	ug/L	94
38) vinyl acetate	9.27	86	1107	1.47	ug/L #	39
39) ethyl tert-butyl ether	9.76	59	21064	1.68	ug/L	95
40) ethyl acetate	10.07	45	1630	2.46	ug/L #	47
41) 2,2-dichloropropane	10.08	77	7401	1.37	ug/L	95
42) cis-1,2-dichloroethene	10.09	96	7697	1.67	ug/L	92

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149331.D
Acq On : 15 Mar 2016 5:20 pm
Operator : tracyk
Sample : ic6446-2
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 16 08:32:55 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) methylacrylate	10.17	85	1441	2.18	ug/L	#	32
44) propionitrile	10.17	54	18527	20.93	ug/L		87
45) bromochloromethane	10.42	128	3456	1.65	ug/L		92
46) tetrahydrofuran	10.47	42	4908	2.45	ug/L		84
47) chloroform	10.49	85	7881	1.71	ug/L		98
48) t-butyl formate	10.51	59	6880	1.68	ug/L		95
51) freon 113	7.36	151	3419	1.32	ug/L		85
52) methacrylonitrile	10.37	67	4492	2.30	ug/L		91
53) 1,1,1-trichloroethane	10.74	97	9375	1.60	ug/L		93
54) Cyclohexane	10.82	84	9244	1.69	ug/L		86
56) epichlorohydrin	12.93	57	6332	11.70	ug/L		94
57) n-butyl alcohol	11.75	56	20445	111.31	ug/L		97
58) carbon tetrachloride	10.96	117	8714	1.51	ug/L		98
59) 1,1-dichloropropene	10.94	75	8969	1.72	ug/L		98
61) hexane	8.98	57	7601	1.76	ug/L		82
62) 2,2,4-TRIMETHYLPENTANE	11.20	57	20687	1.63	ug/L		97
63) benzene	11.21	78	29228	1.89	ug/L		98
64) tert-amyl methyl ether	11.23	87	4654	1.65	ug/L		93
65) heptane	11.38	57	4488	1.99	ug/L		97
66) isopropyl acetate	11.14	87	1686	1.89	ug/L	#	46
67) 1,2-dichloroethane	11.24	62	9737	1.59	ug/L		96
69) trichloroethene	11.96	95	7310	1.87	ug/L		96
71) methyl methacrylate	12.25	100	2286	2.53	ug/L	#	85
72) 2-nitropropane	12.79	41	5088	2.26	ug/L		93
73) 2-chloroethyl vinyl ether	12.80	63	26575	11.88	ug/L		100
74) 1,2-dichloropropane	12.25	63	7611	1.98	ug/L		96
75) dibromomethane	12.41	93	4920	1.82	ug/L		97
76) methylcyclohexane	12.18	83	8816	1.52	ug/L		97
77) bromodichloromethane	12.55	83	10228	1.85	ug/L		90
78) cis-1,3-dichloropropene	13.03	75	12898	2.31	ug/L		94
80) 4-methyl-2-pentanone	13.13	58	4893	2.34	ug/L	#	84
81) toluene	13.41	91	30476	2.18	ug/L		98
82) 3-methyl-1-butanol	13.15	55	13479	44.16	ug/L		96
83) trans-1,3-dichloropropene	13.63	75	12363	2.38	ug/L		94
84) ethyl methacrylate	13.61	69	12366	2.68	ug/L		93
85) 1,1,2-trichloroethane	13.86	83	6827	2.56	ug/L		85
86) 2-hexanone	14.03	58	4825	2.84	ug/L		98
88) tetrachloroethene	14.03	166	7776	1.77	ug/L		85
90) 1,3-dichloropropane	14.06	76	12391	2.11	ug/L		98
91) butyl acetate	14.10	56	7873	2.59	ug/L		89
92) 3,3-dimethyl-1-butanol	14.22	57	14478	16.12	ug/L		96
93) dibromochloromethane	14.34	129	8888	1.93	ug/L		96
94) 1,2-dibromoethane	14.50	107	8236	2.05	ug/L		97
95) chlorobenzene	14.99	112	20226	1.93	ug/L		87
96) 1,1,1,2-tetrachloroethane	15.05	131	7547	1.54	ug/L		93
97) ethylbenzene	15.04	91	36231	1.81	ug/L		98
98) m,p-xylene	15.15	106	27485	3.75	ug/L		95
99) o-xylene	15.60	91	30538	1.76	ug/L		99
100) styrene	15.62	104	24342	2.01	ug/L		95
101) bromoform	15.91	173	7017	1.89	ug/L		99

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149331.D
Acq On : 15 Mar 2016 5:20 pm
Operator : tracyk
Sample : ic6446-2
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 16 08:32:55 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
103) isopropylbenzene	15.96	105	35966	2.10 ug/L	95
105) cyclohexanone	16.17	98	2888	21.81 ug/L	94
106) bromobenzene	16.40	156	10125	2.25 ug/L	96
107) 1,1,2,2-tetrachloroethane	16.30	83	13551	2.40 ug/L	98
108) trans-1,4-dichloro-2-buten	16.35	53	3183	2.73 ug/L	81
109) 1,2,3-trichloropropane	16.38	110	3693	2.31 ug/L	88
110) n-propylbenzene	16.40	91	43671	2.05 ug/L	98
111) 2-chlorotoluene	16.57	126	9460	2.15 ug/L	91
112) 4-chlorotoluene	16.67	91	29187	2.31 ug/L	96
113) 1,3,5-trimethylbenzene	16.55	105	31135	1.97 ug/L	96
114) tert-butylbenzene	16.93	134	6160	2.06 ug/L	93
115) pentachloroethane	17.03	167	5774	1.89 ug/L	96
116) 1,2,4-trimethylbenzene	16.98	105	31850	1.91 ug/L	99
117) sec-butylbenzene	17.16	105	40797	1.99 ug/L	99
118) 1,3-dichlorobenzene	17.38	146	18734	2.01 ug/L	97
119) p-isopropyltoluene	17.29	119	33065	1.81 ug/L	96
120) 1,4-dichlorobenzene	17.47	146	18531	1.92 ug/L	96
121) 1,2-dichlorobenzene	17.90	146	18066	1.82 ug/L	99
122) benzyl chloride	17.59	91	25900	2.04 ug/L	98
123) n-butylbenzene	17.73	92	17723	1.76 ug/L	94
124) 1,2-dibromo-3-chloropropan	18.75	75	3361	1.80 ug/L	92
125) 1,3,5-TRICHLOROBENZENE	18.94	180	13715	1.40 ug/L	96
126) 1,2,4-trichlorobenzene	19.64	180	12013	1.33 ug/L	91
127) hexachlorobutadiene	19.75	225	6183	1.50 ug/L	97
128) naphthalene	19.95	128	32825	1.24 ug/L	98
129) 1,2,3-trichlorobenzene	20.22	180	10822	1.33 ug/L	95
130) hexachloroethane	18.18	201	5303	1.68 ug/L	93

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

7.7.4

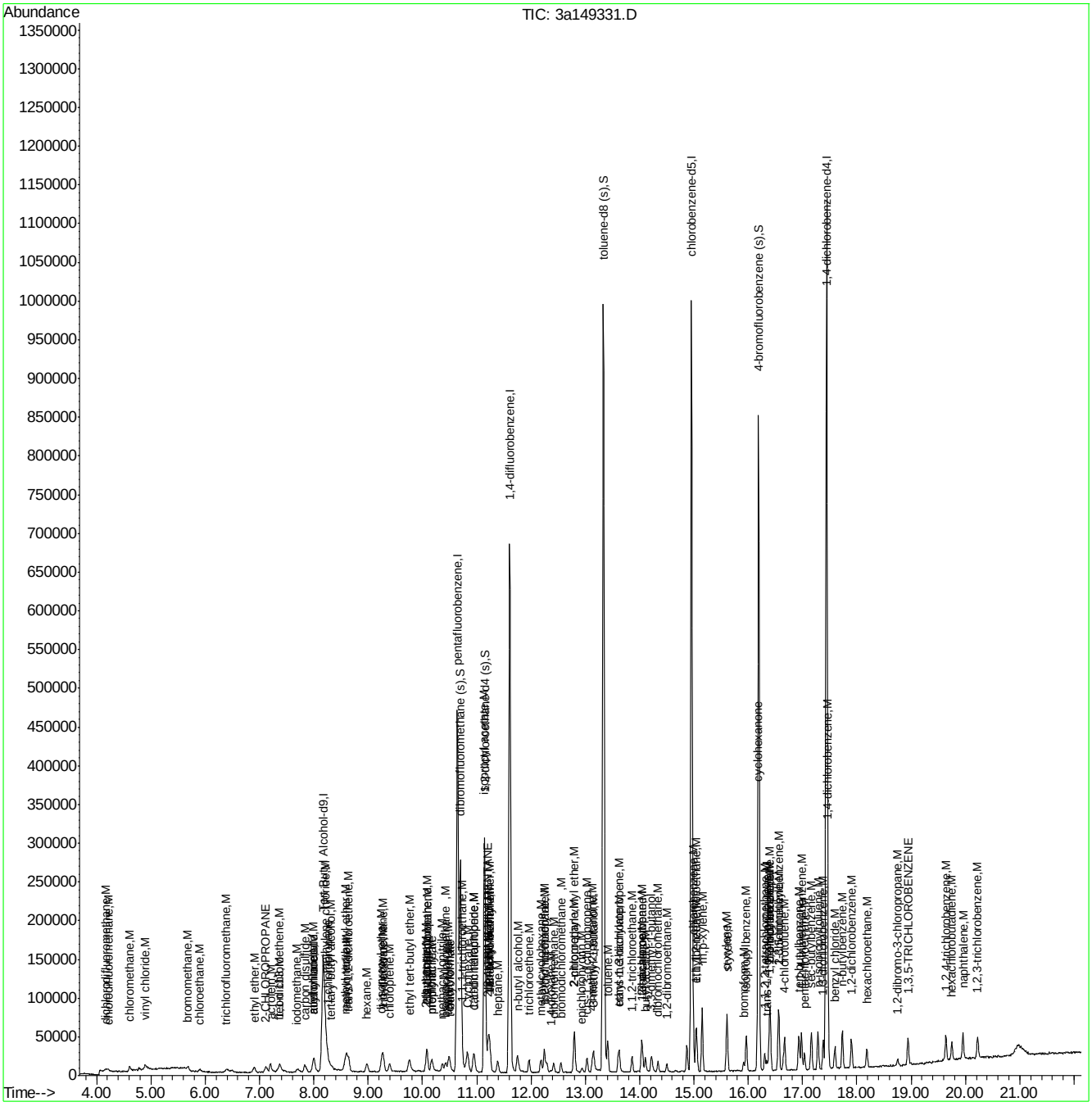
7

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149331.D
Acq On : 15 Mar 2016 5:20 pm
Operator : tracyk
Sample : ic6446-2
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 16 08:32:55 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149332.D
Acq On : 15 Mar 2016 5:50 pm
Operator : tracyk
Sample : ic6446-5
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 16 08:24:04 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	403058	500.00	ug/L	0.00
5) pentafluorobenzene	10.65	168	416460	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	664915	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	651627	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	355290	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	201926	43.02	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 86.04%			
50) 1,2-dichloroethane-d4 (s)	11.15	65	247176	42.95	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 85.90%			
79) toluene-d8 (s)	13.33	98	780830	53.01	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 106.02%			
104) 4-bromofluorobenzene (s)	16.19	95	350334	62.90	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 125.80%#			

Target Compounds

						Qvalue
2) tertiary butyl alcohol	8.30	59	17286	23.70	ug/L	89
4) 1,4-dioxane	12.37	88	6004	146.69	ug/L	91
8) chlorodifluoromethane	4.20	51	9322	3.14	ug/L	100
9) dichlorodifluoromethane	4.16	85	19193	3.61	ug/L	99
10) chloromethane	4.61	50	26542	3.61	ug/L	99
11) vinyl chloride	4.89	62	23770	3.04	ug/L	97
12) bromomethane	5.68	96	13940	4.22	ug/L	94
15) 2-CHLOROPROPANE	7.12	43	28309	3.83	ug/L #	93
16) chloroethane	5.90	64	13612	4.48	ug/L	98
17) trichlorofluoromethane	6.41	101	21138	3.32	ug/L	97
19) 1-chloropropane	8.26	41	12959	3.33	ug/L #	95
20) ethyl ether	6.90	74	10327	4.55	ug/L	97
21) acrolein	7.20	56	38102	33.23	ug/L	99
22) 1,1-dichloroethene	7.38	61	24730	4.09	ug/L	99
23) acetone	7.46	58	2238	4.44	ug/L #	62
24) allyl chloride	7.99	76	10509	4.37	ug/L #	88
25) acetonitrile	7.97	40	20769	43.72	ug/L #	52
26) iodomethane	7.69	142	26569	4.11	ug/L	99
27) iso-butyl alcohol	11.22	74	5824	45.06	ug/L #	62
28) carbon disulfide	7.83	76	53294	4.07	ug/L	97
29) methylene chloride	8.22	84	18464	4.33	ug/L	89
30) methyl acetate	8.00	43	22991	5.06	ug/L	97
31) methyl tert butyl ether	8.58	73	56086	4.23	ug/L	97
32) trans-1,2-dichloroethene	8.64	61	24312	4.09	ug/L	97
33) di-isopropyl ether	9.25	45	60637	4.70	ug/L	92
34) 2-butanone	10.05	72	4072	6.86	ug/L #	20
35) 1,1-dichloroethane	9.28	63	31684	4.31	ug/L	99
36) chloroprene	9.39	53	23204	4.11	ug/L	97
37) acrylonitrile	8.61	53	53091	24.04	ug/L	98
38) vinyl acetate	9.27	86	3396	4.44	ug/L	76
39) ethyl tert-butyl ether	9.76	59	55287	4.35	ug/L	95
40) ethyl acetate	10.08	45	3846	5.73	ug/L #	41
41) 2,2-dichloropropane	10.08	77	16946	3.10	ug/L	97

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149332.D
Acq On : 15 Mar 2016 5:50 pm
Operator : tracyk
Sample : ic6446-5
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 16 08:24:04 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) cis-1,2-dichloroethene	10.09	96	19896	4.27	ug/L		96
43) methylacrylate	10.15	85	3657	5.44	ug/L		66
44) propionitrile	10.17	54	44514	49.56	ug/L		88
45) bromochloromethane	10.43	128	9065	4.25	ug/L		92
46) tetrahydrofuran	10.46	42	10823	5.33	ug/L		93
47) chloroform	10.49	85	19822	4.24	ug/L		96
48) t-butyl formate	10.51	59	17672	4.26	ug/L		98
51) freon 113	7.34	151	9416	3.59	ug/L		97
52) methacrylonitrile	10.36	67	11127	5.61	ug/L		87
53) 1,1,1-trichloroethane	10.74	97	23176	3.89	ug/L		99
54) Cyclohexane	10.82	84	22731	4.09	ug/L		97
56) epichlorohydrin	12.93	57	16619	30.78	ug/L		97
57) n-butyl alcohol	11.74	56	48528	264.74	ug/L		96
58) carbon tetrachloride	10.95	117	21806	3.78	ug/L		96
59) 1,1-dichloropropene	10.94	75	22362	4.30	ug/L		100
61) hexane	8.98	57	18733	4.34	ug/L		99
62) 2,2,4-TRIMETHYLPENTANE	11.20	57	52472	4.15	ug/L	#	95
63) benzene	11.21	78	71411	4.63	ug/L		100
64) tert-amyl methyl ether	11.24	87	11658	4.13	ug/L		93
65) heptane	11.39	57	11400	5.07	ug/L		94
66) isopropyl acetate	11.14	87	4567	5.12	ug/L	#	74
67) 1,2-dichloroethane	11.24	62	24577	4.02	ug/L		97
69) trichloroethene	11.96	95	17858	4.58	ug/L		95
71) methyl methacrylate	12.24	100	5785	6.40	ug/L		95
72) 2-nitropropane	12.79	41	10694	4.76	ug/L		99
73) 2-chloroethyl vinyl ether	12.80	63	68991	30.89	ug/L		98
74) 1,2-dichloropropane	12.25	63	19231	5.02	ug/L		97
75) dibromomethane	12.41	93	12550	4.65	ug/L		94
76) methylcyclohexane	12.18	83	22505	3.88	ug/L		97
77) bromodichloromethane	12.55	83	25409	4.61	ug/L		97
78) cis-1,3-dichloropropene	13.03	75	31967	5.73	ug/L		95
80) 4-methyl-2-pentanone	13.13	58	12192	5.83	ug/L		95
81) toluene	13.41	91	74958	5.38	ug/L		98
82) 3-methyl-1-butanol	13.15	55	33007	108.35	ug/L		94
83) trans-1,3-dichloropropene	13.63	75	31375	6.06	ug/L		99
84) ethyl methacrylate	13.61	69	31038	6.73	ug/L		96
85) 1,1,2-trichloroethane	13.86	83	16308	6.14	ug/L		99
86) 2-hexanone	14.03	58	12531	7.40	ug/L		98
88) tetrachloroethene	14.03	166	18702	4.27	ug/L		96
90) 1,3-dichloropropane	14.05	76	31405	5.36	ug/L		98
91) butyl acetate	14.10	56	18513	6.12	ug/L		99
92) 3,3-dimethyl-1-butanol	14.21	57	34323	38.40	ug/L		97
93) dibromochloromethane	14.34	129	21476	4.68	ug/L		97
94) 1,2-dibromoethane	14.50	107	20709	5.18	ug/L		99
95) chlorobenzene	14.99	112	49950	4.79	ug/L		96
96) 1,1,1,2-tetrachloroethane	15.05	131	18917	3.87	ug/L		95
97) ethylbenzene	15.04	91	89727	4.51	ug/L		98
98) m,p-xylene	15.15	106	67254	9.22	ug/L		93
99) o-xylene	15.60	91	74964	4.34	ug/L		98
100) styrene	15.61	104	60730	5.04	ug/L		95

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149332.D
Acq On : 15 Mar 2016 5:50 pm
Operator : tracyk
Sample : ic6446-5
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 16 08:24:04 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
101) bromoform	15.91	173	18435	4.99	ug/L	94
103) isopropylbenzene	15.96	105	89932	5.10	ug/L	99
105) cyclohexanone	16.17	98	6711	49.16	ug/L	95
106) bromobenzene	16.40	156	24794	5.35	ug/L	97
107) 1,1,2,2-tetrachloroethane	16.30	83	33145	5.70	ug/L	96
108) trans-1,4-dichloro-2-buten	16.34	53	8705	7.24	ug/L	93
109) 1,2,3-trichloropropane	16.38	110	9053	5.50	ug/L	95
110) n-propylbenzene	16.40	91	110654	5.03	ug/L	98
111) 2-chlorotoluene	16.57	126	22988	5.07	ug/L	97
112) 4-chlorotoluene	16.67	91	72521	5.56	ug/L	100
113) 1,3,5-trimethylbenzene	16.56	105	78864	4.83	ug/L	97
114) tert-butylbenzene	16.93	134	14534	4.72	ug/L	91
115) pentachloroethane	17.03	167	14555	4.62	ug/L	94
116) 1,2,4-trimethylbenzene	16.98	105	81726	4.75	ug/L	98
117) sec-butylbenzene	17.16	105	99331	4.71	ug/L	99
118) 1,3-dichlorobenzene	17.38	146	47395	4.93	ug/L	98
119) p-isopropyltoluene	17.29	119	83679	4.45	ug/L	99
120) 1,4-dichlorobenzene	17.47	146	47181	4.73	ug/L	99
121) 1,2-dichlorobenzene	17.90	146	45045	4.40	ug/L	99
122) benzyl chloride	17.59	91	64998	4.97	ug/L	99
123) n-butylbenzene	17.74	92	44399	4.28	ug/L	96
124) 1,2-dibromo-3-chloropropan	18.75	75	7552	3.93	ug/L	94
125) 1,3,5-TRICHLOROBENZENE	18.94	180	34215	3.39	ug/L	98
126) 1,2,4-trichlorobenzene	19.64	180	29961	3.22	ug/L	94
127) hexachlorobutadiene	19.75	225	14773	3.47	ug/L	95
128) naphthalene	19.95	128	85941	3.15	ug/L	98
129) 1,2,3-trichlorobenzene	20.22	180	27265	3.26	ug/L	94
130) hexachloroethane	18.18	201	13359	4.12	ug/L	96

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

7.7.5

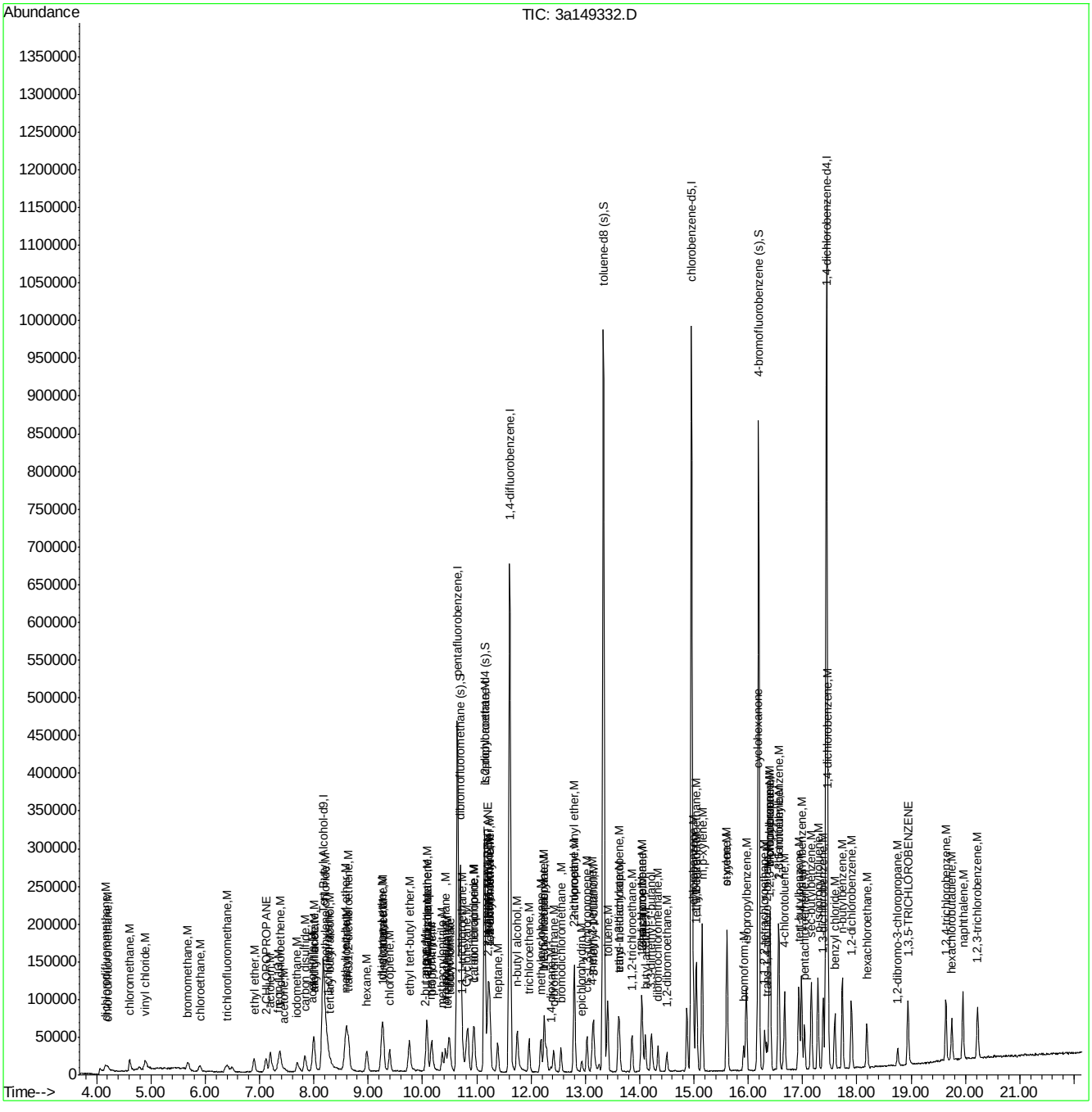
7

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149332.D
Acq On : 15 Mar 2016 5:50 pm
Operator : tracyk
Sample : ic6446-5
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 16 08:24:04 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149333.D
Acq On : 15 Mar 2016 6:20 pm
Operator : tracyk
Sample : ic6446-10
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 16 08:25:06 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	360897	500.00	ug/L	-0.01
5) pentafluorobenzene	10.64	168	403384	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	650342	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	639242	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	338480	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	196958	43.32	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 86.64%			
50) 1,2-dichloroethane-d4 (s)	11.15	65	241814	43.38	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 86.76%			
79) toluene-d8 (s)	13.33	98	763077	52.97	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 105.94%			
104) 4-bromofluorobenzene (s)	16.19	95	338771	63.85	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 127.70%#			

Target Compounds

						Qvalue
2) tertiary butyl alcohol	8.31	59	30625	46.89	ug/L	90
4) 1,4-dioxane	12.37	88	10813	295.04	ug/L	96
8) chlorodifluoromethane	4.21	51	19937	6.93	ug/L	95
9) dichlorodifluoromethane	4.16	85	39976	7.77	ug/L	97
10) chloromethane	4.61	50	53530	7.51	ug/L	98
11) vinyl chloride	4.90	62	49434	6.54	ug/L	97
12) bromomethane	5.68	96	25579	7.99	ug/L	95
15) 2-CHLOROPROPANE	7.12	43	53941	7.53	ug/L	99
16) chloroethane	5.90	64	27527	9.36	ug/L	97
17) trichlorofluoromethane	6.40	101	46898	7.60	ug/L	96
19) 1-chloropropane	8.26	41	28118	7.46	ug/L #	97
20) ethyl ether	6.89	74	21208	9.65	ug/L	99
21) acrolein	7.20	56	82021	73.84	ug/L	97
22) 1,1-dichloroethene	7.38	61	51067	8.73	ug/L	98
23) acetone	7.45	58	4033	8.25	ug/L	97
24) allyl chloride	8.00	76	21057	9.04	ug/L #	87
25) acetonitrile	7.97	40	35177	76.45	ug/L #	58
26) iodomethane	7.70	142	52994	8.47	ug/L	99
27) iso-butyl alcohol	11.22	74	11692	93.39	ug/L #	78
28) carbon disulfide	7.83	76	106874	8.43	ug/L	99
29) methylene chloride	8.22	84	35566	8.60	ug/L	97
30) methyl acetate	7.99	43	42242	9.59	ug/L	99
31) methyl tert butyl ether	8.58	73	115911	9.03	ug/L	96
32) trans-1,2-dichloroethene	8.64	61	48810	8.47	ug/L	96
33) di-isopropyl ether	9.25	45	121675	9.74	ug/L	93
34) 2-butanone	10.06	72	7456	12.96	ug/L	97
35) 1,1-dichloroethane	9.28	63	63920	8.98	ug/L	95
36) chloroprene	9.39	53	48875	8.94	ug/L	97
37) acrylonitrile	8.61	53	105767	49.45	ug/L	98
38) vinyl acetate	9.27	86	7645	10.31	ug/L	89
39) ethyl tert-butyl ether	9.76	59	111437	9.05	ug/L	99
40) ethyl acetate	10.08	45	7937	12.21	ug/L	71
41) 2,2-dichloropropane	10.08	77	32323	6.10	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149333.D
Acq On : 15 Mar 2016 6:20 pm
Operator : tracyk
Sample : ic6446-10
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 16 08:25:06 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) cis-1,2-dichloroethene	10.09	96	39912	8.84	ug/L		98
43) methylacrylate	10.16	85	7379	11.33	ug/L	#	67
44) propionitrile	10.18	54	88454	101.67	ug/L		98
45) bromochloromethane	10.43	128	18303	8.87	ug/L		93
46) tetrahydrofuran	10.46	42	21814	11.09	ug/L		95
47) chloroform	10.49	85	39942	8.82	ug/L		94
48) t-butyl formate	10.51	59	37789	9.40	ug/L		98
51) freon 113	7.34	151	20019	7.89	ug/L		88
52) methacrylonitrile	10.36	67	22026	11.47	ug/L		93
53) 1,1,1-trichloroethane	10.74	97	47060	8.15	ug/L		95
54) Cyclohexane	10.82	84	46608	8.65	ug/L		94
56) epichlorohydrin	12.93	57	32239	61.05	ug/L		97
57) n-butyl alcohol	11.74	56	92553	516.22	ug/L		100
58) carbon tetrachloride	10.96	117	44011	7.81	ug/L		96
59) 1,1-dichloropropene	10.94	75	44980	8.85	ug/L		98
61) hexane	8.98	57	40546	9.61	ug/L		98
62) 2,2,4-TRIMETHYLPENTANE	11.20	57	115846	9.37	ug/L		98
63) benzene	11.21	78	142206	9.44	ug/L		99
64) tert-amyl methyl ether	11.24	87	24667	8.93	ug/L		93
65) heptane	11.38	57	24159	10.99	ug/L		98
66) isopropyl acetate	11.14	87	9532	10.92	ug/L	#	80
67) 1,2-dichloroethane	11.23	62	48245	8.07	ug/L		99
69) trichloroethene	11.96	95	35651	9.36	ug/L		98
71) methyl methacrylate	12.24	100	12670	14.34	ug/L	#	84
72) 2-nitropropane	12.79	41	20964	9.55	ug/L		99
73) 2-chloroethyl vinyl ether	12.80	63	142670	65.32	ug/L		100
74) 1,2-dichloropropane	12.24	63	38108	10.18	ug/L		96
75) dibromomethane	12.41	93	24866	9.42	ug/L		98
76) methylcyclohexane	12.18	83	51559	9.09	ug/L		97
77) bromodichloromethane	12.55	83	51983	9.65	ug/L		95
78) cis-1,3-dichloropropene	13.03	75	64072	11.73	ug/L		97
80) 4-methyl-2-pentanone	13.13	58	23982	11.73	ug/L		90
81) toluene	13.41	91	152451	11.19	ug/L		98
82) 3-methyl-1-butanol	13.15	55	62520	209.82	ug/L		99
83) trans-1,3-dichloropropene	13.63	75	62020	12.26	ug/L		99
84) ethyl methacrylate	13.60	69	61551	13.64	ug/L		97
85) 1,1,2-trichloroethane	13.86	83	32207	12.39	ug/L		99
86) 2-hexanone	14.03	58	24879	15.01	ug/L		97
88) tetrachloroethene	14.03	166	37932	8.83	ug/L		96
90) 1,3-dichloropropane	14.05	76	62380	10.85	ug/L		99
91) butyl acetate	14.10	56	36400	12.26	ug/L		100
92) 3,3-dimethyl-1-butanol	14.22	57	67184	76.62	ug/L		99
93) dibromochloromethane	14.34	129	43795	9.72	ug/L		95
94) 1,2-dibromoethane	14.50	107	42139	10.75	ug/L		99
95) chlorobenzene	14.99	112	102830	10.06	ug/L		98
96) 1,1,1,2-tetrachloroethane	15.05	131	38437	8.02	ug/L		99
97) ethylbenzene	15.04	91	181946	9.31	ug/L		97
98) m,p-xylene	15.15	106	136935	19.14	ug/L		98
99) o-xylene	15.60	91	152159	8.99	ug/L		99
100) styrene	15.61	104	122157	10.34	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149333.D
Acq On : 15 Mar 2016 6:20 pm
Operator : tracyk
Sample : ic6446-10
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 16 08:25:06 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
101) bromoform	15.91	173	36333	10.02 ug/L	98
103) isopropylbenzene	15.96	105	183529	10.92 ug/L	100
105) cyclohexanone	16.17	98	12248	94.18 ug/L	95
106) bromobenzene	16.40	156	49847	11.30 ug/L	97
107) 1,1,2,2-tetrachloroethane	16.30	83	66621	12.02 ug/L	99
108) trans-1,4-dichloro-2-buten	16.34	53	18585	16.22 ug/L	91
109) 1,2,3-trichloropropane	16.38	110	17914	11.42 ug/L	93
110) n-propylbenzene	16.40	91	225436	10.76 ug/L	99
111) 2-chlorotoluene	16.57	126	45860	10.61 ug/L	97
112) 4-chlorotoluene	16.67	91	145262	11.69 ug/L	96
113) 1,3,5-trimethylbenzene	16.55	105	158674	10.21 ug/L	99
114) tert-butylbenzene	16.93	134	30117	10.26 ug/L	97
115) pentachloroethane	17.03	167	29338	9.78 ug/L	95
116) 1,2,4-trimethylbenzene	16.98	105	166595	10.17 ug/L	100
117) sec-butylbenzene	17.16	105	206154	10.26 ug/L	98
118) 1,3-dichlorobenzene	17.38	146	94949	10.37 ug/L	98
119) p-isopropyltoluene	17.29	119	171418	9.56 ug/L	99
120) 1,4-dichlorobenzene	17.47	146	94806	9.98 ug/L	98
121) 1,2-dichlorobenzene	17.90	146	91911	9.42 ug/L	99
122) benzyl chloride	17.59	91	131678	10.57 ug/L	96
123) n-butylbenzene	17.73	92	93363	9.44 ug/L	98
124) 1,2-dibromo-3-chloropropan	18.75	75	14227	7.77 ug/L	95
125) 1,3,5-TRICHLOROBENZENE	18.94	180	69919	7.28 ug/L	96
126) 1,2,4-trichlorobenzene	19.64	180	60661	6.84 ug/L	97
127) hexachlorobutadiene	19.75	225	30110	7.43 ug/L	97
128) naphthalene	19.95	128	180880	6.97 ug/L	99
129) 1,2,3-trichlorobenzene	20.22	180	55599	6.97 ug/L	97
130) hexachloroethane	18.19	201	27653	8.94 ug/L	97

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

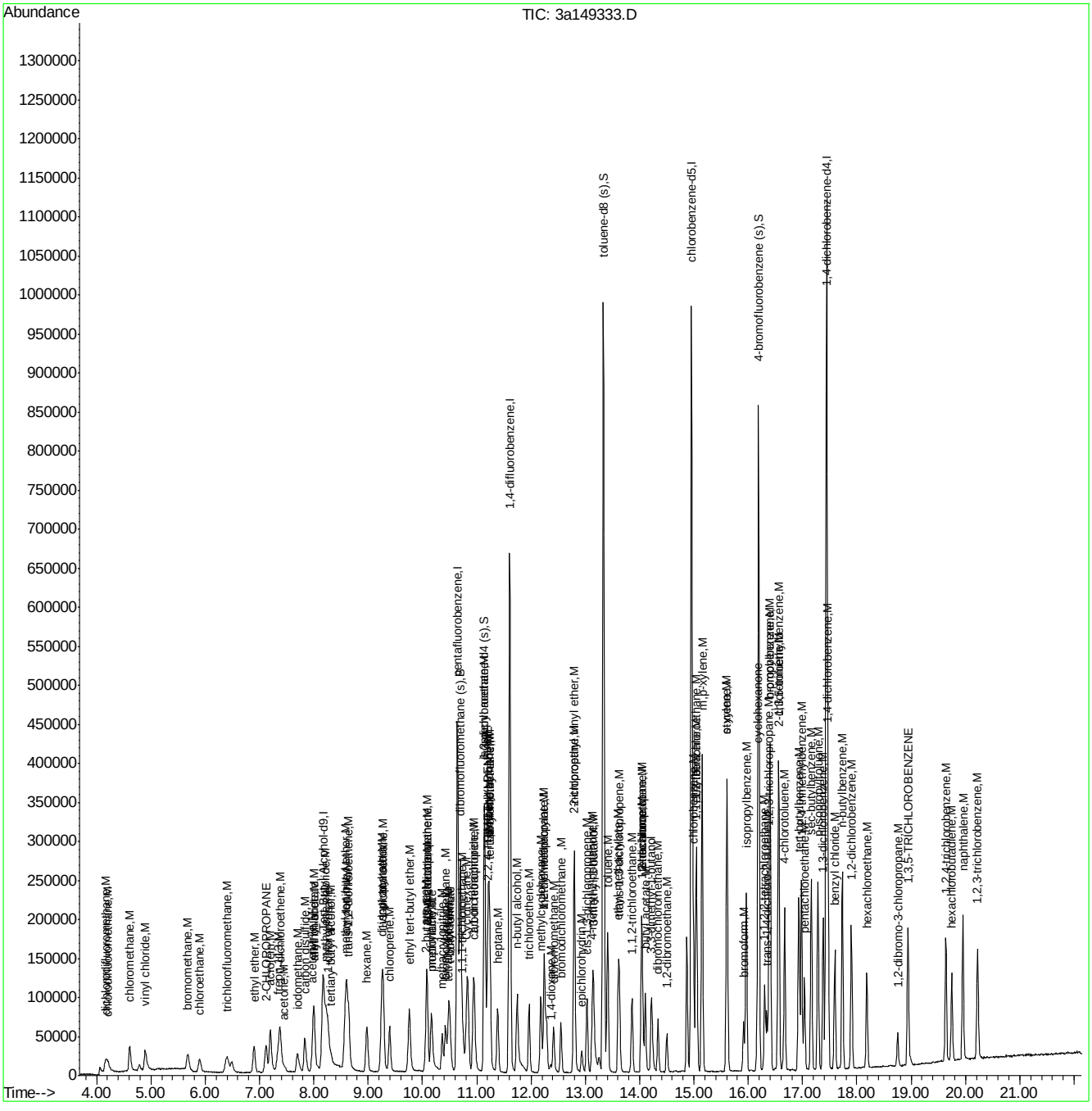
7.7.6

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149333.D
Acq On : 15 Mar 2016 6:20 pm
Operator : tracyk
Sample : ic6446-10
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 16 08:25:06 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration



M3A6446.M Wed Mar 16 11:21:45 2016 ACCUNJ Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149334.D
Acq On : 15 Mar 2016 6:50 pm
Operator : tracyk
Sample : ic6446-20
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 16 08:25:53 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.18	65	411142	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	405459	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	656202	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	648201	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	346538	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	194179	42.49	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 84.98%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	237798	42.45	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 84.90%			
79) toluene-d8 (s)	13.33	98	768549	52.87	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 105.74%			
104) 4-bromofluorobenzene (s)	16.19	95	346742	63.83	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 127.66%#			

Target Compounds

						Qvalue
2) tertiary butyl alcohol	8.30	59	77482	104.14	ug/L	98
4) 1,4-dioxane	12.36	88	28267	677.04	ug/L	97
8) chlorodifluoromethane	4.21	51	39883	13.80	ug/L	94
9) dichlorodifluoromethane	4.17	85	79989	15.46	ug/L	99
10) chloromethane	4.61	50	103749	14.49	ug/L	97
11) vinyl chloride	4.90	62	97770	12.86	ug/L	98
12) bromomethane	5.68	96	49152	15.27	ug/L	99
15) 2-CHLOROPROPANE	7.11	43	101910	14.16	ug/L	99
16) chloroethane	5.90	64	54791	18.53	ug/L	97
17) trichlorofluoromethane	6.41	101	93843	15.12	ug/L	100
19) 1-chloropropane	8.25	41	63378	16.72	ug/L	98
20) ethyl ether	6.89	74	42430	19.21	ug/L	99
21) acrolein	7.19	56	170001	152.27	ug/L	99
22) 1,1-dichloroethene	7.38	61	95500	16.24	ug/L	98
23) acetone	7.45	58	10071	20.51	ug/L	87
24) allyl chloride	8.00	76	40185	17.17	ug/L #	86
25) acetonitrile	7.98	40	91398	197.62	ug/L	94
26) iodomethane	7.69	142	105633	16.80	ug/L	98
27) iso-butyl alcohol	11.22	74	22615	179.71	ug/L #	87
28) carbon disulfide	7.83	76	204088	16.02	ug/L	99
29) methylene chloride	8.22	84	68936	16.59	ug/L	99
30) methyl acetate	7.99	43	91321	20.62	ug/L	99
31) methyl tert butyl ether	8.57	73	227369	17.63	ug/L	98
32) trans-1,2-dichloroethene	8.64	61	93819	16.20	ug/L	98
33) di-isopropyl ether	9.25	45	245418	19.54	ug/L	96
34) 2-butanone	10.05	72	13698	23.69	ug/L #	53
35) 1,1-dichloroethane	9.28	63	123445	17.25	ug/L	98
36) chloroprene	9.39	53	96533	17.56	ug/L	98
37) acrylonitrile	8.60	53	213143	99.15	ug/L	99
38) vinyl acetate	9.27	86	15771	21.16	ug/L	78
39) ethyl tert-butyl ether	9.76	59	227737	18.40	ug/L	97
40) ethyl acetate	10.08	45	16219	24.82	ug/L	74
41) 2,2-dichloropropane	10.08	77	60598	11.38	ug/L	99

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149334.D
Acq On : 15 Mar 2016 6:50 pm
Operator : tracyk
Sample : ic6446-20
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 16 08:25:53 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) cis-1,2-dichloroethene	10.08	96	77533	17.08	ug/L		98
43) methylacrylate	10.16	85	16087	24.58	ug/L	#	63
44) propionitrile	10.17	54	185037	211.60	ug/L		90
45) bromochloromethane	10.43	128	36134	17.42	ug/L		91
46) tetrahydrofuran	10.46	42	43064	21.77	ug/L		97
47) chloroform	10.49	85	77479	17.02	ug/L		96
48) t-butyl formate	10.51	59	78014	19.30	ug/L		96
51) freon 113	7.36	151	39626	15.53	ug/L		97
52) methacrylonitrile	10.36	67	44104	22.85	ug/L		99
53) 1,1,1-trichloroethane	10.74	97	88817	15.31	ug/L		98
54) Cyclohexane	10.82	84	84209	15.55	ug/L		96
56) epichlorohydrin	12.93	57	69852	131.09	ug/L		98
57) n-butyl alcohol	11.74	56	221747	1225.77	ug/L		99
58) carbon tetrachloride	10.96	117	82377	14.48	ug/L		98
59) 1,1-dichloropropene	10.93	75	86971	16.96	ug/L		97
61) hexane	8.98	57	78187	18.37	ug/L		95
62) 2,2,4-TRIMETHYLPENTANE	11.20	57	226007	18.11	ug/L		99
63) benzene	11.21	78	278981	18.35	ug/L		99
64) tert-amyl methyl ether	11.24	87	48175	17.29	ug/L		98
65) heptane	11.38	57	46239	20.85	ug/L		98
66) isopropyl acetate	11.14	87	19953	22.65	ug/L	#	88
67) 1,2-dichloroethane	11.24	62	96379	15.99	ug/L		99
69) trichloroethene	11.96	95	70137	18.24	ug/L		98
71) methyl methacrylate	12.24	100	25541	28.65	ug/L		99
72) 2-nitropropane	12.79	41	41773	18.86	ug/L		95
73) 2-chloroethyl vinyl ether	12.80	63	296502	134.53	ug/L		98
74) 1,2-dichloropropane	12.24	63	75632	20.02	ug/L		96
75) dibromomethane	12.41	93	49316	18.52	ug/L		99
76) methylcyclohexane	12.18	83	99497	17.39	ug/L		99
77) bromodichloromethane	12.55	83	101291	18.64	ug/L		99
78) cis-1,3-dichloropropene	13.03	75	127640	23.17	ug/L		97
80) 4-methyl-2-pentanone	13.13	58	48781	23.65	ug/L		95
81) toluene	13.41	91	303215	22.06	ug/L		99
82) 3-methyl-1-butanol	13.15	55	143521	477.36	ug/L		99
83) trans-1,3-dichloropropene	13.63	75	124608	24.40	ug/L		99
84) ethyl methacrylate	13.60	69	128406	28.20	ug/L		98
85) 1,1,2-trichloroethane	13.86	83	64611	24.63	ug/L		99
86) 2-hexanone	14.03	58	49505	29.60	ug/L		99
88) tetrachloroethene	14.03	166	72683	16.69	ug/L		97
90) 1,3-dichloropropane	14.05	76	124472	21.36	ug/L		100
91) butyl acetate	14.10	56	78620	26.12	ug/L		97
92) 3,3-dimethyl-1-butanol	14.21	57	150554	169.32	ug/L		99
93) dibromochloromethane	14.34	129	87792	19.22	ug/L		97
94) 1,2-dibromoethane	14.50	107	84912	21.36	ug/L		99
95) chlorobenzene	14.99	112	200874	19.38	ug/L		99
96) 1,1,1,2-tetrachloroethane	15.05	131	75754	15.58	ug/L		98
97) ethylbenzene	15.04	91	358310	18.09	ug/L		99
98) m,p-xylene	15.15	106	272564	37.58	ug/L		99
99) o-xylene	15.60	91	300547	17.51	ug/L		99
100) styrene	15.61	104	245568	20.49	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149334.D
Acq On : 15 Mar 2016 6:50 pm
Operator : tracyk
Sample : ic6446-20
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 16 08:25:53 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
101) bromoform	15.91	173	74269	20.21 ug/L	99
103) isopropylbenzene	15.96	105	361095	20.99 ug/L	100
105) cyclohexanone	16.17	98	23604	177.28 ug/L	94
106) bromobenzene	16.40	156	99574	22.05 ug/L	99
107) 1,1,2,2-tetrachloroethane	16.30	83	136316	24.02 ug/L	100
108) trans-1,4-dichloro-2-buten	16.34	53	36856	31.42 ug/L	96
109) 1,2,3-trichloropropane	16.38	110	36059	22.45 ug/L	98
110) n-propylbenzene	16.40	91	440527	20.54 ug/L	99
111) 2-chlorotoluene	16.57	126	91379	20.65 ug/L	97
112) 4-chlorotoluene	16.67	91	294032	23.12 ug/L	98
113) 1,3,5-trimethylbenzene	16.55	105	319770	20.09 ug/L	98
114) tert-butylbenzene	16.93	134	59361	19.75 ug/L	98
115) pentachloroethane	17.03	167	59294	19.31 ug/L	97
116) 1,2,4-trimethylbenzene	16.98	105	336374	20.05 ug/L	99
117) sec-butylbenzene	17.16	105	397136	19.30 ug/L	99
118) 1,3-dichlorobenzene	17.38	146	190816	20.35 ug/L	98
119) p-isopropyltoluene	17.29	119	340254	18.54 ug/L	100
120) 1,4-dichlorobenzene	17.47	146	191416	19.68 ug/L	99
121) 1,2-dichlorobenzene	17.90	146	187574	18.78 ug/L	99
122) benzyl chloride	17.59	91	275944	21.63 ug/L	100
123) n-butylbenzene	17.73	92	181134	17.90 ug/L	99
124) 1,2-dibromo-3-chloropropan	18.75	75	29318	15.63 ug/L	95
125) 1,3,5-TRICHLOROBENZENE	18.94	180	140833	14.32 ug/L	98
126) 1,2,4-trichlorobenzene	19.64	180	123696	13.61 ug/L	99
127) hexachlorobutadiene	19.75	225	59769	14.41 ug/L	98
128) naphthalene	19.95	128	368404	13.86 ug/L	99
129) 1,2,3-trichlorobenzene	20.23	180	117046	14.34 ug/L	96
130) hexachloroethane	18.18	201	54822	17.32 ug/L	94

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

7.2.7

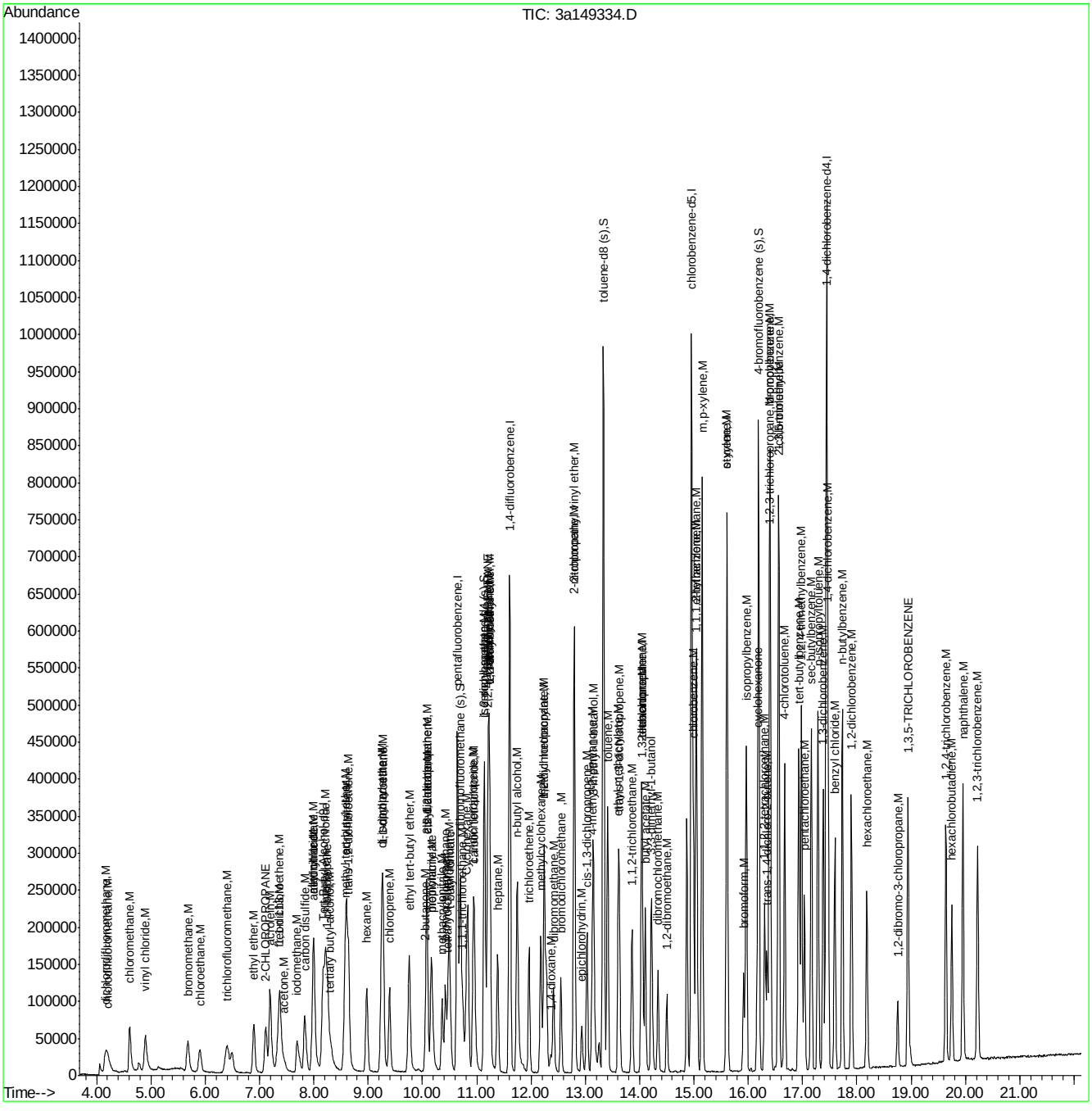
7

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149334.D
Acq On : 15 Mar 2016 6:50 pm
Operator : tracyk
Sample : ic6446-20
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 16 08:25:53 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149335.D
Acq On : 15 Mar 2016 7:21 pm
Operator : tracyk
Sample : icc6446-50
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 16 08:16:41 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.18	65	421416	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	432990	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	697928	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	675081	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	370576	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	204955	41.99	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 83.98%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	249336	41.67	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 83.34%			
79) toluene-d8 (s)	13.33	98	811185	52.47	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 104.94%			
104) 4-bromofluorobenzene (s)	16.19	95	360229	62.01	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 124.02%#			

Target Compounds

						Qvalue
2) tertiary butyl alcohol	8.31	59	178567	234.15	ug/L	100
4) 1,4-dioxane	12.36	88	63210	1477.06	ug/L	100
8) chlorodifluoromethane	4.20	51	101114	32.76	ug/L	100
9) dichlorodifluoromethane	4.16	85	199843	36.17	ug/L	100
10) chloromethane	4.61	50	257874	33.72	ug/L	100
11) vinyl chloride	4.90	62	247341	30.47	ug/L	100
12) bromomethane	5.68	96	117587	34.20	ug/L	99
15) 2-CHLOROPROPANE	7.11	43	253764	33.02	ug/L	100
16) chloroethane	5.90	64	135950	43.05	ug/L	100
17) trichlorofluoromethane	6.40	101	236552	35.70	ug/L	100
19) 1-chloropropane	8.26	41	169902	41.98	ug/L	100
20) ethyl ether	6.90	74	107326	45.50	ug/L	100
21) acrolein	7.20	56	468956	393.33	ug/L	100
22) 1,1-dichloroethene	7.38	61	266132	42.38	ug/L	100
23) acetone	7.46	58	26305	50.16	ug/L	100
24) allyl chloride	8.01	76	108826	43.54	ug/L	99
25) acetonitrile	7.98	40	213995	433.28	ug/L	100
26) iodomethane	7.70	142	274778	40.91	ug/L	100
27) iso-butyl alcohol	11.22	74	57224	425.81	ug/L	100
28) carbon disulfide	7.83	76	547991	40.29	ug/L	100
29) methylene chloride	8.22	84	178559	40.24	ug/L	100
30) methyl acetate	7.99	43	216505	45.79	ug/L	100
31) methyl tert butyl ether	8.58	73	566486	41.12	ug/L	100
32) trans-1,2-dichloroethene	8.64	61	248082	40.11	ug/L	100
33) di-isopropyl ether	9.25	45	619941	46.22	ug/L	100
34) 2-butanone	10.06	72	34505	55.88	ug/L	100
35) 1,1-dichloroethane	9.28	63	315243	41.26	ug/L	100
36) chloroprene	9.39	53	256399	43.68	ug/L	100
37) acrylonitrile	8.60	53	531569	231.54	ug/L	100
38) vinyl acetate	9.27	86	39525	49.66	ug/L	98
39) ethyl tert-butyl ether	9.76	59	574607	43.47	ug/L	100
40) ethyl acetate	10.07	45	40557	58.11	ug/L	100
41) 2,2-dichloropropane	10.08	77	151138	26.58	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149335.D
Acq On : 15 Mar 2016 7:21 pm
Operator : tracyk
Sample : icc6446-50
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 16 08:16:41 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) cis-1,2-dichloroethene	10.09	96	195259	40.27	ug/L	100
43) methylacrylate	10.15	85	39354	56.32	ug/L	100
44) propionitrile	10.18	54	460335	492.95	ug/L	100
45) bromochloromethane	10.42	128	91739	41.41	ug/L	100
46) tetrahydrofuran	10.46	42	100684	47.67	ug/L	100
47) chloroform	10.49	85	199999	41.15	ug/L	100
48) t-butyl formate	10.51	59	189765	43.97	ug/L	100
51) freon 113	7.35	151	105771	38.82	ug/L	100
52) methacrylonitrile	10.36	67	111765	54.23	ug/L	100
53) 1,1,1-trichloroethane	10.74	97	231980	37.45	ug/L	99
54) Cyclohexane	10.82	84	239907	41.50	ug/L	100
56) epichlorohydrin	12.93	57	169419	298.93	ug/L	100
57) n-butyl alcohol	11.74	56	524063	2723.72	ug/L	100
58) carbon tetrachloride	10.96	117	226235	37.40	ug/L	100
59) 1,1-dichloropropene	10.94	75	234121	42.92	ug/L	100
61) hexane	8.98	57	204518	45.19	ug/L	100
62) 2,2,4-TRIMETHYLPENTANE	11.21	57	614008	46.26	ug/L	99
63) benzene	11.21	78	728426	45.04	ug/L	100
64) tert-amyl methyl ether	11.24	87	121711	41.07	ug/L	100
65) heptane	11.39	57	123681	52.44	ug/L	100
66) isopropyl acetate	11.14	87	50106	53.48	ug/L	100
67) 1,2-dichloroethane	11.24	62	246786	38.48	ug/L	100
69) trichloroethene	11.96	95	184099	45.02	ug/L	100
71) methyl methacrylate	12.24	100	65443	69.03	ug/L	98
72) 2-nitropropane	12.79	41	99268	42.14	ug/L	100
73) 2-chloroethyl vinyl ether	12.80	63	740585	315.93	ug/L	100
74) 1,2-dichloropropane	12.24	63	198911	49.51	ug/L	100
75) dibromomethane	12.41	93	126791	44.77	ug/L	100
76) methylcyclohexane	12.18	83	265948	43.70	ug/L	100
77) bromodichloromethane	12.55	83	264023	45.68	ug/L	100
78) cis-1,3-dichloropropene	13.03	75	328148	56.00	ug/L	100
80) 4-methyl-2-pentanone	13.13	58	121874	55.56	ug/L	100
81) toluene	13.41	91	779815	53.34	ug/L	100
82) 3-methyl-1-butanol	13.15	55	339698	1062.31	ug/L	100
83) trans-1,3-dichloropropene	13.63	75	319495	58.83	ug/L	100
84) ethyl methacrylate	13.60	69	326013	67.33	ug/L	100
85) 1,1,2-trichloroethane	13.86	83	167294	59.96	ug/L	100
86) 2-hexanone	14.03	58	123789	69.60	ug/L	100
88) tetrachloroethene	14.03	166	194939	42.97	ug/L	100
90) 1,3-dichloropropane	14.05	76	320668	52.84	ug/L	100
91) butyl acetate	14.10	56	187969	59.96	ug/L	100
92) 3,3-dimethyl-1-butanol	14.22	57	372723	402.50	ug/L	100
93) dibromochloromethane	14.34	129	227004	47.72	ug/L	100
94) 1,2-dibromoethane	14.50	107	214721	51.86	ug/L	100
95) chlorobenzene	14.99	112	515670	47.78	ug/L	100
96) 1,1,1,2-tetrachloroethane	15.05	131	195812	38.68	ug/L	100
97) ethylbenzene	15.04	91	925780	44.88	ug/L	100
98) m,p-xylene	15.15	106	706277	93.50	ug/L	100
99) o-xylene	15.60	91	778439	43.55	ug/L	100
100) styrene	15.61	104	639598	51.25	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149335.D
Acq On : 15 Mar 2016 7:21 pm
Operator : tracyk
Sample : icc6446-50
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 16 08:16:41 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
101) bromoform	15.91	173	192028	50.16	ug/L	100
103) isopropylbenzene	15.96	105	955077	51.91	ug/L	100
105) cyclohexanone	16.17	98	50794	356.74	ug/L	100
106) bromobenzene	16.40	156	253352	52.45	ug/L	100
107) 1,1,2,2-tetrachloroethane	16.30	83	341970	56.35	ug/L	100
108) trans-1,4-dichloro-2-buten	16.34	53	96446	76.90	ug/L	100
109) 1,2,3-trichloropropane	16.38	110	89779	52.27	ug/L	100
110) n-propylbenzene	16.40	91	1139212	49.67	ug/L	100
111) 2-chlorotoluene	16.57	126	234257	49.50	ug/L	100
112) 4-chlorotoluene	16.67	91	739522	54.38	ug/L	100
113) 1,3,5-trimethylbenzene	16.55	105	829677	48.74	ug/L	100
114) tert-butylbenzene	16.93	134	157072	48.88	ug/L	100
115) pentachloroethane	17.03	167	150256	45.75	ug/L	100
116) 1,2,4-trimethylbenzene	16.98	105	853421	47.57	ug/L	100
117) sec-butylbenzene	17.16	105	1057750	48.07	ug/L	100
118) 1,3-dichlorobenzene	17.38	146	498142	49.69	ug/L	100
119) p-isopropyltoluene	17.29	119	888564	45.28	ug/L	100
120) 1,4-dichlorobenzene	17.47	146	492535	47.35	ug/L	100
121) 1,2-dichlorobenzene	17.90	146	476862	44.64	ug/L	100
122) benzyl chloride	17.59	91	672572	49.31	ug/L	100
123) n-butylbenzene	17.73	92	478085	44.17	ug/L	100
124) 1,2-dibromo-3-chloropropan	18.75	75	70081	34.94	ug/L	100
125) 1,3,5-TRICHLOROBENZENE	18.94	180	355428	33.80	ug/L	100
126) 1,2,4-trichlorobenzene	19.64	180	314998	32.42	ug/L	100
127) hexachlorobutadiene	19.75	225	151177	34.08	ug/L	100
128) naphthalene	19.95	128	905116	31.84	ug/L	100
129) 1,2,3-trichlorobenzene	20.22	180	281532	32.25	ug/L	100
130) hexachloroethane	18.18	201	143541	42.41	ug/L	100

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

7.7.8

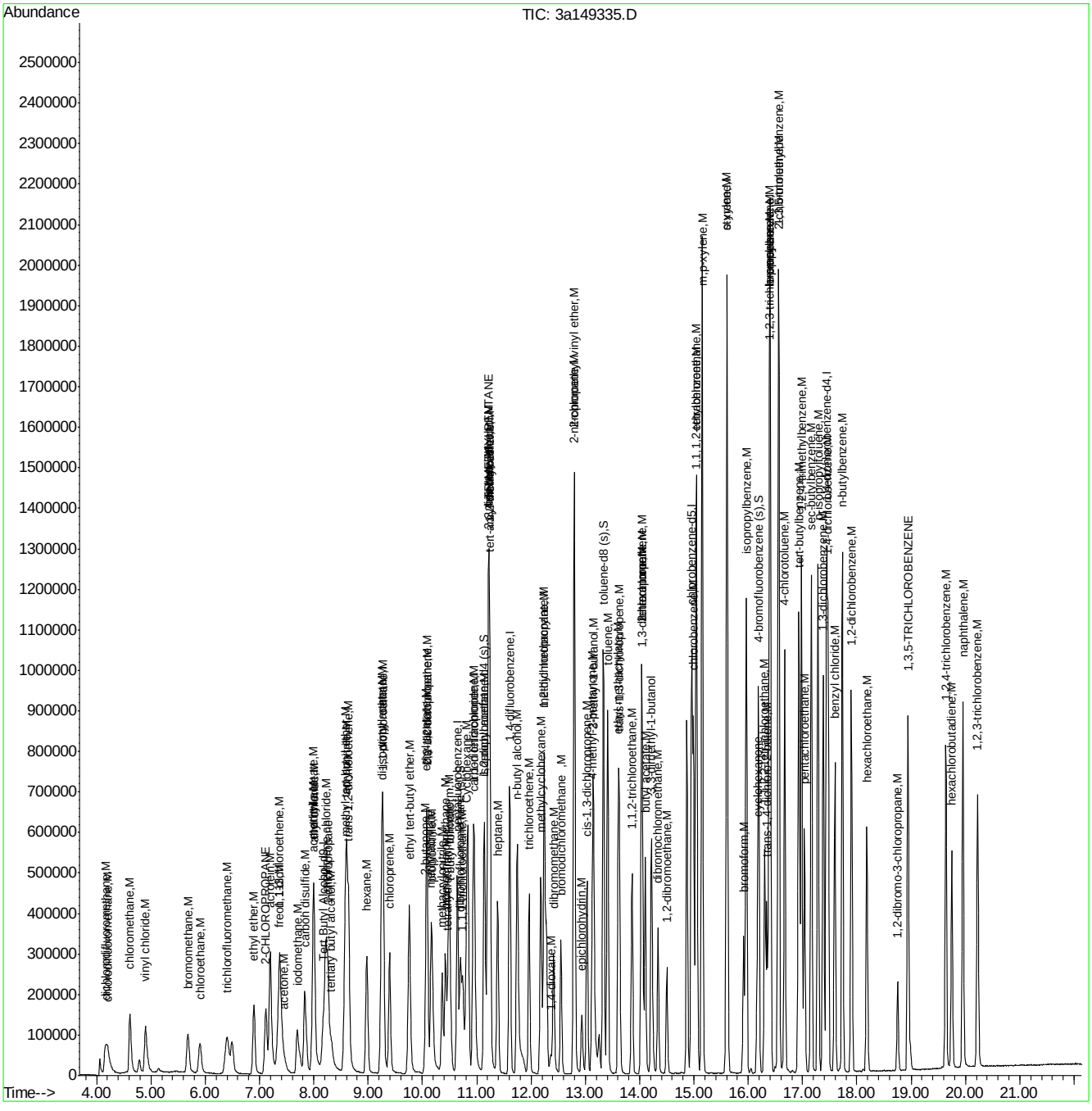
7

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149335.D
Acq On : 15 Mar 2016 7:21 pm
Operator : tracyk
Sample : icc6446-50
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 16 08:16:41 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149336.D
Acq On : 15 Mar 2016 7:51 pm
Operator : tracyk
Sample : ic6446-100
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 16 08:20:47 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.19	65	443221	500.00	ug/L	0.01
5) pentafluorobenzene	10.64	168	435267	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	714071	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	700285	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	374169	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	207431	42.28	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 84.56%			
50) 1,2-dichloroethane-d4 (s)	11.15	65	253762	42.19	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 84.38%			
79) toluene-d8 (s)	13.33	98	829660	52.45	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 104.90%			
104) 4-bromofluorobenzene (s)	16.19	95	374904	63.92	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 127.84%#			

Target Compounds

						Qvalue
2) tertiary butyl alcohol	8.32	59	372240	464.09	ug/L	98
4) 1,4-dioxane	12.37	88	125653	2791.75	ug/L	99
8) chlorodifluoromethane	4.21	51	216215	69.69	ug/L	93
9) dichlorodifluoromethane	4.16	85	405116	72.94	ug/L	98
10) chloromethane	4.61	50	515249	67.02	ug/L	99
11) vinyl chloride	4.90	62	501616	61.47	ug/L	98
12) bromomethane	5.67	96	229062	66.27	ug/L	98
15) 2-CHLOROPROPANE	7.11	43	503924	65.22	ug/L	99
16) chloroethane	5.90	64	271773	85.62	ug/L	100
17) trichlorofluoromethane	6.41	101	502124	75.38	ug/L	98
19) 1-chloropropane	8.26	41	334779	82.28	ug/L	96
20) ethyl ether	6.89	74	214291	90.38	ug/L	97
21) acrolein	7.19	56	1065781	889.23	ug/L	99
22) 1,1-dichloroethene	7.38	61	523233	82.88	ug/L	97
23) acetone	7.45	58	52768	100.09	ug/L	96
24) allyl chloride	8.00	76	209825	83.51	ug/L	89
25) acetonitrile	7.99	40	433228	872.58	ug/L #	85
26) iodomethane	7.69	142	556332	82.40	ug/L	98
27) iso-butyl alcohol	11.22	74	113238	838.22	ug/L	99
28) carbon disulfide	7.83	76	1075292	78.65	ug/L	100
29) methylene chloride	8.22	84	358607	80.40	ug/L	99
30) methyl acetate	7.99	43	441968	92.98	ug/L	99
31) methyl tert butyl ether	8.58	73	1140099	82.33	ug/L	98
32) trans-1,2-dichloroethene	8.64	61	484879	77.98	ug/L	99
33) di-isopropyl ether	9.25	45	1224818	90.84	ug/L	96
34) 2-butanone	10.06	72	71415	115.05	ug/L #	64
35) 1,1-dichloroethane	9.28	63	618258	80.50	ug/L	99
36) chloroprene	9.39	53	501441	84.97	ug/L	99
37) acrylonitrile	8.60	53	1071959	464.49	ug/L	98
38) vinyl acetate	9.27	86	79955	99.92	ug/L	89
39) ethyl tert-butyl ether	9.76	59	1144053	86.09	ug/L	99
40) ethyl acetate	10.07	45	79929	113.92	ug/L	97
41) 2,2-dichloropropane	10.08	77	277777	48.59	ug/L	99

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149336.D
Acq On : 15 Mar 2016 7:51 pm
Operator : tracyk
Sample : ic6446-100
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 16 08:20:47 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) cis-1,2-dichloroethene	10.09	96	380250	78.01	ug/L		98
43) methylacrylate	10.16	85	80945	115.23	ug/L		82
44) propionitrile	10.18	54	928146	988.70	ug/L		99
45) bromochloromethane	10.42	128	183492	82.39	ug/L		95
46) tetrahydrofuran	10.46	42	210320	99.05	ug/L		98
47) chloroform	10.49	85	397179	81.29	ug/L		97
48) t-butyl formate	10.51	59	391327	90.19	ug/L		98
51) freon 113	7.35	151	206575	75.42	ug/L		96
52) methacrylonitrile	10.36	67	226528	109.33	ug/L		97
53) 1,1,1-trichloroethane	10.74	97	462541	74.28	ug/L		98
54) Cyclohexane	10.82	84	475100	81.75	ug/L		98
56) epichlorohydrin	12.94	57	351132	605.55	ug/L		100
57) n-butyl alcohol	11.75	56	1065285	5411.46	ug/L		99
58) carbon tetrachloride	10.96	117	449771	72.67	ug/L		100
59) 1,1-dichloropropene	10.94	75	460435	82.51	ug/L		99
61) hexane	8.98	57	392845	84.84	ug/L		98
62) 2,2,4-TRIMETHYLPENTANE	11.21	57	1179017	86.82	ug/L		98
63) benzene	11.21	78	1433797	86.65	ug/L		98
64) tert-amyl methyl ether	11.24	87	247099	81.49	ug/L		98
65) heptane	11.38	57	236003	97.81	ug/L		99
66) isopropyl acetate	11.14	87	104871	109.40	ug/L	#	90
67) 1,2-dichloroethane	11.24	62	485005	73.92	ug/L		97
69) trichloroethene	11.96	95	367201	87.78	ug/L		98
71) methyl methacrylate	12.24	100	132697	136.80	ug/L		98
72) 2-nitropropane	12.79	41	202755	84.12	ug/L		98
73) 2-chloroethyl vinyl ether	12.80	63	1516188	632.17	ug/L		100
74) 1,2-dichloropropane	12.24	63	388813	94.59	ug/L		97
75) dibromomethane	12.41	93	255394	88.14	ug/L		99
76) methylcyclohexane	12.18	83	523252	84.04	ug/L		100
77) bromodichloromethane	12.55	83	528288	89.34	ug/L		97
78) cis-1,3-dichloropropene	13.03	75	653182	108.95	ug/L		99
80) 4-methyl-2-pentanone	13.13	58	248963	110.92	ug/L		98
81) toluene	13.41	91	1541309	103.04	ug/L		100
82) 3-methyl-1-butanol	13.15	55	704664	2153.83	ug/L		98
83) trans-1,3-dichloropropene	13.63	75	633471	114.01	ug/L		100
84) ethyl methacrylate	13.60	69	651470	131.50	ug/L		99
85) 1,1,2-trichloroethane	13.86	83	333323	116.77	ug/L		99
86) 2-hexanone	14.03	58	253357	139.23	ug/L		99
88) tetrachloroethene	14.03	166	385683	81.95	ug/L		99
90) 1,3-dichloropropane	14.05	76	640125	101.68	ug/L		100
91) butyl acetate	14.10	56	386696	118.91	ug/L		99
92) 3,3-dimethyl-1-butanol	14.22	57	767621	799.11	ug/L		98
93) dibromochloromethane	14.34	129	454769	92.17	ug/L		98
94) 1,2-dibromoethane	14.50	107	434617	101.19	ug/L		98
95) chlorobenzene	14.99	112	1045719	93.40	ug/L		99
96) 1,1,1,2-tetrachloroethane	15.05	131	394360	75.09	ug/L		99
97) ethylbenzene	15.04	91	1851281	86.51	ug/L		100
98) m,p-xylene	15.15	106	1386003	176.87	ug/L		99
99) o-xylene	15.60	91	1541169	83.11	ug/L		100
100) styrene	15.61	104	1257434	97.13	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149336.D
Acq On : 15 Mar 2016 7:51 pm
Operator : tracyk
Sample : ic6446-100
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 16 08:20:47 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
101) bromoform	15.92	173	389654	98.12 ug/L	99
103) isopropylbenzene	15.96	105	1853455	99.76 ug/L	99
105) cyclohexanone	16.17	98	98910	688.00 ug/L	95
106) bromobenzene	16.40	156	503232	103.19 ug/L	99
107) 1,1,2,2-tetrachloroethane	16.30	83	688462	112.36 ug/L	99
108) trans-1,4-dichloro-2-buten	16.34	53	198777	156.96 ug/L	99
109) 1,2,3-trichloropropane	16.38	110	179724	103.64 ug/L	99
110) n-propylbenzene	16.40	91	2232752	96.42 ug/L	100
111) 2-chlorotoluene	16.57	126	463429	96.98 ug/L	98
112) 4-chlorotoluene	16.67	91	1464646	106.66 ug/L	99
113) 1,3,5-trimethylbenzene	16.56	105	1620649	94.29 ug/L	98
114) tert-butylbenzene	16.93	134	305490	94.16 ug/L	99
115) pentachloroethane	17.04	167	297936	89.85 ug/L	98
116) 1,2,4-trimethylbenzene	16.98	105	1662342	91.77 ug/L	99
117) sec-butylbenzene	17.16	105	2026509	91.21 ug/L	100
118) 1,3-dichlorobenzene	17.38	146	961806	95.02 ug/L	99
119) p-isopropyltoluene	17.29	119	1705091	86.05 ug/L	99
120) 1,4-dichlorobenzene	17.47	146	962125	91.62 ug/L	99
121) 1,2-dichlorobenzene	17.90	146	929844	86.21 ug/L	100
122) benzyl chloride	17.59	91	1322894	96.06 ug/L	100
123) n-butylbenzene	17.73	92	916561	83.87 ug/L	99
124) 1,2-dibromo-3-chloropropan	18.75	75	132324	65.34 ug/L	96
125) 1,3,5-TRICHLOROBENZENE	18.94	180	654093	61.61 ug/L	99
126) 1,2,4-trichlorobenzene	19.64	180	581628	59.29 ug/L	98
127) hexachlorobutadiene	19.75	225	279519	62.41 ug/L	98
128) naphthalene	19.95	128	1694793	59.06 ug/L	100
129) 1,2,3-trichlorobenzene	20.23	180	528455	59.96 ug/L	98
130) hexachloroethane	18.18	201	277039	81.06 ug/L	99

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

7.7.9

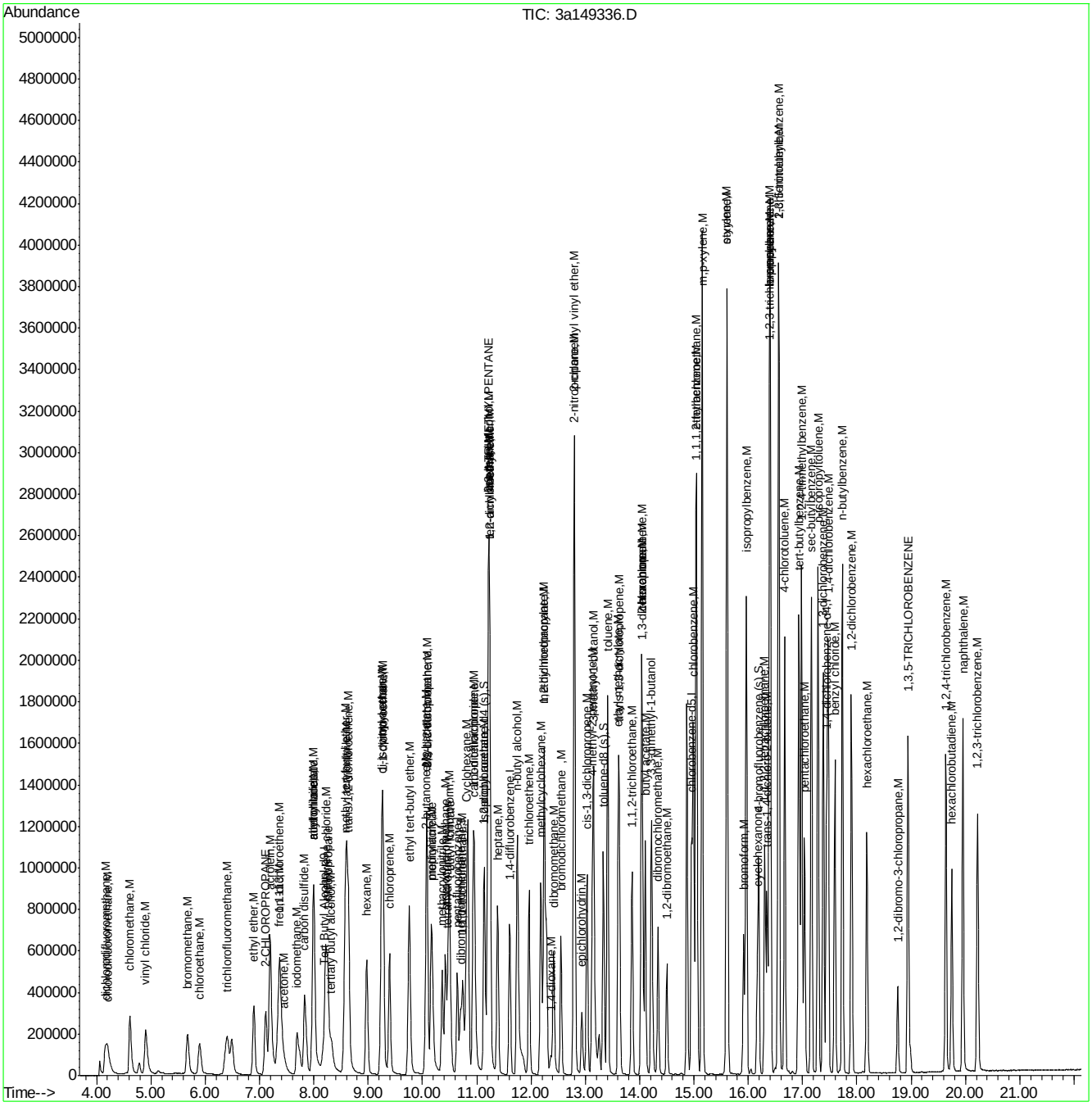
7

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149336.D
Acq On : 15 Mar 2016 7:51 pm
Operator : tracyk
Sample : ic6446-100
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 16 08:20:47 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149337.D
Acq On : 15 Mar 2016 8:21 pm
Operator : tracyk
Sample : ic6446-200
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 16 08:22:10 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.19	65	421742	500.00	ug/L	0.01
5) pentafluorobenzene	10.64	168	446503	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	730890	50.00	ug/L	0.00
87) chlorobenzene-d5	14.96	117	713961	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	366009	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	210492	41.82	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 83.64%			
50) 1,2-dichloroethane-d4 (s)	11.15	65	255046	41.34	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 82.68%			
79) toluene-d8 (s)	13.33	98	856700	52.91	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 105.82%			
104) 4-bromofluorobenzene (s)	16.19	95	374798	65.32	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 130.64%#			

Target Compounds

						Qvalue
2) tertiary butyl alcohol	8.32	59	663729	869.65	ug/L	99
4) 1,4-dioxane	12.37	88	227965	5322.86	ug/L	98
8) chlorodifluoromethane	4.20	51	475251	149.33	ug/L	93
9) dichlorodifluoromethane	4.16	85	779672	136.84	ug/L	99
10) chloromethane	4.62	50	1031884	130.84	ug/L	99
11) vinyl chloride	4.91	62	986443	117.83	ug/L	99
12) bromomethane	5.67	96	445903	125.76	ug/L	99
15) 2-CHLOROPROPANE	7.11	43	1006136	126.95	ug/L	98
16) chloroethane	5.89	64	494907	151.98	ug/L	99
17) trichlorofluoromethane	6.41	101	998069	146.06	ug/L	98
19) 1-chloropropane	8.26	41	684631	164.02	ug/L	87
20) ethyl ether	6.89	74	427140	175.61	ug/L	97
21) acrolein	7.20	56	2275513	1850.79	ug/L	99
22) 1,1-dichloroethene	7.38	61	1073611	165.79	ug/L	98
23) acetone	7.46	58	102337	189.23	ug/L	95
24) allyl chloride	8.00	76	427741	165.96	ug/L	93
25) acetonitrile	7.98	40	798087	1567.00	ug/L	95
26) iodomethane	7.69	142	1147279	165.64	ug/L	99
27) iso-butyl alcohol	11.22	74	234681	1693.46	ug/L #	84
28) carbon disulfide	7.83	76	2203969	157.14	ug/L	99
29) methylene chloride	8.22	84	740840	161.92	ug/L	98
30) methyl acetate	7.99	43	860762	176.53	ug/L	99
31) methyl tert butyl ether	8.58	73	2332067	164.17	ug/L	100
32) trans-1,2-dichloroethene	8.64	61	980743	153.75	ug/L	99
33) di-isopropyl ether	9.25	45	2475367	178.97	ug/L	98
34) 2-butanone	10.06	72	141331	221.95	ug/L #	82
35) 1,1-dichloroethane	9.28	63	1277229	162.12	ug/L	99
36) chloroprene	9.39	53	1013029	167.34	ug/L	99
37) acrylonitrile	8.61	53	2135041	901.85	ug/L	98
38) vinyl acetate	9.27	86	163862	199.63	ug/L	84
39) ethyl tert-butyl ether	9.76	59	2302031	168.87	ug/L	100
40) ethyl acetate	10.08	45	158924	220.81	ug/L	74
41) 2,2-dichloropropane	10.08	77	502706	85.72	ug/L	99

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149337.D
Acq On : 15 Mar 2016 8:21 pm
Operator : tracyk
Sample : ic6446-200
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 16 08:22:10 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) cis-1,2-dichloroethene	10.09	96	770160	154.03	ug/L		98
43) methylacrylate	10.16	85	164362	228.09	ug/L		92
44) propionitrile	10.18	54	1852297	1923.50	ug/L		94
45) bromochloromethane	10.42	128	376994	165.01	ug/L		97
46) tetrahydrofuran	10.46	42	413338	189.77	ug/L		99
47) chloroform	10.49	85	806685	160.94	ug/L		97
48) t-butyl formate	10.51	59	786954	176.81	ug/L		98
51) freon 113	7.35	151	414500	147.52	ug/L		96
52) methacrylonitrile	10.36	67	459519	216.21	ug/L		99
53) 1,1,1-trichloroethane	10.74	97	937080	146.70	ug/L		99
54) Cyclohexane	10.82	84	965818	162.00	ug/L		99
56) epichlorohydrin	12.94	57	694584	1170.29	ug/L		99
57) n-butyl alcohol	11.75	56	1927120	9564.16	ug/L		100
58) carbon tetrachloride	10.96	117	915995	144.59	ug/L		99
59) 1,1-dichloropropene	10.94	75	930997	162.99	ug/L		98
61) hexane	8.97	57	778619	164.29	ug/L		98
62) 2,2,4-TRIMETHYLPENTANE	11.22	57	2360676	169.84	ug/L		98
63) benzene	11.21	78	2905226	171.52	ug/L		99
64) tert-amyl methyl ether	11.24	87	500394	161.23	ug/L		99
65) heptane	11.38	57	471801	191.03	ug/L		100
66) isopropyl acetate	11.14	87	209459	213.48	ug/L	#	86
67) 1,2-dichloroethane	11.24	62	994020	148.02	ug/L		98
69) trichloroethene	11.96	95	755262	176.38	ug/L		99
71) methyl methacrylate	12.24	100	272581	274.54	ug/L		95
72) 2-nitropropane	12.79	41	400746	162.43	ug/L		99
73) 2-chloroethyl vinyl ether	12.80	63	3005090	1224.13	ug/L		99
74) 1,2-dichloropropane	12.25	63	802231	190.67	ug/L		97
75) dibromomethane	12.41	93	529757	178.62	ug/L		99
76) methylcyclohexane	12.18	83	1069824	167.88	ug/L		99
77) bromodichloromethane	12.55	83	1102272	182.11	ug/L		99
78) cis-1,3-dichloropropene	13.03	75	1362583	222.04	ug/L		99
80) 4-methyl-2-pentanone	13.13	58	504145	219.45	ug/L		92
81) toluene	13.41	91	3175899	207.43	ug/L		99
82) 3-methyl-1-butanol	13.15	55	1309334	3909.92	ug/L		99
83) trans-1,3-dichloropropene	13.63	75	1302491	229.02	ug/L		99
84) ethyl methacrylate	13.61	69	1335377	263.34	ug/L		97
85) 1,1,2-trichloroethane	13.86	83	696307	238.31	ug/L		98
86) 2-hexanone	14.03	58	508269	272.88	ug/L		98
88) tetrachloroethene	14.03	166	790175	164.69	ug/L		99
90) 1,3-dichloropropane	14.06	76	1322916	206.11	ug/L		97
91) butyl acetate	14.10	56	769927	232.22	ug/L		99
92) 3,3-dimethyl-1-butanol	14.22	57	1451805	1482.41	ug/L		99
93) dibromochloromethane	14.34	129	950995	189.04	ug/L		99
94) 1,2-dibromoethane	14.50	107	903098	206.24	ug/L		100
95) chlorobenzene	14.99	112	2134309	186.98	ug/L		98
96) 1,1,1,2-tetrachloroethane	15.05	131	810190	151.32	ug/L		99
97) ethylbenzene	15.04	91	3729831	170.96	ug/L		99
98) m,p-xylene	15.15	106	2836102	354.99	ug/L		99
99) o-xylene	15.60	91	3121444	165.11	ug/L		100
100) styrene	15.62	104	2533933	191.99	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149337.D
Acq On : 15 Mar 2016 8:21 pm
Operator : tracyk
Sample : ic6446-200
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 16 08:22:10 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
101) bromoform	15.92	173	797873	197.07 ug/L	99
103) isopropylbenzene	15.96	105	3818925	210.14 ug/L	99
105) cyclohexanone	16.17	98	169946	1208.47 ug/L	99
106) bromobenzene	16.40	156	1011879	212.11 ug/L	99
107) 1,1,2,2-tetrachloroethane	16.30	83	1367198	228.11 ug/L	99
108) trans-1,4-dichloro-2-buten	16.34	53	399557	322.54 ug/L	100
109) 1,2,3-trichloropropane	16.38	110	356432	210.13 ug/L	98
110) n-propylbenzene	16.40	91	4459416	196.87 ug/L	99
111) 2-chlorotoluene	16.57	126	910350	194.75 ug/L	96
112) 4-chlorotoluene	16.67	91	2969726	221.09 ug/L	99
113) 1,3,5-trimethylbenzene	16.56	105	3145374	187.08 ug/L	98
114) tert-butylbenzene	16.93	134	614418	193.59 ug/L	97
115) pentachloroethane	17.04	167	610003	188.05 ug/L	99
116) 1,2,4-trimethylbenzene	16.98	105	3252615	183.56 ug/L	99
117) sec-butylbenzene	17.16	105	4057359	186.69 ug/L	99
118) 1,3-dichlorobenzene	17.38	146	1911445	193.05 ug/L	99
119) p-isopropyltoluene	17.29	119	3347695	172.70 ug/L	98
120) 1,4-dichlorobenzene	17.47	146	1912514	186.17 ug/L	99
121) 1,2-dichlorobenzene	17.90	146	1838313	174.23 ug/L	99
122) benzyl chloride	17.59	91	2520259	187.08 ug/L	99
123) n-butylbenzene	17.74	92	1804744	168.82 ug/L	99
124) 1,2-dibromo-3-chloropropan	18.75	75	262124	132.33 ug/L	97
125) 1,3,5-TRICHLOROBENZENE	18.94	180	1286557	123.88 ug/L	100
126) 1,2,4-trichlorobenzene	19.64	180	1162471	121.14 ug/L	100
127) hexachlorobutadiene	19.75	225	539759	123.19 ug/L	98
128) naphthalene	19.95	128	3369455	120.03 ug/L	100
129) 1,2,3-trichlorobenzene	20.22	180	1057088	122.61 ug/L	97
130) hexachloroethane	18.19	201	570048	170.52 ug/L	99

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

7.7.10

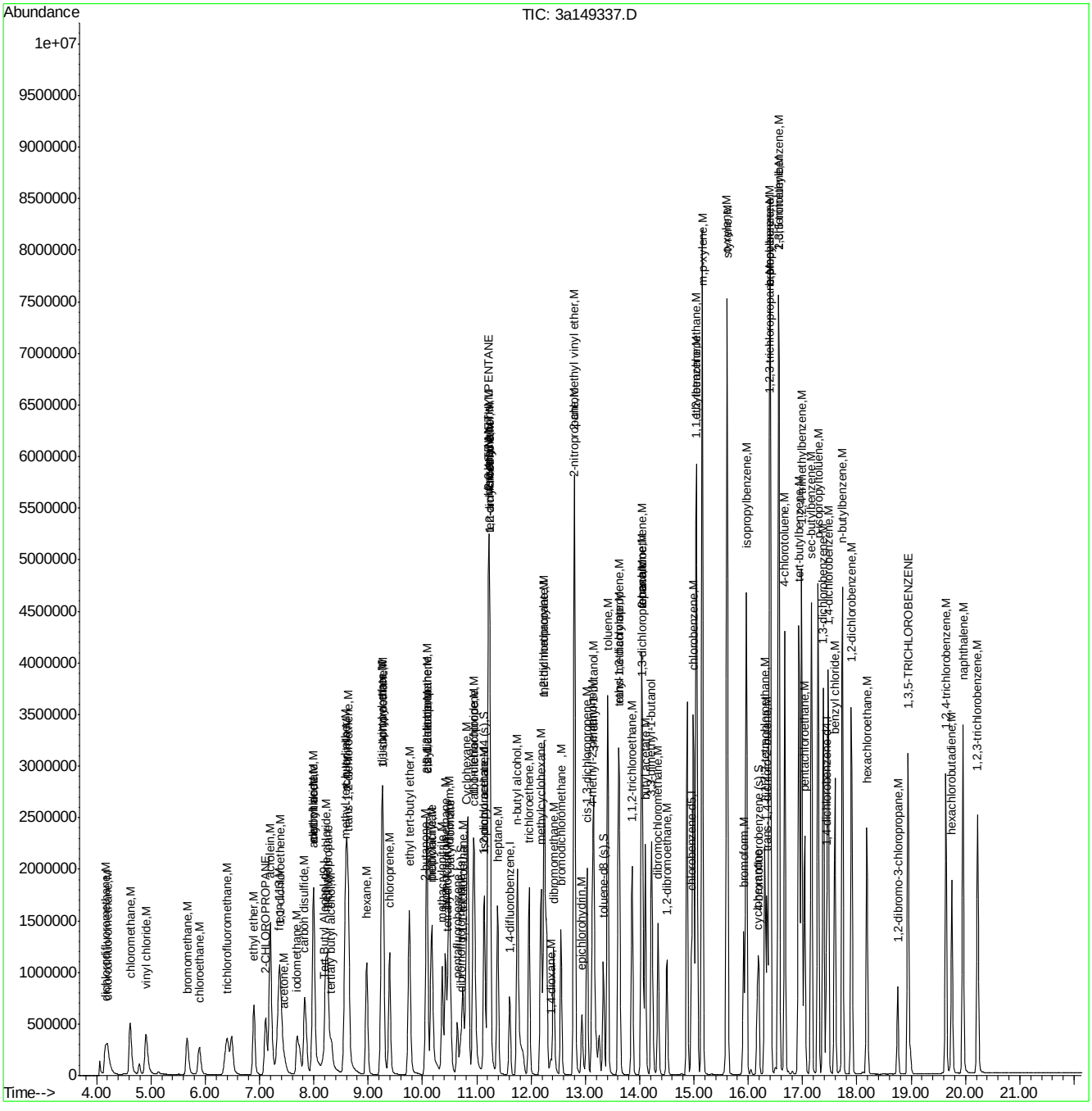
7

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149337.D
Acq On : 15 Mar 2016 8:21 pm
Operator : tracyk
Sample : ic6446-200
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 16 08:22:10 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 08:15:25 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149340.D
Acq On : 15 Mar 2016 9:52 pm
Operator : tracyk
Sample : icv6446-50
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 16 11:17:13 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	426109	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	444005	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	717157	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	698877	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	379152	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	215553	50.31	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 100.62%			
50) 1,2-dichloroethane-d4 (s)	11.15	65	256725	48.93	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 97.86%			
79) toluene-d8 (s)	13.33	98	836174	49.77	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.54%			
104) 4-bromofluorobenzene (s)	16.19	95	367734	48.33	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 96.66%			

Target Compounds

						Qvalue
2) tertiary butyl alcohol	8.31	59	162596	225.49	ug/L	92
4) 1,4-dioxane	12.37	88	60474	1233.88	ug/L	96
8) chlorodifluoromethane	4.20	51	114890	52.18	ug/L	93
9) dichlorodifluoromethane	4.17	85	176473	43.71	ug/L	98
10) chloromethane	4.61	50	239482	42.26	ug/L	98
11) vinyl chloride	4.90	62	230647	46.57	ug/L	99
12) bromomethane	5.67	96	126410	46.07	ug/L	98
15) 2-CHLOROPROPANE	7.11	43	244615	42.45	ug/L	99
16) chloroethane	5.89	64	135690	47.44	ug/L	97
17) trichlorofluoromethane	6.41	101	236296	50.92	ug/L	99
19) 1-chloropropane	8.26	41	176264	54.50	ug/L #	85
20) ethyl ether	6.89	74	103151	46.89	ug/L	98
21) acrolein	7.20	56	511961	537.86	ug/L	98
22) 1,1-dichloroethene	7.38	61	238565	44.47	ug/L	99
23) acetone	7.46	58	26879	52.72	ug/L	97
24) allyl chloride	8.00	76	100044	45.81	ug/L	93
25) acetonitrile	7.97	40	195440	441.99	ug/L #	63
26) iodomethane	7.70	142	252171	45.32	ug/L	99
27) iso-butyl alcohol	11.22	74	59728	496.63	ug/L #	82
28) carbon disulfide	7.83	76	492425	42.78	ug/L	99
29) methylene chloride	8.22	84	174409	45.24	ug/L	97
30) methyl acetate	7.99	43	206596	43.89	ug/L	100
31) methyl tert butyl ether	8.58	73	1140037	92.65	ug/L	92
32) trans-1,2-dichloroethene	8.64	61	228082	44.95	ug/L	99
33) di-isopropyl ether	9.25	45	627555	49.19	ug/L	99
34) 2-butanone	10.06	72	36020	44.11	ug/L #	91
35) 1,1-dichloroethane	9.28	63	314805	47.72	ug/L	98
36) chloroprene	9.39	53	240519	46.94	ug/L	99
37) acrylonitrile	8.60	53	541291	245.11	ug/L	98
38) vinyl acetate	9.27	86	41641	53.30	ug/L	67
39) ethyl tert-butyl ether	9.76	59	601772	51.92	ug/L	99
40) ethyl acetate	10.07	45	39190	46.49	ug/L	97
41) 2,2-dichloropropane	10.08	77	143102	41.01	ug/L	98

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149340.D
Acq On : 15 Mar 2016 9:52 pm
Operator : tracyk
Sample : icv6446-50
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 16 11:17:13 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) cis-1,2-dichloroethene	10.09	96	186802	44.60	ug/L		100
43) methylacrylate	10.15	85	40790	51.80	ug/L		84
44) propionitrile	10.17	54	472458	491.15	ug/L		83
45) bromochloromethane	10.42	128	92247	49.07	ug/L		98
46) tetrahydrofuran	10.46	42	103872	45.48	ug/L		100
47) chloroform	10.49	85	205879	46.69	ug/L		98
48) t-butyl formate	10.51	59	139051	35.45	ug/L		98
51) freon 113	7.34	151	108069	52.14	ug/L		97
52) methacrylonitrile	10.36	67	110549	46.55	ug/L		99
53) 1,1,1-trichloroethane	10.74	97	240329	49.24	ug/L		98
54) Cyclohexane	10.82	84	223577	44.81	ug/L		99
56) epichlorohydrin	12.93	57	173947	245.15	ug/L		99
57) n-butyl alcohol	11.74	56	508344	2356.66	ug/L		98
58) carbon tetrachloride	10.96	117	218372	47.41	ug/L		99
59) 1,1-dichloropropene	10.94	75	236211	49.24	ug/L		99
61) hexane	8.98	57	164461	37.18	ug/L		97
62) 2,2,4-TRIMETHYLPENTANE	11.20	57	578862	47.55	ug/L		99
63) benzene	11.21	78	711628	46.22	ug/L		99
64) tert-amyl methyl ether	11.23	87	132206	53.74	ug/L		98
65) heptane	11.38	57	106140	42.21	ug/L		99
66) isopropyl acetate	11.14	87	49745	49.68	ug/L	#	82
67) 1,2-dichloroethane	11.24	62	244787	48.34	ug/L		99
69) trichloroethene	11.96	95	184015	47.64	ug/L		99
71) methyl methacrylate	12.24	100	64816	50.57	ug/L		93
72) 2-nitropropane	12.79	41	102749	45.86	ug/L		98
73) 2-chloroethyl vinyl ether	12.80	63	772686	260.24	ug/L		99
74) 1,2-dichloropropane	12.24	63	194227	48.13	ug/L		97
75) dibromomethane	12.41	93	126740	48.63	ug/L		96
76) methylcyclohexane	12.18	83	252088	47.78	ug/L		99
77) bromodichloromethane	12.55	83	264719	47.57	ug/L		99
78) cis-1,3-dichloropropene	13.03	75	328192	48.59	ug/L		100
80) 4-methyl-2-pentanone	13.12	58	127322	50.67	ug/L		89
81) toluene	13.41	91	775280	46.17	ug/L		99
82) 3-methyl-1-butanol	13.15	55	343636	939.92	ug/L		99
83) trans-1,3-dichloropropene	13.63	75	311717	47.15	ug/L		99
84) ethyl methacrylate	13.60	69	323097	47.97	ug/L		97
85) 1,1,2-trichloroethane	13.86	83	165709	47.06	ug/L		99
86) 2-hexanone	14.03	58	127486	49.97	ug/L		99
88) tetrachloroethene	14.03	166	196277	49.36	ug/L		98
90) 1,3-dichloropropane	14.05	76	316936	48.65	ug/L		98
91) butyl acetate	14.10	56	196661	49.29	ug/L		97
92) 3,3-dimethyl-1-butanol	14.22	57	375396	495.03	ug/L		98
93) dibromochloromethane	14.34	129	223691	48.46	ug/L		99
94) 1,2-dibromoethane	14.50	107	210405	47.38	ug/L		100
95) chlorobenzene	14.99	112	518167	48.26	ug/L		99
96) 1,1,1,2-tetrachloroethane	15.05	131	196217	49.33	ug/L		99
97) ethylbenzene	15.04	91	924000	47.37	ug/L		99
98) m,p-xylene	15.15	106	706671	98.06	ug/L		98
99) o-xylene	15.60	91	796038	48.58	ug/L		99
100) styrene	15.61	104	629471	49.02	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149340.D
Acq On : 15 Mar 2016 9:52 pm
Operator : tracyk
Sample : icv6446-50
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 16 11:17:13 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
101) bromoform	15.91	173	189290	49.88 ug/L	100
103) isopropylbenzene	15.96	105	933796	47.54 ug/L	99
105) cyclohexanone	16.17	98	45267	387.04 ug/L	96
106) bromobenzene	16.40	156	251652	47.59 ug/L	98
107) 1,1,2,2-tetrachloroethane	16.30	83	337066	46.93 ug/L	99
108) trans-1,4-dichloro-2-buten	16.34	53	101048	52.27 ug/L	97
109) 1,2,3-trichloropropane	16.38	110	88820	46.87 ug/L	98
110) n-propylbenzene	16.40	91	1159562	48.97 ug/L	99
111) 2-chlorotoluene	16.57	126	226240	46.45 ug/L	100
112) 4-chlorotoluene	16.67	91	739413	46.95 ug/L	100
113) 1,3,5-trimethylbenzene	16.55	105	819852	48.48 ug/L	99
114) tert-butylbenzene	16.93	134	157306	49.70 ug/L	99
115) pentachloroethane	17.03	167	151907	49.60 ug/L	100
116) 1,2,4-trimethylbenzene	16.98	105	847603	48.35 ug/L	100
117) sec-butylbenzene	17.16	105	1046579	48.59 ug/L	100
118) 1,3-dichlorobenzene	17.38	146	488967	48.72 ug/L	99
119) p-isopropyltoluene	17.29	119	888416	49.44 ug/L	100
120) 1,4-dichlorobenzene	17.47	146	491315	49.11 ug/L	99
121) 1,2-dichlorobenzene	17.90	146	475860	49.08 ug/L	100
122) benzyl chloride	17.59	91	637668	44.33 ug/L	99
123) n-butylbenzene	17.73	92	469634	48.80 ug/L	99
124) 1,2-dibromo-3-chloropropan	18.75	75	69345	42.86 ug/L	97
125) 1,3,5-TRICHLOROBENZENE	18.94	180	357171	49.72 ug/L	98
126) 1,2,4-trichlorobenzene	19.64	180	312710	50.05 ug/L	99
127) hexachlorobutadiene	19.75	225	145264	46.42 ug/L	98
128) naphthalene	19.95	128	891399	48.40 ug/L	100
129) 1,2,3-trichlorobenzene	20.22	180	281656	48.70 ug/L	98
130) hexachloroethane	18.18	201	148200	50.81 ug/L	98

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

7.7.11

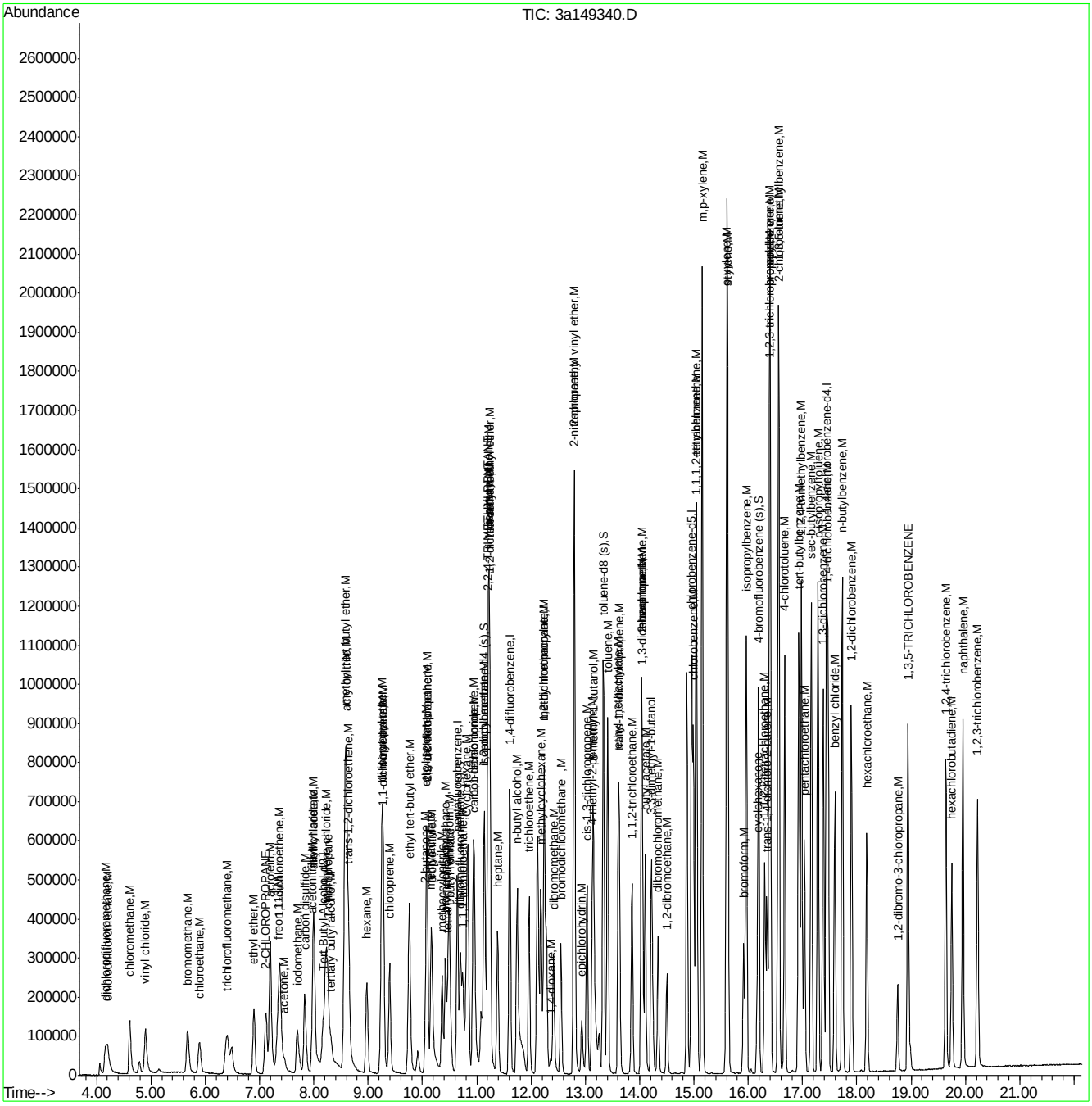
7

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 3a149340.D
Acq On : 15 Mar 2016 9:52 pm
Operator : tracyk
Sample : icv6446-50
Misc : MS99317,V3A6446,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 16 11:17:13 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



M3A6446.M Wed Mar 16 11:17:59 2016 ACCUNJ Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149344.D
Acq On : 16 Mar 2016 10:33 am
Operator : tracyk
Sample : cc6446-20
Misc : MS99317,V3A6447,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 16 15:23:02 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 09:12:19 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.18	65	432017	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	444832	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	714902	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	684423	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	384553	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	217993	50.79	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 101.58%			
50) 1,2-dichloroethane-d4 (s)	11.15	65	262521	49.94	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 99.88%			
79) toluene-d8 (s)	13.33	98	827041	49.38	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 98.76%			
104) 4-bromofluorobenzene (s)	16.19	95	359108	46.53	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 93.06%			

Target Compounds

						Qvalue
2) tertiary butyl alcohol	8.31	59	71949	98.41	ug/L	98
4) 1,4-dioxane	12.37	88	25896	521.14	ug/L	95
8) chlorodifluoromethane	4.20	51	36682	16.63	ug/L	97
9) dichlorodifluoromethane	4.16	85	78983	19.53	ug/L	99
10) chloromethane	4.61	50	107591	18.95	ug/L	97
11) vinyl chloride	4.90	62	101341	20.42	ug/L	96
12) bromomethane	5.68	96	46937	17.07	ug/L	97
15) 2-CHLOROPROPANE	7.11	43	104201	18.05	ug/L	98
16) chloroethane	5.90	64	56757	19.81	ug/L	97
17) trichlorofluoromethane	6.41	101	92769	19.95	ug/L	92
19) 1-chloropropane	8.26	41	68121	21.03	ug/L	96
20) ethyl ether	6.89	74	43542	19.76	ug/L	97
21) acrolein	7.20	56	217640	228.23	ug/L	100
22) 1,1-dichloroethene	7.38	61	101279	18.84	ug/L	97
23) acetone	7.47	58	18807	36.82	ug/L	91
24) allyl chloride	8.00	76	43206	19.75	ug/L	91
25) acetonitrile	7.98	40	84614	191.00	ug/L	97
26) iodomethane	7.70	142	109737	19.69	ug/L	100
27) iso-butyl alcohol	11.22	74	23293	193.32	ug/L #	84
28) carbon disulfide	7.83	76	211561	18.35	ug/L	99
29) methylene chloride	8.22	84	74611	19.32	ug/L	99
30) methyl acetate	7.99	43	87569	18.57	ug/L	95
31) methyl tert butyl ether	8.58	73	237087	19.23	ug/L	98
32) trans-1,2-dichloroethene	8.64	61	100206	19.71	ug/L	100
33) di-isopropyl ether	9.25	45	246580	19.29	ug/L	96
34) 2-butanone	10.06	72	19900	24.33	ug/L #	51
35) 1,1-dichloroethane	9.28	63	130017	19.67	ug/L	99
36) chloroprene	9.39	53	96358	18.77	ug/L	99
37) acrylonitrile	8.60	53	227705	102.92	ug/L	99
38) vinyl acetate	9.27	86	15701	20.72	ug/L	84
39) ethyl tert-butyl ether	9.76	59	226899	19.54	ug/L	99
40) ethyl acetate	10.08	45	17810	20.90	ug/L #	71
41) 2,2-dichloropropane	10.08	77	69322	19.83	ug/L	98

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149344.D
Acq On : 16 Mar 2016 10:33 am
Operator : tracyk
Sample : cc6446-20
Misc : MS99317,V3A6447,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 16 15:23:02 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 09:12:19 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) cis-1,2-dichloroethene	10.09	96	79310	18.90	ug/L		97
43) methylacrylate	10.16	85	16142	20.46	ug/L	#	75
44) propionitrile	10.18	54	192662	199.91	ug/L		97
45) bromochloromethane	10.42	128	37556	19.94	ug/L		95
46) tetrahydrofuran	10.46	42	44722	19.54	ug/L		97
47) chloroform	10.49	85	81931	18.55	ug/L		94
48) t-butyl formate	10.51	59	74526	18.96	ug/L		98
51) freon 113	7.36	151	38498	18.54	ug/L		99
52) methacrylonitrile	10.36	67	46057	19.36	ug/L		98
53) 1,1,1-trichloroethane	10.74	97	92748	18.97	ug/L		98
54) Cyclohexane	10.82	84	86526	17.31	ug/L		96
56) epichlorohydrin	12.93	57	67959	96.08	ug/L		98
57) n-butyl alcohol	11.74	56	206437	960.05	ug/L		98
58) carbon tetrachloride	10.96	117	87768	19.12	ug/L		99
59) 1,1-dichloropropene	10.94	75	90667	18.96	ug/L		98
61) hexane	8.98	57	75642	17.15	ug/L		96
62) 2,2,4-TRIMETHYLPENTANE	11.20	57	215631	17.77	ug/L		97
63) benzene	11.21	78	295061	19.22	ug/L		97
64) tert-amyl methyl ether	11.24	87	48999	19.98	ug/L		97
65) heptane	11.39	57	43986	17.55	ug/L		99
66) isopropyl acetate	11.14	87	19558	19.59	ug/L	#	91
67) 1,2-dichloroethane	11.24	62	101336	20.07	ug/L		97
69) trichloroethene	11.96	95	74069	19.24	ug/L		99
71) methyl methacrylate	12.24	100	25560	20.00	ug/L		93
72) 2-nitropropane	12.79	41	40794	18.27	ug/L		99
73) 2-chloroethyl vinyl ether	12.80	63	283286	95.71	ug/L		98
74) 1,2-dichloropropane	12.25	63	79339	19.72	ug/L		95
75) dibromomethane	12.41	93	52174	20.08	ug/L		97
76) methylcyclohexane	12.18	83	94421	17.95	ug/L		99
77) bromodichloromethane	12.55	83	107134	19.31	ug/L		99
78) cis-1,3-dichloropropene	13.03	75	132871	19.73	ug/L		99
80) 4-methyl-2-pentanone	13.13	58	49370	19.71	ug/L		98
81) toluene	13.41	91	308315	18.42	ug/L		99
82) 3-methyl-1-butanol	13.15	55	138322	379.53	ug/L		99
83) trans-1,3-dichloropropene	13.63	75	128442	19.49	ug/L		98
84) ethyl methacrylate	13.60	69	124214	18.50	ug/L		97
85) 1,1,2-trichloroethane	13.86	83	65423	18.64	ug/L		100
86) 2-hexanone	14.03	58	57640	22.66	ug/L		100
88) tetrachloroethene	14.03	166	76722	19.70	ug/L		96
90) 1,3-dichloropropane	14.05	76	125623	19.69	ug/L		97
91) butyl acetate	14.10	56	73498	18.81	ug/L		96
92) 3,3-dimethyl-1-butanol	14.22	57	146787	197.65	ug/L		98
93) dibromochloromethane	14.34	129	89554	19.81	ug/L		97
94) 1,2-dibromoethane	14.50	107	85558	19.67	ug/L		98
95) chlorobenzene	14.99	112	207441	19.73	ug/L		98
96) 1,1,1,2-tetrachloroethane	15.05	131	79032	20.29	ug/L		99
97) ethylbenzene	15.04	91	364408	19.08	ug/L		99
98) m,p-xylene	15.15	106	275645	39.06	ug/L		99
99) o-xylene	15.60	91	310004	19.32	ug/L		100
100) styrene	15.61	104	250104	19.89	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149344.D
Acq On : 16 Mar 2016 10:33 am
Operator : tracyk
Sample : cc6446-20
Misc : MS99317,V3A6447,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 16 15:23:02 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 09:12:19 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
101) bromoform	15.91	173	75149	20.22 ug/L	100
103) isopropylbenzene	15.96	105	374891	18.82 ug/L	100
105) cyclohexanone	16.16	98	132825	1119.71 ug/L	96
106) bromobenzene	16.40	156	101007	18.83 ug/L	95
107) 1,1,2,2-tetrachloroethane	16.30	83	137446	18.87 ug/L	100
108) trans-1,4-dichloro-2-buten	16.34	53	39670	20.23 ug/L	98
109) 1,2,3-trichloropropane	16.38	110	36520	19.00 ug/L	97
110) n-propylbenzene	16.40	91	448469	18.67 ug/L	99
111) 2-chlorotoluene	16.57	126	94453	19.12 ug/L	99
112) 4-chlorotoluene	16.67	91	294676	18.45 ug/L	99
113) 1,3,5-trimethylbenzene	16.55	105	329325	19.20 ug/L	100
114) tert-butylbenzene	16.93	134	60828	18.95 ug/L	96
115) pentachloroethane	17.03	167	62231	20.04 ug/L	97
116) 1,2,4-trimethylbenzene	16.98	105	341163	19.19 ug/L	100
117) sec-butylbenzene	17.16	105	416923	19.09 ug/L	99
118) 1,3-dichlorobenzene	17.38	146	201944	19.84 ug/L	99
119) p-isopropyltoluene	17.29	119	353798	19.41 ug/L	99
120) 1,4-dichlorobenzene	17.47	146	200660	19.77 ug/L	99
121) 1,2-dichlorobenzene	17.90	146	195801	19.91 ug/L	99
122) benzyl chloride	17.59	91	305558	20.94 ug/L	99
123) n-butylbenzene	17.73	92	191412	19.61 ug/L	99
124) 1,2-dibromo-3-chloropropan	18.75	75	29750	18.13 ug/L	92
125) 1,3,5-TRICHLOROBENZENE	18.94	180	152068	20.87 ug/L	98
126) 1,2,4-trichlorobenzene	19.64	180	136524	21.54 ug/L	98
127) hexachlorobutadiene	19.75	225	63965	20.15 ug/L	95
128) naphthalene	19.95	128	400586	21.44 ug/L	99
129) 1,2,3-trichlorobenzene	20.22	180	124710	21.26 ug/L	98
130) hexachloroethane	18.18	201	59420	20.09 ug/L	98

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

7.7.12

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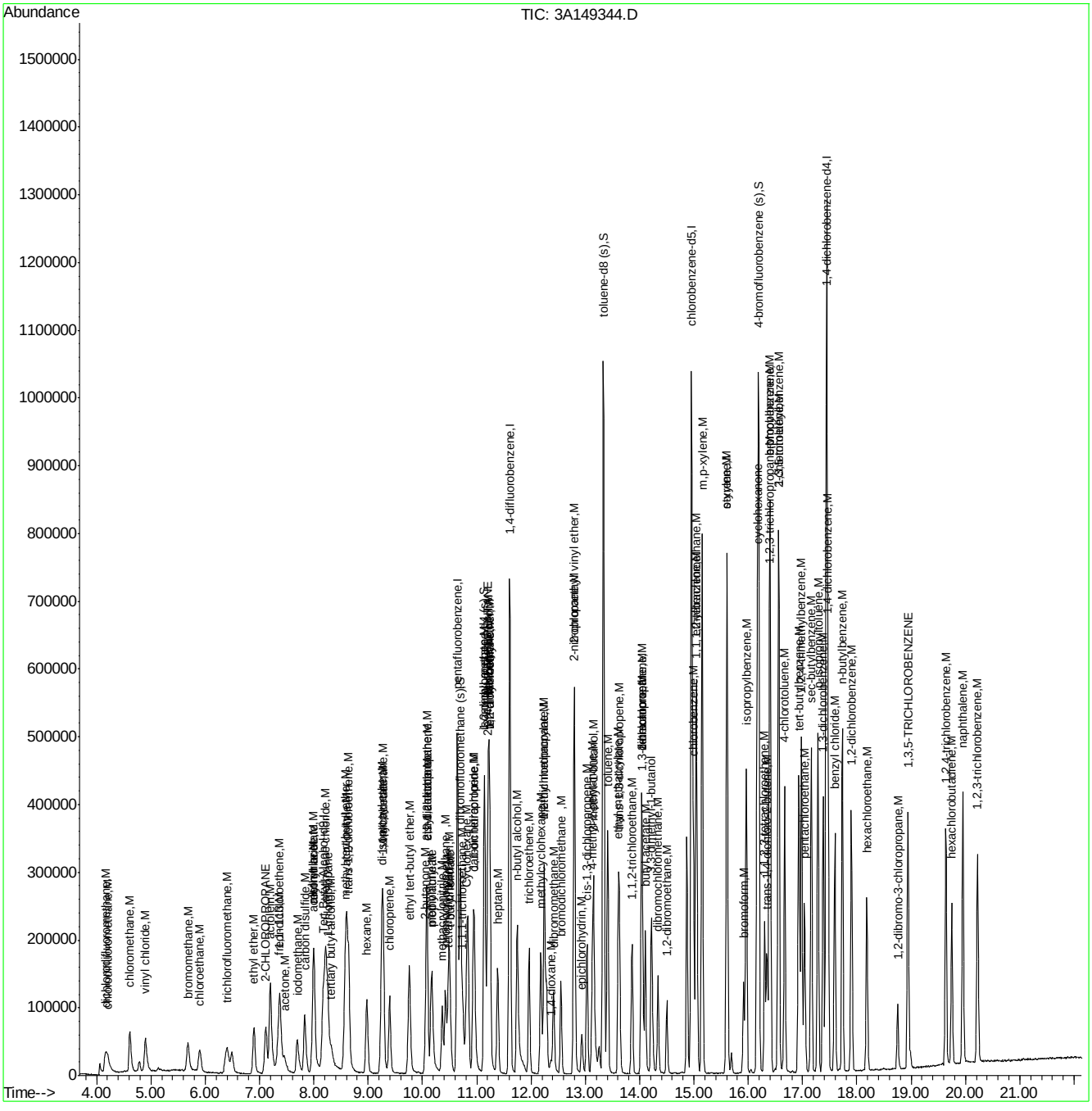
SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149344.D
Acq On : 16 Mar 2016 10:33 am
Operator : tracyk
Sample : cc6446-20
Misc : MS99317,V3A6447,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 16 15:23:02 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 09:12:19 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149367.D
Acq On : 16 Mar 2016 10:13 pm
Operator : tracyk
Sample : cc6446-50
Misc : MS99718,V3A6447,5,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Mar 17 11:38:58 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.18	65	419193	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	464808	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	744650	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	724123	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	401338	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	220602	49.19	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.38%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	258420	47.05	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 94.10%			
79) toluene-d8 (s)	13.33	98	864412	49.55	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 99.10%			
104) 4-bromofluorobenzene (s)	16.19	95	382771	47.53	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 95.06%			

Target Compounds

						Qvalue
2) tertiary butyl alcohol	8.31	59	168141	237.02	ug/L	91
4) 1,4-dioxane	12.37	88	65125	1350.70	ug/L	94
8) chlorodifluoromethane	4.21	51	114240	49.56	ug/L	96
9) dichlorodifluoromethane	4.16	85	225879	53.44	ug/L	99
10) chloromethane	4.61	50	289171	48.74	ug/L	99
11) vinyl chloride	4.90	62	279168	53.84	ug/L	99
12) bromomethane	5.68	96	137793	47.97	ug/L	98
15) 2-CHLOROPROPANE	7.11	43	290290	48.12	ug/L	98
16) chloroethane	5.90	64	153325	51.21	ug/L	99
17) trichlorofluoromethane	6.41	101	277564	57.13	ug/L	98
19) 1-chloropropane	8.26	41	187695	55.44	ug/L	90
20) ethyl ether	6.90	74	113283	49.19	ug/L	96
21) acrolein	7.20	56	597163	599.30	ug/L	99
22) 1,1-dichloroethene	7.38	61	271957	48.42	ug/L	96
23) acetone	7.47	58	26895	50.39	ug/L #	82
24) allyl chloride	8.00	76	109547	47.92	ug/L	94
25) acetonitrile	7.98	40	206327	445.73	ug/L	87
26) iodomethane	7.70	142	298886	51.31	ug/L	100
27) iso-butyl alcohol	11.22	74	61359	487.35	ug/L	96
28) carbon disulfide	7.83	76	551402	45.76	ug/L	99
29) methylene chloride	8.22	84	194174	48.12	ug/L	98
30) methyl acetate	7.99	43	232251	47.13	ug/L	99
31) methyl tert butyl ether	8.58	73	608457	47.24	ug/L	100
32) trans-1,2-dichloroethene	8.64	61	256506	48.29	ug/L	98
33) di-isopropyl ether	9.25	45	674951	50.54	ug/L	98
34) 2-butanone	10.06	72	36968	43.25	ug/L	96
35) 1,1-dichloroethane	9.28	63	333313	48.27	ug/L	99
36) chloroprene	9.39	53	276238	51.49	ug/L	98
37) acrylonitrile	8.61	53	554857	240.01	ug/L	98
38) vinyl acetate	9.27	86	44724	54.68	ug/L	84
39) ethyl tert-butyl ether	9.76	59	632401	52.12	ug/L	99
40) ethyl acetate	10.08	45	42326	47.96	ug/L	70
41) 2,2-dichloropropane	10.08	77	163453	44.74	ug/L	99

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149367.D
Acq On : 16 Mar 2016 10:13 pm
Operator : tracyk
Sample : cc6446-50
Misc : MS99718,V3A6447,5,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Mar 17 11:38:58 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) cis-1,2-dichloroethene	10.09	96	209760	47.84	ug/L		97
43) methylacrylate	10.15	85	40994	49.73	ug/L		98
44) propionitrile	10.17	54	477065	473.74	ug/L		80
45) bromochloromethane	10.42	128	100278	50.95	ug/L		96
46) tetrahydrofuran	10.46	42	107392	44.92	ug/L		99
47) chloroform	10.49	85	213520	46.26	ug/L		97
48) t-butyl formate	10.51	59	214704	52.28	ug/L		96
51) freon 113	7.35	151	118775	54.74	ug/L		93
52) methacrylonitrile	10.36	67	116181	46.74	ug/L		99
53) 1,1,1-trichloroethane	10.74	97	255309	49.97	ug/L		99
54) Cyclohexane	10.81	84	253741	48.58	ug/L	#	79
56) epichlorohydrin	12.93	57	179773	244.01	ug/L		98
57) n-butyl alcohol	11.74	56	540947	2415.22	ug/L		98
58) carbon tetrachloride	10.95	117	247139	51.68	ug/L		98
59) 1,1-dichloropropene	10.94	75	245487	49.28	ug/L		99
61) hexane	8.98	57	223029	48.55	ug/L		96
62) 2,2,4-TRIMETHYLPENTANE	11.21	57	660423	52.25	ug/L		99
63) benzene	11.21	78	758233	47.43	ug/L		98
64) tert-amyl methyl ether	11.23	87	135587	53.08	ug/L		95
65) heptane	11.38	57	135431	51.88	ug/L		99
66) isopropyl acetate	11.14	87	53898	51.84	ug/L	#	82
67) 1,2-dichloroethane	11.23	62	253915	48.29	ug/L		99
69) trichloroethene	11.96	95	193654	48.29	ug/L		100
71) methyl methacrylate	12.24	100	67774	50.92	ug/L		99
72) 2-nitropropane	12.79	41	104241	44.81	ug/L		97
73) 2-chloroethyl vinyl ether	12.80	63	807930	262.07	ug/L		99
74) 1,2-dichloropropane	12.25	63	206689	49.33	ug/L		97
75) dibromomethane	12.41	93	136819	50.56	ug/L		99
76) methylcyclohexane	12.18	83	294690	53.79	ug/L		99
77) bromodichloromethane	12.55	83	282950	48.97	ug/L		100
78) cis-1,3-dichloropropene	13.03	75	350726	50.00	ug/L		100
80) 4-methyl-2-pentanone	13.13	58	128251	49.15	ug/L		95
81) toluene	13.41	91	823191	47.22	ug/L		99
82) 3-methyl-1-butanol	13.15	55	354216	933.09	ug/L		99
83) trans-1,3-dichloropropene	13.63	75	332743	48.47	ug/L		98
84) ethyl methacrylate	13.60	69	333568	47.69	ug/L		98
85) 1,1,2-trichloroethane	13.86	83	177982	48.68	ug/L		100
86) 2-hexanone	14.03	58	127485	48.12	ug/L		99
88) tetrachloroethene	14.03	166	211709	51.39	ug/L		97
90) 1,3-dichloropropane	14.05	76	337262	49.96	ug/L		98
91) butyl acetate	14.10	56	206216	49.88	ug/L		99
92) 3,3-dimethyl-1-butanol	14.22	57	385841	491.07	ug/L		98
93) dibromochloromethane	14.34	129	245907	51.42	ug/L		98
94) 1,2-dibromoethane	14.50	107	230818	50.16	ug/L		99
95) chlorobenzene	14.99	112	557544	50.12	ug/L		99
96) 1,1,1,2-tetrachloroethane	15.05	131	212390	51.54	ug/L		99
97) ethylbenzene	15.04	91	983212	48.65	ug/L		99
98) m,p-xylene	15.15	106	752018	100.72	ug/L		98
99) o-xylene	15.60	91	834617	49.16	ug/L		98
100) styrene	15.61	104	683706	51.39	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149367.D
Acq On : 16 Mar 2016 10:13 pm
Operator : tracyk
Sample : cc6446-50
Misc : MS99718,V3A6447,5,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Mar 17 11:38:58 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
101) bromoform	15.91	173	208206	52.95 ug/L	99
103) isopropylbenzene	15.96	105	1012320	48.69 ug/L	99
105) cyclohexanone	16.17	98	60168	486.00 ug/L	96
106) bromobenzene	16.40	156	275593	49.23 ug/L	96
107) 1,1,2,2-tetrachloroethane	16.30	83	370186	48.69 ug/L	99
108) trans-1,4-dichloro-2-buten	16.34	53	99783	48.76 ug/L	97
109) 1,2,3-trichloropropane	16.38	110	96565	48.14 ug/L	97
110) n-propylbenzene	16.40	91	1219862	48.66 ug/L	100
111) 2-chlorotoluene	16.57	126	249558	48.41 ug/L	97
112) 4-chlorotoluene	16.67	91	782520	46.94 ug/L	99
113) 1,3,5-trimethylbenzene	16.55	105	878580	49.08 ug/L	98
114) tert-butylbenzene	16.93	134	167317	49.94 ug/L	99
115) pentachloroethane	17.03	167	165736	51.13 ug/L	98
116) 1,2,4-trimethylbenzene	16.98	105	909829	49.03 ug/L	99
117) sec-butylbenzene	17.16	105	1126093	49.40 ug/L	99
118) 1,3-dichlorobenzene	17.38	146	544421	51.24 ug/L	99
119) p-isopropyltoluene	17.29	119	948237	49.85 ug/L	99
120) 1,4-dichlorobenzene	17.47	146	535421	50.56 ug/L	99
121) 1,2-dichlorobenzene	17.90	146	519420	50.61 ug/L	99
122) benzyl chloride	17.59	91	771645	50.68 ug/L	100
123) n-butylbenzene	17.73	92	506386	49.71 ug/L	99
124) 1,2-dibromo-3-chloropropan	18.75	75	73611	42.98 ug/L	100
125) 1,3,5-TRICHLOROBENZENE	18.94	180	387911	51.02 ug/L	98
126) 1,2,4-trichlorobenzene	19.64	180	345923	52.31 ug/L	99
127) hexachlorobutadiene	19.75	225	163548	49.37 ug/L	99
128) naphthalene	19.95	128	987990	50.67 ug/L	100
129) 1,2,3-trichlorobenzene	20.22	180	310831	50.77 ug/L	98
130) hexachloroethane	18.18	201	159873	51.78 ug/L	99

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

7.7.13

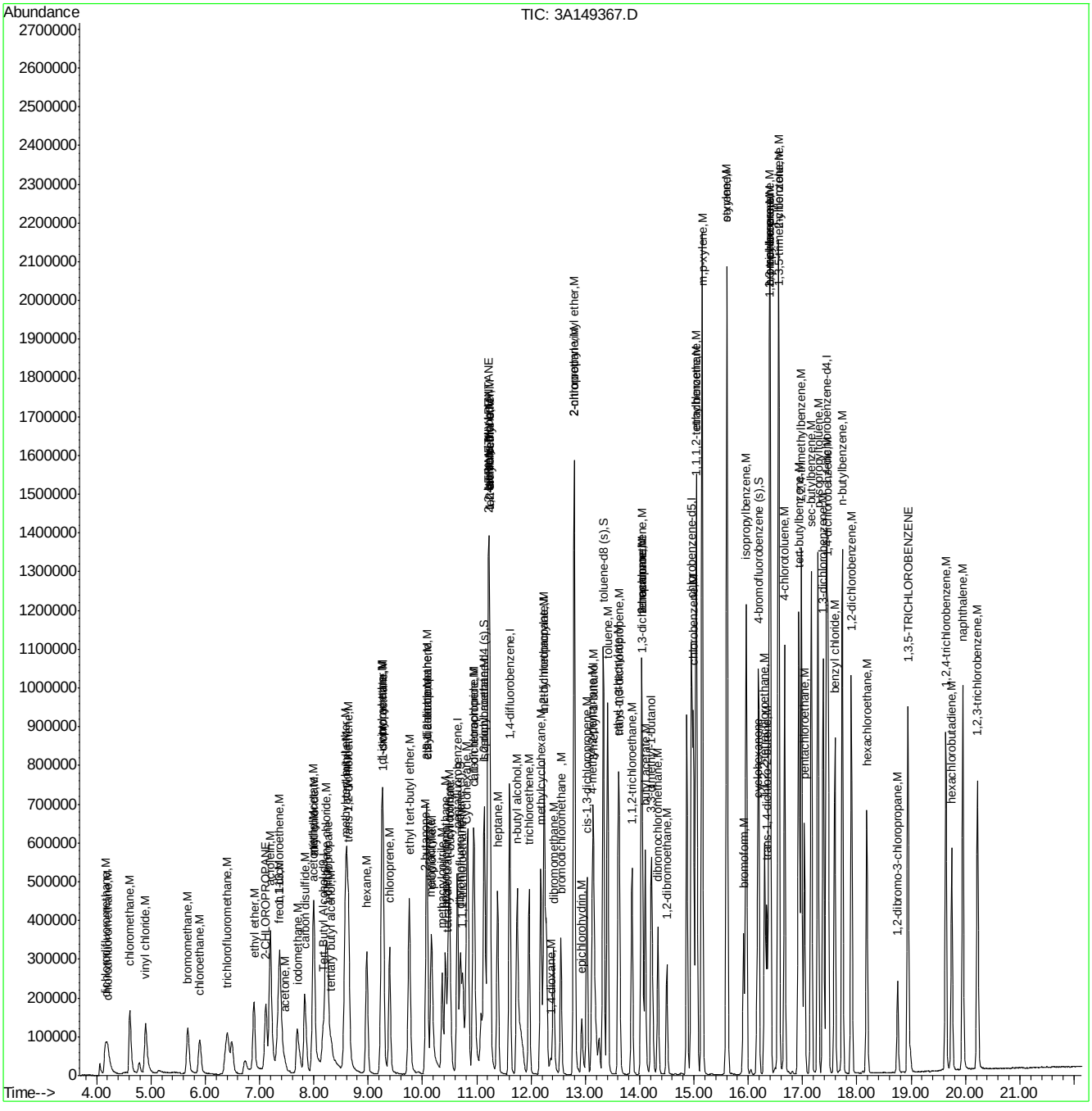
7

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149367.D
Acq On : 16 Mar 2016 10:13 pm
Operator : tracyk
Sample : cc6446-50
Misc : MS99718,V3A6447,5,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Mar 17 11:38:58 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



M3A6446.M Thu Mar 17 11:39:41 2016 ACCUNJ Page: 4

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149423.D
Acq On : 18 Mar 2016 9:08 am
Operator : tracyk
Sample : cc6446-20
Misc : MS99767,V3A6450,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 18 13:11:45 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Mar 17 11:30:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.18	65	480296	500.00	ug/L	0.00
5) pentafluorobenzene	10.64	168	515517	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.61	114	814242	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	774057	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	446200	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.70	113	245719	49.40	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.80%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	290591	47.70	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 95.40%			
79) toluene-d8 (s)	13.33	98	928973	48.70	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 97.40%			
104) 4-bromofluorobenzene (s)	16.19	95	404331	45.16	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 90.32%			

Target Compounds

						Qvalue
2) tertiary butyl alcohol	8.33	59	80998	99.65	ug/L	99
4) 1,4-dioxane	12.37	88	28245	511.28	ug/L	95
8) chlorodifluoromethane	4.20	51	48570	19.00	ug/L	96
9) dichlorodifluoromethane	4.17	85	87891	18.75	ug/L	99
10) chloromethane	4.61	50	110816	16.84	ug/L	100
11) vinyl chloride	4.90	62	105752	18.39	ug/L	95
12) bromomethane	5.68	96	51549	16.18	ug/L	97
15) 2-CHLOROPROPANE	7.12	43	113989	17.04	ug/L	99
16) chloroethane	5.90	64	59219	17.83	ug/L	96
17) trichlorofluoromethane	6.40	101	98558	18.29	ug/L	96
19) 1-chloropropane	8.26	41	73023	19.45	ug/L	96
20) ethyl ether	6.89	74	48791	19.10	ug/L	97
21) acrolein	7.20	56	268824	243.25	ug/L	100
22) 1,1-dichloroethene	7.38	61	111156	17.84	ug/L	98
23) acetone	7.48	58	11711	19.78	ug/L	88
24) allyl chloride	8.00	76	47141	18.59	ug/L	95
25) acetonitrile	7.98	40	95915	186.82	ug/L	94
26) iodomethane	7.69	142	128783	19.94	ug/L	99
27) iso-butyl alcohol	11.22	74	25475	182.44	ug/L #	86
28) carbon disulfide	7.83	76	243681	18.23	ug/L	99
29) methylene chloride	8.22	84	82129	18.35	ug/L	96
30) methyl acetate	7.99	43	103848	19.00	ug/L	95
31) methyl tert butyl ether	8.58	73	260857	18.26	ug/L #	55
32) trans-1,2-dichloroethene	8.64	61	109329	18.56	ug/L	95
33) di-isopropyl ether	9.25	45	275472	18.60	ug/L	98
34) 2-butanone	10.07	72	16185	17.07	ug/L #	55
35) 1,1-dichloroethane	9.28	63	140308	18.32	ug/L	98
36) chloroprene	9.39	53	112065	18.84	ug/L	100
37) acrylonitrile	8.61	53	242649	94.64	ug/L	99
38) vinyl acetate	9.27	86	18882	20.82	ug/L	63
39) ethyl tert-butyl ether	9.76	59	257482	19.13	ug/L	99
40) ethyl acetate	10.08	45	16958	17.33	ug/L #	46
41) 2,2-dichloropropane	10.08	77	74961	18.50	ug/L	99

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149423.D
Acq On : 18 Mar 2016 9:08 am
Operator : tracyk
Sample : cc6446-20
Misc : MS99767,V3A6450,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 18 13:11:45 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Mar 17 11:30:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
42) cis-1,2-dichloroethene	10.09	96	89024	18.31 ug/L	97
43) methylacrylate	10.17	85	17593	19.24 ug/L #	56
44) propionitrile	10.18	54	207135	185.46 ug/L	89
45) bromochloromethane	10.42	128	43629	19.99 ug/L	92
46) tetrahydrofuran	10.46	42	45639	17.21 ug/L	98
47) chloroform	10.49	85	88789	17.34 ug/L	99
48) t-butyl formate	10.51	59	84808	18.62 ug/L	93
51) freon 113	7.36	151	53780	22.35 ug/L	99
52) methacrylonitrile	10.36	67	49370	17.91 ug/L	99
53) 1,1,1-trichloroethane	10.74	97	106525	18.80 ug/L	98
54) Cyclohexane	10.81	84	104414	18.02 ug/L #	78
56) epichlorohydrin	12.93	57	71769	89.09 ug/L	99
57) n-butyl alcohol	11.75	56	224402	916.28 ug/L	97
58) carbon tetrachloride	10.96	117	102354	19.57 ug/L	98
59) 1,1-dichloropropene	10.94	75	101610	18.66 ug/L	96
61) hexane	8.98	57	98041	19.52 ug/L	98
62) 2,2,4-TRIMETHYLPENTANE	11.20	57	271475	19.64 ug/L	97
63) benzene	11.21	78	323554	18.51 ug/L	97
64) tert-amyl methyl ether	11.24	87	55889	20.01 ug/L	95
65) heptane	11.39	57	54745	19.18 ug/L	98
66) isopropyl acetate	11.14	87	22176	19.51 ug/L #	81
67) 1,2-dichloroethane	11.23	62	112757	19.61 ug/L	97
69) trichloroethene	11.96	95	81270	18.53 ug/L	98
71) methyl methacrylate	12.24	100	27727	19.05 ug/L	95
72) 2-nitropropane	12.79	41	44372	17.44 ug/L	99
73) 2-chloroethyl vinyl ether	12.80	63	308794	91.60 ug/L	99
74) 1,2-dichloropropane	12.24	63	84112	18.36 ug/L	95
75) dibromomethane	12.41	93	57716	19.50 ug/L	95
76) methylcyclohexane	12.18	83	119167	19.89 ug/L	95
77) bromodichloromethane	12.55	83	118417	18.74 ug/L	100
78) cis-1,3-dichloropropene	13.03	75	143783	18.75 ug/L	97
80) 4-methyl-2-pentanone	13.13	58	52768	18.50 ug/L	96
81) toluene	13.41	91	334965	17.57 ug/L	100
82) 3-methyl-1-butanol	13.15	55	147936	356.39 ug/L	99
83) trans-1,3-dichloropropene	13.63	75	136655	18.21 ug/L	99
84) ethyl methacrylate	13.60	69	131044	17.13 ug/L	96
85) 1,1,2-trichloroethane	13.86	83	71795	17.96 ug/L	98
86) 2-hexanone	14.03	58	50426	17.41 ug/L	99
88) tetrachloroethene	14.03	166	88058	20.00 ug/L	95
90) 1,3-dichloropropane	14.05	76	136903	18.97 ug/L	96
91) butyl acetate	14.10	56	77768	17.60 ug/L	99
92) 3,3-dimethyl-1-butanol	14.22	57	162953	194.01 ug/L	99
93) dibromochloromethane	14.34	129	101390	19.83 ug/L	98
94) 1,2-dibromoethane	14.50	107	93822	19.07 ug/L	99
95) chlorobenzene	14.99	112	225728	18.98 ug/L	97
96) 1,1,1,2-tetrachloroethane	15.05	131	87962	19.97 ug/L	99
97) ethylbenzene	15.04	91	398255	18.43 ug/L	99
98) m,p-xylene	15.15	106	303740	38.05 ug/L	94
99) o-xylene	15.60	91	335072	18.46 ug/L	99
100) styrene	15.61	104	270858	19.04 ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149423.D
Acq On : 18 Mar 2016 9:08 am
Operator : tracyk
Sample : cc6446-20
Misc : MS99767,V3A6450,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 18 13:11:45 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Mar 17 11:30:00 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
101) bromoform	15.91	173	84564	20.12 ug/L	97
103) isopropylbenzene	15.96	105	406939	17.60 ug/L	99
105) cyclohexanone	16.17	98	59288	430.74 ug/L	95
106) bromobenzene	16.40	156	114662	18.42 ug/L	94
107) 1,1,2,2-tetrachloroethane	16.30	83	152086	17.99 ug/L	100
108) trans-1,4-dichloro-2-buten	16.34	53	39480	17.35 ug/L	98
109) 1,2,3-trichloropropane	16.38	110	40978	18.37 ug/L	100
110) n-propylbenzene	16.40	91	491844	17.65 ug/L	98
111) 2-chlorotoluene	16.57	126	104808	18.29 ug/L	92
112) 4-chlorotoluene	16.67	91	322857	17.42 ug/L	98
113) 1,3,5-trimethylbenzene	16.55	105	358393	18.01 ug/L	98
114) tert-butylbenzene	16.93	134	67963	18.24 ug/L	97
115) pentachloroethane	17.03	167	69654	19.33 ug/L	99
116) 1,2,4-trimethylbenzene	16.98	105	378200	18.33 ug/L	98
117) sec-butylbenzene	17.16	105	463000	18.27 ug/L	100
118) 1,3-dichlorobenzene	17.38	146	228409	19.34 ug/L	98
119) p-isopropyltoluene	17.29	119	395418	18.70 ug/L	99
120) 1,4-dichlorobenzene	17.47	146	228120	19.37 ug/L	97
121) 1,2-dichlorobenzene	17.90	146	220869	19.36 ug/L	98
122) benzyl chloride	17.59	91	323451	19.11 ug/L	99
123) n-butylbenzene	17.73	92	209600	18.51 ug/L	98
124) 1,2-dibromo-3-chloropropan	18.75	75	33134	17.40 ug/L	98
125) 1,3,5-TRICHLOROBENZENE	18.94	180	170803	20.21 ug/L	100
126) 1,2,4-trichlorobenzene	19.64	180	153477	20.87 ug/L	98
127) hexachlorobutadiene	19.75	225	72422	19.67 ug/L	97
128) naphthalene	19.95	128	442830	20.43 ug/L	99
129) 1,2,3-trichlorobenzene	20.22	180	142618	20.95 ug/L	94
130) hexachloroethane	18.18	201	66605	19.40 ug/L	98

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

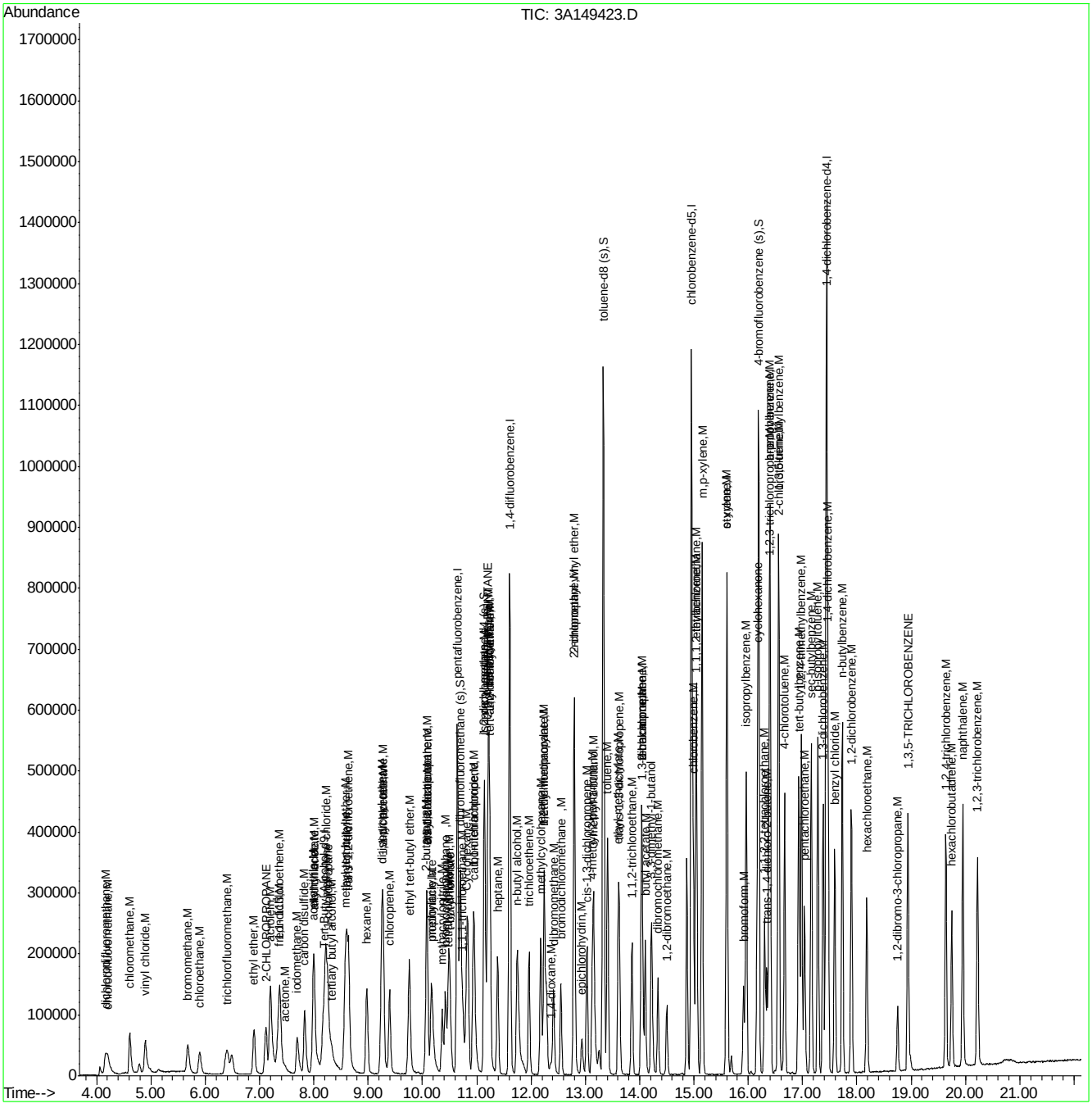
7.7.14

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149423.D
Acq On : 18 Mar 2016 9:08 am
Operator : tracyk
Sample : cc6446-20
Misc : MS99767,V3A6450,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 18 13:11:45 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Thu Mar 17 11:30:00 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149474.D
Acq On : 21 Mar 2016 9:42 am
Operator : tracyk
Sample : cc6446-20
Misc : MS99820,V3A6452,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 21 13:34:37 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	524291	500.00	ug/L	-0.01
5) pentafluorobenzene	10.64	168	572143	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.60	114	928853	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	910907	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	501083	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.69	113	276097	50.01	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 100.02%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	345141	51.05	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 102.10%			
79) toluene-d8 (s)	13.33	98	1065879	48.98	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 97.96%			
104) 4-bromofluorobenzene (s)	16.18	95	475318	47.27	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 94.54%			

Target Compounds

						Qvalue
2) tertiary butyl alcohol	8.30	59	89816	101.23	ug/L	98
4) 1,4-dioxane	12.36	88	34098	565.43	ug/L	94
8) chlorodifluoromethane	4.20	51	67054	23.63	ug/L	95
9) dichlorodifluoromethane	4.17	85	98202	18.88	ug/L	100
10) chloromethane	4.62	50	120517	16.50	ug/L	98
11) vinyl chloride	4.90	62	110790	17.36	ug/L	97
12) bromomethane	5.68	96	52149	14.75	ug/L	93
15) 2-CHLOROPROPANE	7.11	43	124366	16.75	ug/L	98
16) chloroethane	5.90	64	62651	17.00	ug/L	97
17) trichlorofluoromethane	6.41	101	111053	18.57	ug/L	97
19) 1-chloropropane	8.25	41	70720	16.97	ug/L #	94
20) ethyl ether	6.89	74	53794	18.98	ug/L	94
21) acrolein	7.19	56	237225	193.41	ug/L	99
22) 1,1-dichloroethene	7.38	61	128472	18.58	ug/L	98
23) acetone	7.45	58	14248	21.69	ug/L	89
24) allyl chloride	7.99	76	54891	19.51	ug/L	96
25) acetonitrile	7.98	40	107585	188.81	ug/L #	84
26) iodomethane	7.69	142	140552	19.60	ug/L	98
27) iso-butyl alcohol	11.21	74	28616	184.65	ug/L #	86
28) carbon disulfide	7.83	76	273874	18.46	ug/L	99
29) methylene chloride	8.21	84	90877	18.29	ug/L	96
30) methyl acetate	7.98	43	105526	17.40	ug/L	98
31) methyl tert butyl ether	8.57	73	284435	17.94	ug/L	99
32) trans-1,2-dichloroethene	8.63	61	121178	18.53	ug/L	100
33) di-isopropyl ether	9.24	45	296735	18.05	ug/L	96
34) 2-butanone	10.06	72	17894	17.01	ug/L #	85
35) 1,1-dichloroethane	9.27	63	158898	18.69	ug/L	98
36) chloroprene	9.39	53	123301	18.67	ug/L	98
37) acrylonitrile	8.60	53	256835	90.26	ug/L	98
38) vinyl acetate	9.27	86	20418	20.28	ug/L	78
39) ethyl tert-butyl ether	9.75	59	275934	18.47	ug/L	98
40) ethyl acetate	10.07	45	19193	17.67	ug/L #	74
41) 2,2-dichloropropane	10.08	77	81356	18.09	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149474.D
Acq On : 21 Mar 2016 9:42 am
Operator : tracyk
Sample : cc6446-20
Misc : MS99820,V3A6452,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 21 13:34:37 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
42) cis-1,2-dichloroethene	10.08	96	96169	17.82	ug/L		98
43) methylacrylate	10.16	85	19847	19.56	ug/L	#	40
44) propionitrile	10.17	54	222448	179.46	ug/L		86
45) bromochloromethane	10.42	128	47517	19.61	ug/L		94
46) tetrahydrofuran	10.45	42	50878	17.29	ug/L		96
47) chloroform	10.48	85	100280	17.65	ug/L		100
48) t-butyl formate	10.51	59	92900	18.38	ug/L		94
51) freon 113	7.35	151	57939	21.69	ug/L		97
52) methacrylonitrile	10.36	67	54715	17.88	ug/L		96
53) 1,1,1-trichloroethane	10.74	97	119494	19.00	ug/L		97
54) Cyclohexane	10.81	84	114850	17.86	ug/L		95
56) epichlorohydrin	12.93	57	80990	88.13	ug/L		95
57) n-butyl alcohol	11.74	56	245106	877.33	ug/L		98
58) carbon tetrachloride	10.95	117	114220	19.15	ug/L		98
59) 1,1-dichloropropene	10.93	75	113656	18.29	ug/L		99
61) hexane	8.98	57	107907	18.83	ug/L		96
62) 2,2,4-TRIMETHYLPENTANE	11.20	57	298199	18.91	ug/L		99
63) benzene	11.21	78	361099	18.11	ug/L		100
64) tert-amyl methyl ether	11.23	87	59397	18.64	ug/L		97
65) heptane	11.38	57	61657	18.93	ug/L		97
66) isopropyl acetate	11.13	87	24337	18.76	ug/L	#	90
67) 1,2-dichloroethane	11.23	62	126435	19.28	ug/L		99
69) trichloroethene	11.96	95	91416	18.27	ug/L		98
71) methyl methacrylate	12.24	100	32781	19.75	ug/L		95
72) 2-nitropropane	12.78	41	52935	18.24	ug/L		95
73) 2-chloroethyl vinyl ether	12.79	63	362089	94.16	ug/L		98
74) 1,2-dichloropropane	12.24	63	96957	18.55	ug/L		99
75) dibromomethane	12.41	93	64831	19.21	ug/L		99
76) methylcyclohexane	12.17	83	130013	19.03	ug/L		99
77) bromodichloromethane	12.55	83	132402	18.37	ug/L		99
78) cis-1,3-dichloropropene	13.02	75	165074	18.87	ug/L		96
80) 4-methyl-2-pentanone	13.12	58	58793	18.06	ug/L		96
81) toluene	13.41	91	393327	18.09	ug/L		100
82) 3-methyl-1-butanol	13.14	55	158000	333.67	ug/L		98
83) trans-1,3-dichloropropene	13.62	75	161138	18.82	ug/L		99
84) ethyl methacrylate	13.60	69	155998	17.88	ug/L		95
85) 1,1,2-trichloroethane	13.85	83	83065	18.21	ug/L		99
86) 2-hexanone	14.03	58	59596	18.04	ug/L		98
88) tetrachloroethene	14.03	166	99005	19.10	ug/L		99
90) 1,3-dichloropropane	14.05	76	162171	19.10	ug/L		97
91) butyl acetate	14.10	56	87795	16.88	ug/L		94
92) 3,3-dimethyl-1-butanol	14.21	57	165681	167.63	ug/L		98
93) dibromochloromethane	14.33	129	115798	19.25	ug/L		99
94) 1,2-dibromoethane	14.50	107	110041	19.01	ug/L		99
95) chlorobenzene	14.98	112	264072	18.87	ug/L		99
96) 1,1,1,2-tetrachloroethane	15.05	131	100431	19.37	ug/L		97
97) ethylbenzene	15.04	91	458697	18.04	ug/L		98
98) m,p-xylene	15.15	106	353361	37.62	ug/L		99
99) o-xylene	15.60	91	387428	18.14	ug/L		100
100) styrene	15.61	104	317587	18.98	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149474.D
Acq On : 21 Mar 2016 9:42 am
Operator : tracyk
Sample : cc6446-20
Misc : MS99820,V3A6452,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 21 13:34:37 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
101) bromoform	15.91	173	96979	19.61 ug/L	99
103) isopropylbenzene	15.96	105	470344	18.12 ug/L	99
105) cyclohexanone	16.16	98	63704	412.13 ug/L	96
106) bromobenzene	16.40	156	132325	18.93 ug/L	94
107) 1,1,2,2-tetrachloroethane	16.29	83	172917	18.22 ug/L	100
108) trans-1,4-dichloro-2-buten	16.34	53	43984	17.22 ug/L	97
109) 1,2,3-trichloropropane	16.38	110	46174	18.44 ug/L	98
110) n-propylbenzene	16.39	91	570534	18.23 ug/L	98
111) 2-chlorotoluene	16.56	126	119123	18.51 ug/L	95
112) 4-chlorotoluene	16.67	91	366817	17.62 ug/L	98
113) 1,3,5-trimethylbenzene	16.55	105	409445	18.32 ug/L	97
114) tert-butylbenzene	16.93	134	79430	18.99 ug/L	98
115) pentachloroethane	17.03	167	78738	19.45 ug/L	98
116) 1,2,4-trimethylbenzene	16.98	105	425525	18.37 ug/L	98
117) sec-butylbenzene	17.15	105	525203	18.45 ug/L	99
118) 1,3-dichlorobenzene	17.37	146	253554	19.12 ug/L	99
119) p-isopropyltoluene	17.28	119	444460	18.71 ug/L	99
120) 1,4-dichlorobenzene	17.46	146	255249	19.30 ug/L	99
121) 1,2-dichlorobenzene	17.89	146	245034	19.12 ug/L	99
122) benzyl chloride	17.59	91	353246	18.58 ug/L	100
123) n-butylbenzene	17.73	92	236893	18.62 ug/L	98
124) 1,2-dibromo-3-chloropropan	18.74	75	35163	16.45 ug/L	98
125) 1,3,5-TRICHLOROBENZENE	18.94	180	186232	19.62 ug/L	99
126) 1,2,4-trichlorobenzene	19.63	180	165249	20.01 ug/L	98
127) hexachlorobutadiene	19.74	225	78603	19.01 ug/L	97
128) naphthalene	19.95	128	480853	19.75 ug/L	99
129) 1,2,3-trichlorobenzene	20.22	180	152344	19.93 ug/L	100
130) hexachloroethane	18.18	201	75413	19.56 ug/L	99

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

7.7.15

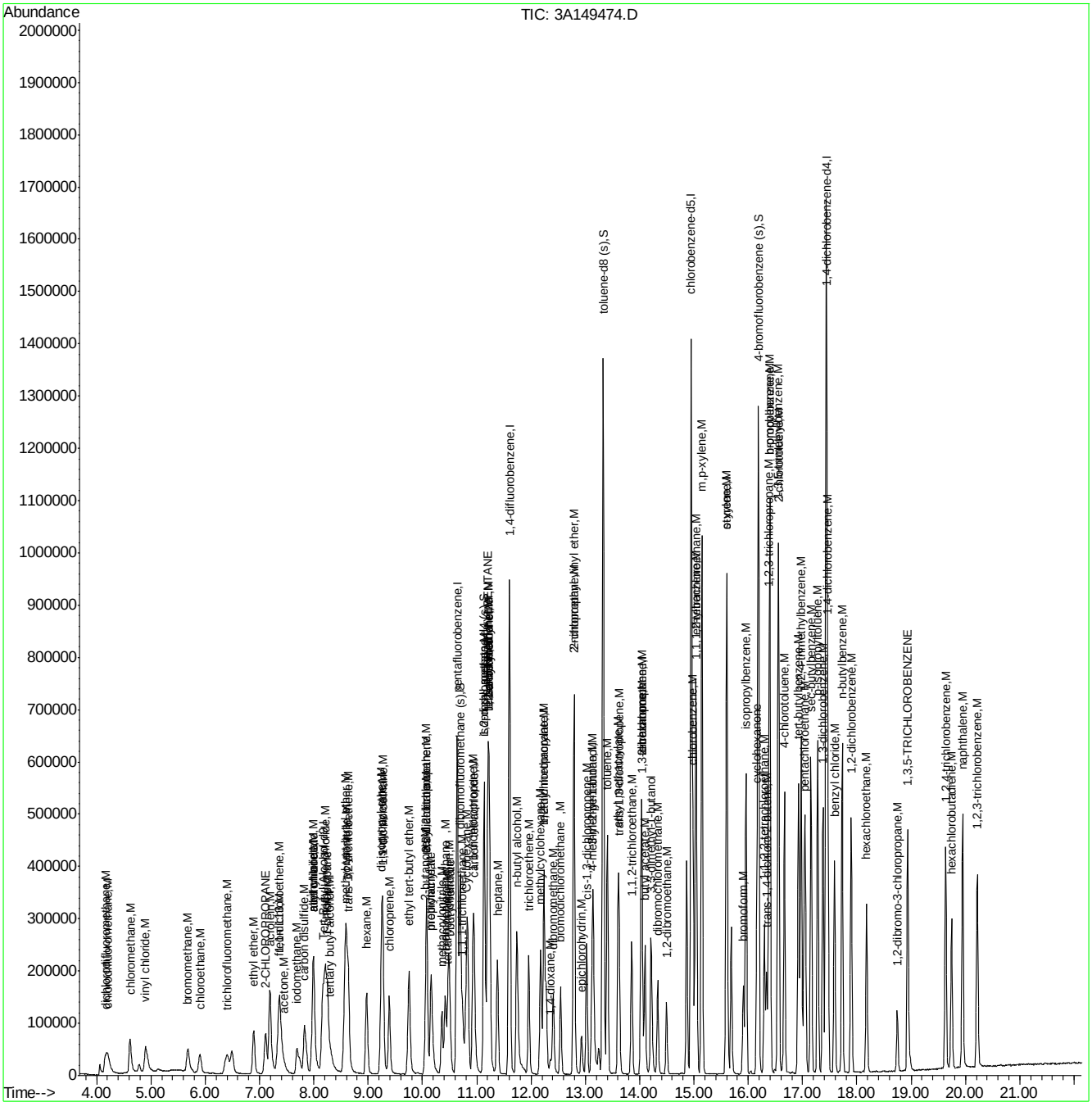
7

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149474.D
Acq On : 21 Mar 2016 9:42 am
Operator : tracyk
Sample : cc6446-20
Misc : MS99820,V3A6452,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 21 13:34:37 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149475.D
Acq On : 21 Mar 2016 10:30 am
Operator : tracyk
Sample : cc6446-1
Misc : MS99820,V3A6452,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 21 13:35:43 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.17	65	433035	500.00	ug/L	-0.01
5) pentafluorobenzene	10.64	168	556924	50.00	ug/L	0.00
55) 1,4-difluorobenzene	11.60	114	896820	50.00	ug/L	0.00
87) chlorobenzene-d5	14.95	117	845139	50.00	ug/L	0.00
102) 1,4-dichlorobenzene-d4	17.44	152	482644	50.00	ug/L	0.00

System Monitoring Compounds

49) dibromofluoromethane (s)	10.69	113	276024	51.36	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.72%			
50) 1,2-dichloroethane-d4 (s)	11.14	65	336635	51.15	ug/L	0.00
Spiked Amount 50.000	Range 73 - 122		Recovery = 102.30%			
79) toluene-d8 (s)	13.33	98	1007976	47.98	ug/L	0.00
Spiked Amount 50.000	Range 84 - 119		Recovery = 95.96%			
104) 4-bromofluorobenzene (s)	16.18	95	444339	45.88	ug/L	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 91.76%			

Target Compounds						Qvalue
12) bromomethane	5.68	96	3514	1.02	ug/L #	71

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

7.7.16

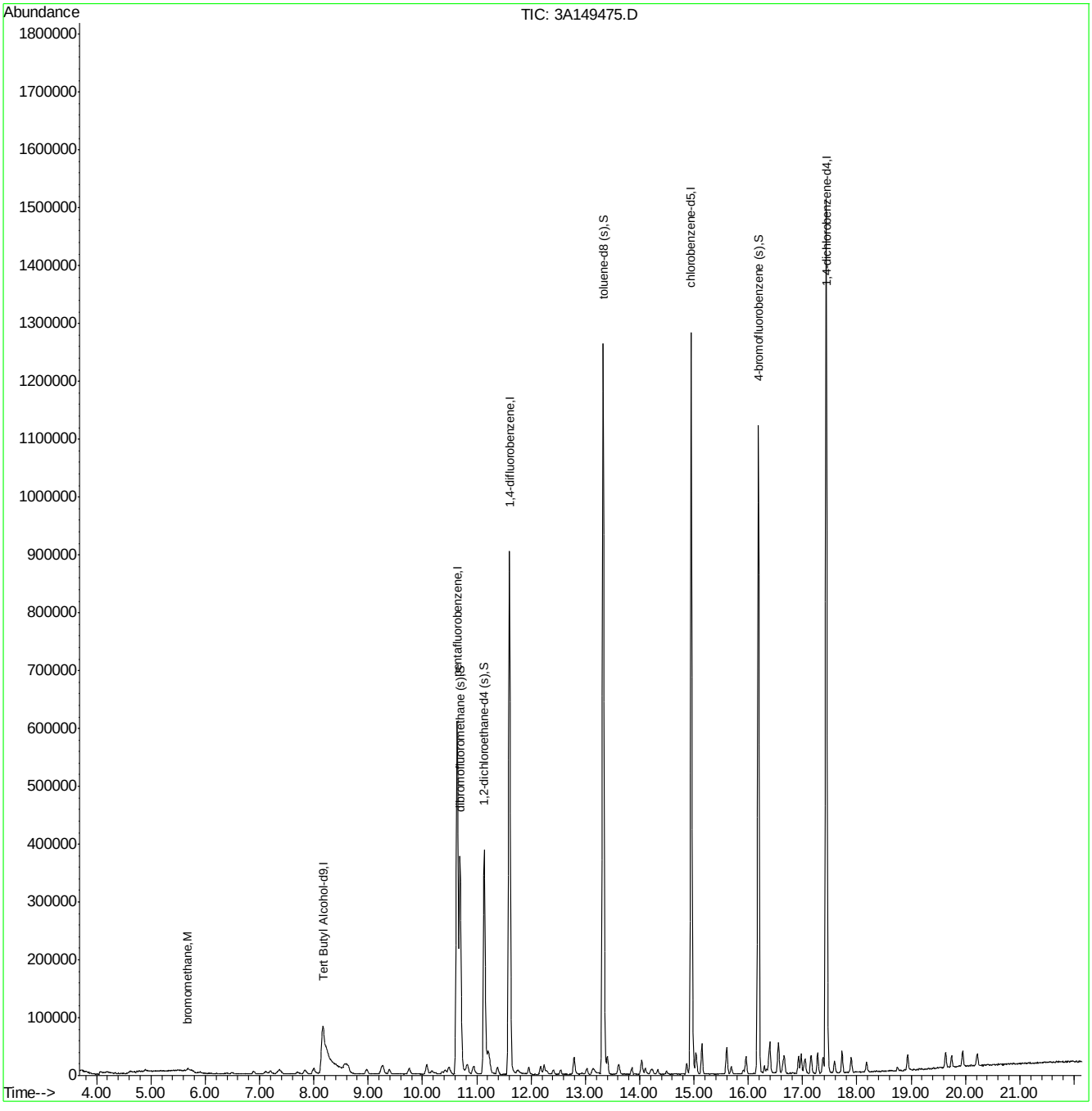
7

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 3A149475.D
Acq On : 21 Mar 2016 10:30 am
Operator : tracyk
Sample : cc6446-1
Misc : MS99820,V3A6452,5,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 21 13:35:43 2016
Quant Method : C:\MSDCHEM\1\METHODS\M3A6446.M
Quant Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Mar 16 11:16:12 2016
Response via : Initial Calibration



M3A6446.M Mon Mar 21 13:36:19 2016 ACCUNJ Page: 2

SGS ACCUTEST JC16204

ACCUTEST.

VOLATILE ANALYSIS LOG

Batch ID: ~~V2A6446~~ V3A6446 TK 3/17

Print Analyst Name: Tracy Karpinski

Analyst Signature: TKarpinski

Columns: 7B602A (100m x .25mm x 1.4µm)

Method V8260C

Initial Cal. Method ~~M2A6446~~ TK 3/17 M3A6446

Date: 3/15/16

Standard Data

Lot #	Description	Conc.
VO15-2284	33 A 27	100ppm
VO15-2284	37 B 18	100ppm
VO15-2284	40 C 10	100ppm
VO15-2284	32 Acro 13	1000ppm
VO15-2284	302 IS	250/2500ppm

Standard Data

Lot #	Description	Conc.
VO15-2284	31 EXTA 20	100ppm
VO15-2284	7 EXTB 34	100ppm
VO15-2284	38 EXTC 7	100ppm
VO15-2258	41 EXTAcro 9	1000ppm
VO15-2284	41 Hexane 3	100ppm

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044. TK 3/15

Supervisor Signature: [signature] Date: 3/16/2016

R	Data File	Sample ID	Test	MTX	Vial #	ALS #	Samp. Amt (ml or g)	MOH amt. (ul)	Secondary dilution	L+	IS	SU	Status (Data)	Comments	pH* <2
	3A149327	BFB											ok	3:11 pm	
	149328	1C6446-0.2	8260C initial	AQ			5						ok	2µl of A.B.C.Acro/ 1000 mL FV DI	
	149329	1C6446-0.5	✓	AQ			5						ok	5µl of A.B.C.Acro/ 1000 mL FV DI	
	149330	1C6446-1	✓	AQ			5						ok ~~HG~~	10µl of A.B.C.Acro/ 1000 mL FV DI ZS 3/16/2016	
	149331	1C6446-2	✓	AQ			5						ok ~~HG~~	2µl of A.B.C.Acro/ 100 mL FV DI Y.L 3/16/2016	
	149332	1C6446-5	✓	AQ			5						ok	5µl of A.B.C.Acro/ 100 mL FV DI	
	149333	1C6446-10	✓	AQ			5						ok	10µl of A.B.C.Acro/ 100 mL FV DI	
	149334	1C6446-20	✓	AQ			5						ok	20µl of A.B.C.Acro/ 100 mL FV DI	
	149335	~~1C64~~ 1C6446-50 TK 3/15	✓	AQ			5						ok	25µl of A.B.C.Acro/ 50 mL FV DI	
	149336	1C6446-100	✓	AQ			5						ok	50µl of A.B.C.Acro/ 50 mL FV DI	
	149337	1C6446-200	✓	AQ			5						ok	100µl of A.B.C.Acro/ 50 mL FV DI	
	149338	IB											clip		
	149339	IB											clip		
	149340	1C6446-50	✓	AQ			5				✓		ok	25µl of EXTA EXTAcro EXTB Hexane/50 mL EXTC FV DI	
	149341	IB													
			~~RR~~ Initial											YL 3/16/2016	

MTX = Matrix Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt. = volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR001-9
Rev. Date: 2/14/2007

SGS ACCUTEST JC16204

ACCUTEST

VOLATILE ANALYSIS LOG

Batch ID: V3A6447

Print Analyst Name: Tracy Karpinski

Analyst Signature: TKarpinski

Columns: 7B1624 (60m x .25mm x 1.4 µm)

Method V8260C

Initial Cal. Method M3A6446

Date: 3/16/16

Standard Data

Lot #	Description			Conc.
V015-2284	33	A	27	100 ppm
V015-2284	37	B	18	100 ppm
V015-2284	46	C	10	100 ppm
V015-2284	32	ACRO	13	1000 ppm
V015-2284	2	IIS		250/500 ppm

Standard Data

Lot #	Description			Conc.
V015-2284	31	EXTA	20	100 ppm
V015-2284	7	EXTB	34	100 ppm
V015-2284	38	EXTC	7	100 ppm
V015-2284	50	EXTACRO	7	1000 ppm
V015-2284	41	Hexane	3	100 ppm

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

210315 | pH paper **Supervisor Signature:** _____ **Date:** 3/17/2016

R	Data File	Sample ID	Test	MTX	Vial #	ALS #	Samp. Amt (ml or g)	MOH amt. (ul)	Secondary dilution	L+	IS	SU	Status (Data)	Comments	pH* < 2
	3A149342	BFB											ok	9:22 Am	
	149343	CC10446-20											NOT USED		
	149344	CC10446-20											ok	#23,34↑ Ketone	
	149345	IB									✓	✓	clip		
	149346	MB1								✓	✓	✓	ok		
	149347	BS									✓	✓	ok		TR
	149348	IB									✓	✓	clip		
	149349	JC16254-7	99718 PAUGTMB	G W	1		7.5/50		20X		✓	✓	ok		✓
	149350	JC16254-6	✓	G W	1		10/50		5X		✓	✓	ok		✓
	149351	JC16254-1	✓	G W	1		5		1X		✓	✓	ok	MATRIX may %	✓
	149352	JC16254-2	✓	G W	1		5		1X		✓	✓	ok		✓
	149353	JC16254-3	✓	G W	1		5		1X		✓	✓	ok		✓
	149354	JC16254-7MS	✓	G W	1		7.5/50		20X		✓	✓	ok		✓
	149355	JC16254-7MSD	✓	G W	1		7.5/50		20X		✓	✓	ok		✓
	149356	JC16254-7	✓	G W	1		250µl/50		200X		✓	✓	ok		✓
	149357	JC16254-6	✓	G W	1		1/50		50X		✓	✓	NOT NEEDED		✓
	149358	JC16189-2	99678 VC	F B	2		5		1X		✓	✓	ok		✓

MTX = Matrix Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt.= volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR001-9
Rev. Date: 2/14/2007

ACCUTEST

VOLATILE ANALYSIS LOG

Batch ID: V3A6447

Print Analyst Name: Tracy Karpinski

Date: 3/16/16

Analyst Signature: TKarpinski

Columns: 7B602A (60m x .25mm x 1.4µm)

Method V8260C

Initial Cal. Method M3A6446

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
	see pg. 71	

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:** 3/17/2016

R	Data File	Sample ID	Test	MTX	Vial #	ALS #	Samp. Amt (ml or g)	MOH amt. (ul)	Secondary dilution	L+	IS	SU	Status (Data)	Comments	pH* < 2
	3A149359	JC16214-1	99694 2NG36GWr4	WTB	2		5		1X		✓	✓	HG	Acetone hit	✓
	149360	JC16214-2	✓	GW	2		5		1X	✓	✓	✓	ok		✓
	149361	JC16214-3	✓	GW	2		5		1X	✓	✓	✓	ok	9:13PM	✓
	149362	JC16182-1	99669 PADFTMBMTBE, TCE	WW	8		5		1X				not run		
	149363	16195-1 JC19 TK 3/16	99678 TCL20+	GW	1		5		1X				not run		
	149364	JC16254-4	99718 PAUGTMB	GW	1		5		1X				not run		
	149365	JC16254-5	✓	GW	1		5		1X				not run		
	149366	BFB2											ok	9:43PM TK 3/17	
	149367	CC6446-50											ok		
	149368	IB											ok		
	149369	MB2									✓		ok		
	149370	JC16204-5	99687 TCL20	WTB	3		5		1X		✓	✓	HG ~~ok~~ KK	Sample drain out 1X NO Data	✓
	149371	JC16204-6	✓	WTB	3		5		1X		✓	✓	ok		✓
	149372	JC16204-7	✓	WTB	2		5		1X		✓	✓	ok		✓
	149373	JC16204-1	✓	GW	3		5		1X		✓	✓	HG ~~ok~~	KL 3/17/2016 Acetone hit	✓
	149374	JC16204-2	✓	GW	3		5		1X		✓	✓	HG ~~ok~~ KK	Sample drain out 1X NO Data	✓
	149375	JC16204-3	✓	GW	3		5		1X		✓	✓	ok		✓
	149376	JC16204-4	✓	GW	3		5		1X		✓	✓	ok		✓

MTX = Matrix Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt.= volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR001-9
Rev. Date: 2/14/2007

ACCUTEST.

VOLATILE ANALYSIS LOG

Batch ID: V3A6450

Print Analyst Name: Tracy Karpinski

Analyst Signature: TK

Columns: ZB624 (60 m x .25mm x 1.4µm)

Method V8260C

Initial Cal. Method M3A6446

Date: 3/18/16

Standard Data

Lot #	Description			Conc.
VOIS-2284	33	A	36	100 ppm
VOIS-2284	37	B	13	100 ppm
VOIS-2284	63	C	7	100 ppm
VOIS-2284	32	Acro	38	1000 ppm
VOIS-2284	2	IS		20/200 ppm

Standard Data

Lot #	Description			Conc.
VOIS-2284	31	EXHA	21	100 ppm
VOIS-2284	54	EXHB	4	100 ppm
VOIS-2284	55	EXHC	1	100 ppm
VOIS-2284	50	EXHAcro	3	1000 ppm
VOIS-2284	41	Hexane	9	100 ppm

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

246315 pH paper **Supervisor Signature:** [signature] **Date:** 3/21/2016

R	Data File	Sample ID	Test	MTX	Vial #	ALS #	Samp. Amt (ml or g)	MOH amt. (ul)	Secondary dilution	L+	IS	SU	Status (Data)	Comments	pH* <2
	3A149422	BFB											ok	8:32 Am	
	149423	CC16440-20									✓	✓	ok	10µl of A.B.C.Acro/50 mL FV DI	
	149424	IB									✓	✓	clip		
	149425	MB1								✓	✓	✓	ok		
	149426	BS									✓	✓	ok	23µl of EXHA EXHAcro EXHB Hexane EXHC /50 mL FV DI	
	149427	IB									✓	✓	clip		
R	149428	JC16204-5	99687 TCLO	WEG	7		5		1X		✓	✓	ok		✓
R	149429	JC16204-2	✓	GW	7		5		1X		✓	✓	ok		✓
R	149430	JC16204-1	✓	GW	6		5		1X		✓	✓	ok		✓
	149431	JC16325-1	99798 TCLO+	GW	3		5		1X	✓	✓	✓	ok		✓
	149432	JC16325-2	✓	GW	3		5		1X	✓	✓	✓	ok		✓
	149433	JC16325-4	✓	GW	4		5		1X	✓	✓	✓	ok		✓
R	149434	JC16346-3	99767 TCLO+	GW	2		5		1X	✓	✓	✓	ok/DL	+ 3A149406 ~~RR-10X~~	✓
R	149435	JC16346-5	✓	GW	2		5		1X	✓	✓	✓	ok/DL	+ 3A149418 ~~RR-10X~~ 3/18/2016	✓
	149436	JC16325-1MS	99798 TCLO+	GW	4		5		1X		✓	✓	ok		✓
	149437	IB											clip		
	149438	JC16325-20	✓	GW	4		5		1X		✓	✓	HG	Sample drained out	✓

MTX = Matrix Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt. = volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR001-9
Rev. Date: 2/14/2007

ACCUTEST

VOLATILE ANALYSIS LOG

Batch ID: V3A6450

Print Analyst Name: Tracy Karpinski

Analyst Signature: TKarpinski

Columns: 7B624 (60m x .25mm x 1.4µm)

Method V8260C

Initial Cal. Method M3A6446

Date: 3/18/16

Standard Data

Lot #	Description	Conc.
	A	
	B TK 3/18	
	C	
	Acro	
	IS	

Standard Data

Lot #	Description	Conc.
	TK EXA	
	3/18 EXB JL-L DG	
	EXC	
	EXACRO	
	Hexane	

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:** 3/21/2016

R	Data File	Sample ID	Test	MTX	Vial #	ALS #	Samp. Amt (ml or g)	MOH amt. (ul)	Secondary dilution	L+	IS	SU	Status (Data)	Comments	pH* <2
R	149439	JC16254-1	99718 PAVGTMB	GW	2		5		1x		✓	✓	ok		✓
R	149440	JC16347-4	99768 TCLZ01	GW	2		5		1x	✓	✓	✓	ok		✓
	149441	JC16325-5	99798 TCLZ01 TK 3/18	WTB	4		5		1x	✓	✓	✓	ok		✓
	149442	JC16325-6	✓	WTB	1		5		1x	✓	✓	✓	ok		✓
	149443	JC16325-3	✓	GW	4		5		1x	✓	✓	✓	ok	7:59 pm	✓

TK 3/21

MTX = Matrix Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt.= volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR001-9
Rev. Date: 2/14/2007

ACCUTEST.

VOLATILE ANALYSIS LOG

Batch ID: V3A6450/V3A6452

Print Analyst Name: Tracy Karpinski

Date: 3/21/16

Analyst Signature: TKarpinski

Columns: 78624 (60m x .25mm x 1.4µm)

Method V8260C

Initial Cal. Method ~~M3~~ TK 3/21 M3A6496

Standard Data

Lot #	Description			Conc.
V015-2284	33	A	36	100ppm
V015-2284	37	B	13	100ppm
V015-2284	53	C	7	100ppm
V015-2284	32	Acro	38	1000ppm
V015-2284	2	IS		250/2500ppm

Standard Data

Lot #	Description			Conc.
V015-2284	31	EXTA	26	100ppm
V015-2284	54	EXTB	5	100ppm
V015-2284	55	EXTC	5	100ppm
V015-2284	50	EXTAcro	7	1000ppm
V015-2284	41	Hexane	11	100ppm

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

216315 pH paper **Supervisor Signature:** _____ **Date:** 3/22/2016

R	Data File	Sample ID	Test	MTX	Vial #	ALS #	Samp. Amt (ml or g)	MOH amt. (ul)	Secondary dilution	L+	IS	SU	Status (Data)	Comments	pH* <2
	3A 149473	BFB											ok	9:06 Am	
	149474	CC16446-20									✓		ok	10µl of A.B.C Acro/50 mL N DI #12	
	149475	CC16446-1									✓		ok	1µl of A.B.C Acro/100 mL N DI	
	149476	MB2									✓		ok		
	149477	BS2									✓		ok	25µl of EXTA EXTAcro EXTB Hexane EXTC /50 mL N DI	
	149478	IB									✓		dup		
	149479	JC16325-3Dup	99798 Tu 20	GW	3		5		1X		✓		ok		✓
	149480	MB1									✓		ok		
	149481	BS									✓		ok	25µl of EXTA EXTAcro EXTB Hexane EXTC /50 mL N DI 2 other f.	
	149482	IB									✓		dup		
	149483	JC16492-2	99928 SL2	GW	9		5		1X		✓		ok		✓
	149484	16492 TK 3/21 JC16492-4	✓	GW	4		5/50		10X		✓		MG/RP	O/D 1X	✓
	149485	JC16492-1	✓	GW	4		5		1X		✓		ok		✓
	149486	JC16492-3	✓	GW	3		5		1X		✓		ok		✓
	149487	JC16492-2MS	✓	GW	7		5		1X		✓		ok	25µl of EXTA EXTAcro EXTB Hexane EXTC /50 mL N	(R)
	149488	JC16492-2MSD	✓	GW	8		5		1X		✓		ok		✓
	149489	IB									✓		dup		

MTX = Matrix Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt.= volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR001-9
Rev. Date: 2/14/2007

ACCUTEST

VOLATILE ANALYSIS LOG

Batch ID: V3A6452

Print Analyst Name: Tracy Karpinski

Analyst Signature: TKarpinski

Columns: TB624 (60m x .25mm x 1.4µm)

Method V8260C

Initial Cal. Method M3A6446

Date: 3/21/16

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
	See pg. 91	

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:** 3/22/2016

R	Data File	Sample ID	Test	MTX	Vial #	ALS #	Samp. Amt (ml or g)	MOH amt. (ul)	Secondary dilution	L+	IS	SU	Status (Data)	Comments	pH* <2
R	3A149490	JC16397-4	99823 BTXm	GW	2		10/50		5X		✓	✓	ok		✓
R	149491	JC16301-3	99741 BTXm, 1357TMB, 124TMB	GW	5		5		1X		✓	✓	ok		✓
	149492	JC16492-7	99928 SL2	WEB	3		5		1X		✓	✓	ok		✓
	149493	JC16492-8 TK 3/21	99928 SL1	WTB	~~4~~ 2 TM 3/21		5		1X		✓	✓	ok		✓
	149494	JC16492-9	99928 SL2	WTB	2		5		1X		✓	✓	ok		✓
R	149495	JC16392-1	99820 TL20+	GW	5		5		1X	✓	✓	✓	ok	8:39 pm	✓
	149496	BFB2											ok	9:09 pm	
	149497	CC16446-50									✓	✓	ok	25µl of A.B.C.Acro/50 mL RV DI #41 #10,346	
	149498	TB											clr		
	149498A	CC16446AB TK 3/21									✓	✓	ok	1µl of A.B.C.Acro/100mL RV DI	
	149499	CC16446-10									✓	✓	ok	10µl of A.B.C.Acro/100 mL RV DI	
	149499A	~~MB2~~ TB TK 3/21									✓	✓	clr		
	149500	MB2	99924	SEB						✓	✓	✓	ok		
	149500A	JC16559-12	TL11+		1		5		1X	✓	✓	✓	ok		✓
	149501	JC16546-1	99934 TL11+	GW	7		5		1X	✓	✓	✓	ok		✓
	149502	JC16546-2	✓	GW	7		5		1X	✓	✓	✓	ok		✓
	149503	JC16492-6	99928 SL1	GW	4		5		1X		✓	✓	ok		✓
	149504	JC16492-5	✓	GW	4		100µl/50		500X		✓	✓	ok	2:40 pm	✓
														TK 3/22	

MTX = Matrix Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt.= volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR001-9
Rev. Date: 2/14/2007

GC/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: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP92132-MB1	2P57277.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497

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

JC16204-1, JC16204-2, JC16204-3, JC16204-4, JC16204-5, JC16204-6, JC16204-1R, JC16204-2R, JC16204-3R, JC16204-4R, JC16204-5R, JC16204-6R

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	0.93	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.4	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.3	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	10	1.1	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	5.0	0.87	ug/l	
95-48-7	2-Methylphenol	ND	2.0	0.82	ug/l	
	3&4-Methylphenol	ND	2.0	0.67	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.4	ug/l	
100-02-7	4-Nitrophenol	ND	10	1.1	ug/l	
87-86-5	Pentachlorophenol	ND	5.0	1.4	ug/l	
108-95-2	Phenol	ND	2.0	0.31	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	1.4	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.5	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.4	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.29	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.24	ug/l	
98-86-2	Acetophenone	ND	2.0	0.28	ug/l	
120-12-7	Anthracene	ND	1.0	0.25	ug/l	
1912-24-9	Atrazine	ND	2.0	0.42	ug/l	
100-52-7	Benzaldehyde	ND	5.0	0.34	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.32	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.33	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.32	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.41	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.37	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.37	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.27	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.26	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.30	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.23	ug/l	
86-74-8	Carbazole	ND	1.0	0.29	ug/l	
105-60-2	Caprolactam	ND	2.0	0.43	ug/l	
218-01-9	Chrysene	ND	1.0	0.35	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.26	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.34	ug/l	

Method Blank Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP92132-MB1	2P57277.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497

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

JC16204-1, JC16204-2, JC16204-3, JC16204-4, JC16204-5, JC16204-6, JC16204-1R, JC16204-2R, JC16204-3R, JC16204-4R, JC16204-5R, JC16204-6R

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.28	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.26	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	0.53	ug/l	
123-91-1	1,4-Dioxane	ND	1.0	0.72	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.37	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.79	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.29	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.31	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.77	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.23	ug/l	
86-73-7	Fluorene	ND	1.0	0.29	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.42	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.36	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	0.29	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.22	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.38	ug/l	
78-59-1	Isophorone	ND	2.0	0.29	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	0.26	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.29	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.21	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.24	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.34	ug/l	
91-20-3	Naphthalene	ND	1.0	0.28	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.46	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.31	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.29	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.23	ug/l	
129-00-0	Pyrene	ND	1.0	0.34	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.36	ug/l	

Method Blank Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP92132-MB1	2P57277.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497

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

JC16204-1, JC16204-2, JC16204-3, JC16204-4, JC16204-5, JC16204-6, JC16204-1R, JC16204-2R, JC16204-3R, JC16204-4R, JC16204-5R, JC16204-6R

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	50%	14-88%
4165-62-2	Phenol-d5	34%	10-110%
118-79-6	2,4,6-Tribromophenol	91%	39-149%
4165-60-0	Nitrobenzene-d5	83%	32-128%
321-60-8	2-Fluorobiphenyl	102%	35-119%
1718-51-0	Terphenyl-d14	91%	10-126%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	1.33	26	ug/l	J
	system artifact/aldol-condensation	2.63	6.9	ug/l	J
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP92132A-MB1	4P15654.D	1	03/17/16	JJ	03/16/16	OP92132A	E4P805

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

JC16204-1, JC16204-2, JC16204-3, JC16204-4, JC16204-5, JC16204-6

CAS No.	Compound	Result	RL	MDL	Units	Q
91-20-3	Naphthalene	ND	0.10	0.013	ug/l	
123-91-1	1,4-Dioxane	ND	0.10	0.053	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	89%	24-125%
321-60-8	2-Fluorobiphenyl	88%	19-127%
1718-51-0	Terphenyl-d14	91%	10-119%

Blank Spike Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP92132-BS1	2P57278.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497

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

JC16204-1, JC16204-2, JC16204-3, JC16204-4, JC16204-5, JC16204-6, JC16204-1R, JC16204-2R, JC16204-3R, JC16204-4R, JC16204-5R, JC16204-6R

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-57-8	2-Chlorophenol	50	41.7	83	48-106
59-50-7	4-Chloro-3-methyl phenol	50	43.2	86	49-113
120-83-2	2,4-Dichlorophenol	50	44.3	89	49-111
105-67-9	2,4-Dimethylphenol	50	39.8	80	42-117
51-28-5	2,4-Dinitrophenol	100	108	108	37-132
534-52-1	4,6-Dinitro-o-cresol	50	45.1	90	49-119
95-48-7	2-Methylphenol	50	39.7	79	42-103
	3&4-Methylphenol	50	36.5	73	39-110
88-75-5	2-Nitrophenol	50	42.5	85	49-114
100-02-7	4-Nitrophenol	50	29.7	59	16-95
87-86-5	Pentachlorophenol	50	31.6	63	30-136
108-95-2	Phenol	50	22.3	45	10-110
58-90-2	2,3,4,6-Tetrachlorophenol	50	45.1	90	47-118
95-95-4	2,4,5-Trichlorophenol	50	49.2	98	55-116
88-06-2	2,4,6-Trichlorophenol	50	49.6	99	56-115
83-32-9	Acenaphthene	50	47.9	96	54-112
208-96-8	Acenaphthylene	50	44.6	89	49-99
98-86-2	Acetophenone	50	42.7	85	52-111
120-12-7	Anthracene	50	43.6	87	58-112
1912-24-9	Atrazine	50	49.3	99	62-134
100-52-7	Benzaldehyde	50	49.9	100	40-129
56-55-3	Benzo(a)anthracene	50	42.5	85	44-120
50-32-8	Benzo(a)pyrene	50	38.0	76	41-127
205-99-2	Benzo(b)fluoranthene	50	42.2	84	41-129
191-24-2	Benzo(g,h,i)perylene	50	38.8	78	34-128
207-08-9	Benzo(k)fluoranthene	50	42.9	86	42-122
101-55-3	4-Bromophenyl phenyl ether	50	44.2	88	54-121
85-68-7	Butyl benzyl phthalate	50	42.8	86	20-143
92-52-4	1,1'-Biphenyl	50	47.8	96	51-106
91-58-7	2-Chloronaphthalene	50	42.8	86	48-104
106-47-8	4-Chloroaniline	50	13.6	27	10-110
86-74-8	Carbazole	50	45.2	90	56-110
105-60-2	Caprolactam	50	12.3	25	10-110
218-01-9	Chrysene	50	41.8	84	45-125
111-91-1	bis(2-Chloroethoxy)methane	50	43.7	87	47-117
111-44-4	bis(2-Chloroethyl)ether	50	45.3	91	48-115

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP92132-BS1	2P57278.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497

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

JC16204-1, JC16204-2, JC16204-3, JC16204-4, JC16204-5, JC16204-6, JC16204-1R, JC16204-2R, JC16204-3R, JC16204-4R, JC16204-5R, JC16204-6R

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-60-1	bis(2-Chloroisopropyl)ether	50	36.3	73	44-112
7005-72-3	4-Chlorophenyl phenyl ether	50	45.4	91	50-117
121-14-2	2,4-Dinitrotoluene	50	50.4	101	57-122
606-20-2	2,6-Dinitrotoluene	50	51.2	102	58-122
91-94-1	3,3'-Dichlorobenzidine	100	42.2	42	10-110
123-91-1	1,4-Dioxane	50	17.3	35	10-110
53-70-3	Dibenzo(a,h)anthracene	50	39.5	79	36-130
132-64-9	Dibenzofuran	50	48.9	98	55-108
84-74-2	Di-n-butyl phthalate	50	45.0	90	45-123
117-84-0	Di-n-octyl phthalate	50	44.4	89	37-144
84-66-2	Diethyl phthalate	50	48.5	97	23-130
131-11-3	Dimethyl phthalate	50	47.4	95	10-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	43.7	87	36-138
206-44-0	Fluoranthene	50	46.3	93	58-116
86-73-7	Fluorene	50	48.7	97	57-113
118-74-1	Hexachlorobenzene	50	44.2	88	49-122
87-68-3	Hexachlorobutadiene	50	32.6	65	24-112
77-47-4	Hexachlorocyclopentadiene	100	53.4	53	14-119
67-72-1	Hexachloroethane	50	32.6	65	31-107
193-39-5	Indeno(1,2,3-cd)pyrene	50	39.8	80	34-128
78-59-1	Isophorone	50	44.5	89	52-119
90-12-0	1-Methylnaphthalene	50	40.8	82	46-103
91-57-6	2-Methylnaphthalene	50	40.9	82	45-107
88-74-4	2-Nitroaniline	50	48.4	97	51-127
99-09-2	3-Nitroaniline	50	23.2	46	10-110
100-01-6	4-Nitroaniline	50	49.5	99	50-112
91-20-3	Naphthalene	50	39.3	79	40-102
98-95-3	Nitrobenzene	50	42.0	84	44-116
621-64-7	N-Nitroso-di-n-propylamine	50	40.8	82	49-117
86-30-6	N-Nitrosodiphenylamine	50	44.1	88	51-113
85-01-8	Phenanthrene	50	45.2	90	56-111
129-00-0	Pyrene	50	45.6	91	47-120
95-94-3	1,2,4,5-Tetrachlorobenzene	50	42.7	85	36-114

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP92132-BS1	2P57278.D	1	03/16/16	SD	03/16/16	OP92132	E2P2497

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

JC16204-1, JC16204-2, JC16204-3, JC16204-4, JC16204-5, JC16204-6, JC16204-1R, JC16204-2R, JC16204-3R, JC16204-4R, JC16204-5R, JC16204-6R

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	61%	14-88%
4165-62-2	Phenol-d5	43%	10-110%
118-79-6	2,4,6-Tribromophenol	91%	39-149%
4165-60-0	Nitrobenzene-d5	85%	32-128%
321-60-8	2-Fluorobiphenyl	103%	35-119%
1718-51-0	Terphenyl-d14	92%	10-126%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP92132A-BS12	4P15655.D	1	03/17/16	JJ	03/16/16	OP92132A	E4P805

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

JC16204-1, JC16204-2, JC16204-3, JC16204-4, JC16204-5, JC16204-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
91-20-3	Naphthalene	1	0.784	78	40-119
123-91-1	1,4-Dioxane	1	0.517	52	20-160

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	86%	24-125%
321-60-8	2-Fluorobiphenyl	85%	19-127%
1718-51-0	Terphenyl-d14	95%	10-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP92132-MS	2P57297.D	1	03/17/16	SD	03/16/16	OP92132	E2P2497
OP92132-MSD	2P57298.D	1	03/17/16	SD	03/16/16	OP92132	E2P2497
JC16170-8	2P57292.D	1	03/17/16	SD	03/16/16	OP92132	E2P2497
JC16170-8	2P57310.D	5	03/17/16	RL	03/16/16	OP92132	E2P2498

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

JC16204-1, JC16204-2, JC16204-3, JC16204-4, JC16204-5, JC16204-6, JC16204-1R, JC16204-2R, JC16204-3R, JC16204-4R, JC16204-5R, JC16204-6R

CAS No.	Compound	JC16170-8 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		100	80.0	80	100	81.5	82	2	49-110/20
59-50-7	4-Chloro-3-methyl phenol	ND		100	81.1	81	100	82.0	82	1	44-121/18
120-83-2	2,4-Dichlorophenol	ND		100	81.9	82	100	82.1	82	0	42-120/19
105-67-9	2,4-Dimethylphenol	21.2		100	99.2	78	100	101	80	2	33-132/23
51-28-5	2,4-Dinitrophenol	ND		200	183	92	200	29.6	15* [a]	144* [b]	21-145/26
534-52-1	4,6-Dinitro-o-cresol	ND		100	83.0	83	100	65.4	65	24	25-134/27
95-48-7	2-Methylphenol	14.0		100	86.6	72	100	88.2	74	2	47-112/18
	3&4-Methylphenol	16.6		100	86.9	70	100	89.4	73	3	44-113/19
88-75-5	2-Nitrophenol	ND		100	77.8	78	100	78.7	79	1	45-118/20
100-02-7	4-Nitrophenol	ND		100	93.1	93	100	74.9	75	22	23-144/28
87-86-5	Pentachlorophenol	ND		100	98.9	99	100	72.4	72	31* [b]	25-151/25
108-95-2	Phenol	ND		100	62.2	62	100	61.4	61	1	22-100/22
58-90-2	2,3,4,6-Tetrachlorophenol	ND		100	99.4	99	100	95.5	96	4	44-122/21
95-95-4	2,4,5-Trichlorophenol	ND		100	93.0	93	100	91.5	92	2	51-124/20
88-06-2	2,4,6-Trichlorophenol	ND		100	94.7	95	100	97.5	98	3	53-120/21
83-32-9	Acenaphthene	391 [d]		100	429	0* [c]	100	461	12* [c]	7	52-120/23
208-96-8	Acenaphthylene	2.8		100	91.1	91	100	91.9	92	1	50-101/22
98-86-2	Acetophenone	2.2		100	79.9	78	100	81.4	79	2	31-141/23
120-12-7	Anthracene	23.4		100	93.4	70	100	92.2	69	1	54-117/22
1912-24-9	Atrazine	ND		100	63.2	63	100	85.3	85	30* [b]	42-152/23
100-52-7	Benzaldehyde	ND		100	83.4	83	100	106	106	24	10-164/30
56-55-3	Benzo(a)anthracene	8.7		100	88.1	79	100	85.2	77	3	40-123/24
50-32-8	Benzo(a)pyrene	2.7		100	77.9	75	100	77.8	75	0	41-127/25
205-99-2	Benzo(b)fluoranthene	3.9		100	77.1	73	100	80.6	77	4	39-127/27
191-24-2	Benzo(g,h,i)perylene	0.81	J	100	83.9	83	100	79.1	78	6	34-128/28
207-08-9	Benzo(k)fluoranthene	1.5		100	80.3	79	100	75.7	74	6	39-122/26
101-55-3	4-Bromophenyl phenyl ether	ND		100	86.8	87	100	87.3	87	1	51-124/23
85-68-7	Butyl benzyl phthalate	ND		100	85.1	85	100	83.1	83	2	21-146/28
92-52-4	1,1'-Biphenyl	56.4		100	131	75	100	134	78	2	27-142/23
91-58-7	2-Chloronaphthalene	ND		100	90.2	90	100	91.1	91	1	51-109/23
106-47-8	4-Chloroaniline	ND		100	12.5	13	100	17.4	17	33	10-110/55
86-74-8	Carbazole	100 [d]		100	185	78	100	194	87	5	52-116/22
105-60-2	Caprolactam	ND		100	43.1	43	100	38.0	38	13	10-106/34
218-01-9	Chrysene	8.9		100	89.7	81	100	82.8	74	8	41-128/24
111-91-1	bis(2-Chloroethoxy)methane	ND		100	78.9	79	100	80.2	80	2	46-120/24
111-44-4	bis(2-Chloroethyl)ether	ND		100	85.2	85	100	85.5	86	0	42-123/28

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP92132-MS	2P57297.D	1	03/17/16	SD	03/16/16	OP92132	E2P2497
OP92132-MSD	2P57298.D	1	03/17/16	SD	03/16/16	OP92132	E2P2497
JC16170-8	2P57292.D	1	03/17/16	SD	03/16/16	OP92132	E2P2497
JC16170-8	2P57310.D	5	03/17/16	RL	03/16/16	OP92132	E2P2498

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

JC16204-1, JC16204-2, JC16204-3, JC16204-4, JC16204-5, JC16204-6, JC16204-1R, JC16204-2R, JC16204-3R, JC16204-4R, JC16204-5R, JC16204-6R

CAS No.	Compound	JC16170-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-60-1	bis(2-Chloroisopropyl)ether	ND		100	63.5	64	100	63.6	64	0	41-117/25
7005-72-3	4-Chlorophenyl phenyl ether	ND		100	90.6	91	100	93.4	93	3	48-121/21
121-14-2	2,4-Dinitrotoluene	ND		100	91.2	91	100	90.9	91	0	54-123/27
606-20-2	2,6-Dinitrotoluene	ND		100	96.3	96	100	97.2	97	1	55-125/26
91-94-1	3,3'-Dichlorobenzidine	ND		200	5.1	3* [a]	200	68.6	34	172* [b]	10-107/47
123-91-1	1,4-Dioxane	ND		100	76.2	76	100	78.9	79	3	10-119/31
53-70-3	Dibenzo(a,h)anthracene	ND		100	82.8	83	100	79.8	80	4	35-130/27
132-64-9	Dibenzofuran	229 [d]		100	275	13* [c]	100	294	32* [c]	7	53-112/22
84-74-2	Di-n-butyl phthalate	ND		100	85.1	85	100	85.5	86	0	38-129/23
117-84-0	Di-n-octyl phthalate	ND		100	78.7	79	100	78.1	78	1	35-145/26
84-66-2	Diethyl phthalate	ND		100	89.3	89	100	91.4	91	2	16-136/30
131-11-3	Dimethyl phthalate	ND		100	89.9	90	100	91.8	92	2	10-143/39
117-81-7	bis(2-Ethylhexyl)phthalate	ND		100	90.4	90	100	82.5	83	9	34-141/28
206-44-0	Fluoranthene	67.1		100	117	50	100	117	50	0	47-123/24
86-73-7	Fluorene	160 [d]		100	212	27* [a]	100	230	45* [a]	8	56-117/22
118-74-1	Hexachlorobenzene	ND		100	85.1	85	100	88.9	89	4	46-125/24
87-68-3	Hexachlorobutadiene	ND		100	67.1	67	100	66.8	67	0	26-121/24
77-47-4	Hexachlorocyclopentadiene	ND		200	111	56	200	99.6	50	11	10-133/31
67-72-1	Hexachloroethane	ND		100	66.7	67	100	67.4	67	1	35-111/26
193-39-5	Indeno(1,2,3-cd)pyrene	0.83	J	100	86.0	85	100	82.7	82	4	32-130/30
78-59-1	Isophorone	ND		100	83.1	83	100	84.1	84	1	47-126/23
90-12-0	1-Methylnaphthalene	ND		100	352	352* [a]	100	361	361* [a]	3	34-124/25
91-57-6	2-Methylnaphthalene	72.6		100	79.1	7* [a]	100	81.3	9* [a]	3	34-123/24
88-74-4	2-Nitroaniline	ND		100	96.1	96	100	102	102	6	46-137/23
99-09-2	3-Nitroaniline	ND		100	29.7	30	100	33.9	34	13	10-110/50
100-01-6	4-Nitroaniline	ND		100	72.0	72	100	86.6	87	18	38-118/25
91-20-3	Naphthalene	379 [d]		100	184	0* [c]	100	197	0* [c]	7	30-121/23
98-95-3	Nitrobenzene	ND		100	80.5	81	100	80.3	80	0	35-130/25
621-64-7	N-Nitroso-di-n-propylamine	ND		100	73.8	74	100	73.8	74	0	45-123/22
86-30-6	N-Nitrosodiphenylamine	ND		100	94.5	95	100	96.8	97	2	46-123/24
85-01-8	Phenanthrene	271 [d]		100	214	0* [c]	100	222	0* [c]	4	48-121/23
129-00-0	Pyrene	45.3		100	113	68	100	107	62	5	43-124/26
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		100	89.5	90	100	89.6	90	0	25-142/24

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP92132-MS	2P57297.D	1	03/17/16	SD	03/16/16	OP92132	E2P2497
OP92132-MSD	2P57298.D	1	03/17/16	SD	03/16/16	OP92132	E2P2497
JC16170-8	2P57292.D	1	03/17/16	SD	03/16/16	OP92132	E2P2497
JC16170-8	2P57310.D	5	03/17/16	RL	03/16/16	OP92132	E2P2498

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

JC16204-1, JC16204-2, JC16204-3, JC16204-4, JC16204-5, JC16204-6, JC16204-1R, JC16204-2R, JC16204-3R, JC16204-4R, JC16204-5R, JC16204-6R

CAS No.	Surrogate Recoveries	MS	MSD	JC16170-8	JC16170-8	Limits
367-12-4	2-Fluorophenol	66%	68%	49%	44%	14-88%
4165-62-2	Phenol-d5	61%	61%	39%	35%	10-110%
118-79-6	2,4,6-Tribromophenol	95%	96%	99%	84%	39-149%
4165-60-0	Nitrobenzene-d5	79%	81%	83%	79%	32-128%
321-60-8	2-Fluorobiphenyl	94%	98%	97%	86%	35-119%
1718-51-0	Terphenyl-d14	88%	81%	85%	73%	10-126%

(a) Outside control limits due to matrix interference.
(b) Analytical precision exceeds in-house control limits.
(c) Outside control limits due to high level in sample relative to spike amount.
(d) Result is from Run #2.

8.3.1

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* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP92132A-MS	4P15656.D	1	03/17/16	JJ	03/16/16	OP92132A	E4P805
OP92132A-MSD	4P15657.D	1	03/17/16	JJ	03/16/16	OP92132A	E4P805
JC16106-9	4P15685.D	1	03/18/16	AD	03/16/16	OP92132A	E4P806

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

JC16204-1, JC16204-2, JC16204-3, JC16204-4, JC16204-5, JC16204-6

CAS No.	Compound	JC16106-9 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
91-20-3	Naphthalene	ND		2	2.54	127	2	2.35	118	8	23-140/36
123-91-1	1,4-Dioxane	ND		2	1.08	54	2	0.999	50	8	20-160/30

CAS No.	Surrogate Recoveries	MS	MSD	JC16106-9	Limits
4165-60-0	Nitrobenzene-d5	87%	82%	76%	24-125%
321-60-8	2-Fluorobiphenyl	89%	82%	74%	19-127%
1718-51-0	Terphenyl-d14	82%	79%	69%	10-119%

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample: E2P2490-DFTPP
Lab File ID: 2P57135.D
Instrument ID: GCMS2P
Injection Date: 03/11/16
Injection Time: 08:50

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	24963	52.1		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	22481	47.0		Pass
70	Less than 2.0% of mass 69	211	0.44	(0.94) [a]	Pass
127	40.0 - 60.0% of mass 198	24029	50.2		Pass
197	Less than 1.0% of mass 198	224	0.47		Pass
198	Base peak, 100% relative abundance	47868	100.0		Pass
199	5.0 - 9.0% of mass 198	3330	6.96		Pass
275	10.0 - 30.0% of mass 198	10939	22.9		Pass
365	1.0 - 100.0% of mass 198	1755	3.67		Pass
441	Present, but less than mass 443	5390	11.3	(87.2) [b]	Pass
442	40.0 - 100.0% of mass 198	33255	69.5		Pass
443	17.0 - 23.0% of mass 442	6180	12.9	(18.6) [c]	Pass

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

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2P2490-IC2490	2P57138A.D	03/11/16	10:13	01:23	Initial cal 100
E2P2490-IC2490	2P57139.D	03/11/16	10:35	01:45	Initial cal 80
E2P2490-ICC2490	2P57140.D	03/11/16	10:57	02:07	Initial cal 50
E2P2490-IC2490	2P57141.D	03/11/16	11:19	02:29	Initial cal 25
E2P2490-IC2490	2P57142.D	03/11/16	11:41	02:51	Initial cal 10
E2P2490-IC2490	2P57143.D	03/11/16	12:03	03:13	Initial cal 5
E2P2490-IC2490	2P57144.D	03/11/16	12:24	03:34	Initial cal 2
E2P2490-IC2490	2P57145.D	03/11/16	12:46	03:56	Initial cal 1

Instrument Performance Check (DFTPP)

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample: E2P2491-DFTPP
Lab File ID: 2P57148.D
Instrument ID: GCMS2P
Injection Date: 03/11/16
Injection Time: 15:37

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	27083	54.9		Pass
68	Less than 2.0% of mass 69	288	0.58	(1.16) [a]	Pass
69	Mass 69 relative abundance	24834	50.3		Pass
70	Less than 2.0% of mass 69	115	0.23	(0.46) [a]	Pass
127	40.0 - 60.0% of mass 198	25624	51.9		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	49354	100.0		Pass
199	5.0 - 9.0% of mass 198	3368	6.82		Pass
275	10.0 - 30.0% of mass 198	11375	23.0		Pass
365	1.0 - 100.0% of mass 198	1774	3.59		Pass
441	Present, but less than mass 443	5993	12.1	(88.2) [b]	Pass
442	40.0 - 100.0% of mass 198	33944	68.8		Pass
443	17.0 - 23.0% of mass 442	6792	13.8	(20.0) [c]	Pass

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

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2P2491-IC2491	2P57149.D	03/11/16	15:54	00:17	Initial cal 100
E2P2491-IC2491	2P57150.D	03/11/16	16:16	00:39	Initial cal 80
E2P2491-ICC2491	2P57151.D	03/11/16	16:38	01:01	Initial cal 50
E2P2491-IC2491	2P57152.D	03/11/16	17:00	01:23	Initial cal 25
E2P2491-IC2491	2P57153.D	03/11/16	17:22	01:45	Initial cal 10
E2P2491-IC2491	2P57154.D	03/11/16	17:43	02:06	Initial cal 5
E2P2491-IC2491	2P57155.D	03/11/16	18:05	02:28	Initial cal 2
E2P2491-IC2491	2P57156.D	03/11/16	18:26	02:49	Initial cal 1
E2P2491-ICV2490	2P57158.D	03/11/16	19:09	03:32	Initial cal verification 50
E2P2491-ICV2490	2P57159.D	03/11/16	19:30	03:53	Initial cal verification 50
E2P2491-ICV2491	2P57159A.D	03/11/16	19:30	03:53	Initial cal verification 50
E2P2491-ICV2490	2P57160.D	03/11/16	19:51	04:14	Initial cal verification 50
E2P2491-ICV2491	2P57160A.D	03/11/16	19:51	04:14	Initial cal verification 50
E2P2491-ICV2490	2P57161.D	03/11/16	20:11	04:34	Initial cal verification 50
E2P2491-ICV2491	2P57163A.D	03/11/16	20:53	05:16	Initial cal verification 50
E2P2491-ICV2490	2P57163.D	03/11/16	20:53	05:16	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample: E2P2492-DFTPP
Lab File ID: 2P57165.D
Instrument ID: GCMS2P
Injection Date: 03/11/16
Injection Time: 22:12

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	26745	59.0		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	24192	53.4		Pass
70	Less than 2.0% of mass 69	221	0.49	(0.91) [a]	Pass
127	40.0 - 60.0% of mass 198	23875	52.7		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	45309	100.0		Pass
199	5.0 - 9.0% of mass 198	3002	6.63		Pass
275	10.0 - 30.0% of mass 198	10595	23.4		Pass
365	1.0 - 100.0% of mass 198	1574	3.47		Pass
441	Present, but less than mass 443	5292	11.7	(90.3) [b]	Pass
442	40.0 - 100.0% of mass 198	30014	66.2		Pass
443	17.0 - 23.0% of mass 442	5859	12.9	(19.5) [c]	Pass

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

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2P2492-ICV2491	2P57166.D	03/11/16	22:21	00:09	Initial cal verification 50
E2P2492-ICV2490	2P57167.D	03/11/16	22:41	00:29	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample: E2P2497-DFTPP
Lab File ID: 2P57272.D
Instrument ID: GCMS2P
Injection Date: 03/16/16
Injection Time: 19:11

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	26586	59.5		Pass
68	Less than 2.0% of mass 69	184	0.41	(0.78) [a]	Pass
69	Mass 69 relative abundance	23568	52.8		Pass
70	Less than 2.0% of mass 69	77	0.17	(0.33) [a]	Pass
127	40.0 - 60.0% of mass 198	25352	56.8		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	44667	100.0		Pass
199	5.0 - 9.0% of mass 198	3091	6.92		Pass
275	10.0 - 30.0% of mass 198	11047	24.7		Pass
365	1.0 - 100.0% of mass 198	1513	3.39		Pass
441	Present, but less than mass 443	4991	11.2	(84.6) [b]	Pass
442	40.0 - 100.0% of mass 198	29143	65.2		Pass
443	17.0 - 23.0% of mass 442	5898	13.2	(20.2) [c]	Pass

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

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2P2497-CC2490	2P57273.D	03/16/16	19:22	00:11	Continuing cal 50
E2P2497-CC2491	2P57274.D	03/16/16	19:43	00:32	Continuing cal 50
OP92132-MB1	2P57277.D	03/16/16	20:46	01:35	Method Blank
OP92132-BS1	2P57278.D	03/16/16	21:06	01:55	Blank Spike
JC16204-6	2P57279.D	03/16/16	21:27	02:16	FB031116
JC16204-6R	2P57279.D	03/16/16	21:27	02:16	FB031116
JC16204-5R	2P57280.D	03/16/16	21:47	02:36	EB031116
JC16204-5	2P57280.D	03/16/16	21:47	02:36	EB031116
JC16204-1	2P57281.D	03/16/16	22:08	02:57	BR-1
JC16204-1R	2P57281.D	03/16/16	22:08	02:57	BR-1
JC16204-2R	2P57282.D	03/16/16	22:29	03:18	BR-2
JC16204-2	2P57282.D	03/16/16	22:29	03:18	BR-2
JC16204-3R	2P57283.D	03/16/16	22:49	03:38	BR-2D
JC16204-3	2P57283.D	03/16/16	22:49	03:38	BR-2D
JC16204-4R	2P57284.D	03/16/16	23:10	03:59	BR-3
JC16204-4	2P57284.D	03/16/16	23:10	03:59	BR-3
ZZZZZZ	2P57285.D	03/16/16	23:30	04:19	(unrelated sample)
ZZZZZZ	2P57286.D	03/16/16	23:51	04:40	(unrelated sample)
ZZZZZZ	2P57288.D	03/17/16	00:32	05:21	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample: E2P2497-DFTPP
Lab File ID: 2P57272.D
Instrument ID: GCMS2P
Injection Date: 03/16/16
Injection Time: 19:11

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	2P57289.D	03/17/16	00:53	05:42	(unrelated sample)
ZZZZZZ	2P57290.D	03/17/16	01:14	06:03	(unrelated sample)
ZZZZZZ	2P57291.D	03/17/16	01:34	06:23	(unrelated sample)
JC16170-8	2P57292.D	03/17/16	01:55	06:44	(used for QC only; not part of job JC16204)
ZZZZZZ	2P57293.D	03/17/16	02:15	07:04	(unrelated sample)
ZZZZZZ	2P57294.D	03/17/16	02:36	07:25	(unrelated sample)
ZZZZZZ	2P57295.D	03/17/16	02:57	07:46	(unrelated sample)
ZZZZZZ	2P57296.D	03/17/16	03:17	08:06	(unrelated sample)
OP92132-MS	2P57297.D	03/17/16	03:38	08:27	Matrix Spike
OP92132-MSD	2P57298.D	03/17/16	03:59	08:48	Matrix Spike Duplicate

Instrument Performance Check (DFTPP)

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample: E2P2498-DFTPP
Lab File ID: 2P57299.D
Instrument ID: GCMS2P
Injection Date: 03/17/16
Injection Time: 09:32

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	31802	59.8		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	27763	52.2		Pass
70	Less than 2.0% of mass 69	402	0.76	(1.45) [a]	Pass
127	40.0 - 60.0% of mass 198	28346	53.3		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	53152	100.0		Pass
199	5.0 - 9.0% of mass 198	3502	6.59		Pass
275	10.0 - 30.0% of mass 198	12154	22.9		Pass
365	1.0 - 100.0% of mass 198	1815	3.41		Pass
441	Present, but less than mass 443	5852	11.0	(90.4) [b]	Pass
442	40.0 - 100.0% of mass 198	32597	61.3		Pass
443	17.0 - 23.0% of mass 442	6473	12.2	(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
E2P2498-CC2490	2P57300.D	03/17/16	09:42	00:10	Continuing cal 25
E2P2498-CC2491	2P57301.D	03/17/16	10:12	00:40	Continuing cal 25
ZZZZZZ	2P57307.D	03/17/16	13:47	04:15	(unrelated sample)
ZZZZZZ	2P57309.D	03/17/16	14:31	04:59	(unrelated sample)
JC16170-8	2P57310.D	03/17/16	14:53	05:21	(used for QC only; not part of job JC16204)
ZZZZZZ	2P57311.D	03/17/16	15:15	05:43	(unrelated sample)
ZZZZZZ	2P57312.D	03/17/16	15:37	06:05	(unrelated sample)
JC16204-1	2P57313.D	03/17/16	17:02	07:30	BR-1

Instrument Performance Check (DFTPP)

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample: E4P767-DFTPP
Lab File ID: 4P14945.D
Instrument ID: GCMS4P
Injection Date: 02/01/16
Injection Time: 16:06

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	44967	42.0		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	59960	56.0		Pass
70	Less than 2.0% of mass 69	24	0.02	(0.04) [a]	Pass
127	40.0 - 60.0% of mass 198	50540	47.2		Pass
197	Less than 1.0% of mass 198	542	0.51		Pass
198	Base peak, 100% relative abundance	106984	100.0		Pass
199	5.0 - 9.0% of mass 198	7920	7.40		Pass
275	10.0 - 30.0% of mass 198	27999	26.2		Pass
365	1.0 - 100.0% of mass 198	3301	3.09		Pass
441	Present, but less than mass 443	13533	12.6	(73.8) [b]	Pass
442	40.0 - 100.0% of mass 198	93328	87.2		Pass
443	17.0 - 23.0% of mass 442	18332	17.1	(19.6) [c]	Pass

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

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E4P767-IC767	4P14948.D	02/01/16	17:52	01:46	Initial cal 0.5
E4P767-ICC767	4P14949.D	02/01/16	18:22	02:16	Initial cal 1.0
E4P767-IC767	4P14950.D	02/01/16	18:52	02:46	Initial cal 0.2
E4P767-IC767	4P14951.D	02/01/16	19:22	03:16	Initial cal 0.1
E4P767-IC767	4P14952.D	02/01/16	19:53	03:47	Initial cal 0.05
E4P767-IC767	4P14953.D	02/01/16	20:23	04:17	Initial cal 0.02
E4P767-IC767	4P14954.D	02/01/16	20:53	04:47	Initial cal 0.01
E4P767-IC767	4P14955.D	02/01/16	21:23	05:17	Initial cal 5
E4P767-IC767	4P14956.D	02/01/16	21:54	05:48	Initial cal 2.5
E4P767-ICV767	4P14957.D	02/01/16	22:24	06:18	Initial cal verification 1.0
E4P767-ICV767	4P14958.D	02/01/16	22:54	06:48	Initial cal verification 1.0
E4P767-ICV767	4P14959.D	02/01/16	23:24	07:18	Initial cal verification 1.0

Instrument Performance Check (DFTPP)

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample: E4P805-DFTPP
Lab File ID: 4P15647.D
Instrument ID: GCMS4P
Injection Date: 03/17/16
Injection Time: 16:01

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	51686	44.3		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	62758	53.8		Pass
70	Less than 2.0% of mass 69	301	0.26	(0.48) [a]	Pass
127	40.0 - 60.0% of mass 198	57512	49.3		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	116626	100.0		Pass
199	5.0 - 9.0% of mass 198	8360	7.17		Pass
275	10.0 - 30.0% of mass 198	30133	25.8		Pass
365	1.0 - 100.0% of mass 198	3247	2.78		Pass
441	Present, but less than mass 443	13256	11.4	(72.2) [b]	Pass
442	40.0 - 100.0% of mass 198	93515	80.2		Pass
443	17.0 - 23.0% of mass 442	18365	15.7	(19.6) [c]	Pass

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

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E4P805-CC767	4P15648.D	03/17/16	16:13	00:12	Continuing cal 0.5
OP92139A-MB1	4P15649.D	03/17/16	17:02	01:01	Method Blank
OP92139A-LB4	4P15651.D	03/17/16	17:33	01:32	Leachate Blank
OP92139A-BS12	4P15650.D	03/17/16	18:03	02:02	Blank Spike
OP92139A-BSD12	4P15652.D	03/17/16	18:34	02:33	Blank Spike
ZZZZZZ	4P15653.D	03/17/16	19:04	03:03	(unrelated sample)
OP92132A-MB1	4P15654.D	03/17/16	19:35	03:34	Method Blank
OP92132A-BS12	4P15655.D	03/17/16	20:05	04:04	Blank Spike
OP92132A-MS	4P15656.D	03/17/16	20:35	04:34	Matrix Spike
OP92132A-MSD	4P15657.D	03/17/16	21:06	05:05	Matrix Spike Duplicate
JC16204-2	4P15658.D	03/17/16	21:36	05:35	BR-2
JC16204-3	4P15659.D	03/17/16	22:06	06:05	BR-2D
JC16204-4	4P15660.D	03/17/16	22:37	06:36	BR-3
JC16204-5	4P15661.D	03/17/16	23:07	07:06	EB031116
JC16204-6	4P15662.D	03/17/16	23:37	07:36	FB031116
ZZZZZZ	4P15664.D	03/18/16	00:38	08:37	(unrelated sample)
JC16204-1	4P15665.D	03/18/16	01:09	09:08	BR-1

Semivolatile Internal Standard Area Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Check Std:	E2P2497-CC2490	**Injection Date:**	03/16/16
Lab File ID:	2P57273.D	**Injection Time:**	19:22
Instrument ID:	GCMS2P	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	125750	4.11	452630	5.17	266660	6.61	456123	7.83	509233	10.89	382229	12.84
Upper Limit [a]	251500	4.61	905260	5.67	533320	7.11	912246	8.33	1018466	11.39	764458	13.34
Lower Limit [b]	62875	3.61	226315	4.67	133330	6.11	228062	7.33	254617	10.39	191115	12.34

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
OP92132-MB1	119565	4.11	449122	5.17	221505	6.60	415662	7.82	409915	10.87	328077	12.82
OP92132-BS1	119561	4.11	421722	5.17	213194	6.60	392975	7.82	425574	10.87	325946	12.83
JC16204-6	119983	4.11	452405	5.17	223514	6.60	415247	7.82	418087	10.86	344148	12.82
JC16204-6R	119983	4.11	452405	5.17	223514	6.60	415247	7.82	418087	10.86	344148	12.82
JC16204-5R	116373	4.11	428762	5.17	213586	6.60	392202	7.82	398419	10.86	343715	12.82
JC16204-5	116373	4.11	428762	5.17	213586	6.60	392202	7.82	398419	10.86	343715	12.82
JC16204-1	134920	4.11	509196	5.17	251712	6.60	461455	7.82	458583	10.86	390203	12.82
JC16204-1R	134920	4.11	509196	5.17	251712	6.60	461455	7.82	458583	10.86	390203	12.82
JC16204-2R	114428	4.11	424166	5.17	211052	6.60	389970	7.82	396920	10.86	336754	12.82
JC16204-2	114428	4.11	424166	5.17	211052	6.60	389970	7.82	396920	10.86	336754	12.82
JC16204-3	143082	4.11	538552	5.17	273684	6.60	502819	7.82	498691	10.86	415145	12.82
JC16204-3R	143082	4.11	538552	5.17	273684	6.60	502819	7.82	498691	10.86	415145	12.82
JC16204-4R	119217	4.11	445300	5.17	220459	6.60	404157	7.82	401499	10.86	352060	12.81
JC16204-4	119217	4.11	445300	5.17	220459	6.60	404157	7.82	401499	10.86	352060	12.81
ZZZZZZ	106023	4.11	358365	5.17	167814	6.61	310454	7.83	333551	10.87	308358	12.82
ZZZZZZ	115070	4.11	427734	5.17	210180	6.60	376960	7.82	374920	10.86	325983	12.82
ZZZZZZ	99156	4.11	348537	5.19	179635	6.60	316189	7.82	352846	10.87	322459	12.82
ZZZZZZ	99845	4.11	353181	5.17	165719	6.60	310788	7.82	293329	10.88	277926	12.84
ZZZZZZ	100989	4.11	366316	5.18	182738	6.61	342866	7.82	346564	10.87	312922	12.82
ZZZZZZ	102332	4.11	381792	5.17	185092	6.60	341377	7.82	326842	10.87	294066	12.82
JC16170-8	93352	4.11	338174	5.17	169923	6.61	313065	7.82	321807	10.87	289671	12.82
ZZZZZZ	94762	4.11	360699	5.18	183421	6.60	346423	7.82	362000	10.87	326853	12.82
ZZZZZZ	116067	4.11	443455	5.17	222381	6.60	415068	7.82	405195	10.86	345653	12.82
ZZZZZZ	82077	4.12	175867*	5.22	169036	6.61	311489	7.82	327019	10.87	302187	12.82
ZZZZZZ	113198	4.11	374003	5.17	180146	6.61	289885	7.82	329373	10.86	311941	12.82
OP92132-MS	96628	4.11	338234	5.17	171096	6.60	306254	7.82	301594	10.87	269917	12.82
OP92132-MSD	112691	4.11	393396	5.17	197591	6.60	351525	7.82	374078	10.87	310974	12.82

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

Semivolatile Internal Standard Area Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Check Std:	E2P2497-CC2490	**Injection Date:**	03/16/16
Lab File ID:	2P57273.D	**Injection Time:**	19:22
Instrument ID:	GCMS2P	**Method:**	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**

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

Semivolatile Internal Standard Area Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Check Std:	E2P2498-CC2490	**Injection Date:**	03/17/16
Lab File ID:	2P57300.D	**Injection Time:**	09:42
Instrument ID:	GCMS2P	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	136153	4.09	484463	5.15	282474	6.57	476562	7.78	517165	10.82	439140	12.76
Upper Limit [a]	272306	4.59	968926	5.65	564948	7.07	953124	8.28	1034330	11.32	878280	13.26
Lower Limit [b]	68077	3.59	242232	4.65	141237	6.07	238281	7.28	258583	10.32	219570	12.26

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
ZZZZZZ	87816	4.09	323286	5.14	173390	6.57	301063	7.78	294468	10.81	265611	12.75
ZZZZZZ	101296	4.09	388004	5.15	194923	6.57	353803	7.78	356114	10.81	320764	12.76
JC16170-8	103421	4.09	362518	5.15	195682	6.57	341318	7.78	356432	10.81	332959	12.75
ZZZZZZ	119292	4.09	437207	5.15	238685	6.57	419550	7.78	420950	10.81	398003	12.75
ZZZZZZ	122371	4.09	422567	5.18	262750	6.57	471942	7.79	506267	10.82	457887	12.76
JC16204-1	102449	4.08	384813	5.14	202979	6.57	358490	7.78	356519	10.81	322776	12.76

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.

Semivolatile Internal Standard Area Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Check Std:	E4P805-CC767	**Injection Date:**	03/17/16
Lab File ID:	4P15648.D	**Injection Time:**	16:13
Instrument ID:	GCMS4P	**Method:**	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	127005	8.47	171195	11.46	302289	15.72	254150	20.36
Upper Limit [a]	254010	8.97	342390	11.96	604578	16.22	508300	20.86
Lower Limit [b]	63503	7.97	85598	10.96	151145	15.22	127075	19.86

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
OP92139A-MB1	123218	8.47	156397	11.46	285770	15.72	236107	20.37
OP92139A-LB4	116516	8.47	178550	11.46	283238	15.72	226758	20.37
OP92139A-BS12	119500	8.47	182729	11.46	279090	15.70	230784	20.37
OP92139A-BSD12	117744	8.47	165705	11.46	268751	15.72	225109	20.36
ZZZZZZ	128760	8.47	197416	11.46	321291	15.70	257996	20.37
OP92132A-MB1	122139	8.47	174765	11.46	286747	15.72	231550	20.36
OP92132A-BS12	101086	8.47	144393	11.46	230189	15.72	190529	20.36
OP92132A-MS	117082	8.47	160364	11.46	304067	15.72	219029	20.36
OP92132A-MSD	124227	8.47	174336	11.46	319556	15.72	244387	20.36
JC16204-2	120691	8.47	196876	11.46	300211	15.70	233426	20.37
JC16204-3	133490	8.47	204090	11.46	328859	15.70	252101	20.36
JC16204-4	119089	8.47	195297	11.46	287563	15.70	229645	20.37
JC16204-5	116613	8.47	188624	11.46	280457	15.70	229368	20.37
JC16204-6	107046	8.47	171144	11.46	253578	15.70	208716	20.37
ZZZZZZ	123997	8.47	197355	11.48	266864	15.74	206788	20.37
JC16204-1	121396	8.45	199824	11.46	310542	15.70	249922	20.37

IS 1 = 1-Methylnaphthalene-d10
IS 2 = Fluorene-d10
IS 3 = Fluoranthene-d10
IS 4 = Benzo(a)pyrene-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.

Semivolatile Surrogate Recovery Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

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
JC16204-1	2P57313.D	43	30	77	76	85	76
JC16204-1	2P57281.D	47	31	95	82	102	88
JC16204-2	2P57282.D	47	30	92	81	97	87
JC16204-3	2P57283.D	49	33	100	88	106	96
JC16204-4	2P57284.D	53	36	100	89	109	93
JC16204-5	2P57280.D	50	33	91	81	98	89
JC16204-6	2P57279.D	47	32	90	81	100	91
JC16204-1R	2P57281.D				82	102	88
JC16204-2R	2P57282.D				81	97	87
JC16204-3R	2P57283.D				88	106	96
JC16204-4R	2P57284.D				89	109	93
JC16204-5R	2P57280.D				81	98	89
JC16204-6R	2P57279.D				81	100	91
OP92132-BS1	2P57278.D	61	43	91	85	103	92
OP92132-MB1	2P57277.D	50	34	91	83	102	91
OP92132-MS	2P57297.D	66	61	95	79	94	88
OP92132-MSD	2P57298.D	68	61	96	81	98	81

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	14-88%
S2 = Phenol-d5	10-110%
S3 = 2,4,6-Tribromophenol	39-149%
S4 = Nitrobenzene-d5	32-128%
S5 = 2-Fluorobiphenyl	35-119%
S6 = Terphenyl-d14	10-126%

Semivolatile Surrogate Recovery Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

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

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
JC16204-1	4P15665.D	86	75	82
JC16204-2	4P15658.D	89	79	86
JC16204-3	4P15659.D	89	84	90
JC16204-4	4P15660.D	96	84	90
JC16204-5	4P15661.D	88	78	90
JC16204-6	4P15662.D	92	80	94
OP92132A-BS12	4P15655.D	86	85	95
OP92132A-MB1	4P15654.D	89	88	91
OP92132A-MS	4P15656.D	87	89	82
OP92132A-MSD	4P15657.D	82	82	79

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	24-125%
S2 = 2-Fluorobiphenyl	19-127%
S3 = Terphenyl-d14	10-119%

Initial Calibration Summary

Job Number: JC16204 **Sample:** E2P2490-ICC2490
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57140.D
Project: BMS, Former Brule Area, PR

Response Factor Report MS2P

Method : C:\MSDCHEM\1\METHODS\M2P2490.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Mar 11 20:15:43 2016
Response via : Initial Calibration

Calibration Files
2 =2p57144.D 5 =2p57143.D 25 =2p57141.D 80 =2p57139.D
100 =2p57138a.D 50 =2p57140.D 1 =2p57145.D 10 =2p57142.D

Compound	2	5	25	80	100	50	1	10	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	----------ISTD----------									
2) 1,4-Dioxane	0.612	0.533	0.509	0.593	0.650	0.524	0.645	0.479	0.568	11.46
3) Pyridine	1.150	1.231	1.295	1.489	1.593	1.326	1.093	1.197	1.297	13.13
4) N-Nitrosodim	0.708	0.777	0.792	0.905	0.974	0.809	0.692	0.748	0.801	12.00
5) 2-Fluorophen	1.208	1.275	1.329	1.499	1.557	1.426	1.152	1.202	1.331	11.18
6) Indene	2.262	2.245	2.160	2.168	2.199	2.145	2.146	2.182	2.188	2.01
7) Cumene	3.196	3.223	3.287	3.605	3.716	3.499	3.292	3.089	3.363	6.51
8) Phenol-d5	1.508	1.559	1.638	1.775	1.807	1.711	1.458	1.572	1.629	7.76
9) Phenol	1.693	1.745	1.729	1.886	1.948	1.831	1.688	1.653	1.772	5.94
10) Aniline	1.908	1.933	2.011	2.211	2.273	2.172	1.812	1.853	2.022	8.66
11) bis(2-Chloro	1.198	1.144	1.154	1.218	1.231	1.161	1.167	1.116	1.173	3.33
12) 2-Chlorophen	1.425	1.428	1.427	1.467	1.464	1.448	1.362	1.367	1.424	2.79
13) Decane	1.888	1.965	1.885	1.910	1.914	1.931	1.927	1.838	1.907	1.98
14) 1,3-Dichloro	1.581	1.611	1.563	1.570	1.549	1.532	1.592	1.557	1.569	1.59
15) 1,4-Dichloro	1.619	1.611	1.560	1.561	1.562	1.568	1.658	1.511	1.581	2.88
16) Benzyl alcoh	0.734	0.817	0.806	0.814	0.807	0.818	0.693	0.801	0.786	5.93
17) 1,2-Dichloro	1.432	1.463	1.478	1.454	1.475	1.479	1.463	1.404	1.456	1.79
18) Acetophenone	1.679	1.784	1.689	1.709	1.684	1.688	1.811	1.694	1.717	2.96
19) 2-Methylphen	1.168	1.162	1.139	1.120	1.107	1.132	1.152	1.122	1.138	1.91
20) 2,2'-oxybis(	0.373	0.413	0.359	0.359	0.354	0.351	0.390	0.352	0.369	5.99
21) 3&4-Methylph	1.262	1.248	1.195	1.250	1.237	1.232	1.243	1.194	1.233	2.03
22) n-Nitroso-di	0.939	0.990	0.926	0.913	0.901	0.903	1.013	0.915	0.937	4.46
23) Hexachloroet	0.543	0.567	0.542	0.544	0.539	0.542	0.573	0.535	0.548	2.53
24) I Naphthalene-d8	----------ISTD----------									
25) Nitrobenzene	0.414	0.398	0.400	0.393	0.386	0.388	0.438	0.401	0.402	4.23
26) Nitrobenzene	0.402	0.399	0.383	0.378	0.378	0.374	0.427	0.389	0.391	4.50
27) Quinoline	0.681	0.668	0.671	0.685	0.682	0.680	0.659	0.679	0.676	1.30
28) Isophorone	0.661	0.669	0.644	0.669	0.666	0.656	0.643	0.667	0.660	1.61
29) 2-Nitropheno	0.193	0.193	0.205	0.219	0.213	0.214	0.173	0.198	0.201	7.51
30) 2,4-Dimethyl	0.383	0.382	0.370	0.373	0.372	0.371	0.376	0.373	0.375	1.34
31) Benzoic acid		0.149	0.186	0.219	0.229	0.212		0.169	0.194	16.11
32) bis(2-Chloro	0.370	0.380	0.373	0.379	0.378	0.377	0.379	0.376	0.376	0.94
33) 2,4-Dichloro	0.293	0.301	0.310	0.315	0.311	0.309	0.274	0.295	0.301	4.52
34) 2,6-Dichloro	0.298	0.308	0.300	0.301	0.301	0.295	0.282	0.298	0.298	2.48
35) 1,3,5-Trichl	0.370	0.359	0.350	0.367	0.365	0.363	0.338	0.362	0.359	2.89
36) 1,2,4-Trichl	0.337	0.342	0.330	0.344	0.340	0.338	0.338	0.338	0.338	1.22
37) 1,2,3-Trichl	0.319	0.326	0.314	0.325	0.321	0.319	0.324	0.327	0.322	1.39
38) Naphthalene	1.049	1.054	1.020	1.035	1.017	1.019	1.075	1.038	1.038	1.95
39) 4-Chloroanil	0.446	0.426	0.430	0.449	0.448	0.433	0.425	0.445	0.438	2.35
40) 2,3-Dichloro	0.366	0.359	0.358	0.379	0.370	0.372	0.365	0.363	0.367	1.91
41) Caprolactam	0.096	0.095	0.098	0.102	0.101	0.101	0.086	0.096	0.097	5.24
42) Hexachlorobu	0.192	0.196	0.192	0.197	0.195	0.194	0.183	0.199	0.193	2.53
43) 4-Chloro-3-m	0.308	0.315	0.316	0.331	0.331	0.322	0.306	0.320	0.319	2.97
44) 2-Methylnaph	0.572	0.599	0.581	0.613	0.601	0.603	0.589	0.581	0.592	2.34
45) 1-Methylnaph	0.633	0.617	0.601	0.624	0.615	0.624	0.612	0.620	0.618	1.55

Initial Calibration Summary

Job Number: JC16204 **Sample:** E2P2490-ICC2490
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57140.D
Project: BMS, Former Brule Area, PR

```
46) Dimethylnaph 0.617 0.615 0.581 0.602 0.591 0.599 0.586 0.597 0.598   2.16

47) I   Acenaphthene-d10      ----------------ISTD---------------------
48) Hexachlorocy 0.170 0.208 0.302 0.353 0.357 0.348 0.116 0.248 0.263  35.08
         ----- Quadratic regression -----                Coefficient =  0.9994
              Response Ratio = -0.02795 + 0.33738 *A + 0.00534 *A^2

49) 2,4,6-Trichl 0.354 0.360 0.365 0.365 0.356 0.371 0.350 0.356 0.360   1.96
50) 2,4,5-Trichl 0.391 0.369 0.374 0.385 0.369 0.389 0.348 0.371 0.374   3.73
51) 2-Fluorobiph 1.264 1.295 1.234 1.217 1.176 1.237 1.227 1.257 1.238   2.85
52) 2-Chloronaph 1.135 1.134 1.082 1.047 0.998 1.055 1.056 1.104 1.076   4.37
53) Biphenyl     1.457 1.501 1.428 1.386 1.333 1.436 1.481 1.448 1.434   3.73
54) 2-Nitroanili 0.426 0.424 0.413 0.409 0.389 0.406 0.420 0.411 0.412   2.91
55) Dimethylphth 1.217 1.306 1.229 1.248 1.170 1.227 1.292 1.253 1.243   3.46
56) Acenaphthyle 1.821 1.872 1.788 1.759 1.665 1.772 1.878 1.789 1.793   3.79
57) 2,6-Dinitrot 0.246 0.269 0.279 0.280 0.275 0.285 0.267 0.271 0.272   4.36
58) 3-Nitroanili 0.316 0.312 0.318 0.323 0.322 0.333 0.298 0.321 0.318   3.16
59) Acenaphthene 1.156 1.170 1.133 1.141 1.087 1.141 1.205 1.127 1.145   2.99
60) 2,4-Dinitrop 0.020 0.031 0.100 0.145 0.149 0.138       0.061 0.092  59.73
         ----- Quadratic regression -----                Coefficient =  0.9982
              Response Ratio = -0.02626 + 0.13092 *A + 0.00482 *A^2

61) 4-Nitropheno 0.127 0.136 0.158 0.153 0.153 0.155 0.101 0.139 0.140  13.65
62) Dibenzofuran 1.575 1.594 1.547 1.557 1.445 1.556 1.572 1.538 1.548   2.93
63) 2,4-Dinitrot 0.336 0.367 0.381 0.392 0.364 0.380 0.320 0.370 0.364   6.62
64) 2,3,4,6-Tetr 0.270 0.269 0.284 0.304 0.306 0.303 0.246 0.283 0.283   7.41
65) Diethylphtha 1.259 1.310 1.264 1.267 1.172 1.275 1.255 1.287 1.261   3.18
66) Fluorene     1.239 1.264 1.256 1.293 1.220 1.281 1.235 1.283 1.259   2.08
67) 4-Chlorophen 0.574 0.597 0.590 0.617 0.599 0.619 0.605 0.592 0.599   2.44
68) 4-Nitroanili 0.275 0.295 0.303 0.302 0.286 0.299 0.280 0.287 0.291   3.55

69) I   Phenanthrene-d10      ----------------ISTD---------------------
70) 4,6-Dinitro- 0.038 0.058 0.103 0.128 0.130 0.125       0.082 0.095  38.70
         ----- Quadratic regression -----                Coefficient =  0.9992
              Response Ratio = -0.00855 + 0.12437 *A + 0.00370 *A^2

71) n-Nitrosodip 0.532 0.535 0.511 0.514 0.513 0.506 0.532 0.531 0.522   2.26
72) 1,2-Diphenyl 0.745 0.742 0.707 0.769 0.755 0.711 0.704 0.744 0.734   3.31
73) 2,4,6-Tribro 0.091 0.100 0.101 0.107 0.110 0.105 0.089 0.097 0.100   7.49
74) 4-Bromopheny 0.205 0.211 0.212 0.225 0.223 0.226 0.199 0.216 0.215   4.55
75) Hexachlorobe 0.215 0.225 0.223 0.240 0.239 0.237 0.232 0.227 0.230   3.72
76) Pentachlorop 0.050 0.068 0.101 0.132 0.144 0.126 0.037 0.078 0.092  43.45
         ----- Quadratic regression -----                Coefficient =  0.9992
              Response Ratio = -0.00829 + 0.10347 *A + 0.00830 *A^2

77) Phenanthrene 1.088 1.089 1.045 1.075 1.067 1.054 1.118 1.066 1.075   2.12
78) Anthracene   1.102 1.073 1.082 1.087 1.053 1.093 1.090 1.099 1.085   1.45
79) Carbazole    0.988 1.001 0.978 1.037 0.999 1.003 1.043 0.985 1.004   2.34
80) Di-n-butylph 1.239 1.250 1.305 1.394 1.370 1.354 1.233 1.259 1.300   4.96
81) Fluoranthene 1.123 1.165 1.216 1.315 1.308 1.293 1.132 1.187 1.218   6.45
82) Octadecane   0.518 0.521 0.515 0.525 0.511 0.528 0.527 0.516 0.520   1.15

83) I   Chrysene-d12          ----------------ISTD---------------------
84) Pyrene       1.272 1.251 1.194 1.173 1.124 1.197 1.235 1.242 1.211   3.99
85) Terphenyl-d1 0.728 0.782 0.745 0.752 0.711 0.738 0.736 0.764 0.745   2.96
86) Butylbenzylp 0.543 0.587 0.562 0.566 0.541 0.578 0.545 0.562 0.561   3.00
87) Butyl steara 0.418 0.439 0.434 0.442 0.426 0.443 0.425 0.428 0.432   2.05
88) Benzo[a]anth 1.175 1.122 1.097 1.093 1.056 1.098 1.185 1.101 1.116   3.91
89) 3,3'-Dichlor 0.424 0.401 0.404 0.409 0.385 0.404 0.378 0.418 0.403   3.80
90) Chrysene     1.067 1.077 0.997 0.982 0.937 0.982 1.046 1.035 1.015   4.78
```

Initial Calibration Summary

Job Number: JC16204 **Sample:** E2P2490-ICC2490
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57140.D
Project: BMS, Former Brule Area, PR

```
 91) bis(2-Ethylh 0.730 0.793 0.753 0.738 0.704 0.743 0.707 0.775 0.743   4.14

 92) I   Perylene-d12          ----------------ISTD---------------------
 93) Di-n-octylph 1.416 1.527 1.595 1.729 1.737 1.630 1.360 1.509 1.563   8.74
 94) Benzo[b]fluo 1.170 1.304 1.304 1.421 1.393 1.331 1.173 1.242 1.292   7.18
 95) Benzo[k]fluo 1.124 1.107 1.144 1.175 1.161 1.156 1.115 1.098 1.135   2.45
 96) Benzo[a]pyre 1.009 1.073 1.095 1.173 1.158 1.103 0.986 1.051 1.081   6.08
 97) Indeno[1,2,3 0.807 0.844 0.890 1.034 1.082 0.949 0.840 0.821 0.908  11.37
 98) Dibenz(a,h)a 0.770 0.779 0.797 0.919 0.914 0.855 0.776 0.776 0.823   7.75
 99) Dibenz[a,h]a 0.834 0.863 0.879 1.014 1.049 0.954 0.864 0.836 0.912   9.16
100) 7,12-Dimethy 0.502 0.543 0.568 0.641 0.629 0.597 0.511 0.538 0.566   9.20
101) Benzo[g,h,i] 0.834 0.857 0.869 0.999 1.003 0.936 0.841 0.831 0.896   8.12
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          M2P2490.M         Fri Mar 11 23:18:46 2016   RPT1
```

8.7.1

8

Initial Calibration Summary

Job Number: JC16204 **Sample:** E2P2491-ICC2491
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57151.D
Project: BMS, Former Brule Area, PR

```
                          Response Factor Report  MS2P

  Method       : C:\MSDCHEM\1\METHODS\M2P2490.M (RTE Integrator)
  Title        : Semi Volatile Extractables by GC/MS
  Last Update  : Fri Mar 11 20:15:43 2016
  Response via : Initial Calibration

  Calibration Files
  2   =2p57155.D  5   =2p57154.D  25  =2p57152.D  80  =2p57150.D
  100 =2p57149.D  50  =2p57151.D  1   =2p57156.D  10  =2p57153.D

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

102) I   1,4-Dichlorobenzene-d ----------------ISTD---------------------
103) Benzaldehyde 1.190 1.185 0.949 0.838 0.748 0.840 1.035 1.059 0.981  16.79

104) I   Naphthalene-d8       ----------------ISTD---------------------
105) Hydroquinone       0.211 0.268 0.324 0.322 0.301       0.229 0.276  17.42

106) I   Acenaphthene-d10     ----------------ISTD---------------------
107) Atrazine     0.178 0.181 0.170 0.171 0.167 0.176 0.176 0.167 0.173   3.06
108) 1,2,4,5-Tetr 0.656 0.638 0.587 0.598 0.584 0.585 0.626 0.564 0.605   5.22

109) I   Chrysene-d12         ----------------ISTD---------------------
110) Benzidine    0.564 0.595 0.462 0.342       0.399 0.489 0.534 0.483  18.71

111) I   Phenanthrene-d10     ----------------ISTD---------------------
112) 1-chloroocta 0.450 0.451 0.419 0.434 0.426 0.430 0.472 0.408 0.436   4.74
113) O-terphenyl  0.610 0.612 0.551 0.562 0.549 0.559 0.629 0.537 0.576   6.11
 -------------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M2P2490.M         Fri Mar 11 20:16:24 2016   RPT1
```

8.7.2

8

Initial Calibration Verification

Job Number: JC16204 **Sample:** E2P2491-ICV2490
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57158.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2P2491\2p57158.D Vial: 11
Acq On : 11 Mar 2016 7:09 pm Operator: sarad
Sample : ICv2490-50 Inst : MS2P
Misc : op91532,e2p2491 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P2490.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Mar 11 20:15:43 2016
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	99	0.00	4.20
3	t	Pyridine	1.297	1.322	-1.9	99	0.20	1.88
10		Aniline	2.022	1.950	3.6	89	0.00	3.94
16	t	Benzyl alcohol	0.786	0.782	0.5	95	0.00	4.35
24	I	Naphthalene-d8	1.000	1.000	0.0	108	0.00	5.25
39	t	4-Chloroaniline	0.438	0.374	14.6	93	0.00	5.34
44	t	2-Methylnaphthalene	0.592	0.452	23.6	81	0.00	5.84
47	I	Acenaphthene-d10	1.000	1.000	0.0	103	0.00	6.69
54	t	2-Nitroaniline	0.412	0.365	11.4	93	-0.01	6.34
58	t	3-Nitroaniline	0.318	0.280	11.9	87	-0.01	6.68
62	t	Dibenzofuran	1.548	1.372	11.4	91	0.00	6.86
68	t	4-Nitroaniline	0.291	0.245	15.8	85	-0.02	7.17
69	I	Phenanthrene-d10	1.000	1.000	0.0	99	0.00	7.91
79	t	Carbazole	1.004	0.906	9.8	90	0.00	8.14

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p57151a.D M2P2490.M Fri Mar 11 20:21:02 2016 RPT1

Initial Calibration Verification

Job Number: JC16204 **Sample:** E2P2491-ICV2490
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57159.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\2P2491\2p57159.D          Vial: 12
Acq On    : 11 Mar 2016   7:30 pm                   Operator: sarad
Sample    : ICv2490-50                              Inst    : MS2P
Misc      : op91532,e2p2491                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2P2490.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Mar 11 20:15:43 2016
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	91	0.00	4.20
4	t	N-Nitrosodimethylamine	0.801	0.598	25.3	67	0.02	1.68
11	t	bis(2-Chloroethyl)ether	1.173	1.122	4.3	87	0.00	4.00
14	t	1,3-Dichlorobenzene	1.569	1.531	2.4	90	0.00	4.15
15	t	1,4-Dichlorobenzene	1.581	1.528	3.4	88	0.00	4.22
17	t	1,2-Dichlorobenzene	1.456	1.417	2.7	87	0.00	4.34
20	t	2,2'-oxybis(1-Chloropropa	0.369	0.305	17.3	79	0.00	4.45
22	t	n-Nitroso-di-n-propylamin	0.937	0.863	7.9	87	-0.02	4.56
23	t	Hexachloroethane	0.548	0.534	2.6	89	0.00	4.61
24	I	Naphthalene-d8	1.000	1.000	0.0	89	0.00	5.25
26	t	Nitrobenzene	0.391	0.364	6.9	86	0.00	4.69
28	t	Isophorone	0.660	0.676	-2.4	91	-0.02	4.88
32	t	bis(2-Chloroethoxy)methan	0.376	0.364	3.2	86	0.00	5.08
36	t	1,2,4-Trichlorobenzene	0.338	0.332	1.8	87	0.00	5.22
38	t	Naphthalene	1.038	1.041	-0.3	91	0.00	5.27
42	t	Hexachlorobutadiene	0.193	0.194	-0.5	89	0.00	5.38
47	I	Acenaphthene-d10	1.000	1.000	0.0	85	0.00	6.69
		----------	True	Calc.	% Drift	----------		
48	t	Hexachlorocyclopentadiene	50.000	38.516	23.0	60	0.00	5.98
		----------	AvgRF	CCRF	% Dev	----------		
52	t	2-Chloronaphthalene	1.076	1.080	-0.4	87	0.00	6.24
55	t	Dimethylphthalate	1.243	1.201	3.4	84	0.00	6.49
56	t	Acenaphthylene	1.793	1.715	4.4	83	0.00	6.57
57	t	2,6-Dinitrotoluene	0.272	0.268	1.5	80	0.00	6.54
59	t	Acenaphthene	1.145	1.127	1.6	84	0.00	6.71
63	t	2,4-Dinitrotoluene	0.364	0.339	6.9	76	0.00	6.87
65	t	Diethylphthalate	1.261	1.187	5.9	80	-0.01	7.07
66	t	Fluorene	1.259	1.226	2.6	82	0.00	7.14
67	t	4-Chlorophenyl-phenylethe	0.599	0.569	5.0	79	0.00	7.14
69	I	Phenanthrene-d10	1.000	1.000	0.0	83	0.00	7.91
71	t	n-Nitrosodiphenylamine	0.522	0.503	3.6	82	-0.01	7.24
72	t	1,2-Diphenylhydrazine	0.734	0.715	2.6	83	0.00	7.27
74	t	4-Bromophenyl-phenylether	0.215	0.208	3.3	76	0.00	7.54
75	t	Hexachlorobenzene	0.230	0.216	6.1	76	0.00	7.59
77	t	Phenanthrene	1.075	1.050	2.3	82	0.00	7.93
78	t	Anthracene	1.085	1.023	5.7	77	0.00	7.98
80	t	Di-n-butylphthalate	1.300	1.226	5.7	75	0.00	8.51

Initial Calibration Verification

Job Number: JC16204 **Sample:** E2P2491-ICV2490
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57159.D
Project: BMS, Former Brule Area, PR

81	t	Fluoranthene	1.218	1.168	4.1	75	-0.01	9.14
83	I	Chrysene-d12	1.000	1.000	0.0	74	0.00	11.00
84	t	Pyrene	1.211	1.235	-2.0	76	0.00	9.40
86	t	Butylbenzylphthalate	0.561	0.539	3.9	69	-0.01	10.31
88	t	Benzo[a]anthracene	1.116	1.062	4.8	72	-0.01	10.98
90	t	Chrysene	1.015	0.959	5.5	72	-0.01	11.04
91	t	bis(2-Ethylhexyl)phthalat	0.743	0.720	3.1	72	0.00	11.17
92	I	Perylene-d12	1.000	1.000	0.0	71	0.00	12.95
93	t	Di-n-octylphthalate	1.563	1.536	1.7	67	-0.01	12.09
94	t	Benzo[b]fluoranthene	1.292	1.178	8.8	63	-0.02	12.46
95	t	Benzo[k]fluoranthene	1.135	1.205	-6.2	74	-0.02	12.50
96	t	Benzo[a]pyrene	1.081	1.107	-2.4	72	-0.01	12.88
97	t	Indeno[1,2,3-cd]pyrene	0.908	0.995	-9.6	75	-0.02	14.23
99	t	Dibenz[a,h]anthracene	0.912	0.978	-7.2	73	-0.02	14.27
101	t	Benzo[g,h,i]perylene	0.896	0.972	-8.5	74	-0.02	14.54

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p57151a.D M2P2490.M Fri Mar 11 22:01:40 2016 RPT1

8.7.4

8

Initial Calibration Verification

Job Number: JC16204 **Sample:** E2P2491-ICV2491
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57159A.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\2P2491\2p57159a.D          Vial: 12
Acq On    : 11 Mar 2016   7:30 pm                    Operator: sarad
Sample    : ICv2491-50                               Inst    : MS2P
Misc      : op91532,e2p2491                          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2P2490.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Mar 11 20:15:43 2016
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	Acenaphthene-d10a	1.000	1.000	0.0	93	0.00	6.69
108	1,2,4,5-Tetrachlorobenzen	0.605	0.632	-4.5	101	0.00	5.99

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p57151a.D M2P2490.M Fri Mar 11 22:01:42 2016 RPT1

Initial Calibration Verification

Job Number: JC16204 **Sample:** E2P2491-ICV2491
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57160A.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\2P2491\2p57160a.D          Vial: 13
Acq On    : 11 Mar 2016   7:51 pm                    Operator: sarad
Sample    : ICv2491-50                               Inst    : MS2P
Misc      : op91532,e2p2491                          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2P2490.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Mar 11 20:15:43 2016
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.
102 I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	102	0.00	4.20
103	Benzaldehyde	0.981	1.106	-12.7	134	0.00	3.83
106 I	Acenaphthene-d10a	1.000	1.000	0.0	99	0.00	6.69
107	Atrazine	0.173	0.173	0.0	97	0.00	7.70

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p57151a.D M2P2490.M Fri Mar 11 22:59:56 2016 RPT1

Initial Calibration Verification

Job Number: JC16204 **Sample:** E2P2491-ICV2490
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57160.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\2P2491\2p57160.D          Vial: 13
Acq On    : 11 Mar 2016   7:51 pm                   Operator: sarad
Sample    : ICv2490-50                              Inst    : MS2P
Misc      : op91532,e2p2491                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2P2490.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Mar 11 20:15:43 2016
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	94	0.00	4.20
2	t	1,4-Dioxane	0.568	0.506	10.9	91	0.02	1.43
6	t	Indene	2.188	2.329	-6.4	102	0.00	4.41
7	t	Cumene	3.363	3.241	3.6	87	0.00	3.51
13	t	Decane	1.907	1.772	7.1	86	0.00	4.09
18	t	Acetophenone	1.717	1.774	-3.3	99	0.00	4.55
24	I	Naphthalene-d8	1.000	1.000	0.0	98	0.00	5.25
27	t	Quinoline	0.676	0.680	-0.6	98	-0.02	5.55
40	t	2,3-Dichloroaniline	0.367	0.310	15.5	82	0.00	6.08
41	t	Caprolactam	0.097	0.091	6.2	89	-0.06	5.62
45	t	1-Methylnaphthalene	0.618	0.588	4.9	92	0.00	5.92
46	t	Dimethylnaphthalene	0.598	0.565	5.5	92	0.00	6.36
47	I	Acenaphthene-d10	1.000	1.000	0.0	91	0.00	6.69
53	t	Biphenyl	1.434	1.443	-0.6	91	0.00	6.23
69	I	Phenanthrene-d10	1.000	1.000	0.0	89	0.00	7.91
82	t	Octadecane	0.520	0.522	-0.4	88	0.00	7.86
92	I	Perylene-d12	1.000	1.000	0.0	75	-0.01	12.94
100	t	7,12-Dimethylbenz(a)anthr	0.566	0.348	38.5#	44#	-0.03	12.45

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p57151a.D M2P2490.M Fri Mar 11 22:59:53 2016 RPT1

8.7.7

8

Initial Calibration Verification

Job Number: JC16204 **Sample:** E2P2491-ICV2490
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57161.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2P2491\2p57161.D Vial: 14
Acq On : 11 Mar 2016 8:11 pm Operator: sarad
Sample : ICv2490-50 Inst : MS2P
Misc : op91532,e2p2491 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P2490.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Mar 11 20:15:43 2016
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	89	0.00	4.20
5	S	2-Fluorophenol	1.331	1.401	-5.3	88	0.00	3.10
8	S	Phenol-d5	1.629	1.690	-3.7	88	-0.01	3.96
24	I	Naphthalene-d8	1.000	1.000	0.0	94	0.00	5.25
25	S	Nitrobenzene-d5	0.402	0.428	-6.5	104	0.00	4.67
47	I	Acenaphthene-d10	1.000	1.000	0.0	87	0.00	6.69
51	S	2-Fluorobiphenyl	1.238	1.433	-15.8	101	0.00	6.15
69	I	Phenanthrene-d10	1.000	1.000	0.0	84	0.00	7.91
73	S	2,4,6-Tribromophenol	0.100	0.099	1.0	79	-0.01	7.33
83	I	Chrysene-d12	1.000	1.000	0.0	69	-0.02	10.99
85	S	Terphenyl-d14	0.745	0.917	-23.1	86	0.00	9.63

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p57151a.D M2P2490.M Fri Mar 11 22:01:44 2016 RPT1

8.7.8

8

Initial Calibration Verification

Job Number: JC16204 **Sample:** E2P2491-ICV2490
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57163.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\2P2491\2p57163.D          Vial: 16
Acq On    : 11 Mar 2016   8:53 pm                   Operator: sarad
Sample    : ICv2490-50                              Inst    : MS2P
Misc      : op91532,e2p2491                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2P2490.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Mar 11 20:15:43 2016
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	74	-0.02	10.99
89 t	3,3'-Dichlorobenzidine	0.403	0.394	2.2	72	-0.01	10.99

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p57151a.D M2P2490.M Fri Mar 11 22:01:46 2016 RPT1

8.7.9

8

Initial Calibration Verification

Job Number: JC16204 **Sample:** E2P2491-ICV2491
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57163A.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\2P2491\2p57163a.D          Vial: 16
Acq On    : 11 Mar 2016   8:53 pm                    Operator: sarad
Sample    : ICv2491-50                               Inst    : MS2P
Misc      : op91532,e2p2491                          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2P2490.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Mar 11 20:15:43 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
109 I	Chrysene-d12a	1.000	1.000	0.0	90	0.00	10.99
110	Benzidine	0.483	0.677	-40.2#	153	0.00	9.32

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p57151a.D M2P2490.M Fri Mar 11 22:01:48 2016 RPT1

8.7.10

8

Initial Calibration Verification

Job Number: JC16204 **Sample:** E2P2492-ICV2491
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57166.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\2P2492\2p57166.D          Vial: 2
Acq On    : 11 Mar 2016  10:21 pm                   Operator: sarad
Sample    : icv2491-50                              Inst    : MS2P
Misc      : op91532,e2p2492                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2P2490.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Mar 11 20:15:43 2016
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.
104 I	Naphthalene-d8a	1.000	1.000	0.0	84	-0.01	5.24
105	Hydroquinone	0.276	0.362	-31.2#	101	0.00	5.67

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p57151a.D M2P2490.M Mon Mar 14 08:51:33 2016 RPT1

8.7.11

8

Initial Calibration Verification

Job Number: JC16204 **Sample:** E2P2492-ICV2490
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57167.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\2P2492\2p57167.D          Vial: 3
Acq On    : 11 Mar 2016  10:41 pm                   Operator: sarad
Sample    : icv2490-50                              Inst    : MS2P
Misc      : op91532,e2p2492                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2P2490.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Mar 11 20:15:43 2016
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	74	-0.01	4.19
9	t	Phenol	1.772	1.693	4.5	68	-0.02	3.96
12	t	2-Chlorophenol	1.424	1.382	2.9	70	-0.02	4.02
19	t	2-Methylphenol	1.138	1.219	-7.1	79	-0.02	4.46
21	t	3&4-Methylphenol	1.233	1.268	-2.8	76	-0.02	4.59
24	I	Naphthalene-d8	1.000	1.000	0.0	74	-0.02	5.24
29	t	2-Nitrophenol	0.201	0.203	-1.0	70	-0.02	4.94
30	t	2,4-Dimethylphenol	0.375	0.391	-4.3	77	-0.02	5.01
31	t	Benzoic acid	0.194	0.199	-2.6	69	-0.03	5.17
33	t	2,4-Dichlorophenol	0.301	0.307	-2.0	73	-0.02	5.16
34	t	2,6-Dichlorophenol	0.298	0.295	1.0	74	-0.02	5.33
43	t	4-Chloro-3-methylphenol	0.319	0.321	-0.6	73	-0.03	5.76
47	I	Acenaphthene-d10	1.000	1.000	0.0	73	-0.02	6.67
49	t	2,4,6-Trichlorophenol	0.360	0.368	-2.2	72	-0.02	6.08
50	t	2,4,5-Trichlorophenol	0.374	0.369	1.3	69	-0.03	6.11
		----------	True	Calc.	% Drift		----------	
60	t	2,4-Dinitrophenol	50.000	51.593	-3.2	64	-0.02	6.76
		----------	AvgRF	CCRF	% Dev		----------	
61	t	4-Nitrophenol	0.140	0.164	-17.1	77	-0.03	6.85
64		2,3,4,6-Tetrachlorophenol	0.283	0.288	-1.8	69	-0.02	6.96
69	I	Phenanthrene-d10	1.000	1.000	0.0	71	-0.02	7.90
		----------	True	Calc.	% Drift		----------	
70	t	4,6-Dinitro-2-methylpheno	50.000	51.866	-3.7	72	-0.03	7.20
		----------	True	Calc.	% Drift		----------	
76	t	Pentachlorophenol	50.000	46.711	6.6	56	-0.03	7.75

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p57151a.D M2P2490.M Fri Mar 11 23:13:48 2016 RPT1

Continuing Calibration Summary

Job Number: JC16204 **Sample:** E2P2497-CC2490
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57273.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\2P2497\2p57273.D Vial: 2
Acq On : 16 Mar 2016 7:22 pm Operator: sarad
Sample : cc2490-50 Inst : MS2P
Misc : op92038,e2p2497 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2P2490.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Mar 11 20:15:43 2016
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	81	-0.02	4.11
2	t	1,4-Dioxane	0.568	0.574	-1.1	88	-0.07	1.32
3	t	Pyridine	1.297	1.245	4.0	76	-0.08	1.57
4	t	N-Nitrosodimethylamine	0.801	0.770	3.9	77	-0.08	1.56
5	S	2-Fluorophenol	1.331	1.373	-3.2	78	-0.03	3.02
6	t	Indene	2.188	2.198	-0.5	83	-0.02	4.33
7	t	Cumene	3.363	3.355	0.2	77	-0.04	3.41
8	S	Phenol-d5	1.629	1.751	-7.5	83	0.00	3.91
9	t	Phenol	1.772	1.821	-2.8	80	0.00	3.92
10		Aniline	2.022	2.054	-1.6	76	-0.02	3.85
11	t	bis(2-Chloroethyl)ether	1.173	1.240	-5.7	86	-0.02	3.92
12	t	2-Chlorophenol	1.424	1.441	-1.2	80	-0.02	3.96
13	t	Decane	1.907	1.802	5.5	75	-0.02	4.01
14	t	1,3-Dichlorobenzene	1.569	1.561	0.5	82	-0.02	4.07
15	t	1,4-Dichlorobenzene	1.581	1.568	0.8	81	-0.02	4.13
16	t	Benzyl alcohol	0.786	0.832	-5.9	82	-0.01	4.27
17	t	1,2-Dichlorobenzene	1.456	1.474	-1.2	80	-0.02	4.25
18	t	Acetophenone	1.717	1.696	1.2	81	-0.01	4.47
19	t	2-Methylphenol	1.138	1.129	0.8	81	0.00	4.41
20	t	2,2'-oxybis(1-Chloropropa	0.369	0.350	5.1	80	-0.02	4.37
21	t	3&4-Methylphenol	1.233	1.223	0.8	80	0.00	4.54
22	t	n-Nitroso-di-n-propylamin	0.937	0.933	0.4	83	-0.01	4.49
23	t	Hexachloroethane	0.548	0.534	2.6	80	-0.02	4.53
24	I	Naphthalene-d8	1.000	1.000	0.0	83	-0.02	5.17
25	S	Nitrobenzene-d5	0.402	0.380	5.5	81	-0.02	4.59
26	t	Nitrobenzene	0.391	0.372	4.9	82	-0.02	4.61
27	t	Quinoline	0.676	0.678	-0.3	82	-0.01	5.48
28	t	Isophorone	0.660	0.638	3.3	80	-0.02	4.81
29	t	2-Nitrophenol	0.201	0.210	-4.5	81	-0.02	4.87
30	t	2,4-Dimethylphenol	0.375	0.352	6.1	78	0.00	4.96
31	t	Benzoic acid	0.194	0.186	4.1	73	0.00	5.13
32	t	bis(2-Chloroethoxy)methan	0.376	0.375	0.3	82	-0.02	5.00
33	t	2,4-Dichlorophenol	0.301	0.308	-2.3	82	0.00	5.10
34	t	2,6-Dichlorophenol	0.298	0.293	1.7	82	0.00	5.27
35		1,3,5-Trichlorobenzene	0.359	0.353	1.7	80	-0.02	4.88
36	t	1,2,4-Trichlorobenzene	0.338	0.335	0.9	82	-0.02	5.14
37		1,2,3-Trichlorobenzene	0.322	0.314	2.5	82	0.00	5.32
38	t	Naphthalene	1.038	1.009	2.8	82	-0.02	5.19
39	t	4-Chloroaniline	0.438	0.436	0.5	83	0.00	5.26
40	t	2,3-Dichloroaniline	0.367	0.366	0.3	81	0.00	6.00
41	t	Caprolactam	0.097	0.102	-5.2	84	-0.01	5.59

Continuing Calibration Summary

Job Number: JC16204 **Sample:** E2P2497-CC2490
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57273.D
Project: BMS, Former Brule Area, PR

42	t	Hexachlorobutadiene	0.193	0.187	3.1	80	-0.01	5.30
43	t	4-Chloro-3-methylphenol	0.319	0.323	-1.3	83	0.00	5.72
44	t	2-Methylnaphthalene	0.592	0.594	-0.3	81	0.00	5.76
45	t	1-Methylnaphthalene	0.618	0.615	0.5	81	0.00	5.84
46	t	Dimethylnaphthalene	0.598	0.600	-0.3	83	0.00	6.27
47	I	Acenaphthene-d10	1.000	1.000	0.0	82	-0.01	6.61
		----------	True	Calc.	% Drift	----------		
48	t	Hexachlorocyclopentadiene	100.000	95.689	4.3	77	-0.02	5.89
		----------	AvgRF	CCRF	% Dev	----------		
49	t	2,4,6-Trichlorophenol	0.360	0.364	-1.1	81	0.00	6.03
50	t	2,4,5-Trichlorophenol	0.374	0.379	-1.3	80	0.00	6.07
51	S	2-Fluorobiphenyl	1.238	1.252	-1.1	83	-0.01	6.07
52	t	2-Chloronaphthalene	1.076	1.070	0.6	83	-0.02	6.16
53	t	Biphenyl	1.434	1.420	1.0	81	-0.02	6.15
54	t	2-Nitroaniline	0.412	0.417	-1.2	85	0.00	6.27
55	t	Dimethylphthalate	1.243	1.238	0.4	83	-0.01	6.41
56	t	Acenaphthylene	1.793	1.786	0.4	83	-0.01	6.49
57	t	2,6-Dinitrotoluene	0.272	0.288	-5.9	83	0.00	6.47
58	t	3-Nitroaniline	0.318	0.337	-6.0	83	0.00	6.61
59	t	Acenaphthene	1.145	1.148	-0.3	83	-0.01	6.63
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	100.000	113.826	-13.8	92	0.00	6.71
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.140	0.136	2.9	72	0.02	6.83
62	t	Dibenzofuran	1.548	1.556	-0.5	82	0.00	6.78
63	t	2,4-Dinitrotoluene	0.364	0.386	-6.0	84	0.00	6.80
64		2,3,4,6-Tetrachlorophenol	0.283	0.272	3.9	74	0.00	6.91
65	t	Diethylphthalate	1.261	1.249	1.0	81	0.00	6.99
66	t	Fluorene	1.259	1.261	-0.2	81	0.00	7.06
67	t	4-Chlorophenyl-phenylethe	0.599	0.602	-0.5	80	0.00	7.06
68	t	4-Nitroaniline	0.291	0.312	-7.2	86	0.00	7.11
69	I	Phenanthrene-d10	1.000	1.000	0.0	83	-0.01	7.83
		----------	True	Calc.	% Drift	----------		
70	t	4,6-Dinitro-2-methylpheno	50.000	53.972	-7.9	88	0.00	7.15
		----------	AvgRF	CCRF	% Dev	----------		
71	t	n-Nitrosodiphenylamine	0.522	0.519	0.6	85	-0.01	7.17
72	t	1,2-Diphenylhydrazine	0.734	0.763	-4.0	89	-0.01	7.19
73	S	2,4,6-Tribromophenol	0.100	0.106	-6.0	84	-0.01	7.26
74	t	4-Bromophenyl-phenylether	0.215	0.221	-2.8	81	-0.01	7.46
75	t	Hexachlorobenzene	0.230	0.239	-3.9	84	-0.01	7.51
		----------	True	Calc.	% Drift	----------		
76	t	Pentachlorophenol	100.000	81.836	18.2	63	0.00	7.70
		----------	AvgRF	CCRF	% Dev	----------		
77	t	Phenanthrene	1.075	1.071	0.4	85	-0.02	7.85
78	t	Anthracene	1.085	1.101	-1.5	84	-0.02	7.89
79	t	Carbazole	1.004	1.015	-1.1	84	0.00	8.06
80	t	Di-n-butylphthalate	1.300	1.354	-4.2	83	-0.02	8.41
81	t	Fluoranthene	1.218	1.290	-5.9	83	-0.02	9.04
82	t	Octadecane	0.520	0.509	2.1	80	-0.01	7.77

Continuing Calibration Summary

Job Number: JC16204 **Sample:** E2P2497-CC2490
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57273.D
Project: BMS, Former Brule Area, PR

83	I	Chrysene-d12	1.000	1.000	0.0	84	0.00	10.89
84	t	Pyrene	1.211	1.183	2.3	83	0.00	9.30
85	S	Terphenyl-d14	0.745	0.751	-0.8	86	0.00	9.52
86	t	Butylbenzylphthalate	0.561	0.568	-1.2	83	0.00	10.20
87		Butyl stearate	0.432	0.426	1.4	81	0.00	10.36
88	t	Benzo[a]anthracene	1.116	1.091	2.2	84	0.00	10.87
89	t	3,3'-Dichlorobenzidine	0.403	0.406	-0.7	85	0.00	10.89
90	t	Chrysene	1.015	0.973	4.1	84	0.00	10.92
91	t	bis(2-Ethylhexyl)phthalat	0.743	0.741	0.3	84	0.00	11.06
92	I	Perylene-d12	1.000	1.000	0.0	76	0.00	12.84
93	t	Di-n-octylphthalate	1.563	1.666	-6.6	78	0.00	11.98
94	t	Benzo[b]fluoranthene	1.292	1.352	-4.6	77	0.00	12.36
95	t	Benzo[k]fluoranthene	1.135	1.143	-0.7	75	0.00	12.39
96	t	Benzo[a]pyrene	1.081	1.103	-2.0	76	0.00	12.76
97	t	Indeno[1,2,3-cd]pyrene	0.908	1.016	-11.9	81	0.01	14.13
98	t	Dibenz(a,h)acridine	0.823	0.857	-4.1	76	0.00	13.88
99	t	Dibenz[a,h]anthracene	0.912	0.994	-9.0	79	0.01	14.16
100	t	7,12-Dimethylbenz(a)anthr	0.566	0.599	-5.8	76	0.00	12.35
101	t	Benzo[g,h,i]perylene	0.896	0.979	-9.3	80	0.00	14.42

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p57151a.D M2P2490.M Wed Mar 16 19:52:50 2016 RPT1

8.7.13 8

Continuing Calibration Summary

Job Number: JC16204 **Sample:** E2P2497-CC2491
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57274.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\2P2497\2p57274.D          Vial: 3
Acq On    : 16 Mar 2016   7:43 pm                   Operator: sarad
Sample    : cc2491-50                               Inst    : MS2P
Misc      : op92038,e2p2497                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2P2490.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Mar 11 20:15:43 2016
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.
102	I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	85	-0.02	4.11
103		Benzaldehyde	0.981	0.971	1.0	99	-0.03	3.74
104	I	Naphthalene-d8a	1.000	1.000	0.0	85	-0.02	5.17
105		Hydroquinone	0.276	0.330	-19.6	94	0.01	5.61
106	I	Acenaphthene-d10a	1.000	1.000	0.0	88	-0.02	6.60
107		Atrazine	0.173	0.163	5.8	82	0.00	7.63
108		1,2,4,5-Tetrachlorobenzen	0.605	0.549	9.3	83	-0.02	5.90
109	I	Chrysene-d12a	1.000	1.000	0.0	89	-0.01	10.87
110		Benzidine	0.483	0.300	37.9#	67	-0.01	9.22

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p57151a.D M2P2490.M Thu Mar 17 16:11:00 2016 RPT1

Continuing Calibration Summary

Job Number: JC16204 **Sample:** E2P2498-CC2490
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57300.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\2P2498\2p57300.D          Vial: 2
Acq On    : 17 Mar 2016   9:42 am                   Operator: robertl1
Sample    : CC2490-25                               Inst    : MS2P
Misc      : op92038,e2p2498                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2P2490.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Sat Mar 19 14:58:18 2016
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	101	0.07	4.09
2	t	1,4-Dioxane	0.568	0.510	10.2	101	0.02	1.30
3	t	Pyridine	1.297	1.160	10.6	91	0.03	1.55
4	t	N-Nitrosodimethylamine	0.801	0.704	12.1	90	0.03	1.54
5	S	2-Fluorophenol	1.331	1.260	5.3	96	0.05	3.00
6	t	Indene	2.188	2.233	-2.1	105	0.08	4.30
7	t	Cumene	3.363	3.234	3.8	100	0.07	3.39
8	S	Phenol-d5	1.629	1.621	0.5	100	0.07	3.88
9	t	Phenol	1.772	1.761	0.6	103	0.07	3.89
10		Aniline	2.022	1.609	20.4#	81	0.07	3.83
11	t	bis(2-Chloroethyl)ether	1.173	1.172	0.1	103	0.07	3.89
12	t	2-Chlorophenol	1.424	1.385	2.7	98	0.08	3.94
13	t	Decane	1.907	1.841	3.5	99	0.07	3.98
14	t	1,3-Dichlorobenzene	1.569	1.502	4.3	97	0.07	4.04
15	t	1,4-Dichlorobenzene	1.581	1.526	3.5	99	0.07	4.10
16	t	Benzyl alcohol	0.786	0.801	-1.9	101	0.08	4.25
17	t	1,2-Dichlorobenzene	1.456	1.415	2.8	97	0.08	4.23
18	t	Acetophenone	1.717	1.697	1.2	102	0.09	4.45
19	t	2-Methylphenol	1.138	1.097	3.6	97	0.09	4.39
20	t	2,2'-oxybis(1-Chloropropa	0.369	0.344	6.8	97	0.08	4.35
21	t	3&4-Methylphenol	1.233	1.196	3.0	101	0.08	4.52
22	t	n-Nitroso-di-n-propylamin	0.937	0.902	3.7	98	0.09	4.46
23	t	Hexachloroethane	0.548	0.522	4.7	97	0.08	4.50
24	I	Naphthalene-d8	1.000	1.000	0.0	103	0.07	5.15
25	S	Nitrobenzene-d5	0.402	0.395	1.7	102	0.07	4.56
26	t	Nitrobenzene	0.391	0.374	4.3	101	0.07	4.58
27	t	Quinoline	0.676	0.670	0.9	103	0.08	5.45
28	t	Isophorone	0.660	0.632	4.2	101	0.07	4.78
29	t	2-Nitrophenol	0.201	0.200	0.5	101	0.07	4.85
30	t	2,4-Dimethylphenol	0.375	0.303	19.2	85	0.07	4.93
31	t	Benzoic acid	0.194	0.197	-1.5	109	0.08	5.08
32	t	bis(2-Chloroethoxy)methan	0.376	0.361	4.0	100	0.07	4.98
33	t	2,4-Dichlorophenol	0.301	0.302	-0.3	101	0.07	5.07
34	t	2,6-Dichlorophenol	0.298	0.280	6.0	96	0.08	5.24
35		1,3,5-Trichlorobenzene	0.359	0.351	2.2	103	0.07	4.85
36	t	1,2,4-Trichlorobenzene	0.338	0.325	3.8	102	0.07	5.11
37		1,2,3-Trichlorobenzene	0.322	0.309	4.0	102	0.08	5.29
38	t	Naphthalene	1.038	0.997	3.9	101	0.08	5.16
39	t	4-Chloroaniline	0.438	0.400	8.7	96	0.08	5.24
40	t	2,3-Dichloroaniline	0.367	0.367	0.0	106	0.09	5.98
41	t	Caprolactam	0.097	0.099	-2.1	104	0.08	5.54

Continuing Calibration Summary

Job Number: JC16204 **Sample:** E2P2498-CC2490
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57300.D
Project: BMS, Former Brule Area, PR

42	t	Hexachlorobutadiene	0.193	0.188	2.6	101	0.08	5.27
43	t	4-Chloro-3-methylphenol	0.319	0.321	-0.6	105	0.08	5.69
44	t	2-Methylnaphthalene	0.592	0.571	3.5	101	0.08	5.73
45	t	1-Methylnaphthalene	0.618	0.607	1.8	104	0.08	5.81
46	t	Dimethylnaphthalene	0.598	0.594	0.7	106	0.09	6.24
47	I	Acenaphthene-d10	1.000	1.000	0.0	104	0.08	6.57
		----------	True	Calc.	% Drift	----------		
48	t	Hexachlorocyclopentadiene	50.000	44.643	10.7	98	0.07	5.86
		----------	AvgRF	CCRF	% Dev	----------		
49	t	2,4,6-Trichlorophenol	0.360	0.362	-0.6	103	0.07	5.99
50	t	2,4,5-Trichlorophenol	0.374	0.377	-0.8	105	0.07	6.04
51	S	2-Fluorobiphenyl	1.238	1.265	-2.2	107	0.07	6.04
52	t	2-Chloronaphthalene	1.076	1.047	2.7	101	0.07	6.13
53	t	Biphenyl	1.434	1.437	-0.2	105	0.07	6.11
54	t	2-Nitroaniline	0.412	0.434	-5.3	109	0.08	6.23
55	t	Dimethylphthalate	1.243	1.178	5.2	100	0.08	6.38
56	t	Acenaphthylene	1.793	1.742	2.8	101	0.08	6.46
57	t	2,6-Dinitrotoluene	0.272	0.272	0.0	101	0.08	6.44
58	t	3-Nitroaniline	0.318	0.326	-2.5	107	0.08	6.57
59	t	Acenaphthene	1.145	1.114	2.7	102	0.08	6.60
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	56.115	-12.2	139	0.07	6.67
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.140	0.144	-2.9	95	0.08	6.79
62	t	Dibenzofuran	1.548	1.517	2.0	102	0.08	6.74
63	t	2,4-Dinitrotoluene	0.364	0.371	-1.9	101	0.08	6.77
64		2,3,4,6-Tetrachlorophenol	0.283	0.266	6.0	98	0.08	6.87
65	t	Diethylphthalate	1.261	1.205	4.4	99	0.08	6.96
66	t	Fluorene	1.259	1.241	1.4	103	0.09	7.02
67	t	4-Chlorophenyl-phenylethe	0.599	0.564	5.8	99	0.09	7.03
68	t	4-Nitroaniline	0.291	0.278	4.5	96	0.09	7.07
69	I	Phenanthrene-d10	1.000	1.000	0.0	104	0.09	7.78
		----------	True	Calc.	% Drift	----------		
70	t	4,6-Dinitro-2-methylpheno	25.000	25.704	-2.8	117	0.08	7.10
		----------	AvgRF	CCRF	% Dev	----------		
71	t	n-Nitrosodiphenylamine	0.522	0.515	1.3	105	0.07	7.13
72	t	1,2-Diphenylhydrazine	0.734	0.798	-8.7	117	0.08	7.16
73	S	2,4,6-Tribromophenol	0.100	0.094	6.0	97	0.07	7.22
74	t	4-Bromophenyl-phenylether	0.215	0.204	5.1	100	0.08	7.42
75	t	Hexachlorobenzene	0.230	0.224	2.6	104	0.08	7.47
		----------	True	Calc.	% Drift	----------		
76	t	Pentachlorophenol	50.000	37.883	24.2#	80	0.08	7.66
		----------	AvgRF	CCRF	% Dev	----------		
77	t	Phenanthrene	1.075	1.039	3.3	103	0.09	7.80
78	t	Anthracene	1.085	1.053	2.9	101	0.09	7.85
79	t	Carbazole	1.004	0.982	2.2	104	0.08	8.01
80	t	Di-n-butylphthalate	1.300	1.259	3.2	100	0.09	8.37
81	t	Fluoranthene	1.218	1.213	0.4	103	0.09	8.98
82	t	Octadecane	0.520	0.541	-4.0	109	0.08	7.74

Continuing Calibration Summary

Job Number: JC16204 **Sample:** E2P2498-CC2490
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57300.D
Project: BMS, Former Brule Area, PR

83	I	Chrysene-d12	1.000	1.000	0.0	106	0.14	10.82
84	t	Pyrene	1.211	1.180	2.6	105	0.11	9.23
85	S	Terphenyl-d14	0.745	0.748	-0.4	107	0.12	9.46
86	t	Butylbenzylphthalate	0.561	0.545	2.9	103	0.12	10.14
87		Butyl stearate	0.432	0.419	3.0	103	0.12	10.29
88	t	Benzo[a]anthracene	1.116	1.071	4.0	104	0.13	10.79
89	t	3,3'-Dichlorobenzidine	0.403	0.386	4.2	101	0.13	10.82
90	t	Chrysene	1.015	0.993	2.2	106	0.14	10.85
91	t	bis(2-Ethylhexyl)phthalat	0.743	0.720	3.1	102	0.14	10.99
92	I	Perylene-d12	1.000	1.000	0.0	108	0.16	12.76
93	t	Di-n-octylphthalate	1.563	1.491	4.6	101	0.14	11.91
94	t	Benzo[b]fluoranthene	1.292	1.306	-1.1	108	0.15	12.27
95	t	Benzo[k]fluoranthene	1.135	1.063	6.3	100	0.14	12.30
96	t	Benzo[a]pyrene	1.081	1.051	2.8	103	0.15	12.68
97	t	Indeno[1,2,3-cd]pyrene	0.908	0.943	-3.9	114	0.16	14.03
98	t	Dibenz(a,h)acridine	0.823	0.874	-6.2	118	0.16	13.78
99	t	Dibenz[a,h]anthracene	0.912	0.948	-3.9	116	0.17	14.06
100	t	7,12-Dimethylbenz(a)anthr	0.566	0.496	12.4	94	0.15	12.27
101	t	Benzo[g,h,i]perylene	0.896	0.930	-3.8	115	0.17	14.32

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p57152a.D M2P2490.M Thu Mar 24 08:26:53 2016 RPT1

8.7.15

8

Continuing Calibration Summary

Job Number: JC16204 **Sample:** E2P2498-CC2491
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 2P57301.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\2P2498\2p57301.D          Vial: 3
Acq On    : 17 Mar 2016  10:12 am                   Operator: robertl1
Sample    : CC2491-25                               Inst    : MS2P
Misc      : op92038,e2p2498                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2P2490eph.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Fri Mar 11 20:15:43 2016
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.
102	I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	97	0.10	4.09
103		Benzaldehyde	0.981	0.932	5.0	95	0.08	3.71
104	I	Naphthalene-d8a	1.000	1.000	0.0	97	0.09	5.14
105		Hydroquinone	0.276	0.297	-7.6	108	0.13	5.59
106	I	Acenaphthene-d10a	1.000	1.000	0.0	99	0.09	6.57
107		Atrazine	0.173	0.145	16.2	85	0.13	7.59
108		1,2,4,5-Tetrachlorobenzen	0.605	0.504	16.7	85	0.07	5.87
109	I	Chrysene-d12a	1.000	1.000	0.0	100	0.16	10.81
110		Benzidine	0.483	0.275	43.1#	60	0.14	9.17
111	I	Phenanthrene-d10a	1.000	1.000	0.0	98	0.11	7.78
112	S	1-chlorooctadecane	0.436	0.369	15.4	86	0.12	8.93
113	S	O-terphenyl	0.576	0.476	17.4	85	0.11	8.14

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2p57152a.D M2P2490eph.M Thu Mar 24 08:28:08 2016 RPT1

Initial Calibration Summary

Job Number: JC16204 **Sample:** E4P767-ICC767
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 4P14949.D
Project: BMS, Former Brule Area, PR

```
                         Response Factor Report  MS4P

Method       : C:\MSDCHEM\1\METHODS\M4P767SIM.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Tue Feb 02 08:55:09 2016
Response via : Initial Calibration

Calibration Files
2.5 =4p14956.D   1.0 =4p14949.D   0.5 =4p14948.D   0.2 =4p14950.D
0.1 =4p14951.D   0.05=4p14952.D   0.02=4p14953.D   0.01=4p14954.D
5   =4p14955.D       =                 =                 =

Compound
            2.5   1.0   0.5   0.2   0.1   0.05  0.02  0.01  5            Avg    %RSD
-----------------------------------------------------------------------------

1) I   1-Methylnaphthalene-d ----------------ISTD---------------------
2)  1,4-Dioxane
          0.397 0.422 0.463 0.544 0.643                   0.360        0.471   22.27
           ---- Quadratic regression ----  Coefficient =  1.0000
             Response Ratio = 0.00593 + 0.41624 *A + -0.04843 *A^2

3)  2-Fluorophenol
          0.672 0.703 0.715 0.834 0.725 0.652 0.706       0.612        0.702    9.27
4)  Phenol-d5
          1.198 1.206 1.215 1.355 1.068 0.979 0.970       1.064        1.132   11.78
5)  Phenol
          1.364 1.425 1.422 1.544 1.318 1.119 1.111       1.436        1.342   11.52
6)  bis(2-Chloroethyl)ether
          1.198 1.124 1.126 1.313 1.142 1.025 1.708 0.947 1.039        1.180   19.00
7)  Nitrobenzene-d5
          1.141 1.142 1.130 1.314 1.119 0.983 1.029       1.054        1.114    8.96
8)  Naphthalene
          2.563 2.595 2.484 3.016 2.730 2.488 2.840 2.669 2.394        2.642    7.40
9)  Hexachlorobutadiene
          0.607 0.596 0.574 0.697 0.635 0.573 0.672 0.676 0.564        0.622    8.08
10)  2-Methylnaphthalene
          1.349 1.325 1.305 1.519 1.322 1.278 1.195 1.272 1.253        1.313    6.83
11)  1-Methylnaphthalene
          1.372 1.406 1.430 1.700 1.426 1.361 1.350 1.447 1.280        1.419    8.25
12)  Hexachlorocyclopentadiene
          0.628 0.542 0.513 0.507 0.361                   0.632        0.531   18.75

13) I   Fluorene-d10          ----------------ISTD---------------------
14)  2-Fluorobiphenyl
          1.019 1.031 1.213 1.477 1.087 1.066 1.079                    1.139   14.22
15)  Acenaphthylene
          1.461 1.391 1.352 1.531 1.444 1.287             1.331        1.400    6.03
16)  Acenaphthene
          0.978 1.003 1.052 1.286 1.024 0.949 1.014 1.067 0.887        1.029   10.77
17)  Dibenzofuran
          1.237 1.210 1.483 1.637 1.331 1.306             1.094        1.328   13.65
18)  Fluorene
          1.219 1.217 1.319 1.515 1.174 1.117             1.114        1.239   11.31
19)  4,6-dinitro-2-methylphenol
          0.124 0.095 0.098 0.086 0.053 0.042             0.142        0.091   39.08
           ---- Quadratic regression ----  Coefficient =  0.9996
             Response Ratio = -0.00728 + 0.10435 *A + 0.00626 *A^2

20)  n-nitrosodiphenylamine
```

Initial Calibration Summary

Job Number: JC16204 **Sample:** E4P767-ICC767
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 4P14949.D
Project: BMS, Former Brule Area, PR

```
          0.625 0.592 0.655 0.724 0.572 0.520            0.545        0.605   11.53
21)  1,2-Diphenylhydrazine
          1.390 1.316 1.185 1.360 1.169 0.981            1.218        1.231   11.39
22)  2,4,6-Tribromophenol
          0.157 0.154 0.158 0.173 0.135 0.117            0.148        0.149   12.34

23)     Fluoranthene-d10      ----------------ISTD---------------------
24)  Hexachlorobenzene
          0.325 0.305 0.320 0.376 0.318 0.291 0.323 0.332 0.307        0.322    7.37
25)  Pentachlorophenol
          0.147 0.119 0.124 0.110 0.078 0.067            0.149        0.113   27.93
           ---- Quadratic regression ----  Coefficient =  0.9991
             Response Ratio = -0.01083 + 0.14227 *A + 0.00146 *A^2

26)  Phenanthrene
          1.242 1.180 1.238 1.407 1.160 1.062 1.130 1.176 1.166        1.196    8.01
27)  Anthracene
          1.155 1.051 1.147 1.257 1.009 0.939 0.993 0.884 1.148        1.065   11.29
28)  Fluoranthene
          1.263 1.232 1.325 1.496 1.243 1.167            1.187        1.273    8.71
29)  Pyrene
          1.275 1.231 1.333 1.433 1.246 1.120 1.257      1.243        1.267    7.05
30)  Terphenyl-d14
          0.607 0.595 0.632 0.730 0.626 0.563 0.593 0.571 0.581        0.611    8.22
31)  Benzo[a]anthracene
          1.132 1.097 1.174 1.236 1.077 0.917            1.124        1.108    8.96
32)  Chrysene
          1.286 1.285 1.315 1.507 1.324 1.207            1.246        1.310    7.31

33) I   Benzo(a)pyrene-d12    ----------------ISTD---------------------
34)  Benzo[b]fluoranthene
          1.610 1.601 1.669 2.013 1.672 1.337            1.689        1.656   11.97
35)  Benzo[k]fluoranthene
          1.682 1.478 1.501 1.644 1.319 1.443            1.436        1.501    8.35
36)  Benzo[a]pyrene
          1.527 1.486 1.576 1.904 1.639 1.898            1.429        1.637   11.73
37)  Indeno[1,2,3-cd]pyrene
          1.714 1.655 1.720 2.018 1.706 1.645            1.613        1.725    7.87
38)  Dibenz[a,h]anthracene
          1.425 1.365 1.430 1.660 1.405 1.312            1.358        1.422    7.94
39)  Benzo[g,h,i]perylene
          1.520 1.462 1.514 1.819 1.559 1.514            1.413        1.543    8.46
-----------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

         M4P767SIM.M        Tue Feb 02 09:03:27 2016
```

8.7.17

8

Initial Calibration Verification

Job Number: JC16204 **Sample:** E4P767-ICV767
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 4P14957.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\e4p767\4p14957.D Vial: 12
Acq On : 1 Feb 2016 10:24 pm Operator: juliusj
Sample : icv767-1.0 Inst : MS4P
Misc : op90759a,e4p767 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Tue Feb 02 08:55:09 2016
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-Methylnaphthalene-d10	1.000	1.000	0.0	97	0.00	8.75
		----------	AvgRF	CCRF	% Dev	----------		
6	t	bis(2-Chloroethyl)ether	1.180	1.334	-13.1	115	-0.02	4.65
8	t	Naphthalene	2.642	2.526	4.4	94	-0.02	7.27
9	t	Hexachlorobutadiene	0.622	0.617	0.8	100	0.00	7.57
10	t	2-Methylnaphthalene	1.313	1.247	5.0	91	0.00	8.62
13	I	Fluorene-d10	1.000	1.000	0.0	92	0.00	11.74
15	t	Acenaphthylene	1.400	1.421	-1.5	94	0.00	10.38
16	t	Acenaphthene	1.029	1.019	1.0	93	0.00	10.74
17		Dibenzofuran	1.328	1.289	2.9	98	0.00	11.11
18	t	Fluorene	1.239	1.176	5.1	89	0.00	11.79
		----------	AvgRF	CCRF	% Dev	----------		
20		n-nitrosodiphenylamine	0.605	0.590	2.5	92	0.00	12.08
21		1,2-Diphenylhydrazine	1.231	1.287	-4.5	90	0.00	12.13
23		Fluoranthene-d10	1.000	1.000	0.0	100	0.00	15.95
24	t	Hexachlorobenzene	0.322	0.301	6.5	99	0.00	12.90
		----------	AvgRF	CCRF	% Dev	----------		
26	t	Phenanthrene	1.196	1.203	-0.6	102	-0.02	13.69
27	t	Anthracene	1.065	0.948	11.0	91	-0.02	13.80
28	t	Fluoranthene	1.273	1.232	3.2	100	-0.02	15.97
29	t	Pyrene	1.267	1.163	8.2	95	-0.02	16.36
31	t	Benzo[a]anthracene	1.108	1.017	8.2	93	0.00	18.47
32	t	Chrysene	1.310	1.314	-0.3	103	0.00	18.52
33	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	92	0.00	20.57
34	t	Benzo[b]fluoranthene	1.656	1.410	14.9	81	0.00	20.13
35	t	Benzo[k]fluoranthene	1.501	1.567	-4.4	97	0.00	20.18
36	t	Benzo[a]pyrene	1.637	1.411	13.8	87	0.00	20.59
37	t	Indeno[1,2,3-cd]pyrene	1.725	1.573	8.8	87	0.00	22.13
38	t	Dibenz[a,h]anthracene	1.422	1.310	7.9	88	0.00	22.17
39	t	Benzo[g,h,i]perylene	1.543	1.460	5.4	92	0.00	22.52

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

Initial Calibration Verification

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample: E4P767-ICV767
Lab FileID: 4P14957.D

```
4p14949.D  M4P767SIM.M       Tue Feb 02 09:03:11 2016
```

Initial Calibration Verification

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR
Sample: E4P767-ICV767
Lab FileID: 4P14958.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e4p767\4p14958.D          Vial: 13
Acq On    :  1 Feb 2016  10:54 pm                   Operator: juliusj
Sample    : icv767-1.0                              Inst    : MS4P
Misc      : op90759a,e4p767                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M4P767SIM.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Tue Feb 02 08:55:09 2016
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-Methylnaphthalene-d10    1.000   1.000      0.0   81  -0.02    8.73

          ----------------------- True    Calc.   % Drift  ------------
 2 t   1,4-Dioxane                1.000   0.940      6.0   77   0.00    1.94

          ----------------------- AvgRF   CCRF     % Dev   -------------
11 t   1-Methylnaphthalene        1.419   1.289      9.2   74  -0.02    8.79

---------------------------------------------------------------------------
---------------------------------------------------------------------------

   (#) = Out of Range              SPCC's out = 0  CCC's out = 0
    4p14949.D  M4P767SIM.M       Tue Feb 02 09:03:13 2016
```

8.7.19

8

Initial Calibration Verification

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR
Sample: E4P767-ICV767
Lab FileID: 4P14959.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e4p767\4p14959.D          Vial: 14
Acq On    :  1 Feb 2016  11:24 pm                   Operator: juliusj
Sample    : icv767-1.0                              Inst    : MS4P
Misc      : op90759a,e4p767                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M4P767SIM.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Tue Feb 02 08:55:09 2016
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-Methylnaphthalene-d10	1.000	1.000	0.0	129	-0.02	8.73
	----------	AvgRF	CCRF	% Dev	----------		
5	Phenol	1.342	1.347	-0.4	121	0.00	4.54
13 I	Fluorene-d10	1.000	1.000	0.0	99	0.00	11.74
	----------	True	Calc.	% Drift	----------		
19	4,6-dinitro-2-methylpheno	5.000	6.227	-24.5	141	-0.02	11.94
	----------	AvgRF	CCRF	% Dev	----------		
23	Fluoranthene-d10	1.000	1.000	0.0	121	0.00	15.95
	----------	True	Calc.	% Drift	----------		
25 t	Pentachlorophenol	5.000	5.339	-6.8	148	-0.02	13.32

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4p14949.D M4P767SIM.M Tue Feb 02 09:03:15 2016

Continuing Calibration Summary

Job Number: JC16204 **Sample:** E4P805-CC767
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 4P15648.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e4p805\4p15648.D          Vial: 2
Acq On    : 17 Mar 2016   4:13 pm                   Operator: juliusj
Sample    : cc767-0.5                               Inst    : MS4P
Misc      : op91877a,e4p805                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M4P767SIM.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Mon Mar 14 09:09:23 2016
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-Methylnaphthalene-d10	1.000	1.000	0.0	109	-0.02	8.47
		----------	True	Calc.	% Drift	----------		
2	t	1,4-Dioxane	0.500	0.500	0.0	107	-0.02	1.76
		----------	AvgRF	CCRF	% Dev	----------		
3	S	2-Fluorophenol	0.702	0.711	-1.3	108	-0.09	3.09
4	S	Phenol-d5	1.132	1.228	-8.5	110	-0.08	4.29
5		Phenol	1.342	1.405	-4.7	107	-0.03	4.30
6	t	bis(2-Chloroethyl)ether	1.180	1.053	10.8	102	-0.02	4.41
7	S	Nitrobenzene-d5	1.114	1.097	1.5	106	-0.02	5.69
8	t	Naphthalene	2.642	2.523	4.5	110	-0.02	7.01
9	t	Hexachlorobutadiene	0.622	0.584	6.1	111	-0.02	7.30
10	t	2-Methylnaphthalene	1.313	1.325	-0.9	110	-0.02	8.34
11	t	1-Methylnaphthalene	1.419	1.405	1.0	107	-0.02	8.53
12		Hexachlorocyclopentadiene	0.531	0.177	66.7#	38#	-0.02	8.70
13	I	Fluorene-d10	1.000	1.000	0.0	100	-0.02	11.46
14	S	2-Fluorobiphenyl	1.139	1.276	-12.0	105	-0.04	9.12
15	t	Acenaphthylene	1.400	1.810	-29.3#	133	-0.02	10.12
16	t	Acenaphthene	1.029	1.162	-12.9	110	-0.05	10.46
17		Dibenzofuran	1.328	1.808	-36.1#	122	-0.02	10.83
18	t	Fluorene	1.239	1.272	-2.7	96	-0.03	11.51
		----------	True	Calc.	% Drift	----------		
19		4,6-dinitro-2-methylpheno	2.500	2.728	-9.1	109	-0.03	11.71
		----------	AvgRF	CCRF	% Dev	----------		
20		n-nitrosodiphenylamine	0.605	0.837	-38.3#	127	-0.03	11.83
21		1,2-Diphenylhydrazine	1.231	2.282	-85.4#	192	-0.03	11.88
22	S	2,4,6-Tribromophenol	0.149	0.206	-38.3#	130	-0.07	12.01
23		Fluoranthene-d10	1.000	1.000	0.0	124	0.00	15.72
24	t	Hexachlorobenzene	0.322	0.294	8.7	114	-0.02	12.64
		----------	True	Calc.	% Drift	----------		
25	t	Pentachlorophenol	2.500	2.422	3.1	122	0.00	13.08
		----------	AvgRF	CCRF	% Dev	----------		
26	t	Phenanthrene	1.196	1.256	-5.0	126	-0.01	13.45
27	t	Anthracene	1.065	1.259	-18.2	136	0.00	13.55
28	t	Fluoranthene	1.273	1.282	-0.7	120	0.00	15.74

Continuing Calibration Summary

Job Number: JC16204 **Sample:** E4P805-CC767
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** 4P15648.D
Project: BMS, Former Brule Area, PR

29	t	Pyrene	1.267	1.351	-6.6	126	0.02	16.15
30	S	Terphenyl-d14	0.611	0.666	-9.0	131	0.02	16.53
31	t	Benzo[a]anthracene	1.108	1.361	-22.8#	144	0.00	18.27
32	t	Chrysene	1.310	1.374	-4.9	130	0.00	18.32
33	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	133	0.00	20.36
34	t	Benzo[b]fluoranthene	1.656	1.697	-2.5	136	0.00	19.94
35	t	Benzo[k]fluoranthene	1.501	1.613	-7.5	143	0.01	19.98
36	t	Benzo[a]pyrene	1.637	1.547	5.5	131	0.01	20.40
37	t	Indeno[1,2,3-cd]pyrene	1.725	1.762	-2.1	137	0.01	21.90
38	t	Dibenz[a,h]anthracene	1.422	1.465	-3.0	137	0.01	21.94
39	t	Benzo[g,h,i]perylene	1.543	1.512	2.0	133	0.00	22.28

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4p14948.D M4P767SIM.M Fri Mar 18 12:23:50 2016

8.7.21

8

GC/MS Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57281.D
Acq On : 16 Mar 2016 10:08 pm
Operator : sarad
Sample : jc16204-1
Misc : op92132,e2p2497,1000
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 17 16:42:43 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

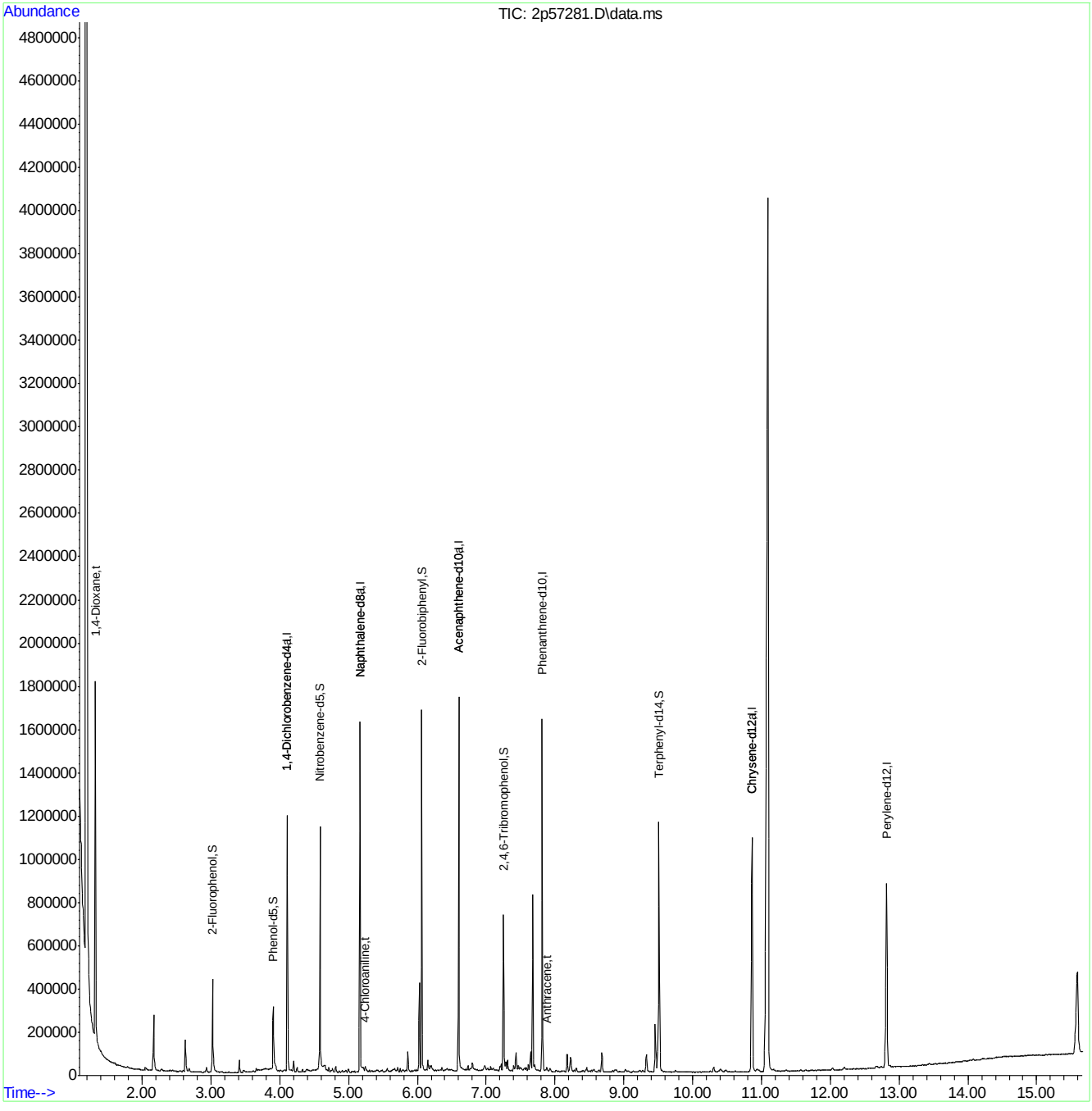
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.109	152	134920	40.00 ppm	-0.03
24) Naphthalene-d8	5.168	136	509196	40.00 ppm	-0.02
47) Acenaphthene-d10	6.601	164	251712	40.00 ppm	-0.02
69) Phenanthrene-d10	7.815	188	461455	40.00 ppm	-0.02
83) Chrysene-d12	10.864	240	458583	40.00 ppm	-0.02
92) Perylene-d12	12.822	264	390203	40.00 ppm	-0.01
102) 1,4-Dichlorobenzene-d4a	4.109	152	134920	40.00 ppm	-0.03
104) Naphthalene-d8a	5.168	136	509196	40.00 ppm	-0.02
106) Acenaphthene-d10a	6.601	164	251712	40.00 ppm	-0.02
109) Chrysene-d12a	10.864	240	458583	40.00 ppm	-0.02
System Monitoring Compounds					
5) 2-Fluorophenol	3.023	112	106114	23.63 ppm	-0.03
Spiked Amount 50.000	Range 11 - 58		Recovery = 47.26%		
8) Phenol-d5	3.906	99	84885	15.45 ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 30.90%		
25) Nitrobenzene-d5	4.585	82	210670	41.14 ppm	-0.03
Spiked Amount 50.000	Range 19 - 61		Recovery = 82.28%#		
51) 2-Fluorobiphenyl	6.061	172	396684	50.91 ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 101.82%#		
73) 2,4,6-Tribromophenol	7.254	330	54611	47.43 ppm	-0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 94.86%#		
85) Terphenyl-d14	9.511	244	377234	44.20 ppm	-0.02
Spiked Amount 50.000	Range 16 - 65		Recovery = 88.40%#		
Target Compounds					Qvalue
2) 1,4-Dioxane	1.322	88	343760	179.42 ppm	78
39) 4-Chloroaniline	5.243	127	5400	0.97 ppm	89
78) Anthracene	7.880	178	5807	0.46 ppm	99

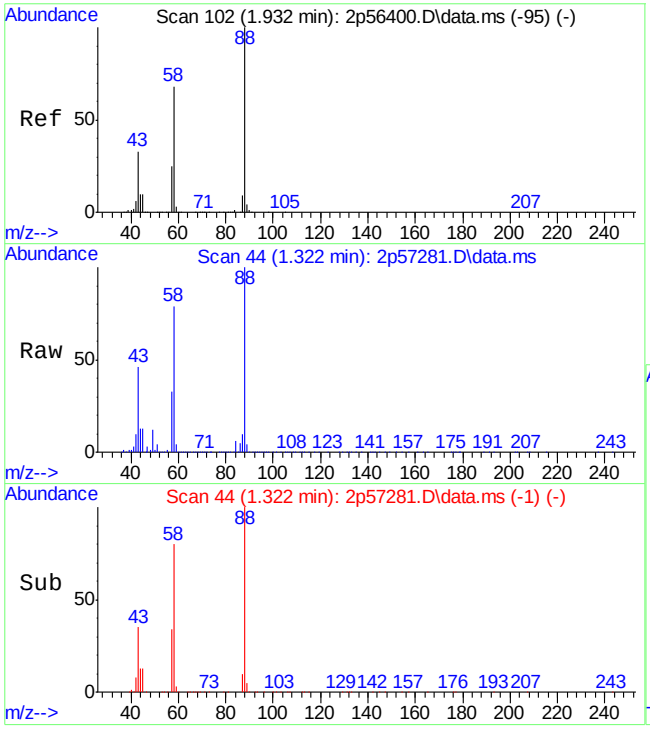
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57281.D
Acq On : 16 Mar 2016 10:08 pm
Operator : sarad
Sample : jc16204-1
Misc : op92132,e2p2497,1000
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 17 16:42:43 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

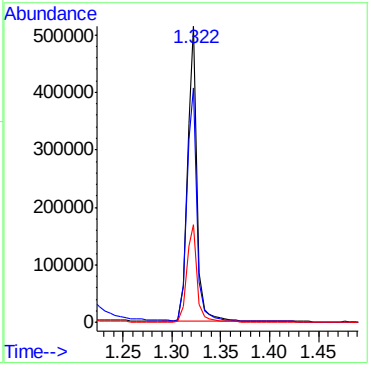


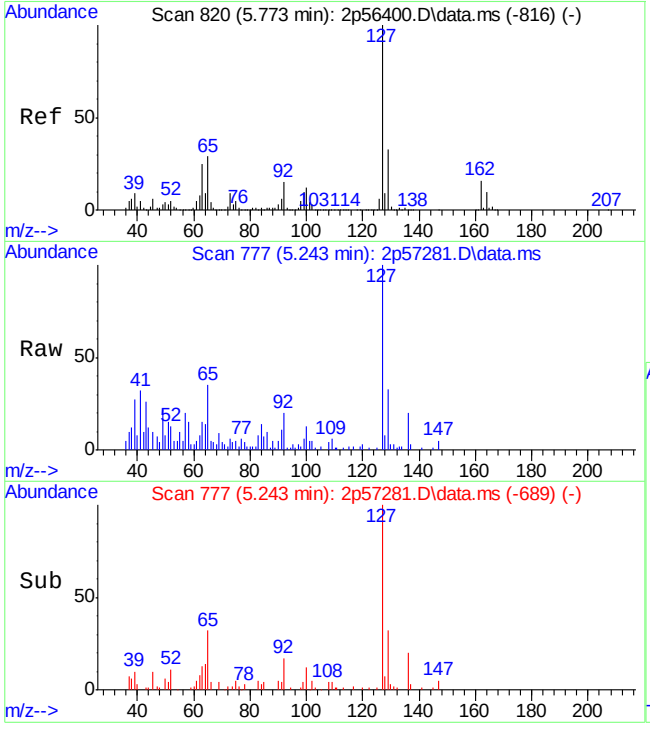


#2
1,4-Dioxane
Concen: 179.42 ppm
RT: 1.322 min Scan# 44
Delta R.T. -0.064 min
Lab File: 2p57281.D
Acq: 16 Mar 2016 10:08 pm

Tgt Ion: 88 Resp: 343760

Ion	Ratio	Lower	Upper
88	100		
58	79.1	32.4	92.4
57	33.0	0.0	51.4

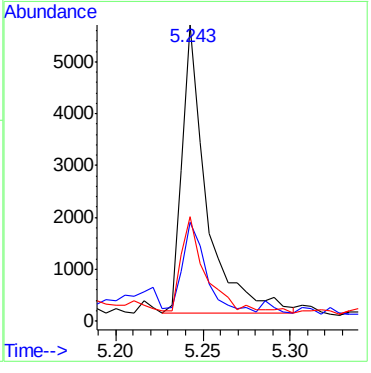




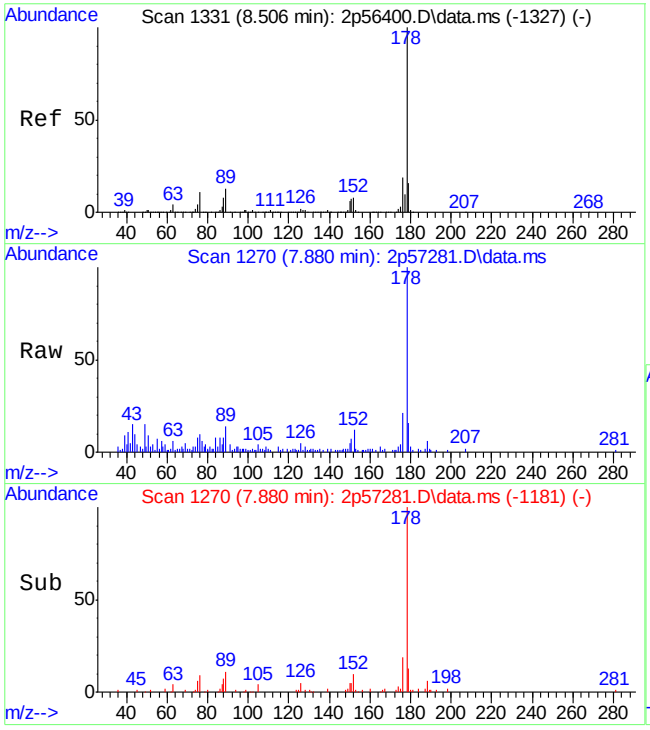
#39
4-Chloroaniline
Concen: 0.97 ppm
RT: 5.243 min Scan# 777
Delta R.T. -0.030 min
Lab File: 2p57281.D
Acq: 16 Mar 2016 10:08 pm

Tgt Ion:127 Resp: 5400

Ion	Ratio	Lower	Upper
127	100		
129	31.1	3.1	63.1
65	33.6	0.0	53.1



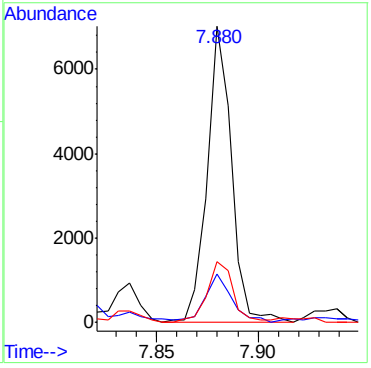
SGS ACCUTEST JC16204



#78
Anthracene
Concen: 0.46 ppm
RT: 7.880 min Scan# 1270
Delta R.T. -0.026 min
Lab File: 2p57281.D
Acq: 16 Mar 2016 10:08 pm

Tgt Ion:178 Resp: 5807

Ion	Ratio	Lower	Upper
178	100		
179	15.2	0.0	46.0
176	20.0	0.0	49.5



9.1.1

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2498\
Data File : 2p57313.D
Acq On : 17 Mar 2016 5:02 pm
Operator : robertl1
Sample : JC16204-1
Misc : op92132,e2p2498,1000,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 21 15:11:20 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

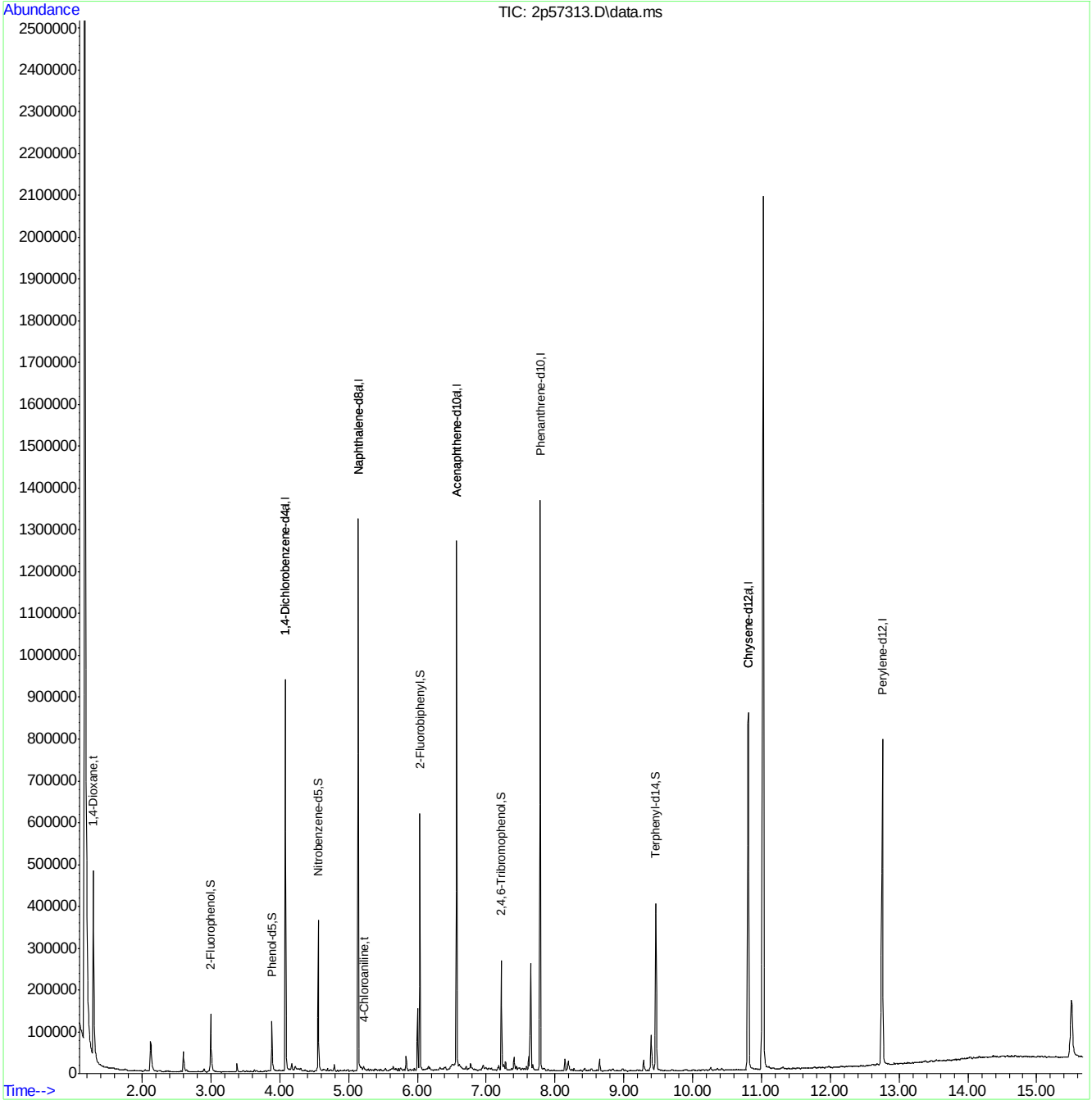
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.082	152	102449	40.00	ppm	-0.05
24) Naphthalene-d8	5.141	136	384813	40.00	ppm	-0.05
47) Acenaphthene-d10	6.569	164	202979	40.00	ppm	-0.05
69) Phenanthrene-d10	7.783	188	358490	40.00	ppm	-0.05
83) Chrysene-d12	10.811	240	356519	40.00	ppm	-0.08
92) Perylene-d12	12.757	264	322776	40.00	ppm	-0.08
102) 1,4-Dichlorobenzene-d4a	4.082	152	102449	40.00	ppm	-0.05
104) Naphthalene-d8a	5.141	136	384813	40.00	ppm	-0.05
106) Acenaphthene-d10a	6.569	164	202979	40.00	ppm	-0.05
109) Chrysene-d12a	10.811	240	356519	40.00	ppm	-0.08
System Monitoring Compounds						
5) 2-Fluorophenol	2.996	112	36715	10.77	ppm	-0.06
Spiked Amount 50.000	Range 11 - 58		Recovery = 21.54%			
8) Phenol-d5	3.884	99	31117	7.46	ppm	-0.03
Spiked Amount 50.000	Range 10 - 59		Recovery = 14.92%			
25) Nitrobenzene-d5	4.558	82	73103	18.89	ppm	-0.06
Spiked Amount 50.000	Range 19 - 61		Recovery = 37.78%			
51) 2-Fluorobiphenyl	6.034	172	133904	21.31	ppm	-0.05
Spiked Amount 50.000	Range 21 - 58		Recovery = 42.62%			
73) 2,4,6-Tribromophenol	7.222	330	17116	19.13	ppm	-0.05
Spiked Amount 50.000	Range 12 - 68		Recovery = 38.26%			
85) Terphenyl-d14	9.463	244	125264	18.88	ppm	-0.07
Spiked Amount 50.000	Range 16 - 65		Recovery = 37.76%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.290	88	113195	77.81	ppm	65
39) 4-Chloroaniline	5.221	127	2507	0.60	ppm	93

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

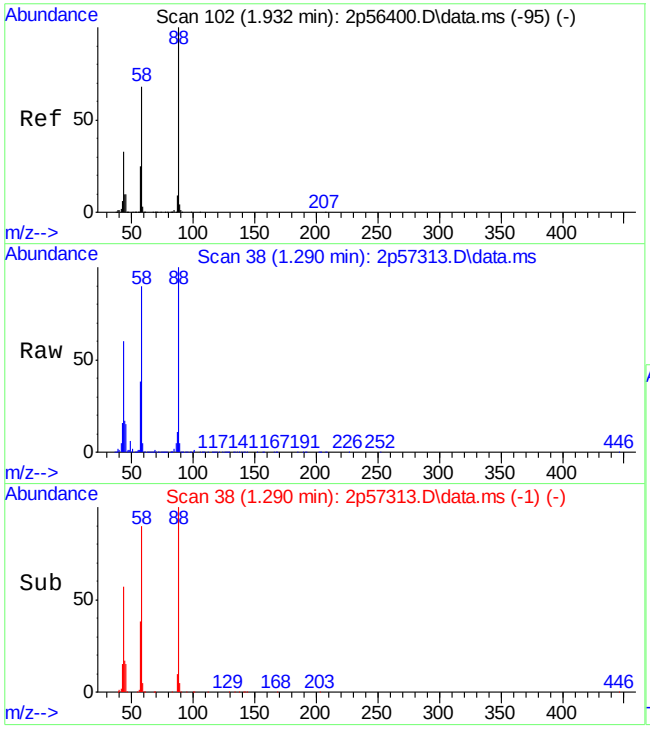
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2498\
Data File : 2p57313.D
Acq On : 17 Mar 2016 5:02 pm
Operator : robertl1
Sample : JC16204-1
Misc : op92132,e2p2498,1000,,,1,2
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 21 15:11:20 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration



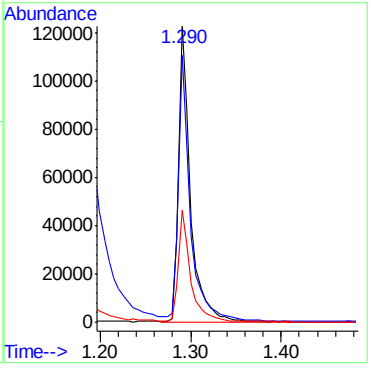
SGS ACCUTEST JC16204

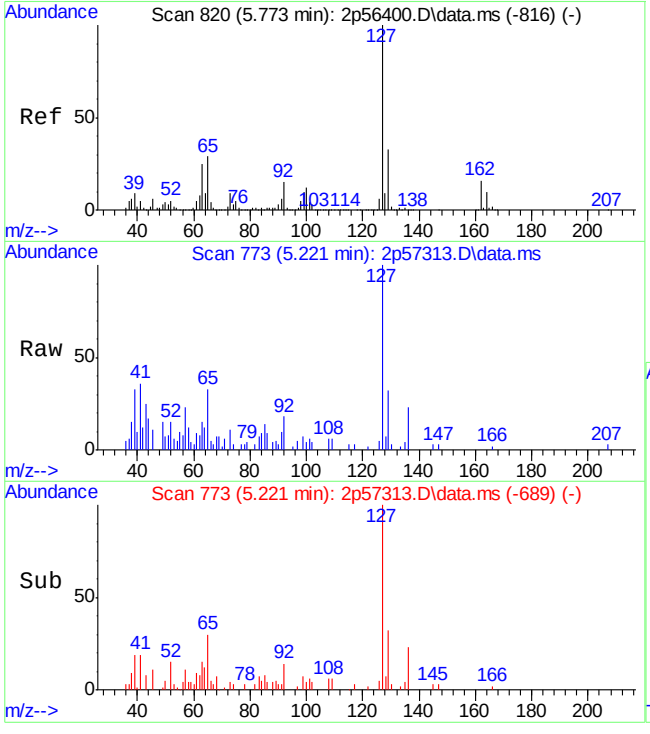


#2
1,4-Dioxane
Concen: 77.81 ppm
RT: 1.290 min Scan# 38
Delta R.T. -0.096 min
Lab File: 2p57313.D
Acq: 17 Mar 2016 5:02 pm

Tgt Ion: 88 Resp: 113195

Ion	Ratio	Lower	Upper
88	100		
58	89.0	32.4	92.4
57	37.7	0.0	51.4

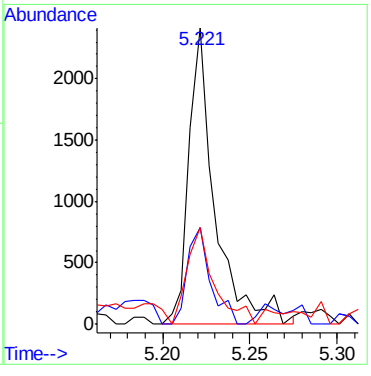




#39
4-Chloroaniline
Concen: 0.60 ppm
RT: 5.221 min Scan# 773
Delta R.T. -0.052 min
Lab File: 2p57313.D
Acq: 17 Mar 2016 5:02 pm

Tgt Ion:127 Resp: 2507

Ion	Ratio	Lower	Upper
127	100		
129	30.6	3.1	63.1
65	28.4	0.0	53.1



9.1.2

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57281.D
Acq On : 16 Mar 2016 10:08 pm
Operator : sarad
Sample : jc16204-1
Misc : op92132,e2p2497,1000
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 17 16:42:43 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.109	152	134920	40.00 ppm	-0.03
24) Naphthalene-d8	5.168	136	509196	40.00 ppm	-0.02
47) Acenaphthene-d10	6.601	164	251712	40.00 ppm	-0.02
69) Phenanthrene-d10	7.815	188	461455	40.00 ppm	-0.02
83) Chrysene-d12	10.864	240	458583	40.00 ppm	-0.02
92) Perylene-d12	12.822	264	390203	40.00 ppm	-0.01
102) 1,4-Dichlorobenzene-d4a	4.109	152	134920	40.00 ppm	-0.03
104) Naphthalene-d8a	5.168	136	509196	40.00 ppm	-0.02
106) Acenaphthene-d10a	6.601	164	251712	40.00 ppm	-0.02
109) Chrysene-d12a	10.864	240	458583	40.00 ppm	-0.02
System Monitoring Compounds					
5) 2-Fluorophenol	3.023	112	106114	23.63 ppm	-0.03
Spiked Amount 50.000	Range 11 - 58		Recovery = 47.26%		
8) Phenol-d5	3.906	99	84885	15.45 ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 30.90%		
25) Nitrobenzene-d5	4.585	82	210670	41.14 ppm	-0.03
Spiked Amount 50.000	Range 19 - 61		Recovery = 82.28%#		
51) 2-Fluorobiphenyl	6.061	172	396684	50.91 ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 101.82%#		
73) 2,4,6-Tribromophenol	7.254	330	54611	47.43 ppm	-0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 94.86%#		
85) Terphenyl-d14	9.511	244	377234	44.20 ppm	-0.02
Spiked Amount 50.000	Range 16 - 65		Recovery = 88.40%#		
Target Compounds					Qvalue
2) 1,4-Dioxane	1.322	88	343760	179.42 ppm	78
39) 4-Chloroaniline	5.243	127	5400	0.97 ppm	89
78) Anthracene	7.880	178	5807	0.46 ppm	99

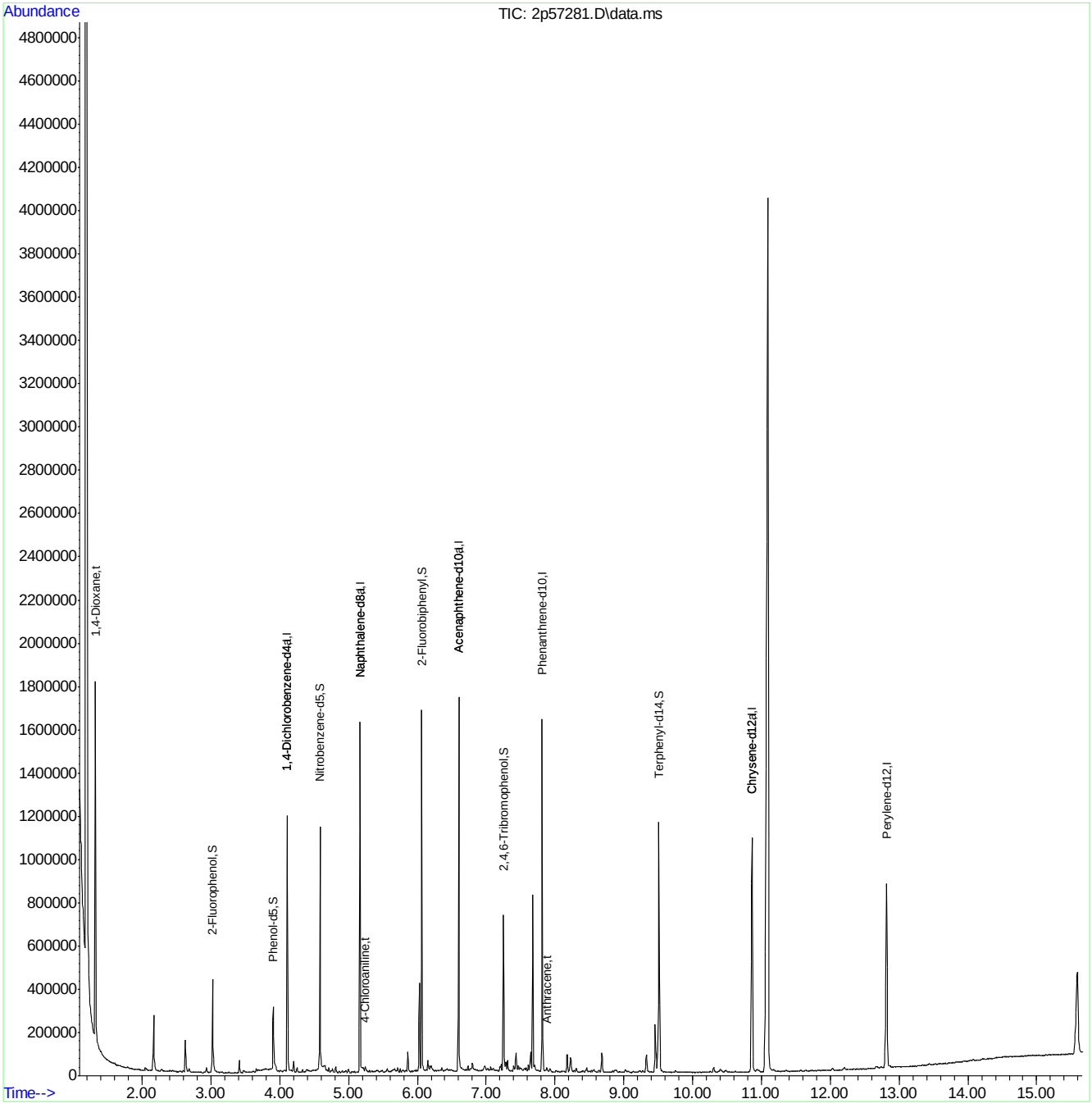
(#) = qualifier out of range (m) = manual integration (+) = signals summed

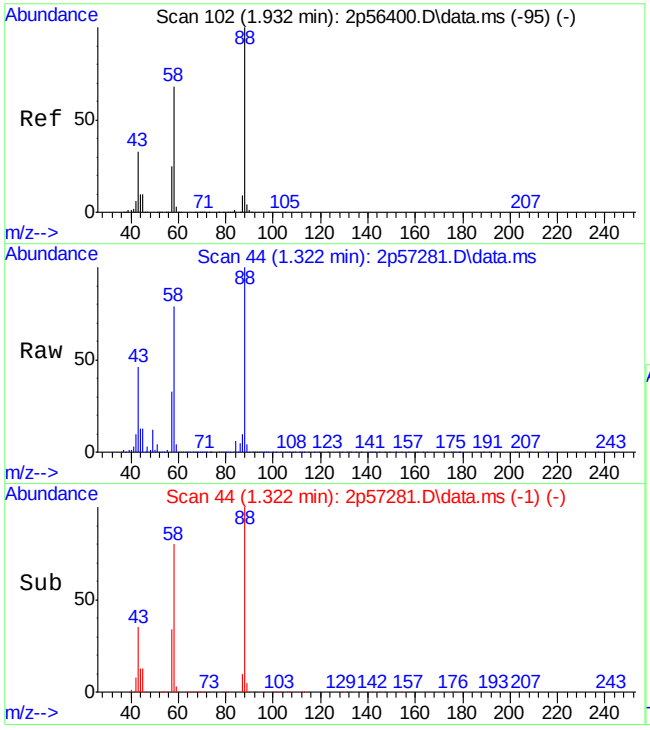
SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57281.D
Acq On : 16 Mar 2016 10:08 pm
Operator : sarad
Sample : jc16204-1
Misc : op92132,e2p2497,1000
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 17 16:42:43 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

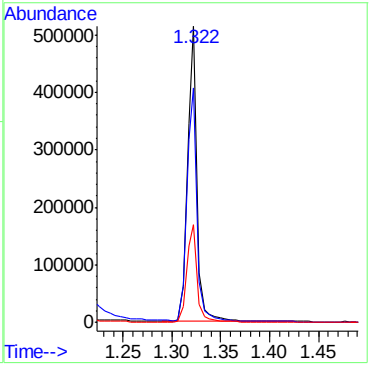


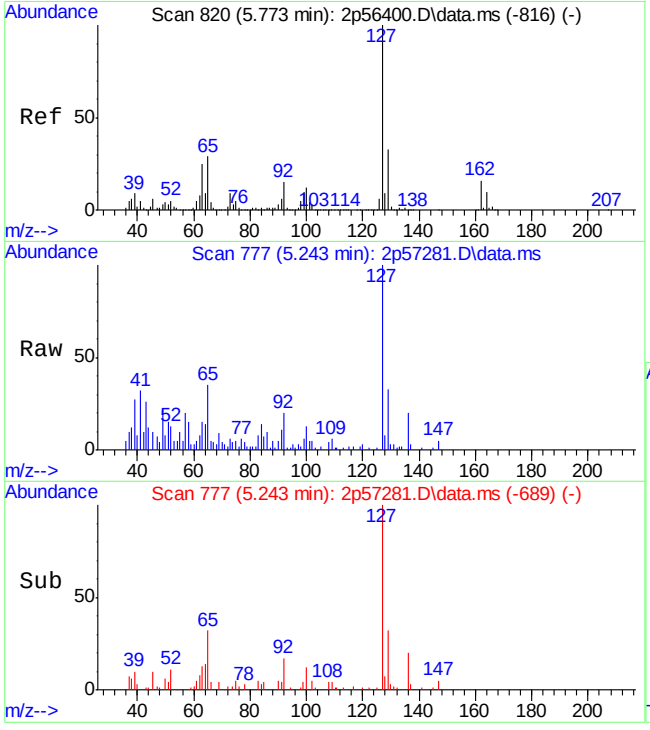


#2
1,4-Dioxane
Concen: 179.42 ppm
RT: 1.322 min Scan# 44
Delta R.T. -0.064 min
Lab File: 2p57281.D
Acq: 16 Mar 2016 10:08 pm

Tgt Ion: 88 Resp: 343760

Ion	Ratio	Lower	Upper
88	100		
58	79.1	32.4	92.4
57	33.0	0.0	51.4

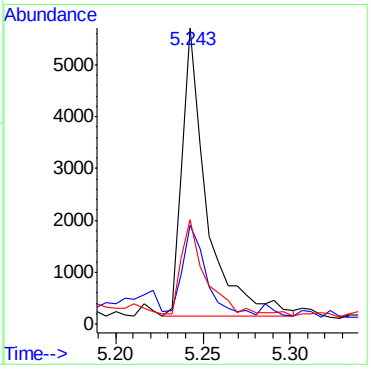


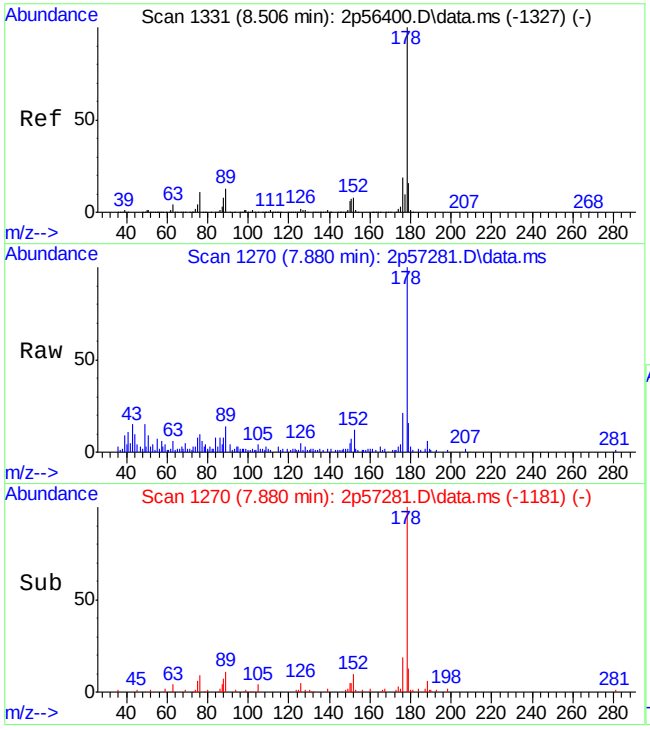


#39
4-Chloroaniline
Concen: 0.97 ppm
RT: 5.243 min Scan# 777
Delta R.T. -0.030 min
Lab File: 2p57281.D
Acq: 16 Mar 2016 10:08 pm

Tgt Ion:127 Resp: 5400

Ion	Ratio	Lower	Upper
127	100		
129	31.1	3.1	63.1
65	33.6	0.0	53.1

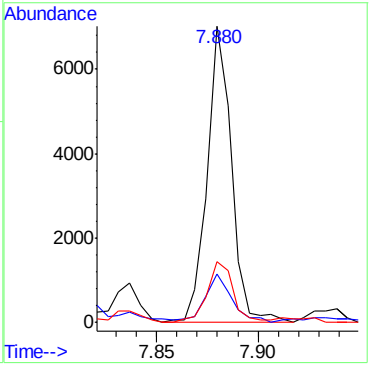




#78
Anthracene
Concen: 0.46 ppm
RT: 7.880 min Scan# 1270
Delta R.T. -0.026 min
Lab File: 2p57281.D
Acq: 16 Mar 2016 10:08 pm

Tgt Ion:178 Resp: 5807

Ion	Ratio	Lower	Upper
178	100		
179	15.2	0.0	46.0
176	20.0	0.0	49.5



9.1.3

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57282.D
Acq On : 16 Mar 2016 10:29 pm
Operator : sarad
Sample : jc16204-2
Misc : op92132,e2p2497,1000
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 17 16:44:26 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

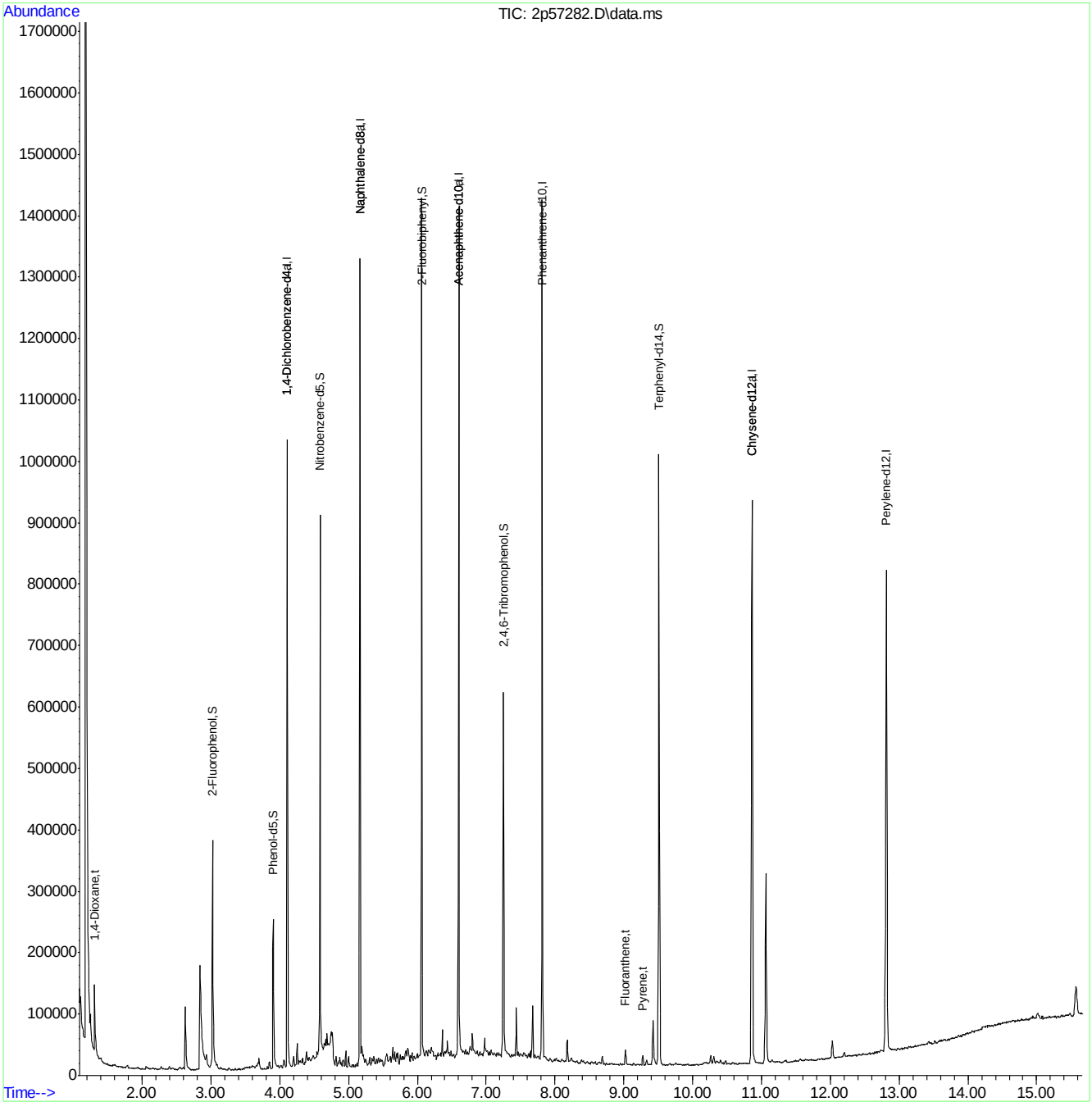
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.109	152	114428	40.00 ppm	-0.03
24) Naphthalene-d8	5.168	136	424166	40.00 ppm	-0.02
47) Acenaphthene-d10	6.601	164	211052	40.00 ppm	-0.02
69) Phenanthrene-d10	7.815	188	389970	40.00 ppm	-0.02
83) Chrysene-d12	10.864	240	396920	40.00 ppm	-0.02
92) Perylene-d12	12.816	264	336754	40.00 ppm	-0.02
102) 1,4-Dichlorobenzene-d4a	4.109	152	114428	40.00 ppm	-0.03
104) Naphthalene-d8a	5.168	136	424166	40.00 ppm	-0.02
106) Acenaphthene-d10a	6.601	164	211052	40.00 ppm	-0.02
109) Chrysene-d12a	10.864	240	396920	40.00 ppm	-0.02
System Monitoring Compounds					
5) 2-Fluorophenol	3.023	112	88708	23.29 ppm	-0.03
Spiked Amount 50.000	Range 11 - 58		Recovery = 46.58%		
8) Phenol-d5	3.905	99	70524	15.14 ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 30.28%		
25) Nitrobenzene-d5	4.585	82	173187	40.60 ppm	-0.03
Spiked Amount 50.000	Range 19 - 61		Recovery = 81.20%#		
51) 2-Fluorobiphenyl	6.061	172	317493	48.59 ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 97.18%#		
73) 2,4,6-Tribromophenol	7.254	330	44578	45.81 ppm	-0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 91.62%#		
85) Terphenyl-d14	9.511	244	321086	43.46 ppm	-0.02
Spiked Amount 50.000	Range 16 - 65		Recovery = 86.92%#		
Target Compounds					Qvalue
2) 1,4-Dioxane	1.311	88	25609	15.76 ppm	64
81) Fluoranthene	9.024	202	9047	0.76 ppm	91
84) Pyrene	9.275	202	5066	0.42 ppm	93

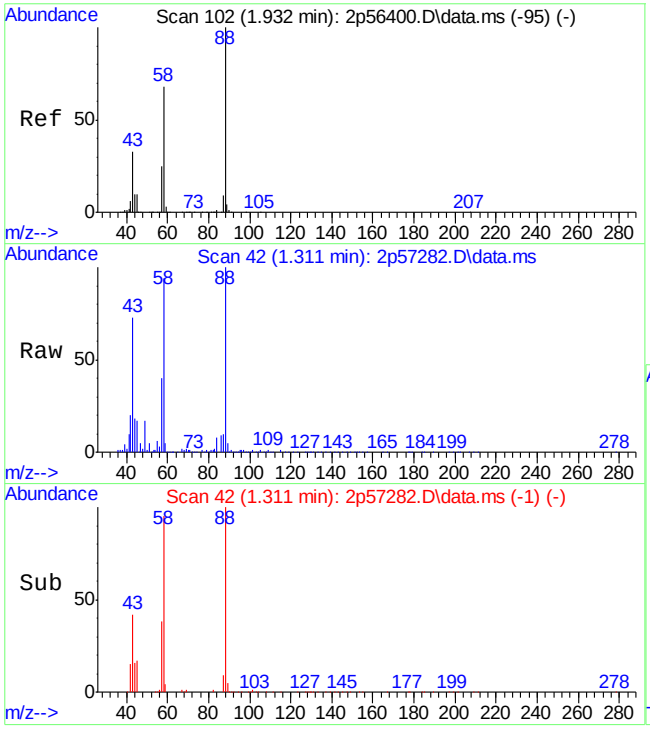
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57282.D
Acq On : 16 Mar 2016 10:29 pm
Operator : sarad
Sample : jc16204-2
Misc : op92132,e2p2497,1000
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 17 16:44:26 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

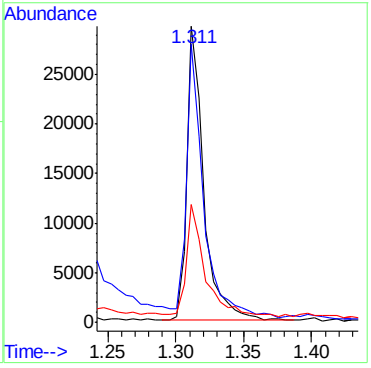


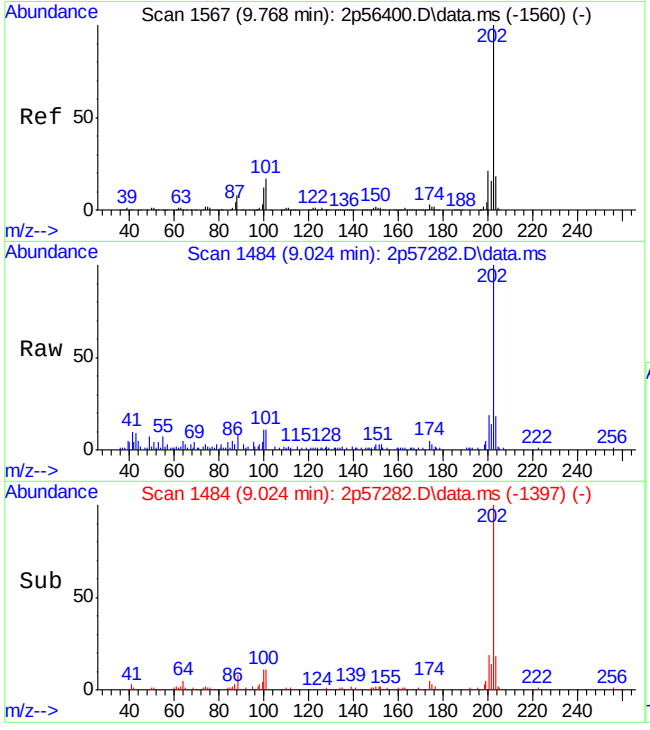


#2
1,4-Dioxane
Concen: 15.76 ppm
RT: 1.311 min Scan# 42
Delta R.T. -0.075 min
Lab File: 2p57282.D
Acq: 16 Mar 2016 10:29 pm

Tgt Ion: 88 Resp: 25609

Ion	Ratio	Lower	Upper
88	100		
58	91.0	32.4	92.4
57	37.7	0.0	51.4

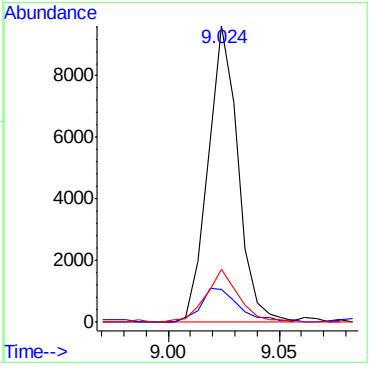


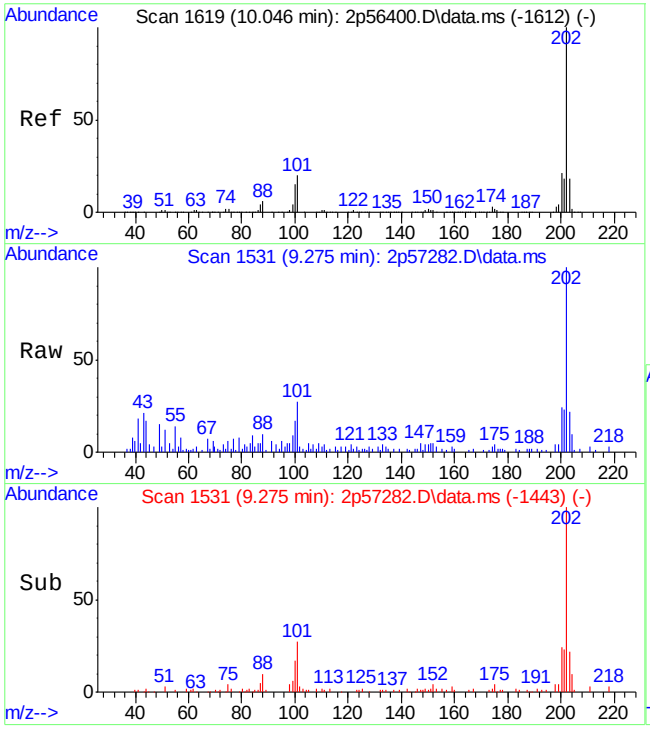


#81
Fluoranthene
Concen: 0.76 ppm
RT: 9.024 min Scan# 1484
Delta R.T. -0.036 min
Lab File: 2p57282.D
Acq: 16 Mar 2016 10:29 pm

Tgt Ion:202 Resp: 9047

Ion	Ratio	Lower	Upper
202	100		
101	10.4	0.0	48.2
203	17.7	0.0	47.8

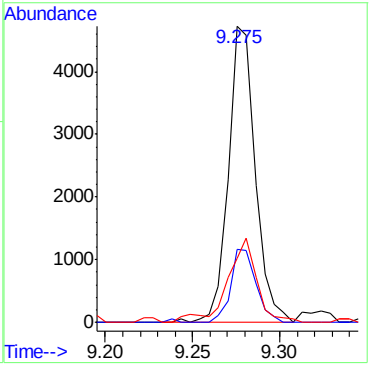




#84
Pyrene
Concen: 0.42 ppm
RT: 9.275 min Scan# 1531
Delta R.T. -0.028 min
Lab File: 2p57282.D
Acq: 16 Mar 2016 10:29 pm

Tgt Ion:202 Resp: 5066

Ion	Ratio	Lower	Upper
202	100		
200	24.5	0.0	50.8
203	21.1	0.0	48.1



9.1.4

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57282.D
Acq On : 16 Mar 2016 10:29 pm
Operator : sarad
Sample : jc16204-2
Misc : op92132,e2p2497,1000
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 17 16:44:26 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

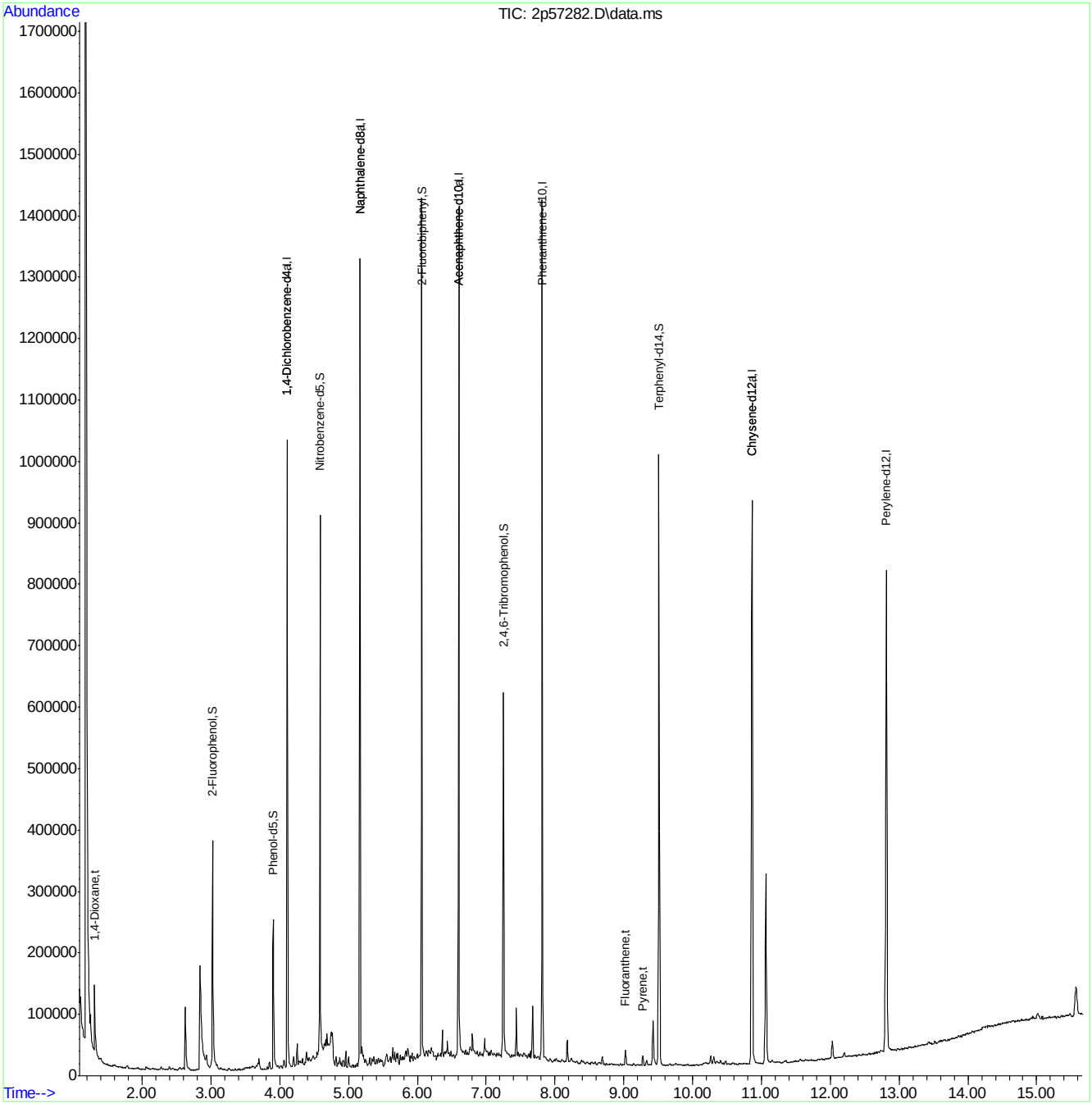
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.109	152	114428	40.00 ppm	-0.03
24) Naphthalene-d8	5.168	136	424166	40.00 ppm	-0.02
47) Acenaphthene-d10	6.601	164	211052	40.00 ppm	-0.02
69) Phenanthrene-d10	7.815	188	389970	40.00 ppm	-0.02
83) Chrysene-d12	10.864	240	396920	40.00 ppm	-0.02
92) Perylene-d12	12.816	264	336754	40.00 ppm	-0.02
102) 1,4-Dichlorobenzene-d4a	4.109	152	114428	40.00 ppm	-0.03
104) Naphthalene-d8a	5.168	136	424166	40.00 ppm	-0.02
106) Acenaphthene-d10a	6.601	164	211052	40.00 ppm	-0.02
109) Chrysene-d12a	10.864	240	396920	40.00 ppm	-0.02
System Monitoring Compounds					
5) 2-Fluorophenol	3.023	112	88708	23.29 ppm	-0.03
Spiked Amount 50.000	Range 11 - 58		Recovery = 46.58%		
8) Phenol-d5	3.905	99	70524	15.14 ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 30.28%		
25) Nitrobenzene-d5	4.585	82	173187	40.60 ppm	-0.03
Spiked Amount 50.000	Range 19 - 61		Recovery = 81.20%#		
51) 2-Fluorobiphenyl	6.061	172	317493	48.59 ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 97.18%#		
73) 2,4,6-Tribromophenol	7.254	330	44578	45.81 ppm	-0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 91.62%#		
85) Terphenyl-d14	9.511	244	321086	43.46 ppm	-0.02
Spiked Amount 50.000	Range 16 - 65		Recovery = 86.92%#		
Target Compounds					Qvalue
2) 1,4-Dioxane	1.311	88	25609	15.76 ppm	64
81) Fluoranthene	9.024	202	9047	0.76 ppm	91
84) Pyrene	9.275	202	5066	0.42 ppm	93

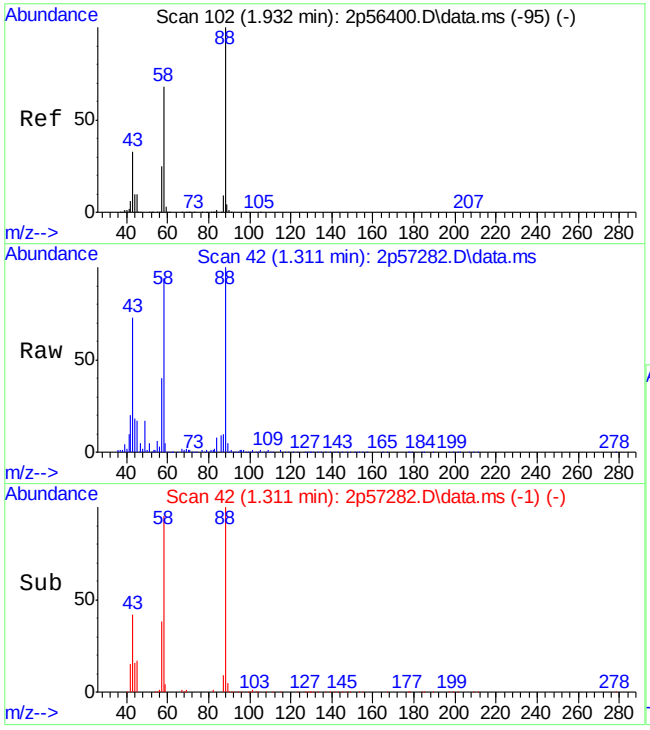
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57282.D
Acq On : 16 Mar 2016 10:29 pm
Operator : sarad
Sample : jc16204-2
Misc : op92132,e2p2497,1000
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 17 16:44:26 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

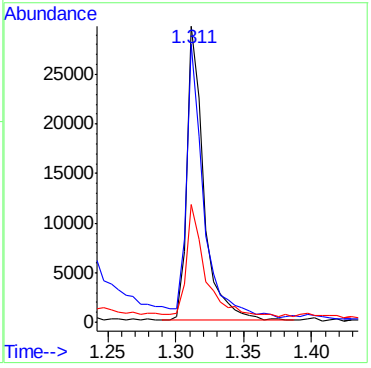


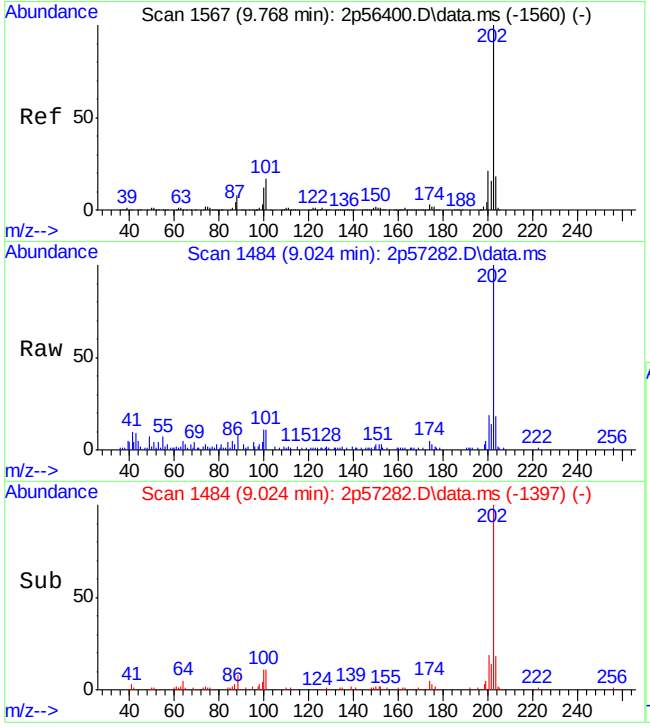


#2
1,4-Dioxane
Concen: 15.76 ppm
RT: 1.311 min Scan# 42
Delta R.T. -0.075 min
Lab File: 2p57282.D
Acq: 16 Mar 2016 10:29 pm

Tgt Ion: 88 Resp: 25609

Ion	Ratio	Lower	Upper
88	100		
58	91.0	32.4	92.4
57	37.7	0.0	51.4

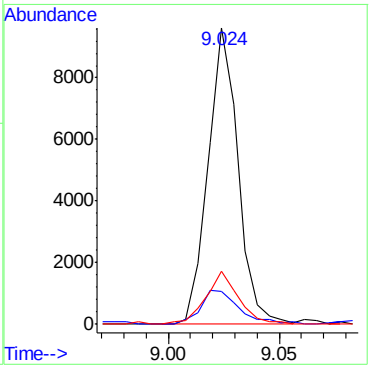


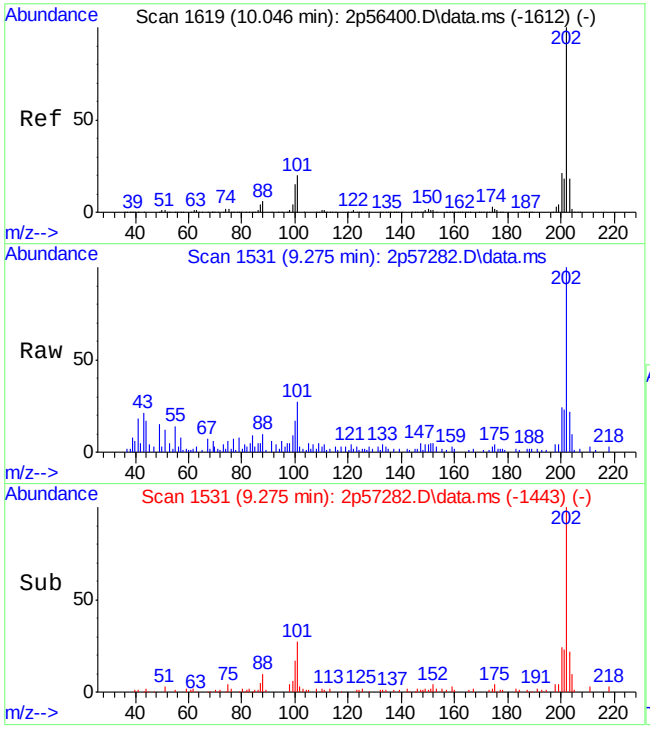


#81
Fluoranthene
Concen: 0.76 ppm
RT: 9.024 min Scan# 1484
Delta R.T. -0.036 min
Lab File: 2p57282.D
Acq: 16 Mar 2016 10:29 pm

Tgt Ion:202 Resp: 9047

Ion	Ratio	Lower	Upper
202	100		
101	10.4	0.0	48.2
203	17.7	0.0	47.8

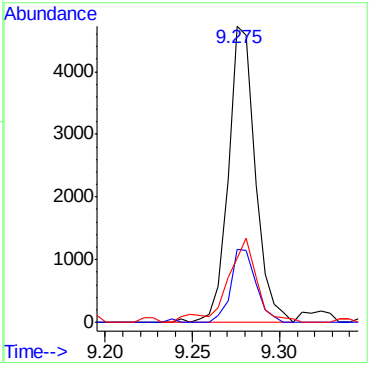




#84
Pyrene
Concen: 0.42 ppm
RT: 9.275 min Scan# 1531
Delta R.T. -0.028 min
Lab File: 2p57282.D
Acq: 16 Mar 2016 10:29 pm

Tgt Ion:202 Resp: 5066

Ion	Ratio	Lower	Upper
202	100		
200	24.5	0.0	50.8
203	21.1	0.0	48.1



9.1.5

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57283.D
Acq On : 16 Mar 2016 10:49 pm
Operator : sarad
Sample : jc16204-3
Misc : op92132,e2p2497,1000
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 17 16:47:36 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

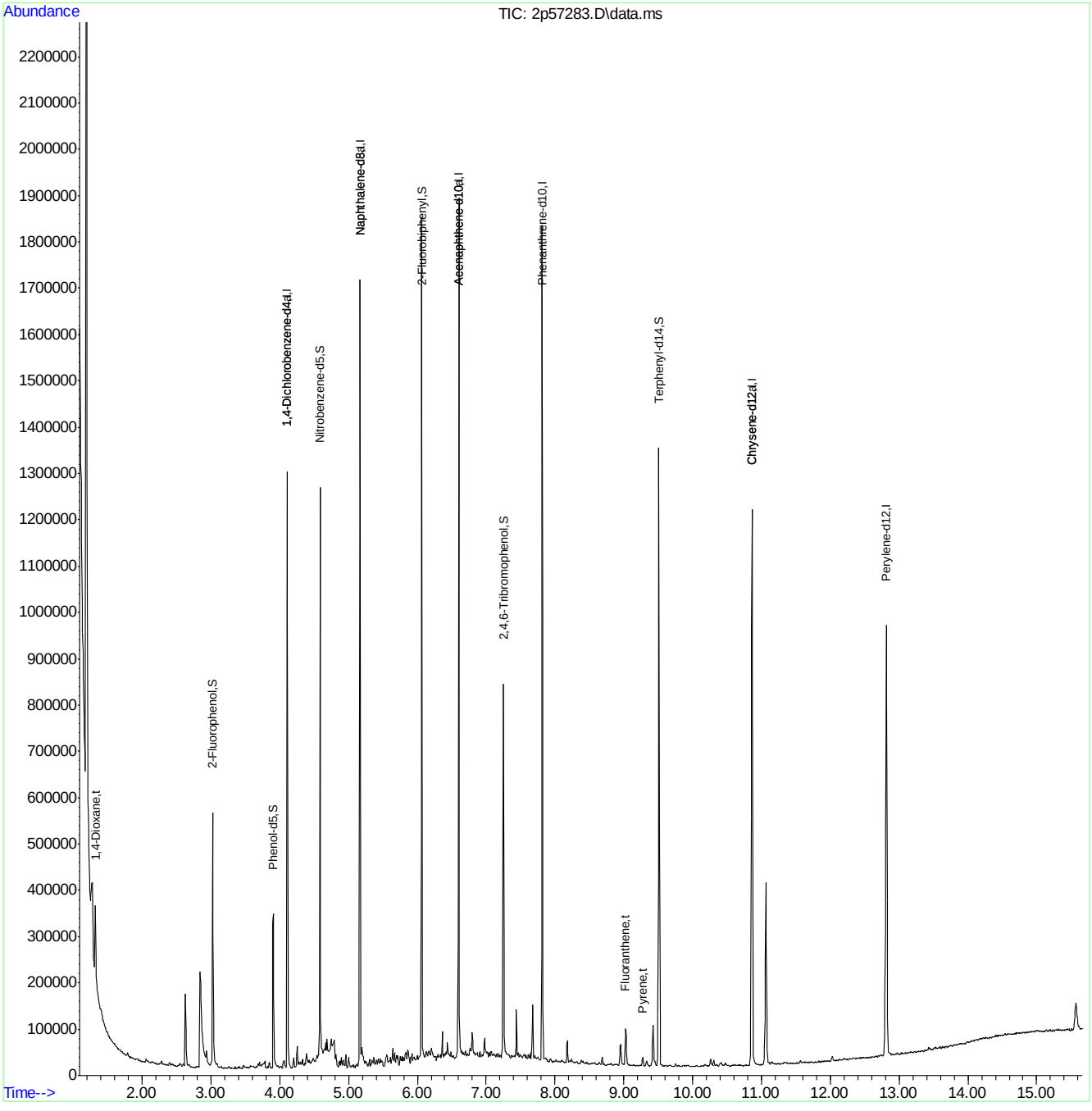
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.109	152	143082	40.00 ppm	-0.03
24) Naphthalene-d8	5.168	136	538552	40.00 ppm	-0.02
47) Acenaphthene-d10	6.601	164	273684	40.00 ppm	-0.02
69) Phenanthrene-d10	7.815	188	502819	40.00 ppm	-0.02
83) Chrysene-d12	10.864	240	498691	40.00 ppm	-0.02
92) Perylene-d12	12.816	264	415145	40.00 ppm	-0.02
102) 1,4-Dichlorobenzene-d4a	4.109	152	143082	40.00 ppm	-0.03
104) Naphthalene-d8a	5.168	136	538552	40.00 ppm	-0.02
106) Acenaphthene-d10a	6.601	164	273684	40.00 ppm	-0.02
109) Chrysene-d12a	10.864	240	498691	40.00 ppm	-0.02
System Monitoring Compounds					
5) 2-Fluorophenol	3.028	112	117114	24.60 ppm	-0.03
Spiked Amount 50.000	Range 11 - 58		Recovery = 49.20%		
8) Phenol-d5	3.905	99	97277	16.70 ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 33.40%		
25) Nitrobenzene-d5	4.585	82	238504	44.03 ppm	-0.03
Spiked Amount 50.000	Range 19 - 61		Recovery = 88.06%#		
51) 2-Fluorobiphenyl	6.061	172	447273	52.79 ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 105.58%#		
73) 2,4,6-Tribromophenol	7.254	330	62502	49.81 ppm	-0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 99.62%#		
85) Terphenyl-d14	9.511	244	445004	47.94 ppm	-0.02
Spiked Amount 50.000	Range 16 - 65		Recovery = 95.88%#		
Target Compounds					Qvalue
2) 1,4-Dioxane	1.322	88	35999	17.72 ppm	72
81) Fluoranthene	9.024	202	12857	0.84 ppm	94
84) Pyrene	9.276	202	7316	0.48 ppm	92

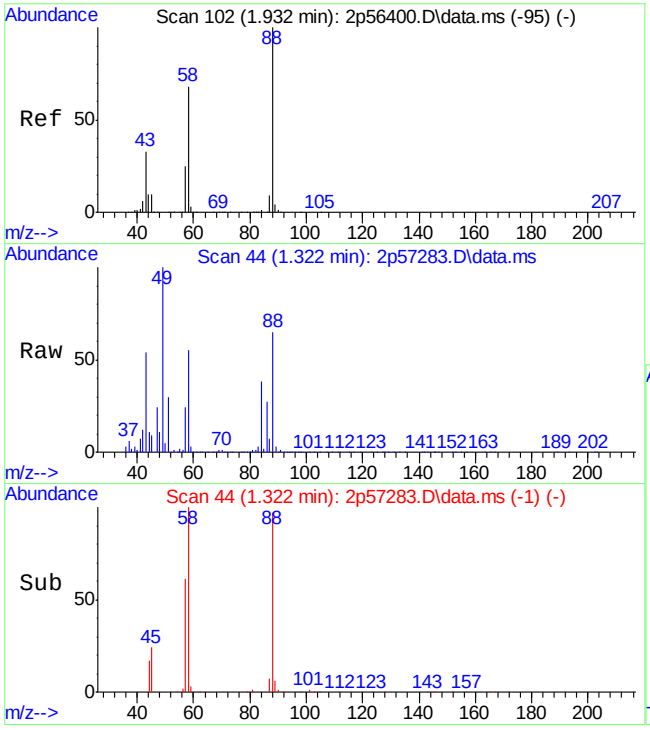
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57283.D
Acq On : 16 Mar 2016 10:49 pm
Operator : sarad
Sample : jc16204-3
Misc : op92132,e2p2497,1000
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 17 16:47:36 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

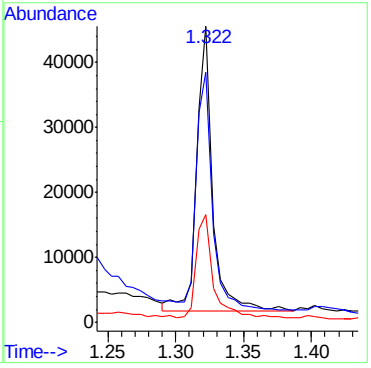


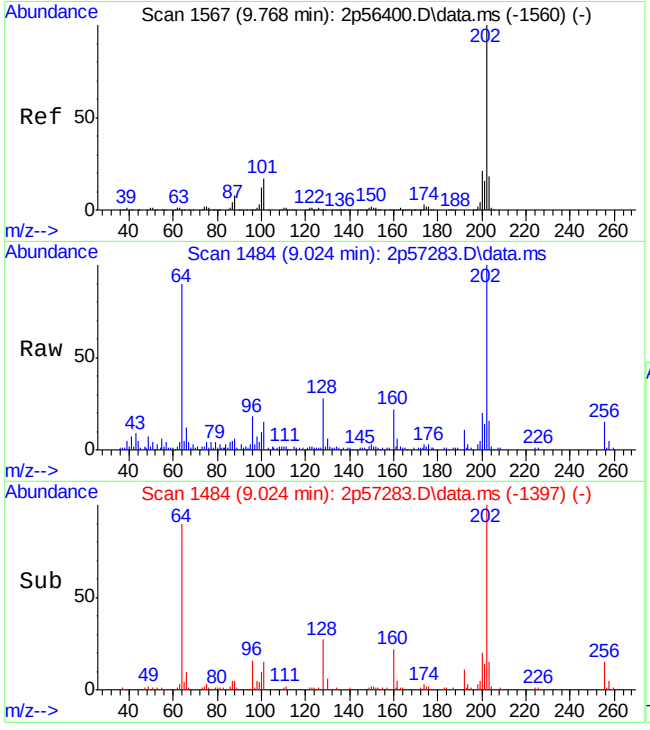


#2
1,4-Dioxane
Concen: 17.72 ppm
RT: 1.322 min Scan# 44
Delta R.T. -0.064 min
Lab File: 2p57283.D
Acq: 16 Mar 2016 10:49 pm

Tgt Ion: 88 Resp: 35999

Ion	Ratio	Lower	Upper
88	100		
58	82.9	32.4	92.4
57	36.6	0.0	51.4

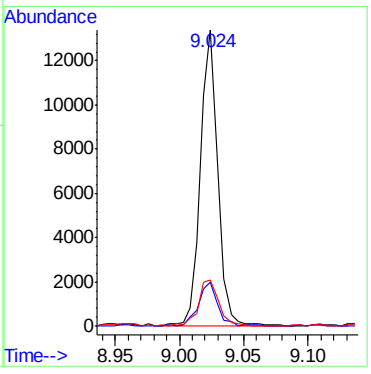


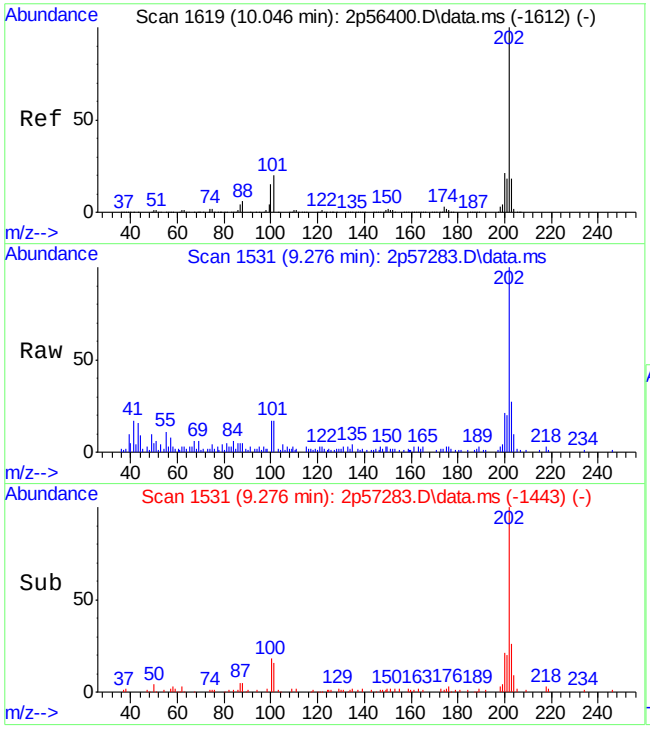


#81
Fluoranthene
Concen: 0.84 ppm
RT: 9.024 min Scan# 1484
Delta R.T. -0.036 min
Lab File: 2p57283.D
Acq: 16 Mar 2016 10:49 pm

Tgt Ion:202 Resp: 12857

Ion	Ratio	Lower	Upper
202	100		
101	15.0	0.0	48.2
203	15.3	0.0	47.8

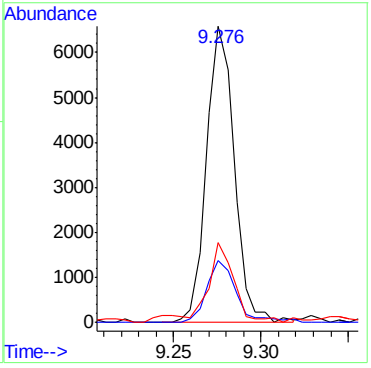




#84
Pyrene
Concen: 0.48 ppm
RT: 9.276 min Scan# 1531
Delta R.T. -0.028 min
Lab File: 2p57283.D
Acq: 16 Mar 2016 10:49 pm

Tgt Ion:202 Resp: 7316

Ion	Ratio	Lower	Upper
202	100		
200	20.6	0.0	50.8
203	25.3	0.0	48.1



9.1.6

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57283.D
Acq On : 16 Mar 2016 10:49 pm
Operator : sarad
Sample : jc16204-3
Misc : op92132,e2p2497,1000
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 17 16:47:36 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

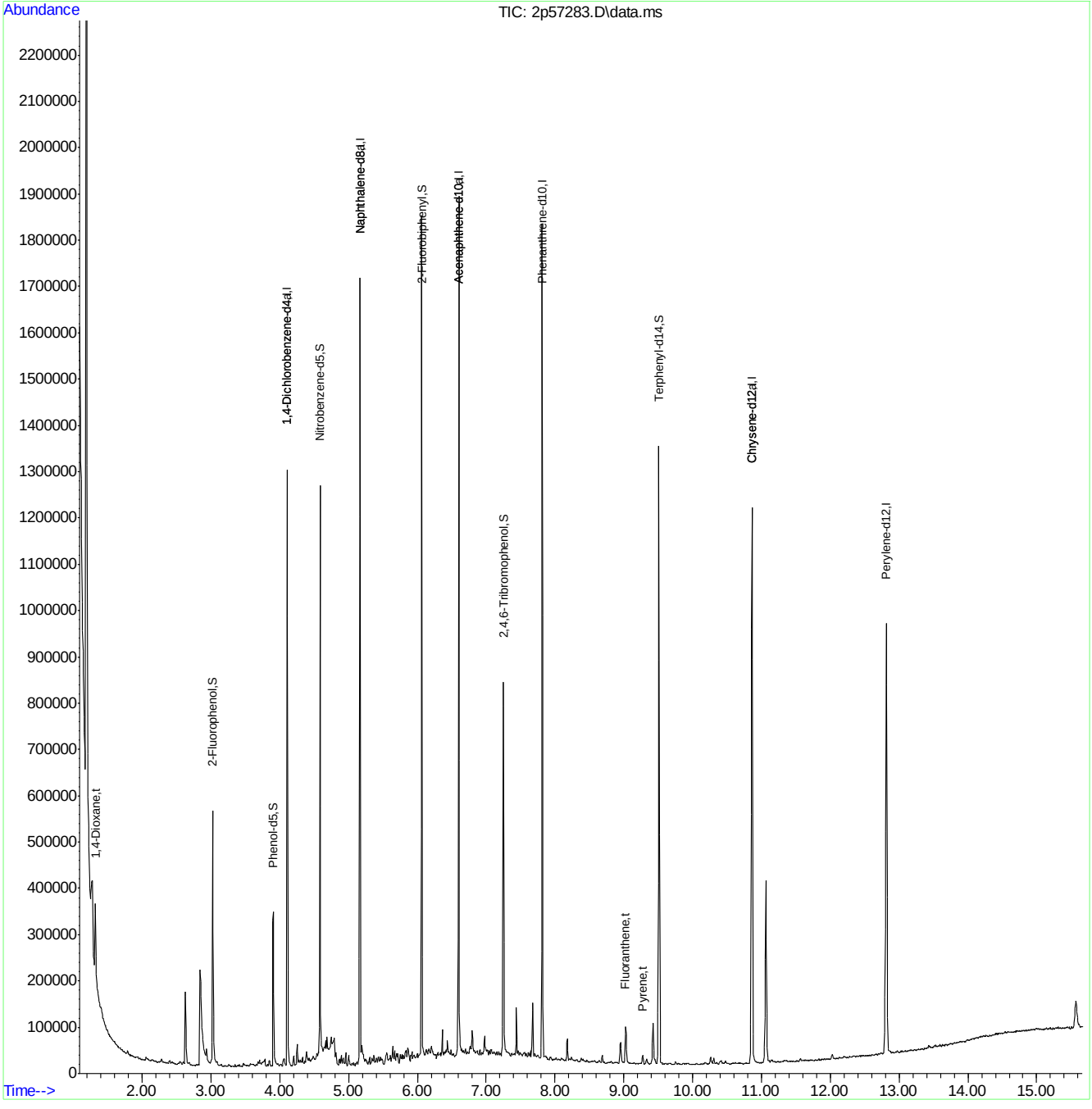
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.109	152	143082	40.00 ppm	-0.03
24) Naphthalene-d8	5.168	136	538552	40.00 ppm	-0.02
47) Acenaphthene-d10	6.601	164	273684	40.00 ppm	-0.02
69) Phenanthrene-d10	7.815	188	502819	40.00 ppm	-0.02
83) Chrysene-d12	10.864	240	498691	40.00 ppm	-0.02
92) Perylene-d12	12.816	264	415145	40.00 ppm	-0.02
102) 1,4-Dichlorobenzene-d4a	4.109	152	143082	40.00 ppm	-0.03
104) Naphthalene-d8a	5.168	136	538552	40.00 ppm	-0.02
106) Acenaphthene-d10a	6.601	164	273684	40.00 ppm	-0.02
109) Chrysene-d12a	10.864	240	498691	40.00 ppm	-0.02
System Monitoring Compounds					
5) 2-Fluorophenol	3.028	112	117114	24.60 ppm	-0.03
Spiked Amount 50.000	Range 11 - 58		Recovery = 49.20%		
8) Phenol-d5	3.905	99	97277	16.70 ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 33.40%		
25) Nitrobenzene-d5	4.585	82	238504	44.03 ppm	-0.03
Spiked Amount 50.000	Range 19 - 61		Recovery = 88.06%#		
51) 2-Fluorobiphenyl	6.061	172	447273	52.79 ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 105.58%#		
73) 2,4,6-Tribromophenol	7.254	330	62502	49.81 ppm	-0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 99.62%#		
85) Terphenyl-d14	9.511	244	445004	47.94 ppm	-0.02
Spiked Amount 50.000	Range 16 - 65		Recovery = 95.88%#		
Target Compounds					Qvalue
2) 1,4-Dioxane	1.322	88	35999	17.72 ppm	72
81) Fluoranthene	9.024	202	12857	0.84 ppm	94
84) Pyrene	9.276	202	7316	0.48 ppm	92

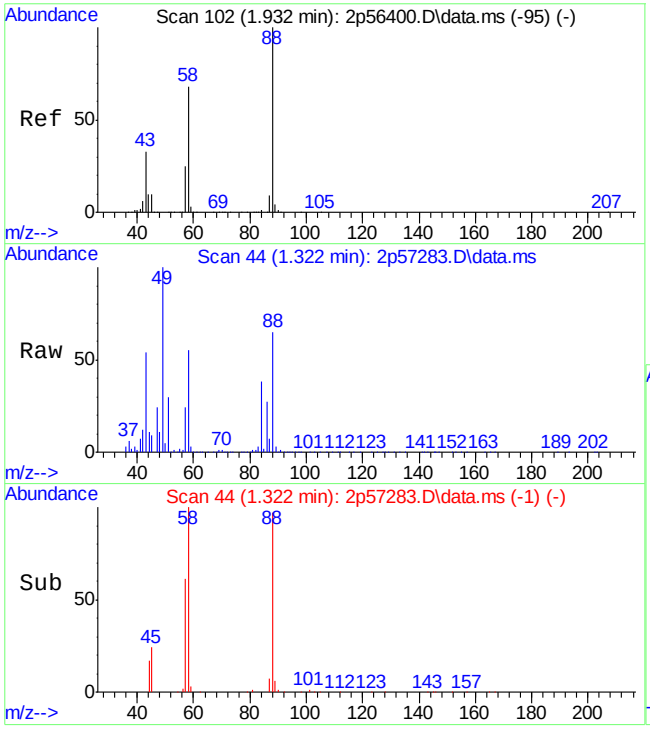
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57283.D
Acq On : 16 Mar 2016 10:49 pm
Operator : sarad
Sample : jc16204-3
Misc : op92132,e2p2497,1000
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 17 16:47:36 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

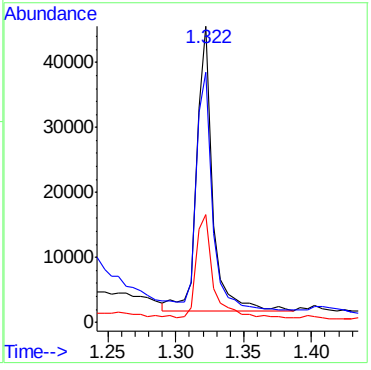


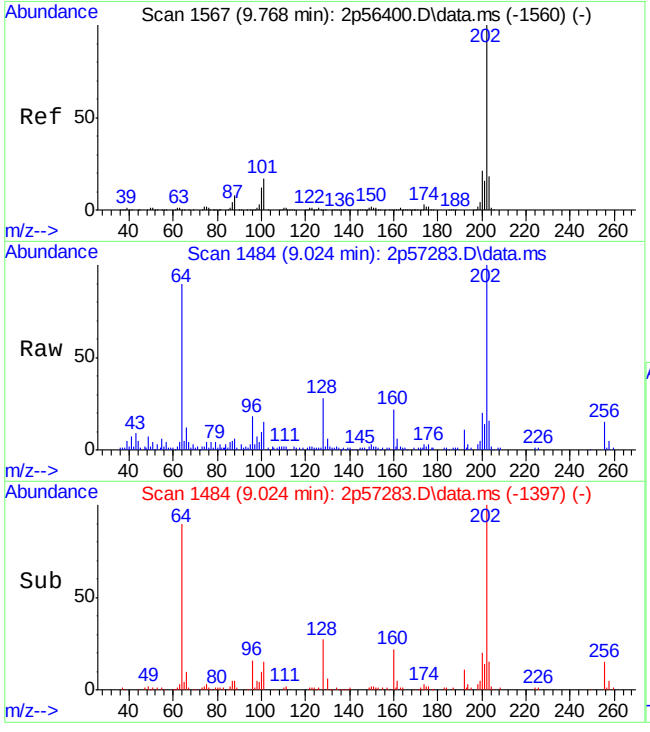


#2
1,4-Dioxane
Concen: 17.72 ppm
RT: 1.322 min Scan# 44
Delta R.T. -0.064 min
Lab File: 2p57283.D
Acq: 16 Mar 2016 10:49 pm

Tgt Ion: 88 Resp: 35999

Ion	Ratio	Lower	Upper
88	100		
58	82.9	32.4	92.4
57	36.6	0.0	51.4

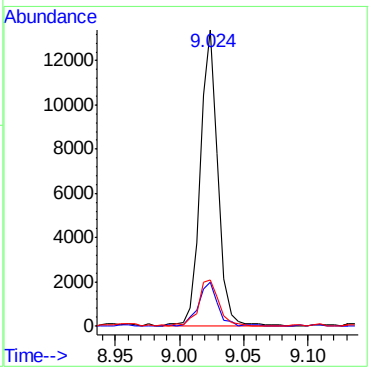




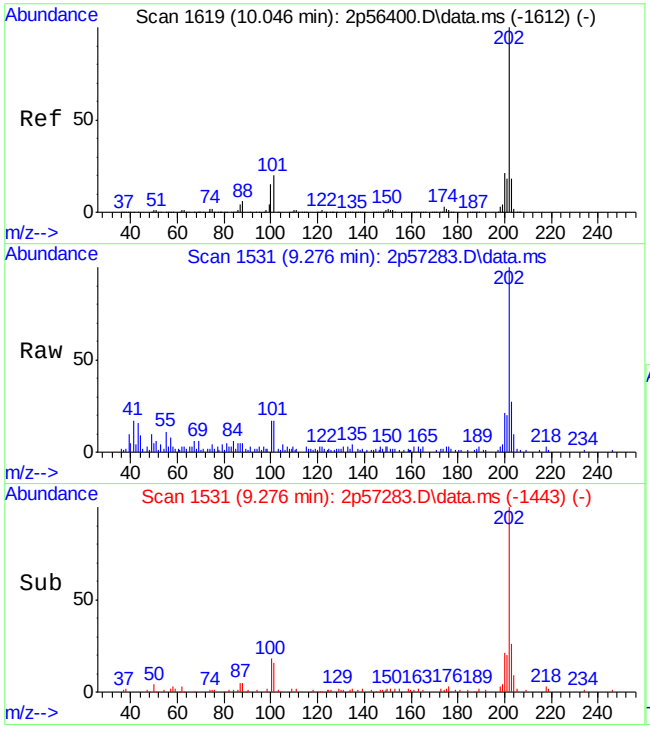
#81
Fluoranthene
Concen: 0.84 ppm
RT: 9.024 min Scan# 1484
Delta R.T. -0.036 min
Lab File: 2p57283.D
Acq: 16 Mar 2016 10:49 pm

Tgt Ion:202 Resp: 12857

Ion	Ratio	Lower	Upper
202	100		
101	15.0	0.0	48.2
203	15.3	0.0	47.8



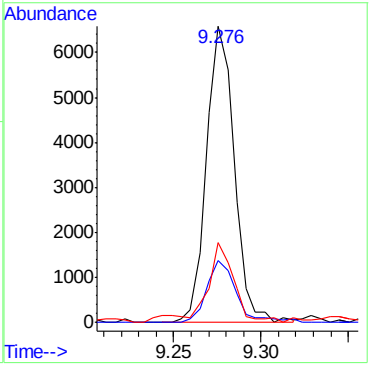
SGS ACCUTEST JC16204



#84
Pyrene
Concen: 0.48 ppm
RT: 9.276 min Scan# 1531
Delta R.T. -0.028 min
Lab File: 2p57283.D
Acq: 16 Mar 2016 10:49 pm

Tgt Ion:202 Resp: 7316

Ion	Ratio	Lower	Upper
202	100		
200	20.6	0.0	50.8
203	25.3	0.0	48.1



9.1.7

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57284.D
Acq On : 16 Mar 2016 11:10 pm
Operator : sarad
Sample : jc16204-4
Misc : op92132,e2p2497,1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 17 16:50:07 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

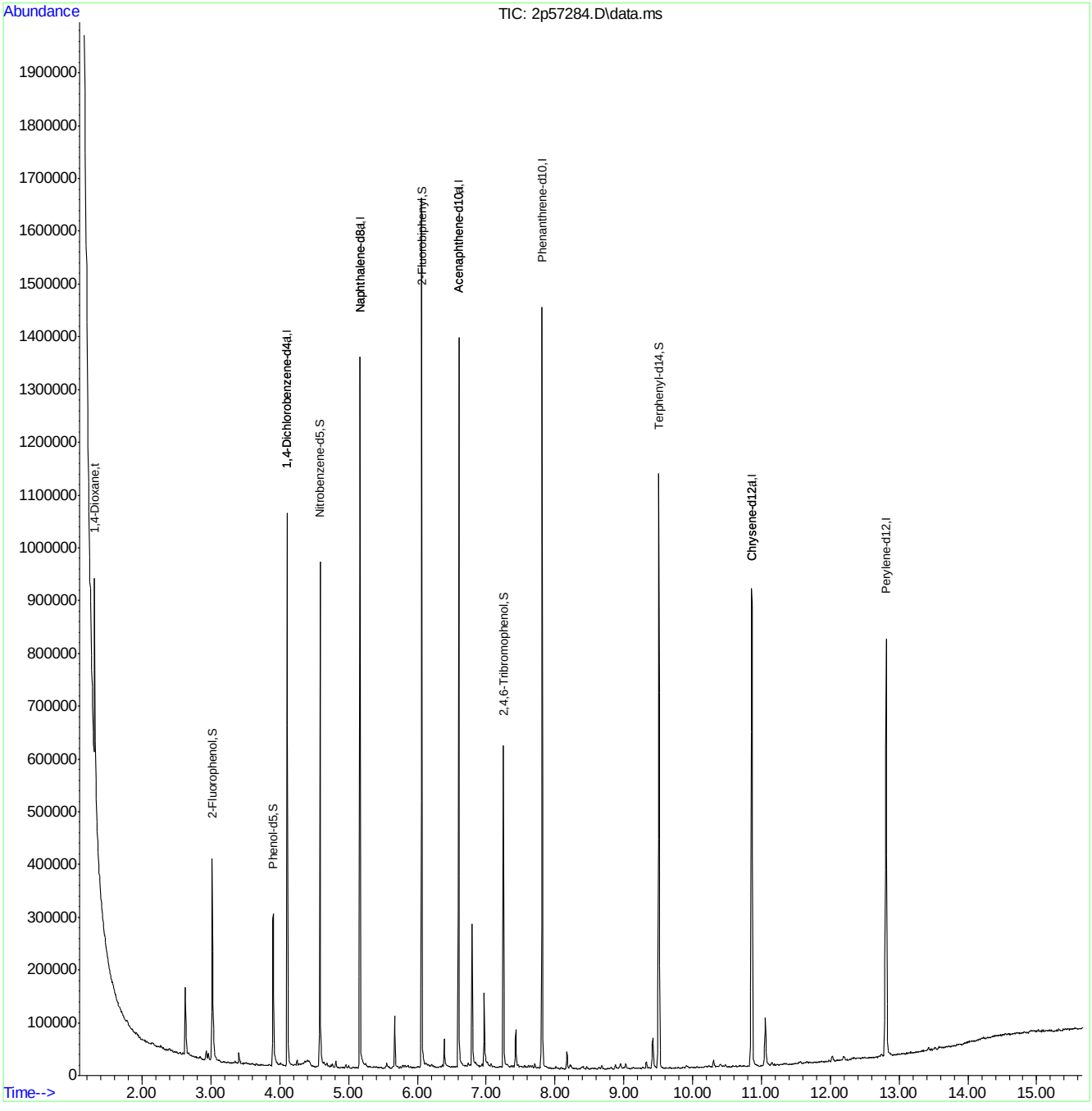
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.109	152	119217	40.00	ppm	-0.03
24) Naphthalene-d8	5.168	136	445300	40.00	ppm	-0.02
47) Acenaphthene-d10	6.601	164	220459	40.00	ppm	-0.02
69) Phenanthrene-d10	7.815	188	404157	40.00	ppm	-0.02
83) Chrysene-d12	10.864	240	401499	40.00	ppm	-0.02
92) Perylene-d12	12.811	264	352060	40.00	ppm	-0.02
102) 1,4-Dichlorobenzene-d4a	4.109	152	119217	40.00	ppm	-0.03
104) Naphthalene-d8a	5.168	136	445300	40.00	ppm	-0.02
106) Acenaphthene-d10a	6.601	164	220459	40.00	ppm	-0.02
109) Chrysene-d12a	10.864	240	401499	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.023	112	104170	26.26	ppm	-0.03
Spiked Amount 50.000	Range 11 - 58		Recovery = 52.52%			
8) Phenol-d5	3.906	99	87157	17.96	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 35.92%			
25) Nitrobenzene-d5	4.585	82	199838	44.62	ppm	-0.03
Spiked Amount 50.000	Range 19 - 61		Recovery = 89.24%#			
51) 2-Fluorobiphenyl	6.061	172	372577	54.59	ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 109.18%#			
73) 2,4,6-Tribromophenol	7.254	330	50633	50.21	ppm	-0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 100.42%#			
85) Terphenyl-d14	9.511	244	347811	46.54	ppm	-0.02
Spiked Amount 50.000	Range 16 - 65		Recovery = 93.08%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.311	88	94271	55.68	ppm #	58

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

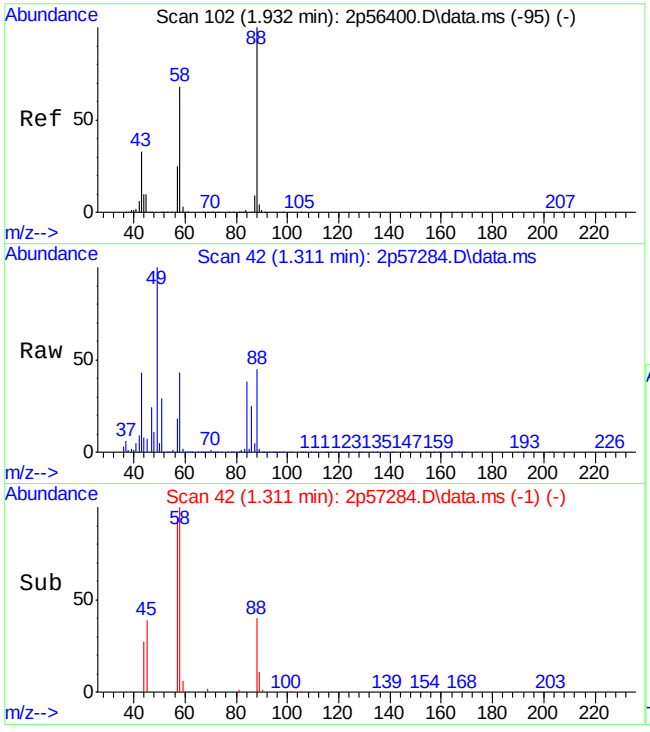
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57284.D
Acq On : 16 Mar 2016 11:10 pm
Operator : sarad
Sample : jc16204-4
Misc : op92132,e2p2497,1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 17 16:50:07 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration



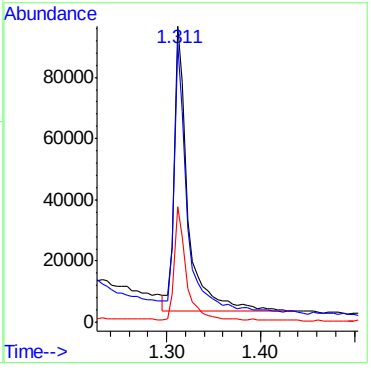
SGS ACCUTEST JC16204



#2
1,4-Dioxane
Concen: 55.68 ppm
RT: 1.311 min Scan# 42
Delta R.T. -0.075 min
Lab File: 2p57284.D
Acq: 16 Mar 2016 11:10 pm

Tgt Ion: 88 Resp: 94271

Ion	Ratio	Lower	Upper
88	100		
58	94.6	32.4	92.4#
57	41.1	0.0	51.4



9.1.8

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57284.D
Acq On : 16 Mar 2016 11:10 pm
Operator : sarad
Sample : jc16204-4
Misc : op92132,e2p2497,1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 17 16:50:07 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

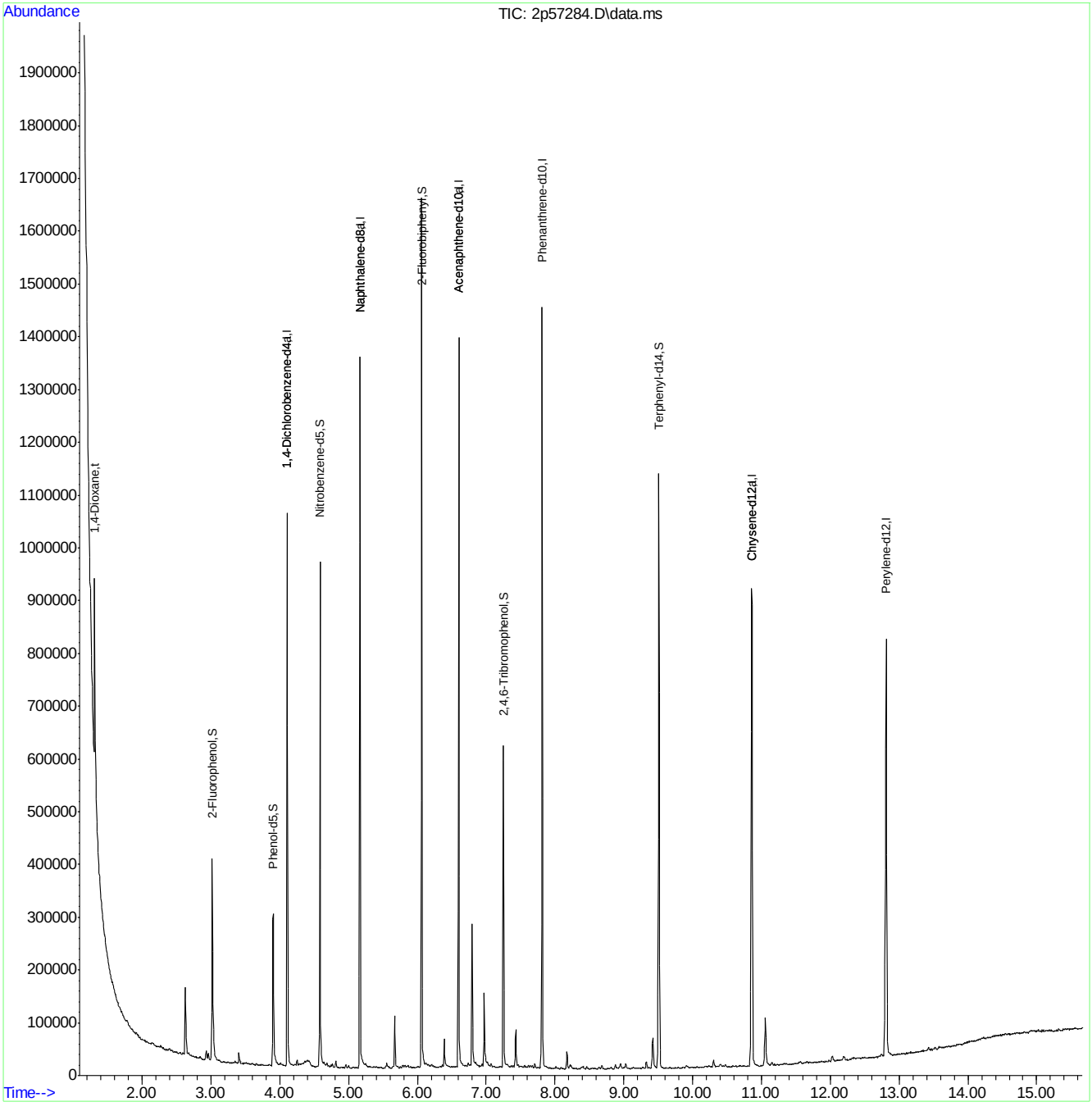
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.109	152	119217	40.00 ppm	-0.03
24) Naphthalene-d8	5.168	136	445300	40.00 ppm	-0.02
47) Acenaphthene-d10	6.601	164	220459	40.00 ppm	-0.02
69) Phenanthrene-d10	7.815	188	404157	40.00 ppm	-0.02
83) Chrysene-d12	10.864	240	401499	40.00 ppm	-0.02
92) Perylene-d12	12.811	264	352060	40.00 ppm	-0.02
102) 1,4-Dichlorobenzene-d4a	4.109	152	119217	40.00 ppm	-0.03
104) Naphthalene-d8a	5.168	136	445300	40.00 ppm	-0.02
106) Acenaphthene-d10a	6.601	164	220459	40.00 ppm	-0.02
109) Chrysene-d12a	10.864	240	401499	40.00 ppm	-0.02
System Monitoring Compounds					
5) 2-Fluorophenol	3.023	112	104170	26.26 ppm	-0.03
Spiked Amount 50.000	Range 11 - 58		Recovery = 52.52%		
8) Phenol-d5	3.906	99	87157	17.96 ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 35.92%		
25) Nitrobenzene-d5	4.585	82	199838	44.62 ppm	-0.03
Spiked Amount 50.000	Range 19 - 61		Recovery = 89.24%#		
51) 2-Fluorobiphenyl	6.061	172	372577	54.59 ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 109.18%#		
73) 2,4,6-Tribromophenol	7.254	330	50633	50.21 ppm	-0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 100.42%#		
85) Terphenyl-d14	9.511	244	347811	46.54 ppm	-0.02
Spiked Amount 50.000	Range 16 - 65		Recovery = 93.08%#		
Target Compounds					Qvalue
2) 1,4-Dioxane	1.311	88	94271	55.68 ppm	# 58

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

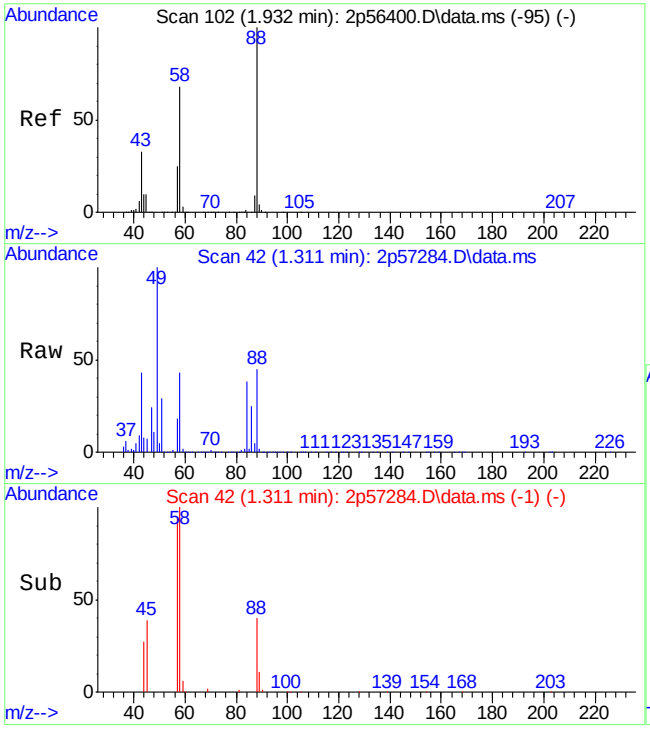
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57284.D
Acq On : 16 Mar 2016 11:10 pm
Operator : sarad
Sample : jc16204-4
Misc : op92132,e2p2497,1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 17 16:50:07 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration



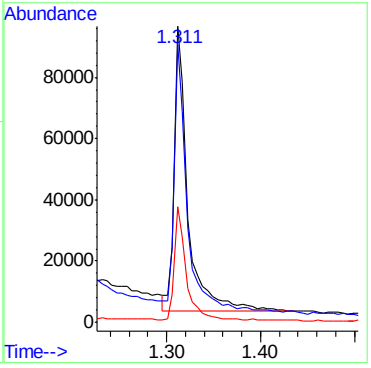
SGS ACCUTEST JC16204



#2
1,4-Dioxane
Concen: 55.68 ppm
RT: 1.311 min Scan# 42
Delta R.T. -0.075 min
Lab File: 2p57284.D
Acq: 16 Mar 2016 11:10 pm

Tgt Ion: 88 Resp: 94271

Ion	Ratio	Lower	Upper
88	100		
58	94.6	32.4	92.4#
57	41.1	0.0	51.4



9.1.9

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57280.D
Acq On : 16 Mar 2016 9:47 pm
Operator : sarad
Sample : jc16204-5
Misc : op92132,e2p2497,1000
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 17 16:31:42 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.109	152	116373	40.00	ppm	-0.03
24) Naphthalene-d8	5.168	136	428762	40.00	ppm	-0.02
47) Acenaphthene-d10	6.601	164	213586	40.00	ppm	-0.02
69) Phenanthrene-d10	7.815	188	392202	40.00	ppm	-0.02
83) Chrysene-d12	10.864	240	398419	40.00	ppm	-0.02
92) Perylene-d12	12.816	264	343715	40.00	ppm	-0.02
102) 1,4-Dichlorobenzene-d4a	4.109	152	116373	40.00	ppm	-0.03
104) Naphthalene-d8a	5.168	136	428762	40.00	ppm	-0.02
106) Acenaphthene-d10a	6.601	164	213586	40.00	ppm	-0.02
109) Chrysene-d12a	10.864	240	398419	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.023	112	96703	24.97	ppm	-0.03
Spiked Amount 50.000	Range 11 - 58		Recovery = 49.94%			
8) Phenol-d5	3.906	99	77354	16.33	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 32.66%			
25) Nitrobenzene-d5	4.585	82	175429	40.68	ppm	-0.03
Spiked Amount 50.000	Range 19 - 61		Recovery = 81.36%#			
51) 2-Fluorobiphenyl	6.061	172	322751	48.81	ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 97.62%#			
73) 2,4,6-Tribromophenol	7.254	330	44712	45.69	ppm	-0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 91.38%#			
85) Terphenyl-d14	9.511	244	329824	44.48	ppm	-0.02
Spiked Amount 50.000	Range 16 - 65		Recovery = 88.96%#			
Target Compounds						Qvalue

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

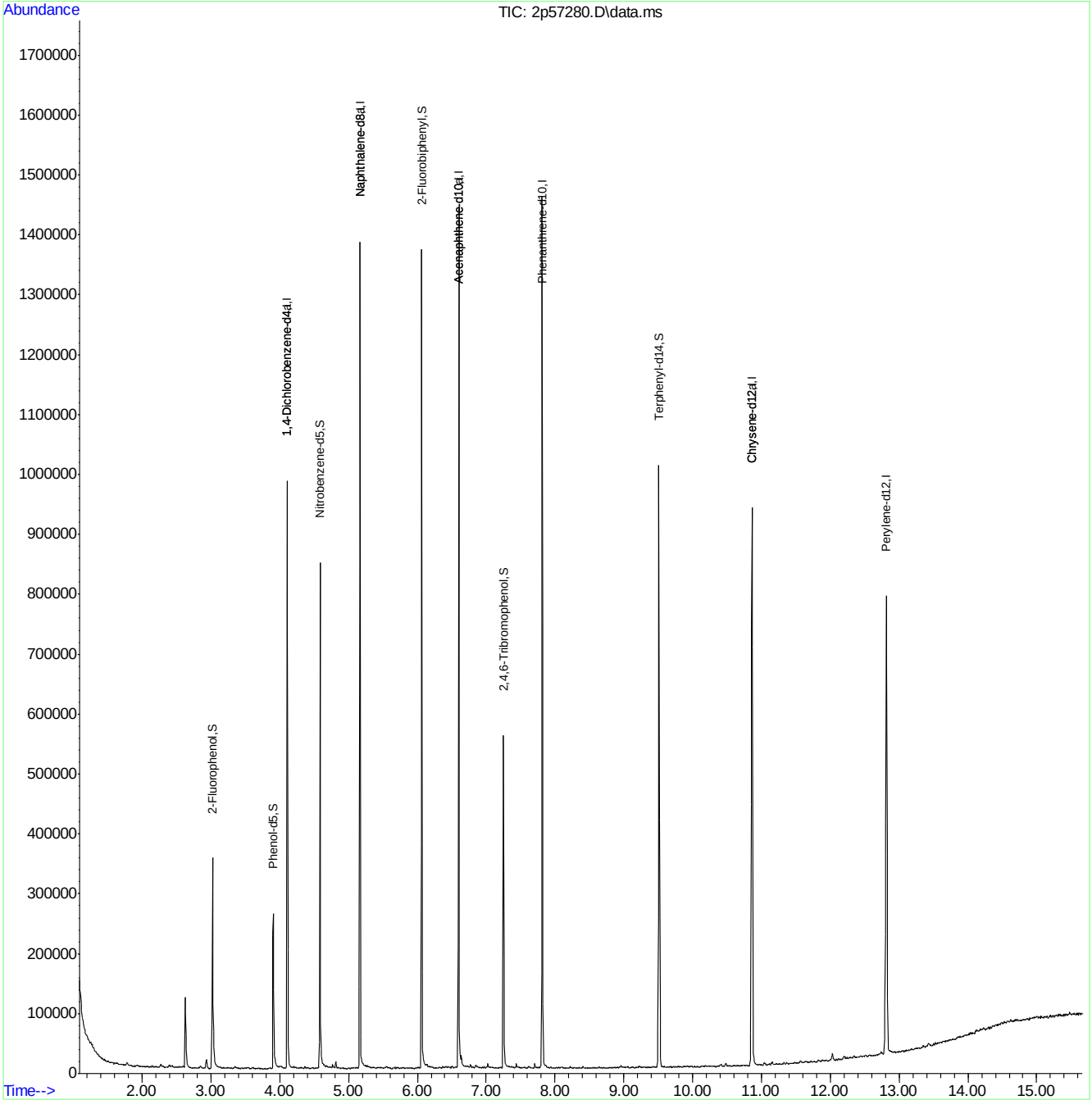
9.1.10

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57280.D
Acq On : 16 Mar 2016 9:47 pm
Operator : sarad
Sample : jc16204-5
Misc : op92132,e2p2497,1000
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 17 16:31:42 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57280.D
Acq On : 16 Mar 2016 9:47 pm
Operator : sarad
Sample : jc16204-5
Misc : op92132,e2p2497,1000
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 17 16:31:42 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.109	152	116373	40.00 ppm	-0.03
24) Naphthalene-d8	5.168	136	428762	40.00 ppm	-0.02
47) Acenaphthene-d10	6.601	164	213586	40.00 ppm	-0.02
69) Phenanthrene-d10	7.815	188	392202	40.00 ppm	-0.02
83) Chrysene-d12	10.864	240	398419	40.00 ppm	-0.02
92) Perylene-d12	12.816	264	343715	40.00 ppm	-0.02
102) 1,4-Dichlorobenzene-d4a	4.109	152	116373	40.00 ppm	-0.03
104) Naphthalene-d8a	5.168	136	428762	40.00 ppm	-0.02
106) Acenaphthene-d10a	6.601	164	213586	40.00 ppm	-0.02
109) Chrysene-d12a	10.864	240	398419	40.00 ppm	-0.02
System Monitoring Compounds					
5) 2-Fluorophenol	3.023	112	96703	24.97 ppm	-0.03
Spiked Amount 50.000	Range 11 - 58		Recovery = 49.94%		
8) Phenol-d5	3.906	99	77354	16.33 ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 32.66%		
25) Nitrobenzene-d5	4.585	82	175429	40.68 ppm	-0.03
Spiked Amount 50.000	Range 19 - 61		Recovery = 81.36%#		
51) 2-Fluorobiphenyl	6.061	172	322751	48.81 ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 97.62%#		
73) 2,4,6-Tribromophenol	7.254	330	44712	45.69 ppm	-0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 91.38%#		
85) Terphenyl-d14	9.511	244	329824	44.48 ppm	-0.02
Spiked Amount 50.000	Range 16 - 65		Recovery = 88.96%#		

Target Compounds Qvalue

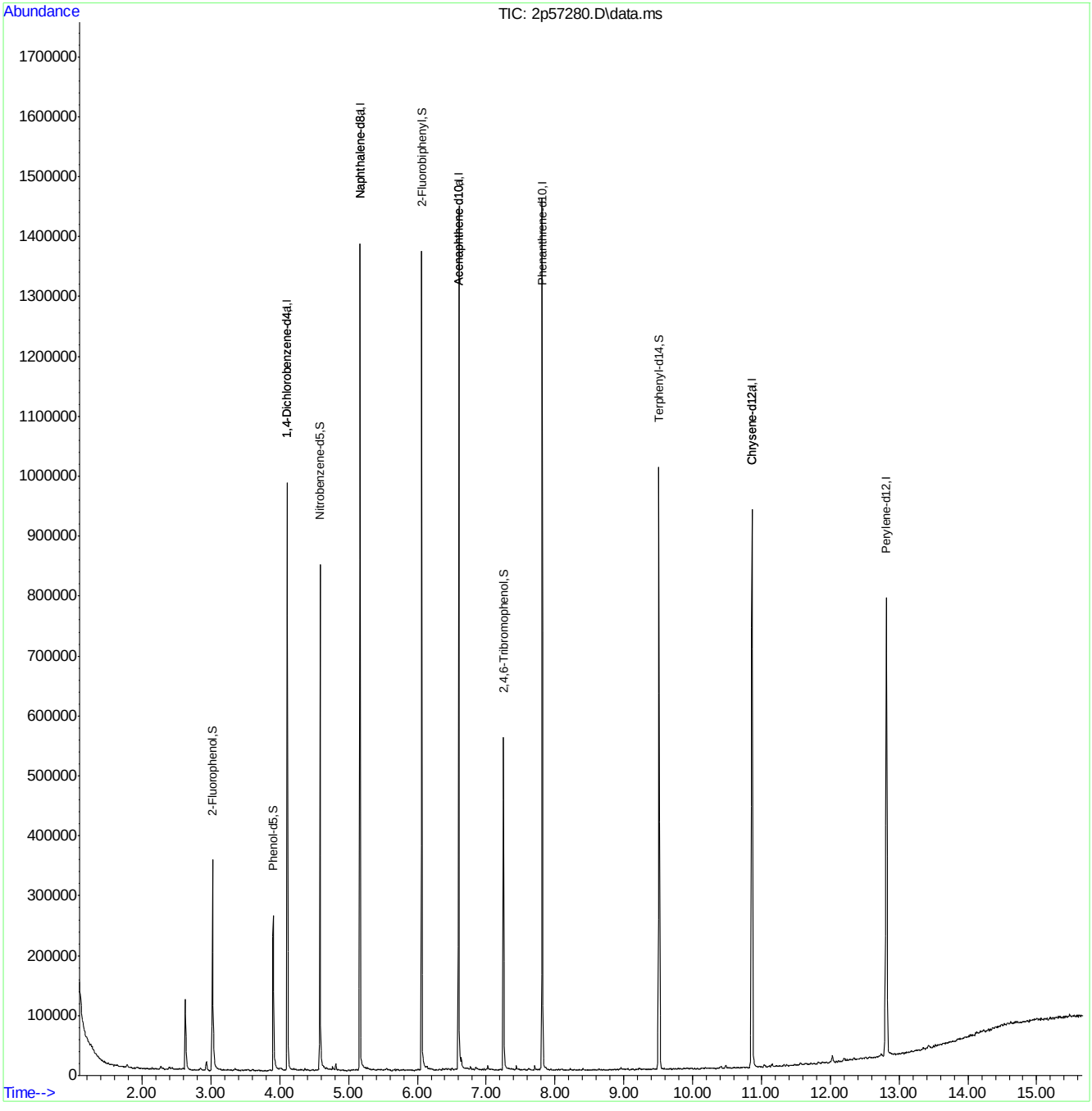
(#) = qualifier out of range (m) = manual integration (+) = signals summed

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57280.D
Acq On : 16 Mar 2016 9:47 pm
Operator : sarad
Sample : jc16204-5
Misc : op92132,e2p2497,1000
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 17 16:31:42 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57279.D
Acq On : 16 Mar 2016 9:27 pm
Operator : sarad
Sample : jc16204-6
Misc : op92132,e2p2497,1000
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 17 16:30:47 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.109	152	119983	40.00	ppm	-0.03
24) Naphthalene-d8	5.168	136	452405	40.00	ppm	-0.02
47) Acenaphthene-d10	6.601	164	223514	40.00	ppm	-0.02
69) Phenanthrene-d10	7.815	188	415247	40.00	ppm	-0.02
83) Chrysene-d12	10.864	240	418087	40.00	ppm	-0.02
92) Perylene-d12	12.822	264	344148	40.00	ppm	-0.01
102) 1,4-Dichlorobenzene-d4a	4.109	152	119983	40.00	ppm	-0.03
104) Naphthalene-d8a	5.168	136	452405	40.00	ppm	-0.02
106) Acenaphthene-d10a	6.601	164	223514	40.00	ppm	-0.02
109) Chrysene-d12a	10.864	240	418087	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.023	112	93671	23.46	ppm	-0.03
Spiked Amount 50.000	Range 11 - 58		Recovery = 46.92%			
8) Phenol-d5	3.905	99	77798	15.93	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 31.86%			
25) Nitrobenzene-d5	4.585	82	184791	40.61	ppm	-0.03
Spiked Amount 50.000	Range 19 - 61		Recovery = 81.22%#			
51) 2-Fluorobiphenyl	6.066	172	346582	50.09	ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 100.18%#			
73) 2,4,6-Tribromophenol	7.254	330	46767	45.13	ppm	-0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 90.26%#			
85) Terphenyl-d14	9.511	244	353982	45.49	ppm	-0.02
Spiked Amount 50.000	Range 16 - 65		Recovery = 90.98%#			

Target Compounds Qvalue

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

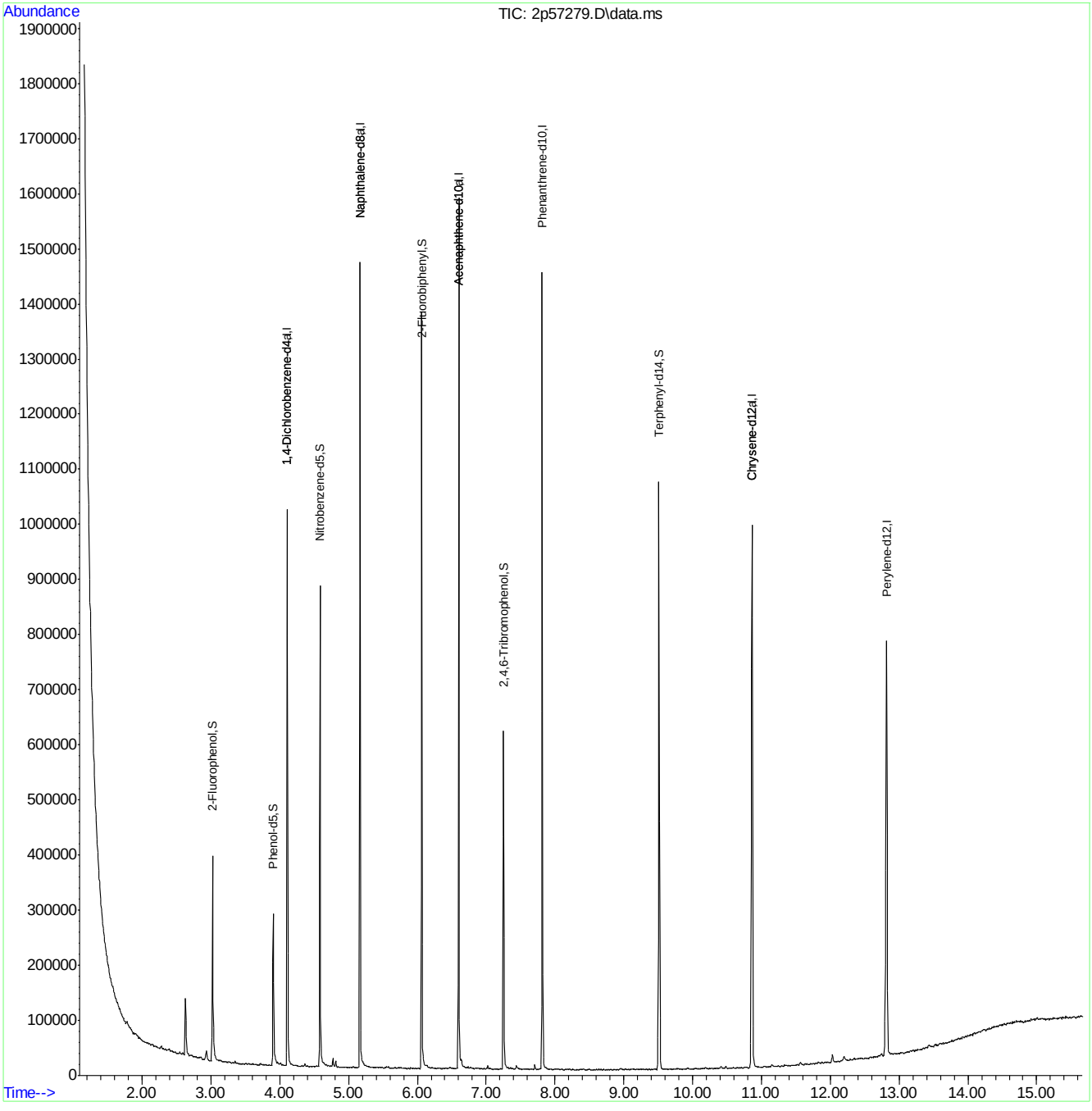
9.1.12

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57279.D
Acq On : 16 Mar 2016 9:27 pm
Operator : sarad
Sample : jc16204-6
Misc : op92132,e2p2497,1000
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 17 16:30:47 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration



M2P2490.M Thu Mar 17 16:30:56 2016 RPT1 Page: 2

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57279.D
Acq On : 16 Mar 2016 9:27 pm
Operator : sarad
Sample : jc16204-6
Misc : op92132,e2p2497,1000
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 17 16:30:47 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.109	152	119983	40.00 ppm	-0.03
24) Naphthalene-d8	5.168	136	452405	40.00 ppm	-0.02
47) Acenaphthene-d10	6.601	164	223514	40.00 ppm	-0.02
69) Phenanthrene-d10	7.815	188	415247	40.00 ppm	-0.02
83) Chrysene-d12	10.864	240	418087	40.00 ppm	-0.02
92) Perylene-d12	12.822	264	344148	40.00 ppm	-0.01
102) 1,4-Dichlorobenzene-d4a	4.109	152	119983	40.00 ppm	-0.03
104) Naphthalene-d8a	5.168	136	452405	40.00 ppm	-0.02
106) Acenaphthene-d10a	6.601	164	223514	40.00 ppm	-0.02
109) Chrysene-d12a	10.864	240	418087	40.00 ppm	-0.02
System Monitoring Compounds					
5) 2-Fluorophenol	3.023	112	93671	23.46 ppm	-0.03
Spiked Amount 50.000	Range 11 - 58		Recovery = 46.92%		
8) Phenol-d5	3.905	99	77798	15.93 ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 31.86%		
25) Nitrobenzene-d5	4.585	82	184791	40.61 ppm	-0.03
Spiked Amount 50.000	Range 19 - 61		Recovery = 81.22%#		
51) 2-Fluorobiphenyl	6.066	172	346582	50.09 ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 100.18%#		
73) 2,4,6-Tribromophenol	7.254	330	46767	45.13 ppm	-0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 90.26%#		
85) Terphenyl-d14	9.511	244	353982	45.49 ppm	-0.02
Spiked Amount 50.000	Range 16 - 65		Recovery = 90.98%#		
Target Compounds					Qvalue

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

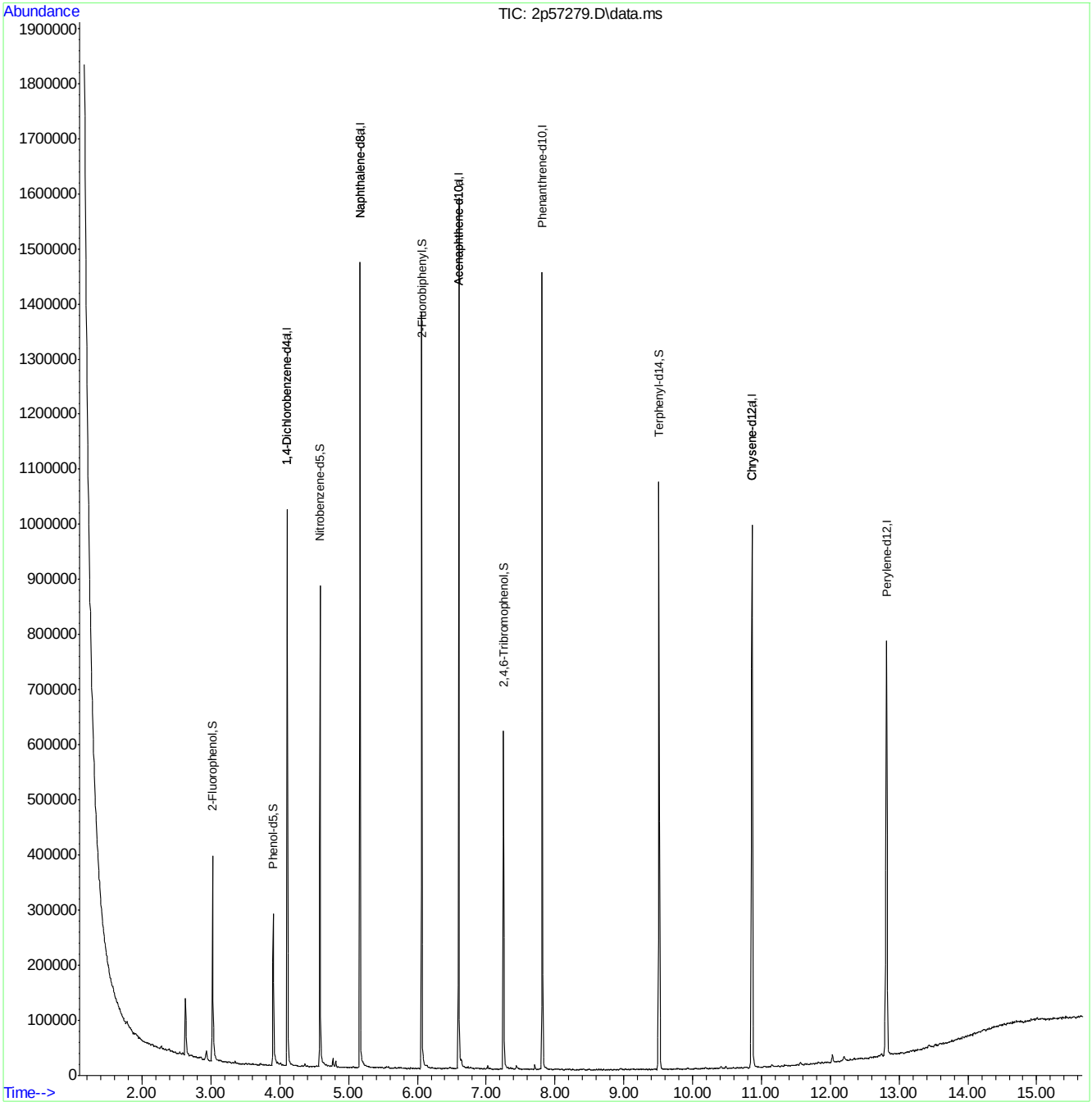
9.1.13

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57279.D
Acq On : 16 Mar 2016 9:27 pm
Operator : sarad
Sample : jc16204-6
Misc : op92132,e2p2497,1000
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 17 16:30:47 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15665.D
Acq On : 18 Mar 2016 1:09 am
Operator : juliusj
Sample : jc16204-1
Misc : op92132a,e4p805,1000
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Mar 18 16:35:17 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 18 16:34:50 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.451	150	121396	4.00	ppm	-0.04
13) Fluorene-d10	11.461	176	199824	4.00	ppm	-0.02
23) Fluoranthene-d10	15.705	212	310542	4.00	ppm	-0.01
33) Benzo(a)pyrene-d12	20.366	264	249922	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.103	112	531633	24.94	ppm	-0.08
Spiked Amount 50.000			Recovery = 49.88%			
4) Phenol-d5	4.286	99	646888	18.83	ppm	-0.08
Spiked Amount 50.000			Recovery = 37.66%			
7) Nitrobenzene-d5	5.678	82	1450285	42.90	ppm	-0.03
Spiked Amount 50.000			Recovery = 85.80%			
14) 2-Fluorobiphenyl	9.123	172	2121682	37.30	ppm	-0.04
Spiked Amount 50.000			Recovery = 74.60%			
22) 2,4,6-Tribromophenol	12.016	330	406874	54.73	ppm	-0.06
Spiked Amount 50.000			Recovery = 109.46%			
30) Terphenyl-d14	16.531	244	1947848	41.08	ppm	0.02
Spiked Amount 50.000			Recovery = 82.16%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.748	88	1932843	135.13	ppm	78
8) Naphthalene	6.996	128	10437	0.13	ppm	66
18) Fluorene	11.510	166	6566	0.11	ppm	90
27) Anthracene	13.536	178	38390	0.46	ppm	100
28) Fluoranthene	15.739	202	37512	0.38	ppm	99
29) Pyrene	16.135	202	25076	0.25	ppm	97

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

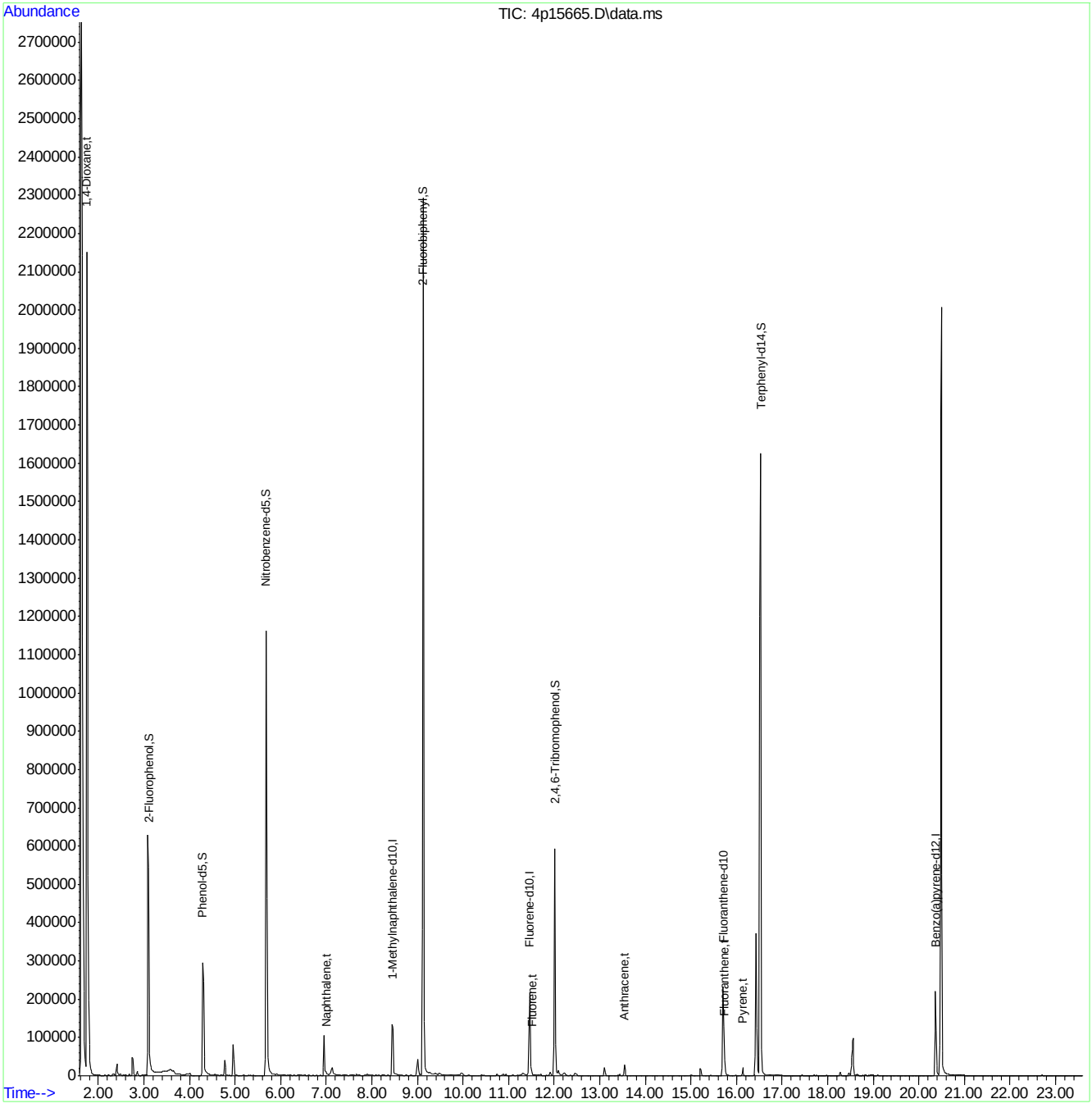
9.1.14

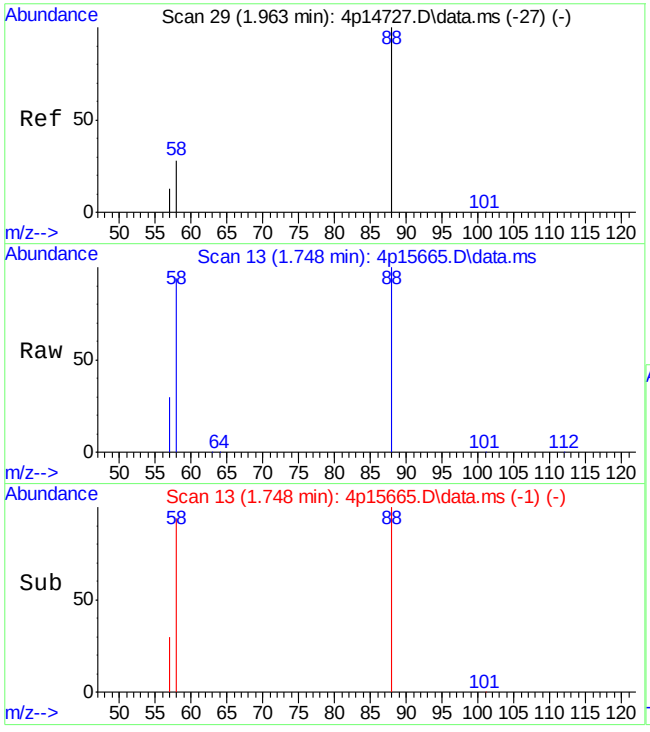
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15665.D
Acq On : 18 Mar 2016 1:09 am
Operator : juliusj
Sample : jc16204-1
Misc : op92132a,e4p805,1000
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Mar 18 16:35:17 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 18 16:34:50 2016
Response via : Initial Calibration

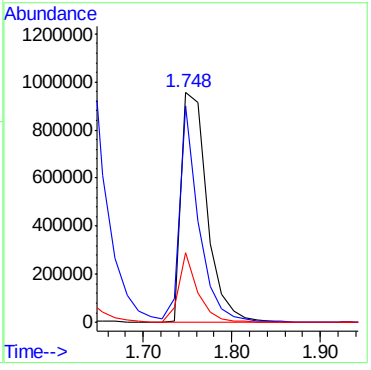


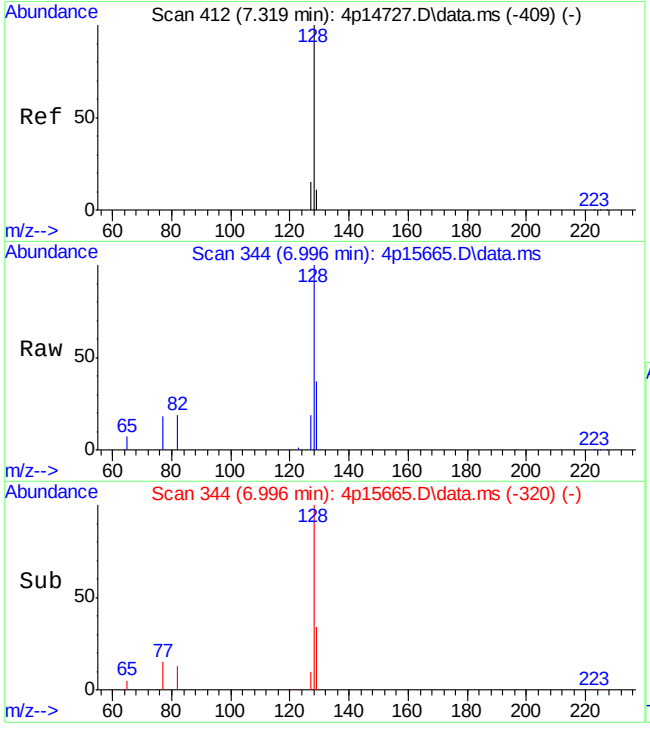


#2
1,4-Dioxane
Concen: 135.13 ppm
RT: 1.748 min Scan# 13
Delta R.T. -0.031 min
Lab File: 4p15665.D
Acq: 18 Mar 2016 1:09 am

Tgt Ion: 88 Resp: 1932843

Ion	Ratio	Lower	Upper
88	100		
58	93.6	53.7	93.7
57	30.1	1.5	41.5

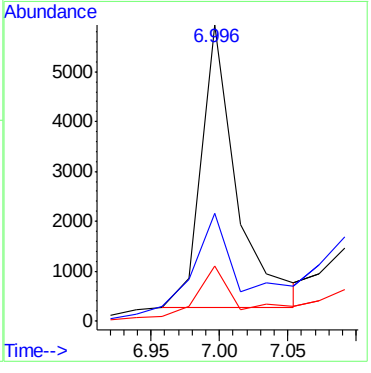


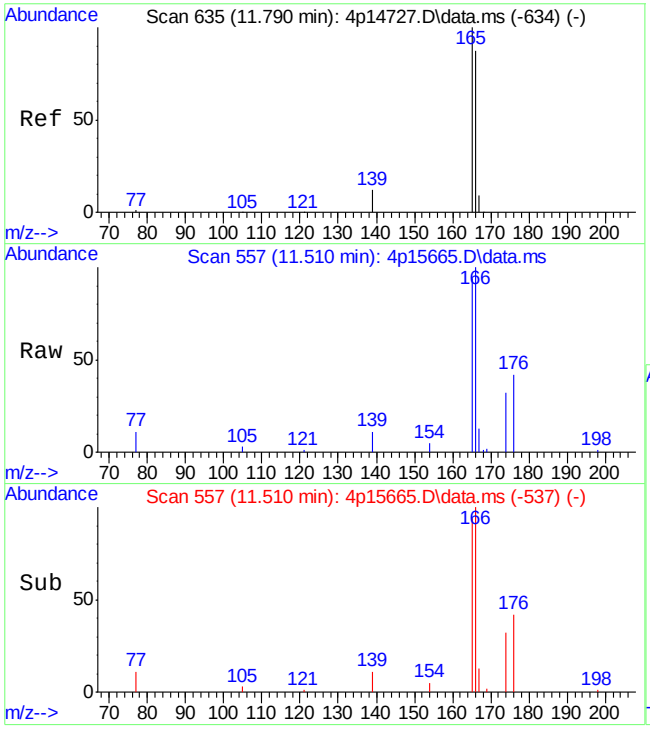


#8
Naphthalene
Concen: 0.13 ppm
RT: 6.996 min Scan# 344
Delta R.T. -0.036 min
Lab File: 4p15665.D
Acq: 18 Mar 2016 1:09 am

Tgt Ion:128 Resp: 10437

Ion	Ratio	Lower	Upper
128	100		
129	30.9	0.0	42.0
127	17.0	0.0	40.3

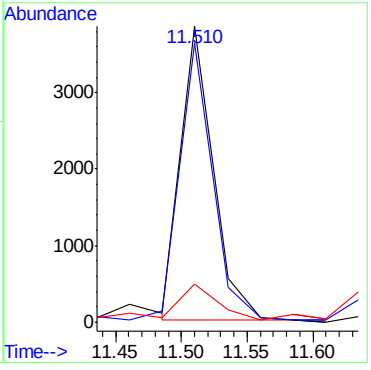


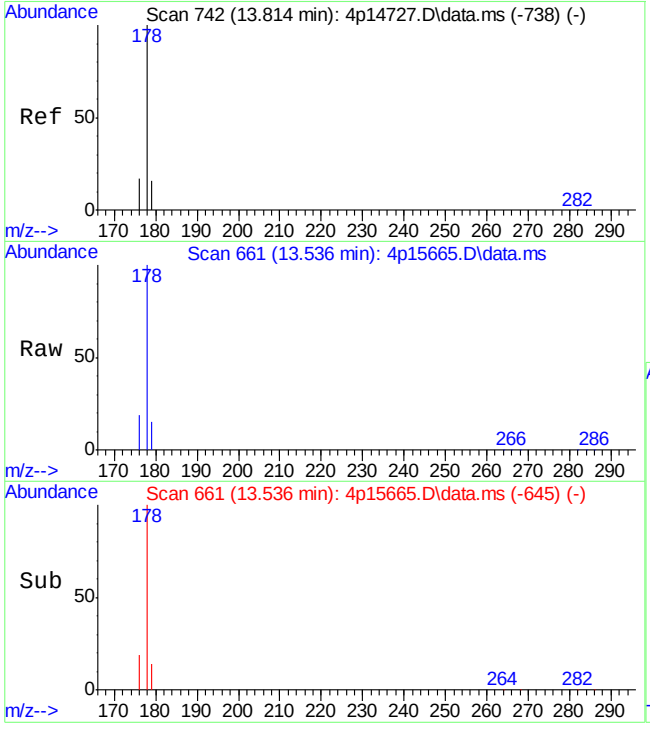


#18
Fluorene
Concen: 0.11 ppm
RT: 11.510 min Scan# 557
Delta R.T. -0.021 min
Lab File: 4p15665.D
Acq: 18 Mar 2016 1:09 am

Tgt Ion:166 Resp: 6566

Ion	Ratio	Lower	Upper
166	100		
165	93.7	54.5	114.5
167	11.2	0.0	43.3

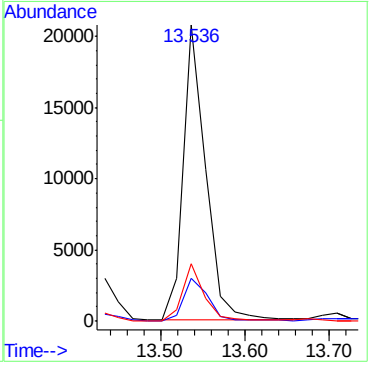


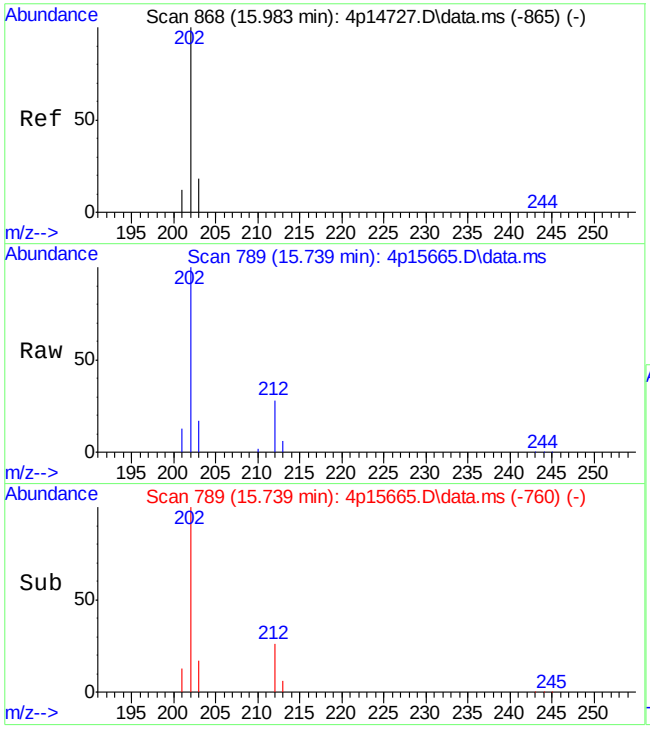


#27
Anthracene
Concen: 0.46 ppm
RT: 13.536 min Scan# 661
Delta R.T. -0.023 min
Lab File: 4p15665.D
Acq: 18 Mar 2016 1:09 am

Tgt Ion:178 Resp: 38390

Ion	Ratio	Lower	Upper
178	100		
179	14.4	0.0	44.3
176	19.1	0.0	49.0

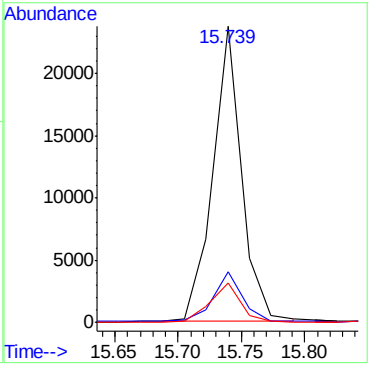


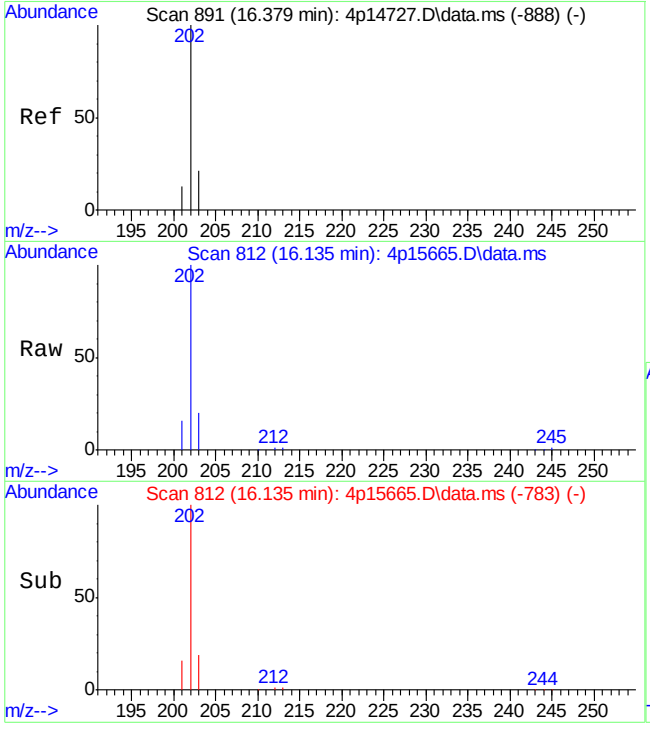


#28
Fluoranthene
Concen: 0.38 ppm
RT: 15.739 min Scan# 789
Delta R.T. 0.004 min
Lab File: 4p15665.D
Acq: 18 Mar 2016 1:09 am

Tgt Ion:202 Resp: 37512

Ion	Ratio	Lower	Upper
202	100		
203	17.0	0.0	46.6
201	13.2	0.0	43.5

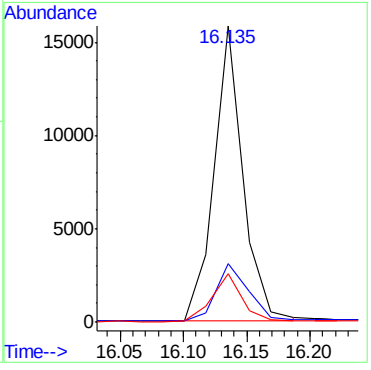




#29
Pyrene
Concen: 0.25 ppm
RT: 16.135 min Scan# 812
Delta R.T. 0.006 min
Lab File: 4p15665.D
Acq: 18 Mar 2016 1:09 am

Tgt Ion:202 Resp: 25076

Ion	Ratio	Lower	Upper
202	100		
203	19.2	0.0	47.1
201	16.0	0.0	46.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15658.D
Acq On : 17 Mar 2016 9:36 pm
Operator : juliusj
Sample : jc16204-2
Misc : op92132a,e4p805,1000
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 18 12:22:17 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 18 12:21:39 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.472	150	120691	4.00	ppm	-0.02
13) Fluorene-d10	11.461	176	196876	4.00	ppm	-0.02
23) Fluoranthene-d10	15.705	212	300211	4.00	ppm	-0.01
33) Benzo(a)pyrene-d12	20.368	264	233426	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.102	112	539432	25.45	ppm	-0.08
Spiked Amount 50.000			Recovery = 50.90%			
4) Phenol-d5	4.286	99	686606	20.11	ppm	-0.08
Spiked Amount 50.000			Recovery = 40.22%			
7) Nitrobenzene-d5	5.677	82	1502241	44.70	ppm	-0.03
Spiked Amount 50.000			Recovery = 89.40%			
14) 2-Fluorobiphenyl	9.123	172	2216473	39.55	ppm	-0.04
Spiked Amount 50.000			Recovery = 79.10%			
22) 2,4,6-Tribromophenol	12.016	330	407551	55.64	ppm	-0.06
Spiked Amount 50.000			Recovery = 111.28%			
30) Terphenyl-d14	16.531	244	1977941	43.15	ppm	0.02
Spiked Amount 50.000			Recovery = 86.30%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.762	88	220153	15.48	ppm #	68
28) Fluoranthene	15.739	202	76292	0.80	ppm	99
29) Pyrene	16.135	202	42342	0.45	ppm	97

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

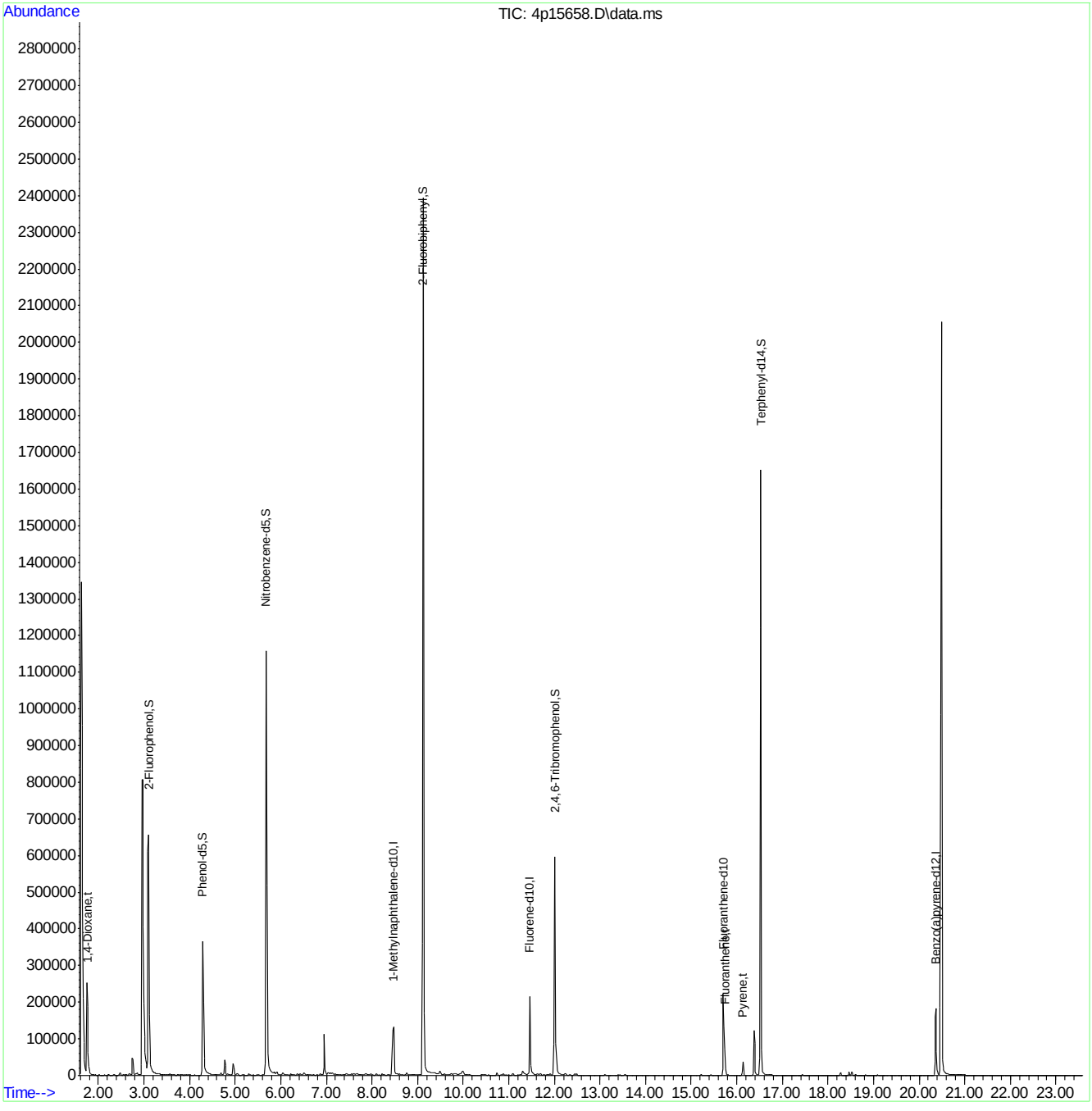
9.1.15

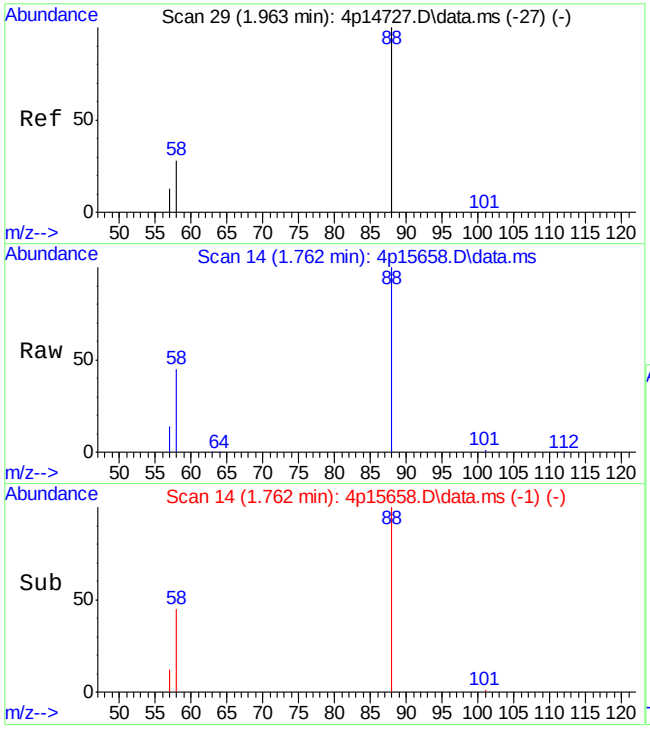
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15658.D
Acq On : 17 Mar 2016 9:36 pm
Operator : juliusj
Sample : jc16204-2
Misc : op92132a,e4p805,1000
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 18 12:22:17 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 18 12:21:39 2016
Response via : Initial Calibration

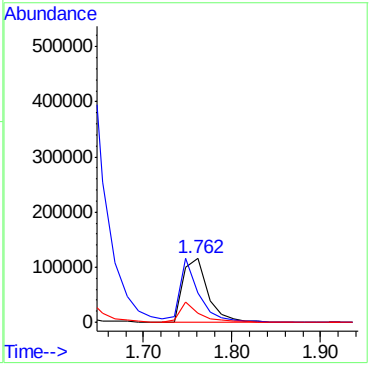


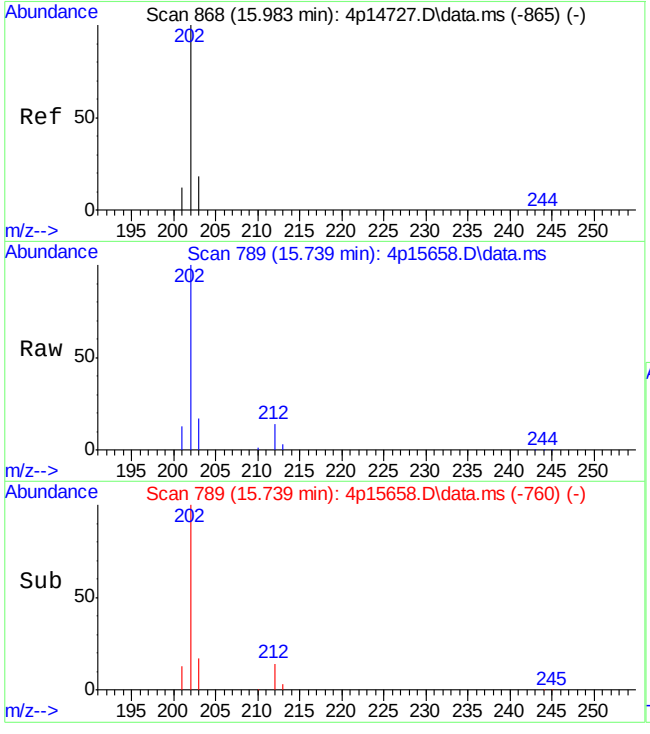


#2
1,4-Dioxane
Concen: 15.48 ppm
RT: 1.762 min Scan# 14
Delta R.T. -0.017 min
Lab File: 4p15658.D
Acq: 17 Mar 2016 9:36 pm

Tgt Ion: 88 Resp: 220153

Ion	Ratio	Lower	Upper
88	100		
58	42.7	53.7	93.7#
57	13.2	1.5	41.5

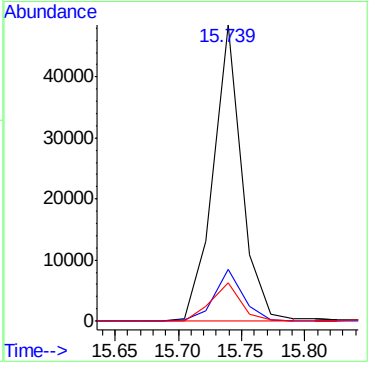


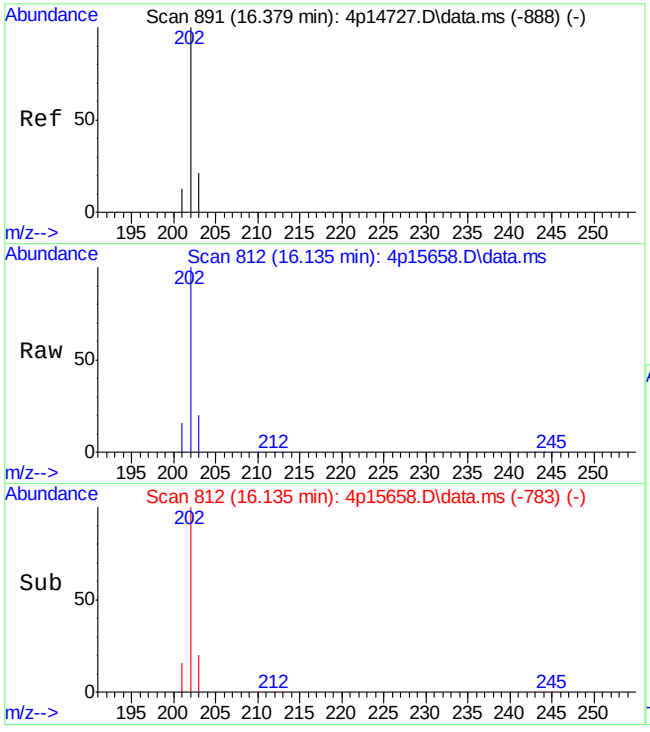


#28
Fluoranthene
Concen: 0.80 ppm
RT: 15.739 min Scan# 789
Delta R.T. 0.004 min
Lab File: 4p15658.D
Acq: 17 Mar 2016 9:36 pm

Tgt Ion:202 Resp: 76292

Ion	Ratio	Lower	Upper
202	100		
203	17.2	0.0	46.6
201	12.9	0.0	43.5

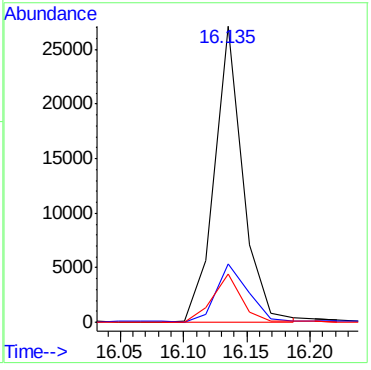




#29
Pyrene
Concen: 0.45 ppm
RT: 16.135 min Scan# 812
Delta R.T. 0.005 min
Lab File: 4p15658.D
Acq: 17 Mar 2016 9:36 pm

Tgt Ion:202 Resp: 42342

Ion	Ratio	Lower	Upper
202	100		
203	19.6	0.0	47.1
201	16.2	0.0	46.0



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15659.D
Acq On : 17 Mar 2016 10:06 pm
Operator : juliusj
Sample : jc16204-3
Misc : op92132a,e4p805,1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 18 12:29:16 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 18 12:28:50 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.470	150	133490	4.00	ppm	-0.02
13) Fluorene-d10	11.457	176	204090	4.00	ppm	-0.02
23) Fluoranthene-d10	15.701	212	328859	4.00	ppm	-0.02
33) Benzo(a)pyrene-d12	20.365	264	252101	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.102	112	609663	26.01	ppm	-0.08
Spiked Amount 50.000			Recovery = 52.02%			
4) Phenol-d5	4.286	99	759735	20.11	ppm	-0.08
Spiked Amount 50.000			Recovery = 40.22%			
7) Nitrobenzene-d5	5.676	82	1662244	44.72	ppm	-0.03
Spiked Amount 50.000			Recovery = 89.44%			
14) 2-Fluorobiphenyl	9.121	172	2442996	42.05	ppm	-0.04
Spiked Amount 50.000			Recovery = 84.10%			
22) 2,4,6-Tribromophenol	12.012	330	466097	61.38	ppm	-0.07
Spiked Amount 50.000			Recovery = 122.76%			
30) Terphenyl-d14	16.527	244	2247056	44.75	ppm	0.02
Spiked Amount 50.000			Recovery = 89.50%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.762	88	258813	16.46	ppm	# 70
28) Fluoranthene	15.735	202	87933	0.84	ppm	100
29) Pyrene	16.131	202	48291	0.46	ppm	97

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

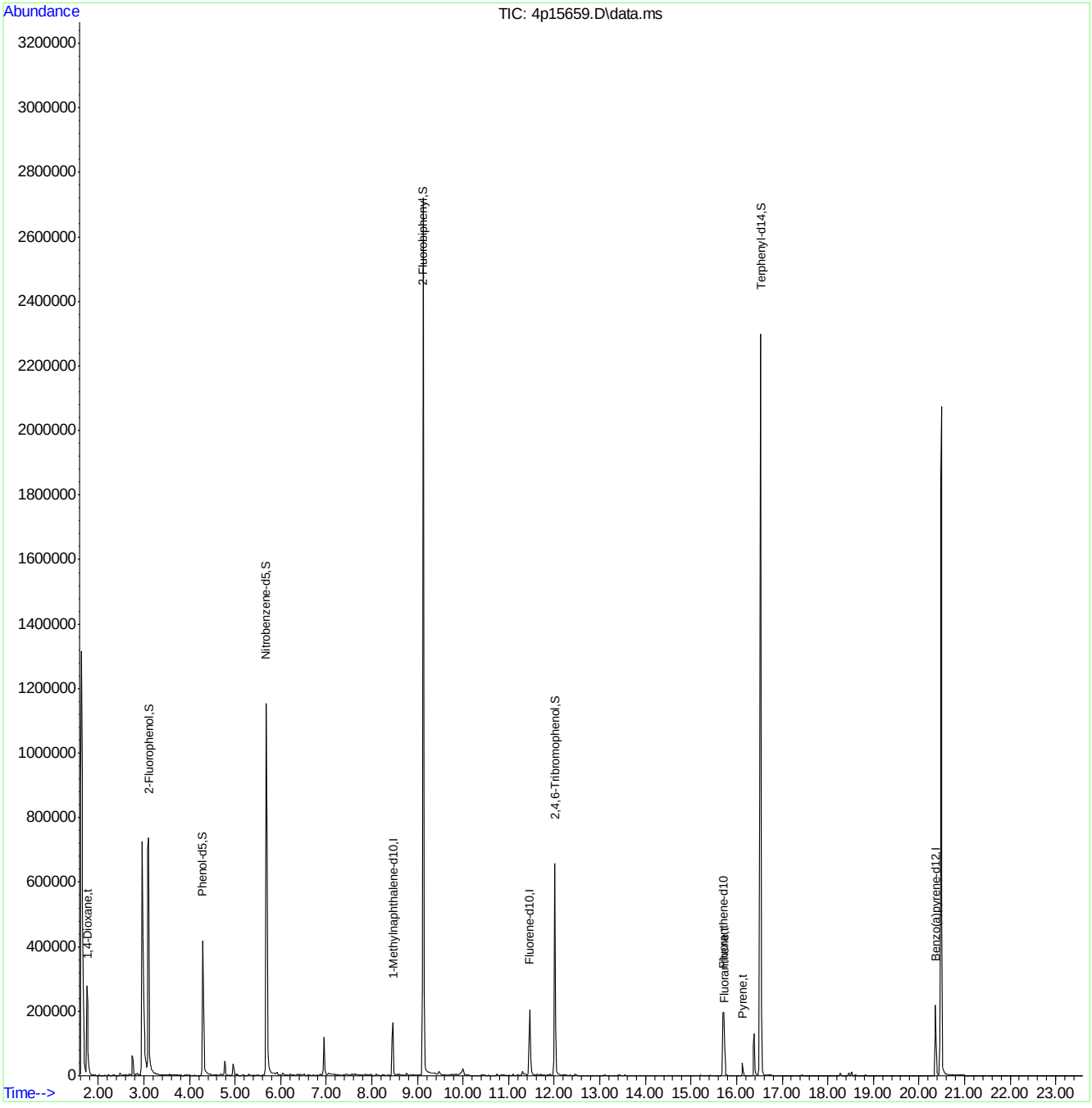
9.1.16

9

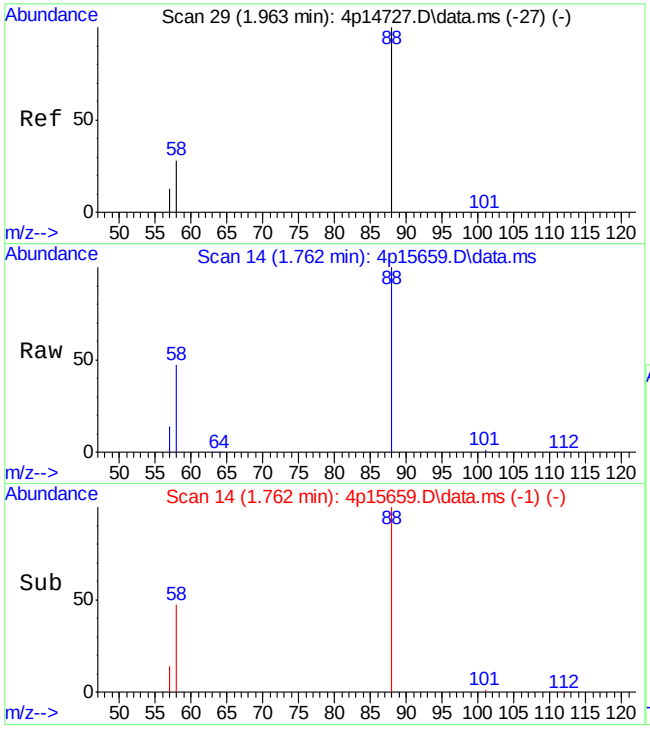
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15659.D
Acq On : 17 Mar 2016 10:06 pm
Operator : juliusj
Sample : jc16204-3
Misc : op92132a,e4p805,1000
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 18 12:29:16 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 18 12:28:50 2016
Response via : Initial Calibration



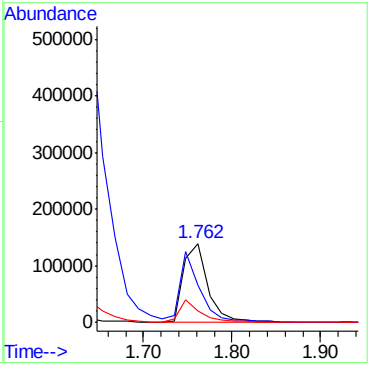
M4P767SIM.M Fri Mar 18 12:29:27 2016 Page: 2

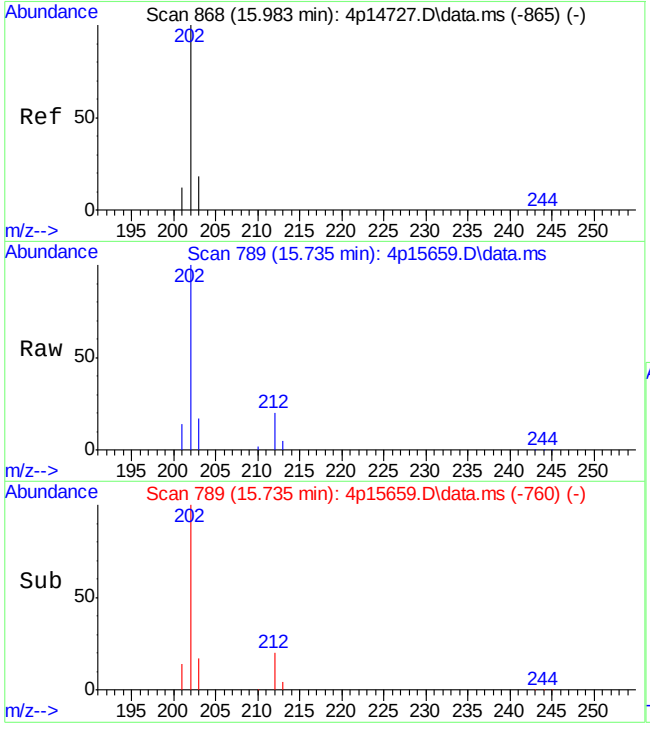


#2
1,4-Dioxane
Concen: 16.46 ppm
RT: 1.762 min Scan# 14
Delta R.T. -0.017 min
Lab File: 4p15659.D
Acq: 17 Mar 2016 10:06 pm

Tgt Ion: 88 Resp: 258813

Ion	Ratio	Lower	Upper
88	100		
58	45.0	53.7	93.7#
57	13.6	1.5	41.5

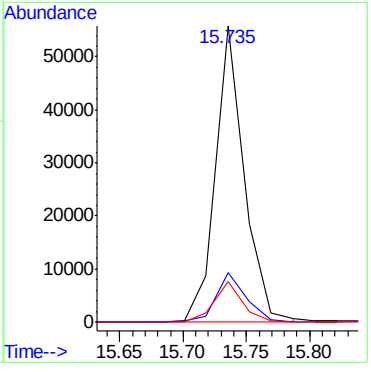


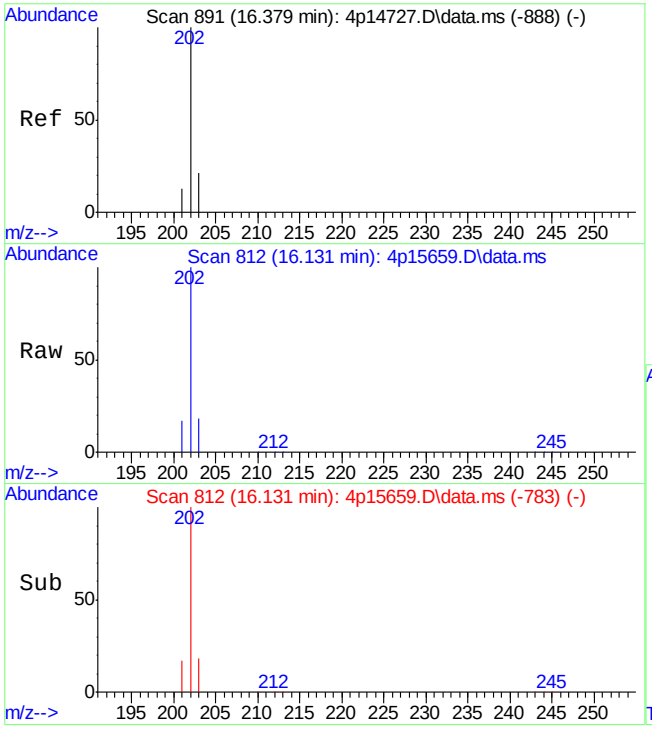


#28
Fluoranthene
Concen: 0.84 ppm
RT: 15.735 min Scan# 789
Delta R.T. -0.000 min
Lab File: 4p15659.D
Acq: 17 Mar 2016 10:06 pm

Tgt Ion:202 Resp: 87933

Ion	Ratio	Lower	Upper
202	100		
203	16.5	0.0	46.6
201	13.8	0.0	43.5

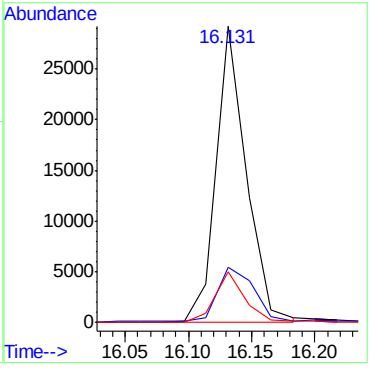




#29
Pyrene
Concen: 0.46 ppm
RT: 16.131 min Scan# 812
Delta R.T. 0.002 min
Lab File: 4p15659.D
Acq: 17 Mar 2016 10:06 pm

Tgt Ion:202 Resp: 48291

Ion	Ratio	Lower	Upper
202	100		
203	18.2	0.0	47.1
201	17.1	0.0	46.0



9.1.16

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15660.D
Acq On : 17 Mar 2016 10:37 pm
Operator : juliusj
Sample : jc16204-4
Misc : op92132a,e4p805,1000
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 18 12:30:08 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 18 12:29:49 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.472	150	119089	4.00	ppm	-0.02
13) Fluorene-d10	11.461	176	195297	4.00	ppm	-0.02
23) Fluoranthene-d10	15.705	212	287563	4.00	ppm	-0.01
33) Benzo(a)pyrene-d12	20.368	264	229645	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.103	112	641998	30.70	ppm	-0.08
Spiked Amount 50.000			Recovery = 61.40%			
4) Phenol-d5	4.286	99	778396	23.10	ppm	-0.08
Spiked Amount 50.000			Recovery = 46.20%			
7) Nitrobenzene-d5	5.678	82	1596945	48.16	ppm	-0.03
Spiked Amount 50.000			Recovery = 96.32%			
14) 2-Fluorobiphenyl	9.123	172	2329901	41.91	ppm	-0.04
Spiked Amount 50.000			Recovery = 83.82%			
22) 2,4,6-Tribromophenol	12.016	330	415553	57.19	ppm	-0.06
Spiked Amount 50.000			Recovery = 114.38%			
30) Terphenyl-d14	16.531	244	1981444	45.13	ppm	0.02
Spiked Amount 50.000			Recovery = 90.26%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.762	88	756812	53.94	ppm #	69

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

9.1.17

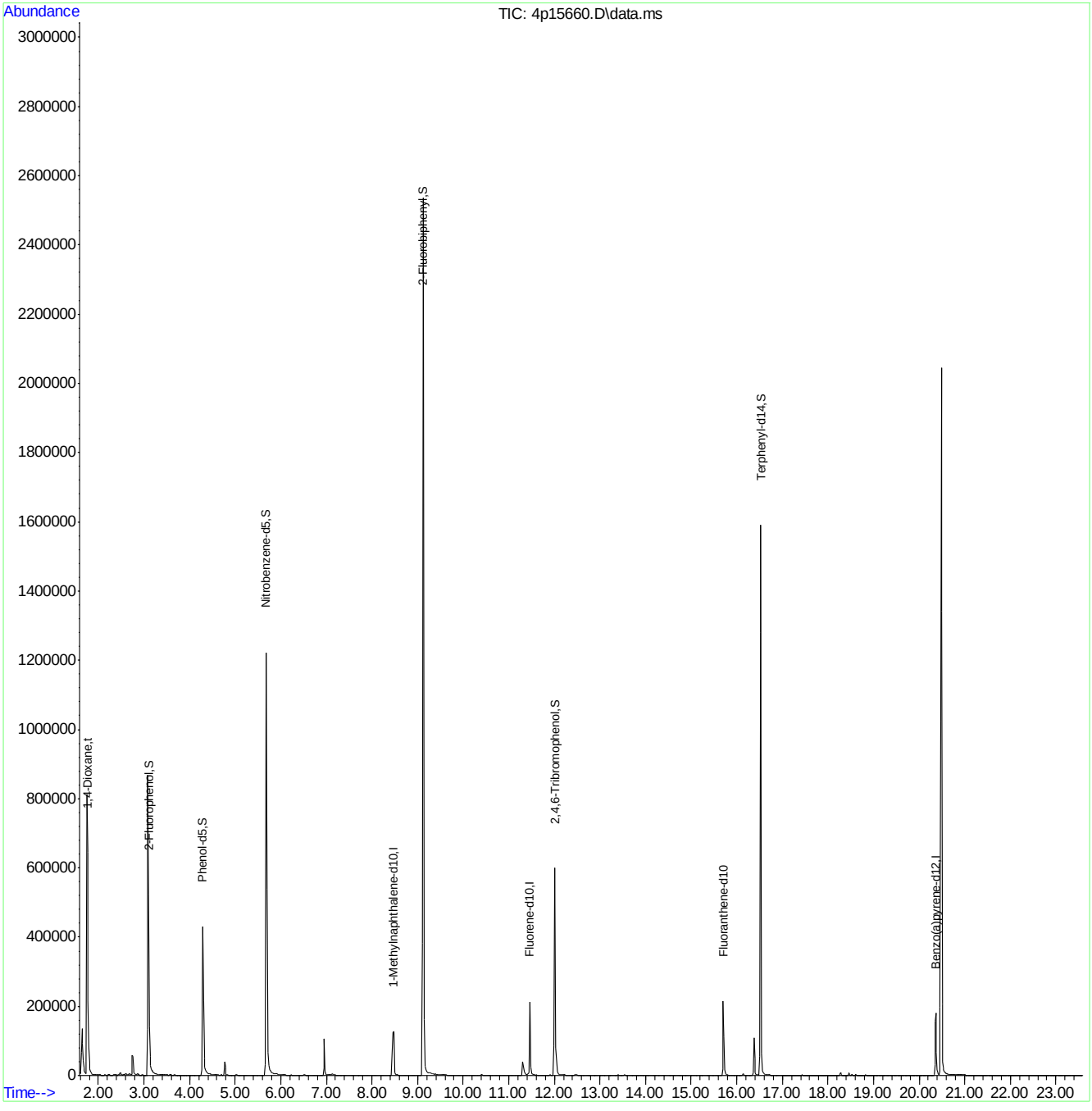
9

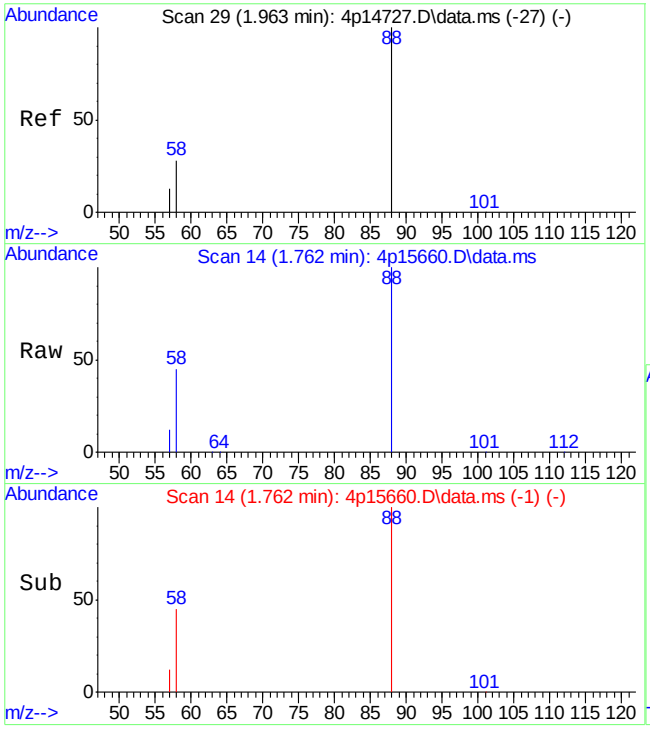
SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15660.D
Acq On : 17 Mar 2016 10:37 pm
Operator : juliusj
Sample : jc16204-4
Misc : op92132a,e4p805,1000
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 18 12:30:08 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 18 12:29:49 2016
Response via : Initial Calibration

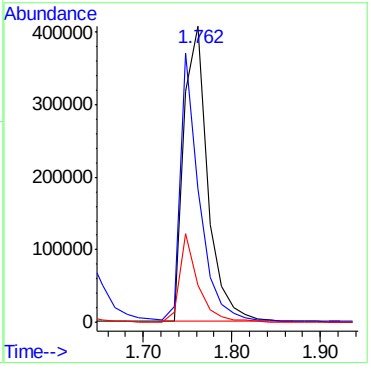




#2
1,4-Dioxane
Concen: 53.94 ppm
RT: 1.762 min Scan# 14
Delta R.T. -0.017 min
Lab File: 4p15660.D
Acq: 17 Mar 2016 10:37 pm

Tgt Ion: 88 Resp: 756812

Ion	Ratio	Lower	Upper
88	100		
58	44.8	53.7	93.7#
57	12.4	1.5	41.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15661.D
Acq On : 17 Mar 2016 11:07 pm
Operator : juliusj
Sample : jc16204-5
Misc : op92132a,e4p805,1000
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 18 12:30:53 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.472	150	116613	4.00	ppm	-0.02
13) Fluorene-d10	11.461	176	188624	4.00	ppm	-0.02
23) Fluoranthene-d10	15.705	212	280457	4.00	ppm	-0.01
33) Benzo(a)pyrene-d12	20.366	264	229368	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.089	112	569113	27.79	ppm	-0.09
Spiked Amount 50.000			Recovery = 55.58%			
4) Phenol-d5	4.286	99	697594	21.14	ppm	-0.08
Spiked Amount 50.000			Recovery = 42.28%			
7) Nitrobenzene-d5	5.678	82	1427983	43.98	ppm	-0.03
Spiked Amount 50.000			Recovery = 87.96%			
14) 2-Fluorobiphenyl	9.123	172	2100702	39.12	ppm	-0.04
Spiked Amount 50.000			Recovery = 78.24%			
22) 2,4,6-Tribromophenol	12.016	330	358821	51.13	ppm	-0.06
Spiked Amount 50.000			Recovery = 102.26%			
30) Terphenyl-d14	16.531	244	1935842	45.21	ppm	0.02
Spiked Amount 50.000			Recovery = 90.42%			

Target Compounds Qvalue

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

9.1.18

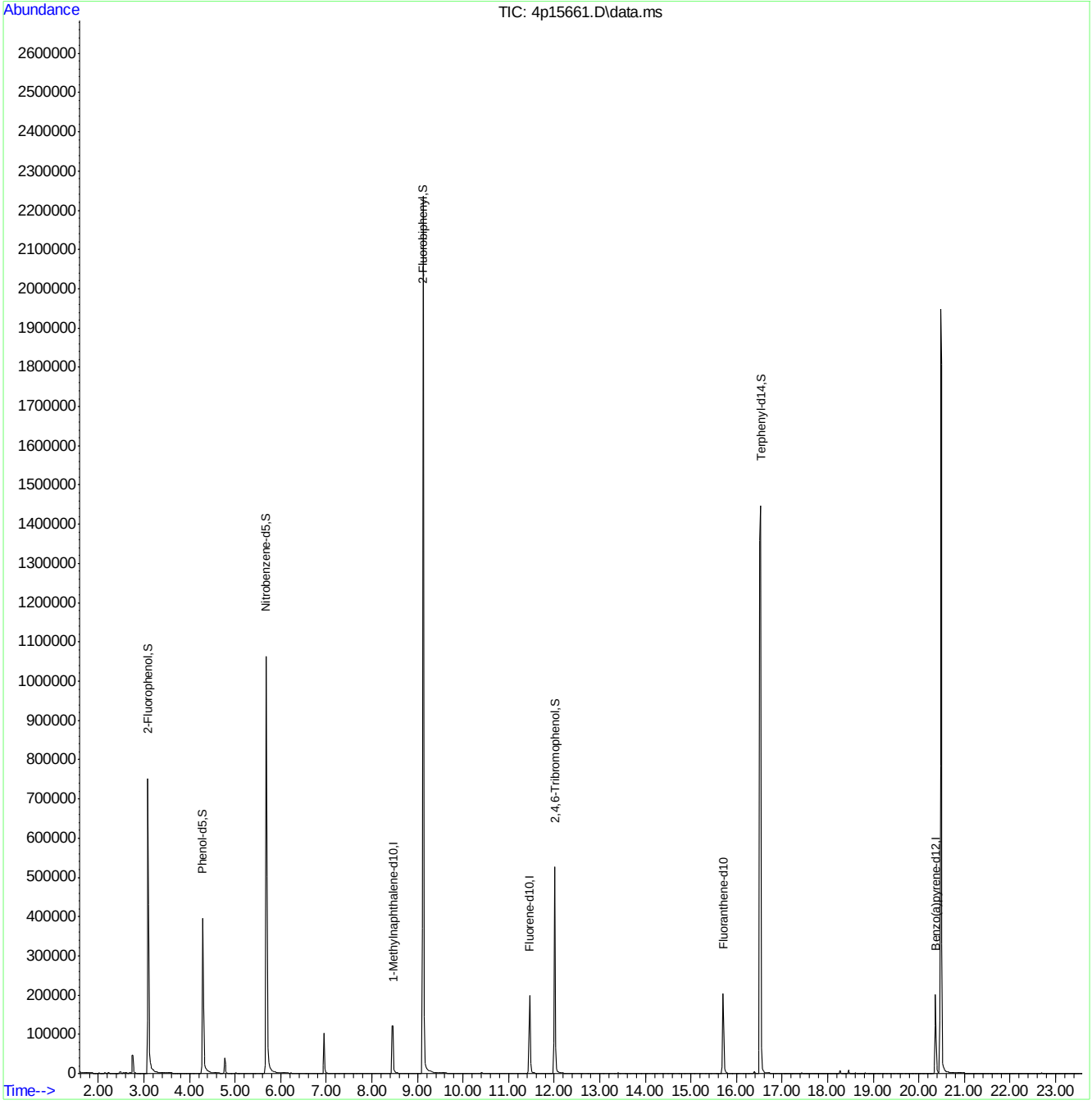
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15661.D
Acq On : 17 Mar 2016 11:07 pm
Operator : juliusj
Sample : jc16204-5
Misc : op92132a,e4p805,1000
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 18 12:30:53 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration



9.1.18
9
SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15662.D
Acq On : 17 Mar 2016 11:37 pm
Operator : juliusj
Sample : jc16204-6
Misc : op92132a,e4p805,1000
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 18 12:31:22 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.472	150	107046	4.00	ppm	-0.02
13) Fluorene-d10	11.461	176	171144	4.00	ppm	-0.02
23) Fluoranthene-d10	15.705	212	253578	4.00	ppm	-0.01
33) Benzo(a)pyrene-d12	20.366	264	208716	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.089	112	517782	27.54	ppm	-0.09
Spiked Amount 50.000			Recovery = 55.08%			
4) Phenol-d5	4.286	99	618211	20.41	ppm	-0.08
Spiked Amount 50.000			Recovery = 40.82%			
7) Nitrobenzene-d5	5.678	82	1368949	45.93	ppm	-0.03
Spiked Amount 50.000			Recovery = 91.86%			
14) 2-Fluorobiphenyl	9.123	172	1959735	40.22	ppm	-0.04
Spiked Amount 50.000			Recovery = 80.44%			
22) 2,4,6-Tribromophenol	12.016	330	326787	51.32	ppm	-0.06
Spiked Amount 50.000			Recovery = 102.64%			
30) Terphenyl-d14	16.531	244	1823726	47.10	ppm	0.02
Spiked Amount 50.000			Recovery = 94.20%			

Target Compounds Qvalue

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

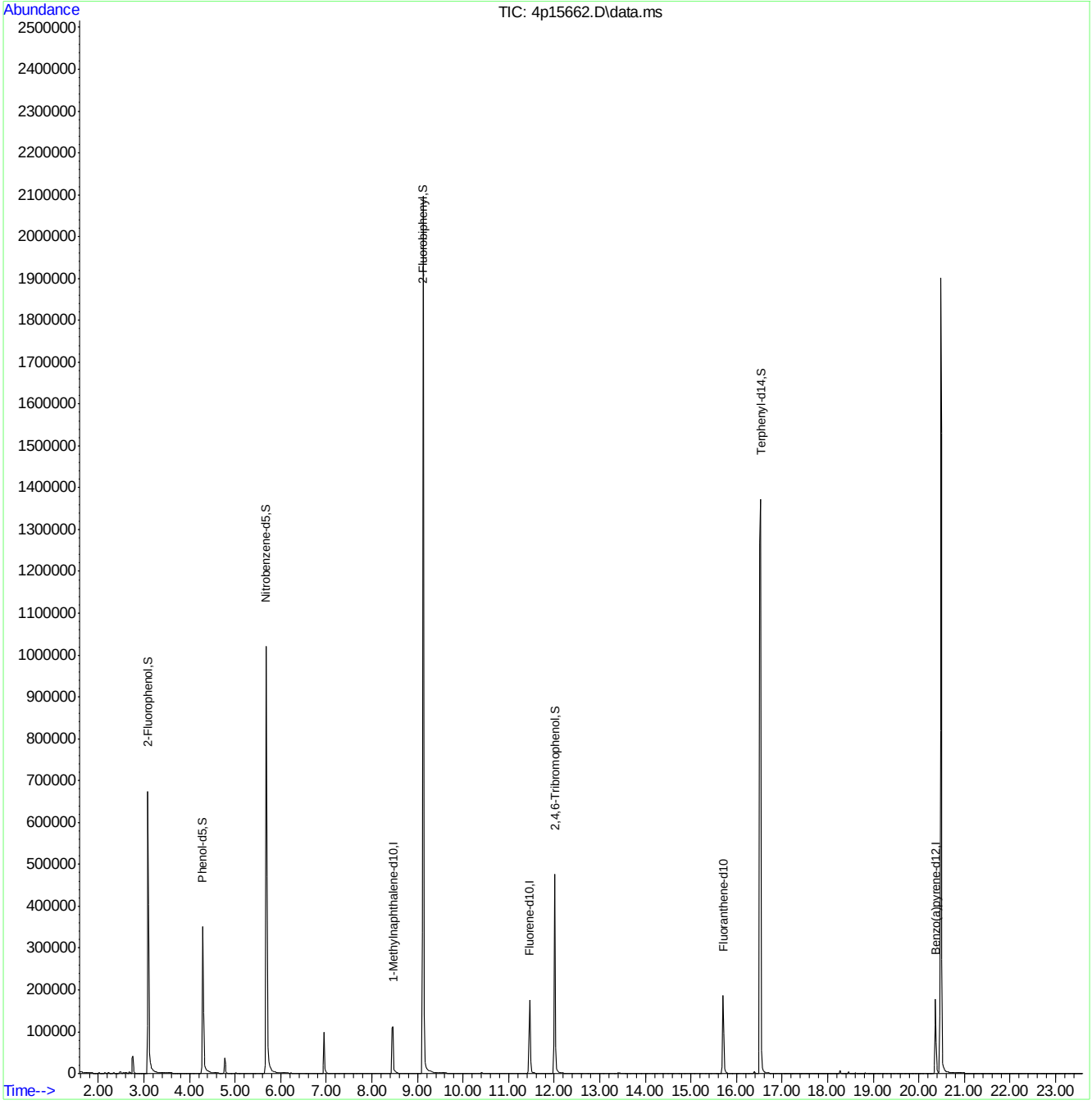
9.1.19

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15662.D
Acq On : 17 Mar 2016 11:37 pm
Operator : juliusj
Sample : jc16204-6
Misc : op92132a,e4p805,1000
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 18 12:31:22 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57277.D
Acq On : 16 Mar 2016 8:46 pm
Operator : sarad
Sample : op92132-mb1
Misc : op92132,e2p2497,1000
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 17 16:25:06 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.114	152	119565	40.00	ppm	-0.02
24) Naphthalene-d8	5.168	136	449122	40.00	ppm	-0.02
47) Acenaphthene-d10	6.601	164	221505	40.00	ppm	-0.02
69) Phenanthrene-d10	7.815	188	415662	40.00	ppm	-0.02
83) Chrysene-d12	10.869	240	409915	40.00	ppm	-0.02
92) Perylene-d12	12.822	264	328077	40.00	ppm	-0.01
102) 1,4-Dichlorobenzene-d4a	4.114	152	119565	40.00	ppm	-0.02
104) Naphthalene-d8a	5.168	136	449122	40.00	ppm	#-0.02
106) Acenaphthene-d10a	6.601	164	221505	40.00	ppm	-0.02
109) Chrysene-d12a	10.869	240	409915	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.023	112	100216	25.19	ppm	-0.03
Spiked Amount 50.000	Range 11 - 58		Recovery = 50.38%			
8) Phenol-d5	3.905	99	82253	16.90	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 33.80%			
25) Nitrobenzene-d5	4.585	82	187713	41.56	ppm	-0.03
Spiked Amount 50.000	Range 19 - 61		Recovery = 83.12%#			
51) 2-Fluorobiphenyl	6.066	172	350629	51.13	ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 102.26%#			
73) 2,4,6-Tribromophenol	7.254	330	47196	45.50	ppm	-0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 91.00%#			
85) Terphenyl-d14	9.516	244	347904	45.60	ppm	-0.02
Spiked Amount 50.000	Range 16 - 65		Recovery = 91.20%#			

Target Compounds Qvalue

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

9.2.1

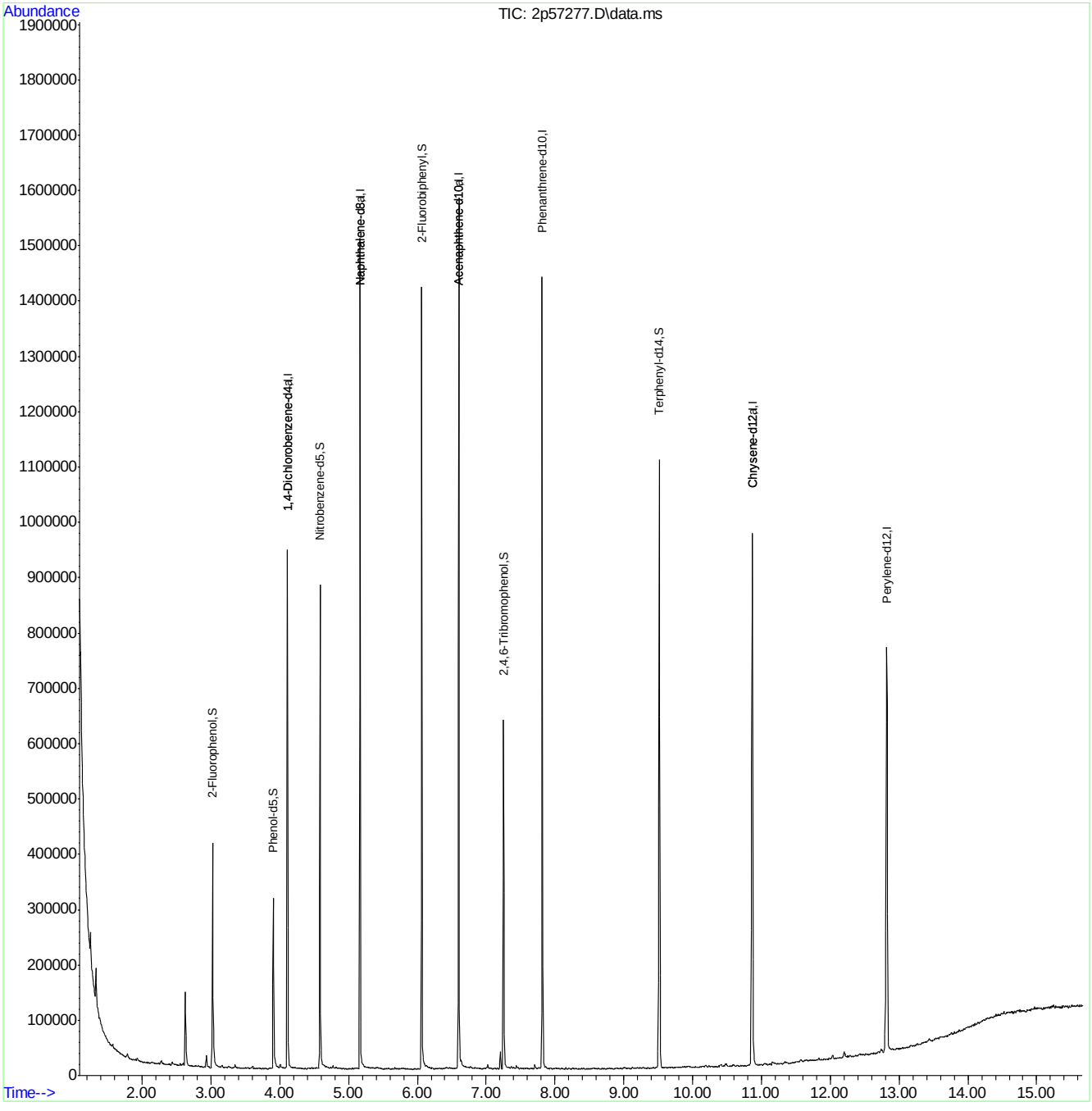
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57277.D
Acq On : 16 Mar 2016 8:46 pm
Operator : sarad
Sample : op92132-mb1
Misc : op92132,e2p2497,1000
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 17 16:25:06 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15654.D
Acq On : 17 Mar 2016 7:35 pm
Operator : juliusj
Sample : op92132a-mb1
Misc : op92132a,e4p805,1000
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 18 12:18:53 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.470	150	122139	4.00	ppm	-0.02
13) Fluorene-d10	11.457	176	174765	4.00	ppm	-0.02
23) Fluoranthene-d10	15.718	212	286747	4.00	ppm	0.00
33) Benzo(a)pyrene-d12	20.365	264	231550	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.089	112	607180	28.31	ppm	-0.09
Spiked Amount 50.000			Recovery = 56.62%			
4) Phenol-d5	4.286	99	734091	21.24	ppm	-0.08
Spiked Amount 50.000			Recovery = 42.48%			
7) Nitrobenzene-d5	5.676	82	1515692	44.57	ppm	-0.03
Spiked Amount 50.000			Recovery = 89.14%			
14) 2-Fluorobiphenyl	9.121	172	2199234	44.20	ppm	-0.04
Spiked Amount 50.000			Recovery = 88.40%			
22) 2,4,6-Tribromophenol	12.012	330	368481	56.67	ppm	-0.07
Spiked Amount 50.000			Recovery = 113.34%			
30) Terphenyl-d14	16.527	244	1997985	45.63	ppm	0.02
Spiked Amount 50.000			Recovery = 91.26%			

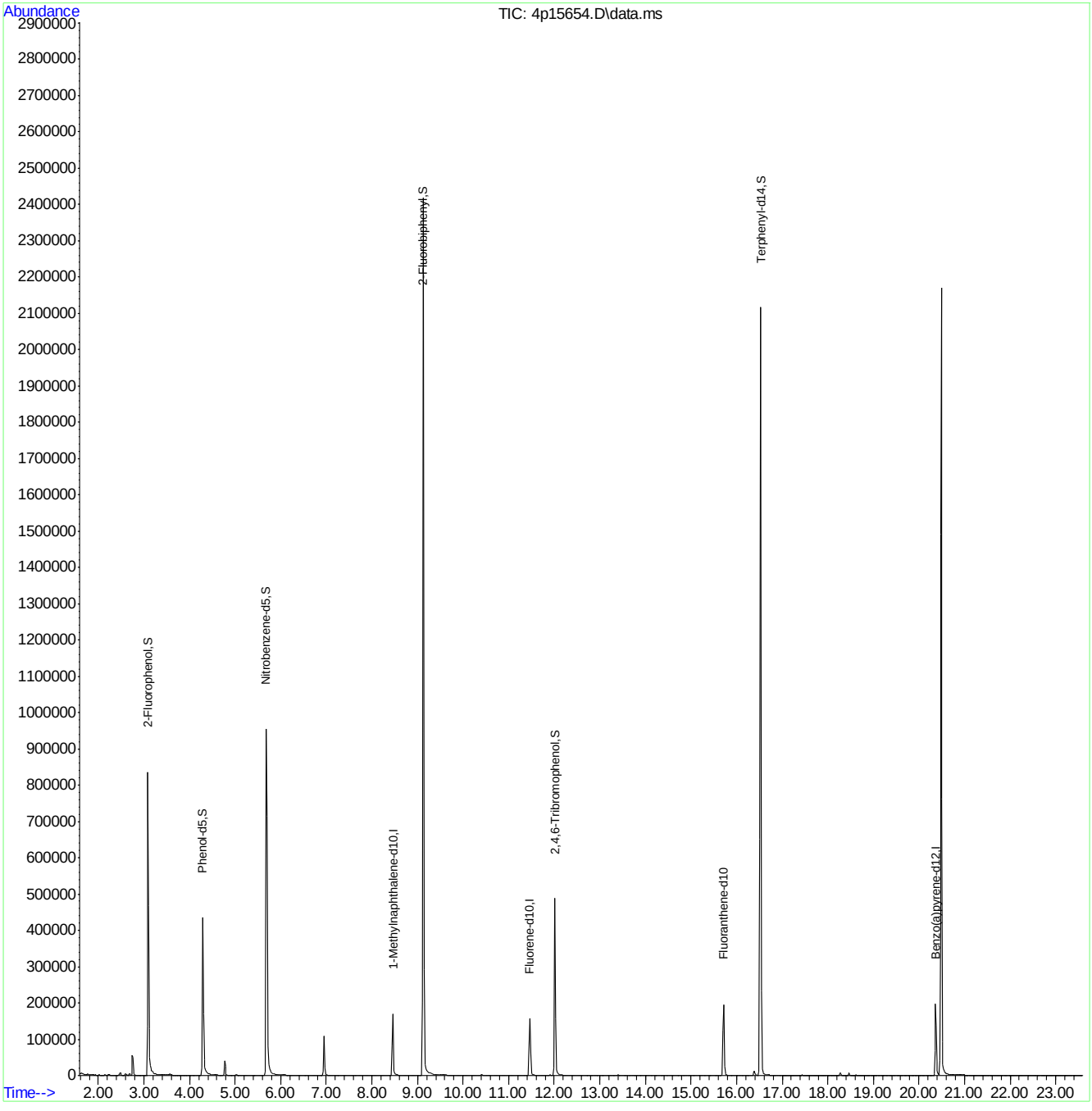
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15654.D
Acq On : 17 Mar 2016 7:35 pm
Operator : juliusj
Sample : op92132a-mb1
Misc : op92132a,e4p805,1000
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 18 12:18:53 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
03/24/16 09:35

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57278.D
Acq On : 16 Mar 2016 9:06 pm
Operator : sarad
Sample : op92132-bs1
Misc : op92132,e2p2497,1000
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 17 16:27:39 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.114	152	119561	40.00	ppm	-0.02
24) Naphthalene-d8	5.168	136	421722	40.00	ppm	-0.02
47) Acenaphthene-d10	6.601	164	213194	40.00	ppm	-0.02
69) Phenanthrene-d10	7.821	188	392975	40.00	ppm	-0.02
83) Chrysene-d12	10.875	240	425574	40.00	ppm	-0.01
92) Perylene-d12	12.827	264	325946	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.114	152	119561	40.00	ppm	-0.02
104) Naphthalene-d8a	5.168	136	421722	40.00	ppm	#-0.02
106) Acenaphthene-d10a	6.601	164	213194	40.00	ppm	-0.02
109) Chrysene-d12a	10.875	240	425574	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.029	112	120854	30.37	ppm	-0.03
Spiked Amount 50.000	Range 11 - 58		Recovery = 60.74%#			
8) Phenol-d5	3.906	99	105536	21.68	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 43.36%			
25) Nitrobenzene-d5	4.590	82	179511	42.32	ppm	-0.02
Spiked Amount 50.000	Range 19 - 61		Recovery = 84.64%#			
51) 2-Fluorobiphenyl	6.067	172	338495	51.29	ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 102.58%#			
73) 2,4,6-Tribromophenol	7.259	330	44645	45.53	ppm	-0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 91.06%#			
85) Terphenyl-d14	9.516	244	364161	45.97	ppm	-0.01
Spiked Amount 50.000	Range 16 - 65		Recovery = 91.94%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.328	88	29428	17.33	ppm	71
3) Pyridine	1.579	79	64561	16.66	ppm #	32
4) N-Nitrosodimethylamine	1.558	74	48697	20.35	ppm #	1
6) Indene	4.328	116	284541	43.50	ppm	95
7) Cumene	3.414	105	371994	37.00	ppm	93
9) Phenol	3.916	94	118008	22.28	ppm	82
10) Aniline	3.847	93	93046	15.40	ppm	93
11) bis(2-Chloroethyl)ether	3.911	93	158932	45.31	ppm	78
12) 2-Chlorophenol	3.959	128	177356	41.68	ppm	92
13) Decane	4.007	57	175828	30.84	ppm	78
14) 1,3-Dichlorobenzene	4.061	146	162369	34.62	ppm	98
15) 1,4-Dichlorobenzene	4.130	146	163920	34.68	ppm	99
16) Benzyl alcohol	4.269	108	92482	39.35	ppm	92
17) 1,2-Dichlorobenzene	4.253	146	159059	36.55	ppm	100
18) Acetophenone	4.467	105	219163	42.70	ppm	89
19) 2-Methylphenol	4.408	108	134959	39.69	ppm	95
20) 2,2'-oxybis(1-Chloropr...	4.371	121	40053	36.32	ppm #	6
21) 3&4-Methylphenol	4.542	108	134474	36.50	ppm	94
22) n-Nitroso-di-n-propyla...	4.483	70	114303	40.79	ppm #	55
23) Hexachloroethane	4.526	201	53339	32.56	ppm	95
26) Nitrobenzene	4.606	77	173153	41.96	ppm	94
27) Quinoline	5.467	129	309441	43.44	ppm	98
28) Isophorone	4.810	82	309679	44.53	ppm	84

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57278.D
Acq On : 16 Mar 2016 9:06 pm
Operator : sarad
Sample : op92132-bs1
Misc : op92132,e2p2497,1000
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 17 16:27:39 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
29)	2-Nitrophenol	4.868	139	89989	42.47	ppm		80
30)	2,4-Dimethylphenol	4.954	107	157494	39.84	ppm		90
31)	Benzoic acid	5.109	105	53680	26.27	ppm		97
32)	bis(2-Chloroethoxy)met...	5.002	93	173615	43.74	ppm		99
33)	2,4-Dichlorophenol	5.098	162	140652	44.32	ppm		99
34)	2,6-Dichlorophenol	5.264	162	131594	41.92	ppm		98
36)	1,2,4-Trichlorobenzene	5.131	180	124883	35.02	ppm		97
38)	Naphthalene	5.189	128	429983	39.28	ppm		97
39)	4-Chloroaniline	5.259	127	62709	13.59	ppm		87
40)	2,3-Dichloroaniline	5.997	161	138241	35.77	ppm		93
41)	Caprolactam	5.558	113	12511	12.27	ppm	#	76
42)	Hexachlorobutadiene	5.296	225	66348	32.55	ppm		97
43)	4-Chloro-3-methylphenol	5.708	107	145053	43.18	ppm		97
44)	2-Methylnaphthalene	5.756	141	255614	40.92	ppm		95
45)	1-Methylnaphthalene	5.837	141	265701	40.78	ppm		96
46)	Dimethylnaphthalene	6.270	156	251915	39.93	ppm		93
48)	Hexachlorocyclopentadiene	5.890	237	92006	53.35	ppm		97
49)	2,4,6-Trichlorophenol	6.018	196	95081	49.62	ppm		98
50)	2,4,5-Trichlorophenol	6.067	196	98110	49.16	ppm		97
52)	2-Chloronaphthalene	6.152	162	245826	42.85	ppm		95
53)	Biphenyl	6.147	154	365061	47.77	ppm		97
54)	2-Nitroaniline	6.264	65	106404	48.45	ppm		86
55)	Dimethylphthalate	6.414	163	313849	47.38	ppm		99
56)	Acenaphthylene	6.489	152	426272	44.61	ppm		99
57)	2,6-Dinitrotoluene	6.462	165	74059	51.16	ppm		93
58)	3-Nitroaniline	6.601	138	39359	23.23	ppm		94
59)	Acenaphthene	6.628	153	292580	47.94	ppm		94
60)	2,4-Dinitrophenol	6.703	184	77255	107.99	ppm	#	72
61)	4-Nitrophenol	6.821	109	22219	29.69	ppm	#	85
62)	Dibenzofuran	6.773	168	403768	48.94	ppm		96
63)	2,4-Dinitrotoluene	6.799	165	97679	50.36	ppm		92
64)	2,3,4,6-Tetrachlorophenol	6.901	232	67950	45.05	ppm		93
65)	Diethylphthalate	6.986	149	326141	48.52	ppm		100
66)	Fluorene	7.051	166	326733	48.69	ppm		96
67)	4-Chlorophenyl-phenyle...	7.056	204	145050	45.42	ppm		89
68)	4-Nitroaniline	7.104	138	76784	49.52	ppm		85
70)	4,6-Dinitro-2-methylph...	7.142	198	53546	45.06	ppm		83
71)	n-Nitrosodiphenylamine	7.168	169	225915	44.09	ppm		98
72)	1,2-Diphenylhydrazine	7.190	77	347117	48.11	ppm		91
74)	4-Bromophenyl-phenylether	7.452	248	93194	44.15	ppm		92
75)	Hexachlorobenzene	7.505	284	99773	44.19	ppm		82
76)	Pentachlorophenol	7.692	266	30897	31.60	ppm		98
77)	Phenanthrene	7.842	178	477589	45.21	ppm		98
78)	Anthracene	7.885	178	465085	43.63	ppm		98
79)	Carbazole	8.056	167	445838	45.18	ppm		99
80)	Di-n-butylphthalate	8.409	149	575569	45.05	ppm		99
81)	Fluoranthene	9.030	202	553910	46.31	ppm		97
82)	Octadecane	7.767	43	230972	45.21	ppm	#	56
84)	Pyrene	9.286	202	586926	45.55	ppm		99
86)	Butylbenzylphthalate	10.190	149	255510	42.84	ppm		94

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57278.D
Acq On : 16 Mar 2016 9:06 pm
Operator : sarad
Sample : op92132-bs1
Misc : op92132,e2p2497,1000
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 17 16:27:39 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
88) Benzo[a]anthracene	10.859	228	504810	42.53 ppm	98
89) 3,3'-Dichlorobenzidine	10.875	252	181027	42.24 ppm	99
90) Chrysene	10.912	228	451470	41.79 ppm	98
91) bis(2-Ethylhexyl)phtha...	11.051	149	345268	43.69 ppm	99
93) Di-n-octylphthalate	11.971	149	565684	44.42 ppm	92
94) Benzo[b]fluoranthene	12.340	252	444358	42.20 ppm	98
95) Benzo[k]fluoranthene	12.378	252	397021	42.93 ppm	98
96) Benzo[a]pyrene	12.752	252	334322	37.95 ppm	93
97) Indeno[1,2,3-cd]pyrene	14.111	276	294812m	39.83 ppm	
99) Dibenz[a,h]anthracene	14.138	278	293277	39.48 ppm	92
100) 7,12-Dimethylbenz(a)an...	12.335	256	133417	28.93 ppm	91
101) Benzo[g,h,i]perylene	14.400	276	282980	38.75 ppm	89
103) Benzaldehyde	3.740	105	146159	49.87 ppm	98
107) Atrazine	7.623	215	45523	49.30 ppm	95
108) 1,2,4,5-Tetrachloroben...	5.901	216	137676	42.70 ppm	98
110) Benzidine	9.217	184	122674	23.85 ppm	97

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

9.3.1

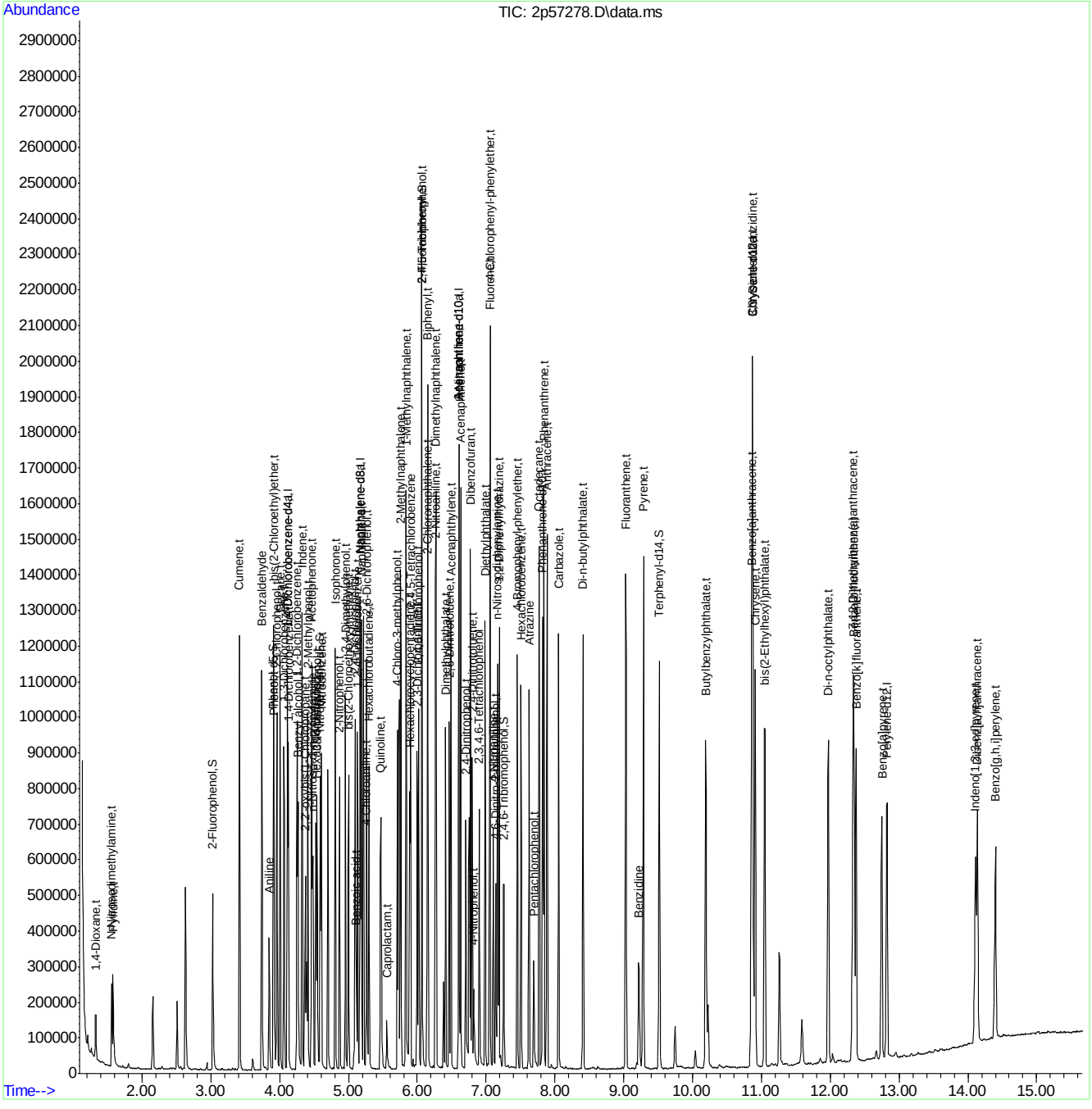
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57278.D
Acq On : 16 Mar 2016 9:06 pm
Operator : sarad
Sample : op92132-bs1
Misc : op92132,e2p2497,1000
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 17 16:27:39 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Manual Integration Approval Summary

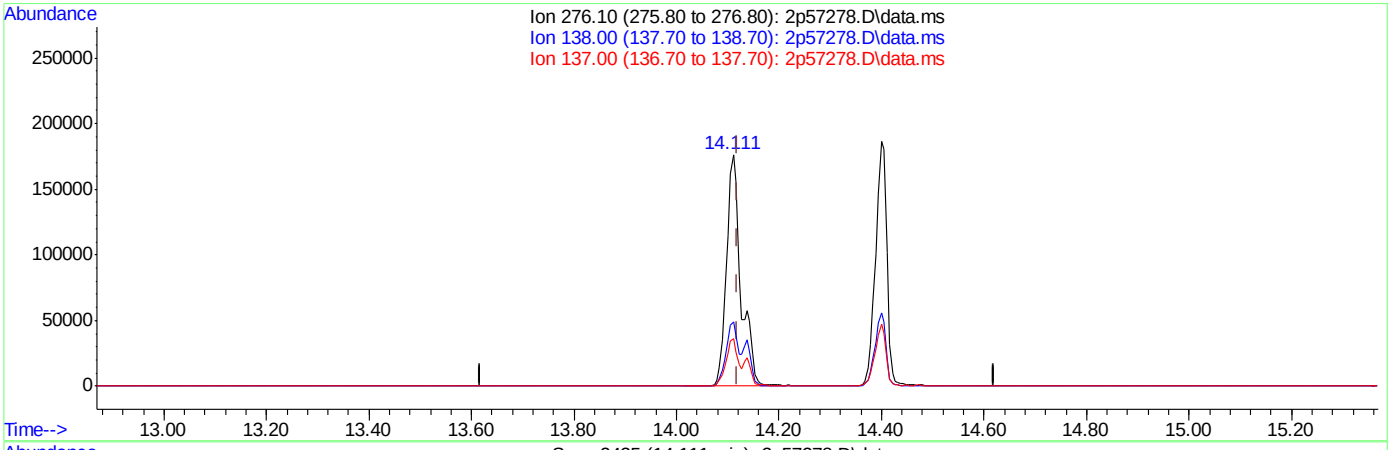
Sample Number:	OP92132-BS1	**Method:**	SW846 8270D
Lab FileID:	2P57278.D	**Analyst approved:**	03/17/16 16:29 Robert LaPosta
Injection Time:	03/16/16 21:06	**Supervisor approved:**	03/24/16 09:35 Nina Pandya

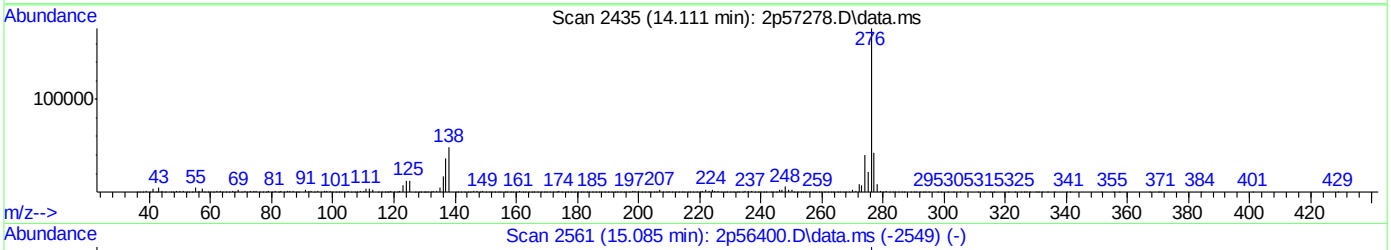
Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5		14.11	Overlapping peak

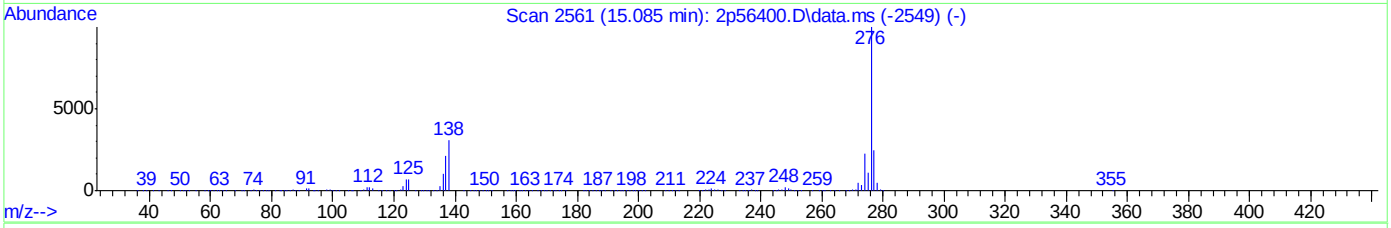
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57278.D
Acq On : 16 Mar 2016 9:06 pm
Operator : sarad
Sample : op92132-bs1
Misc : op92132,e2p2497,1000
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 17 16:26:19 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration







TIC: 2p57278.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.111min (-0.008) 46.57ppm

response 344758

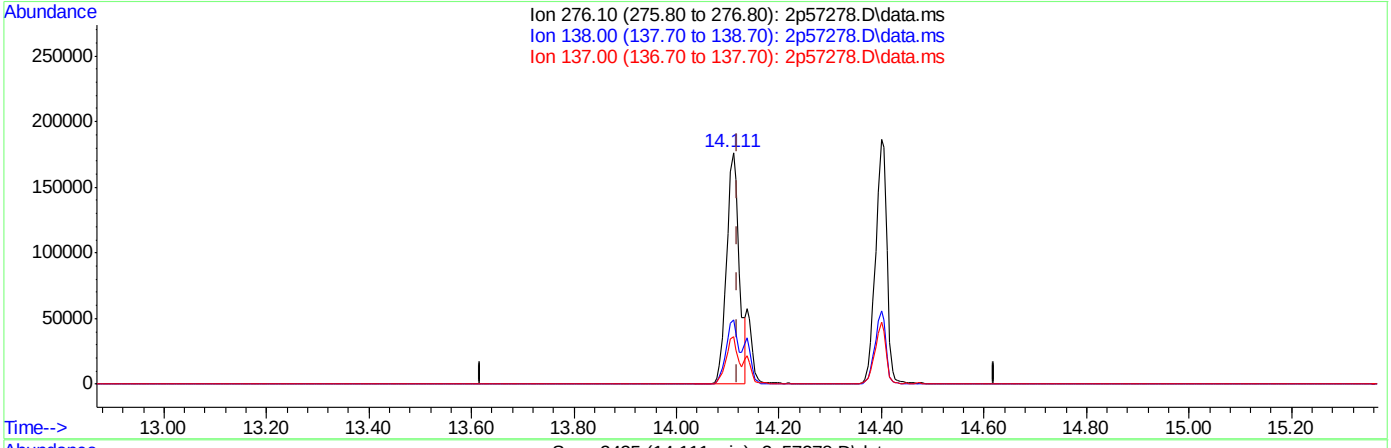
Ion	Exp%	Act%
276.10	100	100
138.00	37.80	27.61
137.00	28.00	20.23
0.00	0.00	0.00

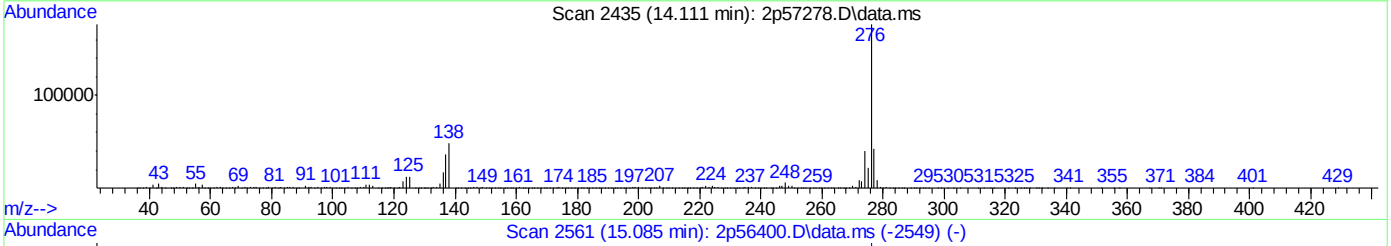
SGS ACCUTEST JC16204

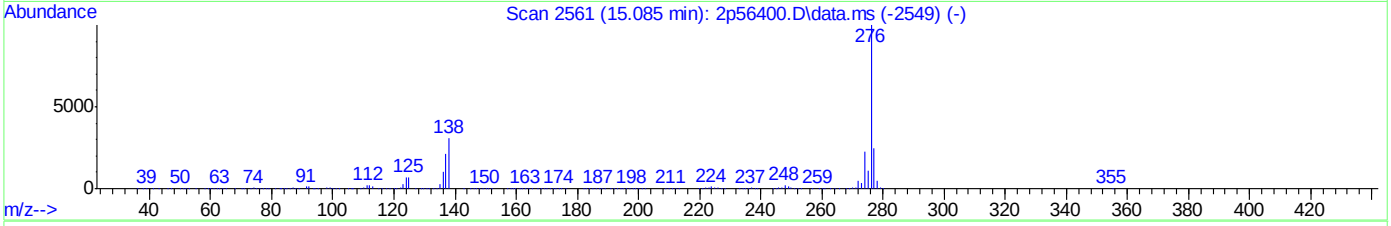
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57278.D
Acq On : 16 Mar 2016 9:06 pm
Operator : sarad
Sample : op92132-bs1
Misc : op92132,e2p2497,1000
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 17 16:26:19 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration







TIC: 2p57278.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.111min (-0.008) 39.83ppm m

response 294812

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	27.69
137.00	28.00	20.40
0.00	0.00	0.00

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15655.D
Acq On : 17 Mar 2016 8:05 pm
Operator : juliusj
Sample : op92132a-bs12
Misc : op92132a,e4p805,1000
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 18 12:19:10 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.470	150	101086	4.00	ppm	-0.02
13) Fluorene-d10	11.457	176	144393	4.00	ppm	-0.02
23) Fluoranthene-d10	15.718	212	230189	4.00	ppm	0.00
33) Benzo(a)pyrene-d12	20.362	264	190529	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.102	112	520800	29.34	ppm	-0.08
Spiked Amount 50.000			Recovery = 58.68%			
4) Phenol-d5	4.286	99	639397	22.35	ppm	-0.08
Spiked Amount 50.000			Recovery = 44.70%			
7) Nitrobenzene-d5	5.676	82	1210524	43.01	ppm	-0.03
Spiked Amount 50.000			Recovery = 86.02%			
14) 2-Fluorobiphenyl	9.121	172	1744142	42.43	ppm	-0.04
Spiked Amount 50.000			Recovery = 84.86%			
22) 2,4,6-Tribromophenol	12.012	330	292808	54.51	ppm	-0.07
Spiked Amount 50.000			Recovery = 109.02%			
30) Terphenyl-d14	16.527	244	1669933	47.51	ppm	0.02
Spiked Amount 50.000			Recovery = 95.02%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.762	88	5956	0.52	ppm	78
5) Phenol	4.303	94	91257	2.69	ppm #	71
6) bis(2-Chloroethyl)ether	4.406	93	23310	0.78	ppm #	33
8) Naphthalene	6.994	128	52316	0.78	ppm	90
9) Hexachlorobutadiene	7.300	225	8863	0.56	ppm	73
10) 2-Methylnaphthalene	8.344	141	25968	0.78	ppm	93
15) Acenaphthylene	10.116	152	44376	0.88	ppm	89
16) Acenaphthene	10.460	153	32759	0.88	ppm	88
17) Dibenzofuran	10.827	168	50545	1.05	ppm	93
18) Fluorene	11.506	166	36641	0.82	ppm	80
19) 4,6-dinitro-2-methylph...	11.705	198	13097	3.57	ppm #	27
20) n-nitrosodiphenylamine	11.829	169	23516	1.08	ppm	87
21) 1,2-Diphenylhydrazine	11.879	77	54624	1.23	ppm	93
24) Hexachlorobenzene	12.637	284	14105	0.76	ppm	88
25) Pentachlorophenol	13.085	266	24386	3.26	ppm	95
26) Phenanthrene	13.429	178	56565	0.82	ppm	97
27) Anthracene	13.549	178	57423	0.94	ppm	94
28) Fluoranthene	15.735	202	61621	0.84	ppm	98
29) Pyrene	16.131	202	61986	0.85	ppm	96
31) Benzo[a]anthracene	18.265	228	53358	0.84	ppm	99
32) Chrysene	18.313	228	57918	0.77	ppm	94
34) Benzo[b]fluoranthene	19.937	252	52022	0.66	ppm	97
35) Benzo[k]fluoranthene	19.971	252	50080	0.70	ppm	97
36) Benzo[a]pyrene	20.397	252	47727	0.61	ppm	96
37) Indeno[1,2,3-cd]pyrene	21.900	276	47120	0.57	ppm	99
38) Dibenz[a,h]anthracene	21.929	278	40237	0.59	ppm	91
39) Benzo[g,h,i]perylene	22.275	276	39779	0.54	ppm	98

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15655.D
Acq On : 17 Mar 2016 8:05 pm
Operator : juliusj
Sample : op92132a-bs12
Misc : op92132a,e4p805,1000
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 18 12:19:10 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration

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

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

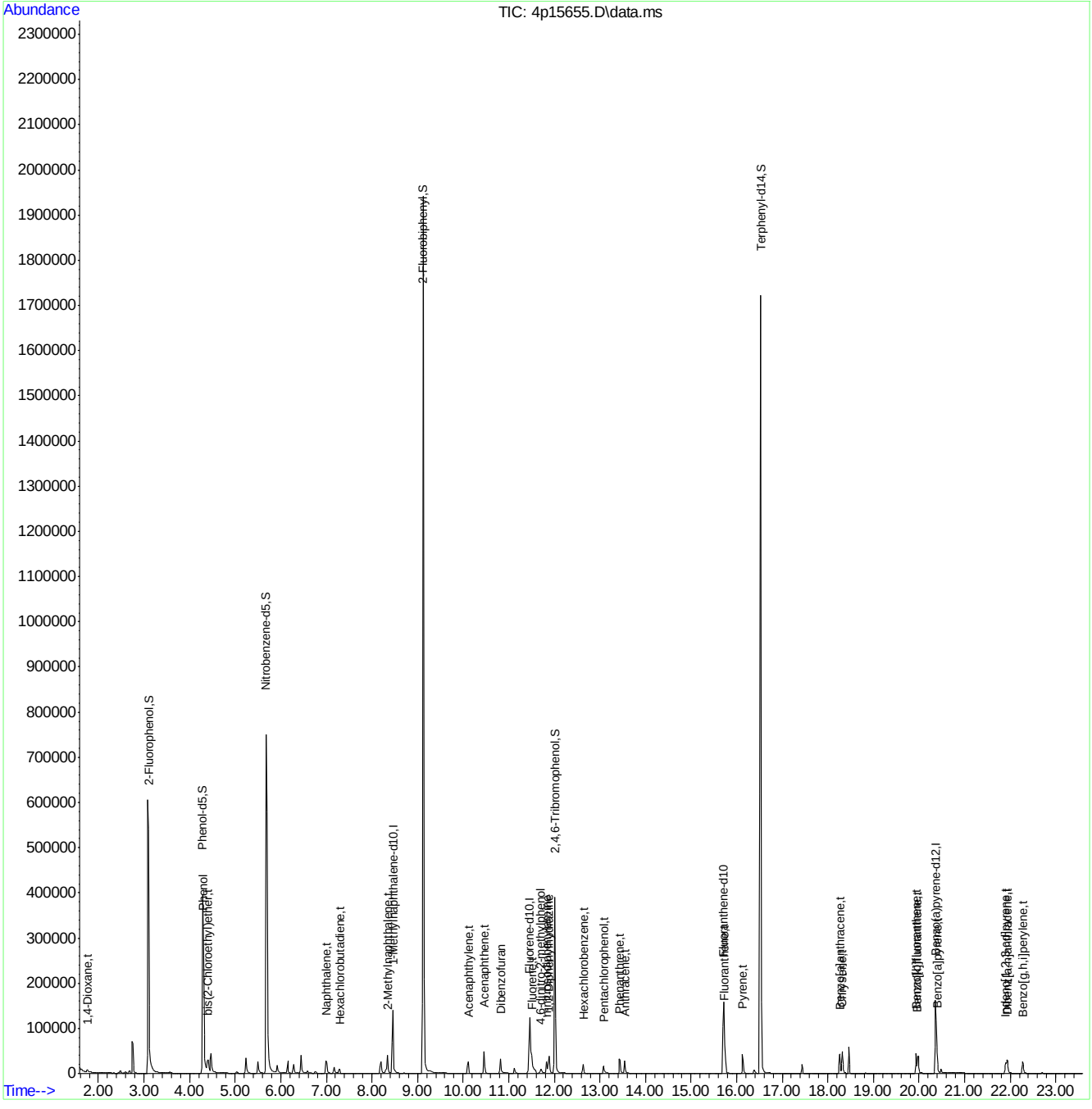
9.3.2

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15655.D
Acq On : 17 Mar 2016 8:05 pm
Operator : juliusj
Sample : op92132a-bs12
Misc : op92132a,e4p805,1000
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 18 12:19:10 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
03/28/16 11:43

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57297.D
Acq On : 17 Mar 2016 3:38 am
Operator : sarad
Sample : op92132-ms
Misc : op92132,e2p2497,500
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Mar 18 10:07:30 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.114	152	96628	40.00	ppm	-0.02
24) Naphthalene-d8	5.168	136	338234	40.00	ppm	-0.02
47) Acenaphthene-d10	6.601	164	171096	40.00	ppm	-0.02
69) Phenanthrene-d10	7.815	188	306254	40.00	ppm	-0.02
83) Chrysene-d12	10.870	240	301594	40.00	ppm	-0.02
92) Perylene-d12	12.822	264	269917	40.00	ppm	-0.01
102) 1,4-Dichlorobenzene-d4a	4.114	152	96628	40.00	ppm	-0.02
104) Naphthalene-d8a	5.168	136	338234	40.00	ppm	-0.02
106) Acenaphthene-d10a	6.601	164	171096	40.00	ppm	-0.02
109) Chrysene-d12a	10.870	240	301594	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.039	112	106203	33.03	ppm	-0.02
Spiked Amount 50.000	Range 11 - 58		Recovery = 66.06%#			
8) Phenol-d5	3.922	99	119106	30.28	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 60.56%#			
25) Nitrobenzene-d5	4.590	82	134102	39.42	ppm	-0.02
Spiked Amount 50.000	Range 19 - 61		Recovery = 78.84%#			
51) 2-Fluorobiphenyl	6.061	172	250154	47.23	ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 94.46%#			
73) 2,4,6-Tribromophenol	7.259	330	36128	47.27	ppm	-0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 94.54%#			
85) Terphenyl-d14	9.511	244	247631	44.11	ppm	-0.02
Spiked Amount 50.000	Range 16 - 65		Recovery = 88.22%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.322	88	52283	38.10	ppm	67
3) Pyridine	1.579	79	70269	22.43	ppm #	20
4) N-Nitrosodimethylamine	1.558	74	50862	26.30	ppm #	1
6) Indene	4.328	116	653029	123.53	ppm	94
7) Cumene	3.414	105	437939	53.90	ppm	94
9) Phenol	3.938	94	133129	31.11	ppm	96
10) Aniline	3.852	93	74702	15.30	ppm	94
11) bis(2-Chloroethyl)ether	3.911	93	120733	42.59	ppm	77
12) 2-Chlorophenol	3.964	128	137582	40.01	ppm	90
13) Decane	4.002	57	157491	34.18	ppm	76
14) 1,3-Dichlorobenzene	4.061	146	134599	35.51	ppm	98
15) 1,4-Dichlorobenzene	4.125	146	136572	35.75	ppm	98
16) Benzyl alcohol	4.269	108	76341	40.19	ppm #	27
17) 1,2-Dichlorobenzene	4.259	146	137043	38.96	ppm	96
18) Acetophenone	4.467	105	165732	39.95	ppm	90
19) 2-Methylphenol	4.414	108	119014	43.30	ppm	94
20) 2,2'-oxybis(1-Chloropr...	4.371	121	28305	31.76	ppm #	6
21) 3&4-Methylphenol	4.553	108	129336	43.44	ppm	92
22) n-Nitroso-di-n-propyla...	4.483	70	83613	36.92	ppm #	52
23) Hexachloroethane	4.521	201	44172	33.37	ppm	94
26) Nitrobenzene	4.601	77	133289	40.27	ppm	96
27) Quinoline	5.467	129	197535m	34.58	ppm	
28) Isophorone	4.810	82	231868	41.57	ppm	78

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57297.D
Acq On : 17 Mar 2016 3:38 am
Operator : sarad
Sample : op92132-ms
Misc : op92132,e2p2497,500
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Mar 18 10:07:30 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
29)	2-Nitrophenol	4.868	139	66111	38.90	ppm		80
30)	2,4-Dimethylphenol	4.965	107	157206	49.58	ppm		92
31)	Benzoic acid	5.130	105	69036	42.12	ppm		95
32)	bis(2-Chloroethoxy)met...	5.002	93	125667	39.47	ppm		99
33)	2,4-Dichlorophenol	5.104	162	104271	40.97	ppm		98
34)	2,6-Dichlorophenol	5.270	162	95888	38.08	ppm		97
36)	1,2,4-Trichlorobenzene	5.130	180	105063	36.73	ppm		98
38)	Naphthalene	5.184	128	806430	91.86	ppm		98
39)	4-Chloroaniline	5.264	127	23096	6.24	ppm		79
40)	2,3-Dichloroaniline	6.002	161	88592	28.58	ppm		98
41)	Caprolactam	5.617	113	17611	21.54	ppm	#	69
42)	Hexachlorobutadiene	5.296	225	54882	33.57	ppm		99
43)	4-Chloro-3-methylphenol	5.719	107	109187	40.53	ppm		99
44)	2-Methylnaphthalene	5.756	141	198038	39.53	ppm		96
45)	1-Methylnaphthalene	5.842	141	919389	175.92	ppm		98
46)	Dimethylnaphthalene	6.270	156	264721	52.32	ppm		94
48)	Hexachlorocyclopentadiene	5.885	237	76965	55.43	ppm		96
49)	2,4,6-Trichlorophenol	6.024	196	72839	47.36	ppm		95
50)	2,4,5-Trichlorophenol	6.072	196	74474	46.49	ppm		97
52)	2-Chloronaphthalene	6.152	162	207699	45.11	ppm		97
53)	Biphenyl	6.141	154	402460	65.63	ppm		98
54)	2-Nitroaniline	6.264	65	84691	48.05	ppm	#	74
55)	Dimethylphthalate	6.414	163	239039	44.97	ppm		100
56)	Acenaphthylene	6.484	152	349285	45.54	ppm		99
57)	2,6-Dinitrotoluene	6.468	165	55948	48.16	ppm		86
58)	3-Nitroaniline	6.607	138	20190	14.85	ppm		95
59)	Acenaphthene	6.633	153	1051562	214.70	ppm		98
60)	2,4-Dinitrophenol	6.708	184	51142	91.62	ppm	#	92
61)	4-Nitrophenol	6.837	109	27948	46.53	ppm	#	78
62)	Dibenzofuran	6.773	168	909053	137.30	ppm		97
63)	2,4-Dinitrotoluene	6.799	165	71015	45.62	ppm	#	57
64)	2,3,4,6-Tetrachlorophenol	6.906	232	60183	49.72	ppm		98
65)	Diethylphthalate	6.986	149	240772	44.63	ppm		99
66)	Fluorene	7.051	166	571047	106.04	ppm		96
67)	4-Chlorophenyl-phenyle...	7.056	204	116121	45.31	ppm		93
68)	4-Nitroaniline	7.109	138	44792	35.99	ppm		84
70)	4,6-Dinitro-2-methylph...	7.142	198	38130	41.51	ppm	#	52
71)	n-Nitrosodiphenylamine	7.163	169	188734	47.26	ppm		98
72)	1,2-Diphenylhydrazine	7.184	77	268350	47.72	ppm		83
74)	4-Bromophenyl-phenylether	7.452	248	71412	43.41	ppm		99
75)	Hexachlorobenzene	7.505	284	74893	42.57	ppm		96
76)	Pentachlorophenol	7.692	266	40511	49.44	ppm		97
77)	Phenanthrene	7.842	178	880628	106.97	ppm		99
78)	Anthracene	7.885	178	387845	46.69	ppm		97
79)	Carbazole	8.062	167	710209	92.35	ppm		98
80)	Di-n-butylphthalate	8.415	149	423523	42.54	ppm		99
81)	Fluoranthene	9.035	202	546495	58.63	ppm		94
82)	Octadecane	7.762	43	179635	45.12	ppm	#	53
84)	Pyrene	9.286	202	514590	56.36	ppm		100
86)	Butylbenzylphthalate	10.196	149	179761	42.53	ppm		98

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57297.D
Acq On : 17 Mar 2016 3:38 am
Operator : sarad
Sample : op92132-ms
Misc : op92132,e2p2497,500
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Mar 18 10:07:30 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
88) Benzo[a]anthracene	10.859	228	370730	44.07	ppm		99
89) 3,3'-Dichlorobenzidine	10.886	252	7721	2.54	ppm		94
90) Chrysene	10.907	228	343333	44.85	ppm		98
91) bis(2-Ethylhexyl)phtha...	11.046	149	253288	45.22	ppm		97
93) Di-n-octylphthalate	11.971	149	414953	39.35	ppm		90
94) Benzo[b]fluoranthene	12.335	252	335920	38.53	ppm		99
95) Benzo[k]fluoranthene	12.373	252	307364	40.13	ppm		98
96) Benzo[a]pyrene	12.747	252	284136	38.95	ppm		95
97) Indeno[1,2,3-cd]pyrene	14.105	276	263628m	43.01	ppm		
99) Dibenz[a,h]anthracene	14.132	278	254638	41.40	ppm		93
100) 7,12-Dimethylbenz(a)an...	12.330	256	88733	23.23	ppm		92
101) Benzo[g,h,i]perylene	14.394	276	253571	41.93	ppm		88
103) Benzaldehyde	3.740	105	98791	41.71	ppm		90
107) Atrazine	7.671	215	23427	31.61	ppm	#	86
108) 1,2,4,5-Tetrachloroben...	5.901	216	115768	44.74	ppm		98

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

9.4.1

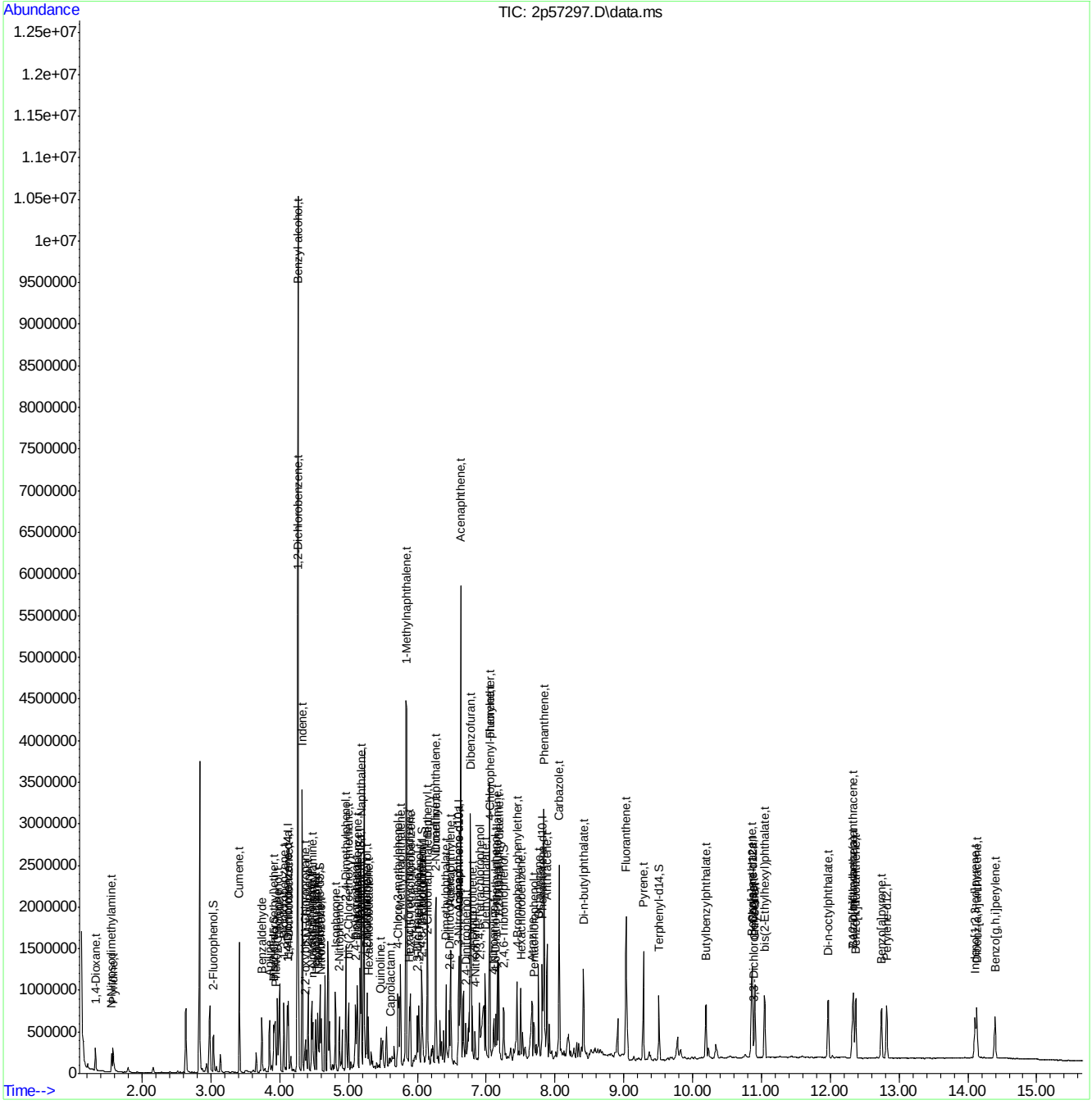
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57297.D
Acq On : 17 Mar 2016 3:38 am
Operator : sarad
Sample : op92132-ms
Misc : op92132,e2p2497,500
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Mar 18 10:07:30 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Manual Integration Approval Summary

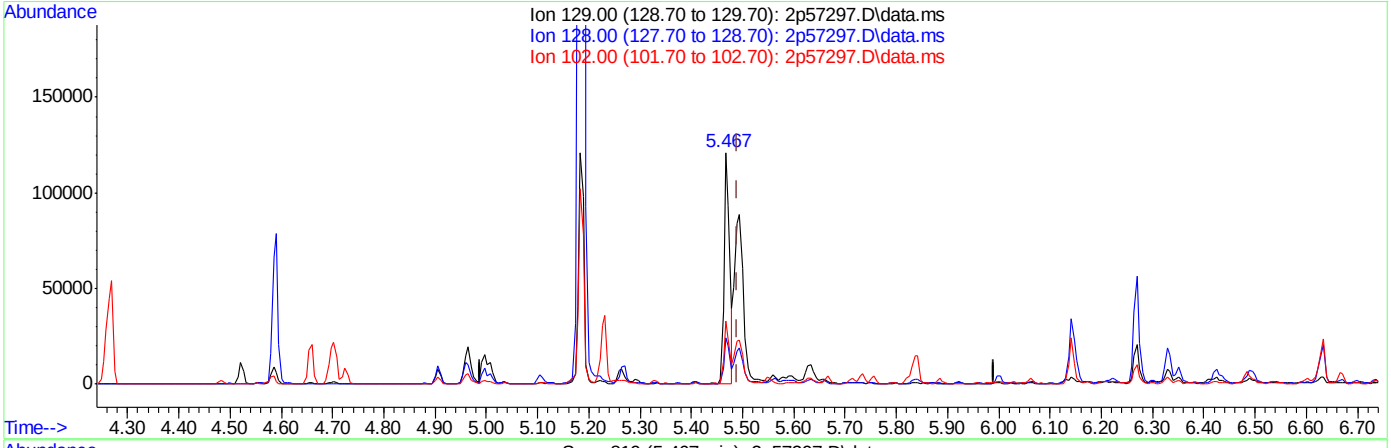
Sample Number:	OP92132-MS	**Method:**	SW846 8270D
Lab FileID:	2P57297.D	**Analyst approved:**	03/18/16 10:13 Robert LaPosta
Injection Time:	03/17/16 03:38	**Supervisor approved:**	03/28/16 11:43 Nina Pandya

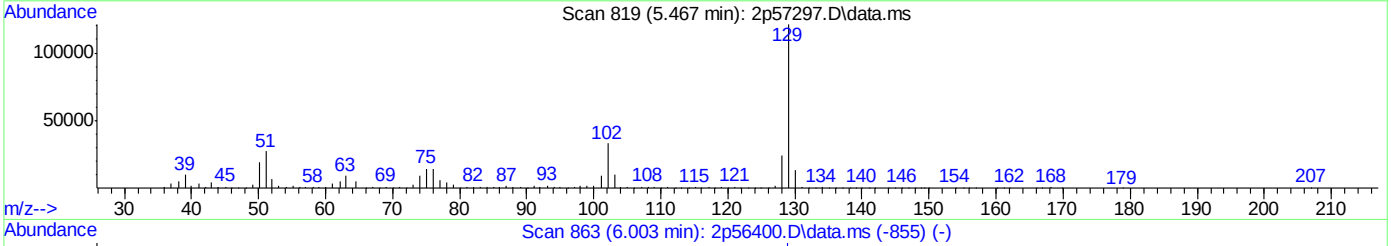
Parameter	CAS	Sig#	R.T. (min.)	Reason
Quinoline	91-22-5		5.47	Split peak
Indeno(1,2,3-cd)pyrene	193-39-5		14.11	Overlapping peak

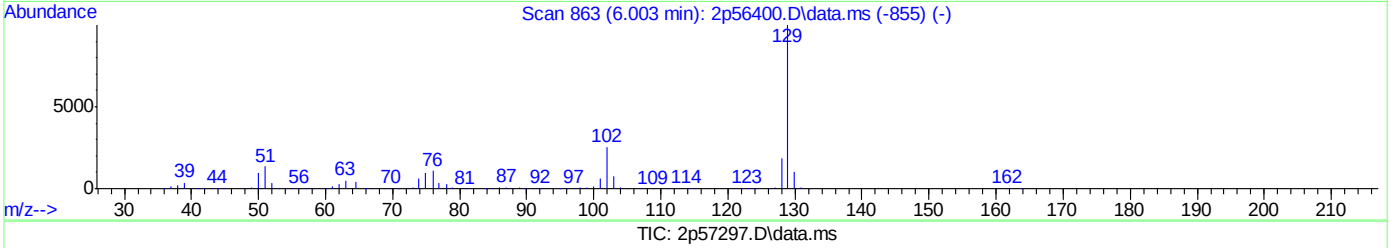
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57297.D
Acq On : 17 Mar 2016 3:38 am
Operator : sarad
Sample : op92132-ms
Misc : op92132,e2p2497,500
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Mar 18 10:05:37 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration







TIC: 2p57297.D\data.ms

(27) Quinoline (t)

5.467min (-0.023) 16.58ppm

response 94706

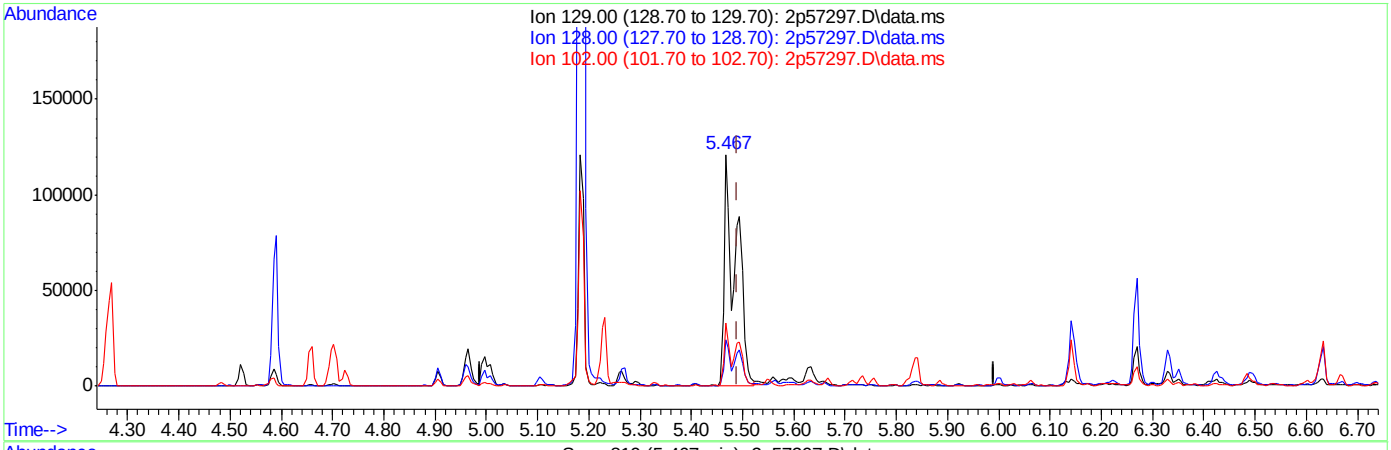
Ion	Exp%	Act%
129.00	100	100
128.00	19.00	19.74
102.00	25.00	27.66
0.00	0.00	0.00

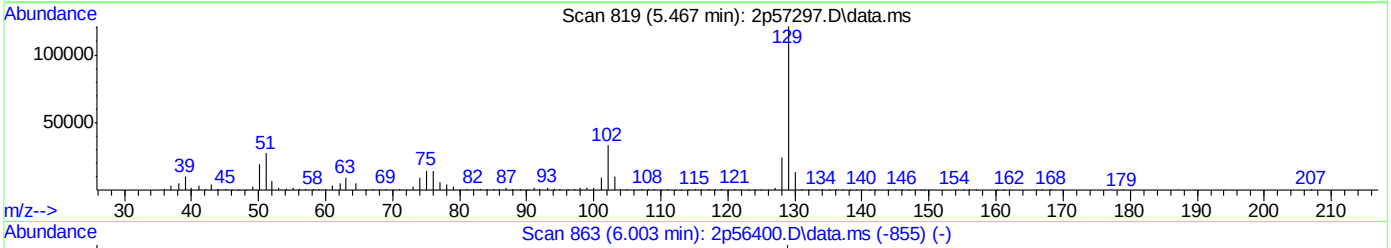
SGS ACCUTEST JC16204

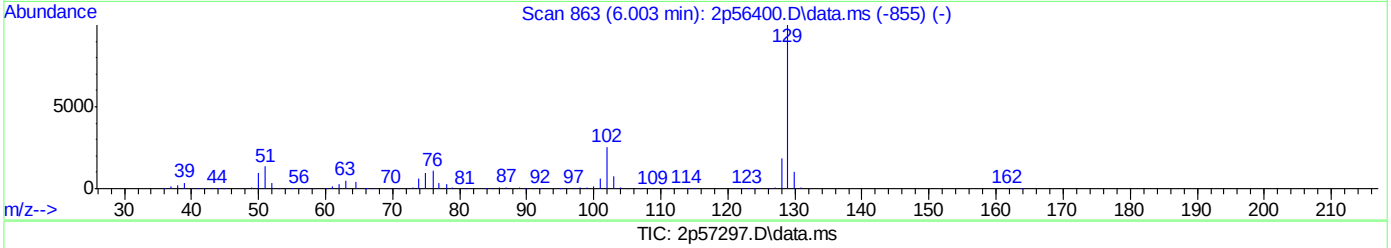
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57297.D
Acq On : 17 Mar 2016 3:38 am
Operator : sarad
Sample : op92132-ms
Misc : op92132,e2p2497,500
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Mar 18 10:05:37 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration







TIC: 2p57297.D\data.ms

(27) Quinoline (t)

5.467min (-0.023) 34.58ppm m

response 197535

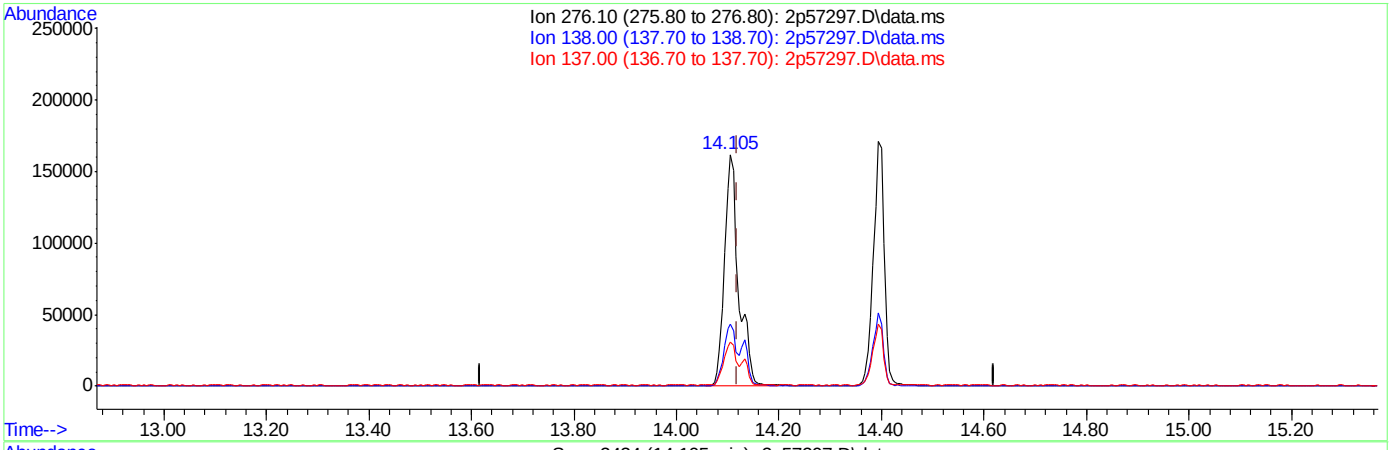
Ion	Exp%	Act%
129.00	100	100
128.00	19.00	19.88
102.00	25.00	27.40
0.00	0.00	0.00

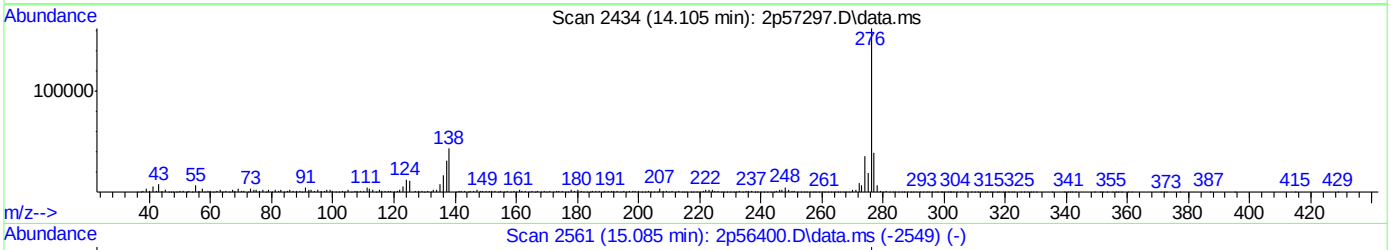
SGS ACCUTEST JC16204

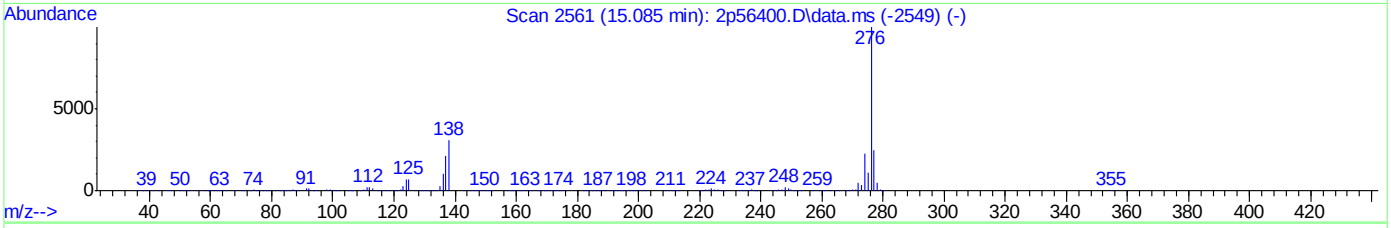
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57297.D
Acq On : 17 Mar 2016 3:38 am
Operator : sarad
Sample : op92132-ms
Misc : op92132,e2p2497,500
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Mar 18 10:05:37 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration







TIC: 2p57297.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.105min (-0.014) 50.18ppm

response 307619

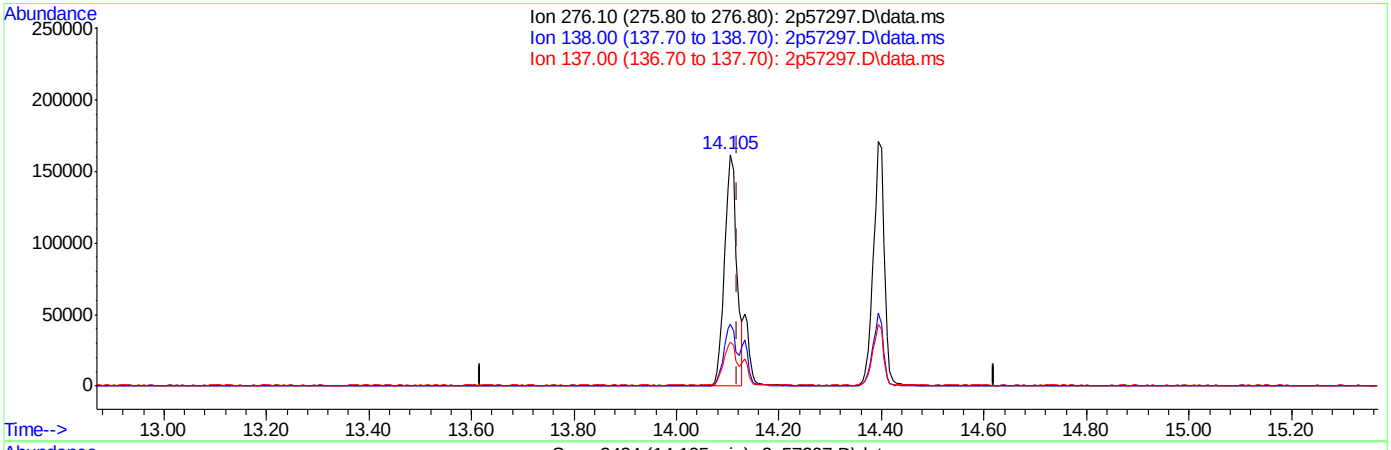
Ion	Exp%	Act%
276.10	100	100
138.00	37.80	26.53
137.00	28.00	18.81
0.00	0.00	0.00

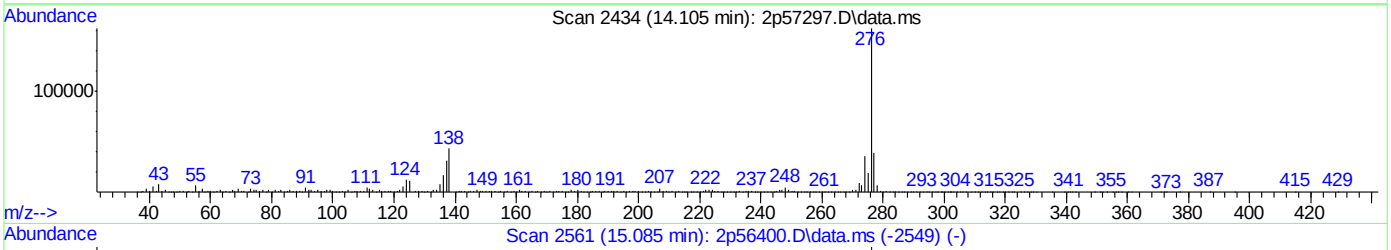
SGS ACCUTEST JC16204

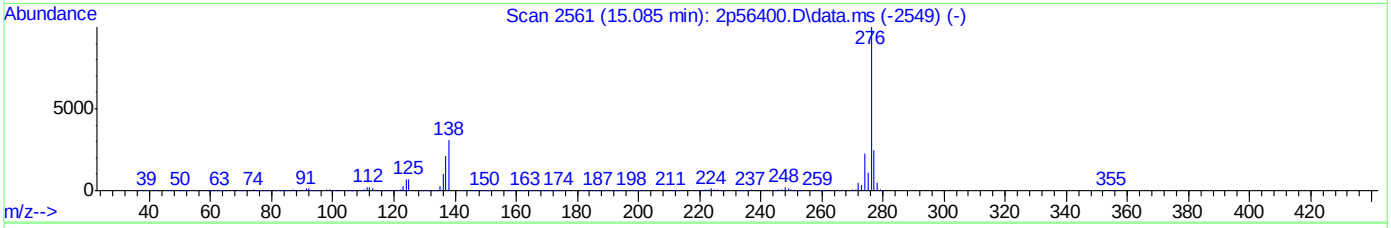
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57297.D
Acq On : 17 Mar 2016 3:38 am
Operator : sarad
Sample : op92132-ms
Misc : op92132,e2p2497,500
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Mar 18 10:05:37 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration







TIC: 2p57297.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.105min (-0.014) 43.01ppm m

response 263628

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	26.69
137.00	28.00	19.20
0.00	0.00	0.00

SGS ACCUTEST JC16204

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
03/28/16 11:43

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57298.D
Acq On : 17 Mar 2016 3:59 am
Operator : sarad
Sample : op92132-msd
Misc : op92132,e2p2497,500
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Mar 18 10:09:41 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.114	152	112691	40.00	ppm	-0.02
24) Naphthalene-d8	5.168	136	393396	40.00	ppm	-0.02
47) Acenaphthene-d10	6.601	164	197591	40.00	ppm	-0.02
69) Phenanthrene-d10	7.815	188	351525	40.00	ppm	-0.02
83) Chrysene-d12	10.870	240	374078	40.00	ppm	-0.02
92) Perylene-d12	12.816	264	310974	40.00	ppm	-0.02
102) 1,4-Dichlorobenzene-d4a	4.114	152	112691	40.00	ppm	-0.02
104) Naphthalene-d8a	5.168	136	393396	40.00	ppm	#-0.02
106) Acenaphthene-d10a	6.601	164	197591	40.00	ppm	-0.02
109) Chrysene-d12a	10.870	240	374078	40.00	ppm	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.039	112	126609	33.76	ppm	-0.02
Spiked Amount 50.000	Range 11 - 58		Recovery = 67.52%#			
8) Phenol-d5	3.922	99	139554	30.42	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 60.84%#			
25) Nitrobenzene-d5	4.590	82	159574	40.33	ppm	-0.02
Spiked Amount 50.000	Range 19 - 61		Recovery = 80.66%#			
51) 2-Fluorobiphenyl	6.066	172	299686	48.99	ppm	-0.02
Spiked Amount 50.000	Range 21 - 58		Recovery = 97.98%#			
73) 2,4,6-Tribromophenol	7.259	330	42102	48.00	ppm	-0.02
Spiked Amount 50.000	Range 12 - 68		Recovery = 96.00%#			
85) Terphenyl-d14	9.511	244	282363	40.55	ppm	-0.02
Spiked Amount 50.000	Range 16 - 65		Recovery = 81.10%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.328	88	63095	39.43	ppm	66
3) Pyridine	1.584	79	116602	31.92	ppm #	20
4) N-Nitrosodimethylamine	1.563	74	56741	25.16	ppm #	1
6) Indene	4.328	116	824748	133.77	ppm	95
7) Cumene	3.414	105	545422	57.56	ppm	93
9) Phenol	3.932	94	153263	30.71	ppm	95
10) Aniline	3.852	93	97312	17.09	ppm	93
11) bis(2-Chloroethyl)ether	3.911	93	141366	42.76	ppm	76
12) 2-Chlorophenol	3.964	128	163445	40.75	ppm	89
13) Decane	4.002	57	185881	34.59	ppm	76
14) 1,3-Dichlorobenzene	4.061	146	159592	36.10	ppm	100
15) 1,4-Dichlorobenzene	4.125	146	165063	37.05	ppm	99
16) Benzyl alcohol	4.275	108	90229	40.73	ppm #	53
17) 1,2-Dichlorobenzene	4.264	146	162326	39.57	ppm	95
18) Acetophenone	4.467	105	197014	40.72	ppm	88
19) 2-Methylphenol	4.414	108	141380	44.11	ppm	94
20) 2,2'-oxybis(1-Chloropr...	4.371	121	33062	31.81	ppm #	3
21) 3&4-Methylphenol	4.553	108	155286	44.72	ppm	91
22) n-Nitroso-di-n-propyla...	4.483	70	97455	36.90	ppm #	47
23) Hexachloroethane	4.521	201	51993	33.68	ppm	93
26) Nitrobenzene	4.606	77	154608	40.16	ppm	98
27) Quinoline	5.473	129	277534	41.77	ppm	99
28) Isophorone	4.815	82	272831	42.06	ppm	80

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57298.D
Acq On : 17 Mar 2016 3:59 am
Operator : sarad
Sample : op92132-msd
Misc : op92132,e2p2497,500
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Mar 18 10:09:41 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
29)	2-Nitrophenol	4.868	139	77778	39.35	ppm		77
30)	2,4-Dimethylphenol	4.965	107	187111	50.74	ppm		89
31)	Benzoic acid	5.093	105	1169	0.61	ppm	#	1
32)	bis(2-Chloroethoxy)met...	5.002	93	148401	40.08	ppm		98
33)	2,4-Dichlorophenol	5.109	162	121539	41.06	ppm		98
34)	2,6-Dichlorophenol	5.270	162	112329	38.36	ppm		98
36)	1,2,4-Trichlorobenzene	5.130	180	124040	37.29	ppm		98
38)	Naphthalene	5.189	128	1004736	98.40	ppm		98
39)	4-Chloroaniline	5.264	127	37546	8.72	ppm		89
40)	2,3-Dichloroaniline	6.002	161	124141	34.43	ppm		96
41)	Caprolactam	5.596	113	18083	19.02	ppm	#	64
42)	Hexachlorobutadiene	5.296	225	63526	33.41	ppm		99
43)	4-Chloro-3-methylphenol	5.724	107	128497	41.00	ppm		95
44)	2-Methylnaphthalene	5.756	141	236910	40.66	ppm		97
45)	1-Methylnaphthalene	5.842	141	1098508	180.72	ppm		96
46)	Dimethylnaphthalene	6.270	156	314332	53.41	ppm		94
48)	Hexachlorocyclopentadiene	5.885	237	79081	49.78	ppm		99
49)	2,4,6-Trichlorophenol	6.024	196	86558	48.74	ppm		100
50)	2,4,5-Trichlorophenol	6.077	196	84604	45.74	ppm		96
52)	2-Chloronaphthalene	6.152	162	242070	45.53	ppm		95
53)	Biphenyl	6.141	154	475241	67.10	ppm		98
54)	2-Nitroaniline	6.270	65	103384	50.79	ppm		83
55)	Dimethylphthalate	6.414	163	281909	45.92	ppm		99
56)	Acenaphthylene	6.484	152	406809	45.93	ppm		100
57)	2,6-Dinitrotoluene	6.468	165	65194	48.60	ppm		93
58)	3-Nitroaniline	6.607	138	26576	16.93	ppm		97
59)	Acenaphthene	6.633	153	1304310	230.60	ppm		97
60)	2,4-Dinitrophenol	6.708	184	4518	14.81	ppm		99
61)	4-Nitrophenol	6.842	109	25989	37.47	ppm	#	79
62)	Dibenzofuran	6.778	168	1123538	146.94	ppm		99
63)	2,4-Dinitrotoluene	6.799	165	81719	45.46	ppm		82
64)	2,3,4,6-Tetrachlorophenol	6.906	232	66744	47.74	ppm		97
65)	Diethylphthalate	6.986	149	284800	45.71	ppm		100
66)	Fluorene	7.051	166	716746	115.25	ppm		94
67)	4-Chlorophenyl-phenyle...	7.056	204	138284	46.72	ppm		94
68)	4-Nitroaniline	7.109	138	62202	43.28	ppm		82
70)	4,6-Dinitro-2-methylph...	7.142	198	33624	32.72	ppm	#	54
71)	n-Nitrosodiphenylamine	7.163	169	221834	48.40	ppm		98
72)	1,2-Diphenylhydrazine	7.184	77	315411	48.87	ppm		83
74)	4-Bromophenyl-phenylether	7.452	248	82457	43.67	ppm		98
75)	Hexachlorobenzene	7.500	284	89747	44.44	ppm		81
76)	Pentachlorophenol	7.698	266	32411	36.22	ppm		97
77)	Phenanthrene	7.842	178	1049033	111.02	ppm		99
78)	Anthracene	7.885	178	439416	46.09	ppm		98
79)	Carbazole	8.062	167	856345	97.01	ppm		100
80)	Di-n-butylphthalate	8.409	149	488366	42.73	ppm		99
81)	Fluoranthene	9.030	202	627330	58.63	ppm		95
82)	Octadecane	7.762	43	179903	39.37	ppm	#	54
84)	Pyrene	9.286	202	603731	53.31	ppm		99
86)	Butylbenzylphthalate	10.190	149	217915	41.57	ppm		98

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57298.D
Acq On : 17 Mar 2016 3:59 am
Operator : sarad
Sample : op92132-msd
Misc : op92132,e2p2497,500
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Mar 18 10:09:41 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
88)	Benzo[a]anthracene	10.859	228	444309	42.58	ppm	98
89)	3,3'-Dichlorobenzidine	10.875	252	129138	34.28	ppm	98
90)	Chrysene	10.902	228	393222	41.41	ppm	99
91)	bis(2-Ethylhexyl)phtha...	11.046	149	286681	41.27	ppm	98
93)	Di-n-octylphthalate	11.966	149	474594	39.06	ppm	91
94)	Benzo[b]fluoranthene	12.335	252	404939	40.31	ppm	98
95)	Benzo[k]fluoranthene	12.367	252	333901	37.84	ppm	98
96)	Benzo[a]pyrene	12.742	252	326872	38.89	ppm	95
97)	Indeno[1,2,3-cd]pyrene	14.100	276	292060m	41.35	ppm	
99)	Dibenz[a,h]anthracene	14.132	278	282776	39.90	ppm	90
100)	7,12-Dimethylbenz(a)an...	12.324	256	106650	24.24	ppm	89
101)	Benzo[g,h,i]perylene	14.394	276	275551	39.55	ppm	87
103)	Benzaldehyde	3.740	105	146967	53.20	ppm	94
107)	Atrazine	7.644	215	36492	42.64	ppm	91
108)	1,2,4,5-Tetrachloroben...	5.901	216	133943	44.82	ppm	98
110)	Benzidine	9.228	184	53074	11.74	ppm	97

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

9.4.2

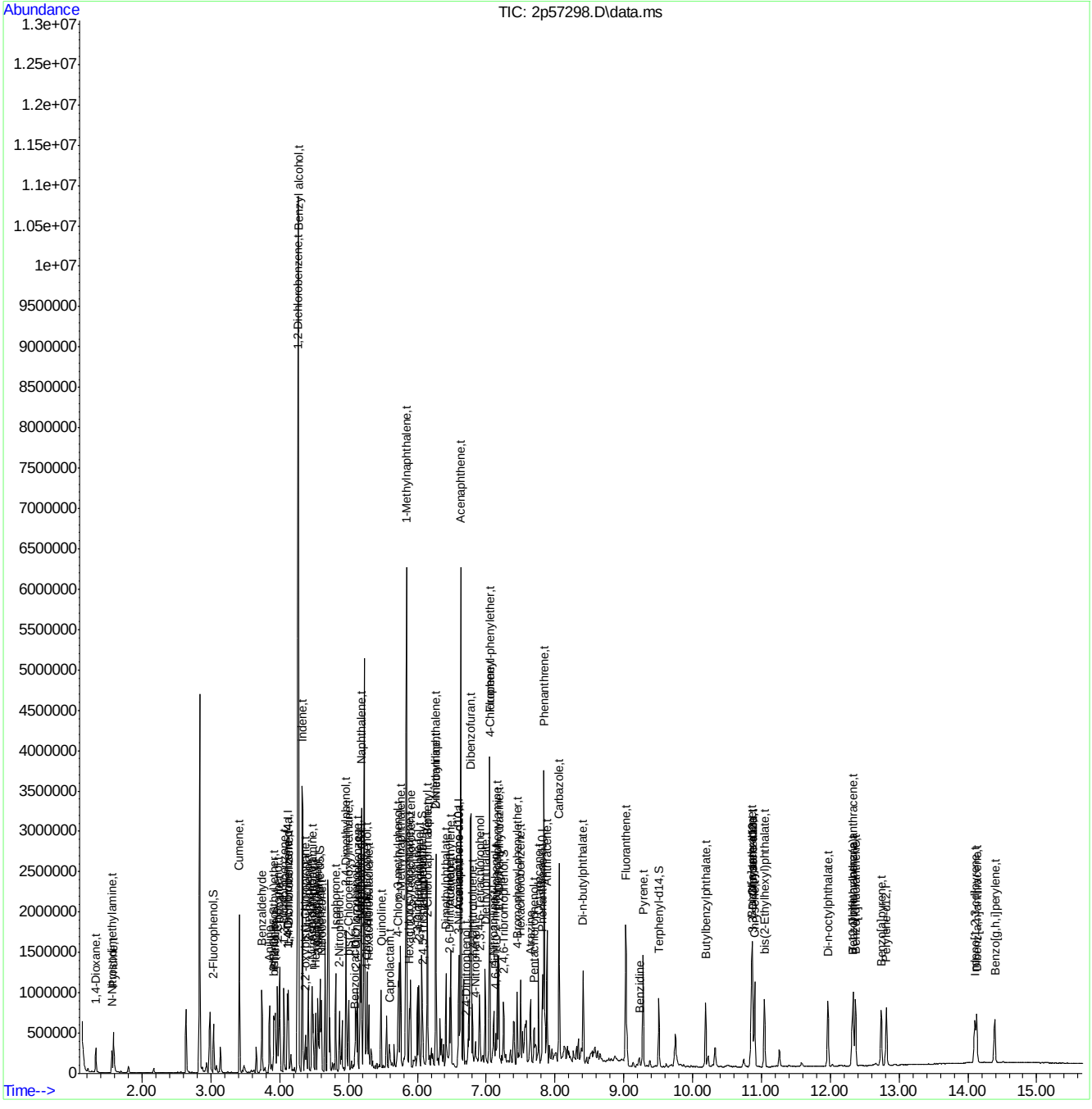
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57298.D
Acq On : 17 Mar 2016 3:59 am
Operator : sarad
Sample : op92132-msd
Misc : op92132,e2p2497,500
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Mar 18 10:09:41 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration



Manual Integration Approval Summary

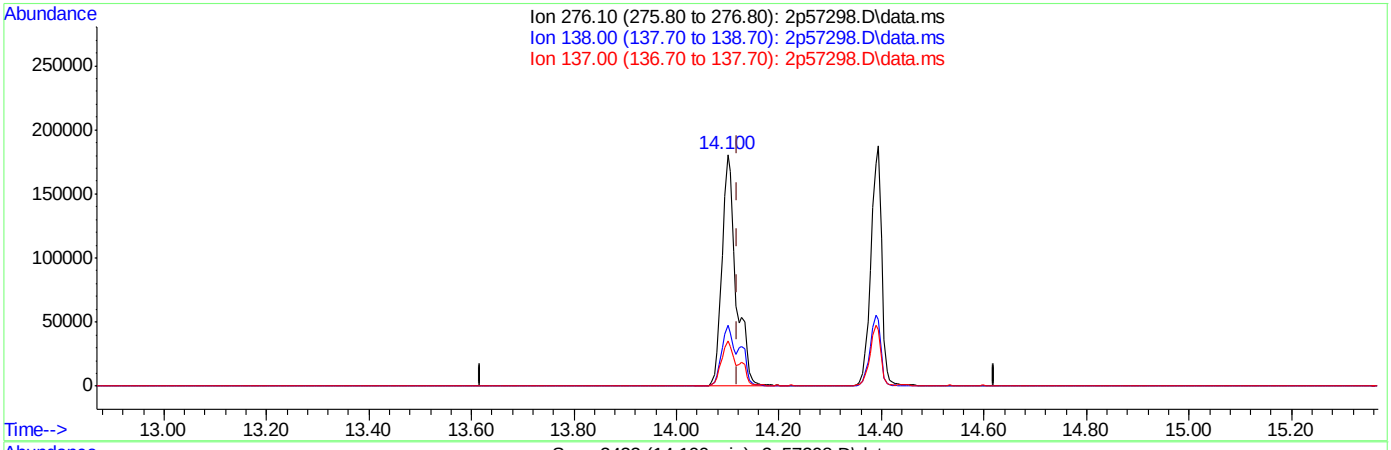
Sample Number:	OP92132-MSD	**Method:**	SW846 8270D
Lab FileID:	2P57298.D	**Analyst approved:**	03/18/16 10:13 Robert LaPosta
Injection Time:	03/17/16 03:59	**Supervisor approved:**	03/28/16 11:43 Nina Pandya

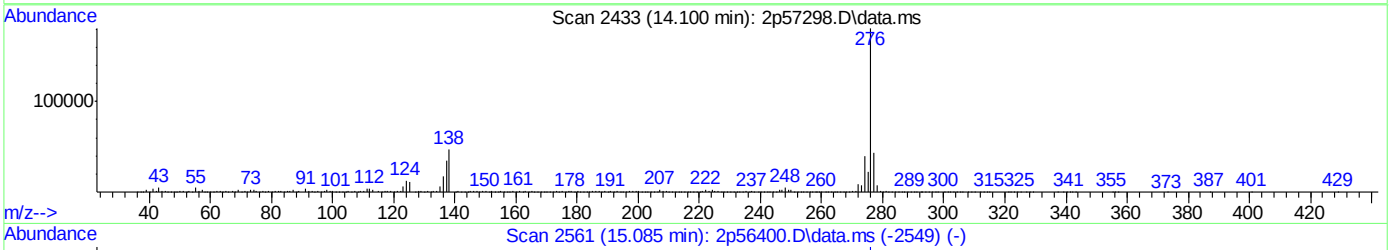
Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5		14.10	Overlapping peak

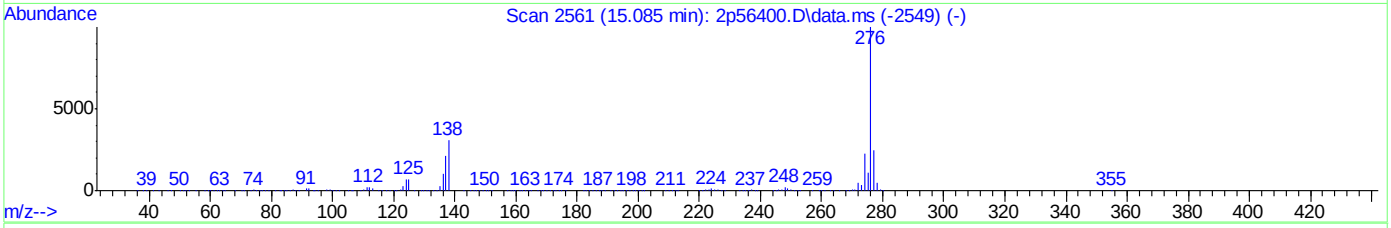
Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57298.D
Acq On    : 17 Mar 2016   3:59 am
Operator  : sarad
Sample    : op92132-msd
Misc      : op92132,e2p2497,500
ALS Vial  : 27   Sample Multiplier: 1

Quant Time: Mar 18 10:07:59 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title  : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration
```







TIC: 2p57298.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.100min (-0.019) 48.69ppm

response 343895

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	26.16
137.00	28.00	19.27
0.00	0.00	0.00

SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57298.D
Acq On : 17 Mar 2016 3:59 am
Operator : sarad
Sample : op92132-msd
Misc : op92132,e2p2497,500
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Mar 18 10:07:59 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
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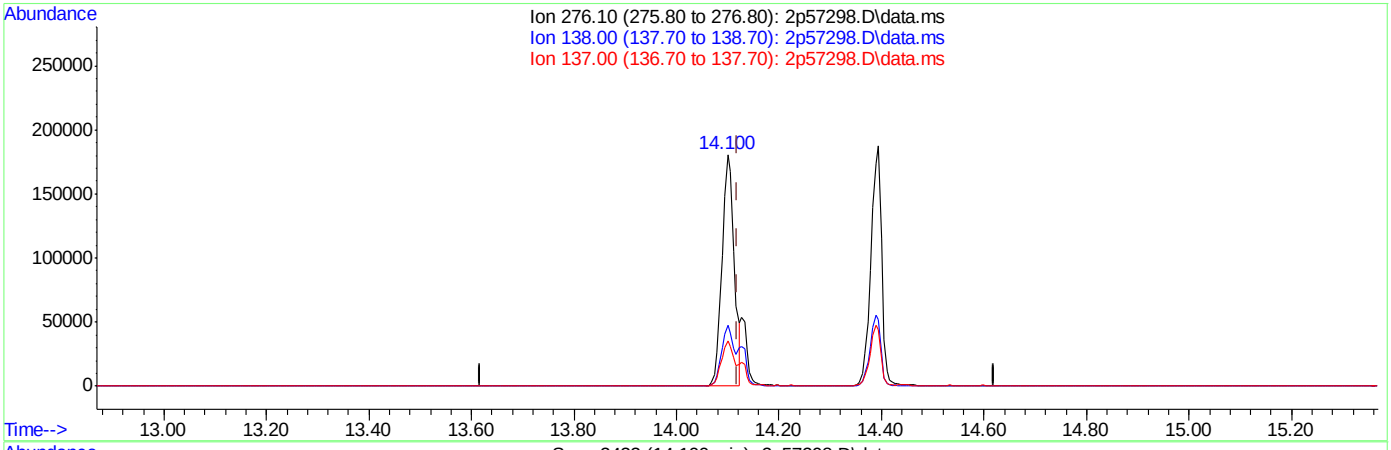
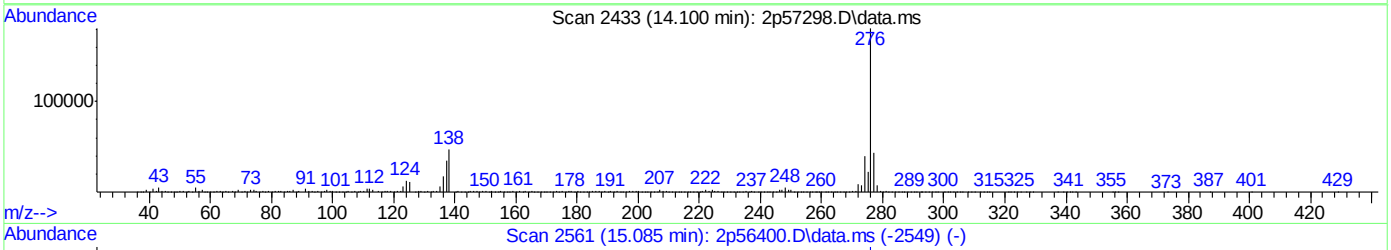
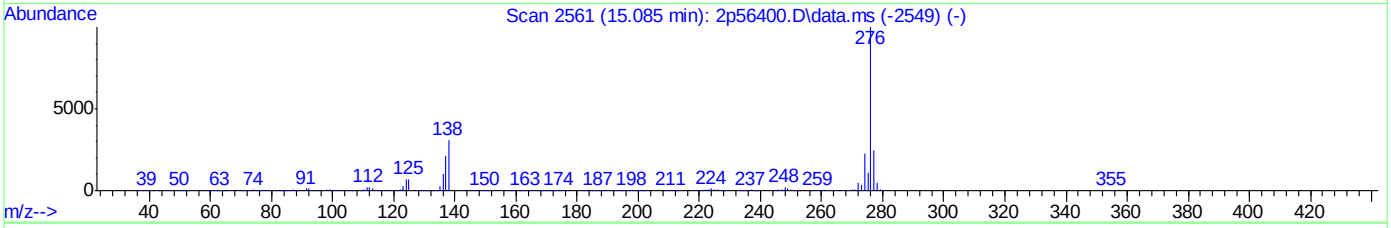






TIC: 2p57298.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.100min (-0.019) 41.35ppm m

response 292060

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	26.32
137.00	28.00	19.54
0.00	0.00	0.00

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15656.D
Acq On : 17 Mar 2016 8:35 pm
Operator : juliusj
Sample : op92132a-ms
Misc : op92132a,e4p805,500
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 18 12:20:19 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.470	150	117082	4.00	ppm	-0.02
13) Fluorene-d10	11.457	176	160364	4.00	ppm	-0.02
23) Fluoranthene-d10	15.718	212	304067	4.00	ppm	0.00
33) Benzo(a)pyrene-d12	20.363	264	219029	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.103	112	722790	35.15	ppm	-0.08
Spiked Amount 50.000			Recovery = 70.30%			
4) Phenol-d5	4.286	99	1040782	31.42	ppm	-0.08
Spiked Amount 50.000			Recovery = 62.84%			
7) Nitrobenzene-d5	5.676	82	1417673	43.49	ppm	-0.03
Spiked Amount 50.000			Recovery = 86.98%			
14) 2-Fluorobiphenyl	9.121	172	2030110	44.47	ppm	-0.04
Spiked Amount 50.000			Recovery = 88.94%			
22) 2,4,6-Tribromophenol	12.012	330	372045	62.36	ppm	-0.07
Spiked Amount 50.000			Recovery = 124.72%			
30) Terphenyl-d14	16.527	244	1894562	40.81	ppm	0.02
Spiked Amount 50.000			Recovery = 81.62%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.762	88	7166	0.54	ppm #	73
5) Phenol	4.303	94	152010	3.87	ppm #	85
6) bis(2-Chloroethyl)ether	4.406	93	29908	0.87	ppm #	33
8) Naphthalene	6.994	128	98381	1.27	ppm	61
9) Hexachlorobutadiene	7.300	225	14016	0.77	ppm	72
10) 2-Methylnaphthalene	8.344	141	41929	1.09	ppm #	83
12) Hexachlorocyclopentadiene	8.701	237	3566	0.23	ppm #	98
15) Acenaphthylene	10.116	152	69892	1.25	ppm	93
16) Acenaphthene	10.460	153	65271	1.58	ppm	76
17) Dibenzofuran	10.827	168	73884	1.39	ppm	92
18) Fluorene	11.506	166	75171	1.51	ppm	77
20) n-nitrosodiphenylamine	11.829	169	239305	9.87	ppm #	36
21) 1,2-Diphenylhydrazine	11.879	77	86719	1.76	ppm	85
24) Hexachlorobenzene	12.637	284	18928	0.77	ppm	99
25) Pentachlorophenol	13.085	266	55785	5.39	ppm	96
26) Phenanthrene	13.446	178	86179	0.95	ppm	94
27) Anthracene	13.549	178	117714	1.45	ppm	80
28) Fluoranthene	15.735	202	101987	1.05	ppm	95
29) Pyrene	16.131	202	227304	2.36	ppm	95
31) Benzo[a]anthracene	18.256	228	84621	1.00	ppm	94
32) Chrysene	18.313	228	94600	0.95	ppm	94
34) Benzo[b]fluoranthene	19.937	252	82131	0.91	ppm	96
35) Benzo[k]fluoranthene	19.971	252	70765	0.86	ppm	99
36) Benzo[a]pyrene	20.397	252	70502	0.79	ppm	96
37) Indeno[1,2,3-cd]pyrene	21.900	276	76374	0.81	ppm	97
38) Dibenz[a,h]anthracene	21.929	278	62603	0.80	ppm	96
39) Benzo[g,h,i]perylene	22.275	276	64221	0.76	ppm	98

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15656.D
Acq On : 17 Mar 2016 8:35 pm
Operator : juliusj
Sample : op92132a-ms
Misc : op92132a,e4p805,500
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 18 12:20:19 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration

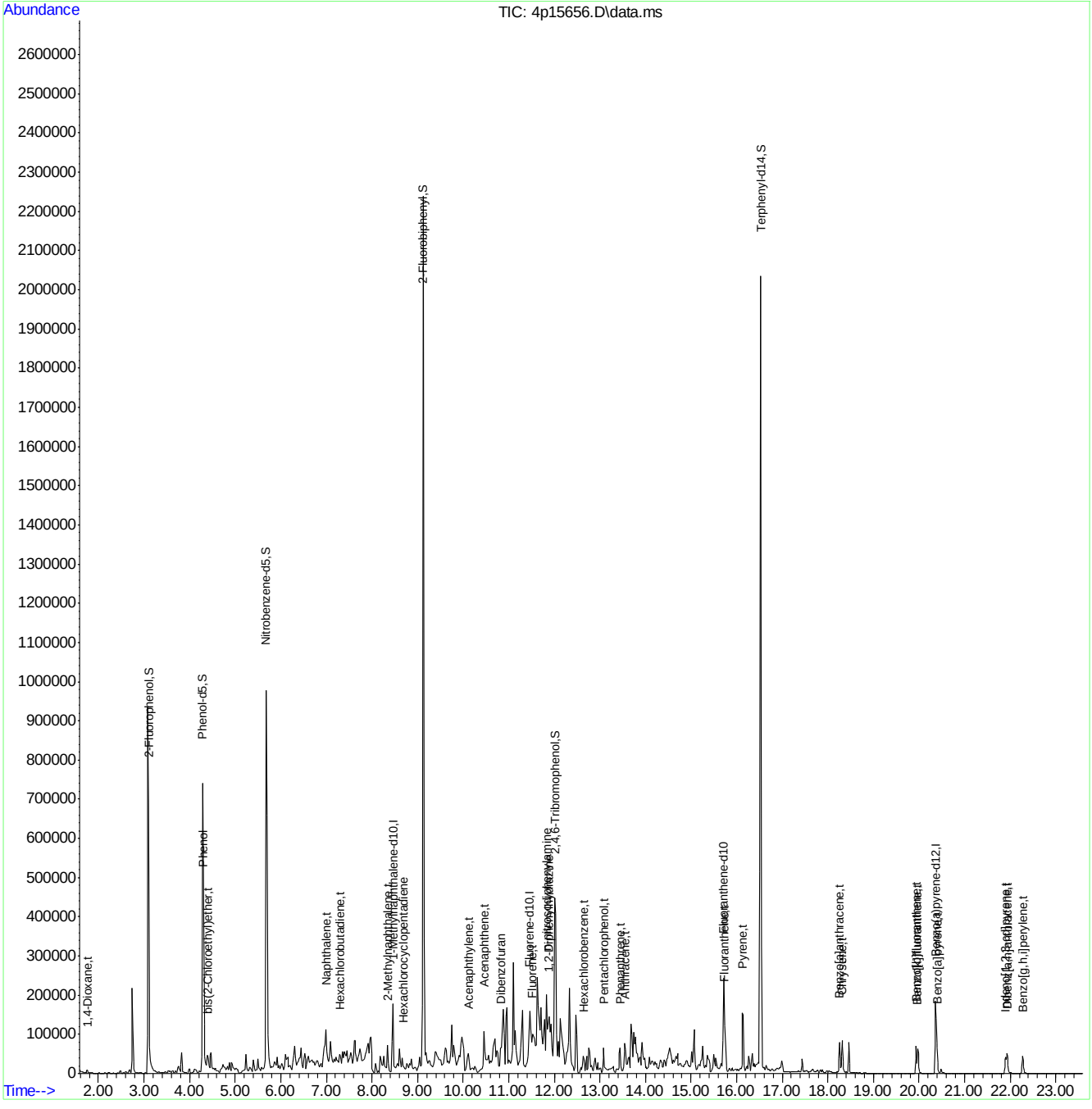
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15656.D
Acq On : 17 Mar 2016 8:35 pm
Operator : juliusj
Sample : op92132a-ms
Misc : op92132a,e4p805,500
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 18 12:20:19 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15657.D
Acq On : 17 Mar 2016 9:06 pm
Operator : juliusj
Sample : op92132a-msd
Misc : op92132a,e4p805,500
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 18 12:21:11 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.470	150	124227	4.00	ppm	-0.02
13) Fluorene-d10	11.457	176	174336	4.00	ppm	-0.02
23) Fluoranthene-d10	15.718	212	319556	4.00	ppm	0.00
33) Benzo(a)pyrene-d12	20.365	264	244387	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.103	112	720919	33.05	ppm	-0.08
Spiked Amount 50.000			Recovery = 66.10%			
4) Phenol-d5	4.286	99	1062514	30.23	ppm	-0.08
Spiked Amount 50.000			Recovery = 60.46%			
7) Nitrobenzene-d5	5.676	82	1419059	41.02	ppm	-0.03
Spiked Amount 50.000			Recovery = 82.04%			
14) 2-Fluorobiphenyl	9.121	172	2027552	40.85	ppm	-0.04
Spiked Amount 50.000			Recovery = 81.70%			
22) 2,4,6-Tribromophenol	12.012	330	386351	59.57	ppm	-0.07
Spiked Amount 50.000			Recovery = 119.14%			
30) Terphenyl-d14	16.527	244	1928321	39.52	ppm	0.02
Spiked Amount 50.000			Recovery = 79.04%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.762	88	7102	0.50	ppm #	74
5) Phenol	4.303	94	156823	3.76	ppm #	86
6) bis(2-Chloroethyl)ether	4.406	93	29611	0.81	ppm #	31
8) Naphthalene	6.995	128	96310	1.17	ppm	65
9) Hexachlorobutadiene	7.300	225	13827	0.72	ppm	72
10) 2-Methylnaphthalene	8.344	141	39188	0.96	ppm #	83
12) Hexachlorocyclopentadiene	8.701	237	4187	0.25	ppm #	99
15) Acenaphthylene	10.117	152	66076	1.08	ppm	92
16) Acenaphthene	10.460	153	65023	1.45	ppm	81
17) Dibenzofuran	10.827	168	70626	1.22	ppm	81
18) Fluorene	11.507	166	70635	1.31	ppm	77
20) n-nitrosodiphenylamine	11.829	169	207512	7.87	ppm #	38
21) 1,2-Diphenylhydrazine	11.879	77	82986	1.55	ppm	91
24) Hexachlorobenzene	12.637	284	19250	0.75	ppm	98
25) Pentachlorophenol	13.085	266	59378	5.45	ppm	94
26) Phenanthrene	13.446	178	83800	0.88	ppm	92
27) Anthracene	13.550	178	105178	1.24	ppm	80
28) Fluoranthene	15.735	202	99214	0.98	ppm	96
29) Pyrene	16.131	202	207436	2.05	ppm	96
31) Benzo[a]anthracene	18.258	228	85393	0.96	ppm	97
32) Chrysene	18.315	228	91791	0.88	ppm	98
34) Benzo[b]fluoranthene	19.939	252	72021	0.71	ppm	96
35) Benzo[k]fluoranthene	19.974	252	82351	0.90	ppm	98
36) Benzo[a]pyrene	20.388	252	70092	0.70	ppm	96
37) Indeno[1,2,3-cd]pyrene	21.893	276	73740	0.70	ppm	99
38) Dibenz[a,h]anthracene	21.931	278	60791	0.70	ppm	99
39) Benzo[g,h,i]perylene	22.277	276	61004	0.65	ppm	99

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15657.D
Acq On : 17 Mar 2016 9:06 pm
Operator : juliusj
Sample : op92132a-msd
Misc : op92132a,e4p805,500
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 18 12:21:11 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration

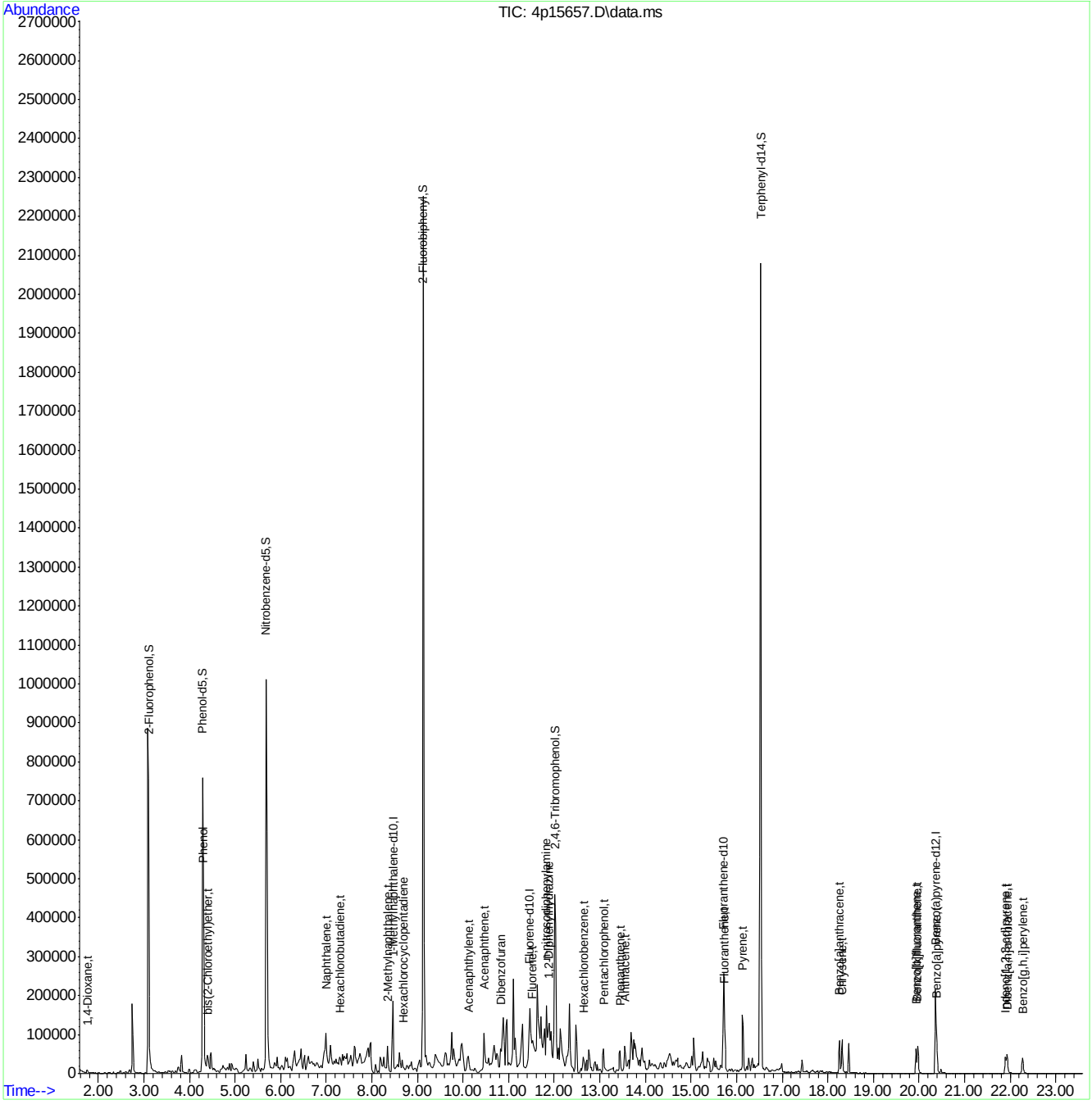
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15657.D
Acq On : 17 Mar 2016 9:06 pm
Operator : juliusj
Sample : op92132a-msd
Misc : op92132a,e4p805,500
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 18 12:21:11 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration

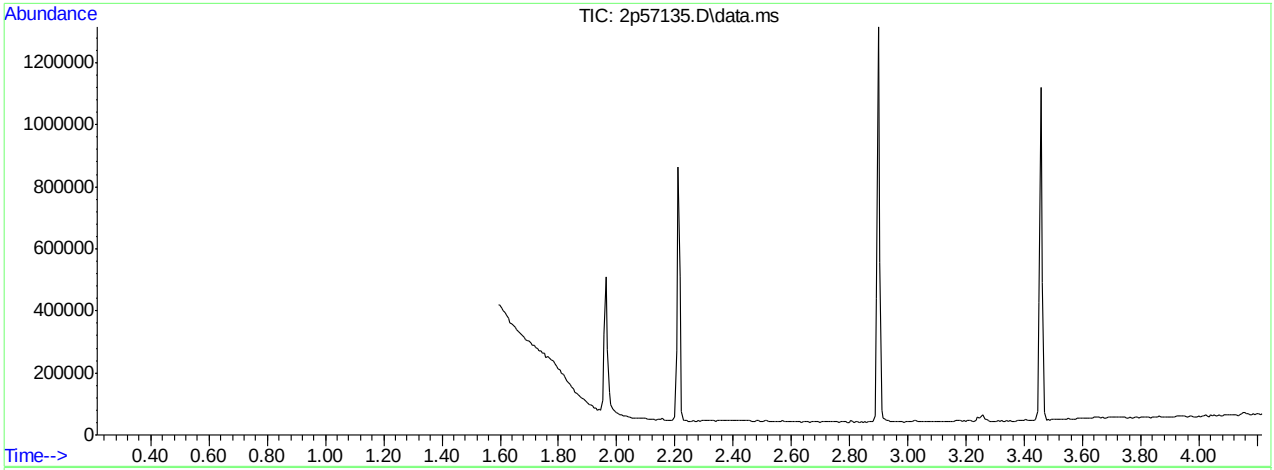


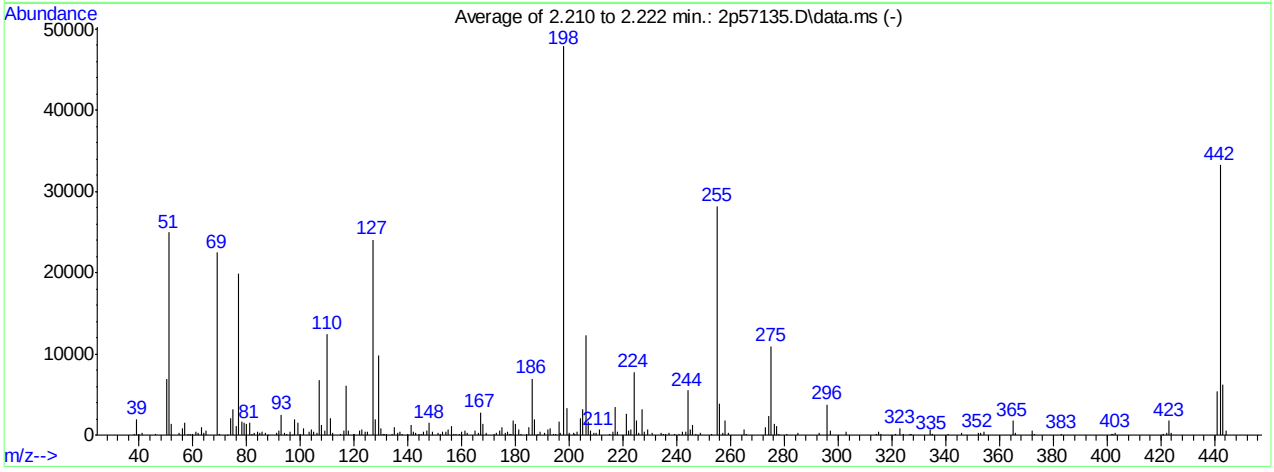
SGS ACCUTEST JC16204

DFTPP

Data File : C:\msdchem\1\DATA\2P2490\2p57135.D Vial: 1
Acq On : 11 Mar 2016 8:50 am Operator: robertl1
Sample : DFTPP Inst : MS2P
Misc : op91532,e2p2490 Multiplr: 1.00
MS Integration Params: events.e

Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M (ChemStation Integrator)
Title :





AutoFind: Scans 106, 107, 108; Background Corrected with Scan 102

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	52.1	24963	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	47.0	22481	PASS
70	69	0.00	2	0.9	211	PASS
127	198	40	60	50.2	24029	PASS
197	198	0.00	1	0.5	224	PASS
198	198	100	100	100.0	47868	PASS
199	198	5	9	7.0	3330	PASS
275	198	10	30	22.9	10939	PASS
365	198	1	100	3.7	1755	PASS
441	443	0.01	100	87.2	5390	PASS
442	198	40	100	69.5	33255	PASS
443	442	17	23	18.6	6180	PASS

2p57135.D DFTPP2P.M Fri Mar 11 23:24:04 2016 RPT1

Average of 2.210 to 2.222 min.: 2p57135.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
38.00	178	58.00	134	74.00	2144	85.00	215
39.05	1955	58.95	192	75.00	3157	85.90	458
40.00	125	60.00	86	76.10	1137	87.00	280
41.05	236	61.00	445	77.05	19895	87.95	66
46.00	84	62.05	328	78.10	1701	91.00	347
50.10	6933	63.05	935	79.00	1592	92.05	593
51.05	24963	64.00	246	80.00	1319	93.00	2498
52.05	1336	65.00	604	81.00	1471	94.00	231
55.05	264	69.00	22481	82.00	210	95.00	137
56.00	835	70.00	211	83.00	278	95.95	477
57.05	1531	73.00	65	83.95	441	97.00	21

Average of 2.210 to 2.222 min.: 2p57135.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
98.00	1975	110.00	12458	124.00	461	136.05	347
99.00	1551	111.00	2131	125.05	372	137.00	431
100.00	99	111.95	262	127.00	24029	137.90	98
100.95	777	115.00	197	128.00	1899	140.00	149
103.05	400	116.00	542	129.00	9872	141.00	1219
103.95	638	117.00	6034	130.05	830	142.00	453
105.00	467	118.00	522	130.90	142	143.00	325
106.10	324	119.90	148	131.10	119	144.00	99
106.95	6742	120.10	84	132.00	99	145.00	96
108.00	1196	122.00	583	133.90	202	145.95	352
109.10	496	123.00	748	135.00	931	147.00	594

Average of 2.210 to 2.222 min.: 2p57135.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
148.00	1483	159.90	353	174.00	526	185.05	932
148.95	400	161.00	525	175.05	1001	186.10	6946
151.05	213	162.05	244	176.00	280	187.10	1935
152.10	160	165.00	606	177.05	382	188.10	162
153.00	413	166.00	268	177.90	127	188.95	474
154.05	351	166.20	166	178.10	124	190.95	293
155.00	729	167.00	2805	179.00	1857	192.00	662
156.05	1079	168.00	1322	180.00	1335	193.00	878
157.00	209	169.00	272	181.05	631	194.00	172
158.00	163	172.00	171	182.00	180	195.10	86
159.00	159	172.95	306	183.90	89	196.05	1681

Average of 2.210 to 2.222 min.: 2p57135.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
196.80	224	208.05	563	224.05	7753	238.95	200
198.00	47868	208.95	213	225.05	1813	241.00	118
199.00	3330	210.00	316	226.00	273	242.10	404
200.00	281	211.05	642	227.00	3219	243.10	446
201.50	256	215.10	136	227.95	418	244.10	5478
202.10	88	216.05	351	229.00	671	245.00	688
203.05	398	217.00	3488	231.00	274	246.00	1194
204.10	2029	218.00	400	234.05	261	247.00	150
205.05	3195	221.05	2592	235.00	196	248.90	217
206.10	12343	222.00	492	236.00	92	253.00	92
207.05	1706	223.00	707	236.95	260	255.00	28230

Average of 2.210 to 2.222 min.: 2p57135.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
256.00	3875	277.90	199	323.05	893	354.15	350
257.05	311	281.00	88	324.10	200	365.00	1755
258.00	1831	285.05	223	326.80	126	366.00	282
259.10	277	292.95	275	327.10	99	372.05	606

264.95	683	296.00	3763	334.00	692	373.00	85
265.90	115	297.00	507	334.90	107	383.00	179
272.95	927	303.00	413	335.10	98	401.80	88
274.05	2413	314.05	209	341.00	101	402.10	109
275.05	10939	315.05	381	345.90	239	403.10	307
276.05	1367	316.00	98	352.05	328	420.90	92
277.00	1045	321.10	90	353.10	227	421.10	119

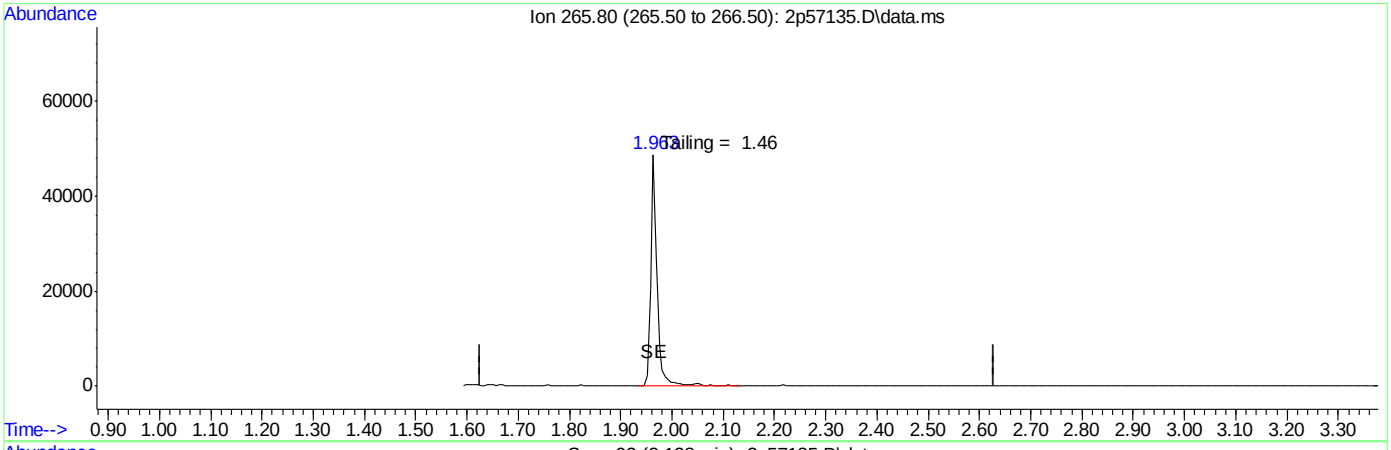
Average of 2.210 to 2.222 min.: 2p57135.D\data.ms
DFTPP
Modified:subtracted

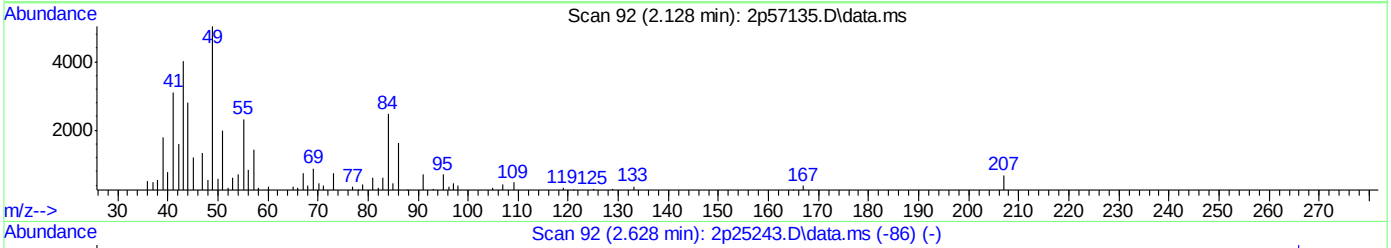
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
422.05	243						
423.10	1770						
424.00	284						
441.10	5390						
442.10	33255						
443.10	6180						
444.05	575						

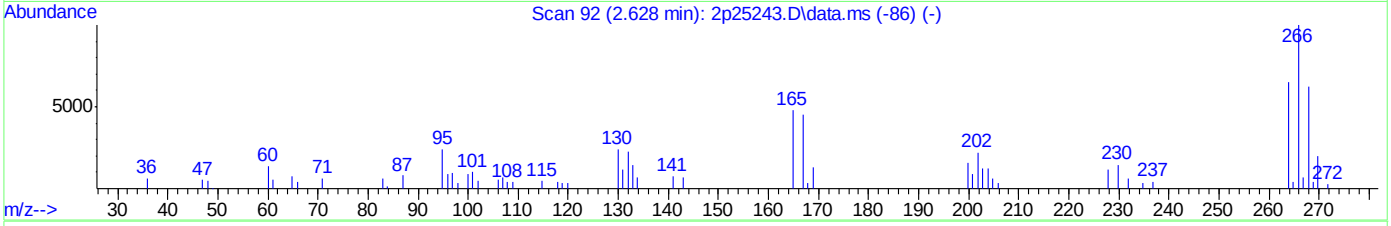
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57135.D
Acq On : 11 Mar 2016 8:50 am
Operator : robertl1
Sample : DFTPP
Misc : op91532,e2p2490
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 11 08:54:17 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title :
QLast Update : Tue Aug 11 08:57:54 2015
Response via : Initial Calibration







TIC: 2p57135.D\data.ms

(1) Pentacholorphenol

2.128min (-2.128) 0.00ppb

response 0

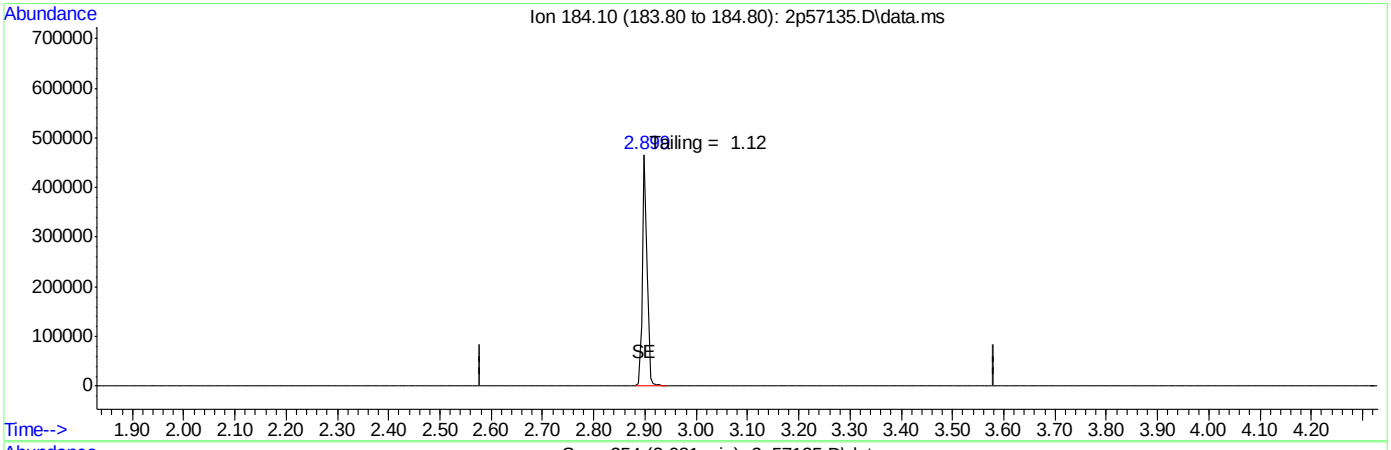
Ion	Exp%	Act%
265.80	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

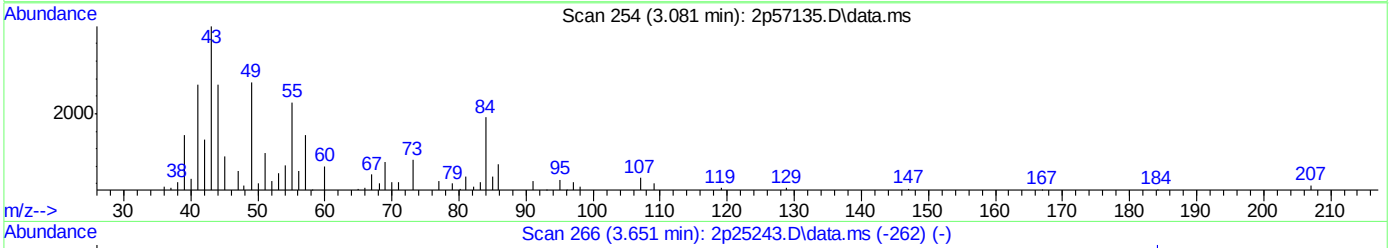
SGS ACCUTEST JC16204

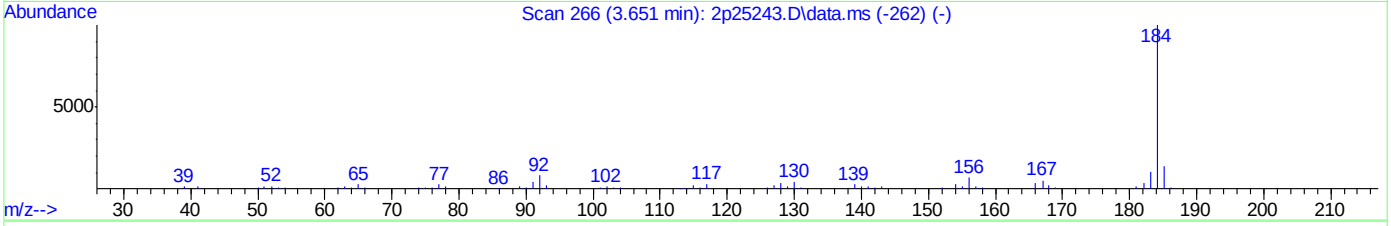
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57135.D
Acq On : 11 Mar 2016 8:50 am
Operator : robertl1
Sample : DFTPP
Misc : op91532,e2p2490
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 11 08:54:17 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title :
QLast Update : Tue Aug 11 08:57:54 2015
Response via : Initial Calibration







TIC: 2p57135.D\data.ms

(2) Benzidine

3.081min (-3.081) 0.00ppb

response 0

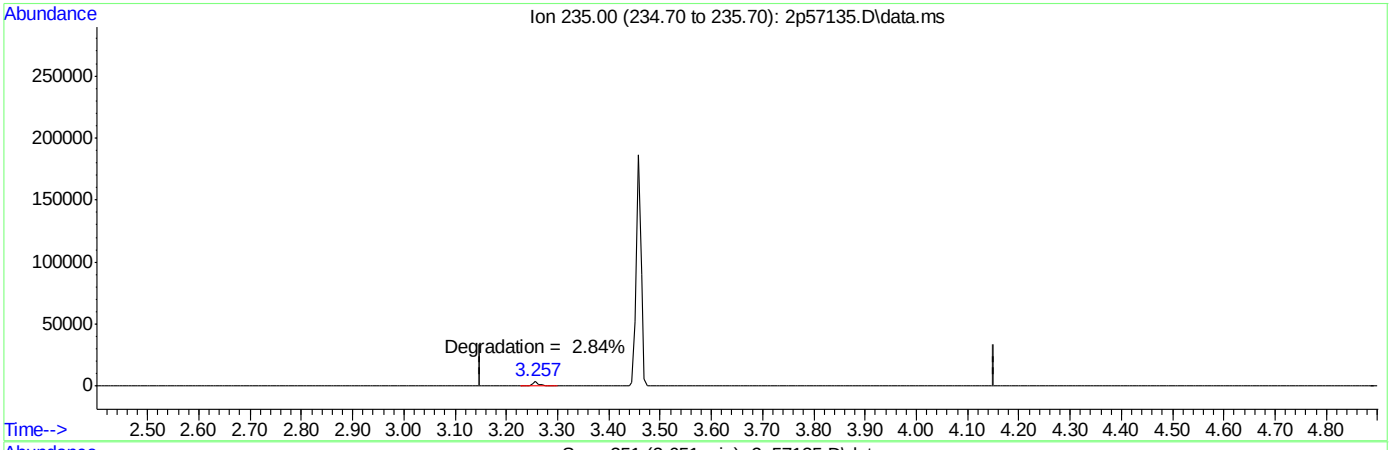
Ion	Exp%	Act%
184.10	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

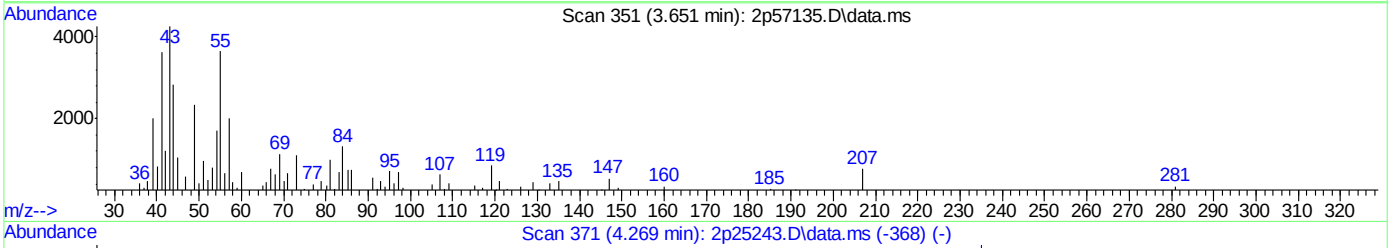
SGS ACCUTEST JC16204

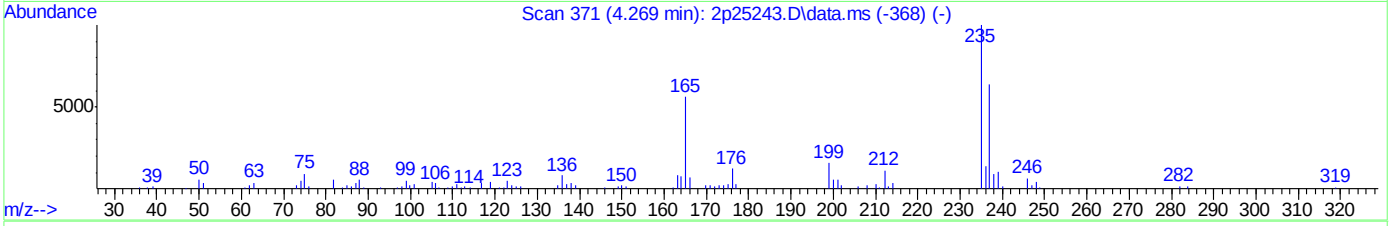
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57135.D
Acq On : 11 Mar 2016 8:50 am
Operator : robertl1
Sample : DFTPP
Misc : op91532,e2p2490
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 11 08:54:17 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title :
QLast Update : Tue Aug 11 08:57:54 2015
Response via : Initial Calibration







TIC: 2p57135.D\data.ms

(3) PP-DDT

3.651min (-3.651) 0.00ppb

response 0

Ion	Exp%	Act%
235.00	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

9.5.1.3

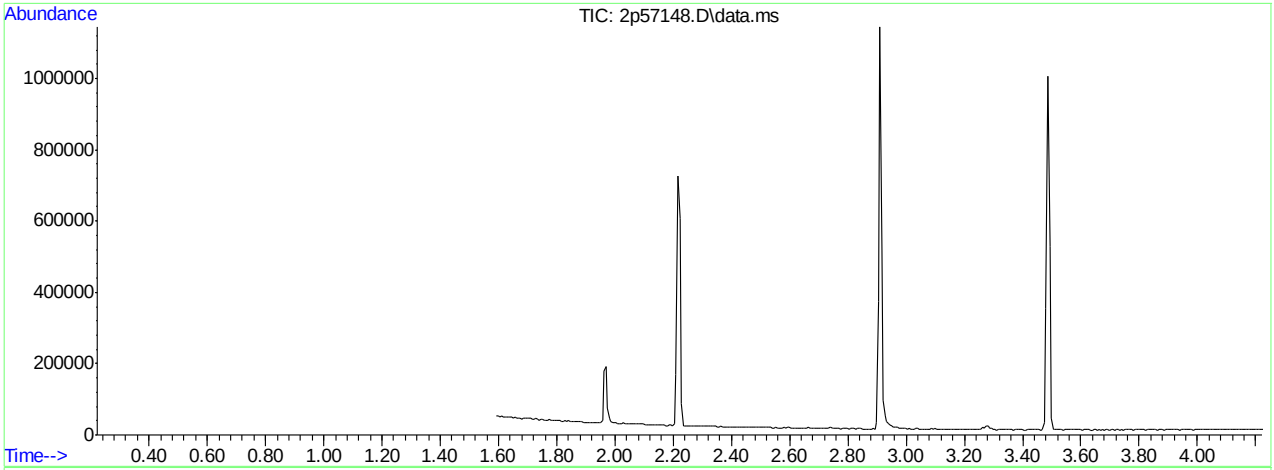
9

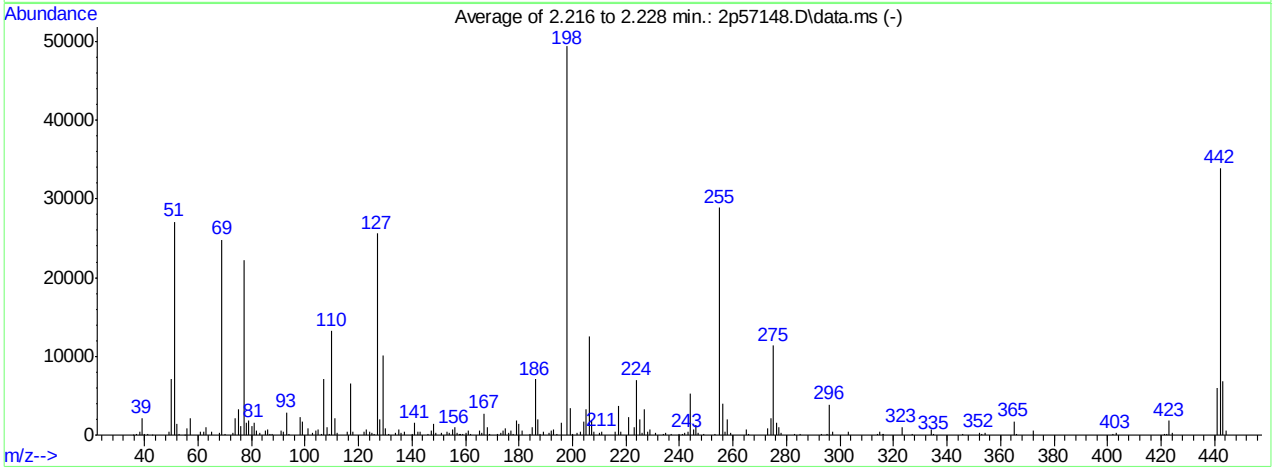
SGS ACCUTEST JC16204

DFTPP

Data File : C:\msdchem\1\DATA\2P2491\2p57148.D Vial: 1
Acq On : 11 Mar 2016 3:37 pm Operator: sarad
Sample : dftpp Inst : MS2P
Misc : op91532,e2p2491 Multiplr: 1.00
MS Integration Params: events.e

Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M (ChemStation Integrator)
Title :





AutoFind: Scans 107, 108, 109; Background Corrected with Scan 102

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	54.9	27083	PASS
68	69	0.00	2	1.2	288	PASS
69	198	0.00	100	50.3	24834	PASS
70	69	0.00	2	0.5	115	PASS
127	198	40	60	51.9	25624	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	49354	PASS
199	198	5	9	6.8	3368	PASS
275	198	10	30	23.0	11375	PASS
365	198	1	100	3.6	1774	PASS
441	443	0.01	100	88.2	5993	PASS
442	198	40	100	68.8	33944	PASS
443	442	17	23	20.0	6792	PASS

2p57148.D DFTPP2P.M Fri Mar 11 22:54:43 2016 RPT1

Average of 2.216 to 2.228 min.: 2p57148.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	40	53.00	103	73.00	311	85.00	534
37.00	113	55.00	63	74.05	2109	86.00	696
38.05	483	55.95	850	75.00	3244	87.00	155
39.05	2139	57.00	2093	76.10	1096	87.90	174
39.95	122	61.00	370	77.10	22176	91.00	613
41.00	119	62.00	377	78.05	1513	92.05	500
43.00	39	63.05	965	79.00	1787	93.00	2855
49.00	403	65.00	421	80.05	1171	94.10	151
50.10	7153	68.10	288	80.95	1575	98.00	2328
51.05	27083	69.00	24834	82.00	529	99.00	1672
52.05	1432	70.00	115	82.90	302	101.00	824

Average of 2.216 to 2.228 min.: 2p57148.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
102.95	299	117.00	6504	131.10	129	148.00	1496
103.95	573	117.95	475	133.90	238	149.00	341
105.05	660	122.00	461	135.05	760	151.05	239
106.20	102	123.00	737	135.90	265	153.05	434
107.00	7148	124.00	393	137.05	423	154.05	326
108.05	1068	125.00	280	140.10	89	155.00	665
109.10	158	125.90	104	141.00	1528	156.00	977
110.00	13231	127.00	25624	142.00	413	157.00	291
111.00	2140	128.05	2028	142.90	374	157.80	133
112.00	329	129.00	10133	146.10	145	158.10	110
115.95	403	130.00	856	147.00	571	158.85	201

Average of 2.216 to 2.228 min.: 2p57148.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
160.00	339	175.00	890	188.00	96	203.00	403
161.05	572	176.00	355	189.00	370	204.05	1669
161.90	203	177.00	508	191.05	324	205.05	3275
165.10	542	177.95	197	191.95	574	206.10	12474
165.95	333	179.00	1842	193.05	665	207.05	1795
167.05	2736	180.00	1449	194.10	93	208.00	401
168.00	1043	181.00	632	196.00	1519	210.05	249
169.10	110	184.00	87	198.00	49354	210.95	457
172.00	188	185.05	953	199.00	3368	216.05	432
173.05	268	186.05	7058	200.00	145	217.00	3728
174.05	526	187.05	2054	201.55	322	218.00	446

Average of 2.216 to 2.228 min.: 2p57148.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
221.00	2252	237.00	195	255.00	28874	277.00	1045
223.10	933	240.00	91	256.05	4005	277.95	251
224.05	7005	241.00	109	257.05	385	283.10	106
225.10	1987	242.00	292	258.00	1938	285.10	165
226.05	243	243.10	426	258.90	232	292.90	149
227.00	3288	244.10	5250	265.00	663	295.20	112
228.00	465	245.05	785	265.90	90	296.05	3900
229.00	697	246.00	1261	273.00	795	297.10	477
230.95	303	246.90	231	274.05	2117	303.00	473
234.00	142	248.95	183	275.05	11375	314.00	121
234.95	277	253.10	85	276.05	1529	315.00	465

Average of 2.216 to 2.228 min.: 2p57148.D\data.ms
dftpp
Modified:subtracted

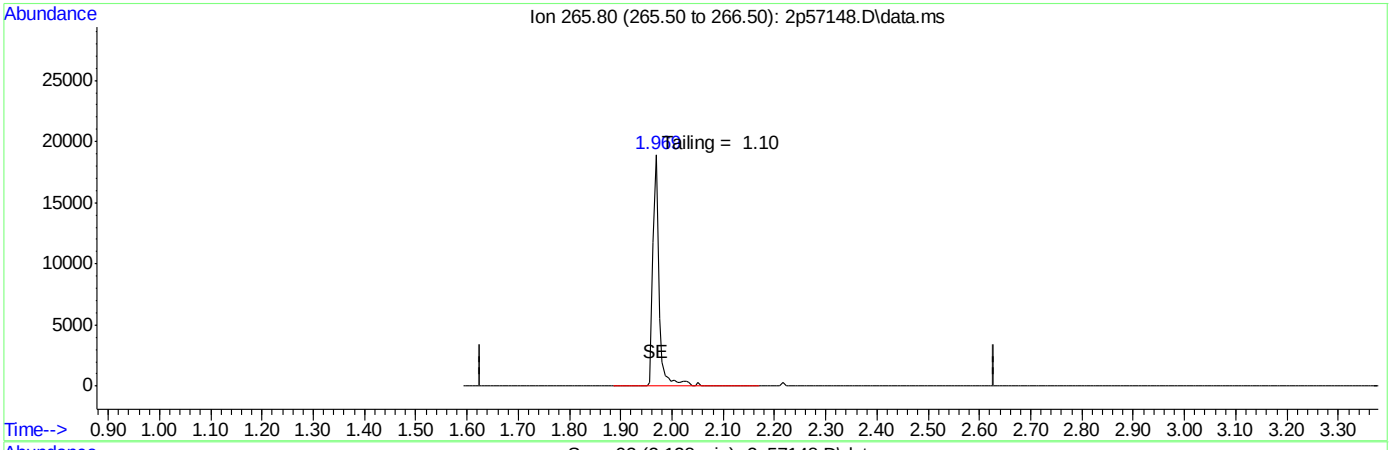
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
315.90	98	365.90	105	444.10	534		
316.10	84	372.00	573				
323.05	1049	402.00	205				
327.00	90	403.05	277				

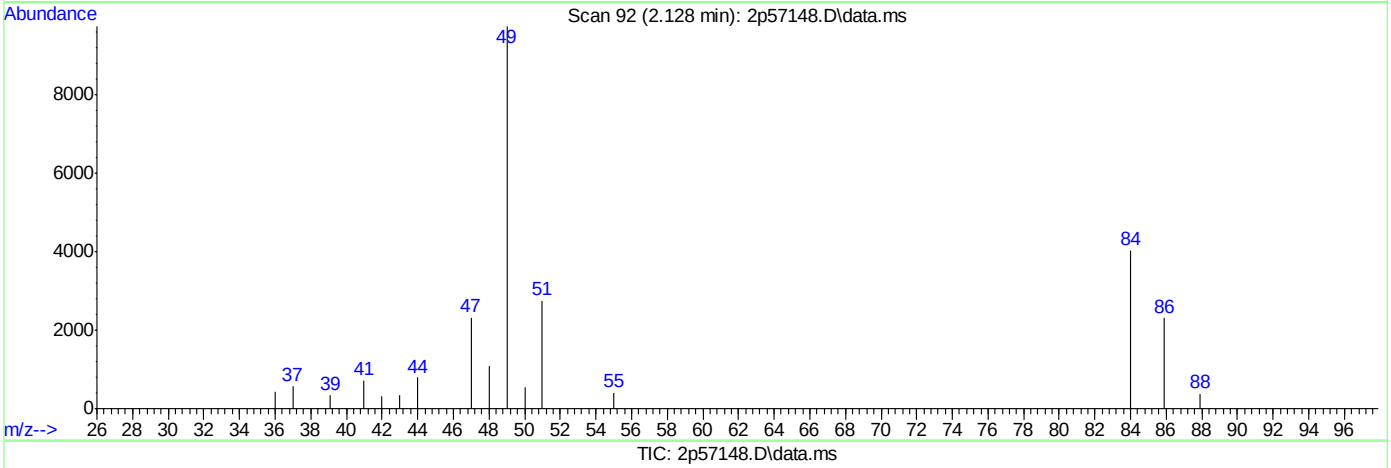
334.00	685	421.10	136
335.00	90	422.10	153
346.00	125	423.05	1790
352.00	288	424.00	343
353.10	171	441.10	5993
354.15	313	442.10	33944
365.00	1774	443.10	6792

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57148.D
Acq On    : 11 Mar 2016   3:37 pm
Operator  : sarad
Sample    : dftpp
Misc      : op91532,e2p2491
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Mar 11 15:41:18 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title  :
QLast Update : Tue Aug 11 08:57:54 2015
Response via : Initial Calibration
```





TIC: 2p57148.D\data.ms

(1) Pentacholorphenol

2.128min (-2.128) 0.00ppb

response 0

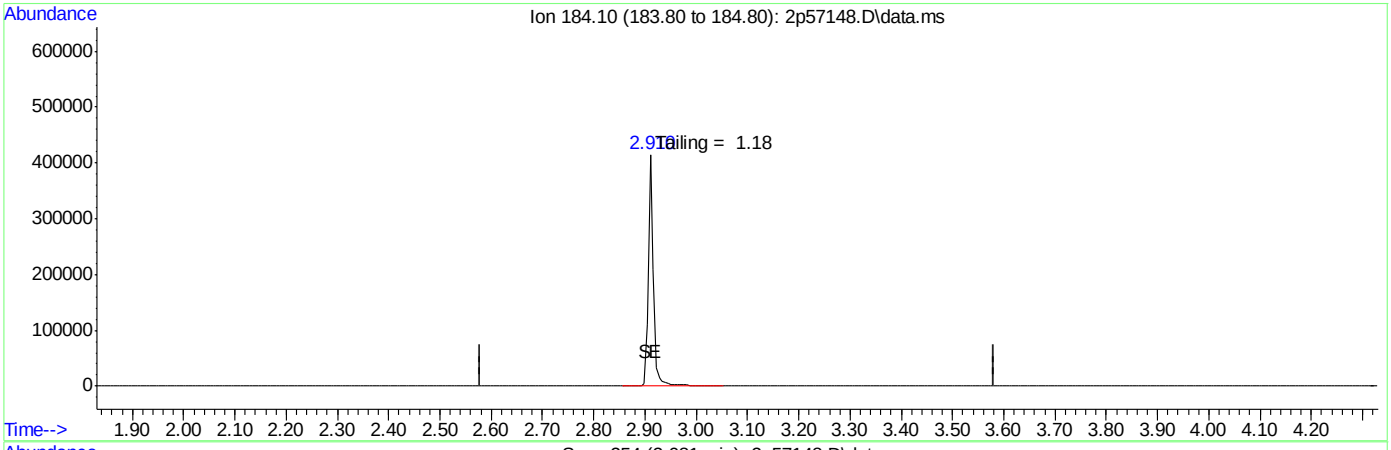
Ion	Exp%	Act%
265.80	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

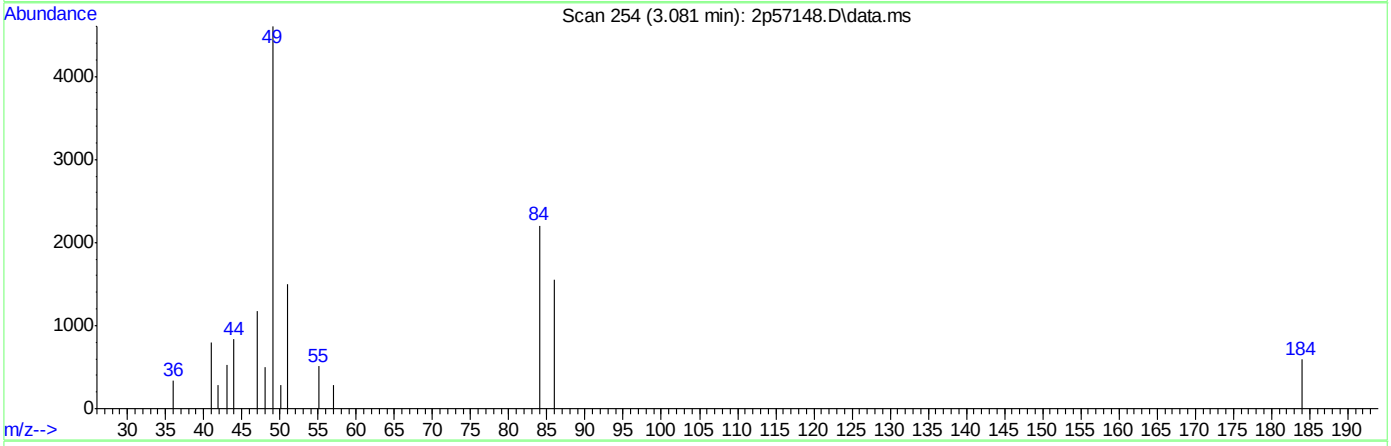
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57148.D
Acq On : 11 Mar 2016 3:37 pm
Operator : sarad
Sample : dftpp
Misc : op91532,e2p2491
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 11 15:41:18 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title :
QLast Update : Tue Aug 11 08:57:54 2015
Response via : Initial Calibration





TIC: 2p57148.D\data.ms

(2) Benzidine

3.081min (-3.081) 0.00ppb

response 0

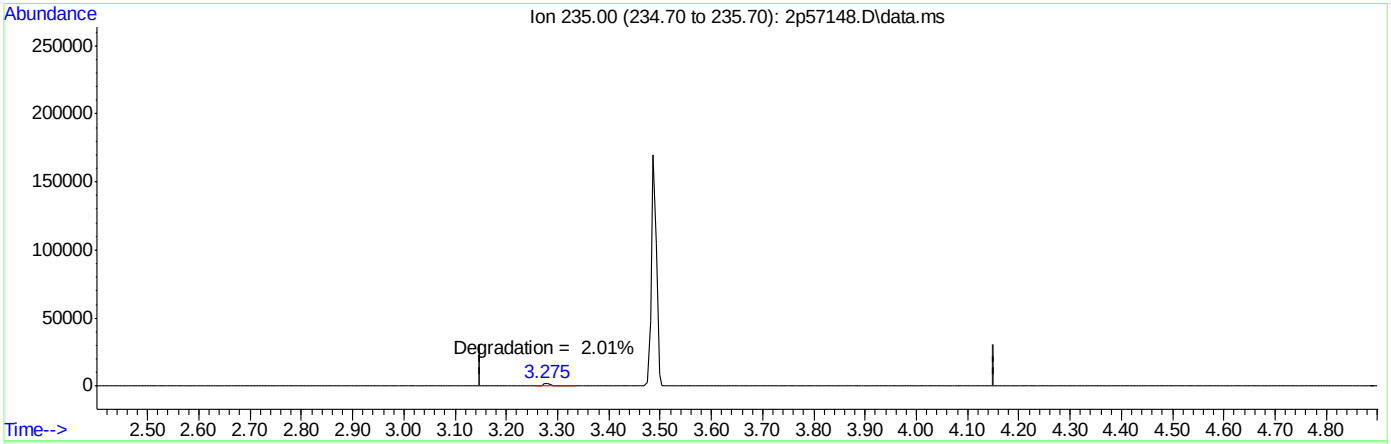
Ion	Exp%	Act%
184.10	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

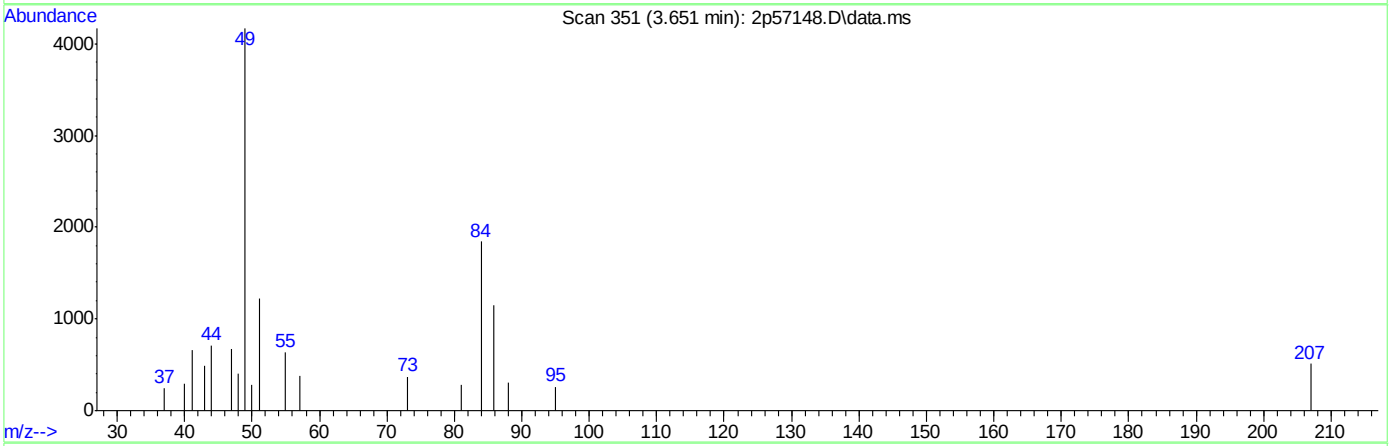
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57148.D
Acq On : 11 Mar 2016 3:37 pm
Operator : sarad
Sample : dftpp
Misc : op91532,e2p2491
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 11 15:41:18 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title :
QLast Update : Tue Aug 11 08:57:54 2015
Response via : Initial Calibration





TIC: 2p57148.D\data.ms

(3) PP-DDT

3.651min (-3.651) 0.00ppb

response 0

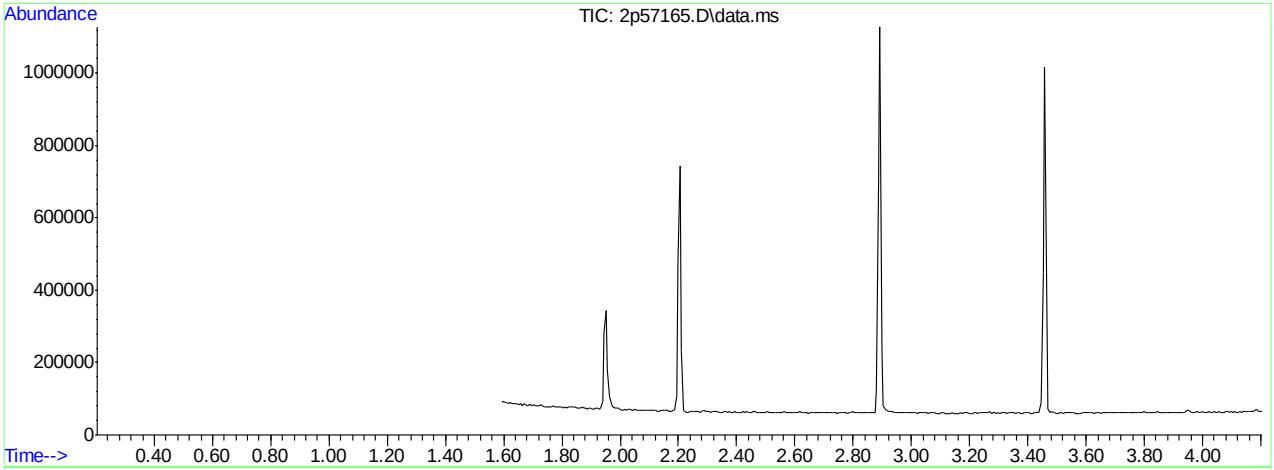
Ion	Exp%	Act%
235.00	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

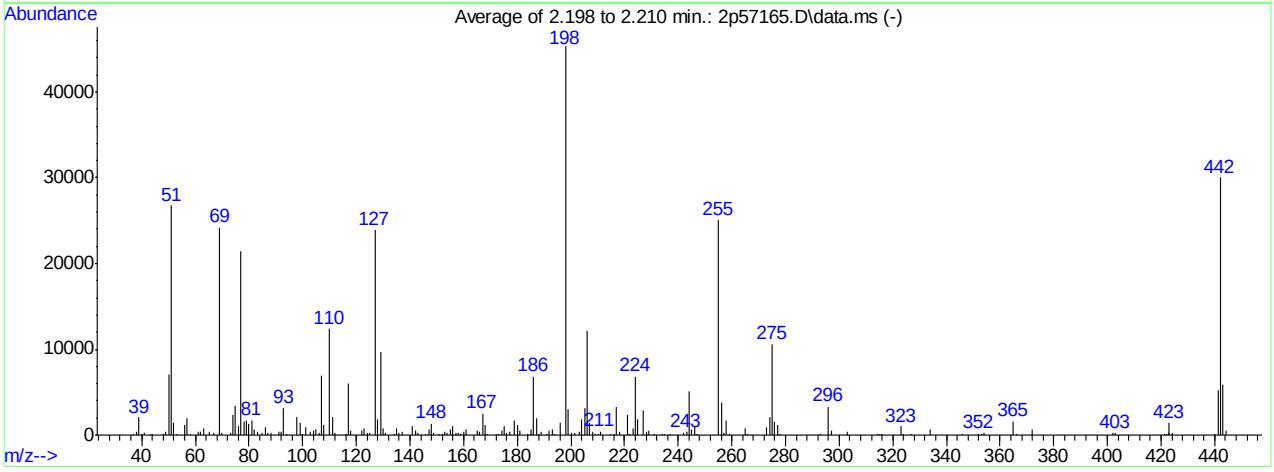
SGS ACCUTEST JC16204

DFTPP

Data File : C:\msdchem\1\DATA\2P2492\2p57165.D Vial: 1
Acq On : 11 Mar 2016 10:12 pm Operator: sarad
Sample : dftpp Inst : MS2P
Misc : op91532,e2p2492 Multiplr: 1.00
MS Integration Params: events.e

Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M (ChemStation Integrator)
Title :





AutoFind: Scans 104, 105, 106; Background Corrected with Scan 101

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	59.0	26745	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	53.4	24192	PASS
70	69	0.00	2	0.9	221	PASS
127	198	40	60	52.7	23875	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	45309	PASS
199	198	5	9	6.6	3002	PASS
275	198	10	30	23.4	10595	PASS
365	198	1	100	3.5	1574	PASS
441	443	0.01	100	90.3	5292	PASS
442	198	40	100	66.2	30014	PASS
443	442	17	23	19.5	5859	PASS

2p57165.D DFTPP2P.M Fri Mar 11 22:18:01 2016 RPT1

Average of 2.198 to 2.210 min.: 2p57165.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.00	148	52.05	1469	70.00	221	83.00	354
37.95	386	53.00	90	73.00	244	85.00	244
39.00	2035	56.00	1117	74.05	2296	86.00	867
39.95	127	56.95	1979	75.00	3338	86.95	224
41.00	311	58.00	85	76.15	1023	88.00	283
43.00	8	61.00	340	77.10	21383	91.00	412
44.00	199	62.00	389	78.10	1603	91.95	356
48.00	84	63.05	797	79.10	1701	93.00	3160
49.00	347	65.05	394	80.00	1369	93.95	187
50.05	7098	67.10	243	81.00	1767	98.00	2136
51.05	26745	69.00	24192	82.05	595	99.00	1482

Average of 2.198 to 2.210 min.: 2p57165.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
100.00	95	116.00	174	131.00	203	148.95	282
101.00	919	117.00	6020	134.00	177	151.00	141
103.00	369	118.00	473	134.95	726	152.10	87
103.95	542	122.00	501	136.00	275	153.05	436
105.05	609	123.00	852	136.95	365	154.00	293
106.10	214	124.00	331	141.00	1029	155.05	657
107.00	6975	125.00	321	142.00	510	156.05	1004
108.00	1158	127.05	23875	142.95	294	157.10	251
110.00	12383	128.05	1791	145.95	181	158.00	285
111.05	2050	129.00	9691	147.05	679	159.00	86
112.00	244	130.00	823	148.05	1353	159.95	387

Average of 2.198 to 2.210 min.: 2p57165.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
161.05	615	177.00	420	191.00	117	205.00	3189
165.00	496	179.00	1689	192.00	559	206.10	12128
166.10	346	180.00	1160	193.05	621	207.05	1471
167.05	2491	181.00	535	193.90	86	208.00	386
168.00	1213	184.10	127	196.05	1454	209.00	103
168.90	190	185.00	677	198.00	45309	210.40	167
172.00	149	185.20	111	199.00	3002	211.00	460
173.00	172	186.00	6829	200.00	245	215.00	84
174.10	489	187.10	1978	201.50	215	216.00	145
175.00	1017	188.10	116	203.05	335	217.00	3224
175.95	258	189.00	409	204.00	1783	217.95	374

Average of 2.198 to 2.210 min.: 2p57165.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
221.05	2335	237.00	104	259.00	172	297.05	553
222.00	92	242.00	317	265.00	738	303.10	345
223.00	725	243.10	356	265.90	91	314.10	107
224.10	6837	244.10	5139	273.05	924	314.90	196
225.00	1822	245.05	627	274.05	2093	316.00	121
227.00	2822	246.05	1062	275.05	10595	323.10	1030
228.05	344	247.00	134	276.00	1536	324.00	111
228.95	592	255.00	25086	277.00	1229	327.00	138
231.00	187	256.00	3767	278.00	115	334.10	625
233.90	110	257.05	279	292.90	111	346.10	108
234.90	133	258.00	1704	296.05	3322	352.00	168

Average of 2.198 to 2.210 min.: 2p57165.D\data.ms
dftpp
Modified:subtracted

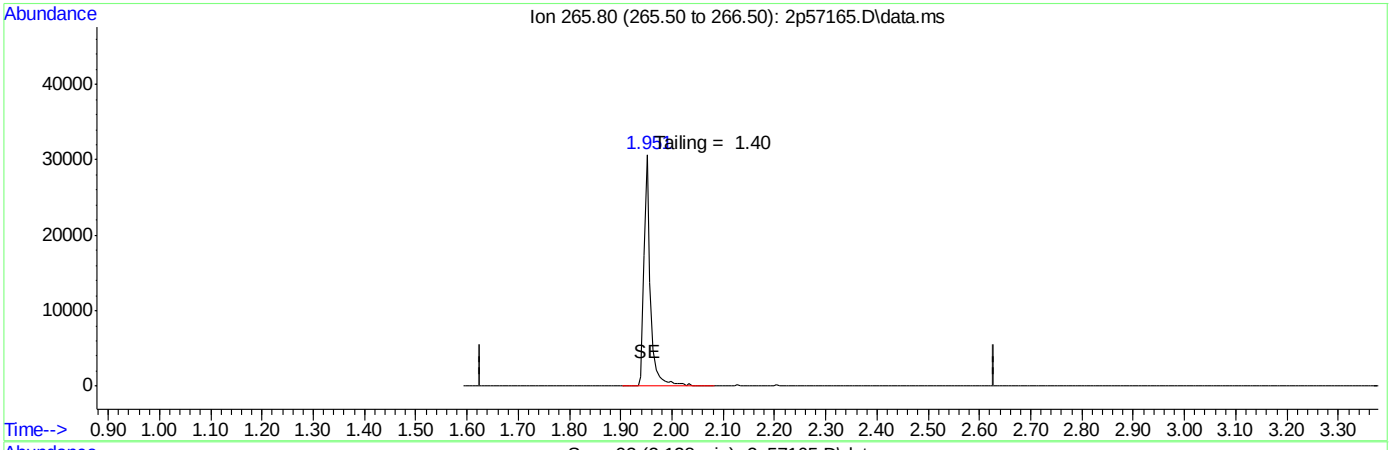
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
353.10	121	424.05	251				
354.05	269	440.00	96				
365.00	1574	441.10	5292				
366.00	135	442.10	30014				

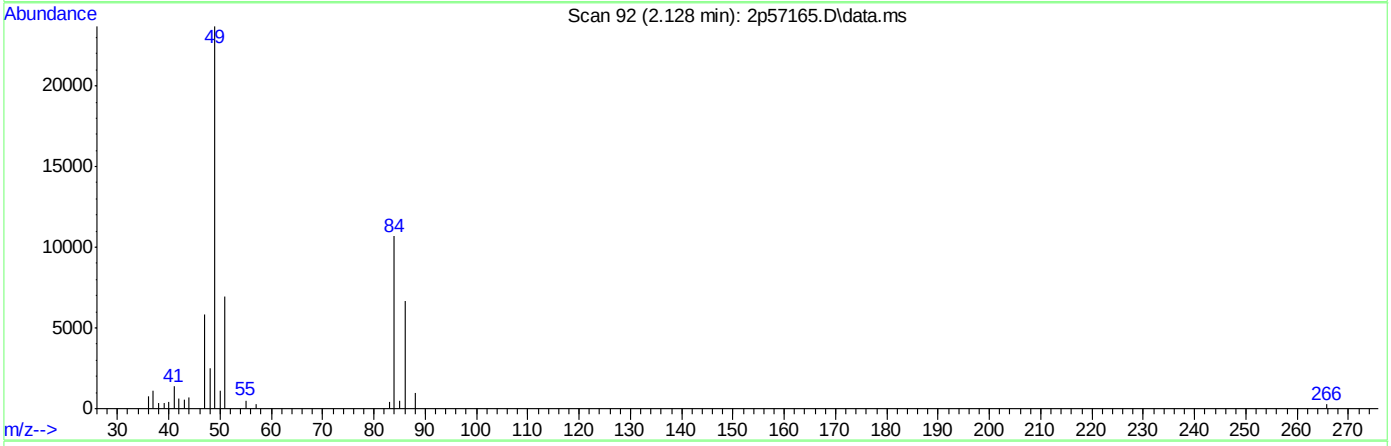
372.05	621	443.10	5859
402.00	236	444.05	517
403.00	243		
421.10	165		
422.00	164		
422.90	236		
423.10	1412		

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\2P2492\
Data File : 2p57165.D
Acq On    : 11 Mar 2016  10:12 pm
Operator  : sarad
Sample    : dftpp
Misc      : op91532,e2p2492
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Mar 11 22:16:02 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title  :
QLast Update : Tue Aug 11 08:57:54 2015
Response via : Initial Calibration
```





TIC: 2p57165.D\data.ms

(1) Pentacholorphenol

2.128min (-2.128) 0.00ppb

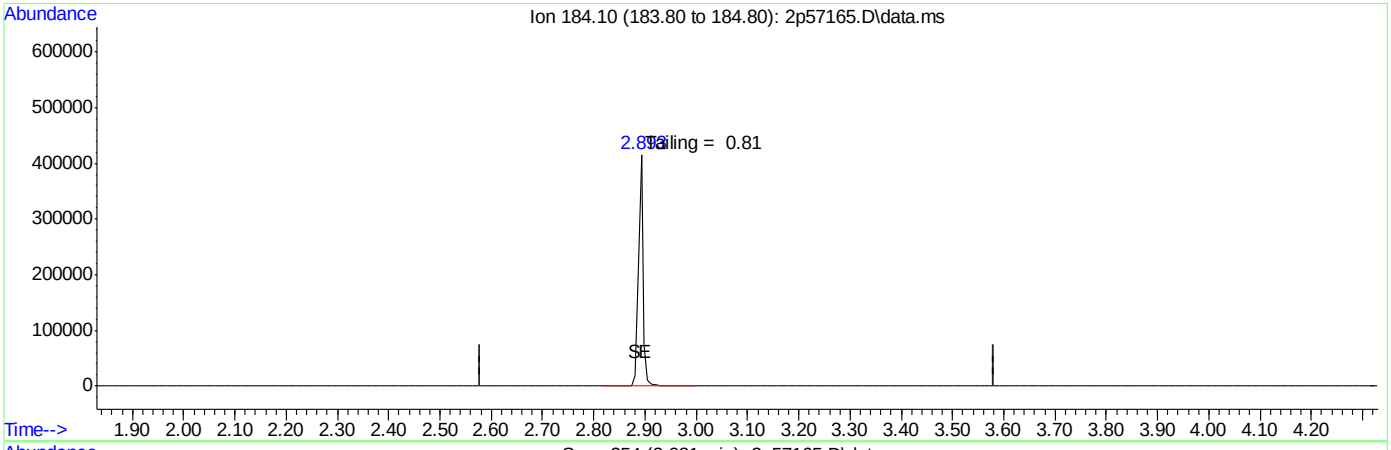
response 0

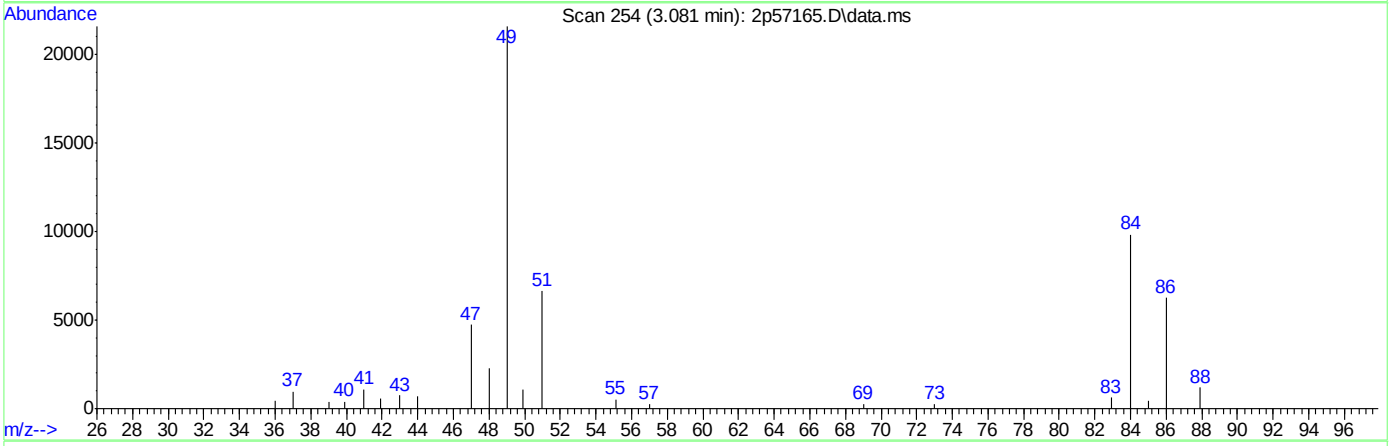
Ion	Exp%	Act%
265.80	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2492\
Data File : 2p57165.D
Acq On : 11 Mar 2016 10:12 pm
Operator : sarad
Sample : dftpp
Misc : op91532,e2p2492
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 11 22:16:02 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title :
QLast Update : Tue Aug 11 08:57:54 2015
Response via : Initial Calibration





TIC: 2p57165.D\data.ms

(2) Benzidine

3.081min (-3.081) 0.00ppb

response 0

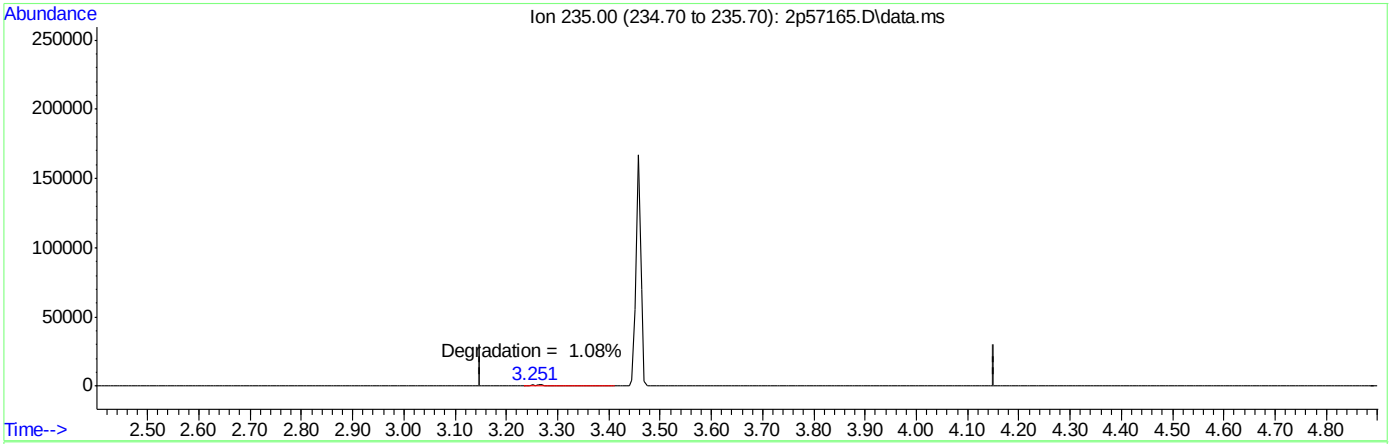
Ion	Exp%	Act%
184.10	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

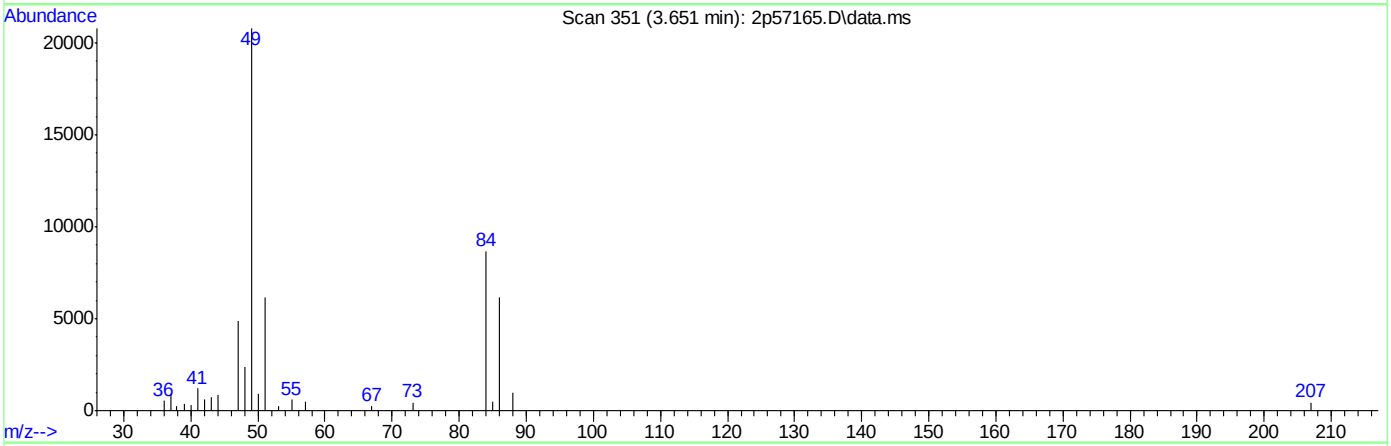
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2492\
Data File : 2p57165.D
Acq On : 11 Mar 2016 10:12 pm
Operator : sarad
Sample : dftpp
Misc : op91532,e2p2492
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 11 22:16:02 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title :
QLast Update : Tue Aug 11 08:57:54 2015
Response via : Initial Calibration





TIC: 2p57165.D\data.ms

(3) PP-DDT

3.651min (-3.651) 0.00ppb

response 0

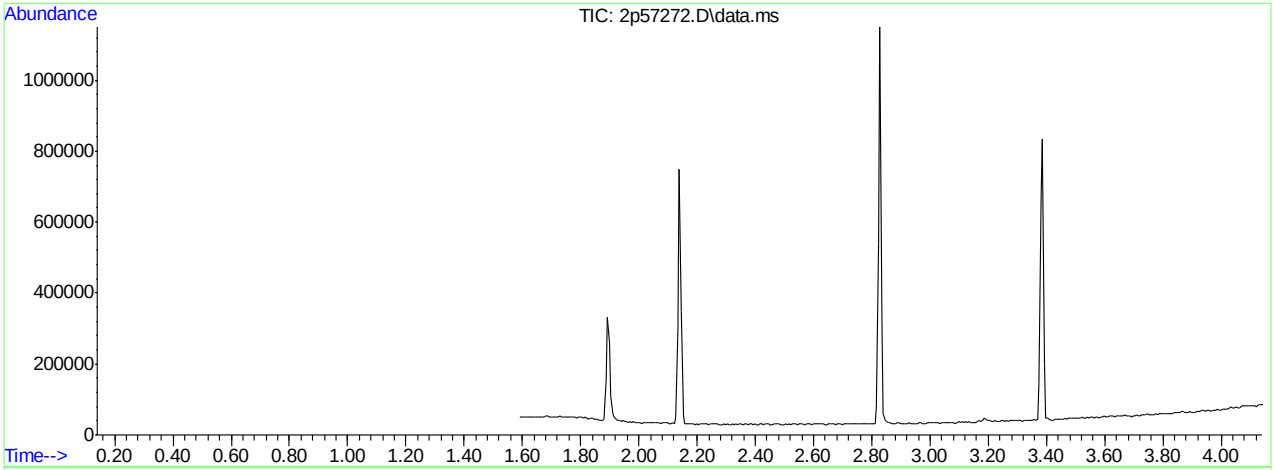
Ion	Exp%	Act%
235.00	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

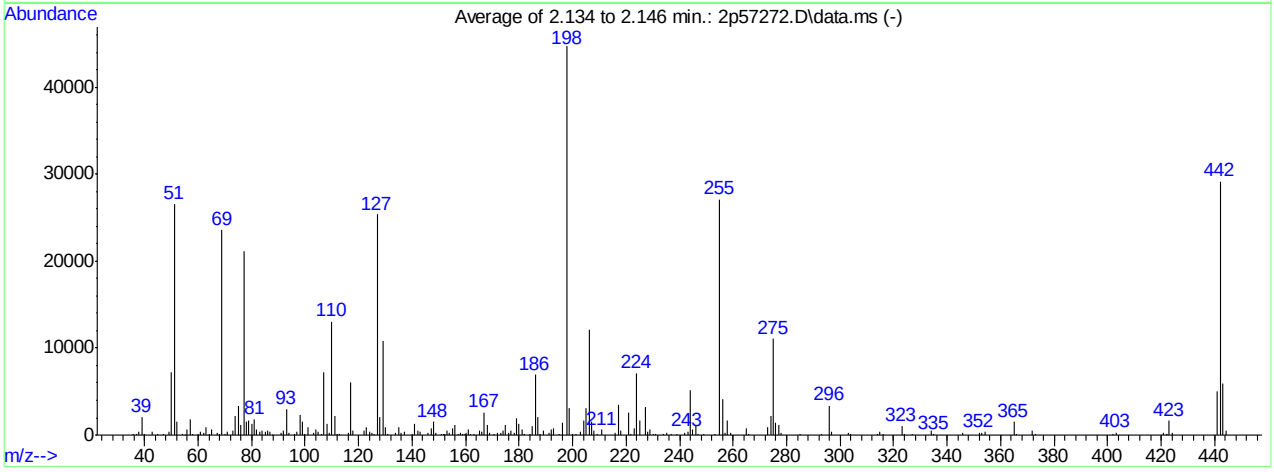
SGS ACCUTEST JC16204

DFTPP

Data File : C:\msdchem\1\DATA\2P2497\2p57272.D Vial: 1
Acq On : 16 Mar 2016 7:11 pm Operator: sarad
Sample : DFTPP Inst : MS2P
Misc : op92038,e2p2497 Multiplr: 1.00
MS Integration Params: events.e

Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M (ChemStation Integrator)
Title :





AutoFind: Scans 93, 94, 95; Background Corrected with Scan 90

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	59.5	26586	PASS
68	69	0.00	2	0.8	184	PASS
69	198	0.00	100	52.8	23568	PASS
70	69	0.00	2	0.3	77	PASS
127	198	40	60	56.8	25352	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	44667	PASS
199	198	5	9	6.9	3091	PASS
275	198	10	30	24.7	11047	PASS
365	198	1	100	3.4	1513	PASS
441	443	0.01	100	84.6	4991	PASS
442	198	40	100	65.2	29143	PASS
443	442	17	23	20.2	5898	PASS

2p57272.D DFTPP2P.M Wed Mar 16 19:17:34 2016 RPT1

Average of 2.134 to 2.146 min.: 2p57272.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	86	52.00	1543	65.05	594	78.05	1602
36.90	136	54.00	85	67.05	201	79.00	1624
38.00	419	55.05	66	68.00	184	80.00	1291
39.00	2081	56.00	675	69.00	23568	81.00	1836
39.95	89	57.00	1770	70.00	77	82.00	667
43.00	421	58.00	84	71.05	335	83.00	396
44.95	196	60.00	120	73.05	500	84.00	520
46.95	109	61.00	398	74.00	2162	85.00	329
49.00	397	61.95	304	75.00	3411	85.90	499
50.05	7194	63.00	918	76.10	1105	86.95	363
51.05	26586	64.00	84	77.05	21199	87.85	15

Average of 2.134 to 2.146 min.: 2p57272.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
91.00	301	103.95	652	117.00	6095	131.00	166
92.00	487	105.00	407	117.95	469	133.95	293
93.00	2993	105.90	144	122.00	496	135.00	960
93.95	249	107.00	7255	123.05	858	135.95	287
96.10	146	108.00	1295	124.00	431	137.00	445
97.05	372	109.10	267	125.00	289	140.00	93
98.05	2324	110.00	13028	125.80	88	141.00	1272
99.00	1534	111.00	2161	127.00	25352	141.95	485
100.00	94	112.00	162	128.05	2066	142.95	341
101.00	871	113.00	84	129.00	10803	145.95	212
103.00	294	115.95	300	130.00	951	147.00	793

Average of 2.134 to 2.146 min.: 2p57272.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
147.95	1539	159.00	103	170.80	112	181.90	102
149.00	273	159.80	104	171.95	277	183.95	192
151.10	105	159.95	309	173.05	288	185.05	1010
151.70	86	160.95	588	174.00	514	186.00	6941
152.00	95	161.90	95	175.00	1184	187.00	2008
153.00	504	163.00	88	175.90	242	188.00	115
154.00	257	165.00	553	176.95	553	189.00	475
155.00	797	166.10	349	178.00	213	191.05	258
156.00	1170	167.00	2592	178.90	1994	192.00	704
157.10	98	168.00	1127	180.00	1262	192.95	770
157.90	261	169.00	258	181.00	697	195.10	85

Average of 2.134 to 2.146 min.: 2p57272.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
196.00	1462	209.00	121	228.00	375	245.00	709
198.00	44667	211.00	631	229.05	709	245.95	1123
198.90	3091	216.05	276	230.00	90	246.95	195
199.90	137	217.00	3422	231.00	162	249.10	128
201.40	179	217.95	519	234.00	133	253.10	97
203.00	435	221.00	2614	235.00	241	255.00	27120
204.00	1740	221.90	131	237.00	143	256.00	4175
205.00	3131	223.05	824	239.10	105	257.05	281
206.05	12071	224.00	7088	241.95	313	257.95	1743
207.00	1600	225.00	1669	243.10	396	258.90	279
208.00	528	227.00	3205	244.00	5142	264.95	774

Average of 2.134 to 2.146 min.: 2p57272.D\data.ms
DFTPP
Modified:subtracted

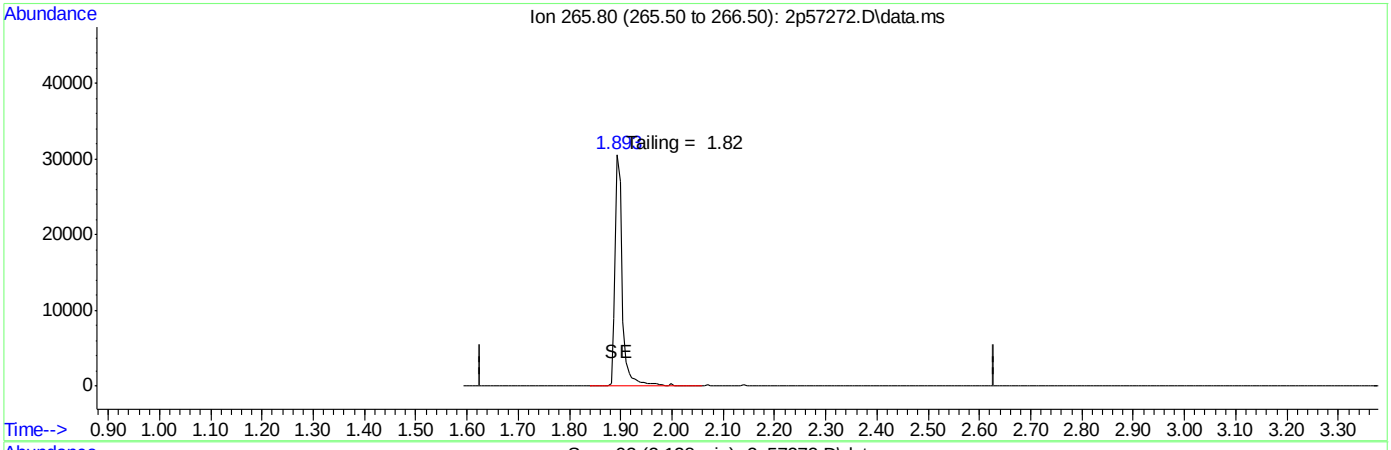
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
265.90	87	302.95	323	352.00	302	422.10	107
273.00	923	303.90	88	353.05	252	423.05	1638
274.00	2178	314.00	134	354.10	330	424.05	284
275.00	11047	314.95	445	365.00	1513	441.10	4991

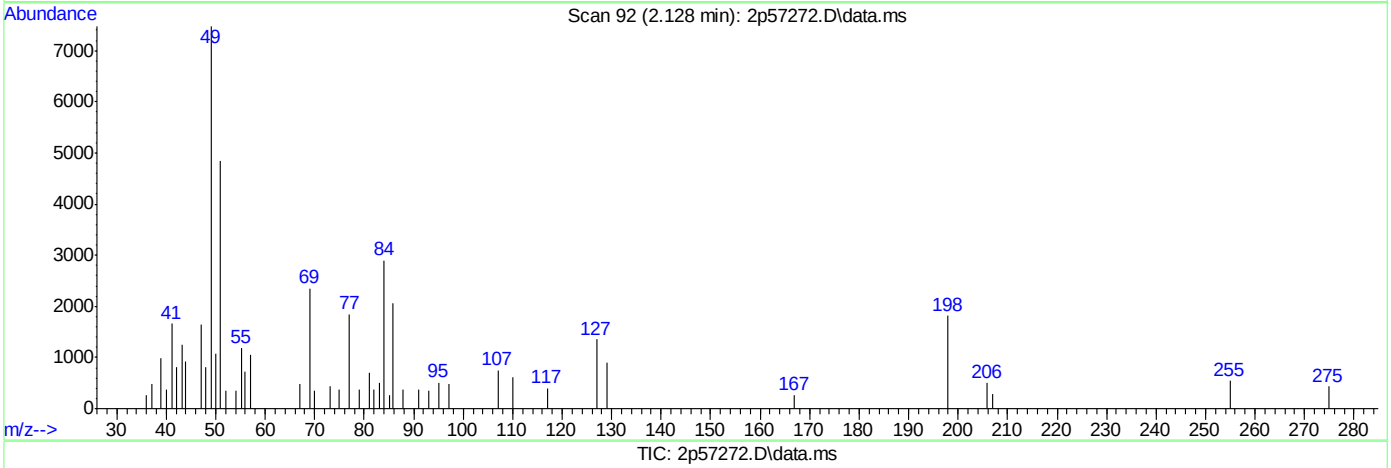
276.00	1478	316.00	120	365.95	194	442.10	29143
277.00	1140	323.05	1093	371.95	543	443.10	5898
277.90	213	324.00	155	373.00	97	444.10	560
285.00	111	326.90	195	401.90	193		
292.90	126	334.00	511	403.10	274		
296.00	3402	335.00	119	421.00	223		
296.95	382	345.85	233	421.90	115		

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57272.D
Acq On    : 16 Mar 2016   7:11 pm
Operator  : sarad
Sample    : DFTPP
Misc      : op92038,e2p2497
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Mar 16 19:15:27 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title  :
QLast Update : Tue Aug 11 08:57:54 2015
Response via : Initial Calibration
```





TIC: 2p57272.D\data.ms

(1) Pentacholorphenol

2.128min (-2.128) 0.00ppb

response 0

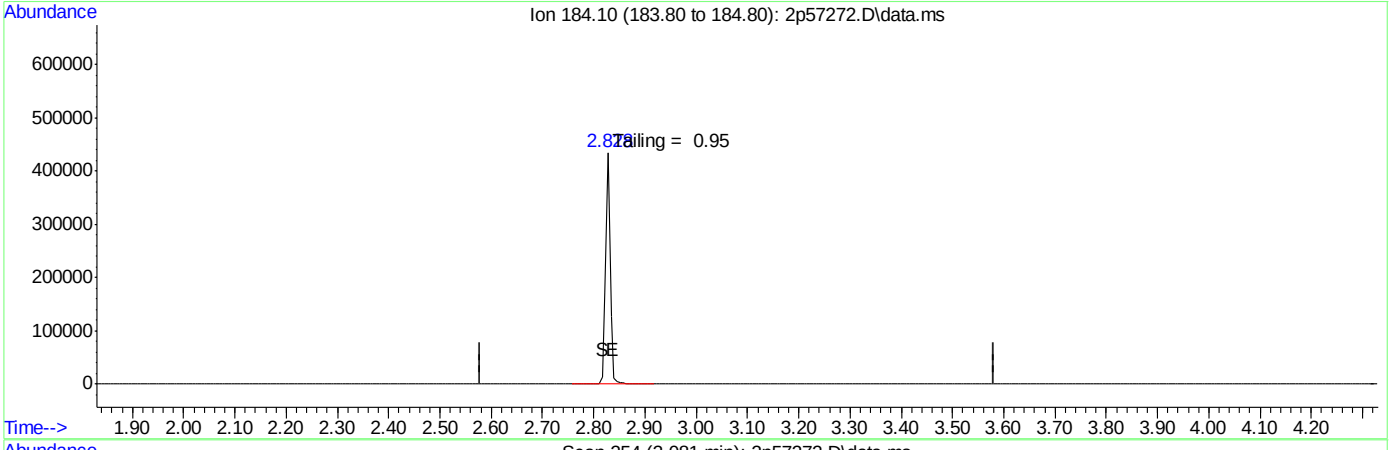
Ion	Exp%	Act%
265.80	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

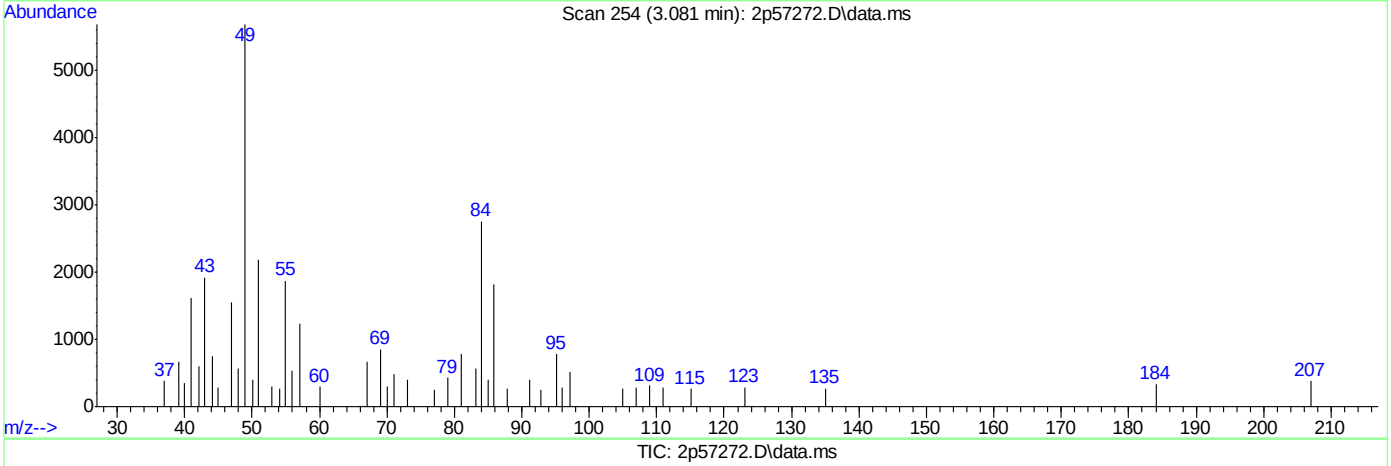
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57272.D
Acq On : 16 Mar 2016 7:11 pm
Operator : sarad
Sample : DFTPP
Misc : op92038,e2p2497
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 19:15:27 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title :
QLast Update : Tue Aug 11 08:57:54 2015
Response via : Initial Calibration





TIC: 2p57272.D\data.ms

(2) Benzidine

3.081min (-3.081) 0.00ppb

response 0

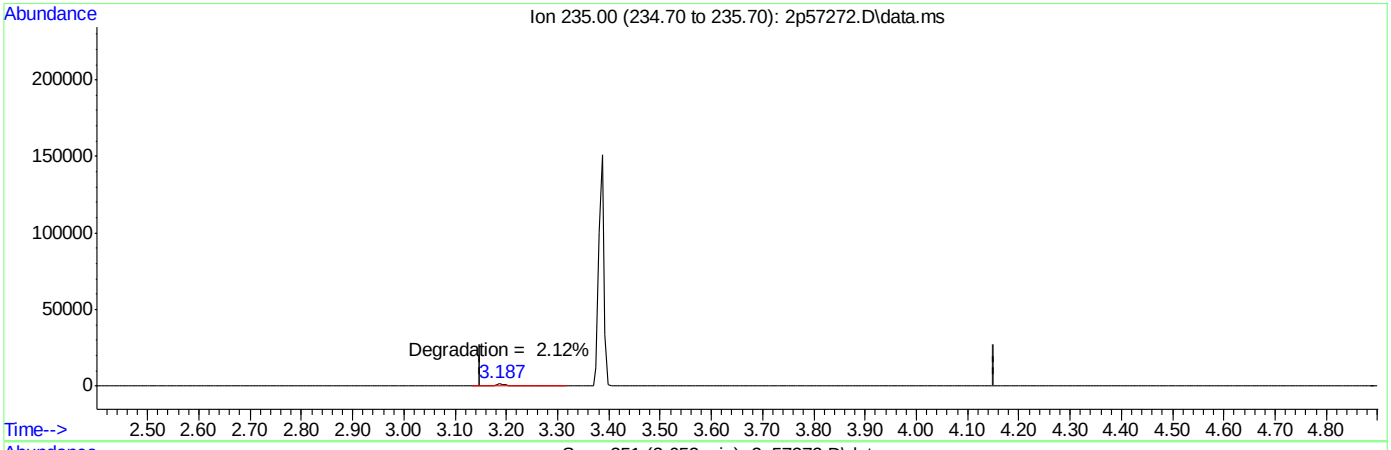
Ion	Exp%	Act%
184.10	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

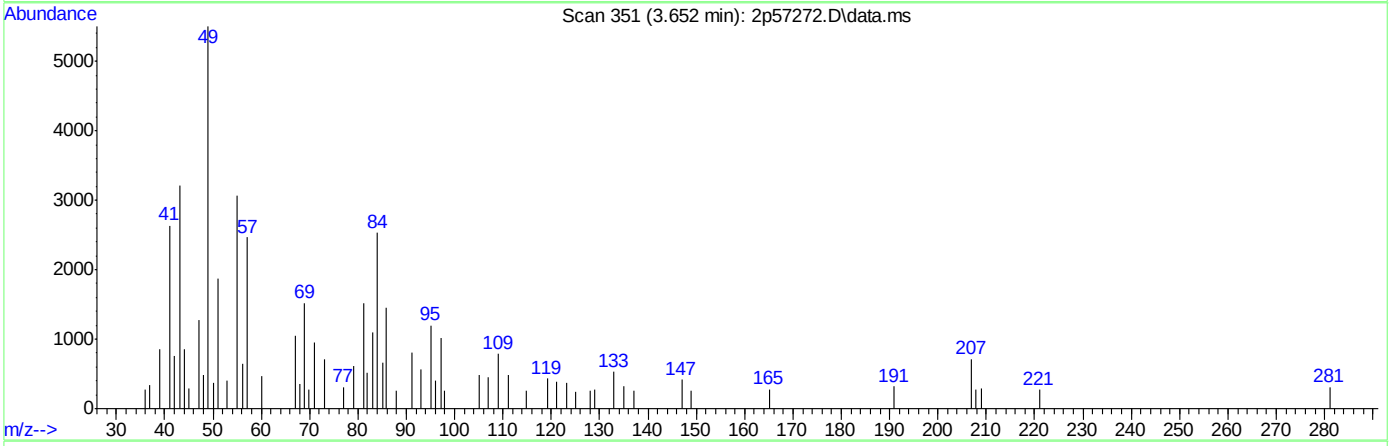
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57272.D
Acq On : 16 Mar 2016 7:11 pm
Operator : sarad
Sample : DFTPP
Misc : op92038,e2p2497
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 19:15:27 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title :
QLast Update : Tue Aug 11 08:57:54 2015
Response via : Initial Calibration





TIC: 2p57272.D\data.ms

(3) PP-DDT

3.651min (-3.651) 0.00ppb

response 0

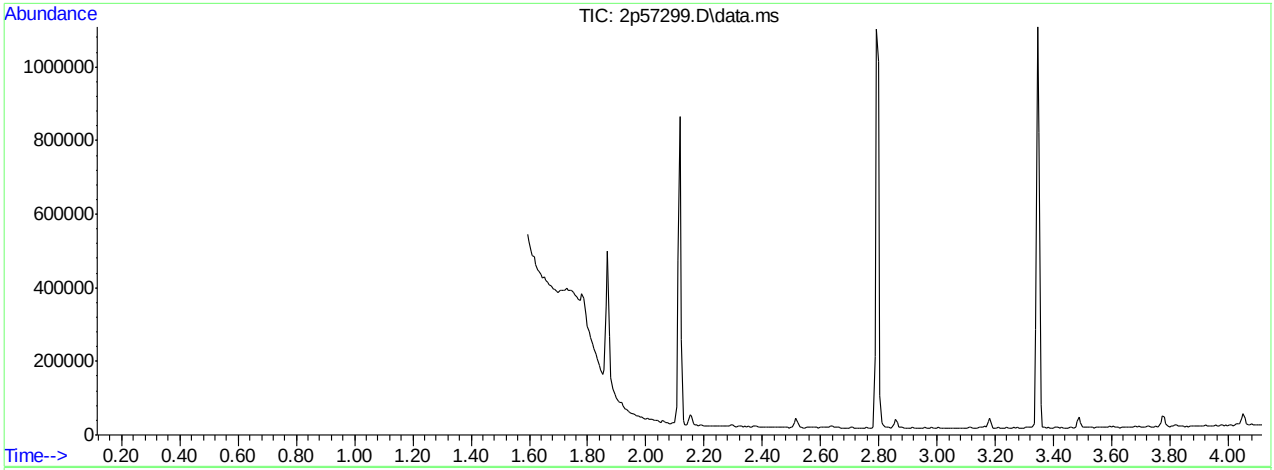
Ion	Exp%	Act%
235.00	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

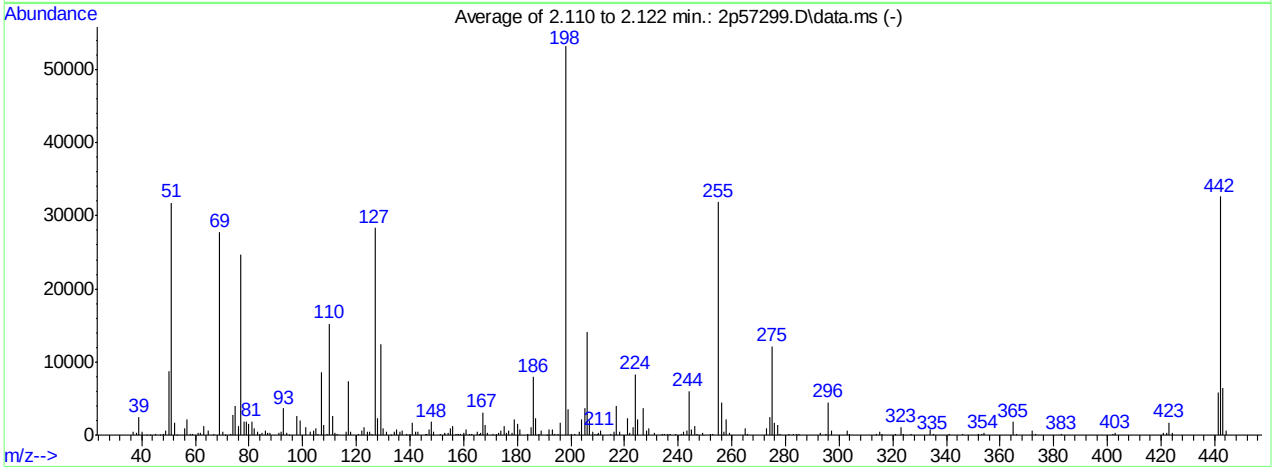
SGS ACCUTEST JC16204

DFTPP

Data File : C:\msdchem\1\DATA\2P2498\2p57299.D Vial: 1
Acq On : 17 Mar 2016 9:32 am Operator: robertl1
Sample : DFTPP Inst : MS2P
Misc : op92038,e2p2498 Multiplr: 1.00
MS Integration Params: events.e

Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M (ChemStation Integrator)
Title :





AutoFind: Scans 89, 90, 91; Background Corrected with Scan 86

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	59.8	31802	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	52.2	27763	PASS
70	69	0.00	2	1.4	402	PASS
127	198	40	60	53.3	28346	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	53152	PASS
199	198	5	9	6.6	3502	PASS
275	198	10	30	22.9	12154	PASS
365	198	1	100	3.4	1815	PASS
441	443	0.01	100	90.4	5852	PASS
442	198	40	100	61.3	32597	PASS
443	442	17	23	19.9	6473	PASS

2p57299.D DFTPP2P.M Thu Mar 17 09:37:39 2016 RPT1

Average of 2.110 to 2.122 min.: 2p57299.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.00	474	51.05	31802	67.10	103	80.00	1489
37.90	284	52.10	1634	69.00	27763	81.00	1908
39.10	2532	53.00	53	70.05	402	82.00	868
40.05	480	56.00	969	71.05	9	83.00	438
42.00	10	57.00	2082	73.05	114	83.95	127
43.05	13	57.95	209	74.05	2714	84.95	323
45.00	221	59.00	86	75.00	3963	86.00	582
47.00	26	61.00	325	76.05	1237	87.00	265
47.90	126	62.05	338	77.05	24735	87.90	241
49.00	621	63.00	1280	78.00	1833	91.00	256
50.05	8770	65.00	646	79.00	1867	92.00	534

Average of 2.110 to 2.122 min.: 2p57299.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.00	3638	108.00	1311	123.00	1053	135.00	829
94.00	324	109.05	196	124.05	438	136.05	484
95.00	51	110.00	15220	125.00	437	137.05	603
98.00	2592	111.00	2592	125.80	129	138.90	113
99.00	1946	112.00	316	127.00	28346	140.10	96
101.00	1074	113.00	87	128.00	2268	141.00	1640
103.00	441	116.05	444	129.00	12368	141.95	450
104.00	650	117.00	7378	130.00	985	142.95	393
105.05	881	118.05	529	131.05	409	145.90	95
105.90	97	121.00	86	133.00	70	146.10	128
107.00	8590	122.00	630	134.00	491	147.00	727

Average of 2.110 to 2.122 min.: 2p57299.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
148.00	1799	159.00	144	171.00	101	184.00	154
149.00	506	160.00	357	172.00	219	185.00	1128
151.10	129	161.00	734	173.00	344	186.05	7903
152.90	138	162.00	84	174.05	573	187.00	2286
153.10	295	163.10	104	175.00	1223	188.05	224
154.05	317	165.00	536	176.00	306	189.00	569
155.00	883	166.00	188	176.95	669	191.00	56
156.05	1266	166.20	294	178.05	349	191.95	696
157.15	220	167.00	3096	179.00	2213	193.05	797
157.90	235	168.00	1444	180.00	1514	194.00	113
158.10	97	169.05	353	181.00	733	195.10	131

Average of 2.110 to 2.122 min.: 2p57299.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
196.00	1703	209.10	189	224.10	8302	241.00	146
198.00	53152	209.90	92	225.00	2222	242.00	474
199.00	3502	210.15	266	227.00	3693	243.05	644
200.00	168	211.00	663	228.00	585	244.05	6027
201.45	232	215.00	104	229.00	900	245.05	808
202.95	403	216.05	405	231.00	314	246.00	1305
204.10	2181	217.00	3999	234.00	164	246.90	144
205.05	3619	217.95	491	234.95	224	249.00	336
206.05	14075	221.00	2254	236.00	108	252.20	84
207.05	2058	221.95	269	236.90	224	253.00	110
208.00	534	223.10	1049	239.00	112	255.00	31872

Average of 2.110 to 2.122 min.: 2p57299.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
256.00	4391	278.00	143	314.00	93	351.80	168
257.05	412	281.15	205	315.00	441	352.00	109
258.05	2141	283.00	143	316.10	201	353.10	203
258.95	236	284.00	88	321.00	83	353.95	273

265.05	896	285.00	156	323.10	1140	365.00	1815
265.95	220	292.95	238	324.00	156	366.00	175
273.00	969	294.90	87	327.00	172	372.05	626
274.10	2515	296.00	4515	334.00	767	373.10	94
275.00	12154	296.95	631	335.00	137	383.00	114
276.00	1658	303.10	586	341.00	88	402.00	120
277.05	1331	304.00	102	346.00	227	403.05	297

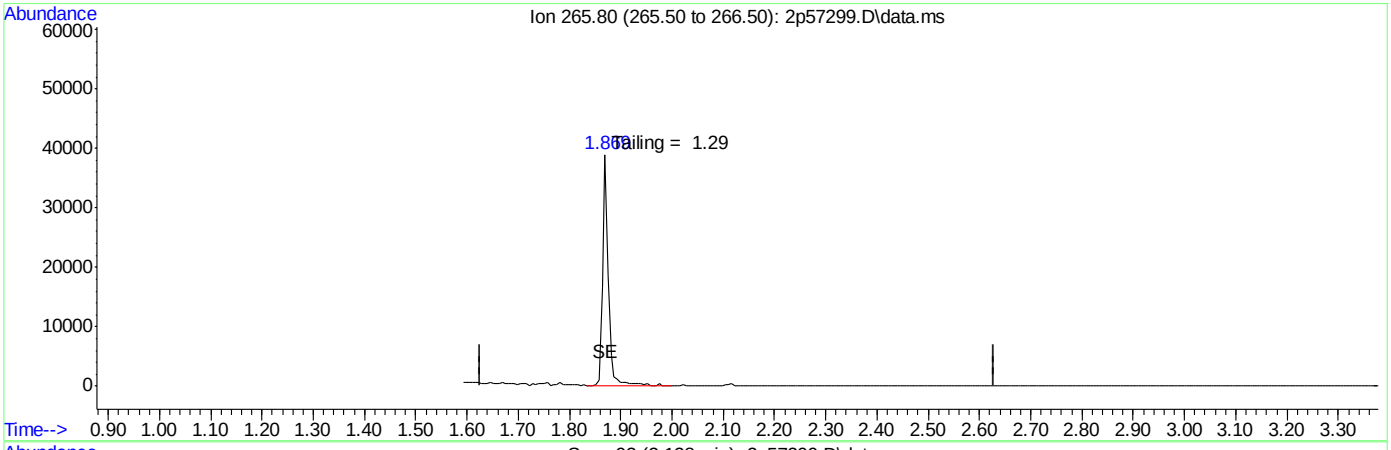
Average of 2.110 to 2.122 min.: 2p57299.D\data.ms
DFTPP
Modified:subtracted

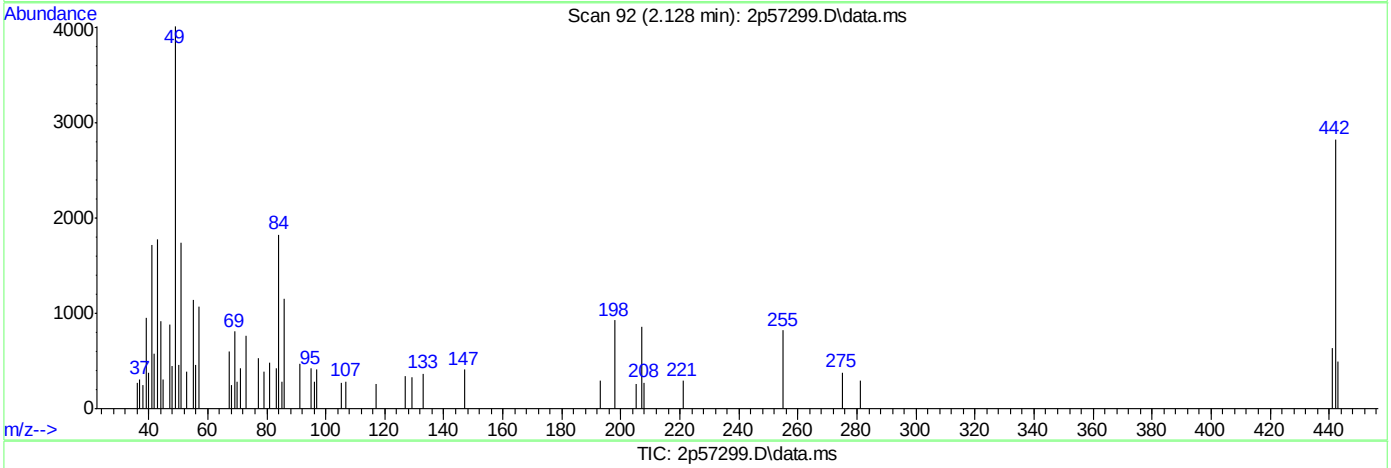
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
420.95	343						
422.05	261						
423.10	1729						
423.95	309						
441.10	5852						
442.10	32597						
443.10	6473						
444.05	544						

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\2P2498\
Data File : 2p57299.D
Acq On    : 17 Mar 2016   9:32 am
Operator  : robertl1
Sample    : DFTPP
Misc      : op92038,e2p2498
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Mar 17 09:36:27 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title  :
QLast Update : Tue Aug 11 08:57:54 2015
Response via : Initial Calibration
```





TIC: 2p57299.D\data.ms

(1) Pentacholorphenol

2.128min (-2.128) 0.00ppb

response 0

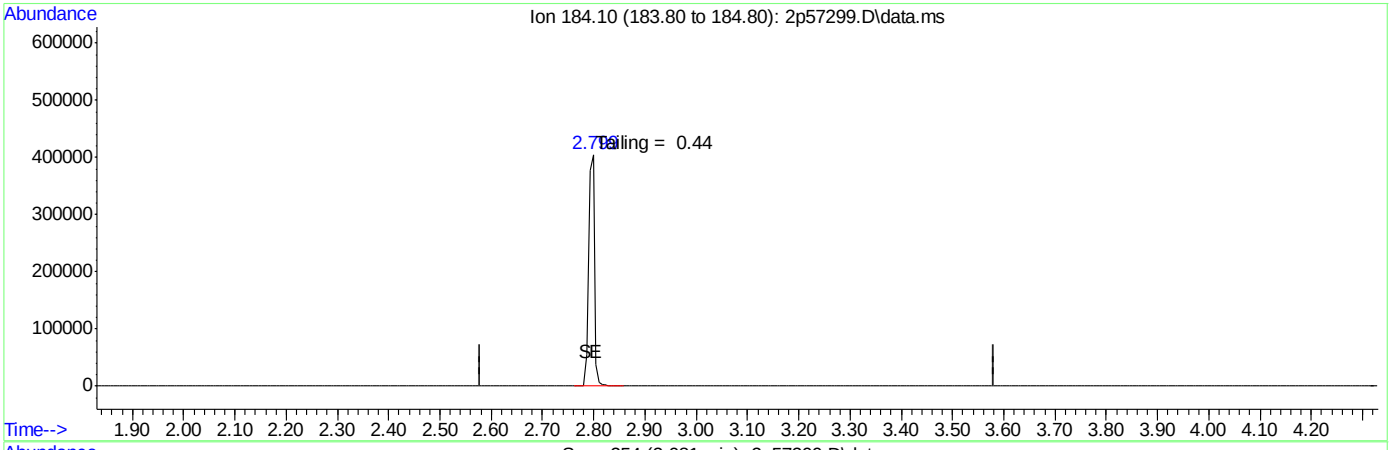
Ion	Exp%	Act%
265.80	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

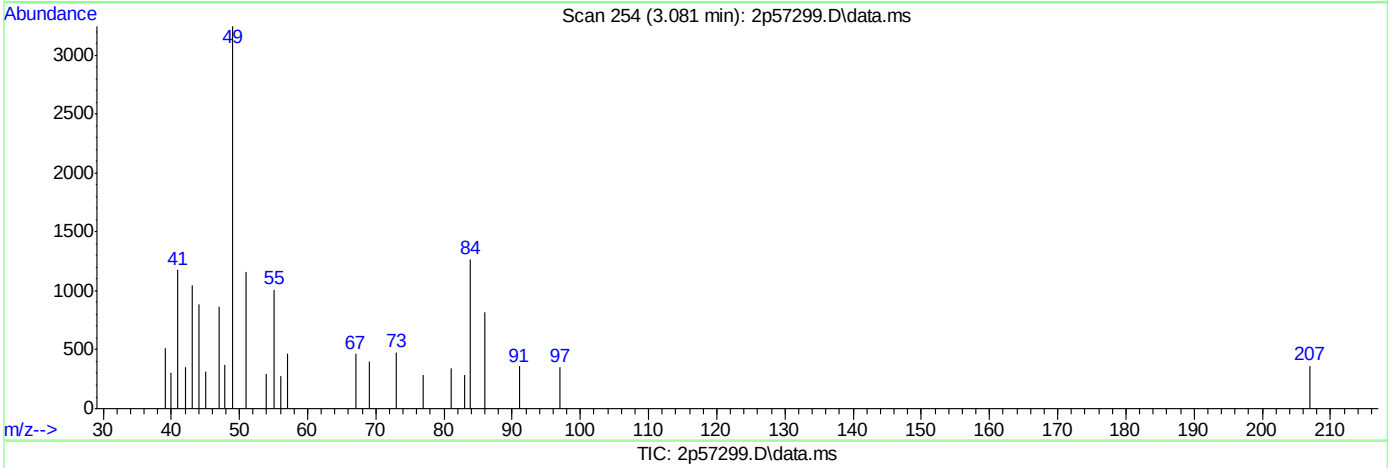
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\2P2498\
Data File : 2p57299.D
Acq On    : 17 Mar 2016   9:32 am
Operator  : robertl1
Sample    : DFTPP
Misc      : op92038,e2p2498
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Mar 17 09:36:27 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title  :
QLast Update : Tue Aug 11 08:57:54 2015
Response via : Initial Calibration
```





TIC: 2p57299.D\data.ms

(2) Benzidine

3.081min (-3.081) 0.00ppb

response 0

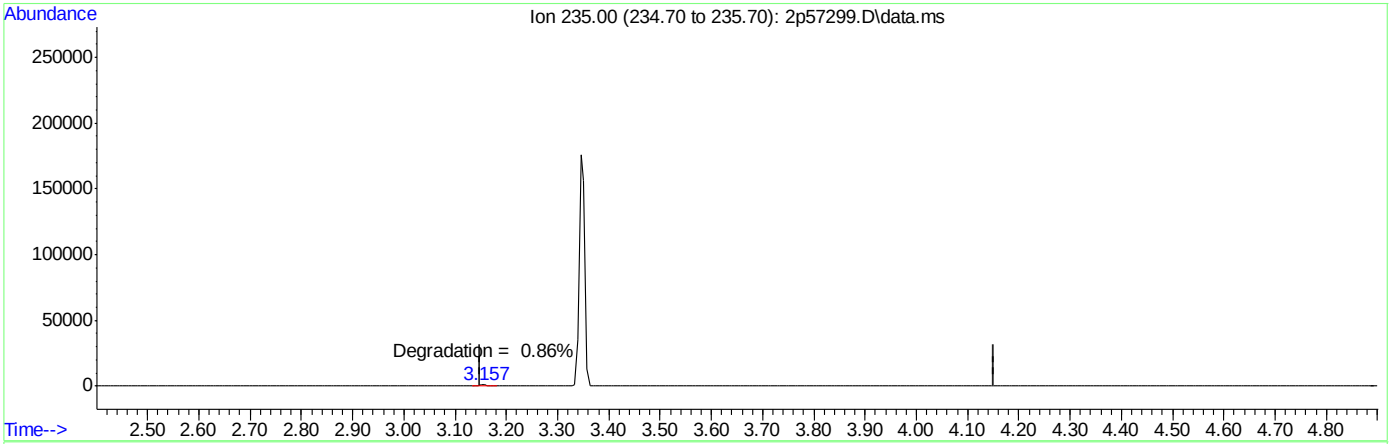
Ion	Exp%	Act%
184.10	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

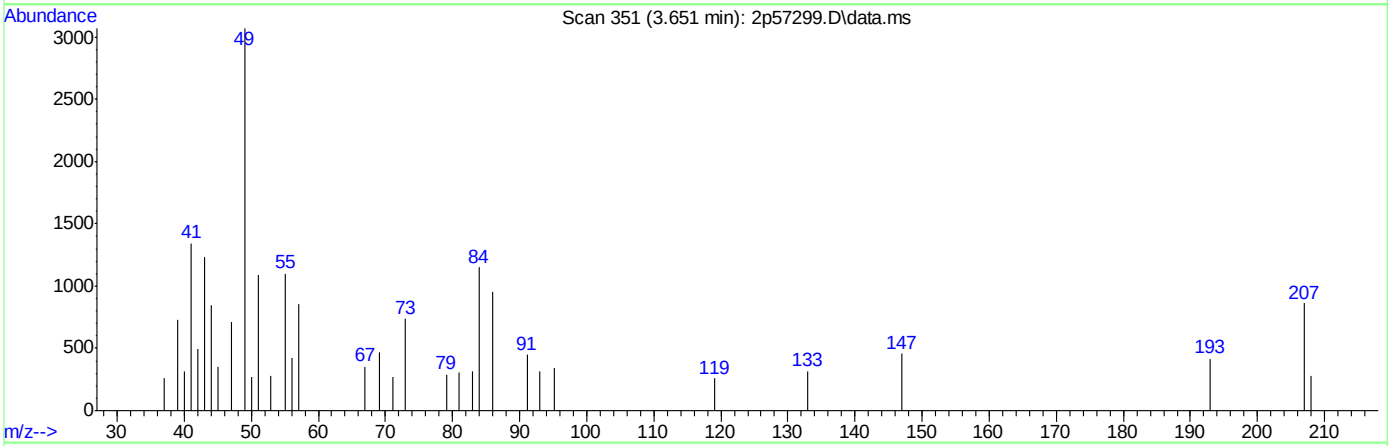
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2498\
Data File : 2p57299.D
Acq On : 17 Mar 2016 9:32 am
Operator : robertl1
Sample : DFTPP
Misc : op92038,e2p2498
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 17 09:36:27 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP2P.M
Quant Title :
QLast Update : Tue Aug 11 08:57:54 2015
Response via : Initial Calibration





TIC: 2p57299.D\data.ms

(3) PP-DDT

3.651min (-3.651) 0.00ppb

response 0

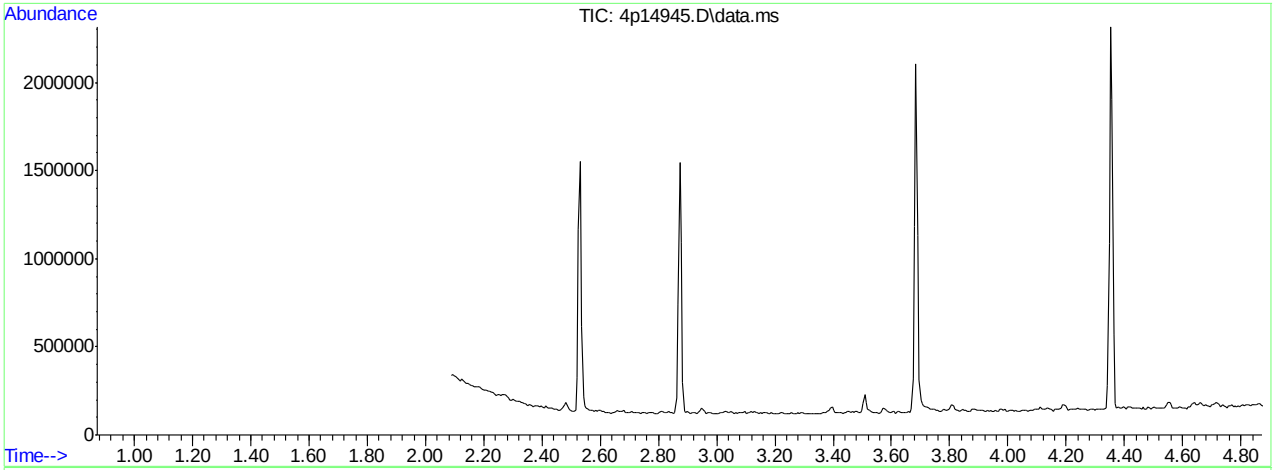
Ion	Exp%	Act%
235.00	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

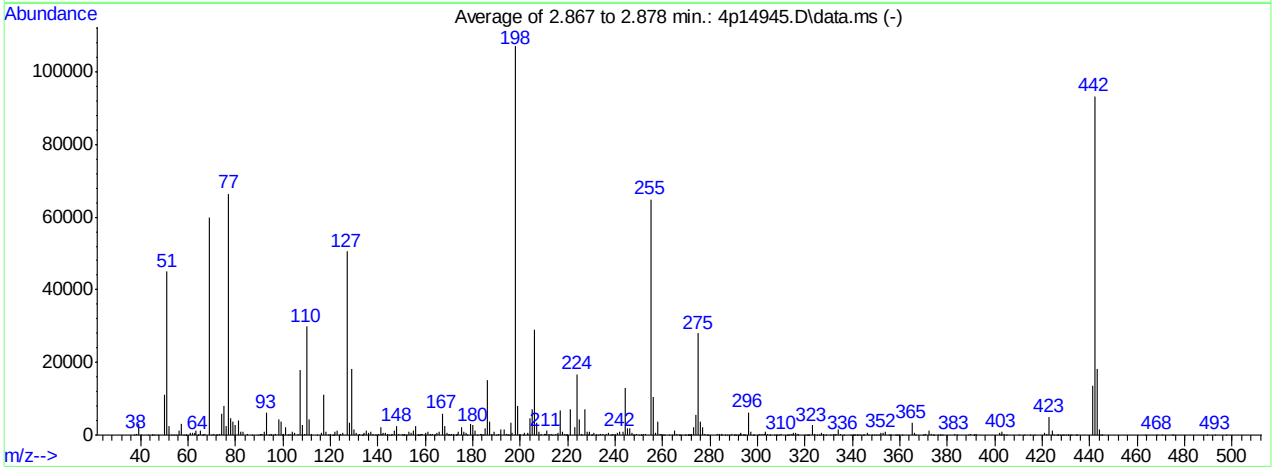
SGS ACCUTEST JC16204

DFTPPR

Data File : C:\msdchem\1\DATA\e4p767\4p14945.D Vial: 1
Acq On : 1 Feb 2016 4:06 pm Operator: juliusj
Sample : dftpp Inst : MS4P
Misc : op90759a,e4p767 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP4P.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS





AutoFind: Scans 147, 148, 149; Background Corrected with Scan 142

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	42.0	44967	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	56.0	59960	PASS
70	69	0.00	2	0.0	24	PASS
127	198	40	60	47.2	50540	PASS
197	198	0.00	1	0.5	542	PASS
198	198	100	100	100.0	106984	PASS
199	198	5	9	7.4	7920	PASS
275	198	10	30	26.2	27999	PASS
365	198	1	100	3.1	3301	PASS
441	443	0.10	100	73.8	13533	PASS
442	198	40	100	87.2	93328	PASS
443	442	17	23	19.6	18332	PASS

4p14945.D DFTPP4P.M Tue Feb 02 09:03:45 2016

Average of 2.867 to 2.878 min.: 4p14945.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.15	44	52.10	2342	63.00	558	72.00	111
38.10	378	53.00	108	63.15	1288	72.20	78
39.15	2964	54.00	62	64.10	60	73.10	317
40.10	8	55.05	158	64.30	152	74.05	5768
43.10	53	56.10	1247	65.15	1155	75.10	8137
44.90	155	57.10	3197	66.00	115	76.10	2417
45.15	49	58.10	131	66.20	10	77.10	66502
45.80	47	59.00	102	67.10	290	78.10	4583
47.10	89	59.20	102	69.10	59960	79.10	3647
50.05	11154	61.05	729	70.10	24	80.05	2767
51.10	44967	62.10	770	71.10	254	81.10	3994

Average of 2.867 to 2.878 min.: 4p14945.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
82.10	1019	95.00	160	104.00	994	117.10	11165
83.10	908	95.20	409	105.05	739	118.10	1020
85.10	167	96.10	117	106.15	287	119.00	123
87.00	108	96.95	298	107.10	17904	120.05	257
89.20	132	98.10	4470	108.10	2712	121.15	104
90.10	111	99.10	3771	109.15	205	121.40	107
90.90	326	99.90	125	110.10	29869	122.10	787
91.05	442	100.05	404	111.10	4412	123.10	1149
92.10	1064	101.05	2176	112.00	459	123.90	93
93.10	6151	102.05	33	114.20	28	124.10	342
94.10	74	103.05	367	116.10	766	125.15	734

Average of 2.867 to 2.878 min.: 4p14945.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
127.10	50540	136.05	623	144.80	39	153.10	914
128.05	3348	137.20	865	145.40	43	154.10	484
129.10	18139	138.05	220	146.05	308	155.05	1093
130.05	1707	138.85	117	147.10	1254	156.15	2371
131.10	479	139.25	37	148.05	2506	156.80	55
131.80	42	140.15	166	149.05	434	157.00	153
132.10	261	141.10	2052	150.10	245	157.30	63
133.05	101	141.90	259	150.80	63	157.70	136
133.90	94	142.15	665	151.15	191	158.10	433
134.15	520	143.10	692	151.40	63	158.95	380
135.10	1348	144.15	181	152.00	90	159.90	148

Average of 2.867 to 2.878 min.: 4p14945.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
160.10	581	169.05	563	177.05	651	187.15	3727
161.05	1081	169.80	61	177.80	63	188.10	405
162.10	244	170.05	192	179.05	3035	189.15	853
162.30	89	170.60	32	180.15	2730	190.10	128
163.15	241	171.10	295	181.05	1169	191.05	216
163.90	26	172.15	167	182.10	34	192.00	1594
164.10	69	172.90	79	183.20	206	193.05	1431
165.15	656	173.20	305	183.95	268	194.15	290
166.05	1062	174.10	958	184.20	70	194.90	124
167.10	5973	175.10	2221	185.10	1912	195.20	36
168.05	2510	176.05	915	186.10	15082	196.10	3441

Average of 2.867 to 2.878 min.: 4p14945.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
196.80	542	206.10	29112	216.10	590	225.90	73
198.10	106984	207.10	3374	217.05	6725	226.05	354
199.10	7920	208.00	993	218.05	849	227.10	6991
199.90	333	209.05	461	218.85	172	228.05	863

200.10	160	210.10	420	219.10	48	228.90	104
201.10	56	210.60	308	219.60	18	229.10	994
201.55	596	211.10	1163	219.90	49	229.90	67
203.00	514	212.25	250	221.05	7085	230.10	139
203.20	316	213.10	175	223.05	2177	231.05	635
204.10	4629	213.75	68	224.10	16774	232.00	72
205.15	7120	215.05	321	225.10	4285	232.20	38

Average of 2.867 to 2.878 min.: 4p14945.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
232.95	110	243.15	918	251.90	223	262.70	17
234.00	209	244.10	13038	253.00	310	264.00	103
235.05	445	245.15	1933	255.10	64920	265.05	1237
236.05	174	246.05	1979	256.10	10623	266.10	211
237.05	516	247.10	536	257.05	572	266.80	88
238.10	139	247.70	52	258.10	3576	267.50	24
238.70	58	248.05	111	258.95	358	268.10	62
239.00	245	249.05	395	259.20	280	269.10	18
240.05	165	250.10	129	260.00	108	269.95	162
241.00	497	250.90	25	260.30	35	270.50	29
242.05	942	251.10	119	260.90	117	270.90	22

Average of 2.867 to 2.878 min.: 4p14945.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
271.10	80	279.10	71	291.10	35	297.95	65
271.40	81	283.00	392	291.90	67	298.40	23
271.60	81	284.15	263	292.30	62	299.80	21
272.20	257	284.80	78	292.50	52	301.00	176
273.05	2164	285.05	405	292.80	28	302.05	213
274.05	5454	286.20	30	293.00	487	302.80	275
275.10	27999	287.30	33	294.00	131	303.15	995
276.05	3765	288.00	17	294.30	78	304.15	300
277.10	2276	289.20	165	295.00	107	305.10	18
278.00	407	290.15	68	296.05	6303	305.30	39
278.80	20	290.75	62	297.05	1001	306.95	70

Average of 2.867 to 2.878 min.: 4p14945.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
308.00	108	316.90	32	328.05	356	340.80	77
308.20	85	317.25	175	328.80	32	341.05	153
309.05	153	319.70	134	330.90	22	341.90	25
310.00	222	320.85	152	331.95	198	342.10	113
312.20	25	321.20	120	332.50	45	343.20	42
312.80	137	321.80	21	333.00	242	344.20	44
313.30	29	323.10	2731	334.10	1532	344.90	25
314.05	318	324.05	459	335.00	407	346.10	607
314.80	146	325.10	42	336.20	100	347.00	80
315.15	494	326.05	93	339.10	53	348.10	54
316.15	529	327.00	715	340.05	71	349.20	17

Average of 2.867 to 2.878 min.: 4p14945.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
350.20	22	359.30	57	374.20	90	392.10	210
351.10	33	361.00	22	376.00	19	402.10	583
352.05	674	365.00	3301	377.00	42	402.60	42
353.05	600	366.05	528	377.20	20	403.00	888
354.05	1052	366.60	27	377.90	17	403.95	285
355.15	101	369.90	41	382.95	269	404.95	66
355.80	24	370.10	46	384.05	139	410.15	63
356.00	34	370.85	176	389.05	44	412.30	33
357.90	36	372.10	1283	390.00	233	414.90	60
358.50	20	373.10	382	391.05	112	416.80	24
358.90	43	374.00	24	391.40	75	421.10	771

Average of 2.867 to 2.878 min.: 4p14945.D\data.ms

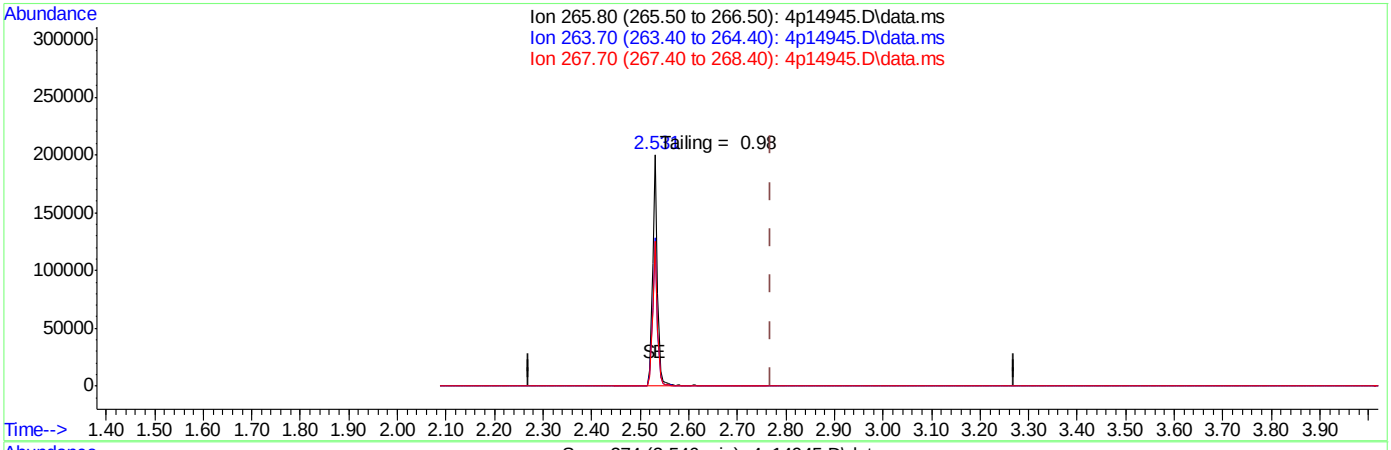
dftpp
Modified:subtracted

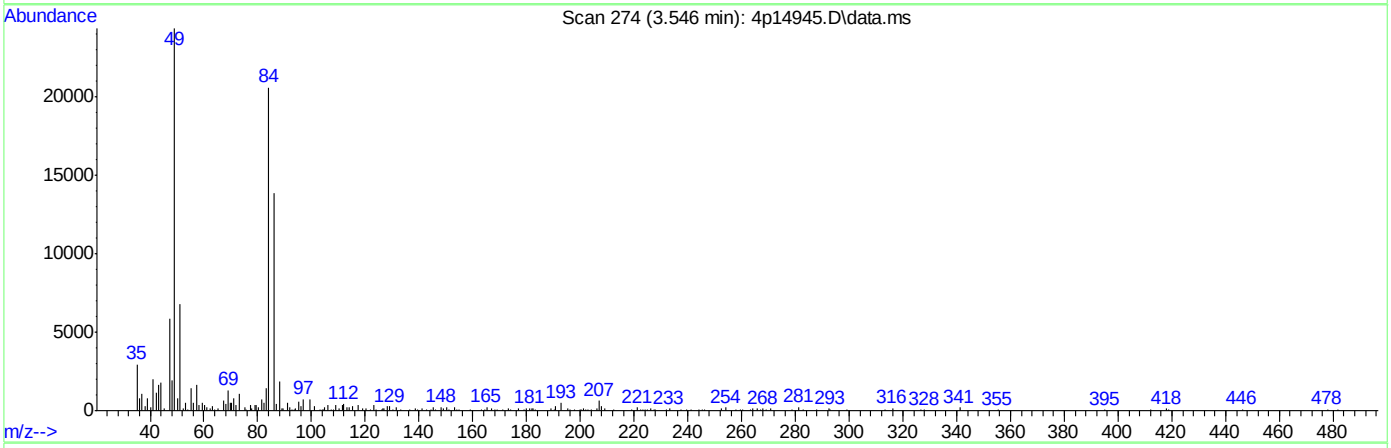
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
422.00	310	430.65	58	444.90	33		
423.00	5014	431.00	34	445.20	29		
424.10	1290	431.70	23	463.30	17		
424.85	111	432.50	91	468.20	29		
426.05	77	434.30	22	470.50	25		
426.50	18	434.80	35	474.60	18		
426.75	79	441.10	13533	475.10	19		
427.70	61	442.10	93328	489.40	20		
428.70	68	443.10	18332	492.90	34		
429.00	25	443.90	126	497.30	17		
429.70	32	444.10	1669				

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14945.D
Acq On    :  1 Feb 2016   4:06 pm
Operator  : juliusj
Sample    : dftpp
Misc      : op90759a,e4p767
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Feb 01 16:12:29 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP4P.M
Quant Title  : Semi Volatile Extractables by GC/MS
QLast Update : Thu Feb 20 12:09:44 2014
Response via : Initial Calibration
```





TIC: 4p14945.D\data.ms

(1) Pentachlorophenol (MC)

2.531min (-0.239) 75.38ng m

response 140947

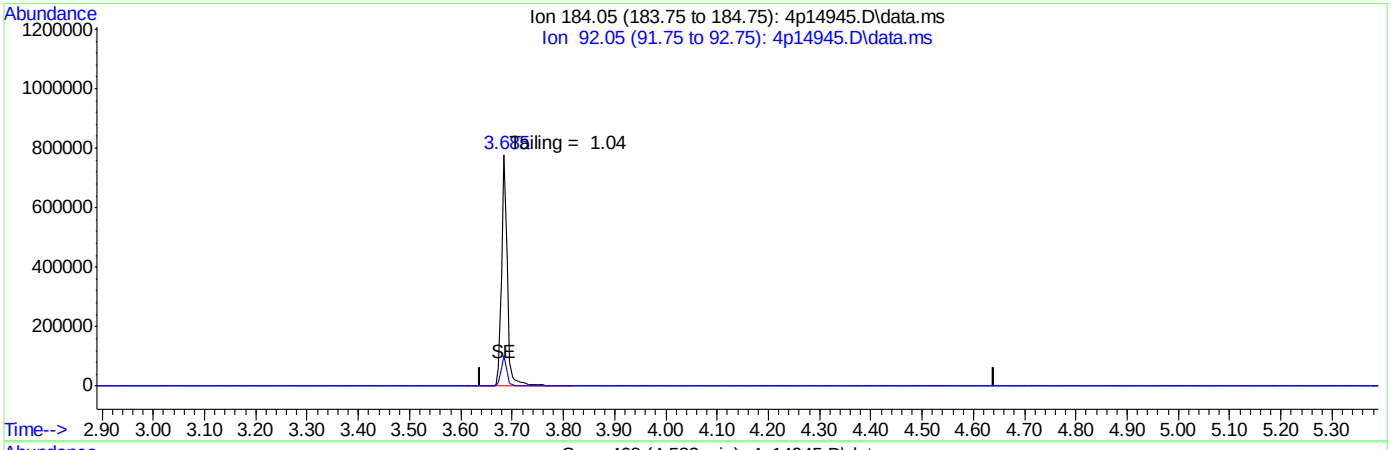
Ion	Exp%	Act%
265.80	100	100
263.70	64.70	63.87
267.70	64.60	62.62
0.00	0.00	0.00

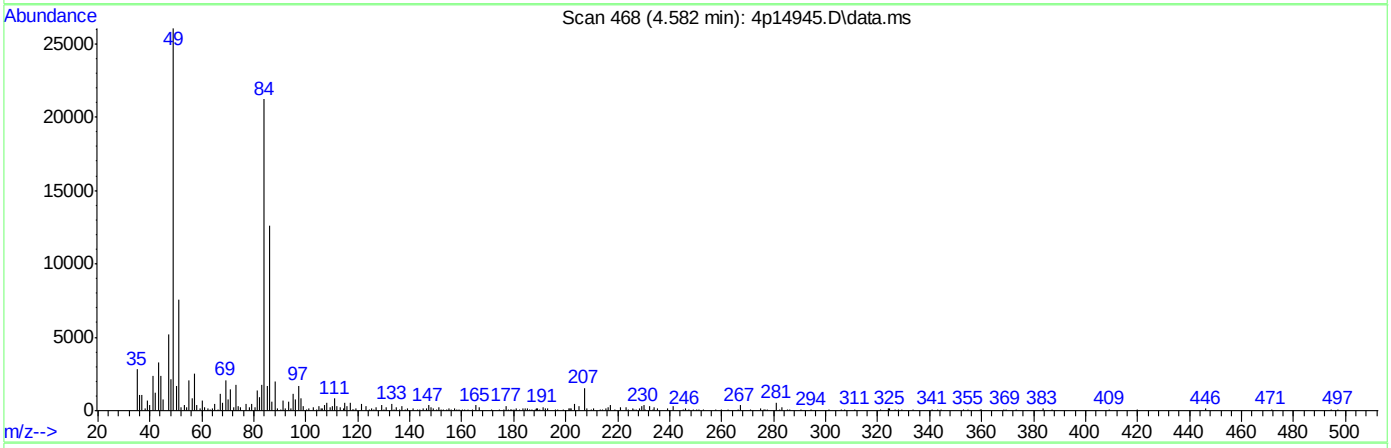
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14945.D
Acq On : 1 Feb 2016 4:06 pm
Operator : juliusj
Sample : dftpp
Misc : op90759a,e4p767
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 01 16:12:29 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP4P.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Feb 20 12:09:44 2014
Response via : Initial Calibration





TIC: 4p14945.D\data.ms

(2) Benzidine (M)

4.140min (-4.140) 0.00ng

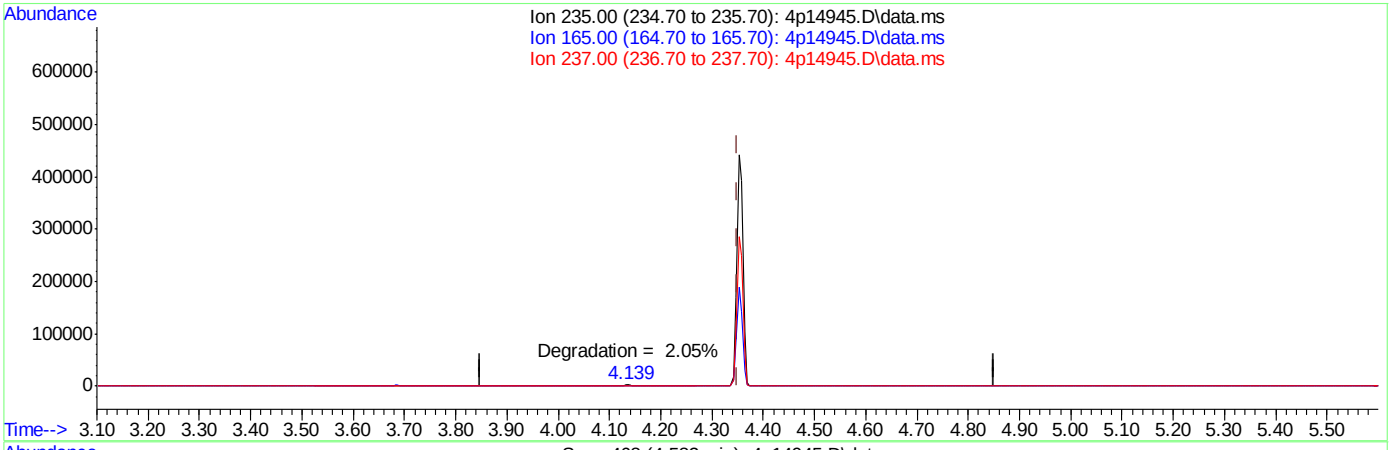
response 0

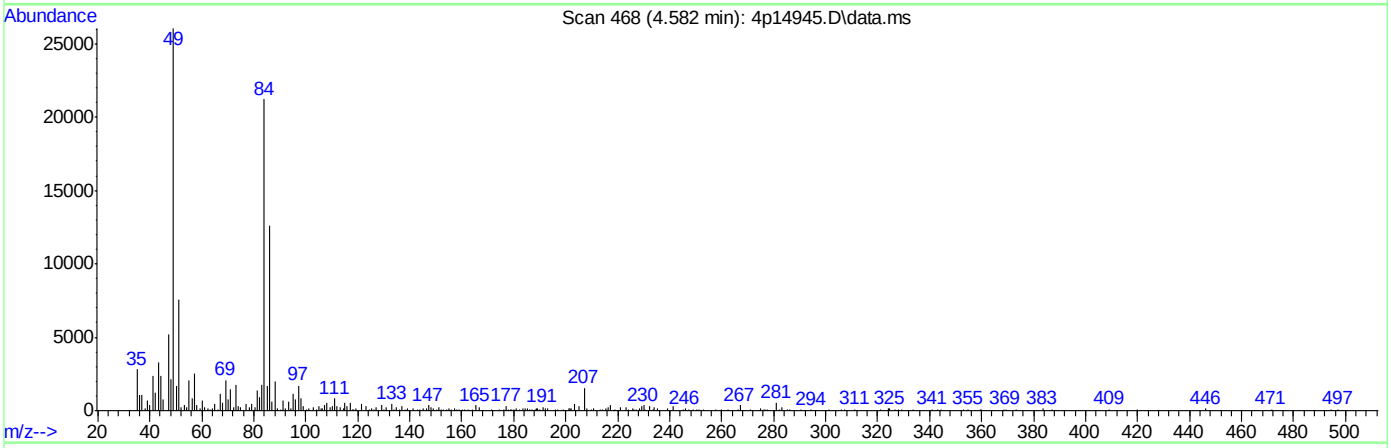
Ion	Exp%	Act%
184.05	100	0.00
92.05	11.60	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14945.D
Acq On    :  1 Feb 2016   4:06 pm
Operator  : juliusj
Sample    : dftpp
Misc      : op90759a,e4p767
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Feb 01 16:12:29 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP4P.M
Quant Title  : Semi Volatile Extractables by GC/MS
QLast Update : Thu Feb 20 12:09:44 2014
Response via : Initial Calibration
```





TIC: 4p14945.D\data.ms

(3) PP-DDT (MC)

4.352min (+0.002) 195.21ppb

response 365003

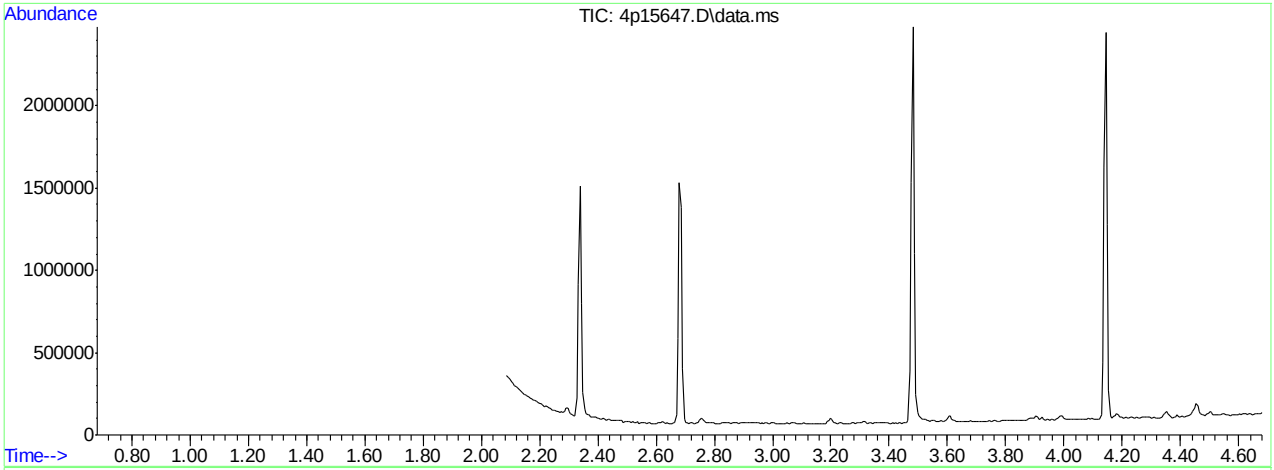
Ion	Exp%	Act%
235.00	100	100
165.00	58.00	42.58
237.00	62.20	64.43
0.00	0.00	0.00

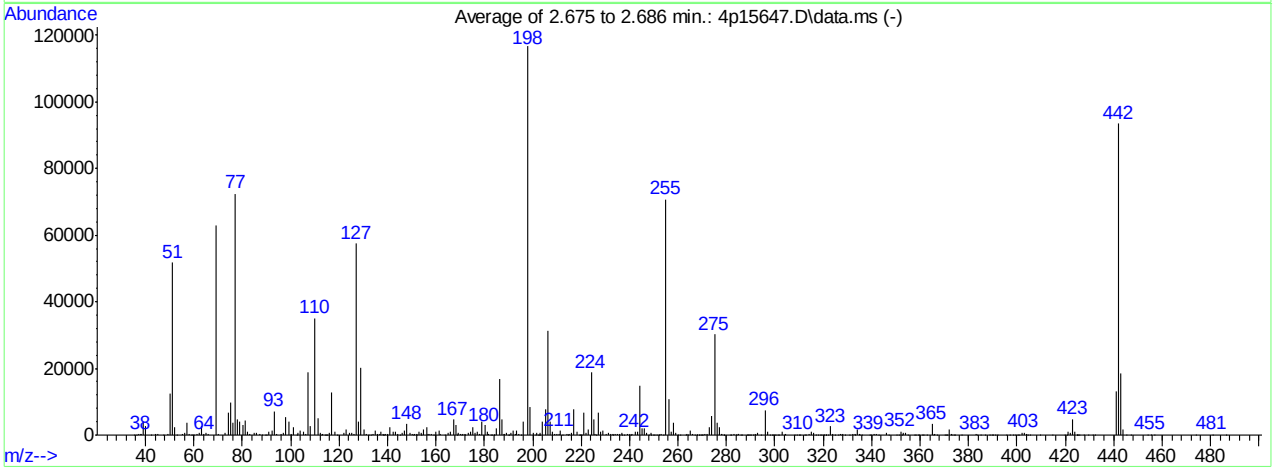
SGS ACCUTEST JC16204

DFTPPR

Data File : C:\msdchem\1\DATA\e4p805\4p15647.D Vial: 1
Acq On : 17 Mar 2016 4:01 pm Operator: juliusj
Sample : dftpp Inst : MS4P
Misc : op91877a,e4p805 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP4P.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS





AutoFind: Scans 111, 112, 113; Background Corrected with Scan 106

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	44.3	51686	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	53.8	62758	PASS
70	69	0.00	2	0.5	301	PASS
127	198	40	60	49.3	57512	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	116626	PASS
199	198	5	9	7.2	8360	PASS
275	198	10	30	25.8	30133	PASS
365	198	1	100	2.8	3247	PASS
441	443	0.10	100	72.2	13256	PASS
442	198	40	100	80.2	93515	PASS
443	442	17	23	19.6	18365	PASS

4p15647.D DFTPP4P.M Fri Mar 18 09:55:51 2016

Average of 2.675 to 2.686 min.: 4p15647.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	62	49.10	321	60.00	32	75.10	9643
36.15	144	50.05	12476	61.05	438	76.10	3608
37.25	293	51.10	51686	62.00	744	77.10	72504
38.00	321	52.10	2429	63.10	2645	78.05	4683
38.20	290	53.05	108	64.10	337	79.05	3939
39.10	3963	55.10	323	65.10	628	80.10	3123
40.00	2548	56.15	795	66.05	198	81.05	4500
42.10	91	57.10	3655	69.10	62758	82.10	1186
44.10	297	58.00	511	70.00	301	83.10	508
45.05	313	59.00	49	73.05	660	85.10	682
47.20	171	59.30	95	74.05	6699	86.00	765

Average of 2.675 to 2.686 min.: 4p15647.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.05	452	99.10	4197	111.10	5110	122.10	674
88.00	122	100.10	384	112.00	706	122.95	1632
89.35	19	101.00	2465	112.80	94	124.05	677
90.10	59	102.40	106	113.20	187	125.05	528
91.10	1173	103.05	745	114.10	30	125.90	226
92.10	1224	104.00	1457	114.30	94	127.10	57512
93.10	7115	105.05	1156	115.15	43	128.15	4153
94.05	309	106.10	238	116.05	676	129.05	20079
96.10	183	107.10	18708	117.05	12707	130.05	1630
97.00	566	108.10	2736	118.05	1111	131.10	447
98.05	5431	110.05	35009	119.10	162	132.05	94

Average of 2.675 to 2.686 min.: 4p15647.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
133.25	125	141.10	2347	151.05	289	159.05	170
134.10	511	142.15	872	151.85	80	160.10	980
135.05	1456	143.05	902	152.15	223	161.10	1460
136.00	508	144.00	225	153.05	944	162.00	378
136.70	191	145.10	17	153.80	122	163.40	142
137.10	852	145.95	626	154.10	582	165.05	567
137.95	81	147.05	1412	155.05	1595	166.05	895
138.20	262	148.05	3253	156.10	2297	167.10	4660
138.80	52	149.10	625	156.90	277	168.05	3040
139.20	287	150.15	275	157.20	473	168.80	99
140.15	279	150.80	163	158.05	490	169.05	518

Average of 2.675 to 2.686 min.: 4p15647.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.05	188	179.05	3966	188.10	244	196.05	4204
170.75	122	180.10	2895	188.30	217	198.10	116626
171.10	203	181.10	1141	189.00	831	199.05	8360
171.80	37	181.90	314	189.90	25	200.10	645
172.10	325	182.65	57	190.10	167	201.05	158
173.15	609	183.15	82	191.10	518	201.55	594
174.05	1134	183.80	171	192.00	1449	202.10	55
175.15	2299	184.00	85	193.00	353	202.30	80
176.05	810	185.15	1909	193.10	1206	202.80	53
177.00	889	186.10	16747	194.15	416	203.10	652
178.05	357	187.10	4567	195.10	171	204.10	4155

Average of 2.675 to 2.686 min.: 4p15647.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
205.10	7912	215.15	231	224.10	18835	233.15	213
206.05	31205	216.05	700	225.10	4818	234.00	333
207.10	4205	217.05	7917	225.90	257	235.00	261
208.10	949	218.05	1025	226.15	141	236.05	259

209.05	409	219.05	94	227.10	6826	236.80	61
210.00	266	219.50	79	228.10	1140	237.00	554
210.65	440	219.70	78	229.05	1457	237.95	128
211.15	1342	220.10	115	230.10	229	239.05	378
212.15	164	221.10	6756	231.10	696	240.00	242
214.05	267	222.10	680	232.10	181	240.70	73
214.70	93	223.05	1862	232.90	24	241.15	323

Average of 2.675 to 2.686 min.: 4p15647.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
242.15	912	250.95	81	260.90	38	269.50	21
243.10	1151	251.90	47	263.00	34	269.90	20
244.10	14663	252.15	99	263.85	234	270.05	67
245.10	1998	253.05	451	264.20	59	271.10	213
246.05	2198	253.80	74	265.05	1443	272.15	186
247.00	594	255.10	70813	265.95	242	273.05	2330
247.95	133	256.10	10610	266.70	86	274.05	5570
248.70	126	257.05	1060	267.80	76	275.10	30133
249.05	564	258.05	3796	268.00	146	276.05	3798
249.95	53	259.00	553	268.70	32	276.90	300
250.30	40	260.05	102	268.90	24	277.10	2508

Average of 2.675 to 2.686 min.: 4p15647.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
277.90	238	285.90	73	294.05	92	304.00	29
278.10	238	286.20	55	296.10	7414	304.20	196
278.90	37	288.50	23	297.10	1124	308.10	144
279.15	154	288.70	38	298.00	43	308.85	59
281.70	37	289.10	135	298.80	29	309.95	96
281.90	71	289.70	30	299.20	25	310.30	37
283.00	298	289.95	98	299.90	29	312.10	30
283.90	95	291.10	44	300.40	40	312.90	50
284.15	103	291.80	40	301.10	153	314.00	431
284.90	282	292.10	193	301.80	88	315.05	891
285.20	305	293.00	667	303.10	1154	316.05	548

Average of 2.675 to 2.686 min.: 4p15647.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
317.00	61	324.90	22	334.90	20	351.20	41
317.90	26	326.10	109	335.10	456	352.05	1092
318.70	24	326.95	384	336.00	18	352.70	47
319.30	17	327.70	47	339.15	77	353.05	537
320.10	70	328.05	221	339.85	55	354.15	622
320.40	52	328.95	92	341.05	317	355.15	139
321.05	164	331.00	43	342.15	206	357.90	20
321.30	30	332.05	225	342.90	17	358.20	17
322.05	174	333.00	58	346.00	627	359.10	142
323.10	2631	333.20	260	346.90	67	359.60	22
324.10	478	334.05	1739	350.10	30	361.05	53

Average of 2.675 to 2.686 min.: 4p15647.D\data.ms
dftpp
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
361.60	50	373.10	121	390.95	122	404.70	20
362.90	22	373.90	89	392.10	75	405.25	55
365.00	3247	374.30	49	395.90	20	409.80	18
365.80	177	376.95	48	397.20	16	414.90	78
366.05	244	383.00	311	398.60	54	419.65	97
367.00	31	383.80	56	399.20	33	420.90	72
370.25	136	385.15	41	400.20	25	421.05	896
370.80	71	387.10	17	400.95	153	422.10	561
371.20	110	388.90	20	402.00	607	423.10	4841
372.10	1729	389.80	59	403.05	699	424.05	974
372.80	279	390.10	176	404.10	235	424.80	55

Average of 2.675 to 2.686 min.: 4p15647.D\data.ms

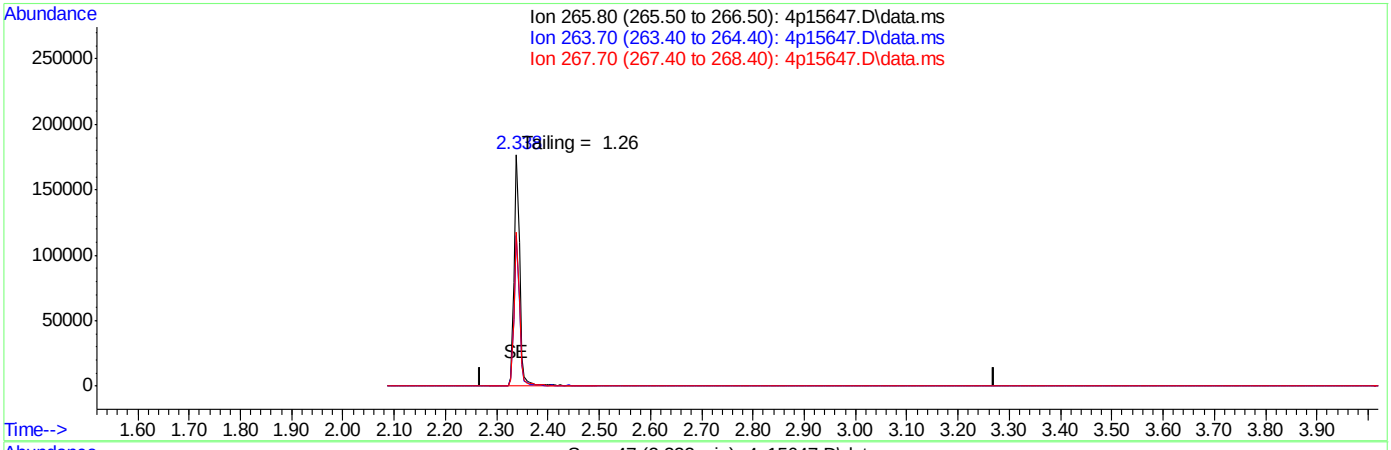
dftpp
Modified:subtracted

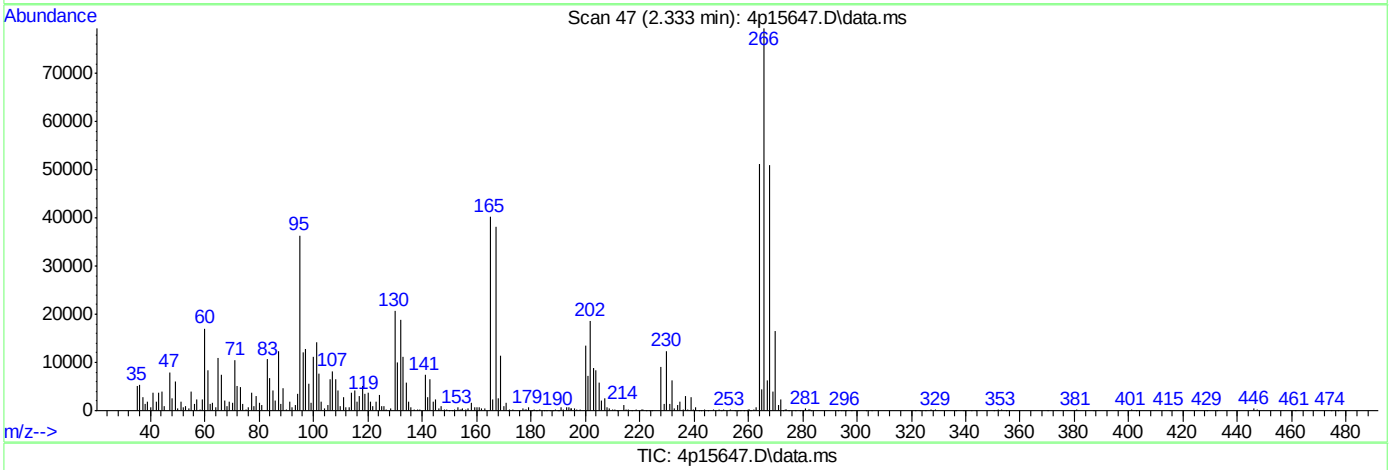
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
425.00	79	445.05	116				
425.40	40	447.20	25				
426.00	27	454.10	18				
427.60	57	455.30	21				
429.50	19	456.70	17				
431.40	49	474.00	21				
432.20	35	480.70	25				
441.10	13256	486.30	20				
442.05	93515						
443.10	18365						
444.00	1580						

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15647.D
Acq On    : 17 Mar 2016   4:01 pm
Operator  : juliusj
Sample    : dftpp
Misc      : op91877a,e4p805
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Mar 17 16:07:19 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP4P.M
Quant Title  : Semi Volatile Extractables by GC/MS
QLast Update : Thu Feb 20 12:09:44 2014
Response via : Initial Calibration
```





TIC: 4p15647.D\data.ms

(1) Pentachlorophenol (MC)

2.770min (-2.770) 0.00ng

response 0

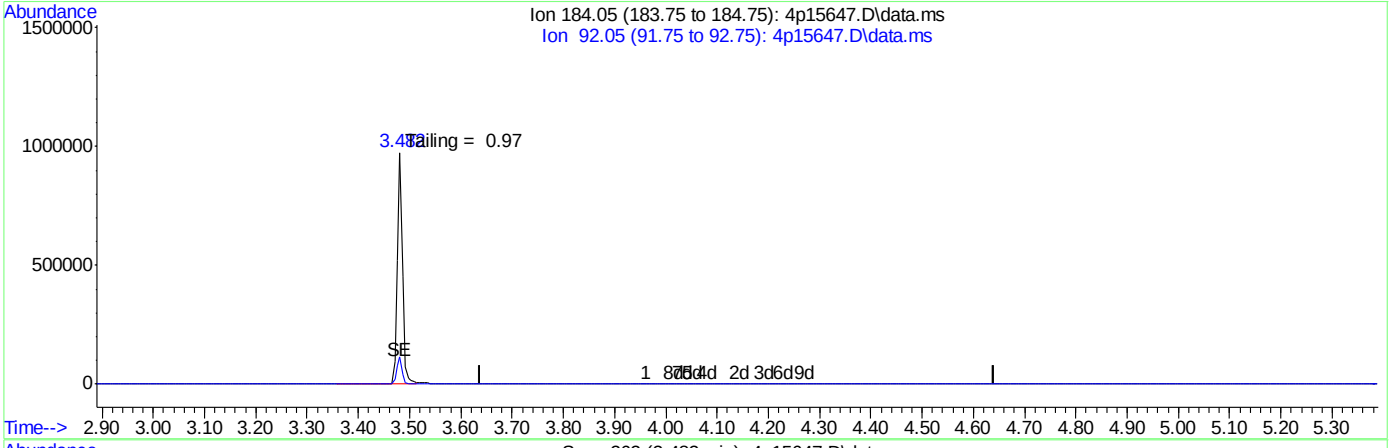
Ion	Exp%	Act%
265.80	100	0.00
263.70	64.70	0.00#
267.70	64.60	0.00#
0.00	0.00	0.00

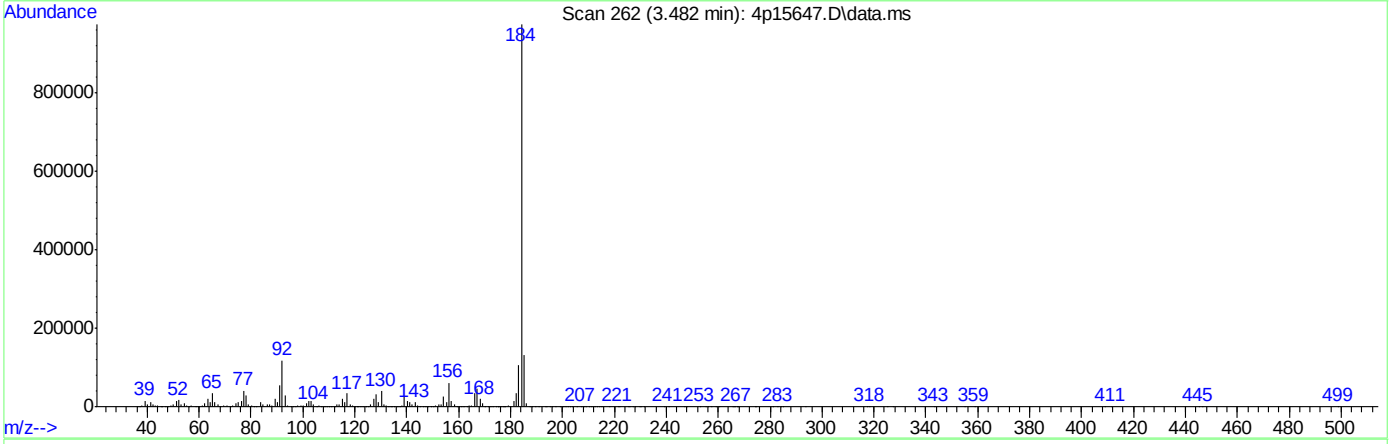
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15647.D
Acq On : 17 Mar 2016 4:01 pm
Operator : juliusj
Sample : dftpp
Misc : op91877a,e4p805
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 17 16:07:19 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP4P.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Feb 20 12:09:44 2014
Response via : Initial Calibration





TIC: 4p15647.D\data.ms

(2) Benzidine (M)

4.140min 0.00ng d

response 0

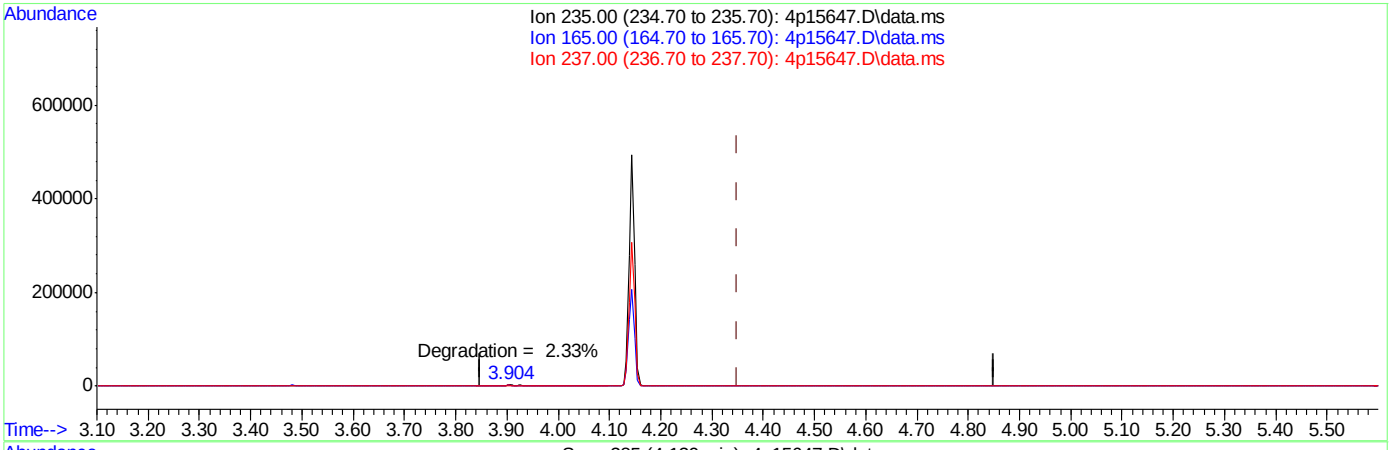
Ion	Exp%	Act%
184.05	100	0.00
92.05	11.60	0.00
0.00	0.00	0.00
0.00	0.00	0.00

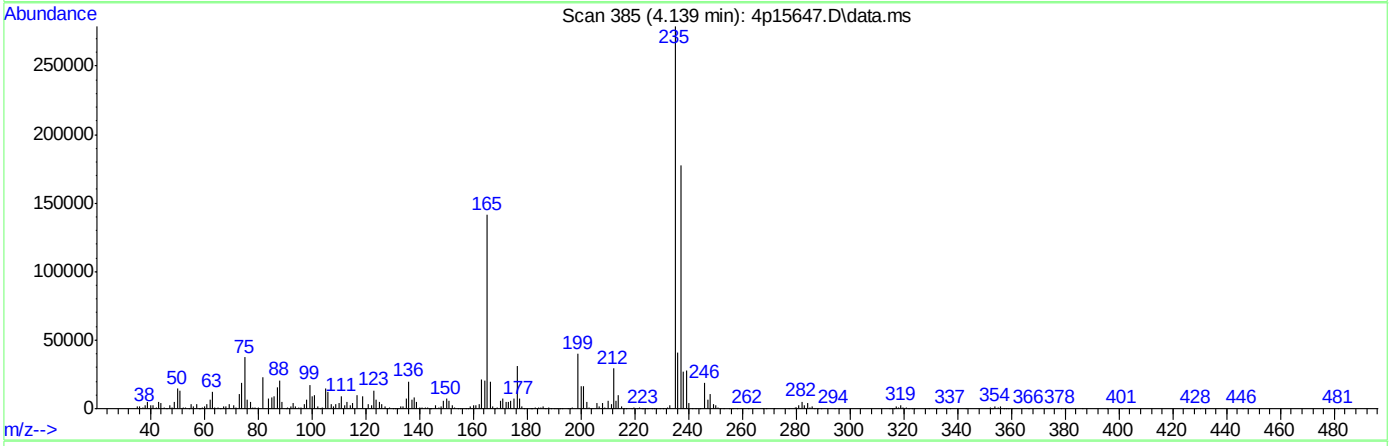
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15647.D
Acq On : 17 Mar 2016 4:01 pm
Operator : juliusj
Sample : dftpp
Misc : op91877a,e4p805
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 17 16:07:19 2016
Quant Method : C:\MSDCHEM\1\METHODS\DFTPP4P.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Thu Feb 20 12:09:44 2014
Response via : Initial Calibration





TIC: 4p15647.D\data.ms

(3) PP-DDT (MC)

4.144min (-0.206) 194.63ppb

response 363925

Ion	Exp%	Act%
235.00	100	100
165.00	58.00	41.55
237.00	62.20	61.82
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
03/14/16 13:00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57138a.D
Acq On : 11 Mar 2016 10:13 am
Operator : robertl1
Sample : ic2490-100
Misc : op91532,e2p2490
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 11 15:06:54 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:04:54 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	113570	40.00	ppm	0.00
24) Naphthalene-d8	5.259	136	394846	40.00	ppm	0.00
47) Acenaphthene-d10	6.692	164	246303	40.00	ppm	0.00
69) Phenanthrene-d10	7.917	188	401869	40.00	ppm	0.00
83) Chrysene-d12	11.008	240	474185	40.00	ppm	0.02
92) Perylene-d12	12.961	264	365162	40.00	ppm	0.01
102) 1,4-Dichlorobenzene-d4a	4.200	152	113570	40.00	ppm	0.00
104) Naphthalene-d8a	5.259	136	394846	40.00	ppm	0.00
106) Acenaphthene-d10a	6.692	164	246303	40.00	ppm	0.00
109) Chrysene-d12a	11.008	240	474185	40.00	ppm	0.02
111) Phenanthrene-d10a	7.917	188	401869	40.00	ppm	0.00
114) Chrysene-d12b	11.008	240	474185	40.00	ppm	0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.103	112	442104	119.13	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery	=	238.26%#	
8) Phenol-d5	3.980	99	513047	112.43	ppm	0.01
Spiked Amount 50.000	Range 10 - 59		Recovery	=	224.86%#	
25) Nitrobenzene-d5	4.681	82	380592	95.59	ppm	0.01
Spiked Amount 50.000	Range 19 - 61		Recovery	=	191.18%#	
51) 2-Fluorobiphenyl	6.157	172	724034	94.72	ppm	0.01
Spiked Amount 50.000	Range 21 - 58		Recovery	=	189.44%#	
73) 2,4,6-Tribromophenol	7.345	330	110230	111.04	ppm	0.00
Spiked Amount 50.000	Range 12 - 68		Recovery	=	222.08%#	
85) Terphenyl-d14	9.639	244	842829	95.63	ppm	0.01
Spiked Amount 50.000	Range 16 - 65		Recovery	=	191.26%#	
112) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.402	88	184424	114.67	ppm	64
3) Pyridine	1.675	79	452274	125.43	ppm #	33
4) N-Nitrosodimethylamine	1.659	74	276416	123.97	ppm #	1
6) Indene	4.414	116	624363	100.36	ppm	96
7) Cumene	3.510	105	1055183	111.65	ppm	95
9) Phenol	3.991	94	553020	110.98	ppm	92
10) Aniline	3.938	93	645260	113.95	ppm	90
11) bis(2-Chloroethyl)ether	4.002	93	349462	105.47	ppm	78
12) 2-Chlorophenol	4.045	128	415769	103.32	ppm	93
13) Decane	4.093	57	543405	100.38	ppm	78
14) 1,3-Dichlorobenzene	4.152	146	439789	98.75	ppm	99
15) 1,4-Dichlorobenzene	4.216	146	443529	98.64	ppm	99
16) Benzyl alcohol	4.355	108	229141	103.16	ppm	83
17) 1,2-Dichlorobenzene	4.344	146	418659	101.26	ppm	100
18) Acetophenone	4.558	105	478185	98.01	ppm	91
19) 2-Methylphenol	4.478	108	314208	97.06	ppm	92
20) 2,2'-oxybis(1-Chloropr...	4.456	121	100368	95.51	ppm #	1
21) 3&4-Methylphenol	4.612	108	351225	100.57	ppm	94
22) n-Nitroso-di-n-propyla...	4.579	70	255886	95.75	ppm #	59

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57138a.D
Acq On : 11 Mar 2016 10:13 am
Operator : robertl1
Sample : ic2490-100
Misc : op91532,e2p2490
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 11 15:06:54 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:04:54 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Hexachloroethane	4.617	201	152948	98.20	ppm		91
26) Nitrobenzene	4.697	77	373503	96.28	ppm		95
27) Quinoline	5.569	129	673092	101.22	ppm		97
28) Isophorone	4.900	82	657634	101.28	ppm		83
29) 2-Nitrophenol	4.959	139	210550	107.57	ppm		73
30) 2,4-Dimethylphenol	5.039	107	367413	99.26	ppm		95
31) Benzoic acid	5.216	105	225662m	137.58	ppm		
32) bis(2-Chloroethoxy)met...	5.088	93	373333	100.65	ppm		98
33) 2,4-Dichlorophenol	5.178	162	307026	104.13	ppm		97
34) 2,6-Dichlorophenol	5.355	162	296750	101.18	ppm		98
35) 1,3,5-Trichlorobenzene	4.965	180	360663	102.09	ppm		97
36) 1,2,4-Trichlorobenzene	5.221	180	335376	100.76	ppm		99
37) 1,2,3-Trichlorobenzene	5.403	180	316715	99.88	ppm		99
38) Naphthalene	5.275	128	1003597	97.95	ppm		98
39) 4-Chloroaniline	5.350	127	441986	102.74	ppm		92
40) 2,3-Dichloroaniline	6.088	161	365209	101.50	ppm		98
41) Caprolactam	5.687	113	99714	105.34	ppm	#	59
42) Hexachlorobutadiene	5.387	225	192178	101.05	ppm		97
43) 4-Chloro-3-methylphenol	5.794	107	326917	104.63	ppm		93
44) 2-Methylnaphthalene	5.847	141	593136	102.01	ppm		98
45) 1-Methylnaphthalene	5.927	141	606668	99.65	ppm		97
46) Dimethylnaphthalene	6.361	156	582994	98.86	ppm		94
48) Hexachlorocyclopentadiene	5.981	237	439902	286.02	ppm		97
49) 2,4,6-Trichlorophenol	6.104	196	219025	99.15	ppm		98
50) 2,4,5-Trichlorophenol	6.147	196	227020	98.85	ppm		98
52) 2-Chloronaphthalene	6.243	162	614367	92.33	ppm		95
53) Biphenyl	6.232	154	820896	92.54	ppm		97
54) 2-Nitroaniline	6.350	65	239306	94.20	ppm		82
55) Dimethylphthalate	6.500	163	720585	94.22	ppm		100
56) Acenaphthylene	6.574	152	1025051	92.59	ppm		100
57) 2,6-Dinitrotoluene	6.553	165	169479	101.81	ppm		79
58) 3-Nitroaniline	6.687	138	197976	101.39	ppm		97
59) Acenaphthene	6.719	153	669025	94.85	ppm		94
60) 2,4-Dinitrophenol	6.788	184	183294	357.89	ppm	#	94
61) 4-Nitrophenol	6.885	109	94496	110.72	ppm		81
62) Dibenzofuran	6.863	168	889503	93.40	ppm		97
63) 2,4-Dinitrotoluene	6.885	165	224331	101.22	ppm		61
64) 2,3,4,6-Tetrachlorophenol	6.986	232	188296	109.19	ppm		98
65) Diethylphthalate	7.077	149	721728	93.00	ppm		99
66) Fluorene	7.141	166	751442	97.31	ppm		95
67) 4-Chlorophenyl-phenyle...	7.147	204	368556	100.32	ppm		95
68) 4-Nitroaniline	7.200	138	176344	98.96	ppm		89
70) 4,6-Dinitro-2-methylph...	7.227	198	130180	164.70	ppm		83
71) n-Nitrosodiphenylamine	7.254	169	515057	98.09	ppm		99
72) 1,2-Diphenylhydrazine	7.280	77	758540	103.49	ppm		88
74) 4-Bromophenyl-phenylether	7.543	248	224469	104.71	ppm		98
75) Hexachlorobenzene	7.596	284	240074	104.62	ppm		88
76) Pentachlorophenol	7.783	266	289068	333.57	ppm		99
77) Phenanthrene	7.938	178	1071689	99.20	ppm		99
78) Anthracene	7.987	178	1058103	97.11	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57138a.D
Acq On : 11 Mar 2016 10:13 am
Operator : robertl1
Sample : ic2490-100
Misc : op91532,e2p2490
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 11 15:06:54 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:04:54 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
79)	Carbazole	8.152	167	1003893	99.94	ppm		100
80)	Di-n-butylphthalate	8.516	149	1376522	106.45	ppm		99
81)	Fluoranthene	9.147	202	1313840	108.65	ppm		97
82)	Octadecane	7.864	43	513709	98.47	ppm	#	61
84)	Pyrene	9.409	202	1332823	92.42	ppm		99
86)	Butylbenzylphthalate	10.319	149	641010	96.61	ppm		95
87)	Butyl stearate	10.474	56	505463	99.05	ppm		89
88)	Benzo[a]anthracene	10.992	228	1251316	94.33	ppm		99
89)	3,3'-Dichlorobenzidine	11.008	252	456453	95.79	ppm		99
90)	Chrysene	11.051	228	1111106	91.88	ppm		98
91)	bis(2-Ethylhexyl)phtha...	11.180	149	834522	94.68	ppm		99
93)	Di-n-octylphthalate	12.105	149	1585952	112.88	ppm		92
94)	Benzo[b]fluoranthene	12.490	252	1271408	109.34	ppm		99
95)	Benzo[k]fluoranthene	12.522	252	1059481	102.77	ppm		100
96)	Benzo[a]pyrene	12.891	252	1057324	108.45	ppm		96
97)	Indeno[1,2,3-cd]pyrene	14.260	276	987598m	118.49	ppm		
98)	Dibenz(a,h)acridine	14.004	279	834308	112.90	ppm		100
99)	Dibenz[a,h]anthracene	14.293	278	957967	117.00	ppm		90
100)	7,12-Dimethylbenz(a)an...	12.479	256	573847	113.20	ppm		92
101)	Benzo[g,h,i]perylene	14.565	276	915575	113.79	ppm		88

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

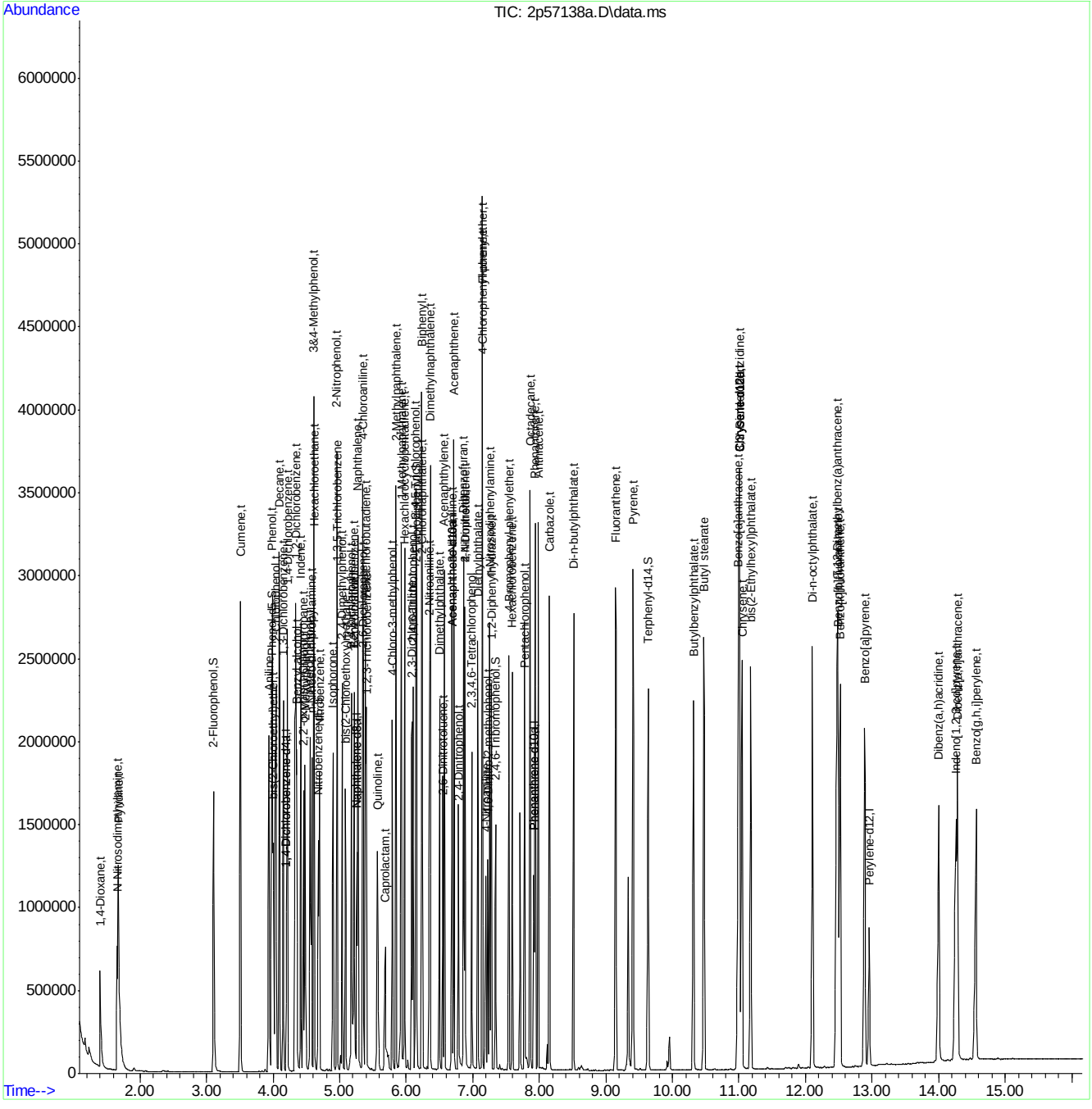
9.6.1

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57138a.D
Acq On : 11 Mar 2016 10:13 am
Operator : robertl1
Sample : ic2490-100
Misc : op91532,e2p2490
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 11 15:06:54 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:04:54 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Manual Integration Approval Summary

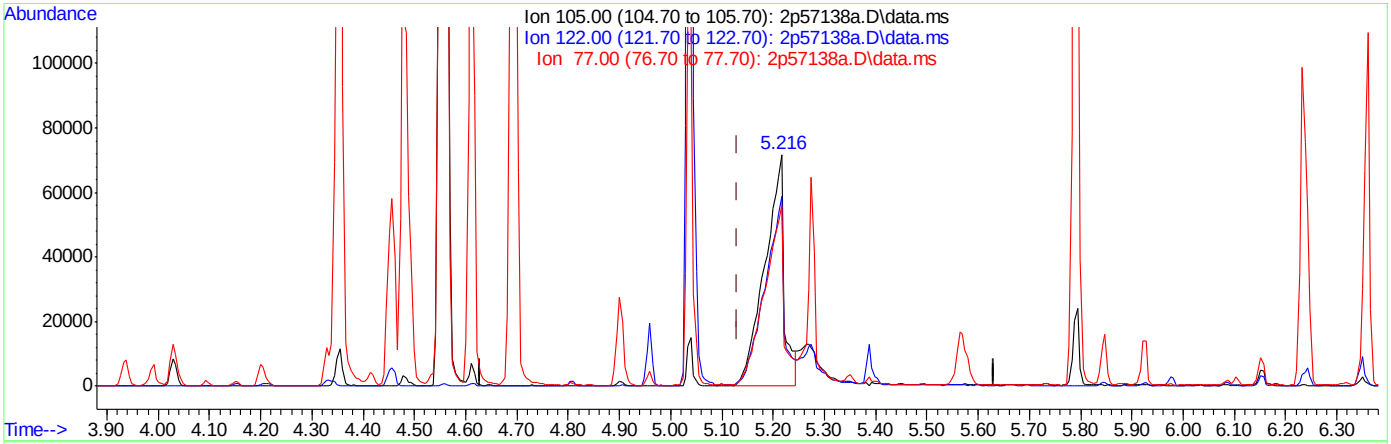
Sample Number:	E2P2490-IC2490	**Method:**	SW846 8270D
Lab FileID:	2P57138A.D	**Analyst approved:**	03/11/16 23:20 Sara Davis
Injection Time:	03/11/16 10:13	**Supervisor approved:**	03/14/16 13:00 Nina Pandya

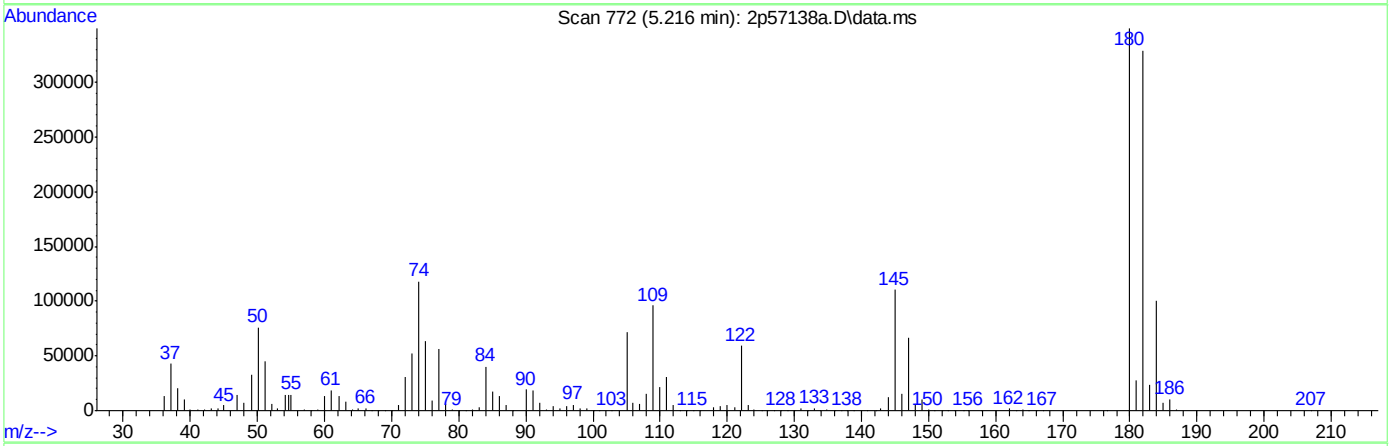
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		5.22	Split peak
Indeno(1,2,3-cd)pyrene	193-39-5		14.26	Overlapping peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57138a.D
Acq On : 11 Mar 2016 10:13 am
Operator : robertl1
Sample : ic2490-100
Misc : op91532,e2p2490
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 11 15:04:58 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:04:54 2016
Response via : Initial Calibration





TIC: 2p57138a.D\data.ms

(31) Benzoic acid (t)

5.216min (+0.085) 113.81ppm

response 186673

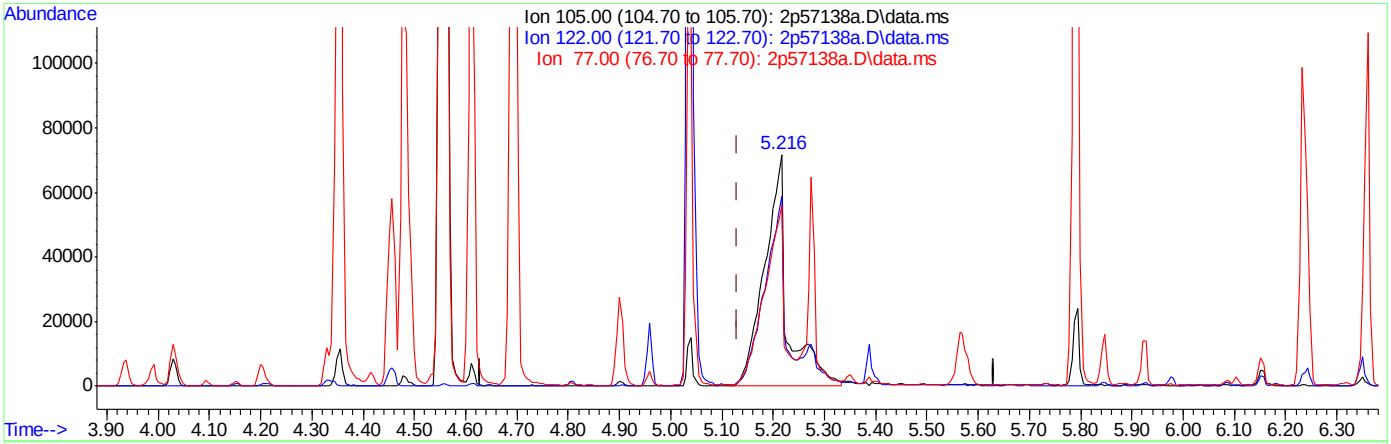
Ion	Exp%	Act%
105.00	100	100
122.00	77.90	82.55
77.00	73.40	78.02
0.00	0.00	0.00

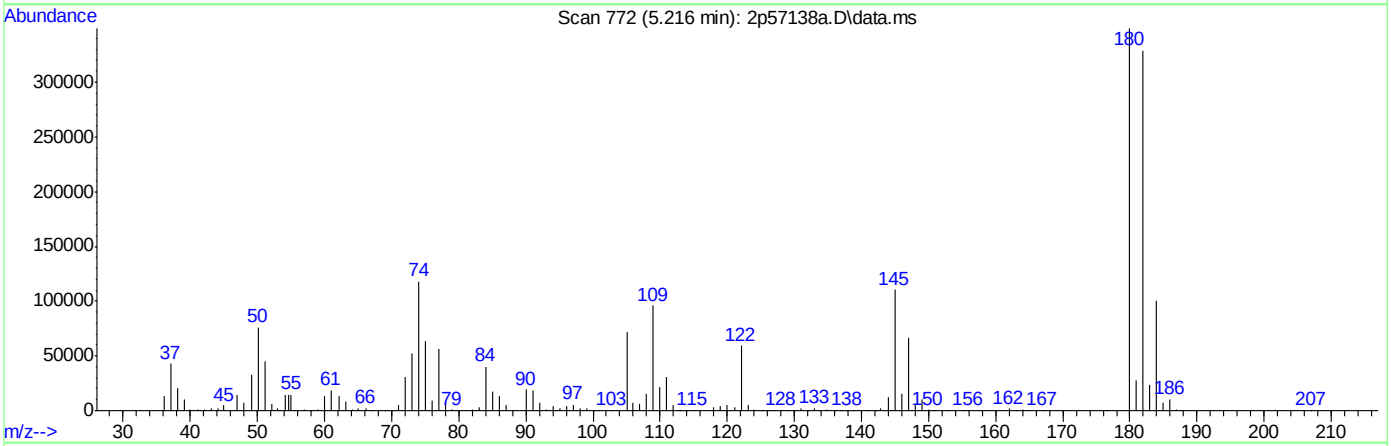
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57138a.D
Acq On : 11 Mar 2016 10:13 am
Operator : robertl1
Sample : ic2490-100
Misc : op91532,e2p2490
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 11 15:04:58 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:04:54 2016
Response via : Initial Calibration





TIC: 2p57138a.D\data.ms

(31) Benzoic acid (t)

5.216min (+0.085) 137.58ppm m

response 225662

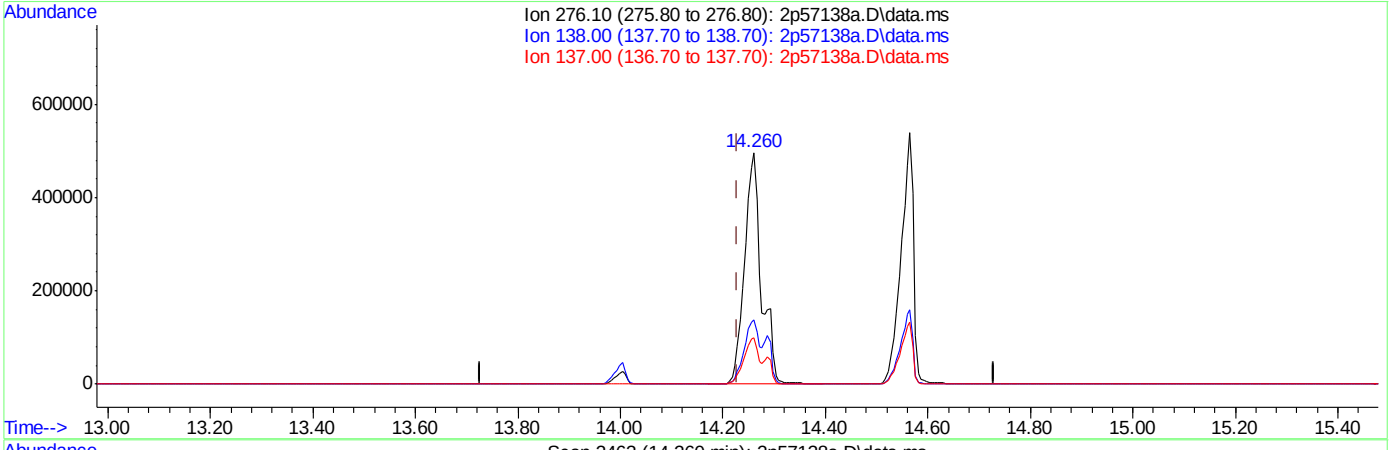
Ion	Exp%	Act%
105.00	100	100
122.00	77.90	82.12
77.00	73.40	77.98
0.00	0.00	0.00

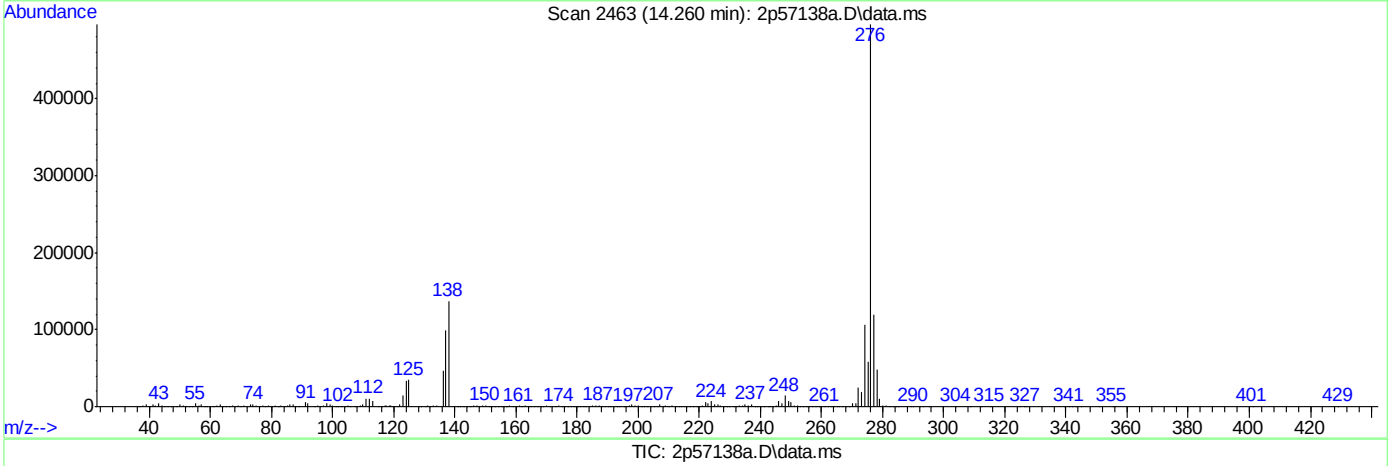
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57138a.D
Acq On : 11 Mar 2016 10:13 am
Operator : robertl1
Sample : ic2490-100
Misc : op91532,e2p2490
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 11 15:04:58 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:04:54 2016
Response via : Initial Calibration





TIC: 2p57138a.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.260min (+0.032) 135.84ppm

response 1132271

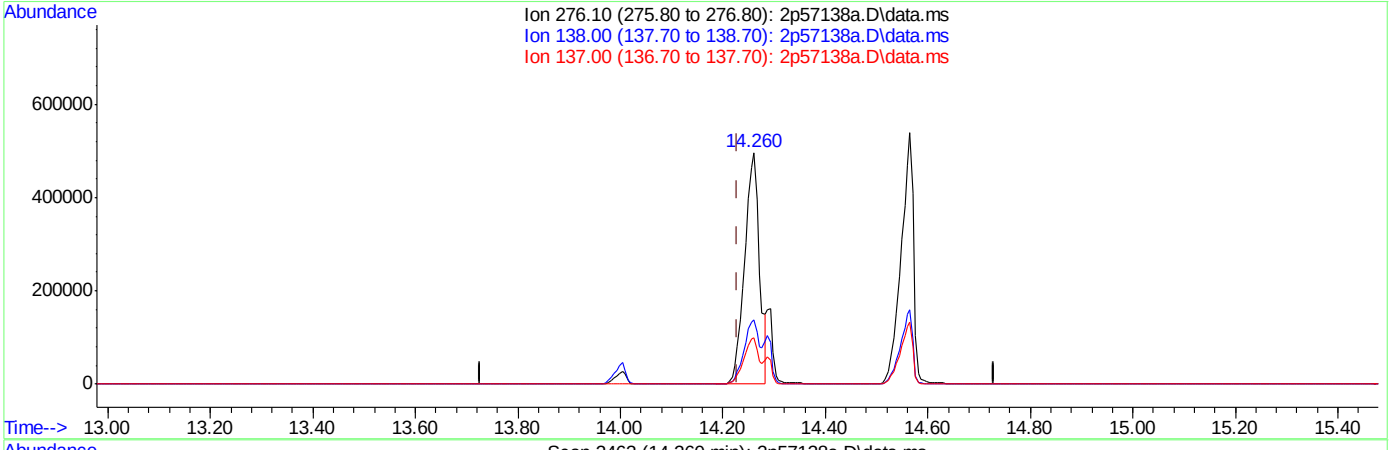
Ion	Exp%	Act%
276.10	100	100
138.00	37.80	27.68
137.00	28.00	19.92
0.00	0.00	0.00

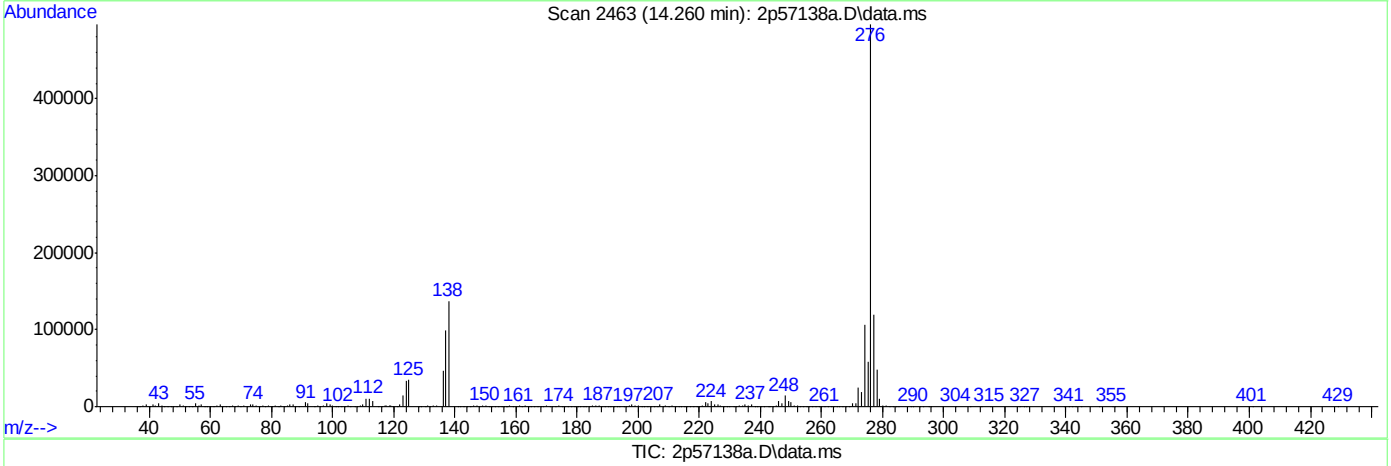
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57138a.D
Acq On : 11 Mar 2016 10:13 am
Operator : robertl1
Sample : ic2490-100
Misc : op91532,e2p2490
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 11 15:04:58 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:04:54 2016
Response via : Initial Calibration





TIC: 2p57138a.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.260min (+0.032) 118.49ppm m

response 987598

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	27.70
137.00	28.00	19.96
0.00	0.00	0.00

SGS ACCUTEST JC16204

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
03/14/16 13:00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57139.D
Acq On : 11 Mar 2016 10:35 am
Operator : robertl1
Sample : ic2490-80
Misc : op91532,e2p2490
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 11 15:08:23 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:07:06 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	116247	40.00	ppm	0.00
24) Naphthalene-d8	5.259	136	405468	40.00	ppm	0.00
47) Acenaphthene-d10	6.692	164	245386	40.00	ppm	0.00
69) Phenanthrene-d10	7.912	188	410126	40.00	ppm	0.00
83) Chrysene-d12	11.003	240	466833	40.00	ppm	0.00
92) Perylene-d12	12.956	264	369051	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	116247	40.00	ppm	0.00
104) Naphthalene-d8a	5.259	136	405468	40.00	ppm	0.00
106) Acenaphthene-d10a	6.692	164	245386	40.00	ppm	0.00
109) Chrysene-d12a	11.003	240	466833	40.00	ppm	0.00
111) Phenanthrene-d10a	7.912	188	410126	40.00	ppm	0.00
114) Chrysene-d12b	11.003	240	466833	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.103	112	348539	91.75	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery = 183.50%#			
8) Phenol-d5	3.975	99	412768	88.35	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 176.70%#			
25) Nitrobenzene-d5	4.676	82	318580	77.86	ppm	0.00
Spiked Amount 50.000	Range 19 - 61		Recovery = 155.72%#			
51) 2-Fluorobiphenyl	6.152	172	597082	78.40	ppm	0.00
Spiked Amount 50.000	Range 21 - 58		Recovery = 156.80%#			
73) 2,4,6-Tribromophenol	7.345	330	87661	86.53	ppm	0.00
Spiked Amount 50.000	Range 12 - 68		Recovery = 173.06%#			
85) Terphenyl-d14	9.634	244	702058	80.91	ppm	0.00
Spiked Amount 50.000	Range 16 - 65		Recovery = 161.82%#			
112) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.408	88	137828	84.02	ppm	69
3) Pyridine	1.675	79	346216	93.86	ppm #	37
4) N-Nitrosodimethylamine	1.659	74	210328	92.11	ppm #	1
6) Indene	4.414	116	504082	79.16	ppm	95
7) Cumene	3.510	105	838088	86.63	ppm	96
9) Phenol	3.986	94	438588	85.98	ppm	95
10) Aniline	3.932	93	514052	88.68	ppm	93
11) bis(2-Chloroethyl)ether	4.002	93	283104	83.47	ppm	77
12) 2-Chlorophenol	4.045	128	340966	82.77	ppm	94
13) Decane	4.093	57	444084	80.14	ppm	78
14) 1,3-Dichlorobenzene	4.152	146	365044	80.05	ppm	99
15) 1,4-Dichlorobenzene	4.216	146	362956	78.83	ppm	98
16) Benzyl alcohol	4.355	108	189188	83.20	ppm	87
17) 1,2-Dichlorobenzene	4.344	146	337962	79.86	ppm	97
18) Acetophenone	4.553	105	397249	79.54	ppm	87
19) 2-Methylphenol	4.478	108	260394	78.58	ppm	94
20) 2,2'-oxybis(1-Chloropr...	4.457	121	83510	77.59	ppm #	7
21) 3&4-Methylphenol	4.612	108	290524	81.26	ppm	95
22) n-Nitroso-di-n-propyla...	4.574	70	212230	77.61	ppm #	54

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57139.D
Acq On : 11 Mar 2016 10:35 am
Operator : robertl1
Sample : ic2490-80
Misc : op91532,e2p2490
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 11 15:08:23 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:07:06 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Hexachloroethane	4.617	201	126386	79.27	ppm		92
26) Nitrobenzene	4.692	77	306717	76.93	ppm		96
27) Quinoline	5.564	129	555702	81.31	ppm		97
28) Isophorone	4.901	82	542126	81.24	ppm		86
29) 2-Nitrophenol	4.959	139	177206	88.09	ppm		70
30) 2,4-Dimethylphenol	5.034	107	302119	79.42	ppm		91
31) Benzoic acid	5.200	105	177622m	105.54	ppm		
32) bis(2-Chloroethoxy)met...	5.088	93	307698	80.72	ppm		98
33) 2,4-Dichlorophenol	5.173	162	255688	84.38	ppm		98
34) 2,6-Dichlorophenol	5.350	162	243822	80.89	ppm		97
35) 1,3,5-Trichlorobenzene	4.965	180	297964	82.06	ppm		98
36) 1,2,4-Trichlorobenzene	5.221	180	278816	81.51	ppm		99
37) 1,2,3-Trichlorobenzene	5.398	180	263835	80.96	ppm		96
38) Naphthalene	5.275	128	839047	79.69	ppm		98
39) 4-Chloroaniline	5.344	127	364119	82.36	ppm		89
40) 2,3-Dichloroaniline	6.083	161	307634	83.19	ppm		94
41) Caprolactam	5.676	113	82475	84.77	ppm	#	61
42) Hexachlorobutadiene	5.387	225	159588	81.65	ppm		99
43) 4-Chloro-3-methylphenol	5.788	107	268762	83.69	ppm		96
44) 2-Methylnaphthalene	5.847	141	497039	83.17	ppm		97
45) 1-Methylnaphthalene	5.922	141	505815	80.84	ppm		96
46) Dimethylnaphthalene	6.361	156	487856	80.49	ppm		96
48) Hexachlorocyclopentadiene	5.976	237	346363	226.04	ppm		98
49) 2,4,6-Trichlorophenol	6.104	196	179145	81.40	ppm		100
50) 2,4,5-Trichlorophenol	6.147	196	188915	82.56	ppm		98
52) 2-Chloronaphthalene	6.243	162	513682	77.48	ppm		96
53) Biphenyl	6.232	154	680084	76.95	ppm		98
54) 2-Nitroaniline	6.350	65	200530	79.23	ppm		94
55) Dimethylphthalate	6.500	163	612552	80.40	ppm		99
56) Acenaphthylene	6.575	152	863209	78.26	ppm		100
57) 2,6-Dinitrotoluene	6.548	165	137508	82.91	ppm		92
58) 3-Nitroaniline	6.687	138	158415	81.43	ppm		96
59) Acenaphthene	6.719	153	560209	79.72	ppm		93
60) 2,4-Dinitrophenol	6.783	184	141933	278.17	ppm	#	81
61) 4-Nitrophenol	6.885	109	75118	88.34	ppm		88
62) Dibenzofuran	6.863	168	763910	80.51	ppm		99
63) 2,4-Dinitrotoluene	6.880	165	192238	87.06	ppm	#	55
64) 2,3,4,6-Tetrachlorophenol	6.981	232	149016	86.74	ppm		91
65) Diethylphthalate	7.077	149	621996	80.45	ppm		98
66) Fluorene	7.142	166	634812	82.51	ppm		95
67) 4-Chlorophenyl-phenyle...	7.147	204	302737	82.71	ppm		95
68) 4-Nitroaniline	7.195	138	148078	83.41	ppm		89
70) 4,6-Dinitro-2-methylph...	7.222	198	105157	130.37	ppm		87
71) n-Nitrosodiphenylamine	7.254	169	421516	78.66	ppm		99
72) 1,2-Diphenylhydrazine	7.275	77	630520	84.29	ppm		92
74) 4-Bromophenyl-phenylether	7.543	248	184564	84.36	ppm		97
75) Hexachlorobenzene	7.596	284	196495	83.90	ppm		96
76) Pentachlorophenol	7.778	266	217183	245.57	ppm		98
77) Phenanthrene	7.939	178	881637	79.97	ppm		99
78) Anthracene	7.981	178	891883	80.20	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57139.D
Acq On : 11 Mar 2016 10:35 am
Operator : robertl1
Sample : ic2490-80
Misc : op91532,e2p2490
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 11 15:08:23 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:07:06 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
79) Carbazole	8.147	167	850631	82.98	ppm		100
80) Di-n-butylphthalate	8.511	149	1143293	86.63	ppm		99
81) Fluoranthene	9.147	202	1078834	87.42	ppm		96
82) Octadecane	7.858	43	430443	80.85	ppm	#	58
84) Pyrene	9.404	202	1094820	77.12	ppm		100
86) Butylbenzylphthalate	10.319	149	528904	80.97	ppm		97
87) Butyl stearate	10.474	56	412573	82.12	ppm		87
88) Benzo[a]anthracene	10.993	228	1020200	78.12	ppm		100
89) 3,3'-Dichlorobenzidine	11.003	252	381987	81.43	ppm		99
90) Chrysene	11.046	228	917153	77.04	ppm		99
91) bis(2-Ethylhexyl)phtha...	11.174	149	689408	79.45	ppm		99
93) Di-n-octylphthalate	12.105	149	1276202	89.88	ppm		92
94) Benzo[b]fluoranthene	12.480	252	1048934	89.26	ppm		98
95) Benzo[k]fluoranthene	12.517	252	867184	83.23	ppm		99
96) Benzo[a]pyrene	12.886	252	865509	87.84	ppm		96
97) Indeno[1,2,3-cd]pyrene	14.255	276	763544	92.94	ppm		75
98) Dibenz(a,h)acridine	13.999	279	678442	90.84	ppm		100
99) Dibenz[a,h]anthracene	14.282	278	748389	90.44	ppm		94
100) 7,12-Dimethylbenz(a)an...	12.474	256	473335	92.39	ppm		93
101) Benzo[g,h,i]perylene	14.555	276	737495	90.69	ppm		89

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

9.6.2

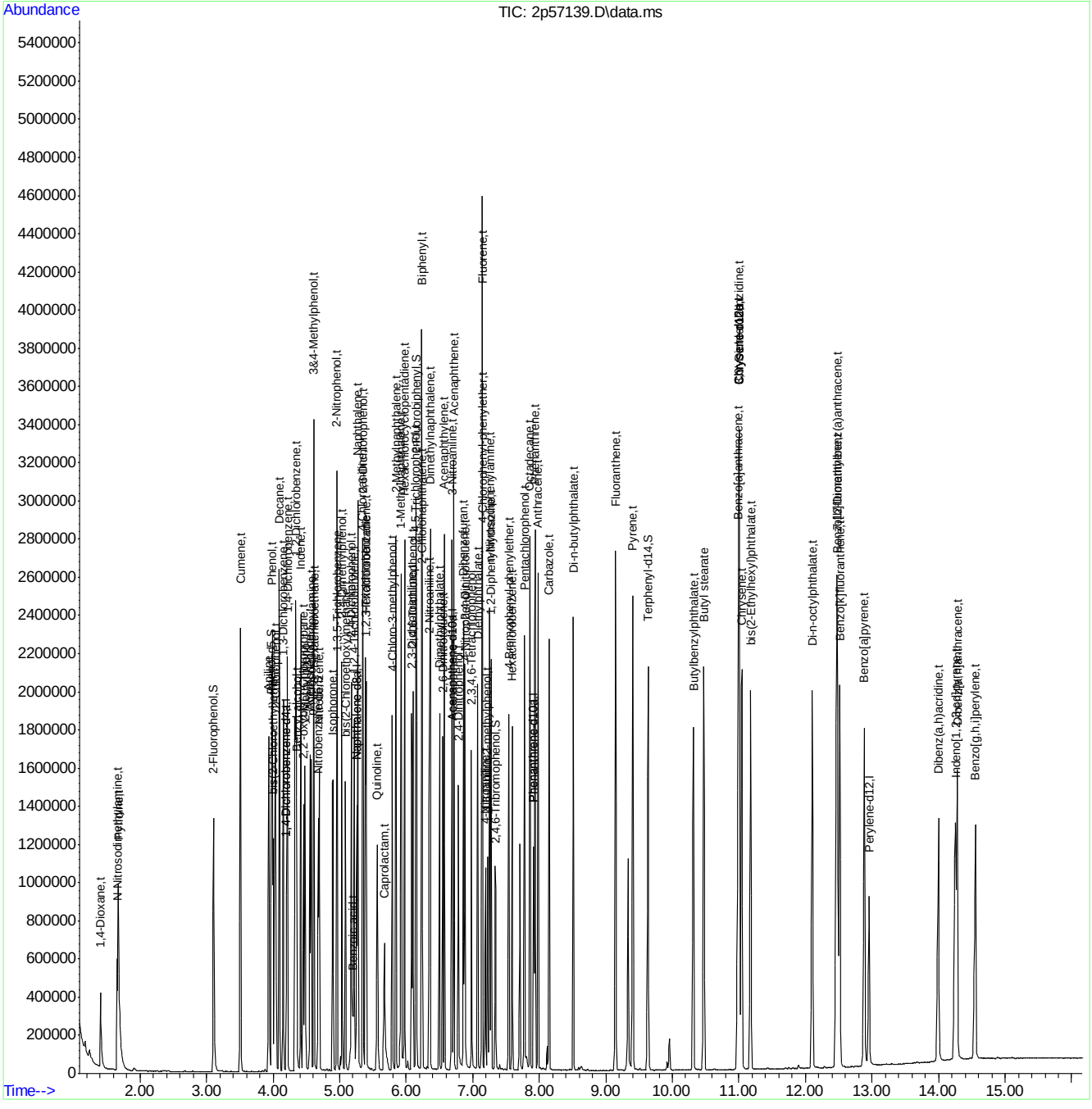
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57139.D
Acq On : 11 Mar 2016 10:35 am
Operator : robertl1
Sample : ic2490-80
Misc : op91532,e2p2490
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 11 15:08:23 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:07:06 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Manual Integration Approval Summary

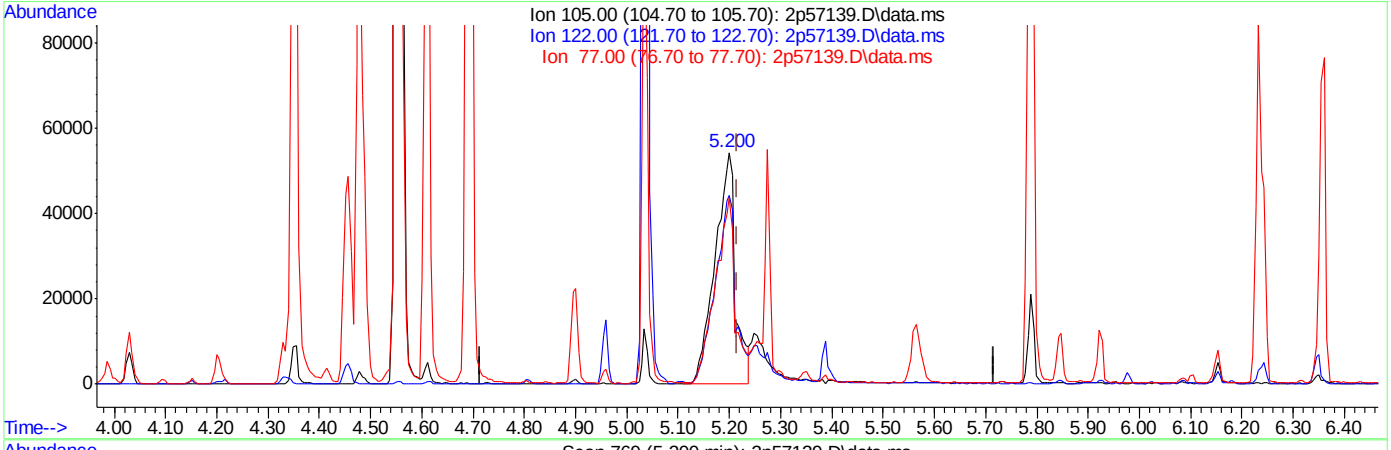
Sample Number:	E2P2490-IC2490	**Method:**	SW846 8270D
Lab FileID:	2P57139.D	**Analyst approved:**	03/11/16 23:20 Sara Davis
Injection Time:	03/11/16 10:35	**Supervisor approved:**	03/14/16 13:00 Nina Pandya

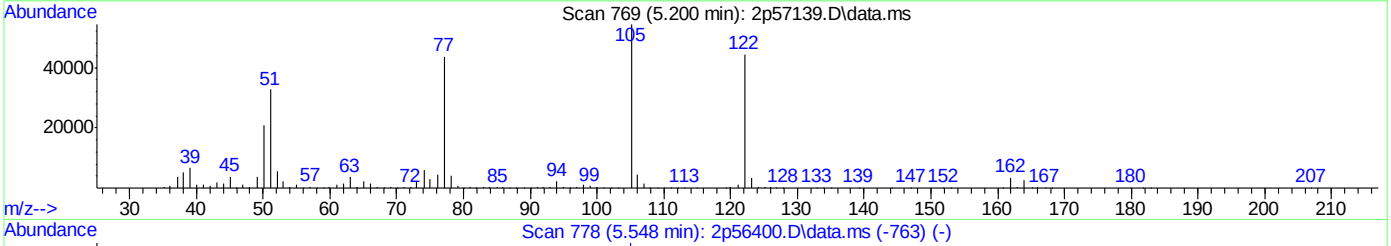
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		5.20	Split peak

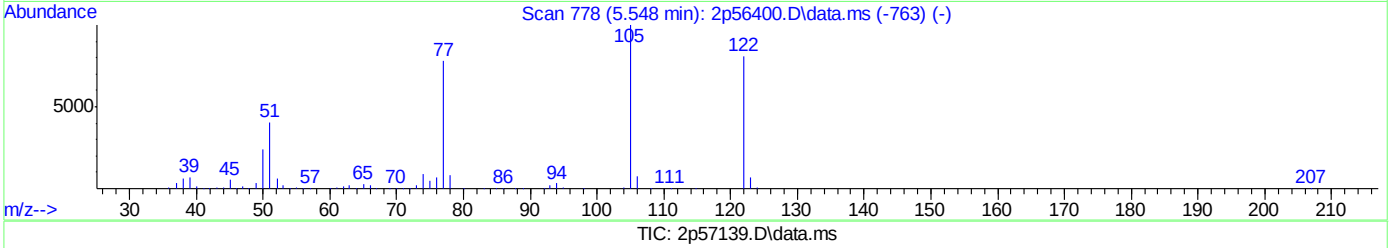
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57139.D
Acq On : 11 Mar 2016 10:35 am
Operator : robertl1
Sample : ic2490-80
Misc : op91532,e2p2490
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 11 15:07:14 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:07:06 2016
Response via : Initial Calibration







TIC: 2p57139.D\data.ms

(31) Benzoic acid (t)

5.200min (-0.016) 88.77ppm

response 149396

Ion	Exp%	Act%
105.00	100	100
122.00	77.90	81.66
77.00	73.40	80.27
0.00	0.00	0.00

9.6.2.2

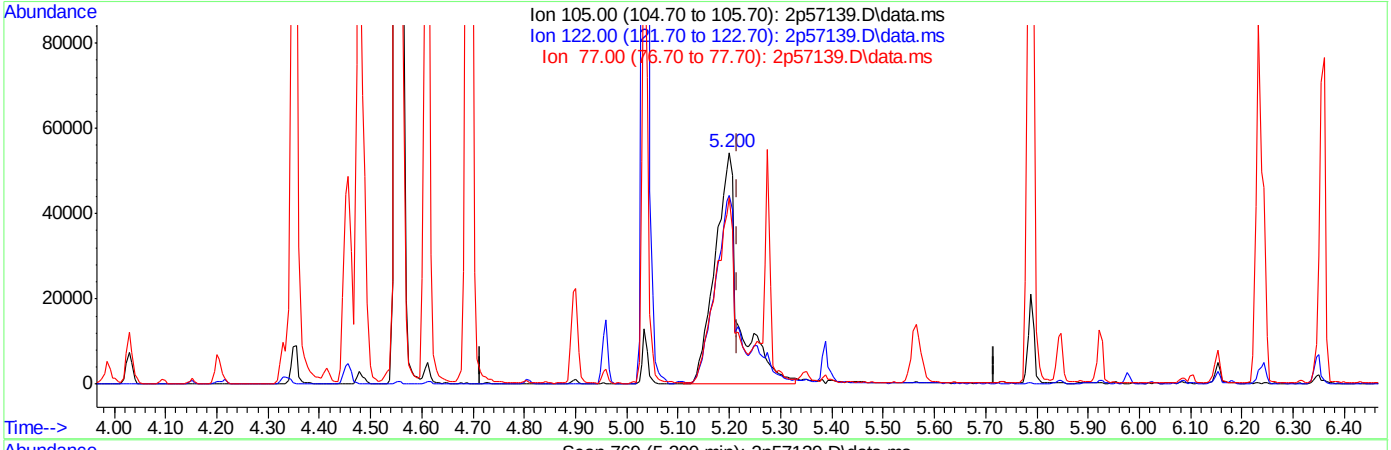
9

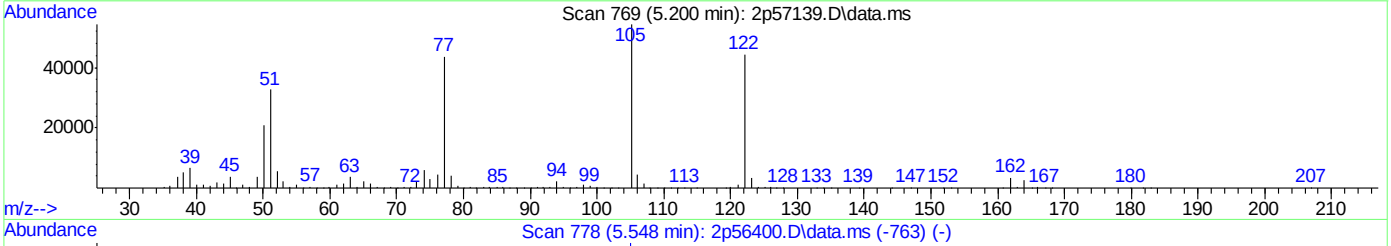
SGS ACCUTEST JC16204

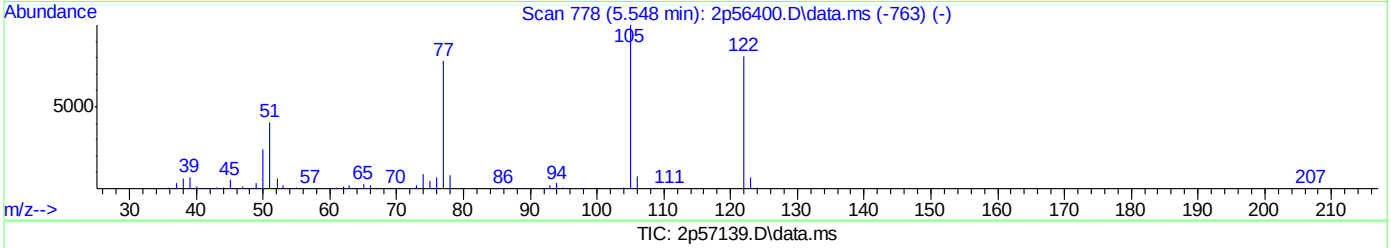
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57139.D
Acq On : 11 Mar 2016 10:35 am
Operator : robertl1
Sample : ic2490-80
Misc : op91532,e2p2490
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 11 15:07:14 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:07:06 2016
Response via : Initial Calibration







TIC: 2p57139.D\data.ms

(31) Benzoic acid (t)

5.200min (-0.016) 105.54ppm m

response 177622

Ion	Exp%	Act%
105.00	100	100
122.00	77.90	81.57
77.00	73.40	80.51
0.00	0.00	0.00

9.6.2.3

9

SGS ACCUTEST JC16204

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
03/14/16 13:00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57140.D
Acq On : 11 Mar 2016 10:57 am
Operator : robertl1
Sample : icc2490-50
Misc : op91532,e2p2490
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 11 14:55:22 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:54:05 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	155804	40.00	ppm	0.00
24) Naphthalene-d8	5.259	136	547726	40.00	ppm	0.00
47) Acenaphthene-d10	6.692	164	324212	40.00	ppm	0.00
69) Phenanthrene-d10	7.912	188	547463	40.00	ppm	0.00
83) Chrysene-d12	11.003	240	603837	40.00	ppm	0.00
92) Perylene-d12	12.955	264	502164	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	155804	40.00	ppm	0.00
104) Naphthalene-d8a	5.259	136	547726	40.00	ppm	0.00
106) Acenaphthene-d10a	6.692	164	324212	40.00	ppm	0.00
109) Chrysene-d12a	11.003	240	603837	40.00	ppm	0.00
111) Phenanthrene-d10a	7.912	188	547463	40.00	ppm	0.00
114) Chrysene-d12b	11.003	240	603837	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.103	112	277688	45.81	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery = 91.62%#			
8) Phenol-d5	3.975	99	333285	47.43	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 94.86%#			
25) Nitrobenzene-d5	4.676	82	265605	50.59	ppm	0.00
Spiked Amount 50.000	Range 19 - 61		Recovery = 101.18%#			
51) 2-Fluorobiphenyl	6.152	172	501443	52.61	ppm	0.00
Spiked Amount 50.000	Range 21 - 58		Recovery = 105.22%#			
73) 2,4,6-Tribromophenol	7.339	330	71877	47.87	ppm	0.00
Spiked Amount 50.000	Range 12 - 68		Recovery = 95.74%#			
85) Terphenyl-d14	9.634	244	557232	51.92	ppm	0.00
Spiked Amount 50.000	Range 16 - 65		Recovery = 103.84%#			
112) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.413	88	101963	39.46	ppm	65
3) Pyridine	1.675	79	258289	41.49	ppm #	25
4) N-Nitrosodimethylamine	1.664	74	157534	41.67	ppm #	1
6) Indene	4.414	116	417763	48.80	ppm	95
7) Cumene	3.510	105	681513	47.11	ppm	95
9) Phenol	3.986	94	356528	47.02	ppm	95
10) Aniline	3.932	93	423097	47.82	ppm	75
11) bis(2-Chloroethyl)ether	4.002	93	226106	47.19	ppm	83
12) 2-Chlorophenol	4.039	128	281951	49.46	ppm	86
13) Decane	4.093	57	376154	50.49	ppm	79
14) 1,3-Dichlorobenzene	4.152	146	298347	49.55	ppm	98
15) 1,4-Dichlorobenzene	4.216	146	305449	50.36	ppm	98
16) Benzyl alcohol	4.349	108	159396	50.74	ppm	90
17) 1,2-Dichlorobenzene	4.339	146	288122	50.19	ppm	99
18) Acetophenone	4.553	105	328781	50.15	ppm	86
19) 2-Methylphenol	4.478	108	220415	51.16	ppm	95
20) 2,2'-oxybis(1-Chloropr...	4.456	121	68453	49.95	ppm #	1
21) 3&4-Methylphenol	4.612	108	239971	49.83	ppm	94
22) n-Nitroso-di-n-propyla...	4.574	70	175789	49.93	ppm #	57

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57140.D
Acq On : 11 Mar 2016 10:57 am
Operator : robertl1
Sample : icc2490-50
Misc : op91532,e2p2490
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 11 14:55:22 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:54:05 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Hexachloroethane	4.617	201	105486	50.30	ppm		93
26) Nitrobenzene	4.692	77	256326	49.75	ppm		98
27) Quinoline	5.558	129	465465	50.13	ppm		97
28) Isophorone	4.895	82	449309	49.53	ppm		82
29) 2-Nitrophenol	4.959	139	146634	50.49	ppm	#	67
30) 2,4-Dimethylphenol	5.034	107	254198	50.16	ppm		90
31) Benzoic acid	5.189	105	144842	46.07	ppm		98
32) bis(2-Chloroethoxy)met...	5.088	93	258257	50.15	ppm		98
33) 2,4-Dichlorophenol	5.173	162	211615	49.97	ppm		98
34) 2,6-Dichlorophenol	5.350	162	201957	49.34	ppm		97
35) 1,3,5-Trichlorobenzene	4.959	180	248745	50.00	ppm		95
36) 1,2,4-Trichlorobenzene	5.221	180	231574	50.06	ppm		99
37) 1,2,3-Trichlorobenzene	5.398	180	218205	49.95	ppm		96
38) Naphthalene	5.275	128	697753	50.40	ppm		98
39) 4-Chloroaniline	5.344	127	296762	48.68	ppm		90
40) 2,3-Dichloroaniline	6.082	161	254591	50.54	ppm		95
41) Caprolactam	5.665	113	68847	50.05	ppm	#	60
42) Hexachlorobutadiene	5.387	225	132838	50.11	ppm		99
43) 4-Chloro-3-methylphenol	5.788	107	220582	48.92	ppm		93
44) 2-Methylnaphthalene	5.847	141	413173	50.50	ppm		97
45) 1-Methylnaphthalene	5.922	141	427048	51.03	ppm		96
46) Dimethylnaphthalene	6.361	156	409947	50.98	ppm		95
48) Hexachlorocyclopentadiene	5.975	237	282146	97.45	ppm		98
49) 2,4,6-Trichlorophenol	6.104	196	150223	52.11	ppm		98
50) 2,4,5-Trichlorophenol	6.141	196	157712	52.78	ppm		98
52) 2-Chloronaphthalene	6.243	162	427745	52.89	ppm		97
53) Biphenyl	6.232	154	582012	53.86	ppm		99
54) 2-Nitroaniline	6.344	65	164413	52.19	ppm		81
55) Dimethylphthalate	6.494	163	497145	52.41	ppm		100
56) Acenaphthylene	6.574	152	718212	53.23	ppm		100
57) 2,6-Dinitrotoluene	6.548	165	115363	51.71	ppm		85
58) 3-Nitroaniline	6.687	138	134789	51.72	ppm		89
59) Acenaphthene	6.719	153	462342	52.50	ppm		97
60) 2,4-Dinitrophenol	6.783	184	112081	92.91	ppm	#	96
61) 4-Nitrophenol	6.879	109	62721	50.42	ppm	#	78
62) Dibenzofuran	6.858	168	630458	53.85	ppm		96
63) 2,4-Dinitrotoluene	6.879	165	153973	52.14	ppm		60
64) 2,3,4,6-Tetrachlorophenol	6.981	232	122719	49.51	ppm		94
65) Diethylphthalate	7.072	149	516514	54.37	ppm		100
66) Fluorene	7.136	166	519105	52.48	ppm		95
67) 4-Chlorophenyl-phenyle...	7.147	204	250768	51.69	ppm		98
68) 4-Nitroaniline	7.190	138	121205	52.22	ppm		84
70) 4,6-Dinitro-2-methylph...	7.222	198	85829	48.40	ppm		78
71) n-Nitrosodiphenylamine	7.248	169	346318	49.36	ppm		98
72) 1,2-Diphenylhydrazine	7.275	77	486225	47.05	ppm		93
74) 4-Bromophenyl-phenylether	7.543	248	154689	50.59	ppm		95
75) Hexachlorobenzene	7.596	284	162062	49.55	ppm		95
76) Pentachlorophenol	7.778	266	172945	87.84	ppm		98
77) Phenanthrene	7.933	178	721604	49.43	ppm		99
78) Anthracene	7.981	178	747868	51.88	ppm		98

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57140.D
Acq On : 11 Mar 2016 10:57 am
Operator : robertl1
Sample : icc2490-50
Misc : op91532,e2p2490
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 11 14:55:22 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:54:05 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
79)	Carbazole	8.147	167	686661	50.21	ppm		100
80)	Di-n-butylphthalate	8.511	149	926703	49.42	ppm		98
81)	Fluoranthene	9.147	202	884873	49.44	ppm		94
82)	Octadecane	7.858	43	361152	51.61	ppm	#	57
84)	Pyrene	9.404	202	903311	53.22	ppm		100
86)	Butylbenzylphthalate	10.313	149	436238	53.44	ppm		95
87)	Butyl stearate	10.468	56	334368	51.95	ppm		87
88)	Benzo[a]anthracene	10.987	228	828777	52.01	ppm		98
89)	3,3'-Dichlorobenzidine	11.003	252	305264	52.52	ppm		99
90)	Chrysene	11.041	228	741240	52.39	ppm		99
91)	bis(2-Ethylhexyl)phtha...	11.174	149	560525	52.75	ppm		99
93)	Di-n-octylphthalate	12.100	149	1022900	46.90	ppm		92
94)	Benzo[b]fluoranthene	12.479	252	835337	47.78	ppm		96
95)	Benzo[k]fluoranthene	12.511	252	725886	49.82	ppm		100
96)	Benzo[a]pyrene	12.886	252	692543	47.63	ppm		94
97)	Indeno[1,2,3-cd]pyrene	14.250	276	595550m	38.25	ppm		
98)	Dibenz(a,h)acridine	13.993	279	536895	46.80	ppm		100
99)	Dibenz[a,h]anthracene	14.277	278	598916	45.46	ppm		93
100)	7,12-Dimethylbenz(a)an...	12.469	256	374591	47.47	ppm		89
101)	Benzo[g,h,i]perylene	14.549	276	587369	46.65	ppm		90

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

9.6.3

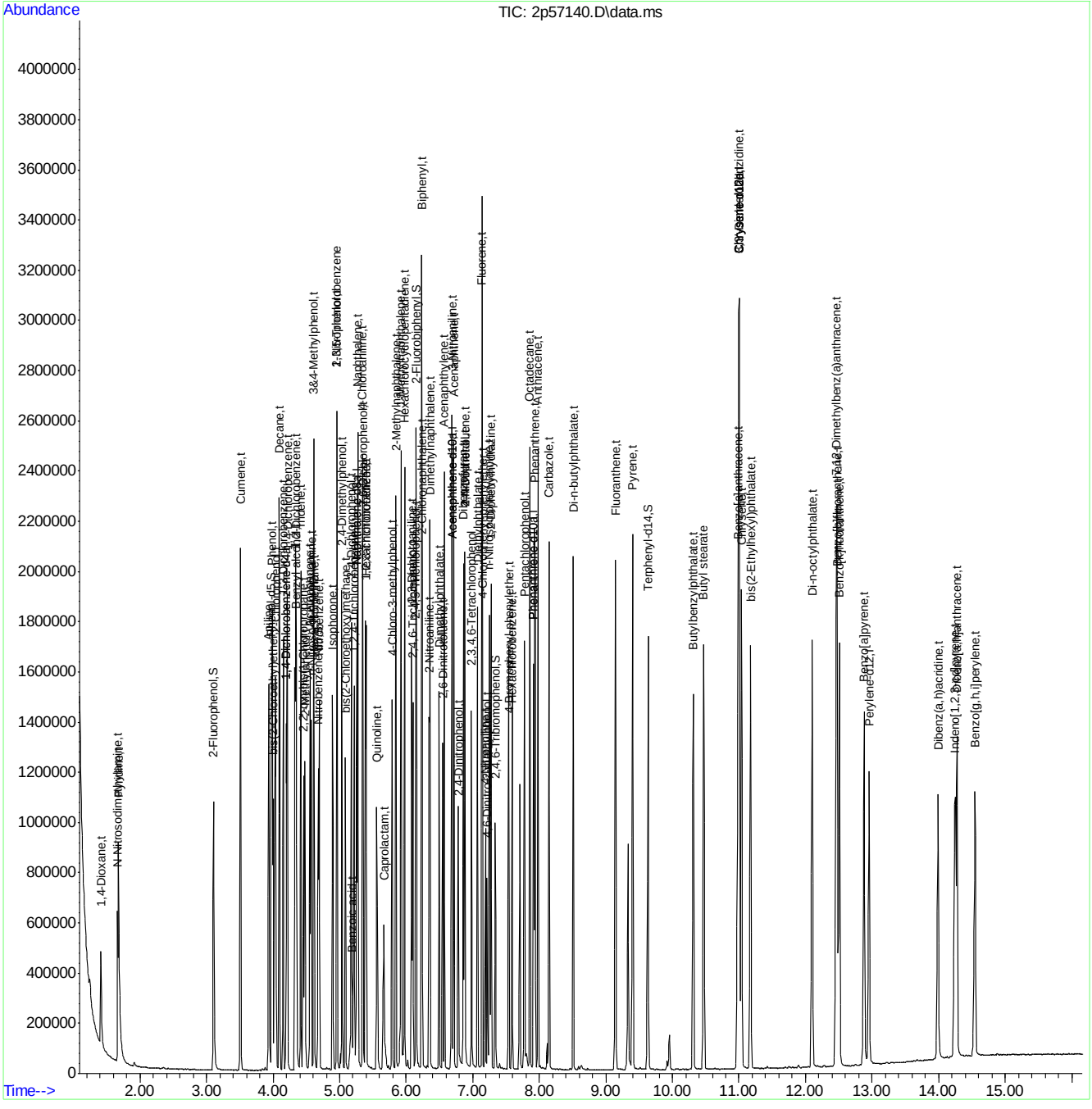
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57140.D
Acq On : 11 Mar 2016 10:57 am
Operator : robertl1
Sample : icc2490-50
Misc : op91532,e2p2490
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 11 14:55:22 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:54:05 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Manual Integration Approval Summary

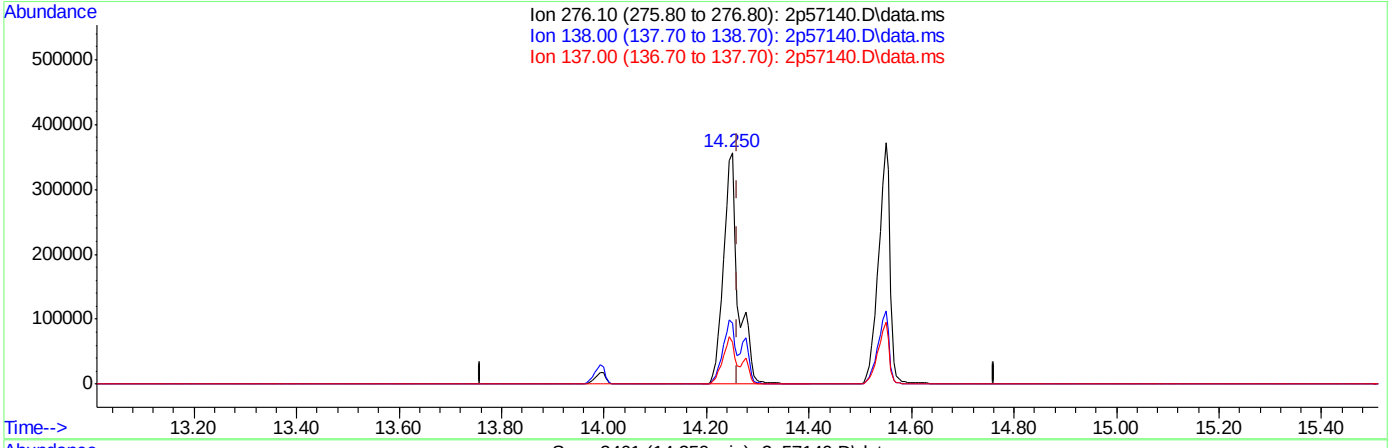
Sample Number:	E2P2490-ICC2490	**Method:**	SW846 8270D
Lab FileID:	2P57140.D	**Analyst approved:**	03/11/16 23:20 Sara Davis
Injection Time:	03/11/16 10:57	**Supervisor approved:**	03/14/16 13:00 Nina Pandya

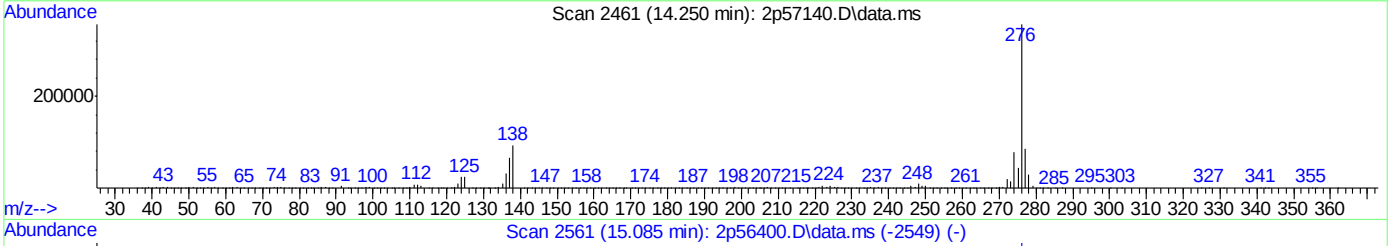
Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5		14.25	Overlapping peak

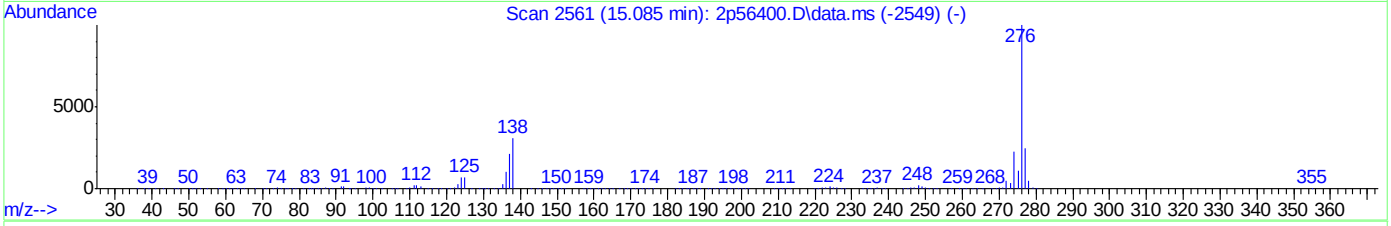
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57140.D
Acq On : 11 Mar 2016 10:57 am
Operator : robertl1
Sample : icc2490-50
Misc : op91532,e2p2490
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 11 14:54:40 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:54:05 2016
Response via : Initial Calibration







TIC: 2p57140.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.250min (-0.011) 46.11ppm

response 718008

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	26.25
137.00	28.00	18.21
0.00	0.00	0.00

9.6.3.2

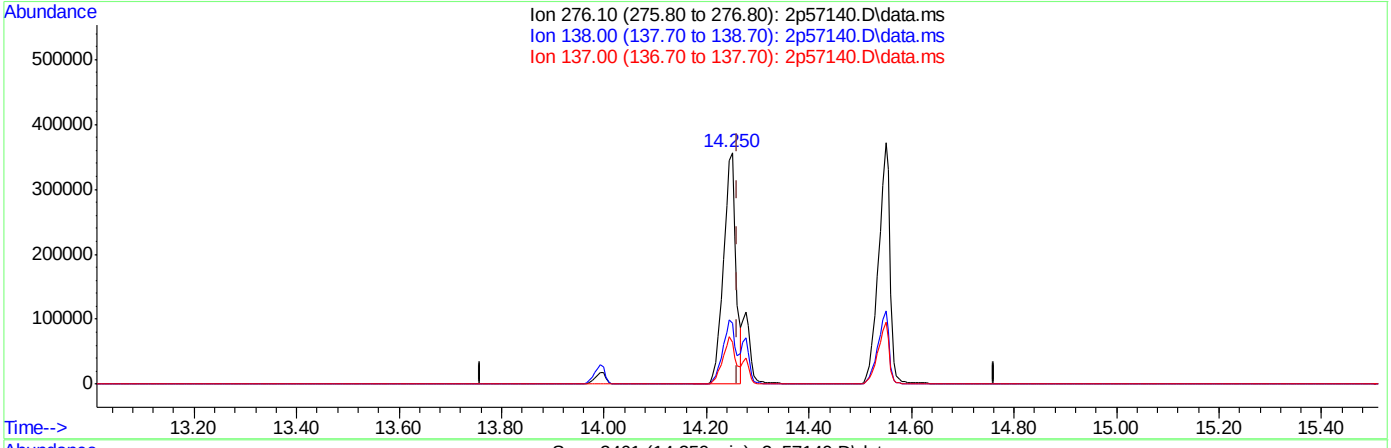
9

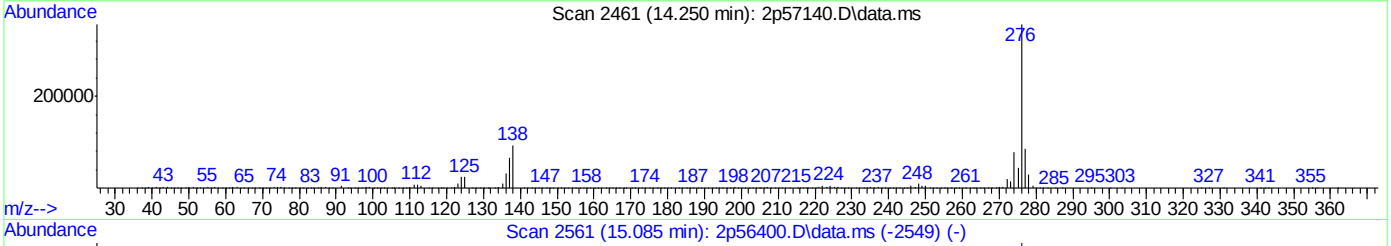
SGS ACCUTEST JC16204

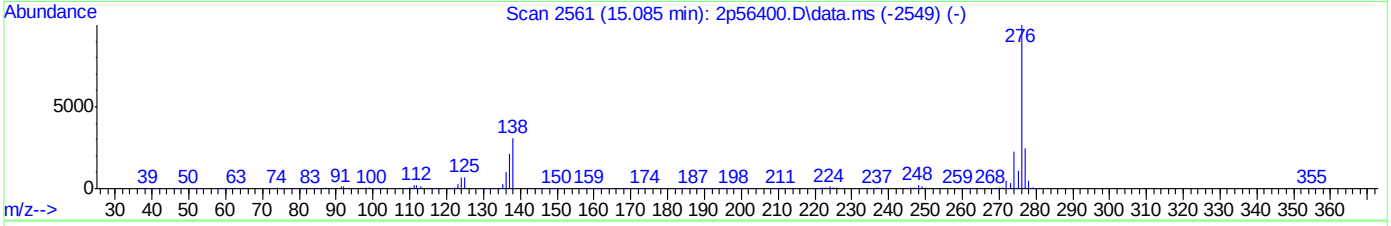
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57140.D
Acq On : 11 Mar 2016 10:57 am
Operator : robertl1
Sample : icc2490-50
Misc : op91532,e2p2490
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 11 14:54:40 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:54:05 2016
Response via : Initial Calibration







TIC: 2p57140.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.250min (-0.011) 38.25ppm m

response 595550

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	26.30
137.00	28.00	18.27
0.00	0.00	0.00

SGS ACCUTEST JC16204

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
03/14/16 13:00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57141.D
Acq On : 11 Mar 2016 11:19 am
Operator : robertl1
Sample : ic2490-25
Misc : op91532,e2p2490
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 11 14:58:04 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:57:00 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	134585	40.00	ppm	0.00
24) Naphthalene-d8	5.253	136	469352	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	271522	40.00	ppm	0.00
69) Phenanthrene-d10	7.912	188	460296	40.00	ppm	0.00
83) Chrysene-d12	10.998	240	487202	40.00	ppm	0.00
92) Perylene-d12	12.950	264	408261	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	134585	40.00	ppm	0.00
104) Naphthalene-d8a	5.253	136	469352	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	271522	40.00	ppm	0.00
109) Chrysene-d12a	10.998	240	487202	40.00	ppm	0.00
111) Phenanthrene-d10a	7.912	188	460296	40.00	ppm	0.00
114) Chrysene-d12b	10.998	240	487202	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.103	112	111819	22.29	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery = 44.58%			
8) Phenol-d5	3.970	99	137746	23.29	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 46.58%			
25) Nitrobenzene-d5	4.670	82	117306	25.92	ppm	0.00
Spiked Amount 50.000	Range 19 - 61		Recovery = 51.84%			
51) 2-Fluorobiphenyl	6.152	172	209374	25.56	ppm	0.00
Spiked Amount 50.000	Range 21 - 58		Recovery = 51.12%			
73) 2,4,6-Tribromophenol	7.339	330	29041	23.50	ppm	0.00
Spiked Amount 50.000	Range 12 - 68		Recovery = 47.00%			
85) Terphenyl-d14	9.629	244	226727	25.69	ppm	0.00
Spiked Amount 50.000	Range 16 - 65		Recovery = 51.38%			
112) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.408	88	42852	21.46	ppm	64
3) Pyridine	1.675	79	108949	22.15	ppm #	25
4) N-Nitrosodimethylamine	1.659	74	66656	22.26	ppm #	1
6) Indene	4.414	116	181673	24.87	ppm	95
7) Cumene	3.510	105	276496	22.78	ppm	95
9) Phenol	3.981	94	145465	22.89	ppm	97
10) Aniline	3.932	93	169167	22.63	ppm	91
11) bis(2-Chloroethyl)ether	3.997	93	97035	24.12	ppm	79
12) 2-Chlorophenol	4.039	128	120051	24.51	ppm	92
13) Decane	4.093	57	158524	24.51	ppm	77
14) 1,3-Dichlorobenzene	4.152	146	131448	25.39	ppm	99
15) 1,4-Dichlorobenzene	4.216	146	131246	24.96	ppm	99
16) Benzyl alcohol	4.344	108	67838	24.81	ppm	81
17) 1,2-Dichlorobenzene	4.339	146	124321	25.02	ppm	97
18) Acetophenone	4.547	105	142091	25.05	ppm	86
19) 2-Methylphenol	4.473	108	95789	25.44	ppm	95
20) 2,2'-oxybis(1-Chloropr...	4.451	121	30182	25.51	ppm #	1
21) 3&4-Methylphenol	4.606	108	100542	24.21	ppm	93
22) n-Nitroso-di-n-propyla...	4.564	70	77907	25.63	ppm #	54

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57141.D
Acq On : 11 Mar 2016 11:19 am
Operator : robertl1
Sample : ic2490-25
Misc : op91532,e2p2490
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 11 14:58:04 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:57:00 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Hexachloroethane	4.617	201	45626	25.11	ppm		90
26) Nitrobenzene	4.687	77	112471	25.54	ppm		96
27) Quinoline	5.553	129	196795	24.70	ppm		98
28) Isophorone	4.890	82	188990	24.43	ppm		84
29) 2-Nitrophenol	4.954	139	60173	24.06	ppm		69
30) 2,4-Dimethylphenol	5.029	107	108465	24.94	ppm		90
31) Benzoic acid	5.163	105	54530	21.07	ppm		98
32) bis(2-Chloroethoxy)met...	5.082	93	109284	24.73	ppm		97
33) 2,4-Dichlorophenol	5.173	162	90819	25.03	ppm		98
34) 2,6-Dichlorophenol	5.344	162	88054	25.27	ppm		99
35) 1,3,5-Trichlorobenzene	4.959	180	102765	24.11	ppm		97
36) 1,2,4-Trichlorobenzene	5.216	180	96722	24.38	ppm		97
37) 1,2,3-Trichlorobenzene	5.398	180	92200	24.64	ppm		98
38) Naphthalene	5.270	128	299192	25.12	ppm		98
39) 4-Chloroaniline	5.339	127	126090	24.46	ppm		89
40) 2,3-Dichloroaniline	6.083	161	105037	24.20	ppm		97
41) Caprolactam	5.633	113	28629	24.28	ppm	#	63
42) Hexachlorobutadiene	5.387	225	56271	24.74	ppm		100
43) 4-Chloro-3-methylphenol	5.778	107	92581	24.22	ppm	#	59
44) 2-Methylnaphthalene	5.842	141	170556	24.21	ppm		95
45) 1-Methylnaphthalene	5.922	141	176187	24.32	ppm		96
46) Dimethylnaphthalene	6.355	156	170561	24.51	ppm		93
48) Hexachlorocyclopentadiene	5.976	237	102548	42.84	ppm		98
49) 2,4,6-Trichlorophenol	6.099	196	62025	25.16	ppm		94
50) 2,4,5-Trichlorophenol	6.141	196	63516	24.69	ppm		98
52) 2-Chloronaphthalene	6.238	162	183554	26.34	ppm		95
53) Biphenyl	6.227	154	242259	25.78	ppm		99
54) 2-Nitroaniline	6.339	65	70131	26.01	ppm		79
55) Dimethylphthalate	6.494	163	208610	25.64	ppm		99
56) Acenaphthylene	6.569	152	303496	26.02	ppm		100
57) 2,6-Dinitrotoluene	6.543	165	47373	24.93	ppm		85
58) 3-Nitroaniline	6.676	138	54018	24.33	ppm		96
59) Acenaphthene	6.714	153	192275	25.43	ppm		97
60) 2,4-Dinitrophenol	6.778	184	34036	34.93	ppm	#	70
61) 4-Nitrophenol	6.879	109	26792	25.61	ppm	#	86
62) Dibenzofuran	6.858	168	262532	25.78	ppm		99
63) 2,4-Dinitrotoluene	6.874	165	64671	25.60	ppm		68
64) 2,3,4,6-Tetrachlorophenol	6.981	232	48138	23.30	ppm		97
65) Diethylphthalate	7.067	149	214504	25.83	ppm		100
66) Fluorene	7.136	166	213138	25.11	ppm		93
67) 4-Chlorophenyl-phenyle...	7.142	204	100113	24.23	ppm		88
68) 4-Nitroaniline	7.179	138	51387	25.86	ppm		87
70) 4,6-Dinitro-2-methylph...	7.211	198	29738	20.27	ppm		93
71) n-Nitrosodiphenylamine	7.243	169	146881	25.06	ppm		99
72) 1,2-Diphenylhydrazine	7.270	77	203332	24.11	ppm		94
74) 4-Bromophenyl-phenylether	7.537	248	61066	23.61	ppm		95
75) Hexachlorobenzene	7.591	284	64119	23.42	ppm		91
76) Pentachlorophenol	7.773	266	58067	37.35	ppm		96
77) Phenanthrene	7.933	178	300729	24.64	ppm		99
78) Anthracene	7.976	178	311249	25.21	ppm		98

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57141.D
Acq On : 11 Mar 2016 11:19 am
Operator : robertl1
Sample : ic2490-25
Misc : op91532,e2p2490
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 11 14:58:04 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:57:00 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
79)	Carbazole	8.142	167	281481	24.43	ppm		100
80)	Di-n-butylphthalate	8.511	149	375374	23.95	ppm		99
81)	Fluoranthene	9.142	202	349897	23.38	ppm		93
82)	Octadecane	7.858	43	148048	24.76	ppm	#	59
84)	Pyrene	9.399	202	363662	25.73	ppm		99
86)	Butylbenzylphthalate	10.313	149	171223	25.13	ppm		98
87)	Butyl stearate	10.468	56	132108	24.95	ppm		88
88)	Benzo[a]anthracene	10.982	228	334026	25.47	ppm		98
89)	3,3'-Dichlorobenzidine	10.993	252	122917	25.57	ppm		99
90)	Chrysene	11.030	228	303463	25.96	ppm		98
91)	bis(2-Ethylhexyl)phtha...	11.174	149	229230	26.02	ppm		98
93)	Di-n-octylphthalate	12.094	149	406913	23.68	ppm		92
94)	Benzo[b]fluoranthene	12.463	252	332609	23.93	ppm		97
95)	Benzo[k]fluoranthene	12.496	252	291834	24.68	ppm		99
96)	Benzo[a]pyrene	12.875	252	279494	24.22	ppm		94
97)	Indeno[1,2,3-cd]pyrene	14.234	276	227088m	20.33	ppm		
98)	Dibenz(a,h)acridine	13.988	279	203262	22.51	ppm		98
99)	Dibenz[a,h]anthracene	14.266	278	224191	21.93	ppm		92
100)	7,12-Dimethylbenz(a)an...	12.458	256	144839	23.16	ppm		89
101)	Benzo[g,h,i]perylene	14.539	276	221661	22.40	ppm		86

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

9.6.4

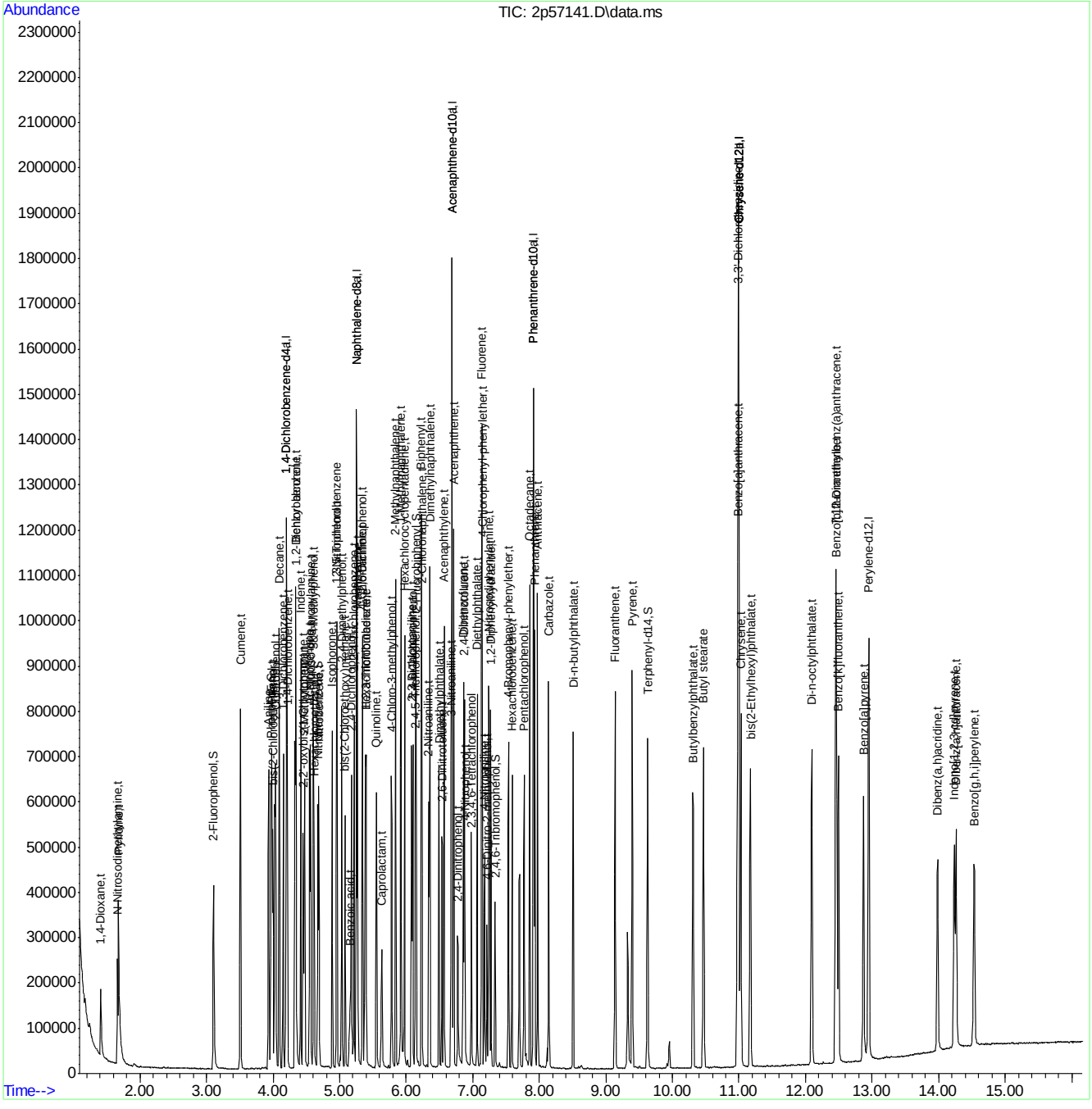
6

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57141.D
Acq On : 11 Mar 2016 11:19 am
Operator : robertl1
Sample : ic2490-25
Misc : op91532,e2p2490
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 11 14:58:04 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:57:00 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Manual Integration Approval Summary

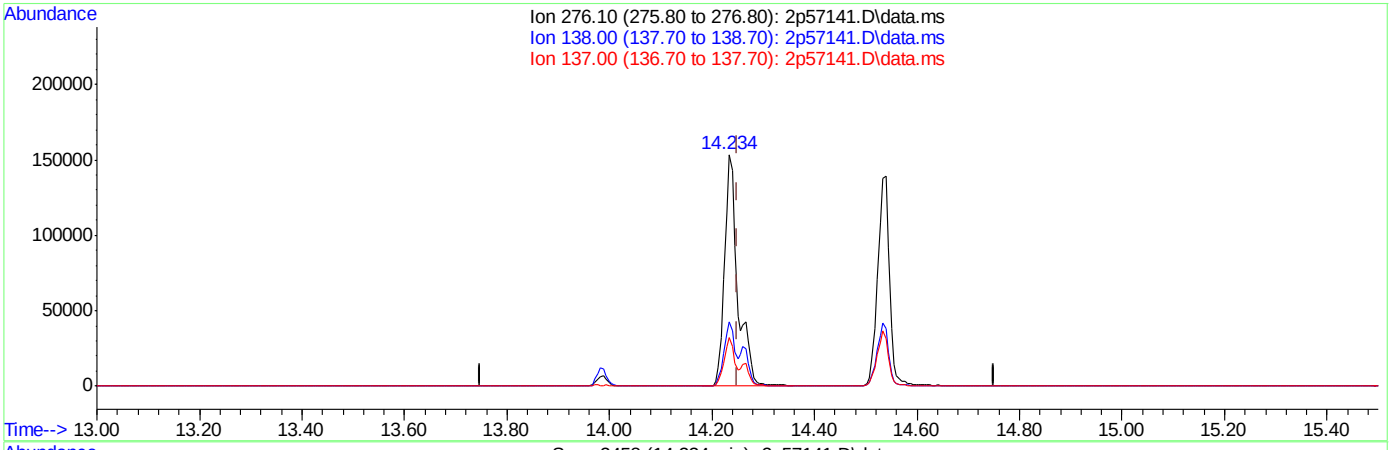
Sample Number:	E2P2490-IC2490	**Method:**	SW846 8270D
Lab FileID:	2P57141.D	**Analyst approved:**	03/11/16 23:20 Sara Davis
Injection Time:	03/11/16 11:19	**Supervisor approved:**	03/14/16 13:00 Nina Pandya

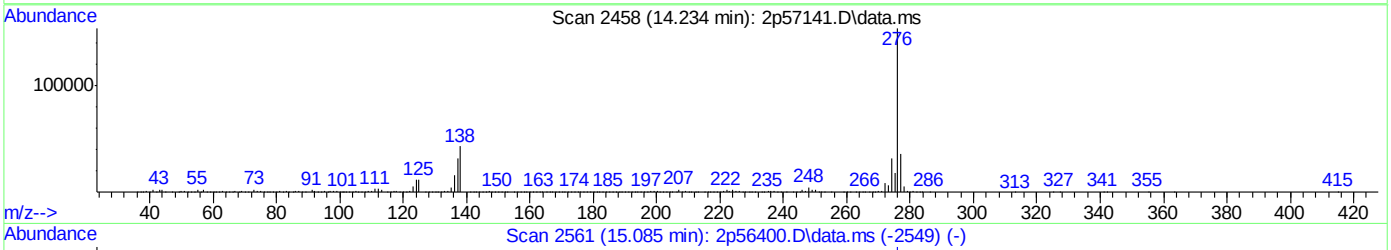
Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5		14.23	Overlapping peak

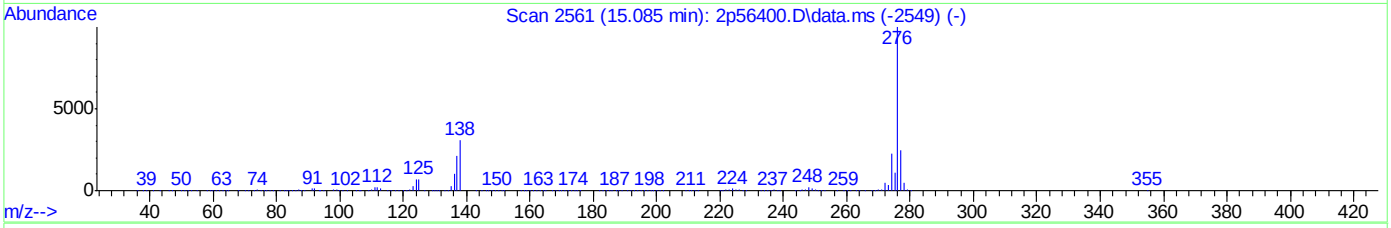
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57141.D
Acq On : 11 Mar 2016 11:19 am
Operator : robertl1
Sample : ic2490-25
Misc : op91532,e2p2490
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 11 14:57:06 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:57:00 2016
Response via : Initial Calibration







TIC: 2p57141.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.234min (-0.016) 24.58ppm

response 274537

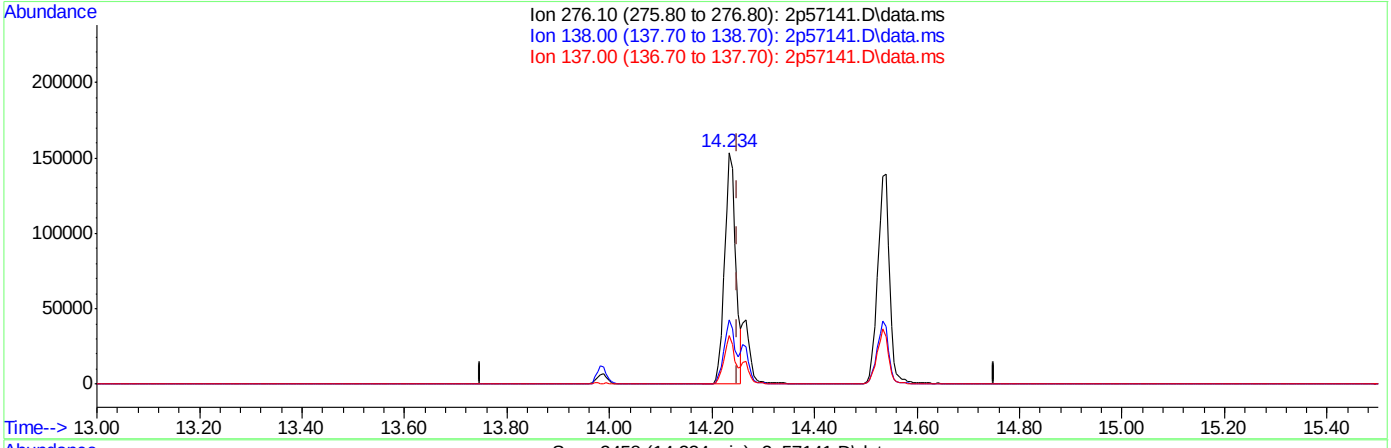
Ion	Exp%	Act%
276.10	100	100
138.00	37.80	27.88
137.00	28.00	20.64
0.00	0.00	0.00

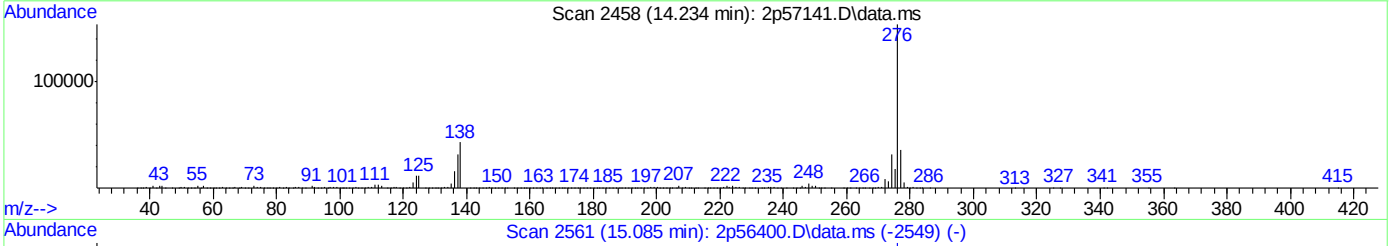
SGS ACCUTEST JC16204

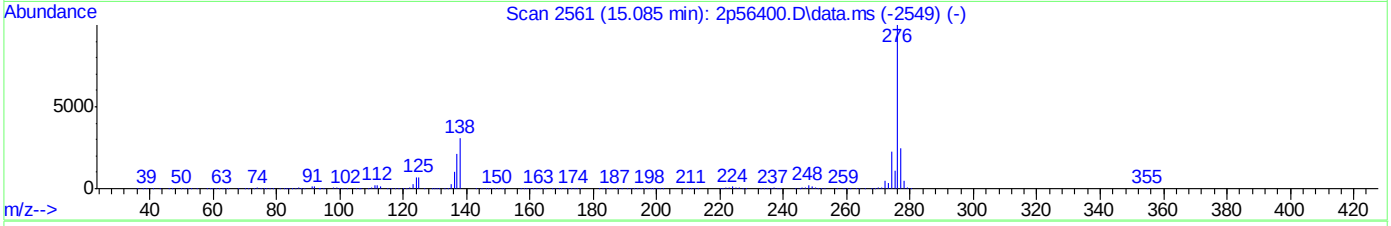
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57141.D
Acq On : 11 Mar 2016 11:19 am
Operator : robertl1
Sample : ic2490-25
Misc : op91532,e2p2490
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 11 14:57:06 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:57:00 2016
Response via : Initial Calibration







TIC: 2p57141.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.234min (-0.016) 20.33ppm m

response 227088

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	27.94
137.00	28.00	20.78
0.00	0.00	0.00

SGS ACCUTEST JC16204

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
03/14/16 13:00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57142.D
Acq On : 11 Mar 2016 11:41 am
Operator : robertl1
Sample : ic2490-10
Misc : op91532,e2p2490
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 11 14:59:17 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:58:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	141883	40.00	ppm	0.00
24) Naphthalene-d8	5.253	136	486802	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	283919	40.00	ppm	0.00
69) Phenanthrene-d10	7.912	188	473217	40.00	ppm	0.00
83) Chrysene-d12	10.993	240	481379	40.00	ppm	0.00
92) Perylene-d12	12.950	264	421374	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	141883	40.00	ppm	0.00
104) Naphthalene-d8a	5.253	136	486802	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	283919	40.00	ppm	0.00
109) Chrysene-d12a	10.993	240	481379	40.00	ppm	0.00
111) Phenanthrene-d10a	7.912	188	473217	40.00	ppm	0.00
114) Chrysene-d12b	10.993	240	481379	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.103	112	42630	8.36	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery = 16.72%			
8) Phenol-d5	3.970	99	55760	9.15	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 18.30%			
25) Nitrobenzene-d5	4.670	82	48847	10.28	ppm	0.00
Spiked Amount 50.000	Range 19 - 61		Recovery = 20.56%			
51) 2-Fluorobiphenyl	6.147	172	89226	10.34	ppm	0.00
Spiked Amount 50.000	Range 21 - 58		Recovery = 20.68%#			
73) 2,4,6-Tribromophenol	7.334	330	11477	9.22	ppm	0.00
Spiked Amount 50.000	Range 12 - 68		Recovery = 18.44%			
85) Terphenyl-d14	9.629	244	91975	10.45	ppm	0.00
Spiked Amount 50.000	Range 16 - 65		Recovery = 20.90%			
112) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.413	88	16987	8.47	ppm	68
3) Pyridine	1.681	79	42447	8.51	ppm #	30
4) N-Nitrosodimethylamine	1.665	74	26533	8.72	ppm #	1
6) Indene	4.414	116	77414	10.07	ppm	96
7) Cumene	3.510	105	109567	8.82	ppm	95
9) Phenol	3.981	94	58640	9.01	ppm	98
10) Aniline	3.932	93	65719	8.61	ppm	89
11) bis(2-Chloroethyl)ether	3.997	93	39574	9.44	ppm	78
12) 2-Chlorophenol	4.039	128	48499	9.45	ppm	90
13) Decane	4.093	57	65211	9.63	ppm	79
14) 1,3-Dichlorobenzene	4.152	146	55211	10.06	ppm	98
15) 1,4-Dichlorobenzene	4.216	146	53604	9.68	ppm	99
16) Benzyl alcohol	4.344	108	28402	9.88	ppm	84
17) 1,2-Dichlorobenzene	4.339	146	49796	9.50	ppm	98
18) Acetophenone	4.547	105	60077	10.04	ppm	89
19) 2-Methylphenol	4.473	108	39794	9.97	ppm	95
20) 2,2'-oxybis(1-Chloropr...	4.451	121	12501	9.95	ppm #	1
21) 3&4-Methylphenol	4.606	108	42352	9.78	ppm	93
22) n-Nitroso-di-n-propyla...	4.564	70	32445	10.04	ppm #	61

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57142.D
Acq On : 11 Mar 2016 11:41 am
Operator : robertl1
Sample : ic2490-10
Misc : op91532,e2p2490
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 11 14:59:17 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:58:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Hexachloroethane	4.612	201	18980	9.89	ppm		89
26) Nitrobenzene	4.687	77	47307	10.28	ppm		96
27) Quinoline	5.548	129	82682	10.05	ppm		98
28) Isophorone	4.884	82	81191	10.20	ppm		79
29) 2-Nitrophenol	4.954	139	24103	9.41	ppm	#	67
30) 2,4-Dimethylphenol	5.029	107	45345	10.06	ppm		95
31) Benzoic acid	5.136	105	20587m	8.09	ppm		
32) bis(2-Chloroethoxy)met...	5.082	93	45701	10.01	ppm		99
33) 2,4-Dichlorophenol	5.173	162	35873	9.53	ppm		96
34) 2,6-Dichlorophenol	5.344	162	36247	9.99	ppm		96
35) 1,3,5-Trichlorobenzene	4.959	180	44013	10.07	ppm		98
36) 1,2,4-Trichlorobenzene	5.216	180	41127	10.08	ppm		96
37) 1,2,3-Trichlorobenzene	5.393	180	39845	10.32	ppm		96
38) Naphthalene	5.270	128	126348	10.21	ppm		98
39) 4-Chloroaniline	5.339	127	54168	10.20	ppm		90
40) 2,3-Dichloroaniline	6.083	161	44218	9.93	ppm		94
41) Caprolactam	5.617	113	11647	9.62	ppm	#	57
42) Hexachlorobutadiene	5.382	225	24222	10.30	ppm		98
43) 4-Chloro-3-methylphenol	5.778	107	38916	9.92	ppm	#	59
44) 2-Methylnaphthalene	5.842	141	70657	9.77	ppm		94
45) 1-Methylnaphthalene	5.922	141	75457	10.13	ppm		96
46) Dimethylnaphthalene	6.355	156	72596	10.12	ppm		95
48) Hexachlorocyclopentadiene	5.976	237	35203	14.77	ppm		96
49) 2,4,6-Trichlorophenol	6.099	196	25258	9.78	ppm		98
50) 2,4,5-Trichlorophenol	6.136	196	26342	9.83	ppm		96
52) 2-Chloronaphthalene	6.238	162	78376	10.57	ppm		98
53) Biphenyl	6.227	154	102794	10.35	ppm		99
54) 2-Nitroaniline	6.339	65	29146	10.20	ppm		88
55) Dimethylphthalate	6.489	163	88923	10.36	ppm		99
56) Acenaphthylene	6.569	152	126970	10.27	ppm		99
57) 2,6-Dinitrotoluene	6.537	165	19248	9.70	ppm		97
58) 3-Nitroaniline	6.676	138	22818	9.92	ppm		99
59) Acenaphthene	6.714	153	80008	10.06	ppm		96
60) 2,4-Dinitrophenol	6.778	184	8609	9.39	ppm	#	94
61) 4-Nitrophenol	6.879	109	9900	8.98	ppm	#	75
62) Dibenzofuran	6.853	168	109152	10.15	ppm		94
63) 2,4-Dinitrotoluene	6.874	165	26292	9.87	ppm		82
64) 2,3,4,6-Tetrachlorophenol	6.976	232	20088	9.52	ppm		86
65) Diethylphthalate	7.067	149	91369	10.41	ppm		99
66) Fluorene	7.131	166	91098	10.25	ppm		96
67) 4-Chlorophenyl-phenyle...	7.142	204	42047	9.83	ppm		90
68) 4-Nitroaniline	7.174	138	20380	9.70	ppm		84
70) 4,6-Dinitro-2-methylph...	7.211	198	9657	6.83	ppm		88
71) n-Nitrosodiphenylamine	7.243	169	62770	10.41	ppm		98
72) 1,2-Diphenylhydrazine	7.270	77	87961	10.27	ppm		92
74) 4-Bromophenyl-phenylether	7.537	248	25605	9.81	ppm		95
75) Hexachlorobenzene	7.591	284	26914	9.77	ppm		97
76) Pentachlorophenol	7.773	266	18443	12.60	ppm		100
77) Phenanthrene	7.928	178	126071	10.10	ppm		98
78) Anthracene	7.976	178	129986	10.21	ppm		98

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57142.D
Acq On : 11 Mar 2016 11:41 am
Operator : robertl1
Sample : ic2490-10
Misc : op91532,e2p2490
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 11 14:59:17 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:58:18 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
79)	Carbazole	8.142	167	116587	9.92	ppm		99
80)	Di-n-butylphthalate	8.505	149	148929	9.37	ppm		99
81)	Fluoranthene	9.137	202	140486	9.33	ppm		96
82)	Octadecane	7.858	43	61055	9.97	ppm	#	60
84)	Pyrene	9.393	202	149436	10.60	ppm		99
86)	Butylbenzylphthalate	10.308	149	67611	10.03	ppm		93
87)	Butyl stearate	10.463	56	51508	9.85	ppm		88
88)	Benzo[a]anthracene	10.982	228	132541	10.16	ppm		98
89)	3,3'-Dichlorobenzidine	10.993	252	50266	10.50	ppm		93
90)	Chrysene	11.025	228	124510	10.64	ppm		99
91)	bis(2-Ethylhexyl)phtha...	11.169	149	93272	10.57	ppm		95
93)	Di-n-octylphthalate	12.094	149	158924	9.12	ppm		92
94)	Benzo[b]fluoranthene	12.453	252	130854	9.25	ppm		99
95)	Benzo[k]fluoranthene	12.490	252	115669	9.52	ppm		98
96)	Benzo[a]pyrene	12.870	252	110680	9.39	ppm		96
97)	Indeno[1,2,3-cd]pyrene	14.228	276	86455m	8.00	ppm		
98)	Dibenz(a,h)acridine	13.982	279	81755	9.07	ppm		97
99)	Dibenz[a,h]anthracene	14.261	278	88040	8.70	ppm		90
100)	7,12-Dimethylbenz(a)an...	12.453	256	56635	9.00	ppm		94
101)	Benzo[g,h,i]perylene	14.528	276	87492	8.88	ppm		89

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

9.6.5

9

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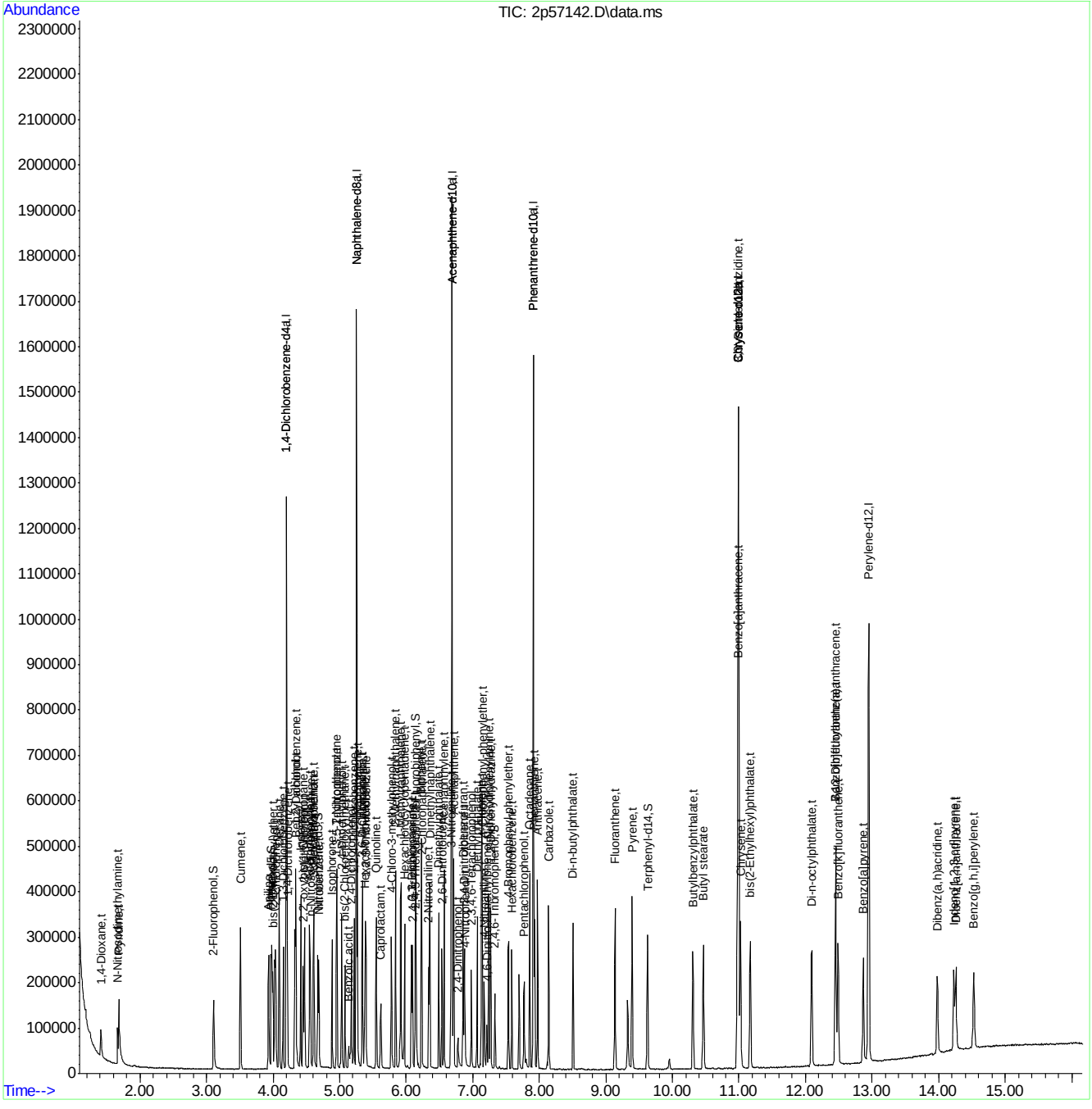

SGS ACCUTEST JC16204

Manual Integration Approval Summary

Sample Number:	E2P2490-IC2490	**Method:**	SW846 8270D
Lab FileID:	2P57142.D	**Analyst approved:**	03/11/16 23:20 Sara Davis
Injection Time:	03/11/16 11:41	**Supervisor approved:**	03/14/16 13:00 Nina Pandya

Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzoic acid	65-85-0		5.14	Split peak
Indeno(1,2,3-cd)pyrene	193-39-5		14.23	Overlapping peak

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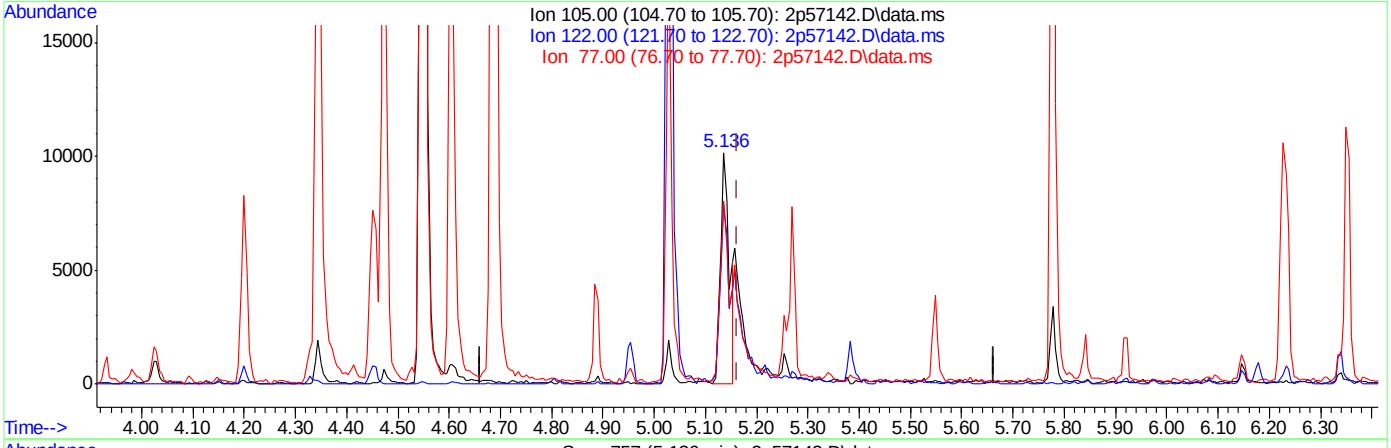

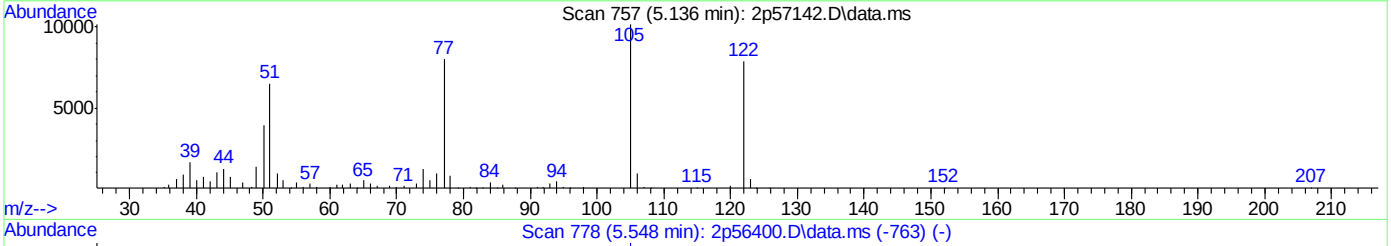

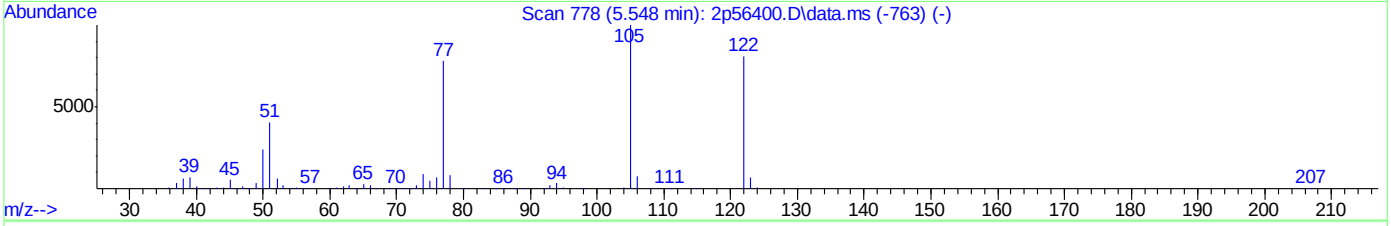

TIC: 2p57142.D\data.ms

(31) Benzoic acid (t)

5.136min (-0.027) 4.68ppm

response 11897

Ion	Exp%	Act%
105.00	100	100
122.00	77.90	76.59
77.00	73.40	78.18
0.00	0.00	0.00

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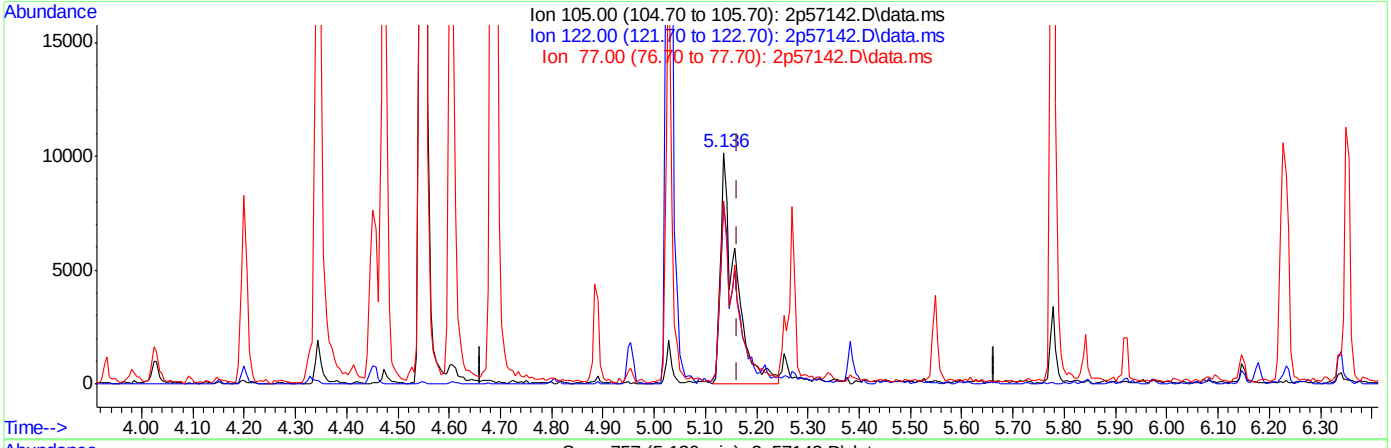

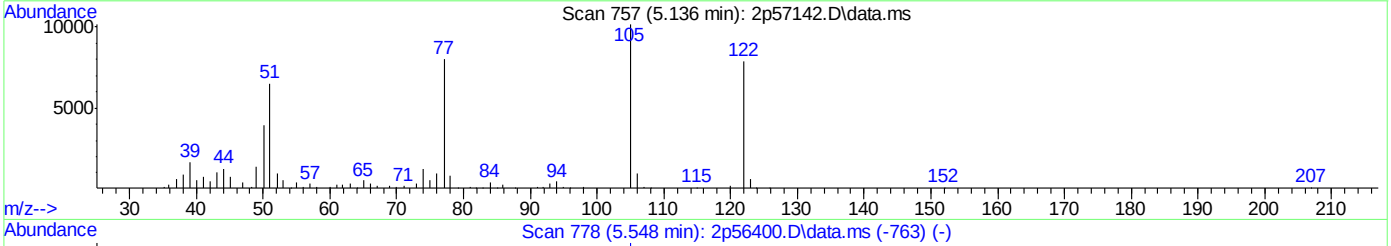

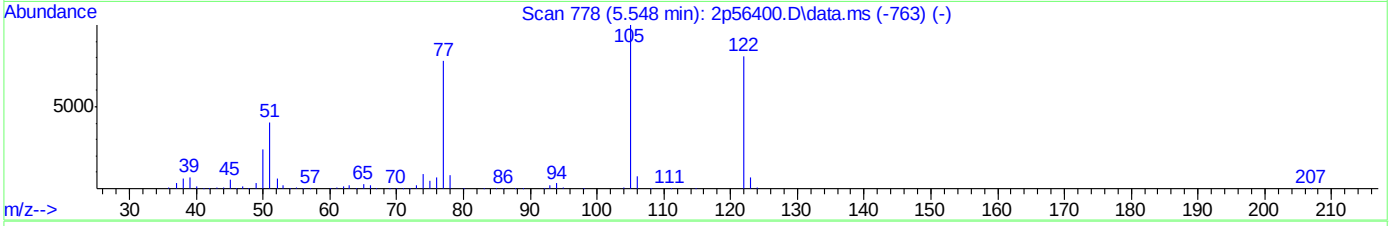

TIC: 2p57142.D\data.ms

(31) Benzoic acid (t)

5.136min (-0.027) 8.09ppm m

response 20587

Ion	Exp%	Act%
105.00	100	100
122.00	77.90	77.80
77.00	73.40	79.14
0.00	0.00	0.00

SGS ACCUTEST JC16204

Quantitation Report (Qedit)

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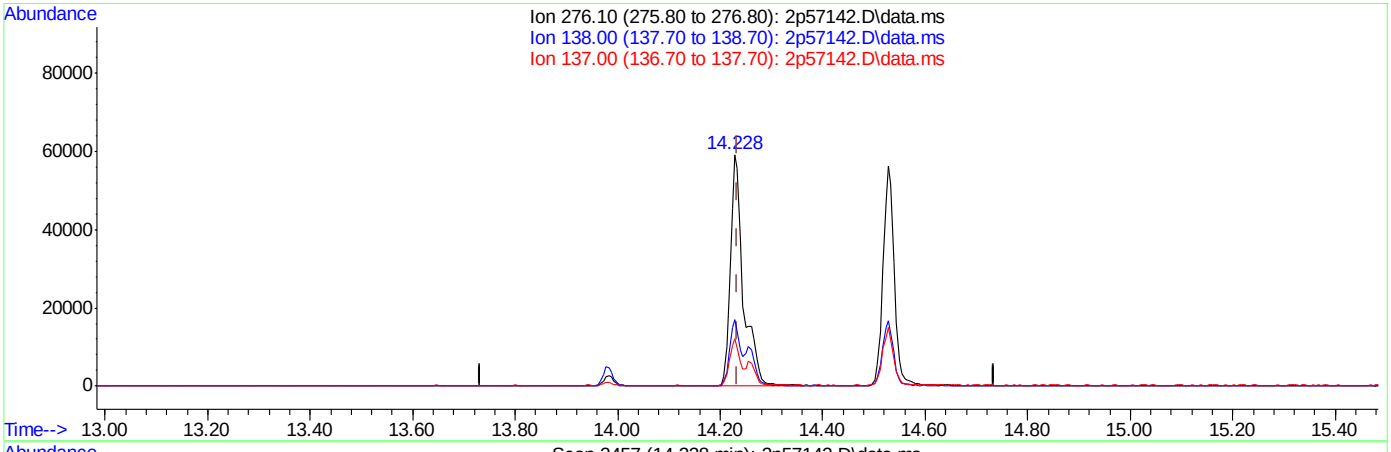

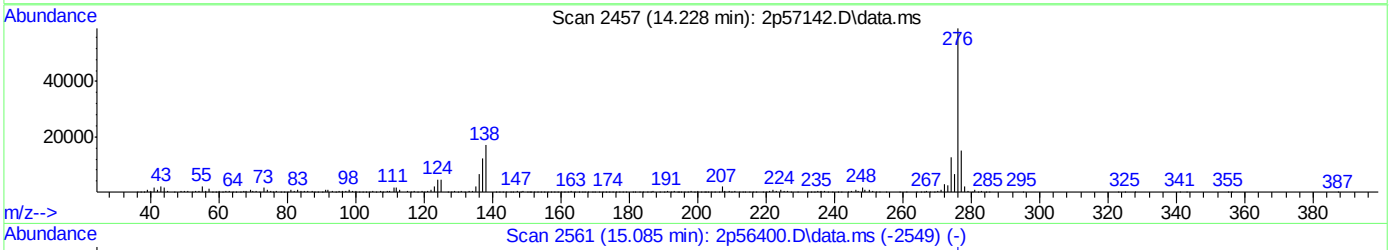

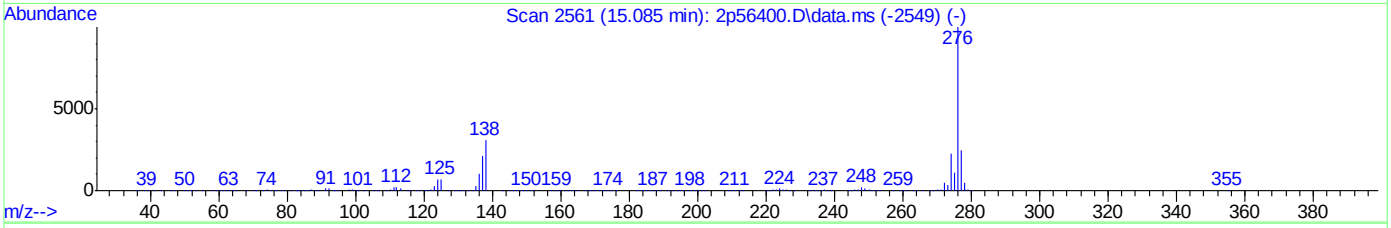

TIC: 2p57142.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.228min (-0.005) 9.83ppm

response 106331

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	28.35
137.00	28.00	20.24
0.00	0.00	0.00

SGS ACCUTEST JC16204

Quantitation Report (Qedit)

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Sample : ic2490-10
Misc : op91532,e2p2490
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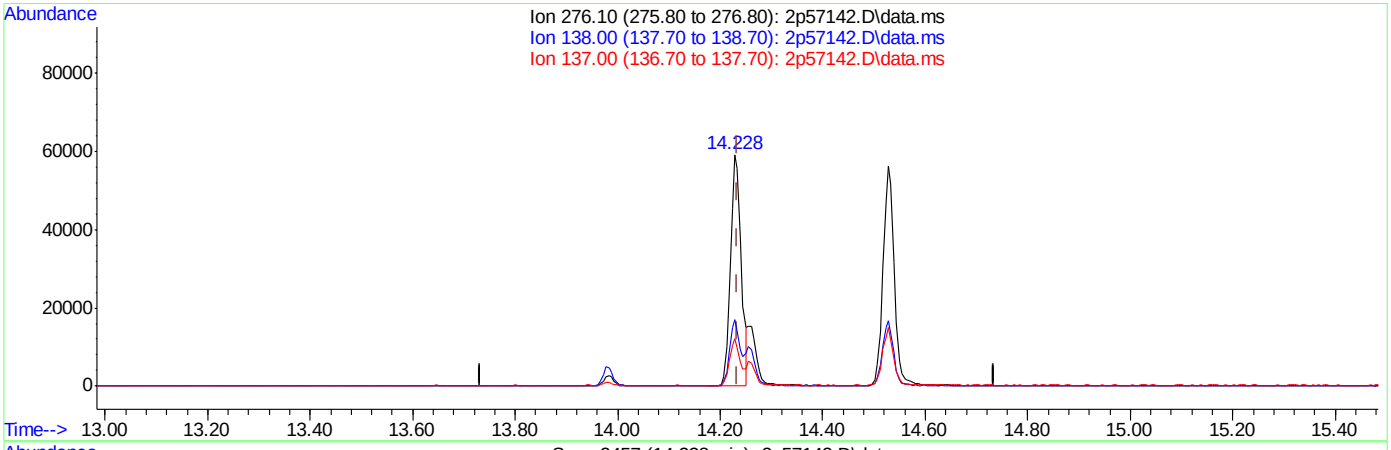

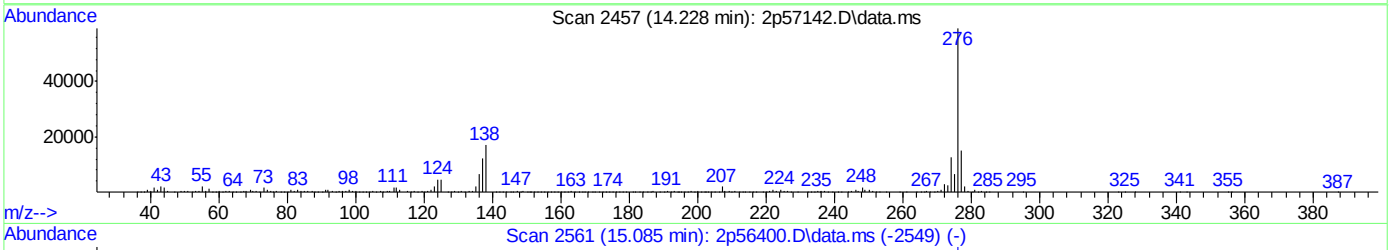

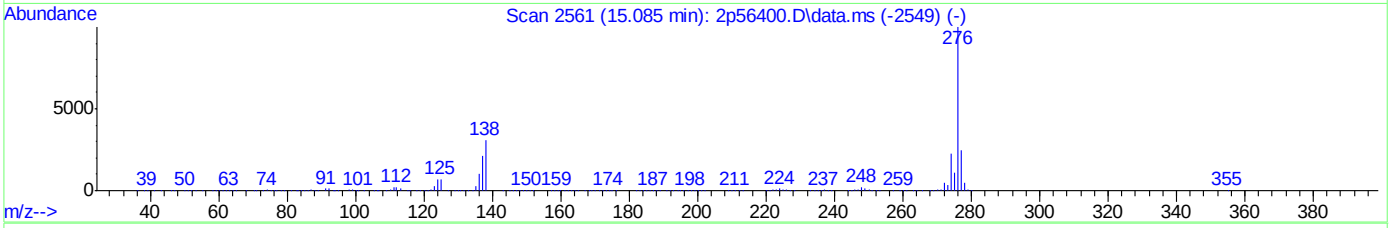

TIC: 2p57142.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.228min (-0.005) 8.00ppm m

response 86455

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	28.62
137.00	28.00	20.53
0.00	0.00	0.00

SGS ACCUTEST JC16204

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
03/14/16 13:00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57143.D
Acq On : 11 Mar 2016 12:03 pm
Operator : robertl1
Sample : ic2490-5
Misc : op91532,e2p2490
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 11 15:00:23 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:59:27 2016
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Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	138226	40.00	ppm	0.00
24) Naphthalene-d8	5.254	136	500633	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	289929	40.00	ppm	0.00
69) Phenanthrene-d10	7.912	188	486351	40.00	ppm	0.00
83) Chrysene-d12	10.993	240	470705	40.00	ppm	0.00
92) Perylene-d12	12.950	264	413881	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	138226	40.00	ppm	0.00
104) Naphthalene-d8a	5.254	136	500633	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	289929	40.00	ppm	0.00
109) Chrysene-d12a	10.993	240	470705	40.00	ppm	0.00
111) Phenanthrene-d10a	7.912	188	486351	40.00	ppm	0.00
114) Chrysene-d12b	10.993	240	470705	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.109	112	22036	4.63	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery	=	9.26%#	
8) Phenol-d5	3.970	99	26929	4.64	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery	=	9.28%#	
25) Nitrobenzene-d5	4.671	82	24927	5.07	ppm	0.00
Spiked Amount 50.000	Range 19 - 61		Recovery	=	10.14%#	
51) 2-Fluorobiphenyl	6.147	172	46919	5.28	ppm	0.00
Spiked Amount 50.000	Range 21 - 58		Recovery	=	10.56%#	
73) 2,4,6-Tribromophenol	7.340	330	6053	4.82	ppm	0.00
Spiked Amount 50.000	Range 12 - 68		Recovery	=	9.64%#	
85) Terphenyl-d14	9.629	244	46040	5.29	ppm	0.00
Spiked Amount 50.000	Range 16 - 65		Recovery	=	10.58%#	
112) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.413	88	9212	4.90	ppm	# 59
3) Pyridine	1.686	79	21271	4.55	ppm	# 28
4) N-Nitrosodimethylamine	1.665	74	13427	4.68	ppm	# 1
6) Indene	4.414	116	38783	5.17	ppm	96
7) Cumene	3.510	105	55696	4.74	ppm	93
9) Phenol	3.981	94	30149	4.87	ppm	97
10) Aniline	3.932	93	33397	4.65	ppm	92
11) bis(2-Chloroethyl)ether	3.997	93	19764	4.91	ppm	83
12) 2-Chlorophenol	4.039	128	24674	5.01	ppm	90
13) Decane	4.093	57	33949	5.19	ppm	80
14) 1,3-Dichlorobenzene	4.152	146	27828	5.20	ppm	96
15) 1,4-Dichlorobenzene	4.216	146	27838	5.20	ppm	98
16) Benzyl alcohol	4.344	108	14117	5.06	ppm	81
17) 1,2-Dichlorobenzene	4.339	146	25282	5.02	ppm	97
18) Acetophenone	4.548	105	30820	5.28	ppm	86
19) 2-Methylphenol	4.473	108	20070	5.16	ppm	93
20) 2,2'-oxybis(1-Chloropr...	4.451	121	7135	5.84	ppm	# 14
21) 3&4-Methylphenol	4.606	108	21559	5.14	ppm	95
22) n-Nitroso-di-n-propyla...	4.558	70	17102	5.43	ppm	# 50

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Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Hexachloroethane	4.612	201	9795	5.26	ppm		88
26) Nitrobenzene	4.687	77	24948	5.24	ppm		97
27) Quinoline	5.548	129	41779	4.93	ppm		98
28) Isophorone	4.884	82	41896	5.09	ppm		81
29) 2-Nitrophenol	4.954	139	12062	4.65	ppm	#	57
30) 2,4-Dimethylphenol	5.029	107	23907	5.15	ppm		89
31) Benzoic acid	5.131	105	9302	3.73	ppm		94
32) bis(2-Chloroethoxy)met...	5.082	93	23776	5.06	ppm		98
33) 2,4-Dichlorophenol	5.173	162	18844	4.93	ppm		94
34) 2,6-Dichlorophenol	5.344	162	19246	5.16	ppm		99
35) 1,3,5-Trichlorobenzene	4.959	180	22466	4.99	ppm		99
36) 1,2,4-Trichlorobenzene	5.216	180	21374	5.08	ppm		97
37) 1,2,3-Trichlorobenzene	5.393	180	20420	5.10	ppm		95
38) Naphthalene	5.270	128	65929	5.15	ppm		96
39) 4-Chloroaniline	5.339	127	26661	4.86	ppm		91
40) 2,3-Dichloroaniline	6.083	161	22481	4.92	ppm		96
41) Caprolactam	5.612	113	5961	4.83	ppm	#	63
42) Hexachlorobutadiene	5.382	225	12247	5.03	ppm		99
43) 4-Chloro-3-methylphenol	5.778	107	19689	4.89	ppm	#	53
44) 2-Methylnaphthalene	5.842	141	37480	5.07	ppm		91
45) 1-Methylnaphthalene	5.922	141	38590	5.02	ppm		97
46) Dimethylnaphthalene	6.355	156	38498	5.20	ppm		96
48) Hexachlorocyclopentadiene	5.976	237	15063	6.62	ppm		99
49) 2,4,6-Trichlorophenol	6.099	196	13052	4.98	ppm		93
50) 2,4,5-Trichlorophenol	6.141	196	13366	4.91	ppm		97
52) 2-Chloronaphthalene	6.238	162	41108	5.35	ppm		96
53) Biphenyl	6.227	154	54412	5.32	ppm		99
54) 2-Nitroaniline	6.339	65	15353	5.24	ppm		85
55) Dimethylphthalate	6.489	163	47324	5.35	ppm		100
56) Acenaphthylene	6.569	152	67830	5.34	ppm		100
57) 2,6-Dinitrotoluene	6.537	165	9732	4.84	ppm		97
58) 3-Nitroaniline	6.676	138	11299	4.82	ppm		97
59) Acenaphthene	6.714	153	42416	5.22	ppm		99
60) 2,4-Dinitrophenol	6.783	184	2254	2.78	ppm	#	99
61) 4-Nitrophenol	6.885	109	4942	4.50	ppm	#	56
62) Dibenzofuran	6.853	168	57775	5.24	ppm		97
63) 2,4-Dinitrotoluene	6.874	165	13316	4.91	ppm		92
64) 2,3,4,6-Tetrachlorophenol	6.981	232	9766	4.59	ppm		95
65) Diethylphthalate	7.067	149	47475	5.24	ppm		98
66) Fluorene	7.131	166	45823	5.02	ppm		94
67) 4-Chlorophenyl-phenyle...	7.142	204	21646	4.98	ppm		89
68) 4-Nitroaniline	7.174	138	10701	5.02	ppm		91
70) 4,6-Dinitro-2-methylph...	7.211	198	3527	2.64	ppm		87
71) n-Nitrosodiphenylamine	7.243	169	32506	5.19	ppm		99
72) 1,2-Diphenylhydrazine	7.270	77	45129	5.09	ppm		93
74) 4-Bromophenyl-phenylether	7.537	248	12856	4.82	ppm		94
75) Hexachlorobenzene	7.591	284	13702	4.87	ppm		93
76) Pentachlorophenol	7.773	266	8309	6.09	ppm		91
77) Phenanthrene	7.928	178	66217	5.15	ppm		99
78) Anthracene	7.976	178	65241	4.96	ppm		99

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80)	Di-n-butylphthalate	8.506	149	76018	4.73	ppm		99
81)	Fluoranthene	9.137	202	70832	4.66	ppm		95
82)	Octadecane	7.858	43	31667	5.03	ppm	#	58
84)	Pyrene	9.393	202	73592	5.26	ppm		98
86)	Butylbenzylphthalate	10.308	149	34538	5.23	ppm		94
87)	Butyl stearate	10.463	56	25816	5.07	ppm		87
88)	Benzo[a]anthracene	10.982	228	65995	5.15	ppm		99
89)	3,3'-Dichlorobenzidine	10.993	252	23621	4.98	ppm		97
90)	Chrysene	11.025	228	63384	5.45	ppm		99
91)	bis(2-Ethylhexyl)phtha...	11.169	149	46657	5.33	ppm		97
93)	Di-n-octylphthalate	12.094	149	79001	4.72	ppm		91
94)	Benzo[b]fluoranthene	12.453	252	67470	4.95	ppm		98
95)	Benzo[k]fluoranthene	12.490	252	57283	4.86	ppm		99
96)	Benzo[a]pyrene	12.870	252	55515	4.87	ppm		93
97)	Indeno[1,2,3-cd]pyrene	14.229	276	43665m	4.33	ppm		
98)	Dibenz(a,h)acridine	13.983	279	40306	4.66	ppm		99
99)	Dibenz[a,h]anthracene	14.261	278	44635	4.64	ppm		92
100)	7,12-Dimethylbenz(a)an...	12.447	256	28115	4.66	ppm		92
101)	Benzo[g,h,i]perylene	14.528	276	44337	4.71	ppm		87

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

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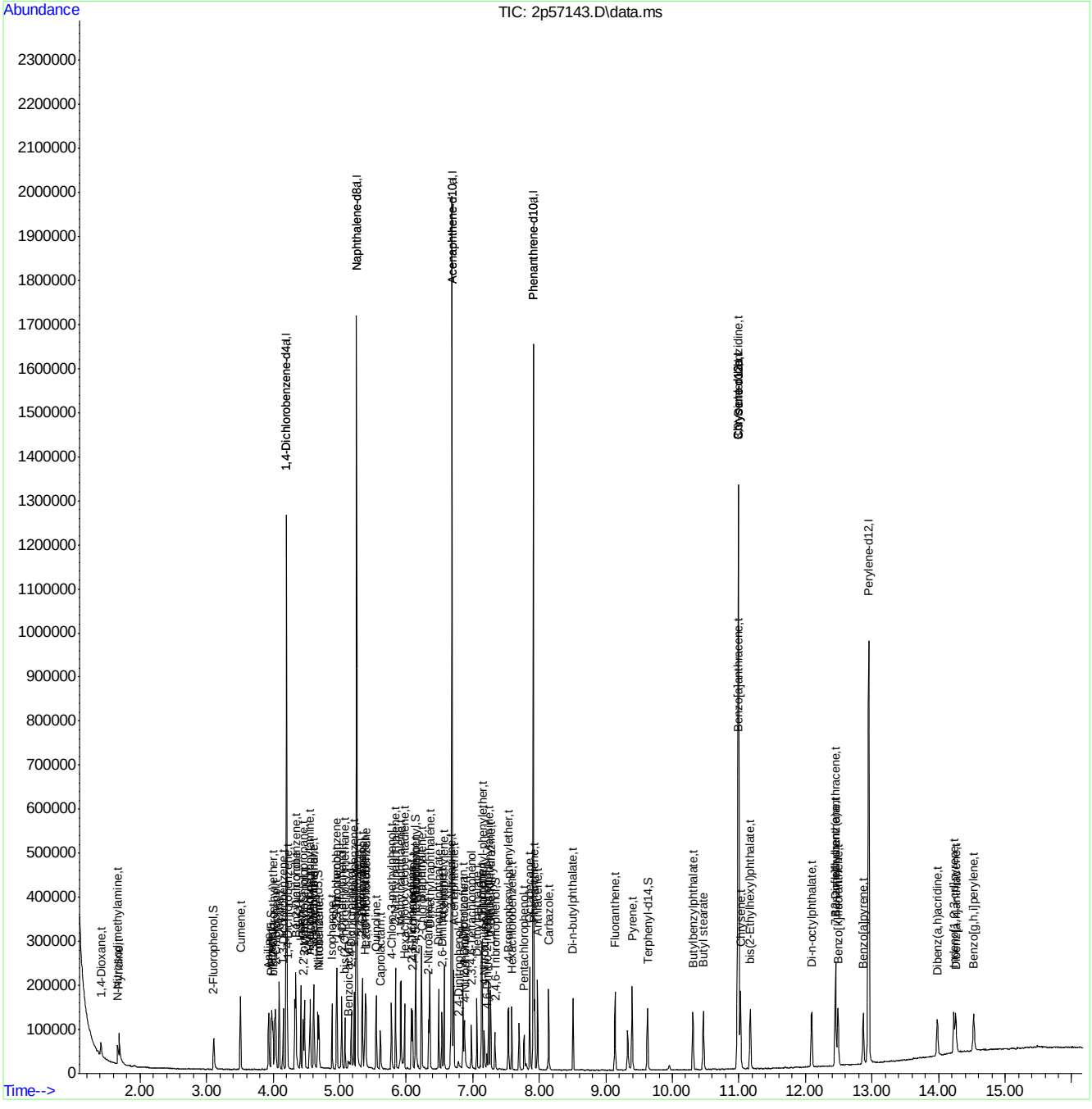
Operator : robertl1
Sample : ic2490-5
Misc : op91532,e2p2490
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 11 15:00:23 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:59:27 2016
Response via : Initial Calibration



Manual Integration Approval Summary

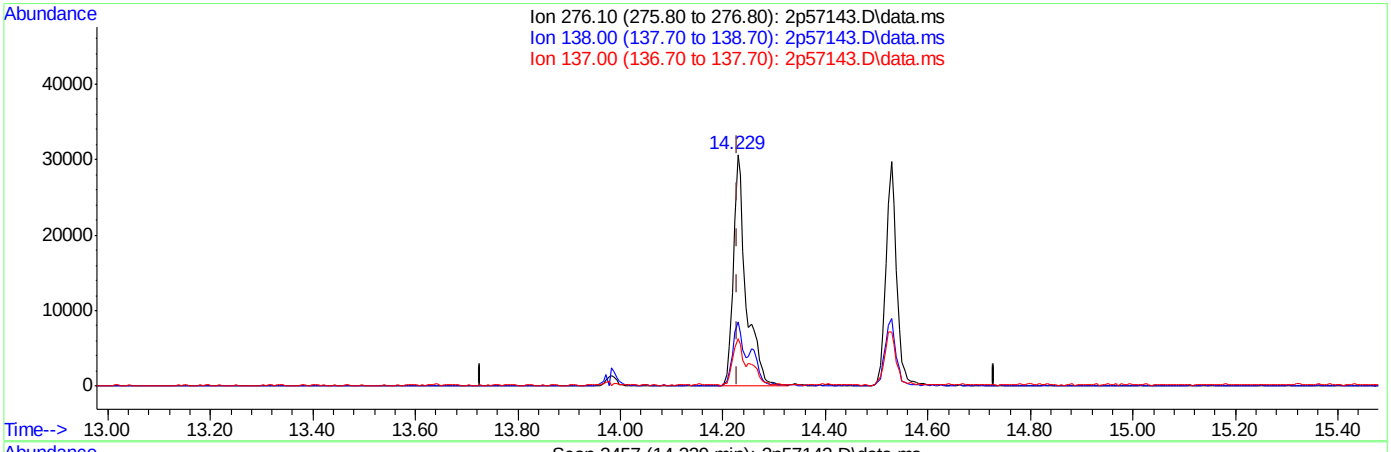
Sample Number:	E2P2490-IC2490	**Method:**	SW846 8270D
Lab FileID:	2P57143.D	**Analyst approved:**	03/11/16 23:20 Sara Davis
Injection Time:	03/11/16 12:03	**Supervisor approved:**	03/14/16 13:00 Nina Pandya

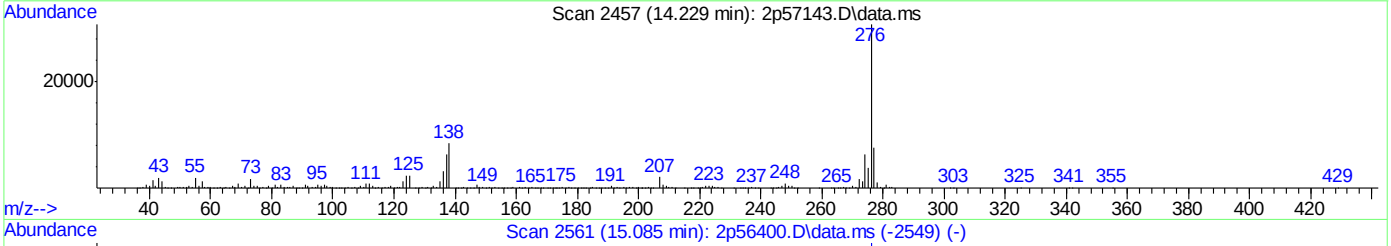
Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5		14.23	Overlapping peak

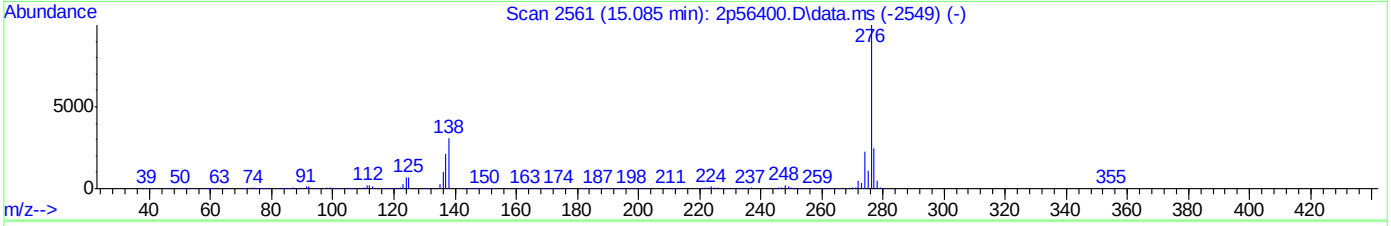
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57143.D
Acq On : 11 Mar 2016 12:03 pm
Operator : robertl1
Sample : ic2490-5
Misc : op91532,e2p2490
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 11 14:59:32 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:59:27 2016
Response via : Initial Calibration







TIC: 2p57143.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.229min (+0.000) 5.32ppm

response 53673

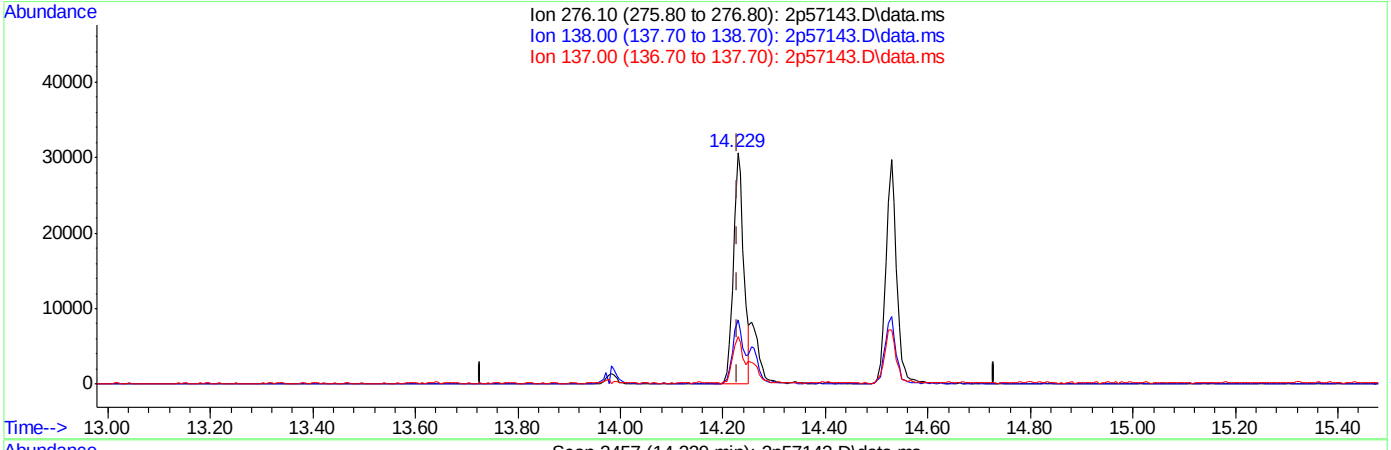
Ion	Exp%	Act%
276.10	100	100
138.00	37.80	27.08
137.00	28.00	19.88
0.00	0.00	0.00

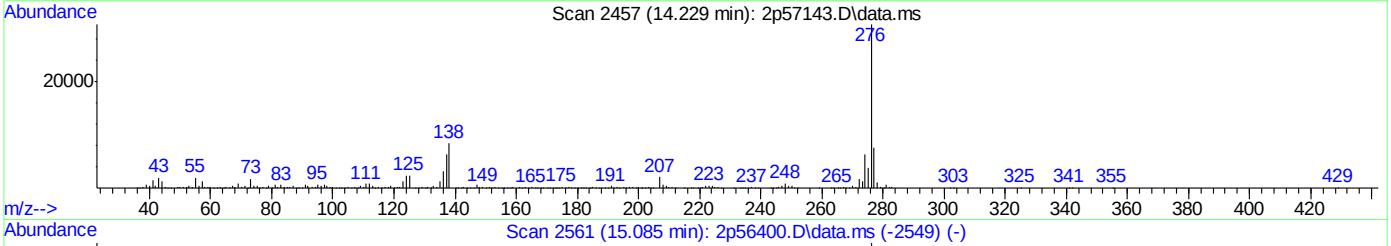
SGS ACCUTEST JC16204

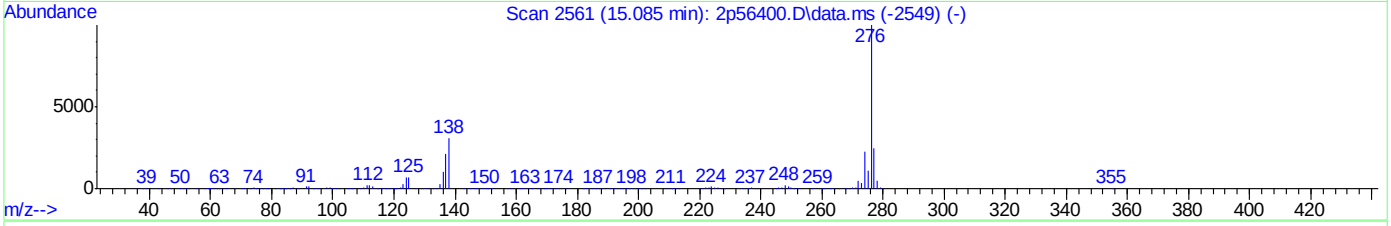
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57143.D
Acq On : 11 Mar 2016 12:03 pm
Operator : robertl1
Sample : ic2490-5
Misc : op91532,e2p2490
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 11 14:59:32 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:59:27 2016
Response via : Initial Calibration







TIC: 2p57143.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.229min (+0.000) 4.33ppm m

response 43665

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	27.57
137.00	28.00	20.47
0.00	0.00	0.00

SGS ACCUTEST JC16204

2P57144.D

Manual Integrations APPROVED (compounds with "m" flag)

Nina Pandya
03/14/16 13:00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57144.D
Acq On : 11 Mar 2016 12:24 pm
Operator : robertl1
Sample : ic2490-2
Misc : op91532,e2p2490
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 11 15:02:28 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:59:27 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	175903	40.00	ppm	0.00
24) Naphthalene-d8	5.253	136	638677	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	376267	40.00	ppm	0.00
69) Phenanthrene-d10	7.912	188	619778	40.00	ppm	0.00
83) Chrysene-d12	10.998	240	605735	40.00	ppm	0.00
92) Perylene-d12	12.950	264	538260	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	175903	40.00	ppm	0.00
104) Naphthalene-d8a	5.253	136	638677	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	376267	40.00	ppm	0.00
109) Chrysene-d12a	10.998	240	605735	40.00	ppm	0.00
111) Phenanthrene-d10a	7.912	188	619778	40.00	ppm	0.00
114) Chrysene-d12b	10.998	240	605735	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.109	112	10626	1.75	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery	=	3.50%#	
8) Phenol-d5	3.975	99	13267	1.79	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery	=	3.58%#	
25) Nitrobenzene-d5	4.670	82	13232	2.11	ppm	0.00
Spiked Amount 50.000	Range 19 - 61		Recovery	=	4.22%#	
51) 2-Fluorobiphenyl	6.147	172	23786	2.06	ppm	0.00
Spiked Amount 50.000	Range 21 - 58		Recovery	=	4.12%#	
73) 2,4,6-Tribromophenol	7.334	330	2809	1.76	ppm	0.00
Spiked Amount 50.000	Range 12 - 68		Recovery	=	3.52%#	
85) Terphenyl-d14	9.629	244	22041	1.97	ppm	0.00
Spiked Amount 50.000	Range 16 - 65		Recovery	=	3.94%#	
112) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.418	88	5383	2.25	ppm	# 59
3) Pyridine	1.697	79	10113	1.70	ppm	# 39
4) N-Nitrosodimethylamine	1.675	74	6224	1.71	ppm	# 1
6) Indene	4.414	116	19891	2.08	ppm	91
7) Cumene	3.510	105	28108	1.88	ppm	96
9) Phenol	3.986	94	14888	1.89	ppm	96
10) Aniline	3.932	93	16784	1.84	ppm	73
11) bis(2-Chloroethyl)ether	3.996	93	10537	2.06	ppm	# 72
12) 2-Chlorophenol	4.039	128	12533	2.00	ppm	88
13) Decane	4.093	57	16601	2.00	ppm	76
14) 1,3-Dichlorobenzene	4.152	146	13906	2.04	ppm	99
15) 1,4-Dichlorobenzene	4.216	146	14238	2.09	ppm	95
16) Benzyl alcohol	4.344	108	6459	1.82	ppm	75
17) 1,2-Dichlorobenzene	4.339	146	12594	1.96	ppm	97
18) Acetophenone	4.547	105	14767	1.99	ppm	84
19) 2-Methylphenol	4.472	108	10277	2.08	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.451	121	3280	2.11	ppm	# 1
21) 3&4-Methylphenol	4.606	108	11100	2.08	ppm	85
22) n-Nitroso-di-n-propyla...	4.558	70	8258	2.06	ppm	# 48

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57144.D
Acq On : 11 Mar 2016 12:24 pm
Operator : robertl1
Sample : ic2490-2
Misc : op91532,e2p2490
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 11 15:02:28 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:59:27 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Hexachloroethane	4.612	201	4774	2.01	ppm		85
26) Nitrobenzene	4.686	77	12846	2.11	ppm		99
27) Quinoline	5.548	129	21733	2.01	ppm		96
28) Isophorone	4.884	82	21123	2.01	ppm		79
29) 2-Nitrophenol	4.954	139	6173	1.86	ppm	#	56
30) 2,4-Dimethylphenol	5.029	107	12235	2.07	ppm		94
31) Benzoic acid	5.141	105	3922	1.23	ppm		77
32) bis(2-Chloroethoxy)met...	5.082	93	11818	1.97	ppm		97
33) 2,4-Dichlorophenol	5.178	162	9369	1.92	ppm		98
34) 2,6-Dichlorophenol	5.344	162	9530	2.00	ppm		95
35) 1,3,5-Trichlorobenzene	4.959	180	11801	2.06	ppm		93
36) 1,2,4-Trichlorobenzene	5.216	180	10749	2.00	ppm		96
37) 1,2,3-Trichlorobenzene	5.392	180	10200	2.00	ppm		97
38) Naphthalene	5.269	128	33491	2.05	ppm		97
39) 4-Chloroaniline	5.339	127	14251	2.04	ppm		92
40) 2,3-Dichloroaniline	6.082	161	11682	2.00	ppm		94
41) Caprolactam	5.606	113	3059	1.94	ppm	#	67
42) Hexachlorobutadiene	5.382	225	6121	1.97	ppm		98
43) 4-Chloro-3-methylphenol	5.778	107	9842	1.92	ppm		95
44) 2-Methylnaphthalene	5.842	141	18268	1.94	ppm		96
45) 1-Methylnaphthalene	5.922	141	20211	2.06	ppm		93
46) Dimethylnaphthalene	6.355	156	19712	2.09	ppm		93
48) Hexachlorocyclopentadiene	5.975	237	6381	2.16	ppm		99
49) 2,4,6-Trichlorophenol	6.098	196	6652	1.95	ppm		93
50) 2,4,5-Trichlorophenol	6.141	196	7352	2.08	ppm		93
52) 2-Chloronaphthalene	6.238	162	21351	2.14	ppm		98
53) Biphenyl	6.227	154	27406	2.06	ppm		99
54) 2-Nitroaniline	6.339	65	8023	2.11	ppm	#	78
55) Dimethylphthalate	6.489	163	22890	1.99	ppm		99
56) Acenaphthylene	6.569	152	34266	2.08	ppm		98
57) 2,6-Dinitrotoluene	6.537	165	4634	1.77	ppm		95
58) 3-Nitroaniline	6.676	138	5951	1.96	ppm		91
59) Acenaphthene	6.714	153	21755	2.06	ppm		97
60) 2,4-Dinitrophenol	6.794	184	749	0.71	ppm	#	20
61) 4-Nitrophenol	6.890	109	2391	1.68	ppm	#	73
62) Dibenzofuran	6.853	168	29638	2.07	ppm		93
63) 2,4-Dinitrotoluene	6.874	165	6325	1.80	ppm		87
64) 2,3,4,6-Tetrachlorophenol	6.981	232	5076	1.84	ppm		98
65) Diethylphthalate	7.061	149	23682	2.01	ppm		97
66) Fluorene	7.131	166	23304	1.97	ppm		92
67) 4-Chlorophenyl-phenyle...	7.141	204	10804	1.91	ppm		91
68) 4-Nitroaniline	7.174	138	5177	1.87	ppm		93
70) 4,6-Dinitro-2-methylph...	7.216	198	1177	0.69	ppm		79
71) n-Nitrosodiphenylamine	7.243	169	16493	2.07	ppm		99
72) 1,2-Diphenylhydrazine	7.270	77	23083	2.04	ppm		92
74) 4-Bromophenyl-phenylether	7.537	248	6351	1.87	ppm		93
75) Hexachlorobenzene	7.591	284	6677	1.86	ppm		94
76) Pentachlorophenol	7.773	266	3084	1.77	ppm		98
77) Phenanthrene	7.928	178	33714	2.06	ppm		99
78) Anthracene	7.976	178	34142	2.04	ppm		99

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57144.D
Acq On : 11 Mar 2016 12:24 pm
Operator : robertl1
Sample : ic2490-2
Misc : op91532,e2p2490
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 11 15:02:28 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:59:27 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
79)	Carbazole	8.142	167	30627	1.99	ppm		96
80)	Di-n-butylphthalate	8.505	149	38383	1.87	ppm		99
81)	Fluoranthene	9.136	202	34801	1.80	ppm		96
82)	Octadecane	7.858	43	16045	2.00	ppm	#	59
84)	Pyrene	9.393	202	38528	2.14	ppm		98
86)	Butylbenzylphthalate	10.308	149	16450	1.94	ppm		93
87)	Butyl stearate	10.468	56	12675	1.93	ppm		94
88)	Benzo[a]anthracene	10.982	228	35587	2.16	ppm		96
89)	3,3'-Dichlorobenzidine	10.992	252	12831	2.10	ppm		92
90)	Chrysene	11.025	228	32325	2.16	ppm		99
91)	bis(2-Ethylhexyl)phtha...	11.169	149	22099	1.96	ppm		98
93)	Di-n-octylphthalate	12.089	149	38102	1.75	ppm		92
94)	Benzo[b]fluoranthene	12.453	252	31485	1.78	ppm		97
95)	Benzo[k]fluoranthene	12.485	252	30261	1.97	ppm		98
96)	Benzo[a]pyrene	12.870	252	27155	1.83	ppm		94
97)	Indeno[1,2,3-cd]pyrene	14.228	276	21729m	1.66	ppm		
98)	Dibenz(a,h)acridine	13.982	279	20718	1.84	ppm		99
99)	Dibenz[a,h]anthracene	14.260	278	22439	1.79	ppm		91
100)	7,12-Dimethylbenz(a)an...	12.447	256	13515	1.72	ppm		87
101)	Benzo[g,h,i]perylene	14.528	276	22437	1.83	ppm		89

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

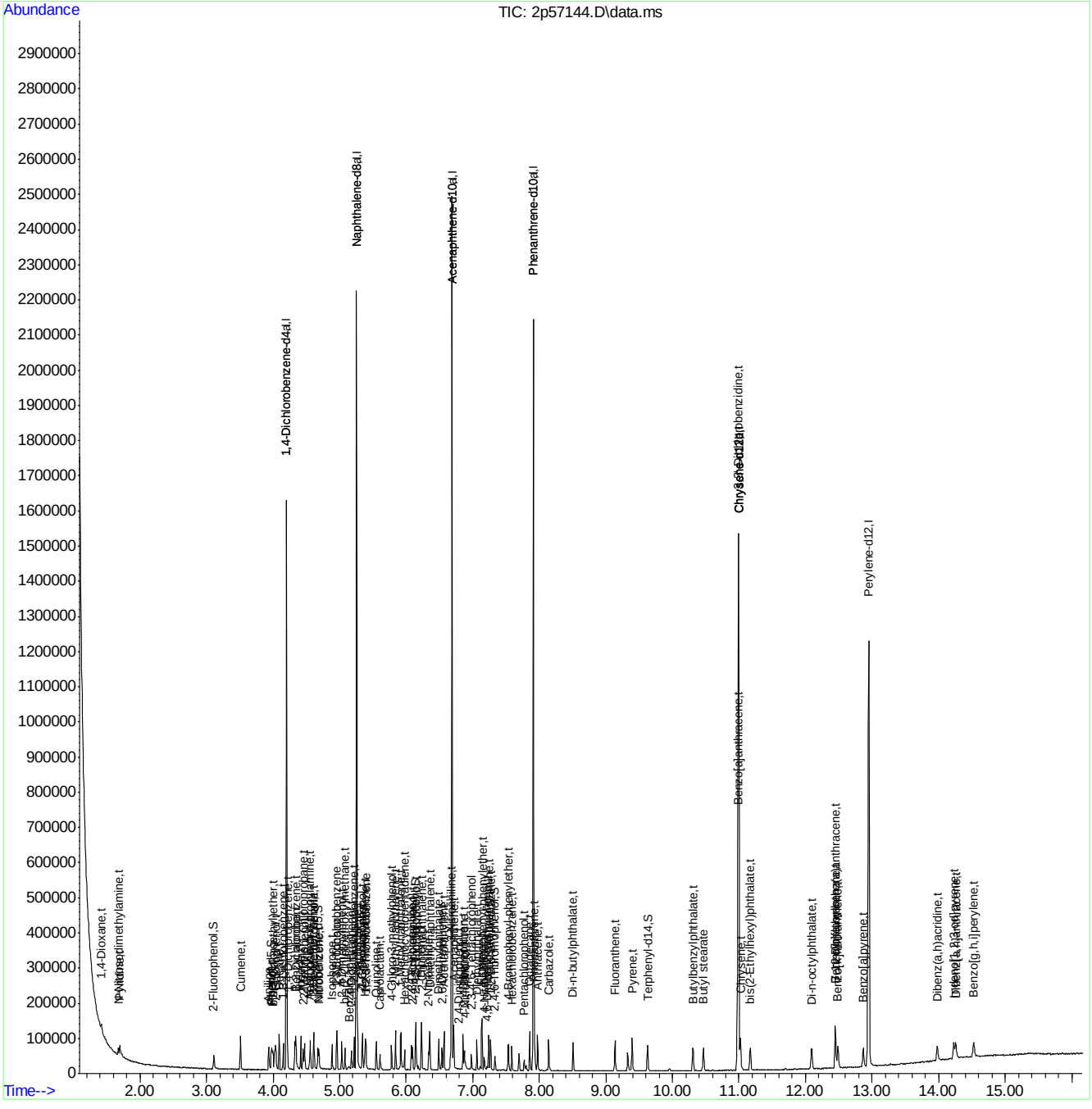
9.6.7

9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57144.D
Acq On : 11 Mar 2016 12:24 pm
Operator : robertl1
Sample : ic2490-2
Misc : op91532,e2p2490
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 11 15:02:28 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:59:27 2016
Response via : Initial Calibration



Manual Integration Approval Summary

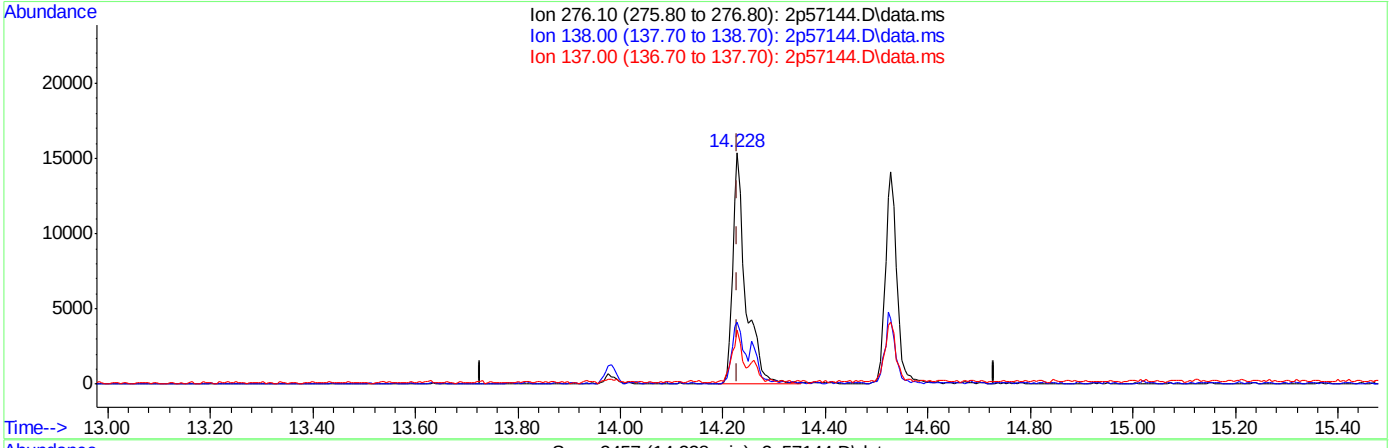
Sample Number:	E2P2490-IC2490	**Method:**	SW846 8270D
Lab FileID:	2P57144.D	**Analyst approved:**	03/11/16 23:20 Sara Davis
Injection Time:	03/11/16 12:24	**Supervisor approved:**	03/14/16 13:00 Nina Pandya

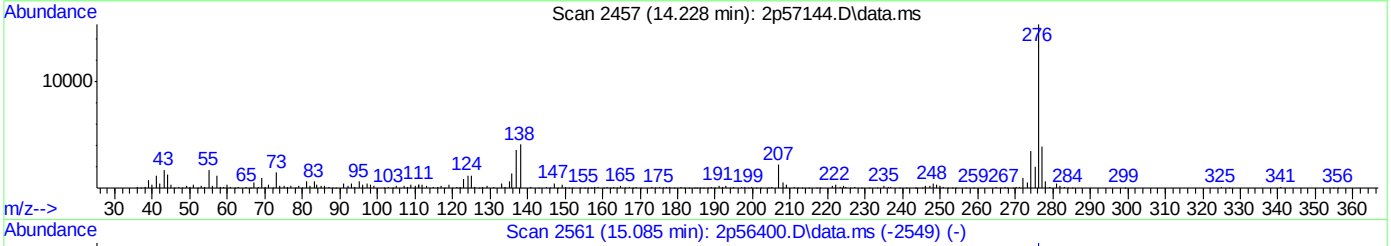
Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5		14.23	Overlapping peak

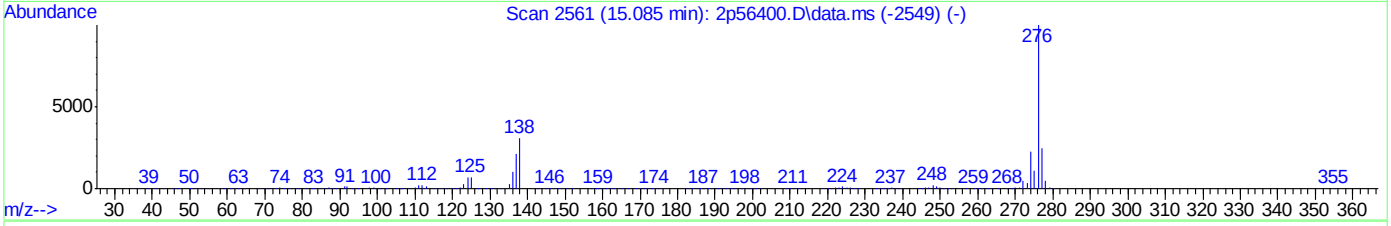
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57144.D
Acq On : 11 Mar 2016 12:24 pm
Operator : robertl1
Sample : ic2490-2
Misc : op91532,e2p2490
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 11 15:01:44 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:59:27 2016
Response via : Initial Calibration







TIC: 2p57144.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.228min (-0.000) 2.08ppm

response 27274

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	26.53
137.00	28.00	22.41
0.00	0.00	0.00

9.6.7.2

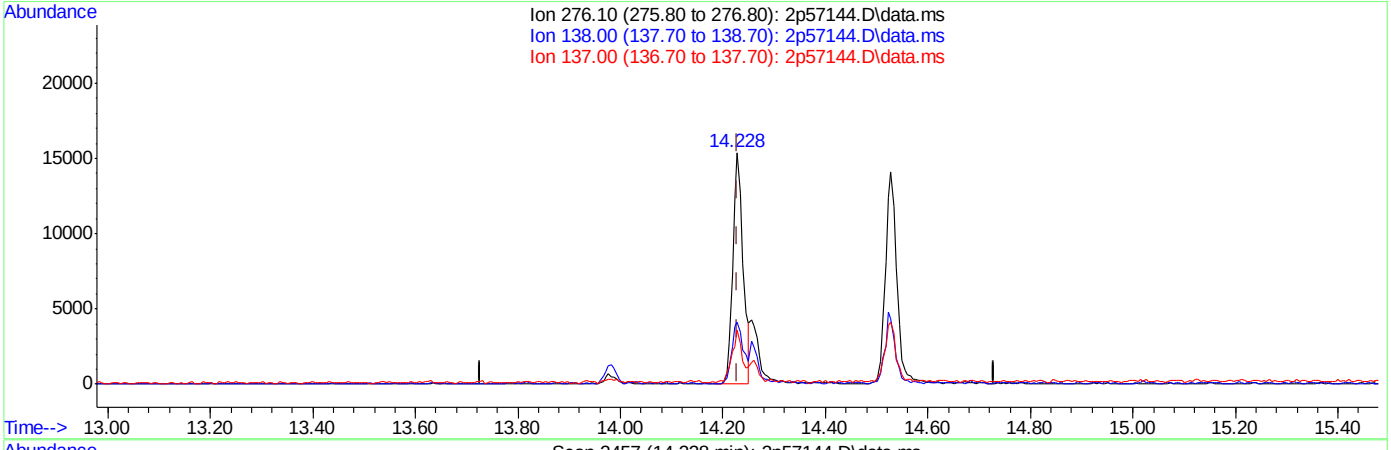
9

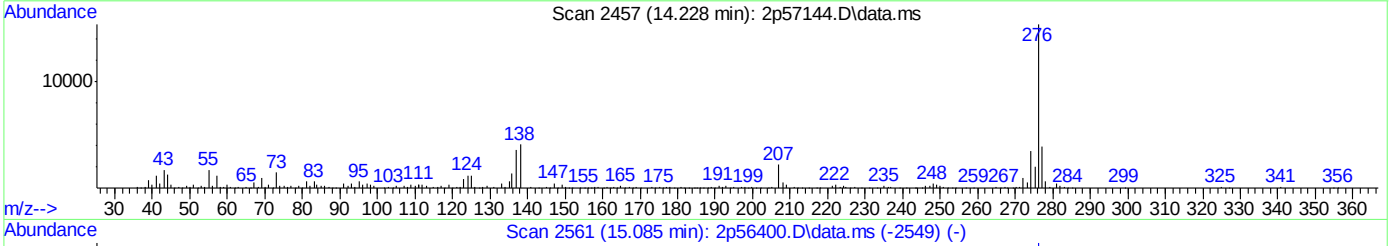
SGS ACCUTEST JC16204

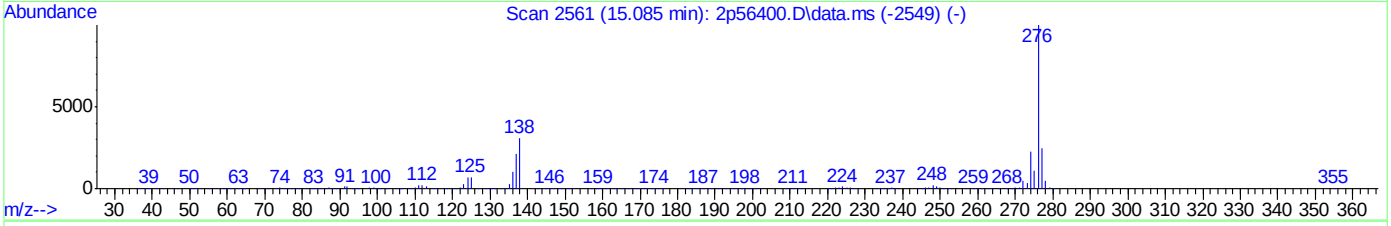
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57144.D
Acq On : 11 Mar 2016 12:24 pm
Operator : robertl1
Sample : ic2490-2
Misc : op91532,e2p2490
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 11 15:01:44 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 14:59:27 2016
Response via : Initial Calibration







TIC: 2p57144.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.228min (-0.000) 1.66ppm m

response 21729

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	26.70
137.00	28.00	23.42
0.00	0.00	0.00

9.6.7.3

9

SGS ACCUTEST JC16204

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
03/14/16 13:00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57145.D
Acq On : 11 Mar 2016 12:46 pm
Operator : robertl1
Sample : ic2490-1
Misc : op91532,e2p2490
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 11 15:03:19 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:02:38 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	141333	40.00	ppm	0.00
24) Naphthalene-d8	5.254	136	516768	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	300293	40.00	ppm	0.00
69) Phenanthrene-d10	7.912	188	494996	40.00	ppm	0.00
83) Chrysene-d12	10.993	240	482806	40.00	ppm	0.00
92) Perylene-d12	12.950	264	426058	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	141333	40.00	ppm	0.00
104) Naphthalene-d8a	5.254	136	516768	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	300293	40.00	ppm	0.00
109) Chrysene-d12a	10.993	240	482806	40.00	ppm	0.00
111) Phenanthrene-d10a	7.912	188	494996	40.00	ppm	0.00
114) Chrysene-d12b	10.993	240	482806	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.109	112	4072	0.86	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery = 1.72%#			
8) Phenol-d5	3.975	99	5152	0.89	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery = 1.78%#			
25) Nitrobenzene-d5	4.671	82	5660	1.10	ppm	0.00
Spiked Amount 50.000	Range 19 - 61		Recovery = 2.20%#			
51) 2-Fluorobiphenyl	6.147	172	9210	0.99	ppm	0.00
Spiked Amount 50.000	Range 21 - 58		Recovery = 1.98%#			
73) 2,4,6-Tribromophenol	7.339	330	1098	0.88	ppm	0.00
Spiked Amount 50.000	Range 12 - 68		Recovery = 1.76%#			
85) Terphenyl-d14	9.629	244	8882	1.00	ppm	0.00
Spiked Amount 50.000	Range 16 - 65		Recovery = 2.00%#			
112) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.413	88	2278	1.16	ppm	74
3) Pyridine	1.702	79	3862	0.83	ppm #	24
4) N-Nitrosodimethylamine	1.675	74	2446	0.86	ppm #	1
6) Indene	4.414	116	7583	0.98	ppm	89
7) Cumene	3.510	105	11631	0.98	ppm	94
9) Phenol	3.986	94	5964	0.95	ppm	95
10) Aniline	3.932	93	6404	0.89	ppm	94
11) bis(2-Chloroethyl)ether	3.997	93	4123	1.00	ppm #	65
12) 2-Chlorophenol	4.039	128	4813	0.96	ppm	78
13) Decane	4.093	57	6809	1.02	ppm	83
14) 1,3-Dichlorobenzene	4.152	146	5624	1.02	ppm	92
15) 1,4-Dichlorobenzene	4.216	146	5860	1.06	ppm	86
16) Benzyl alcohol	4.350	108	2448	0.87	ppm	82
17) 1,2-Dichlorobenzene	4.339	146	5169	1.01	ppm	97
18) Acetophenone	4.553	105	6399	1.07	ppm	94
19) 2-Methylphenol	4.473	108	4072	1.02	ppm	88
20) 2,2'-oxybis(1-Chloropr...	4.451	121	1379	1.09	ppm #	10
21) 3&4-Methylphenol	4.606	108	4391	1.02	ppm	93
22) n-Nitroso-di-n-propyla...	4.558	70	3579	1.10	ppm #	51

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57145.D
Acq On : 11 Mar 2016 12:46 pm
Operator : robertl1
Sample : ic2490-1
Misc : op91532,e2p2490
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 11 15:03:19 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:02:38 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) Hexachloroethane	4.612	201	2024	1.06	ppm		92
26) Nitrobenzene	4.687	77	5522	1.11	ppm		94
27) Quinoline	5.548	129	8518	0.97	ppm		89
28) Isophorone	4.884	82	8312	0.98	ppm		78
29) 2-Nitrophenol	4.954	139	2229	0.84	ppm	#	48
30) 2,4-Dimethylphenol	5.029	107	4858	1.01	ppm		89
31) Benzoic acid	5.136	105	1234	0.52	ppm	#	67
32) bis(2-Chloroethoxy)met...	5.082	93	4896	1.01	ppm		92
33) 2,4-Dichlorophenol	5.179	162	3534	0.90	ppm		93
34) 2,6-Dichlorophenol	5.344	162	3641	0.95	ppm		97
35) 1,3,5-Trichlorobenzene	4.959	180	4369	0.94	ppm		91
36) 1,2,4-Trichlorobenzene	5.216	180	4373	1.01	ppm		98
37) 1,2,3-Trichlorobenzene	5.398	180	4180	1.01	ppm		92
38) Naphthalene	5.270	128	13888	1.05	ppm		97
39) 4-Chloroaniline	5.339	127	5486	0.97	ppm		89
40) 2,3-Dichloroaniline	6.083	161	4719	1.00	ppm		94
41) Caprolactam	5.607	113	1110	0.88	ppm	#	62
42) Hexachlorobutadiene	5.382	225	2362	0.94	ppm		96
43) 4-Chloro-3-methylphenol	5.778	107	3954	0.96	ppm		88
44) 2-Methylnaphthalene	5.842	141	7614	1.00	ppm		95
45) 1-Methylnaphthalene	5.922	141	7909	0.99	ppm		88
46) Dimethylnaphthalene	6.355	156	7565	0.98	ppm		96
48) Hexachlorocyclopentadiene	5.976	237	1736	0.81	ppm		93
49) 2,4,6-Trichlorophenol	6.099	196	2627	0.97	ppm		90
50) 2,4,5-Trichlorophenol	6.141	196	2613	0.92	ppm		91
52) 2-Chloronaphthalene	6.238	162	7931	0.98	ppm		91
53) Biphenyl	6.227	154	11118	1.04	ppm		98
54) 2-Nitroaniline	6.339	65	3151	1.03	ppm		78
55) Dimethylphthalate	6.489	163	9702	1.06	ppm		98
56) Acenaphthylene	6.569	152	14100	1.06	ppm		97
57) 2,6-Dinitrotoluene	6.537	165	2007	0.99	ppm		96
58) 3-Nitroaniline	6.676	138	2236	0.92	ppm	#	77
59) Acenaphthene	6.714	153	9043	1.07	ppm		97
61) 4-Nitrophenol	6.896	109	760	0.69	ppm	#	64
62) Dibenzofuran	6.853	168	11802	1.03	ppm		98
63) 2,4-Dinitrotoluene	6.874	165	2403	0.87	ppm		98
64) 2,3,4,6-Tetrachlorophenol	6.981	232	1845	0.85	ppm		96
65) Diethylphthalate	7.061	149	9425	1.00	ppm		99
66) Fluorene	7.131	166	9271	0.98	ppm		95
67) 4-Chlorophenyl-phenyle...	7.142	204	4545	1.02	ppm		88
68) 4-Nitroaniline	7.179	138	2101	0.96	ppm		84
70) 4,6-Dinitro-2-methylph...	7.222	198	182	0.15	ppm	#	54
71) n-Nitrosodiphenylamine	7.243	169	6581	1.03	ppm		97
72) 1,2-Diphenylhydrazine	7.270	77	8709	0.96	ppm		92
74) 4-Bromophenyl-phenylether	7.537	248	2464	0.92	ppm	#	79
75) Hexachlorobenzene	7.591	284	2869	1.02	ppm		91
76) Pentachlorophenol	7.773	266	906	0.73	ppm		82
77) Phenanthrene	7.928	178	13832	1.05	ppm		99
78) Anthracene	7.976	178	13493	1.00	ppm		96
79) Carbazole	8.142	167	12904	1.05	ppm		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57145.D
Acq On : 11 Mar 2016 12:46 pm
Operator : robertl1
Sample : ic2490-1
Misc : op91532,e2p2490
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 11 15:03:19 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:02:38 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
80)	Di-n-butylphthalate	8.505	149	15259	0.94	ppm		97
81)	Fluoranthene	9.137	202	14013	0.92	ppm		97
82)	Octadecane	7.858	43	6516	1.02	ppm	#	58
84)	Pyrene	9.393	202	14910	1.02	ppm		93
86)	Butylbenzylphthalate	10.308	149	6580	0.98	ppm		95
87)	Butyl stearate	10.463	56	5127	0.99	ppm		82
88)	Benzo[a]anthracene	10.982	228	14299	1.07	ppm		96
89)	3,3'-Dichlorobenzidine	10.993	252	4560	0.93	ppm		84
90)	Chrysene	11.025	228	12622	1.04	ppm		99
91)	bis(2-Ethylhexyl)phtha...	11.169	149	8538	0.95	ppm		90
93)	Di-n-octylphthalate	12.094	149	14487	0.86	ppm		93
94)	Benzo[b]fluoranthene	12.453	252	12492	0.91	ppm		96
95)	Benzo[k]fluoranthene	12.485	252	11876	0.98	ppm		95
96)	Benzo[a]pyrene	12.870	252	10504	0.91	ppm		98
97)	Indeno[1,2,3-cd]pyrene	14.229	276	8949m	0.89	ppm		
98)	Dibenz(a,h)acridine	13.983	279	8261	0.94	ppm		99
99)	Dibenz[a,h]anthracene	14.261	278	9201	0.95	ppm		95
100)	7,12-Dimethylbenz(a)an...	12.447	256	5441	0.90	ppm		79
101)	Benzo[g,h,i]perylene	14.528	276	8960	0.94	ppm		87

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

9.6.8

9

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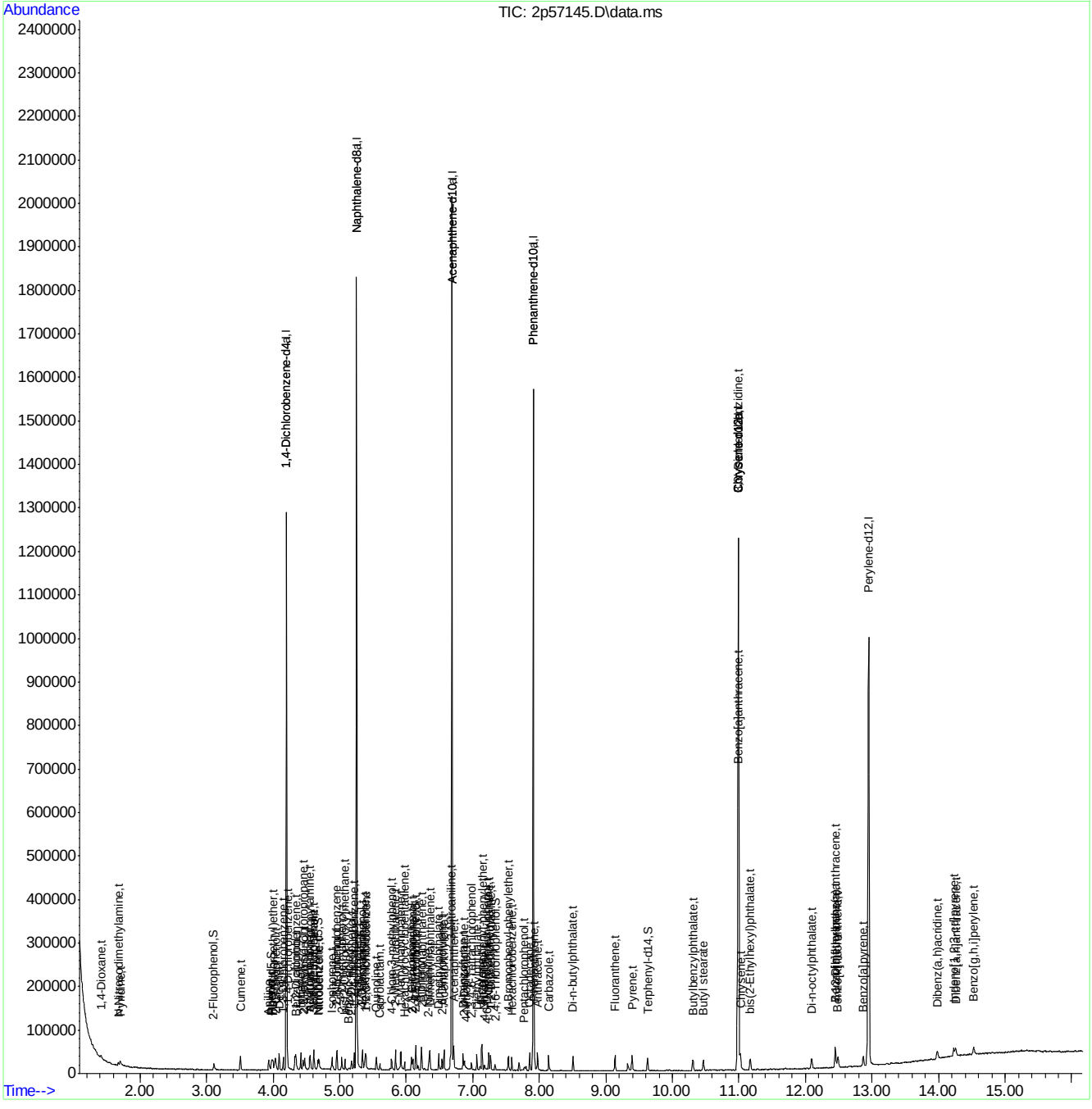
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57145.D
Acq On : 11 Mar 2016 12:46 pm
Operator : robertl1
Sample : ic2490-1
Misc : op91532,e2p2490
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 11 15:03:19 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:02:38 2016
Response via : Initial Calibration



M2P2490.M Fri Mar 11 15:03:26 2016 RPT1 Page: 4

Manual Integration Approval Summary

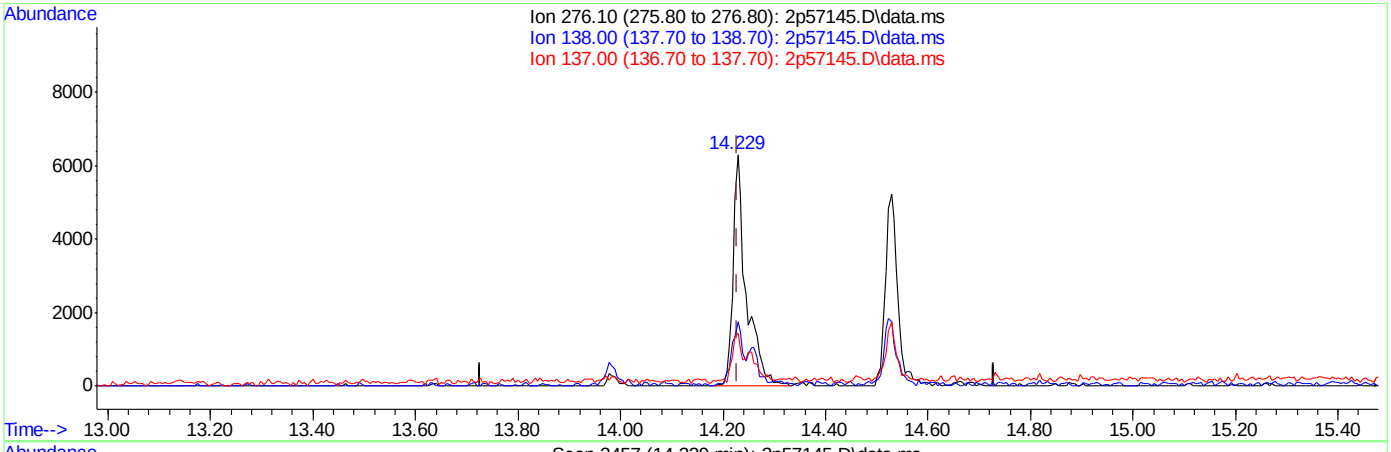
Sample Number:	E2P2490-IC2490	**Method:**	SW846 8270D
Lab FileID:	2P57145.D	**Analyst approved:**	03/11/16 23:20 Sara Davis
Injection Time:	03/11/16 12:46	**Supervisor approved:**	03/14/16 13:00 Nina Pandya

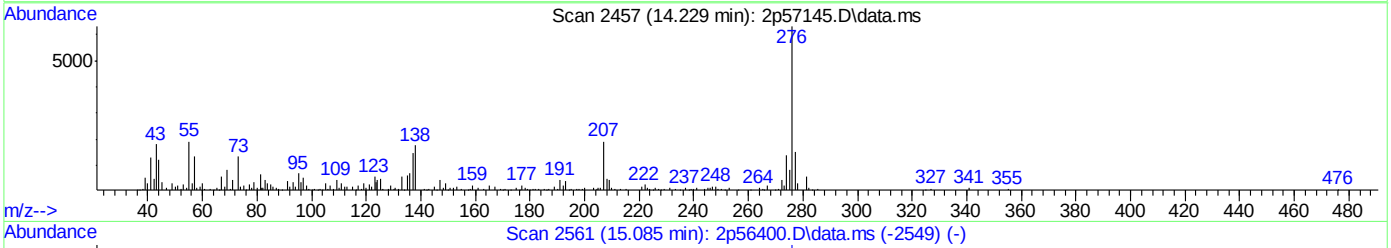
Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5		14.23	Overlapping peak

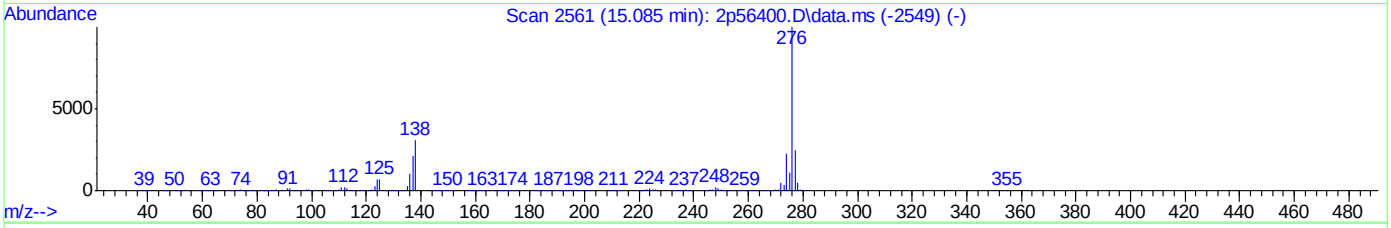
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57145.D
Acq On : 11 Mar 2016 12:46 pm
Operator : robertl1
Sample : ic2490-1
Misc : op91532,e2p2490
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 11 15:02:44 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:02:38 2016
Response via : Initial Calibration







TIC: 2p57145.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.229min (+0.000) 1.14ppm

response 11444

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	27.32
137.00	28.00	19.78
0.00	0.00	0.00

9.6.8.2

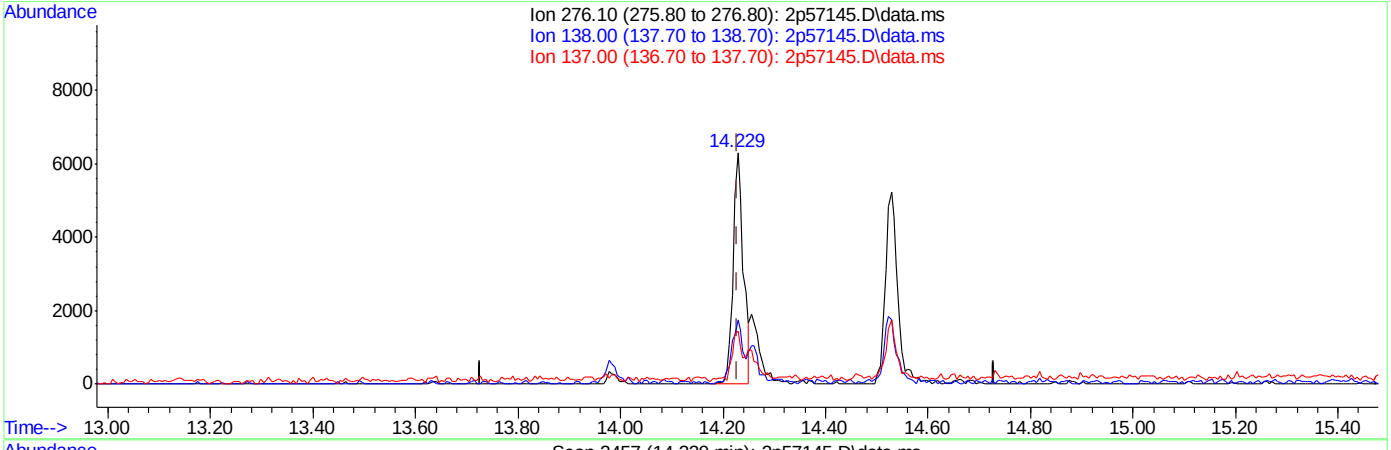
9

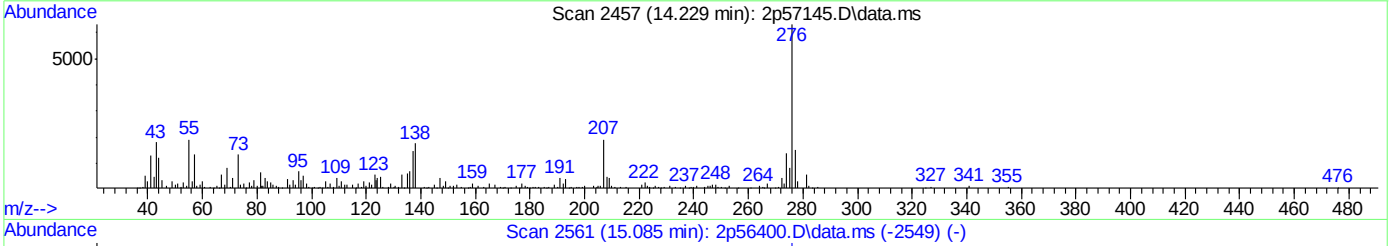
SGS ACCUTEST JC16204

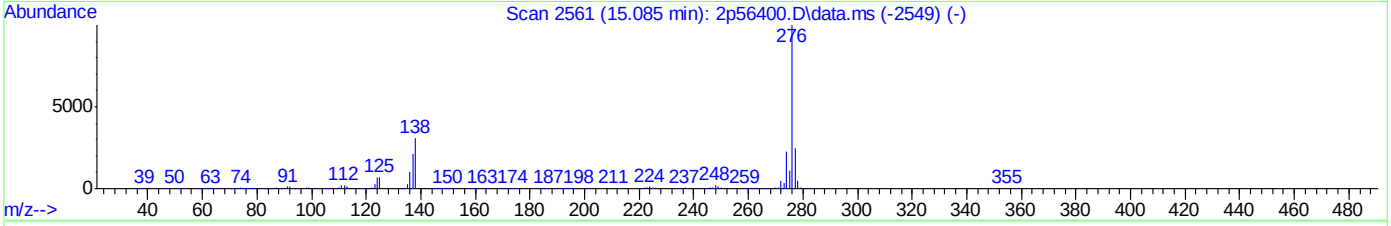
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2490\
Data File : 2p57145.D
Acq On : 11 Mar 2016 12:46 pm
Operator : robertl1
Sample : ic2490-1
Misc : op91532,e2p2490
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 11 15:02:44 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 15:02:38 2016
Response via : Initial Calibration







TIC: 2p57145.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.229min (+0.000) 0.89ppm m

response 8949

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	27.81
137.00	28.00	22.97
0.00	0.00	0.00

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57149.D
Acq On : 11 Mar 2016 3:54 pm
Operator : sarad
Sample : IC2491-100
Misc : op91532,e2p2491
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 11 19:29:38 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 19:29:13 2016
Response via : Initial Calibration

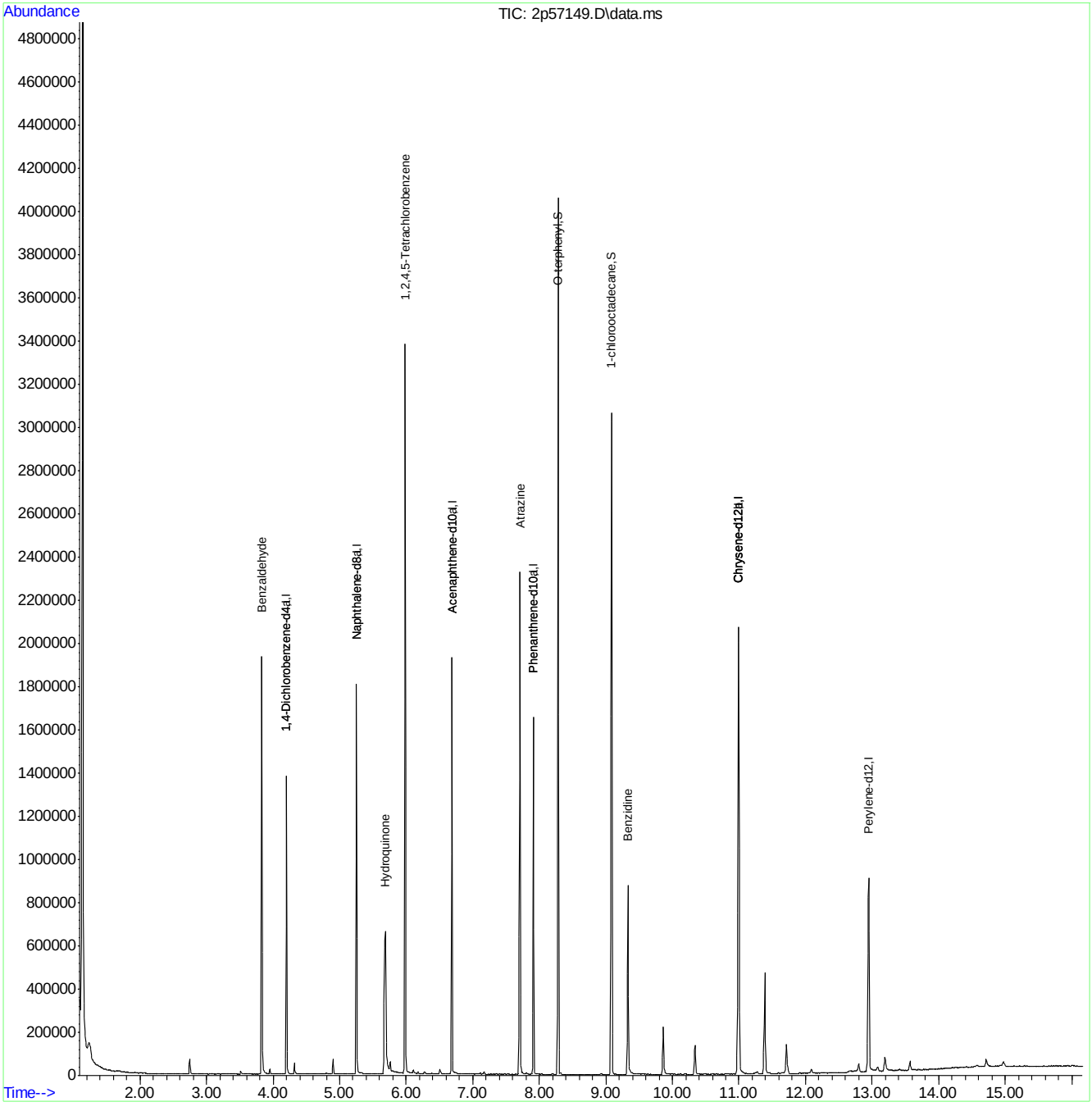
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	141446	40.00	ppm	0.00
24) Naphthalene-d8	5.253	136	523941	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	287394	40.00	ppm	0.00
69) Phenanthrene-d10	7.912	188	467226	40.00	ppm	0.00
83) Chrysene-d12	10.992	240	454952	40.00	ppm	-0.01
92) Perylene-d12	12.950	264	394701	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	141446	40.00	ppm	0.00
104) Naphthalene-d8a	5.253	136	523941	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	287394	40.00	ppm	0.00
109) Chrysene-d12a	10.992	240	454952	40.00	ppm	0.00
111) Phenanthrene-d10a	7.912	188	467226	40.00	ppm	0.00
114) Chrysene-d12b	10.992	240	454952	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery = 0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery = 0.00%#			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery = 0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery = 0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery = 0.00%#			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery = 0.00%#			
112) 1-chlorooctadecane	9.083	57	497774	99.58	ppm	0.00
113) O-terphenyl	8.286	230	640875	99.96	ppm	0.00
Target Compounds						Qvalue
103) Benzaldehyde	3.831	105	264524	99.21	ppm	90
105) Hydroquinone	5.687	110	421276	99.38	ppm #	82
107) Atrazine	7.714	215	119840	99.85	ppm	93
108) 1,2,4,5-Tetrachloroben...	5.986	216	419886	99.97	ppm	98
110) Benzidine	9.334	184	351833	98.43	ppm	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57149.D
Acq On : 11 Mar 2016 3:54 pm
Operator : sarad
Sample : IC2491-100
Misc : op91532,e2p2491
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 11 19:29:38 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 19:29:13 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57150.D
Acq On : 11 Mar 2016 4:16 pm
Operator : sarad
Sample : IC2491-80
Misc : op91532,e2p2491
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 11 19:32:49 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 19:29:13 2016
Response via : Initial Calibration

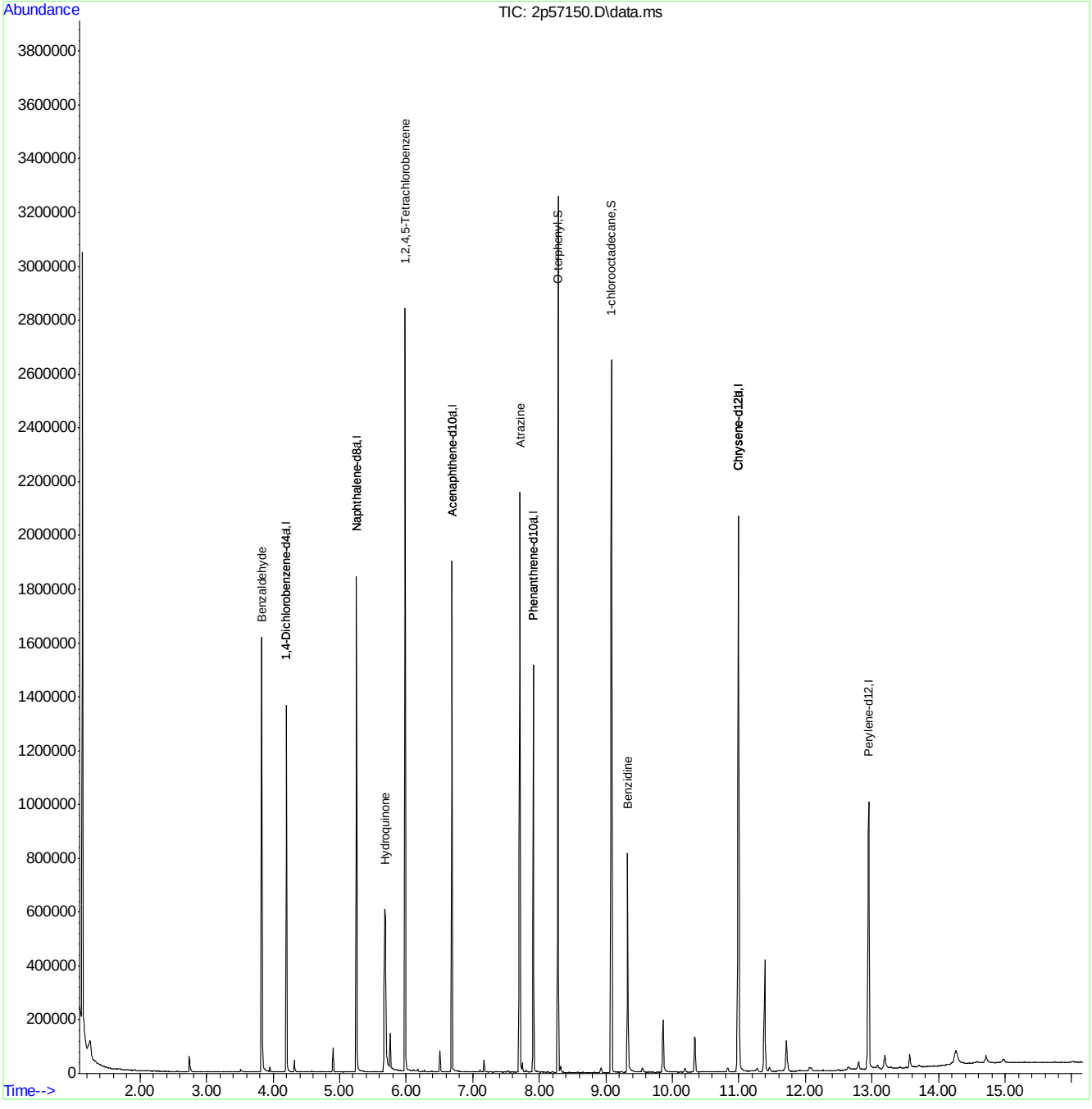
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	146343	40.00	ppm	0.00
24) Naphthalene-d8	5.254	136	533894	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	291957	40.00	ppm	0.00
69) Phenanthrene-d10	7.912	188	474491	40.00	ppm	0.00
83) Chrysene-d12	10.993	240	465415	40.00	ppm	-0.01
92) Perylene-d12	12.950	264	425045	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	146343	40.00	ppm	0.00
104) Naphthalene-d8a	5.254	136	533894	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	291957	40.00	ppm	0.00
109) Chrysene-d12a	10.993	240	465415	40.00	ppm	0.00
111) Phenanthrene-d10a	7.912	188	474491	40.00	ppm	0.00
114) Chrysene-d12b	10.993	240	465415	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery = 0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery = 0.00%#			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery = 0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery = 0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery = 0.00%#			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery = 0.00%#			
112) 1-chlorooctadecane	9.083	57	412304	81.22	ppm	0.00
113) O-terphenyl	8.281	230	533421	81.92	ppm	0.00
Target Compounds						Qvalue
103) Benzaldehyde	3.831	105	245294	88.92	ppm	91
105) Hydroquinone	5.681	110	346478	80.21	ppm #	81
107) Atrazine	7.709	215	99919	81.95	ppm	94
108) 1,2,4,5-Tetrachloroben...	5.986	216	349254	81.86	ppm	98
110) Benzidine	9.329	184	318155	87.00	ppm	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57150.D
Acq On : 11 Mar 2016 4:16 pm
Operator : sarad
Sample : IC2491-80
Misc : op91532,e2p2491
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 11 19:32:49 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 19:29:13 2016
Response via : Initial Calibration



M2P2490.M Fri Mar 11 19:33:00 2016 RPT1 Page: 2

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57151.D
Acq On : 11 Mar 2016 4:38 pm
Operator : sarad
Sample : ICC2491-50
Misc : op91532,e2p2491
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 11 19:33:30 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 19:29:13 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	144169	40.00	ppm	0.00
24) Naphthalene-d8	5.254	136	539217	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	297779	40.00	ppm	0.00
69) Phenanthrene-d10	7.912	188	491125	40.00	ppm	0.00
83) Chrysene-d12	10.993	240	496347	40.00	ppm	-0.01
92) Perylene-d12	12.950	264	442751	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	144169	40.00	ppm	0.00
104) Naphthalene-d8a	5.254	136	539217	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	297779	40.00	ppm	0.00
109) Chrysene-d12a	10.993	240	496347	40.00	ppm	0.00
111) Phenanthrene-d10a	7.912	188	491125	40.00	ppm	0.00
114) Chrysene-d12b	10.993	240	496347	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery = 0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery = 0.00%#			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery = 0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery = 0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery = 0.00%#			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery = 0.00%#			
112) 1-chlorooctadecane	9.083	57	263733	50.19	ppm	0.00
113) O-terphenyl	8.281	230	343400	50.95	ppm	0.00
Target Compounds						Qvalue
103) Benzaldehyde	3.825	105	151392	55.71	ppm	91
105) Hydroquinone	5.671	110	202615	46.44	ppm #	82
107) Atrazine	7.703	215	65657	52.80	ppm	92
108) 1,2,4,5-Tetrachloroben...	5.986	216	217824	50.05	ppm	99
110) Benzidine	9.329	184	247456	63.45	ppm	98

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

9.6.11

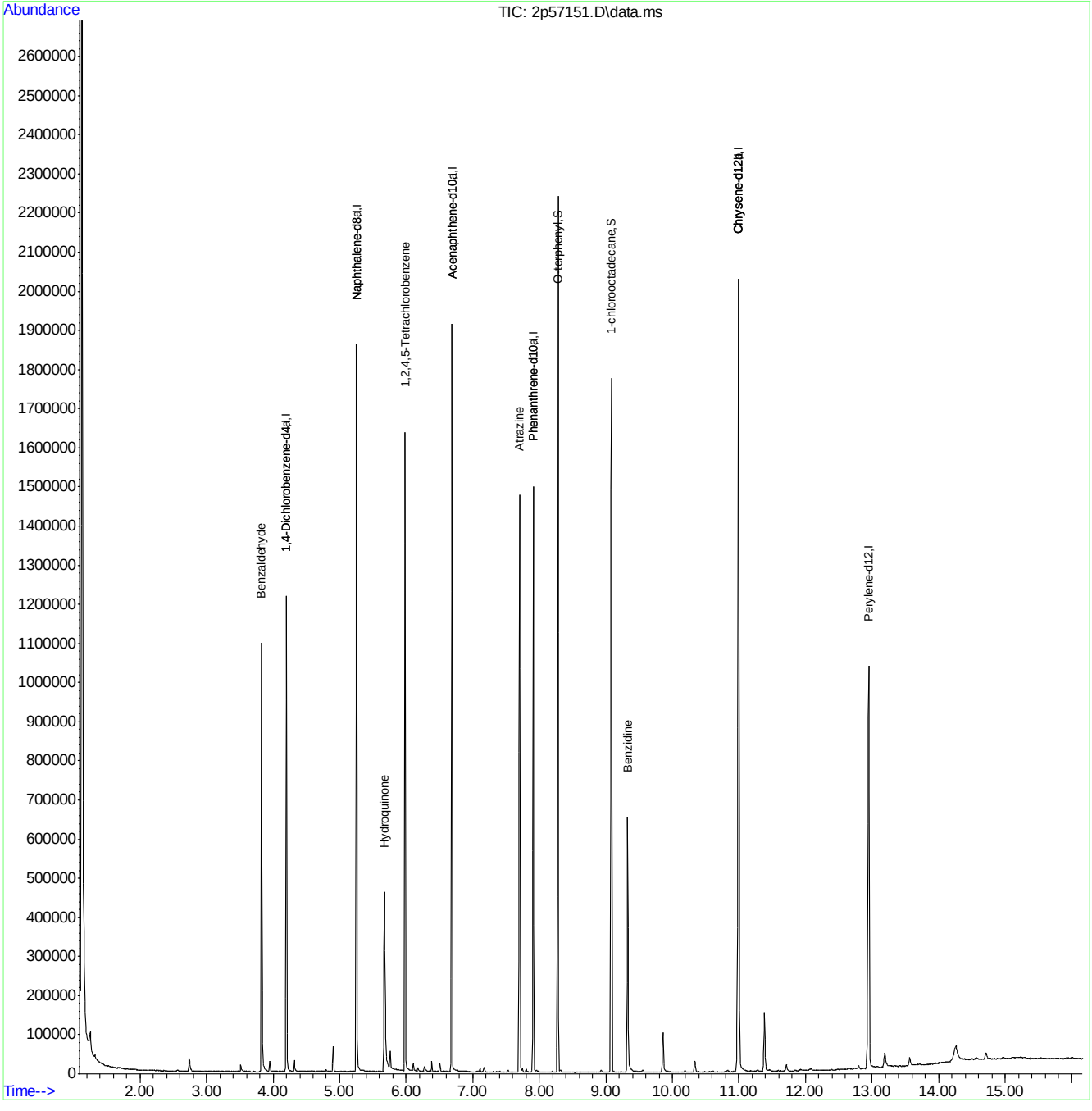
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57151.D
Acq On : 11 Mar 2016 4:38 pm
Operator : sarad
Sample : ICC2491-50
Misc : op91532,e2p2491
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 11 19:33:30 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 19:29:13 2016
Response via : Initial Calibration



M2P2490.M Fri Mar 11 19:33:45 2016 RPT1 Page: 2

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57152.D
Acq On : 11 Mar 2016 5:00 pm
Operator : sarad
Sample : IC2491-25
Misc : op91532,e2p2491
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 11 19:34:05 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 19:29:13 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	163349	40.00	ppm	0.00
24) Naphthalene-d8	5.253	136	598616	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	327925	40.00	ppm	0.00
69) Phenanthrene-d10	7.912	188	540442	40.00	ppm	0.00
83) Chrysene-d12	10.993	240	529703	40.00	ppm	-0.01
92) Perylene-d12	12.950	264	472799	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	163349	40.00	ppm	0.00
104) Naphthalene-d8a	5.253	136	598616	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	327925	40.00	ppm	0.00
109) Chrysene-d12a	10.993	240	529703	40.00	ppm	0.00
111) Phenanthrene-d10a	7.912	188	540442	40.00	ppm	0.00
114) Chrysene-d12b	10.993	240	529703	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery = 0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery = 0.00%#			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery = 0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery = 0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery = 0.00%#			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery = 0.00%#			
112) 1-chlorooctadecane	9.078	57	141459	24.47	ppm	0.00
113) O-terphenyl	8.281	230	186049	25.09	ppm	0.00
Target Compounds						Qvalue
103) Benzaldehyde	3.825	105	96888	31.47	ppm	91
105) Hydroquinone	5.671	110	100255	20.70	ppm #	82
107) Atrazine	7.703	215	34755	25.38	ppm	88
108) 1,2,4,5-Tetrachloroben...	5.986	216	120396	25.12	ppm	98
110) Benzidine	9.329	184	152991	36.76	ppm	99

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

9.6.12

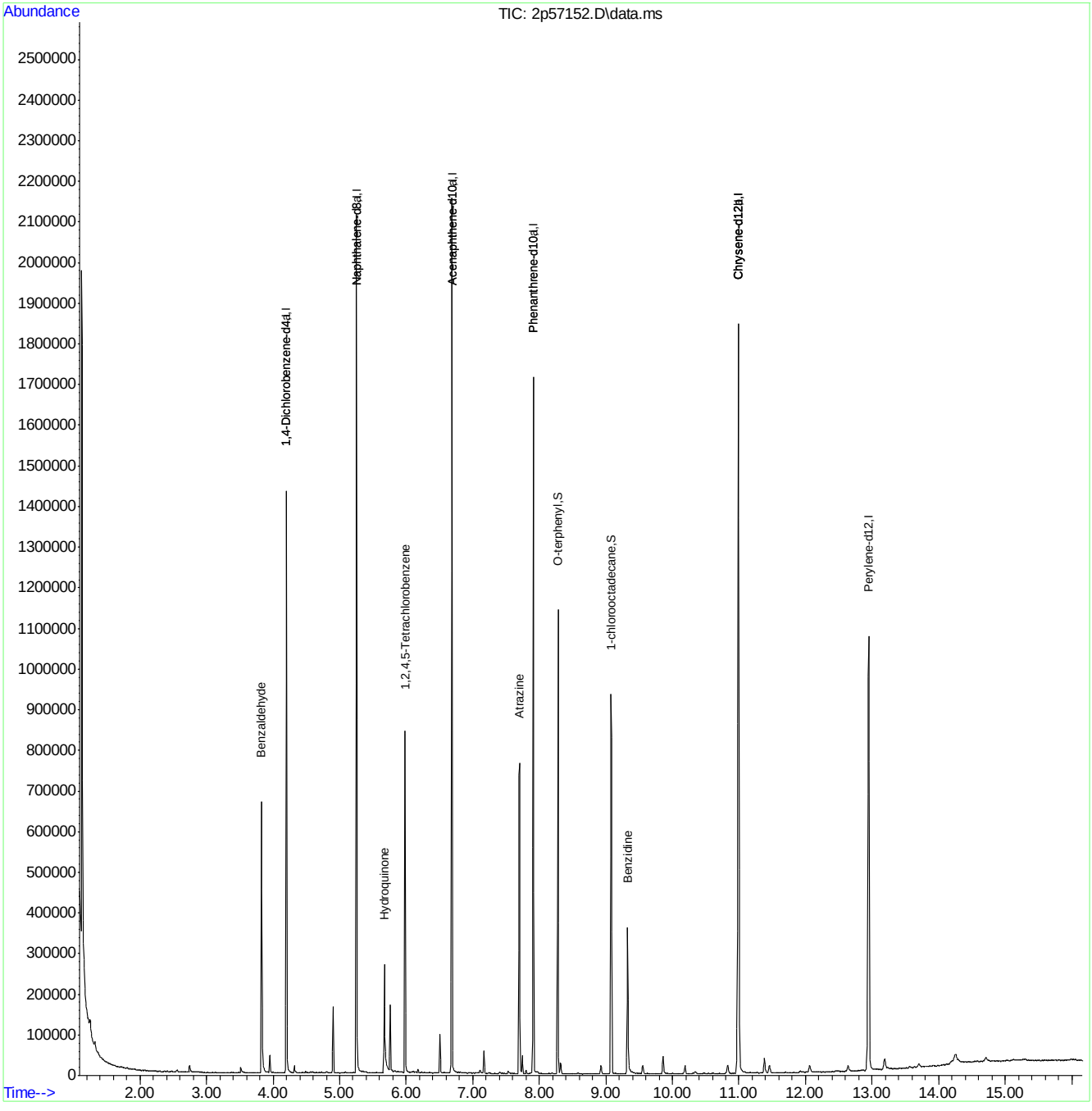
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57152.D
Acq On : 11 Mar 2016 5:00 pm
Operator : sarad
Sample : IC2491-25
Misc : op91532,e2p2491
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 11 19:34:05 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 19:29:13 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57153.D
Acq On : 11 Mar 2016 5:22 pm
Operator : sarad
Sample : IC2491-10
Misc : op91532,e2p2491
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 11 19:34:42 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 19:29:13 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	156368	40.00	ppm	0.00
24) Naphthalene-d8	5.253	136	568505	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	325694	40.00	ppm	0.00
69) Phenanthrene-d10	7.906	188	543650	40.00	ppm	0.00
83) Chrysene-d12	10.993	240	527149	40.00	ppm	-0.01
92) Perylene-d12	12.950	264	474296	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	156368	40.00	ppm	0.00
104) Naphthalene-d8a	5.253	136	568505	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	325694	40.00	ppm	0.00
109) Chrysene-d12a	10.993	240	527149	40.00	ppm	0.00
111) Phenanthrene-d10a	7.906	188	543650	40.00	ppm	0.00
114) Chrysene-d12b	10.993	240	527149	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery = 0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery = 0.00%#			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery = 0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery = 0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery = 0.00%#			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery = 0.00%#			
112) 1-chlorooctadecane	9.078	57	55418	9.53	ppm	0.00
113) O-terphenyl	8.275	230	72922	9.77	ppm	-0.01
Target Compounds						Qvalue
103) Benzaldehyde	3.831	105	41415	14.05	ppm	93
105) Hydroquinone	5.671	110	32497	7.06	ppm #	81
107) Atrazine	7.698	215	13617	10.01	ppm	90
108) 1,2,4,5-Tetrachloroben...	5.981	216	45950	9.65	ppm	99
110) Benzidine	9.324	184	70345	16.98	ppm	98

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

9.6.13

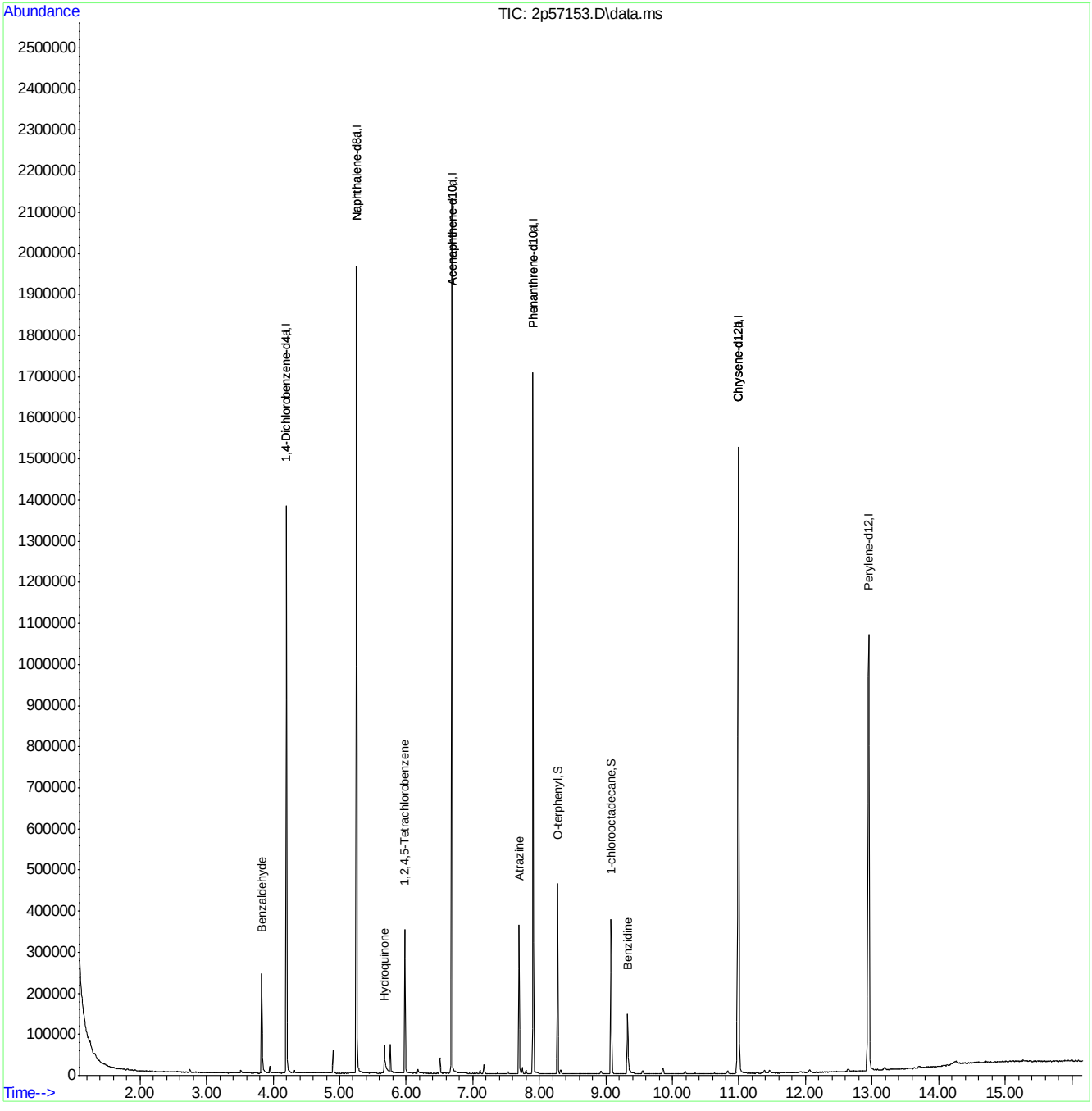
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57153.D
Acq On : 11 Mar 2016 5:22 pm
Operator : sarad
Sample : IC2491-10
Misc : op91532,e2p2491
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 11 19:34:42 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 19:29:13 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57154.D
Acq On : 11 Mar 2016 5:43 pm
Operator : sarad
Sample : IC2491-5
Misc : op91532,e2p2491
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 11 19:35:18 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 19:29:13 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	180090	40.00	ppm	0.00
24) Naphthalene-d8	5.253	136	643394	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	369430	40.00	ppm	0.00
69) Phenanthrene-d10	7.912	188	608221	40.00	ppm	0.00
83) Chrysene-d12	10.993	240	596575	40.00	ppm	-0.01
92) Perylene-d12	12.950	264	532475	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	180090	40.00	ppm	0.00
104) Naphthalene-d8a	5.253	136	643394	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	369430	40.00	ppm	0.00
109) Chrysene-d12a	10.993	240	596575	40.00	ppm	0.00
111) Phenanthrene-d10a	7.912	188	608221	40.00	ppm	0.00
114) Chrysene-d12b	10.993	240	596575	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery	=	0.00%#	
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery	=	0.00%#	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery	=	0.00%#	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery	=	0.00%#	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery	=	0.00%#	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery	=	0.00%#	
112) 1-chlorooctadecane	9.078	57	34313	5.27	ppm	0.00
113) O-terphenyl	8.275	230	46559	5.58	ppm	-0.01
Target Compounds						Qvalue
103) Benzaldehyde	3.831	105	26669	7.86	ppm	89
105) Hydroquinone	5.671	110	16985	3.26	ppm #	85
107) Atrazine	7.698	215	8364	5.42	ppm	91
108) 1,2,4,5-Tetrachloroben...	5.981	216	29477	5.46	ppm	99
110) Benzidine	9.324	184	44357	9.46	ppm	99

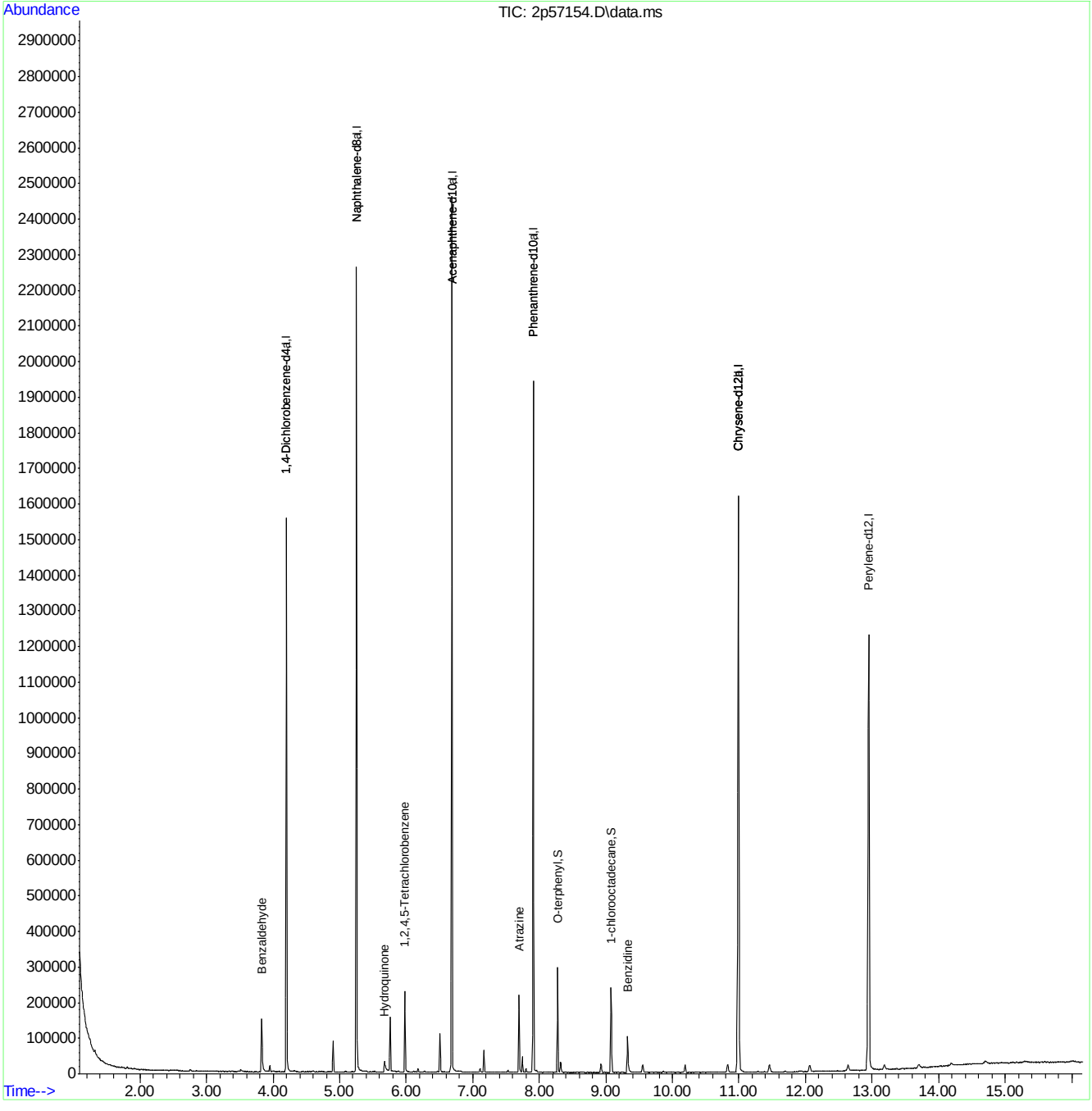
(#) = qualifier out of range (m) = manual integration (+) = signals summed

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57154.D
Acq On : 11 Mar 2016 5:43 pm
Operator : sarad
Sample : IC2491-5
Misc : op91532,e2p2491
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 11 19:35:18 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 19:29:13 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57155.D
Acq On : 11 Mar 2016 6:05 pm
Operator : sarad
Sample : IC2491-2
Misc : op91532,e2p2491
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 11 19:36:34 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 19:29:13 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	244547	40.00	ppm	0.00
24) Naphthalene-d8	5.253	136	894083	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	515469	40.00	ppm	0.00
69) Phenanthrene-d10	7.912	188	849333	40.00	ppm	0.00
83) Chrysene-d12	10.998	240	830171	40.00	ppm	0.00
92) Perylene-d12	12.955	264	740339	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	244547	40.00	ppm	0.00
104) Naphthalene-d8a	5.253	136	894083	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	515469	40.00	ppm	0.00
109) Chrysene-d12a	10.998	240	830171	40.00	ppm	0.00
111) Phenanthrene-d10a	7.912	188	849333	40.00	ppm	0.00
114) Chrysene-d12b	10.998	240	830171	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery	=	0.00%#	
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery	=	0.00%#	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery	=	0.00%#	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery	=	0.00%#	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery	=	0.00%#	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery	=	0.00%#	
112) 1-chlorooctadecane	9.078	57	19125	2.10	ppm	0.00
113) O-terphenyl	8.275	230	25892	2.22	ppm	-0.01
Target Compounds						Qvalue
103) Benzaldehyde	3.831	105	14548	3.16	ppm	90
105) Hydroquinone	5.681	110	7052	0.97	ppm #	76
107) Atrazine	7.698	215	4581	2.13	ppm	86
108) 1,2,4,5-Tetrachloroben...	5.981	216	16909	2.24	ppm	98
110) Benzidine	9.329	184	23400	3.59	ppm	98

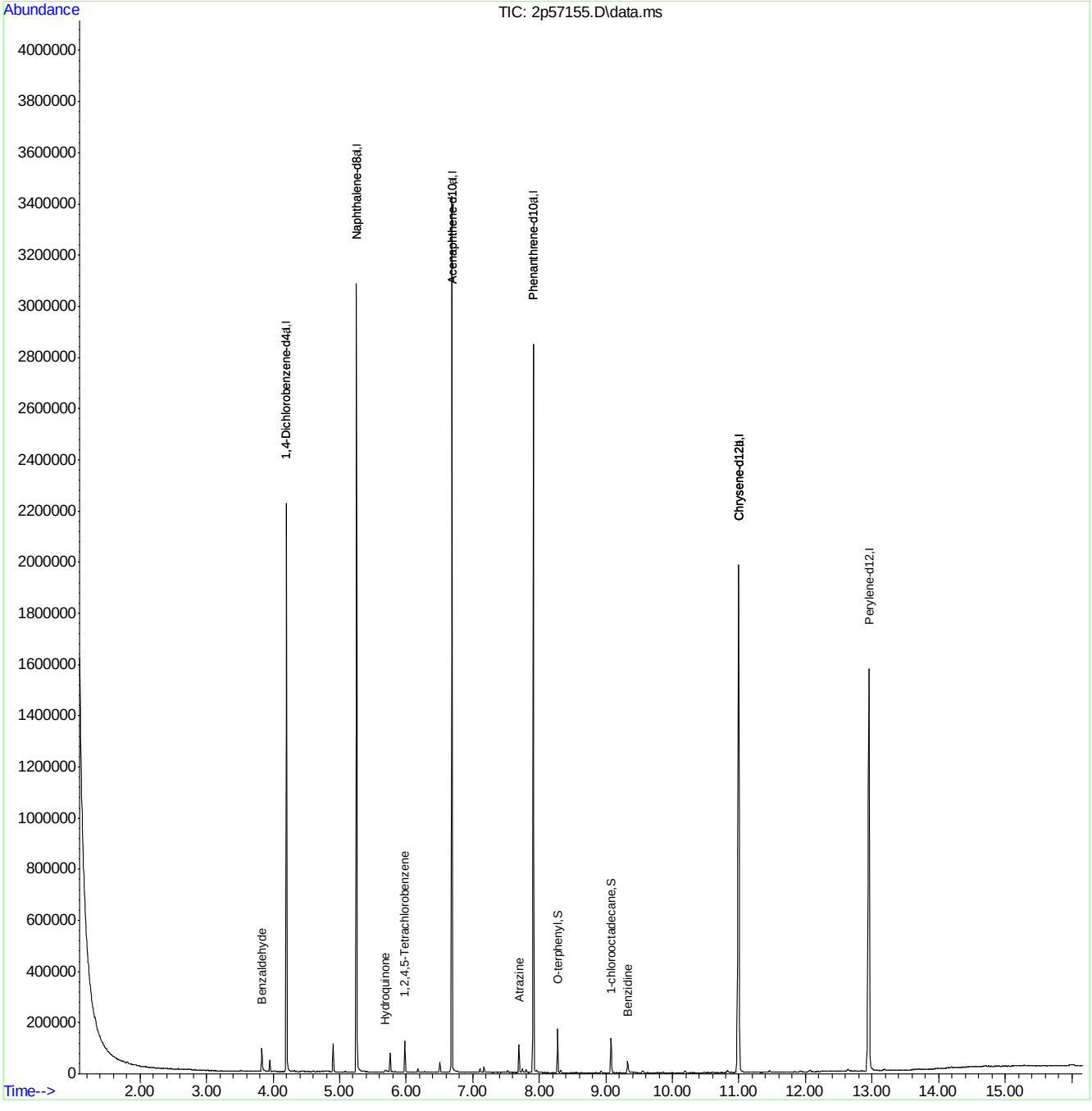
(#) = qualifier out of range (m) = manual integration (+) = signals summed

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57155.D
Acq On : 11 Mar 2016 6:05 pm
Operator : sarad
Sample : IC2491-2
Misc : op91532,e2p2491
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 11 19:36:34 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 19:29:13 2016
Response via : Initial Calibration



M2P2490.M Fri Mar 11 19:36:51 2016 RPT1 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57156.D
Acq On : 11 Mar 2016 6:26 pm
Operator : sarad
Sample : IC2491-1
Misc : op91532,e2p2491
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 11 19:37:11 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 19:29:13 2016
Response via : Initial Calibration

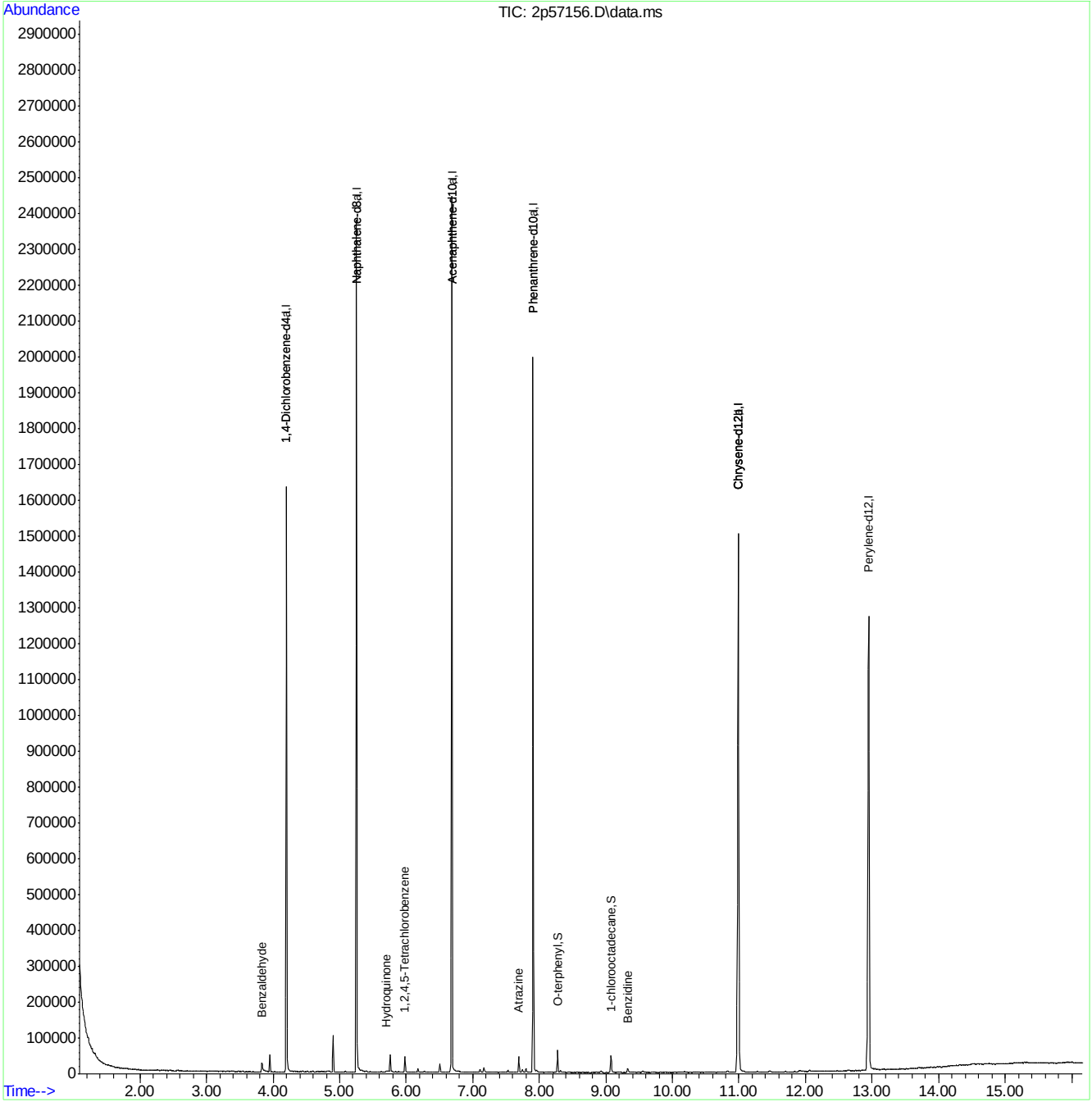
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	186558	40.00	ppm	0.00
24) Naphthalene-d8	5.253	136	665319	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	376517	40.00	ppm	0.00
69) Phenanthrene-d10	7.906	188	625776	40.00	ppm	0.00
83) Chrysene-d12	10.993	240	610244	40.00	ppm	-0.01
92) Perylene-d12	12.950	264	554360	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	186558	40.00	ppm	0.00
104) Naphthalene-d8a	5.253	136	665319	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	376517	40.00	ppm	0.00
109) Chrysene-d12a	10.993	240	610244	40.00	ppm	0.00
111) Phenanthrene-d10a	7.906	188	625776	40.00	ppm	0.00
114) Chrysene-d12b	10.993	240	610244	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery = 0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery = 0.00%#			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery = 0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery = 0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery = 0.00%#			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery = 0.00%#			
112) 1-chlorooctadecane	9.078	57	7389	1.10	ppm	0.00
113) O-terphenyl	8.275	230	9839	1.15	ppm	-0.01
Target Compounds						Qvalue
103) Benzaldehyde	3.831	105	4829	1.37	ppm	90
105) Hydroquinone	5.703	110	2481	0.46	ppm #	85
107) Atrazine	7.692	215	1658	1.05	ppm #	87
108) 1,2,4,5-Tetrachloroben...	5.981	216	5892	1.07	ppm #	87
110) Benzidine	9.329	184	7458	1.56	ppm	91

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57156.D
Acq On : 11 Mar 2016 6:26 pm
Operator : sarad
Sample : IC2491-1
Misc : op91532,e2p2491
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 11 19:37:11 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 19:29:13 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57158.D
Acq On : 11 Mar 2016 7:09 pm
Operator : sarad
Sample : ICv2490-50
Misc : op91532,e2p2491
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 11 20:09:55 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	154381	40.00	ppm	0.00
24) Naphthalene-d8	5.253	136	590837	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	335281	40.00	ppm	0.00
69) Phenanthrene-d10	7.906	188	544493	40.00	ppm	0.00
83) Chrysene-d12	10.987	240	500430	40.00	ppm	-0.02
92) Perylene-d12	12.945	264	391251	40.00	ppm	-0.01
102) 1,4-Dichlorobenzene-d4a	4.200	152	154381	40.00	ppm	0.00
104) Naphthalene-d8a	5.253	136	590837	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	335281	40.00	ppm	0.00
109) Chrysene-d12a	10.987	240	500430	40.00	ppm	0.00
111) Phenanthrene-d10a	7.906	188	544493	40.00	ppm	0.00
114) Chrysene-d12b	10.987	240	500430	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery = 0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery = 0.00%#			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery = 0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery = 0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery = 0.00%#			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery = 0.00%#			
112) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
3) Pyridine	1.878	79	255144	50.98	ppm #	42
10) Aniline	3.938	93	376229	48.22	ppm	97
16) Benzyl alcohol	4.349	108	150904	49.72	ppm	79
39) 4-Chloroaniline	5.339	127	276349	42.74	ppm	91
44) 2-Methylnaphthalene	5.842	141	333493	38.11	ppm	97
54) 2-Nitroaniline	6.339	65	153064	44.31	ppm	79
58) 3-Nitroaniline	6.676	138	117228	44.00	ppm	94
62) Dibenzofuran	6.858	168	575135	44.33	ppm	97
68) 4-Nitroaniline	7.173	138	102644	42.09	ppm	77
79) Carbazole	8.142	167	616349	45.08	ppm	99

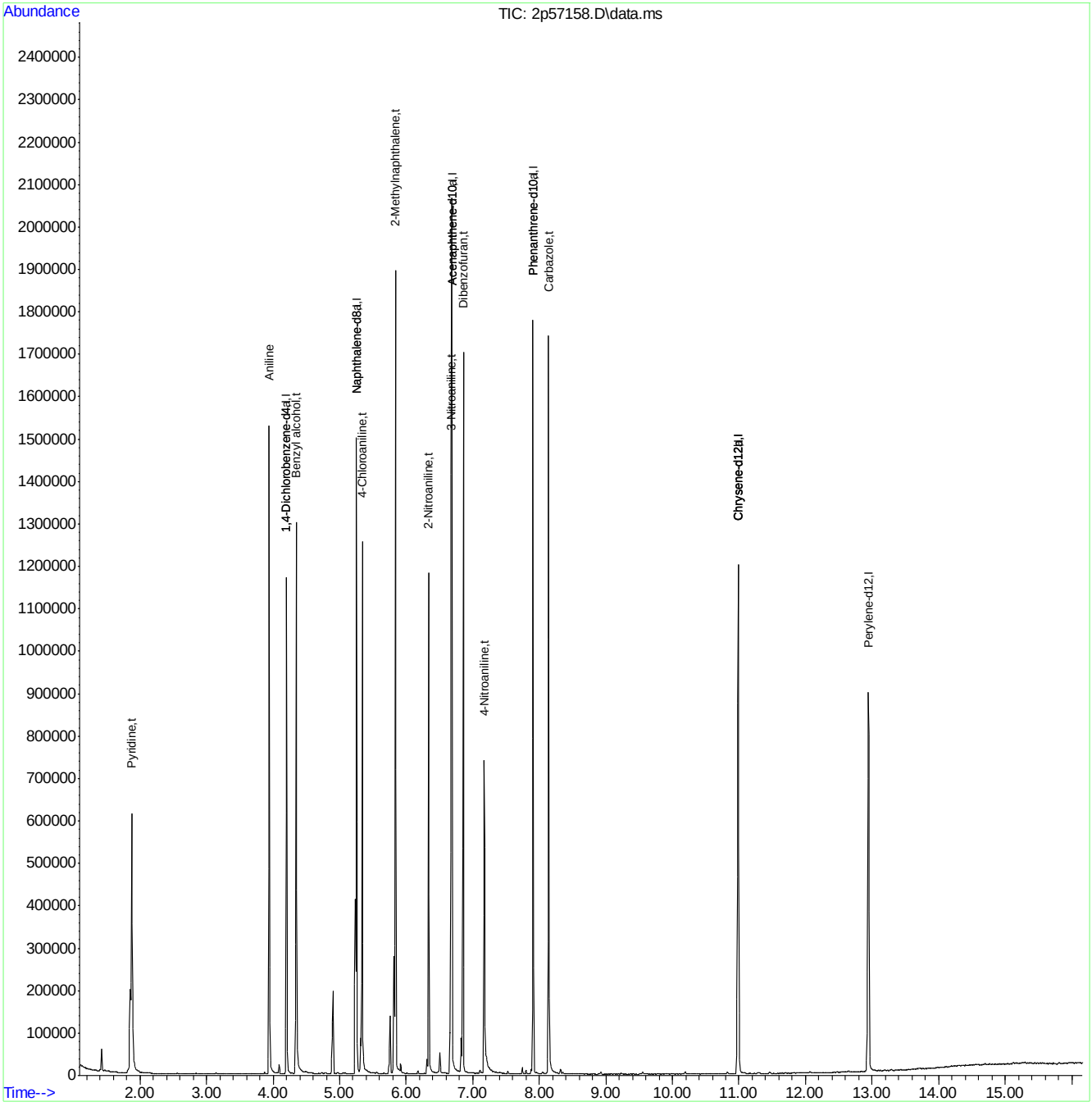
(#) = qualifier out of range (m) = manual integration (+) = signals summed

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57158.D
Acq On : 11 Mar 2016 7:09 pm
Operator : sarad
Sample : ICv2490-50
Misc : op91532,e2p2491
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 11 20:09:55 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
03/14/16 13:01

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57159.D
Acq On : 11 Mar 2016 7:30 pm
Operator : sarad
Sample : ICv2490-50
Misc : op91532,e2p2491
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 11 21:59:35 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	141029	40.00	ppm	0.00
24) Naphthalene-d8	5.253	136	486012	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	277157	40.00	ppm	0.00
69) Phenanthrene-d10	7.906	188	453149	40.00	ppm	0.00
83) Chrysene-d12	10.998	240	446382	40.00	ppm	0.00
92) Perylene-d12	12.950	264	358756	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	141029	40.00	ppm	0.00
104) Naphthalene-d8a	5.253	136	486012	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	277157	40.00	ppm	0.00
109) Chrysene-d12a	10.998	240	446382	40.00	ppm	0.00
111) Phenanthrene-d10a	7.906	188	453149	40.00	ppm	0.00
114) Chrysene-d12b	10.998	240	446382	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery = 0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery = 0.00%#			
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery = 0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery = 0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery = 0.00%#			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery = 0.00%#			
112) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
4) N-Nitrosodimethylamine	1.675	74	105485	37.37	ppm #	1
11) bis(2-Chloroethyl)ether	3.996	93	197835	47.82	ppm	77
14) 1,3-Dichlorobenzene	4.152	146	269827	48.77	ppm	99
15) 1,4-Dichlorobenzene	4.216	146	269345	48.31	ppm	99
17) 1,2-Dichlorobenzene	4.339	146	249808	48.66	ppm	98
20) 2,2'-oxybis(1-Chloropr...	4.451	121	53837	41.39	ppm #	7
22) n-Nitroso-di-n-propyla...	4.558	70	152174	46.04	ppm #	54
23) Hexachloroethane	4.611	201	94144	48.73	ppm	96
26) Nitrobenzene	4.686	77	221222	46.51	ppm	98
28) Isophorone	4.884	82	410441	51.21	ppm	83
32) bis(2-Chloroethoxy)met...	5.082	93	221132	48.34	ppm	99
36) 1,2,4-Trichlorobenzene	5.216	180	201716	49.08	ppm	98
38) Naphthalene	5.269	128	632404	50.13	ppm	98
42) Hexachlorobutadiene	5.382	225	117789	50.15	ppm	97
48) Hexachlorocyclopentadiene	5.975	237	83666	38.52	ppm	99
52) 2-Chloronaphthalene	6.237	162	374027	50.15	ppm	97
55) Dimethylphthalate	6.494	163	415949	48.30	ppm	98
56) Acenaphthylene	6.569	152	594039	47.81	ppm	99
57) 2,6-Dinitrotoluene	6.542	165	92838	49.34	ppm	91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57159.D
Acq On : 11 Mar 2016 7:30 pm
Operator : sarad
Sample : ICv2490-50
Misc : op91532,e2p2491
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 11 21:59:35 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
59)	Acenaphthene	6.713	153	390612	49.23	ppm	97
63)	2,4-Dinitrotoluene	6.874	165	117501	46.60	ppm	88
65)	Diethylphthalate	7.067	149	411341	47.07	ppm	100
66)	Fluorene	7.136	166	424873	48.70	ppm	94
67)	4-Chlorophenyl-phenyle...	7.141	204	197294	47.52	ppm	93
71)	n-Nitrosodiphenylamine	7.243	169	285087	48.25	ppm	100
72)	1,2-Diphenylhydrazine	7.270	77	405264	48.71	ppm	93
74)	4-Bromophenyl-phenylether	7.537	248	117557	48.30	ppm	95
75)	Hexachlorobenzene	7.591	284	122595	47.09	ppm	91
77)	Phenanthrene	7.933	178	594885	48.84	ppm	99
78)	Anthracene	7.976	178	579419	47.14	ppm	98
80)	Di-n-butylphthalate	8.505	149	694364	47.13	ppm	99
81)	Fluoranthene	9.136	202	661599	47.97	ppm	97
84)	Pyrene	9.399	202	689342	51.01	ppm	99
86)	Butylbenzylphthalate	10.308	149	300904	48.10	ppm	93
88)	Benzo[a]anthracene	10.982	228	592744	47.61	ppm	99
90)	Chrysene	11.035	228	535229	47.23	ppm	97
91)	bis(2-Ethylhexyl)phtha...	11.174	149	401907	48.48	ppm	98
93)	Di-n-octylphthalate	12.094	149	688738	49.14	ppm	92
94)	Benzo[b]fluoranthene	12.458	252	528153	45.57	ppm	98
95)	Benzo[k]fluoranthene	12.495	252	540533	53.10	ppm	99
96)	Benzo[a]pyrene	12.875	252	496373	51.19	ppm	96
97)	Indeno[1,2,3-cd]pyrene	14.234	276	446386m	54.79	ppm	
99)	Dibenz[a,h]anthracene	14.266	278	438723	53.66	ppm	92
101)	Benzo[g,h,i]perylene	14.539	276	435864	54.23	ppm	88

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

9.6.18

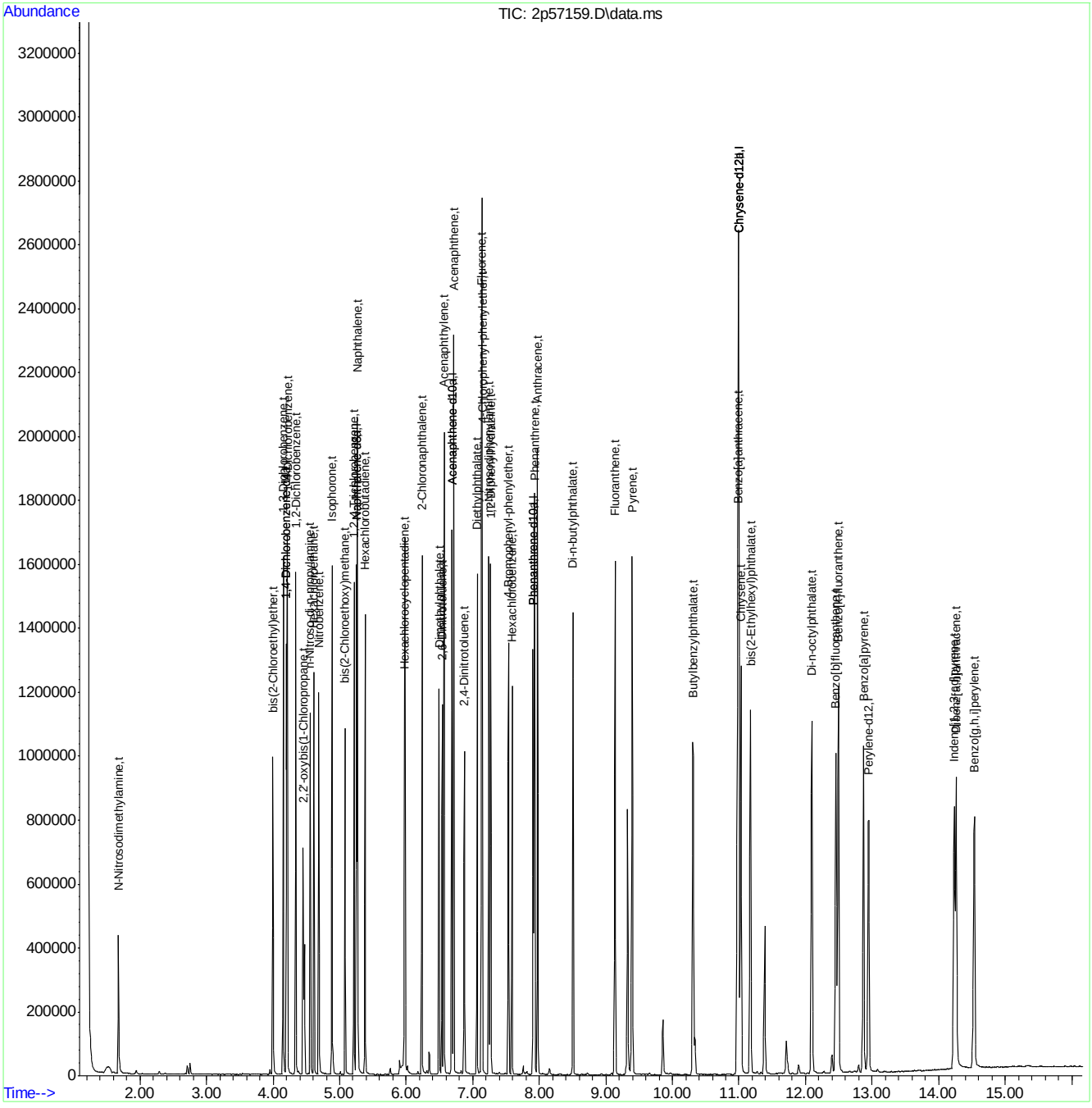
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57159.D
Acq On : 11 Mar 2016 7:30 pm
Operator : sarad
Sample : ICv2490-50
Misc : op91532,e2p2491
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 11 21:59:35 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Manual Integration Approval Summary

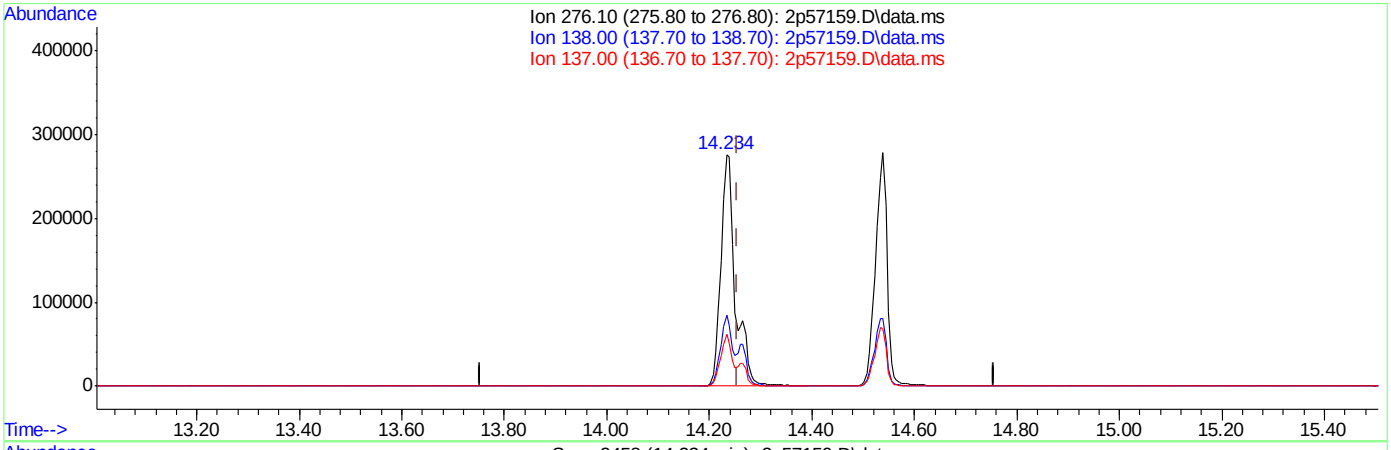
Sample Number:	E2P2491-ICV2490	**Method:**	SW846 8270D
Lab FileID:	2P57159.D	**Analyst approved:**	03/11/16 23:02 Sara Davis
Injection Time:	03/11/16 19:30	**Supervisor approved:**	03/14/16 13:01 Nina Pandya

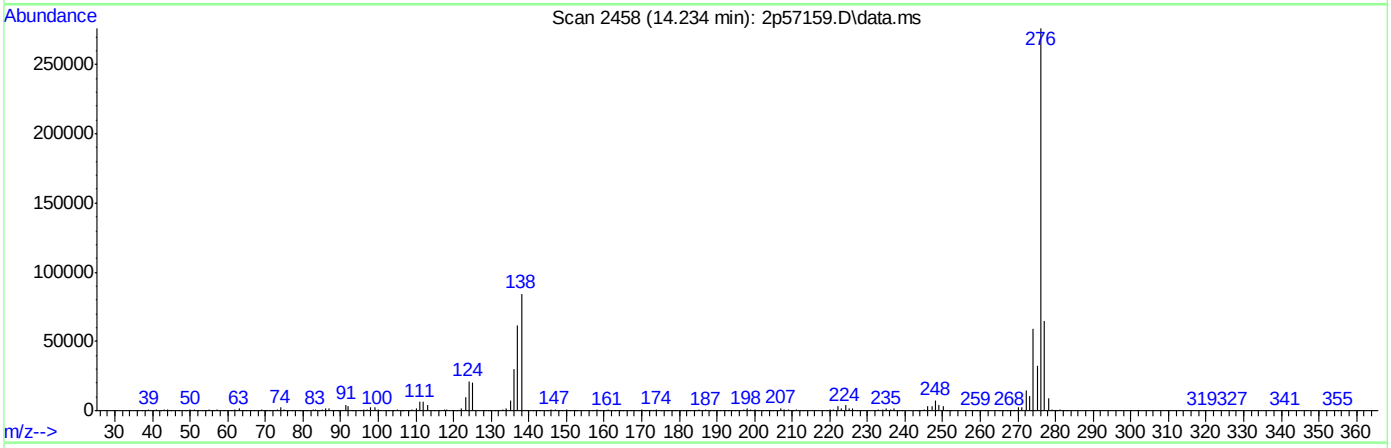
Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5		14.23	Overlapping peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57159.D
Acq On : 11 Mar 2016 7:30 pm
Operator : sarad
Sample : ICv2490-50
Misc : op91532,e2p2491
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 11 20:22:01 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration





TIC: 2p57159.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.234min (-0.021) 66.17ppm

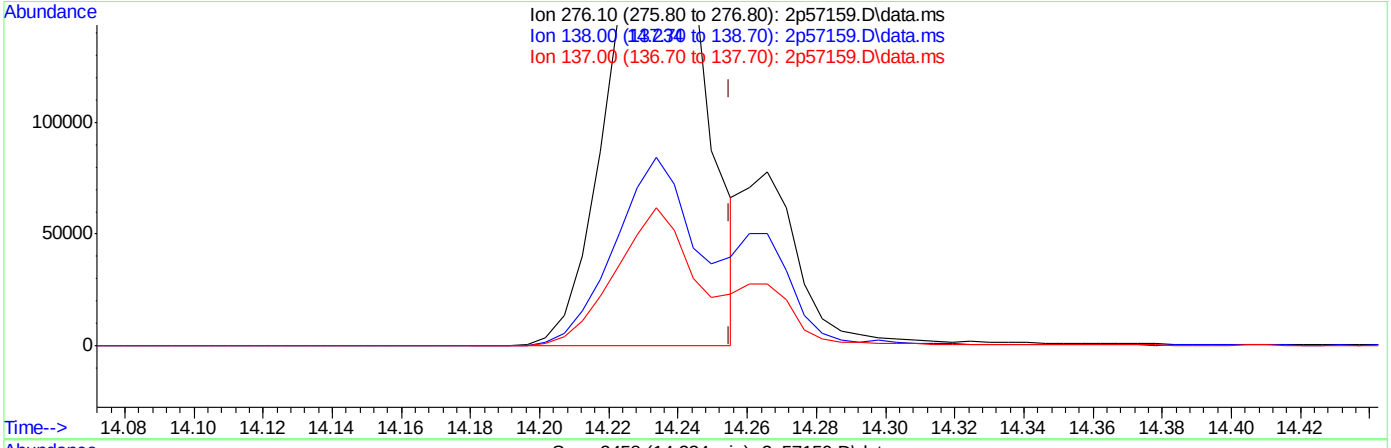
response 539152

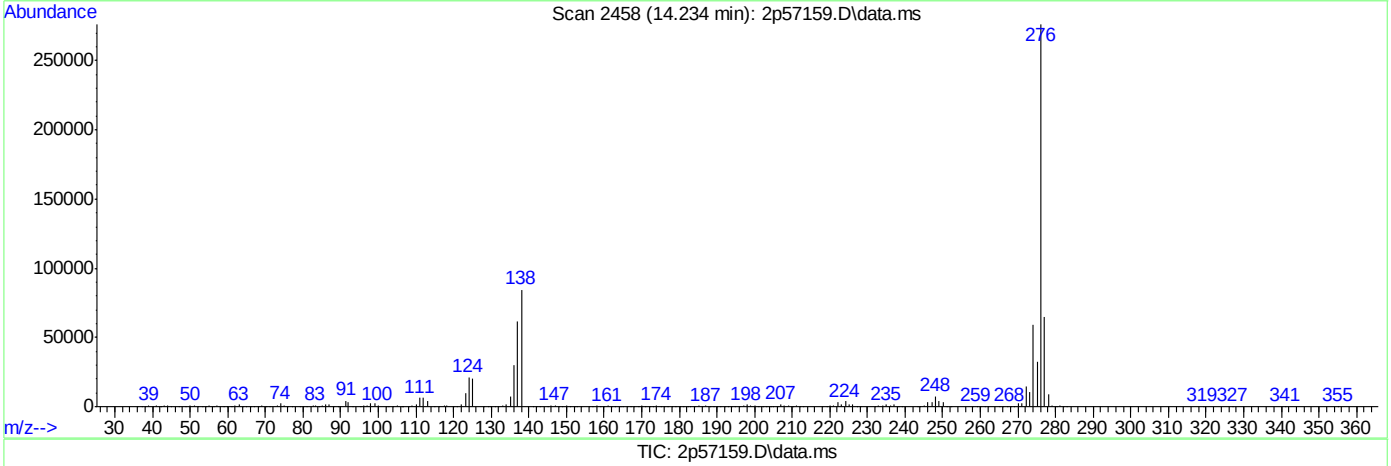
Ion	Exp%	Act%
276.10	100	100
138.00	37.80	30.52
137.00	28.00	22.31
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57159.D
Acq On : 11 Mar 2016 7:30 pm
Operator : sarad
Sample : ICv2490-50
Misc : op91532,e2p2491
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 11 20:22:01 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration





TIC: 2p57159.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.234min (-0.021) 54.79ppm m

response 446386

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	30.54
137.00	28.00	22.34
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57159a.D
Acq On : 11 Mar 2016 7:30 pm
Operator : sarad
Sample : ICv2491-50
Misc : op91532,e2p2491
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 11 22:00:22 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration

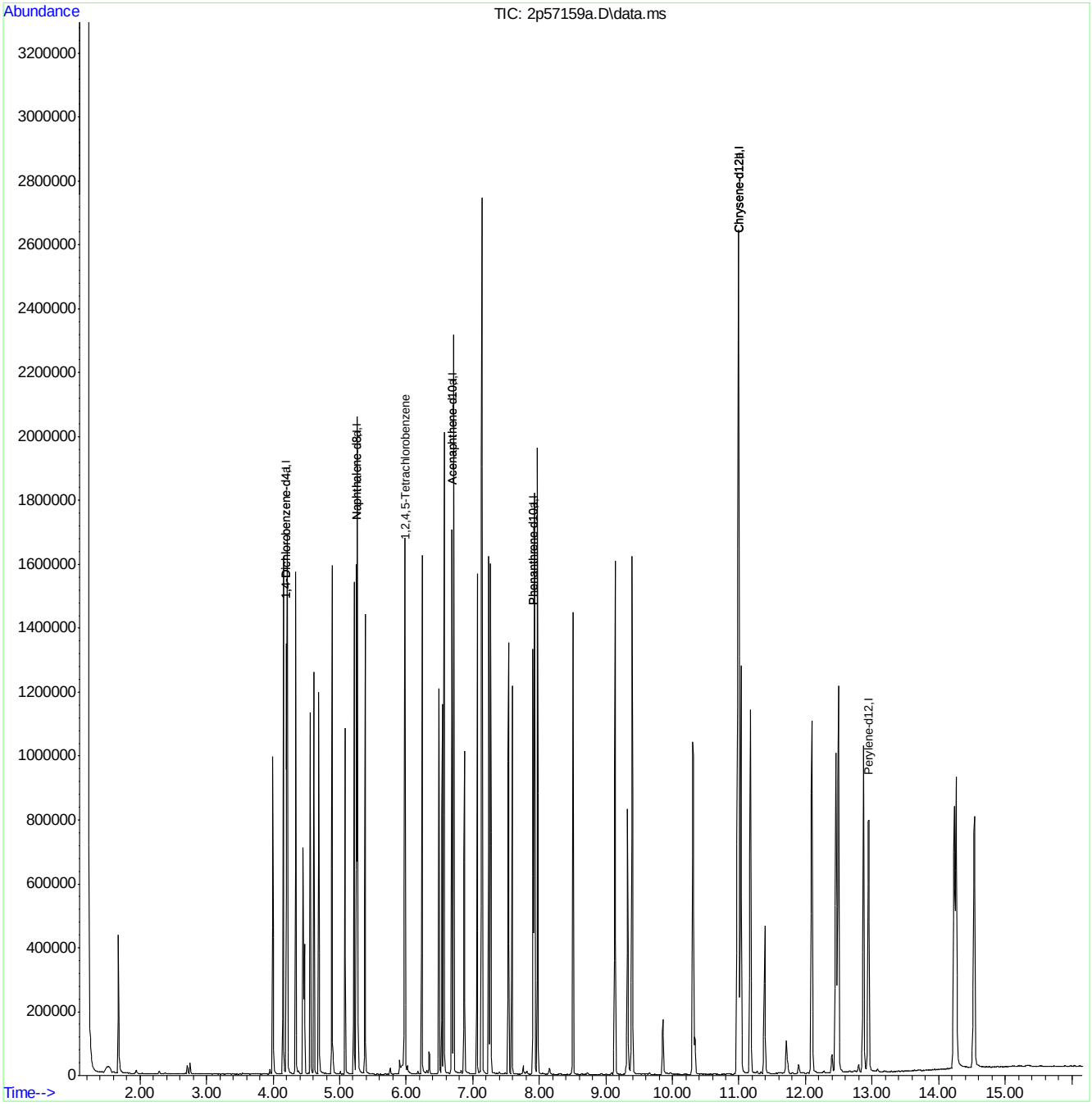
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	141029	40.00	ppm	0.00
24) Naphthalene-d8	5.253	136	486012	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	277157	40.00	ppm	0.00
69) Phenanthrene-d10	7.906	188	453149	40.00	ppm	0.00
83) Chrysene-d12	10.998	240	446382	40.00	ppm	0.00
92) Perylene-d12	12.950	264	358756	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.200	152	141029	40.00	ppm	0.00
104) Naphthalene-d8a	5.253	136	486012	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	277157	40.00	ppm	0.00
109) Chrysene-d12a	10.998	240	446382	40.00	ppm	0.00
111) Phenanthrene-d10a	7.906	188	453149	40.00	ppm	0.00
114) Chrysene-d12b	10.998	240	446382	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery = 0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery = 0.00%#			
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery = 0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery = 0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery = 0.00%#			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery = 0.00%#			
112) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
108) 1,2,4,5-Tetrachloroben...	5.986	216	219060	52.26	ppm	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57159a.D
Acq On : 11 Mar 2016 7:30 pm
Operator : sarad
Sample : ICv2491-50
Misc : op91532,e2p2491
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 11 22:00:22 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration



M2P2490.M Fri Mar 11 22:00:33 2016 RPT1 Page: 2

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57160.D
Acq On : 11 Mar 2016 7:51 pm
Operator : sarad
Sample : ICv2490-50
Misc : op91532,e2p2491
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 11 23:00:31 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	146446	40.00	ppm	0.00
24) Naphthalene-d8	5.253	136	535288	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	294076	40.00	ppm	0.00
69) Phenanthrene-d10	7.906	188	488745	40.00	ppm	0.00
83) Chrysene-d12	10.987	240	471523	40.00	ppm	-0.02
92) Perylene-d12	12.945	264	377742	40.00	ppm	-0.01
102) 1,4-Dichlorobenzene-d4a	4.200	152	146446	40.00	ppm	0.00
104) Naphthalene-d8a	5.253	136	535288	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	294076	40.00	ppm	0.00
109) Chrysene-d12a	10.987	240	471523	40.00	ppm	0.00
111) Phenanthrene-d10a	7.906	188	488745	40.00	ppm	0.00
114) Chrysene-d12b	10.987	240	471523	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery = 0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery = 0.00%#			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery = 0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery = 0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery = 0.00%#			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery = 0.00%#			
112) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.429	88	92713	44.58	ppm	74
6) Indene	4.414	116	426356	53.22	ppm	96
7) Cumene	3.510	105	593376	48.19	ppm	93
13) Decane	4.093	57	324364	46.45	ppm	79
18) Acetophenone	4.547	105	324802	51.66	ppm	88
27) Quinoline	5.548	129	454810	50.31	ppm	99
40) 2,3-Dichloroaniline	6.082	161	207657	42.33	ppm	96
41) Caprolactam	5.617	113	61000	47.14	ppm #	64
45) 1-Methylnaphthalene	5.922	141	393258	47.55	ppm	96
46) Dimethylnaphthalene	6.355	156	377954	47.20	ppm	93
53) Biphenyl	6.227	154	530585	50.34	ppm	98
82) Octadecane	7.858	43	318928	50.20	ppm #	61
100) 7,12-Dimethylbenz(a)an...	12.447	256	164547	30.78	ppm	90

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

9.6.20

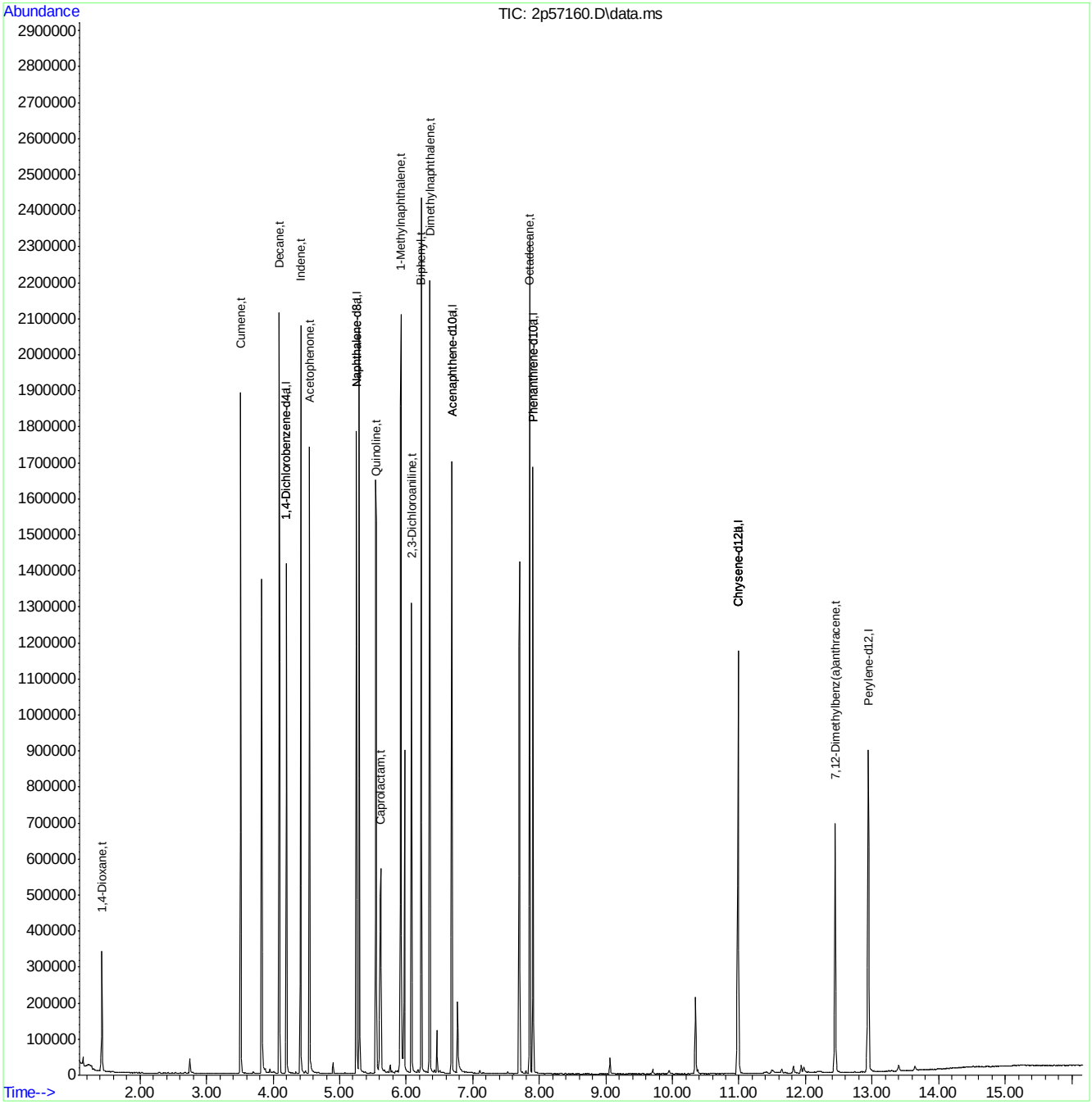
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57160.D
Acq On : 11 Mar 2016 7:51 pm
Operator : sarad
Sample : ICv2490-50
Misc : op91532,e2p2491
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 11 23:00:31 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

9.6.20 9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57160a.D
Acq On : 11 Mar 2016 7:51 pm
Operator : sarad
Sample : ICv2491-50
Misc : op91532,e2p2491
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 11 22:56:12 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	146446	40.00	ppm	0.00
24) Naphthalene-d8	5.253	136	535288	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	294076	40.00	ppm	0.00
69) Phenanthrene-d10	7.906	188	488745	40.00	ppm	0.00
83) Chrysene-d12	10.987	240	471523	40.00	ppm	-0.02
92) Perylene-d12	12.945	264	377742	40.00	ppm	-0.01
102) 1,4-Dichlorobenzene-d4a	4.200	152	146446	40.00	ppm	0.00
104) Naphthalene-d8a	5.253	136	535288	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	294076	40.00	ppm	0.00
109) Chrysene-d12a	10.987	240	471523	40.00	ppm	0.00
111) Phenanthrene-d10a	7.906	188	488745	40.00	ppm	0.00
114) Chrysene-d12b	10.987	240	471523	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery = 0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery = 0.00%#			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery = 0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery = 0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery = 0.00%#			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery = 0.00%#			
112) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
103) Benzaldehyde	3.831	105	202449	56.39	ppm	93
107) Atrazine	7.703	215	63613	49.94	ppm #	86

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

9.6.21

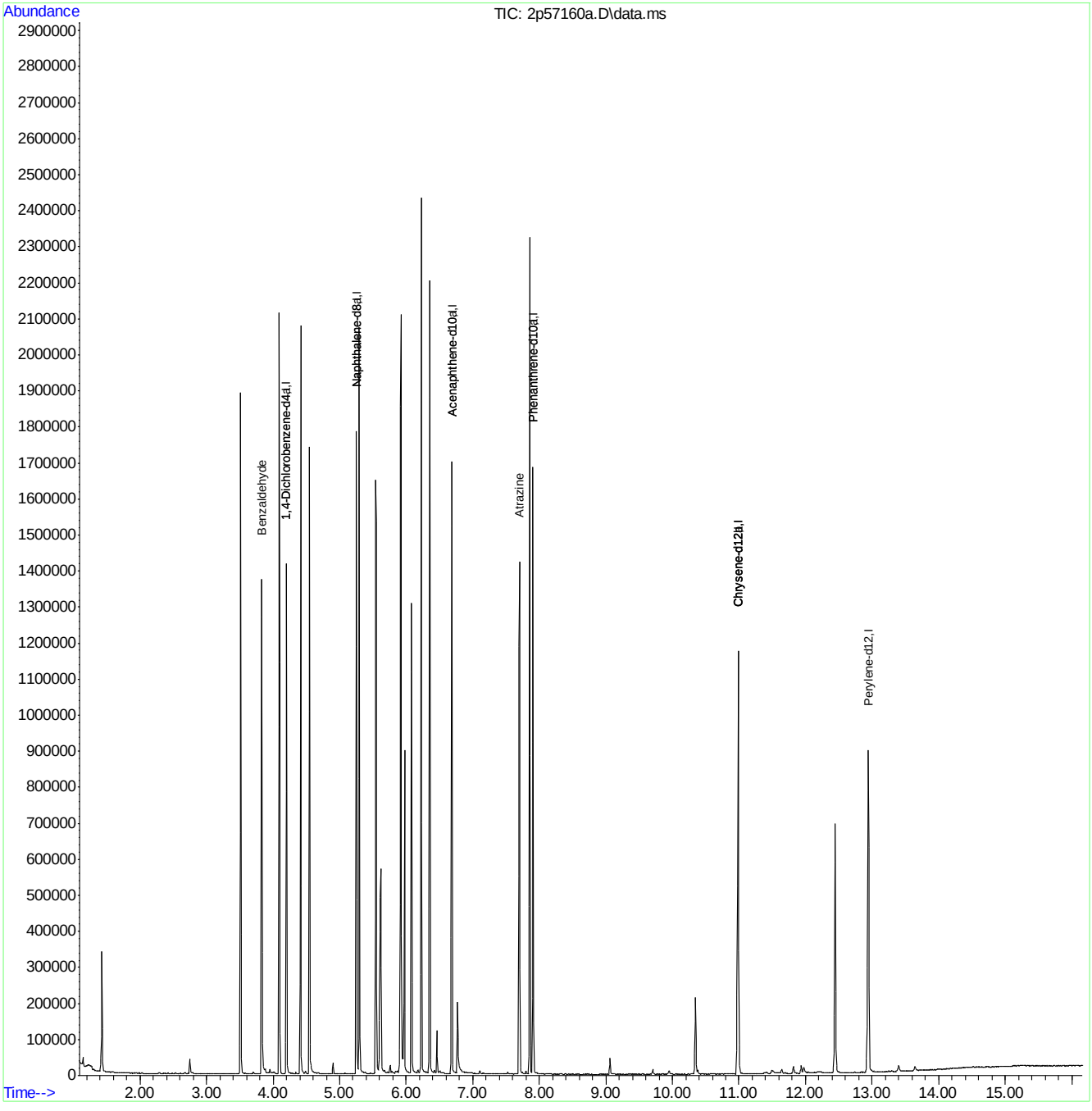
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57160a.D
Acq On : 11 Mar 2016 7:51 pm
Operator : sarad
Sample : ICv2491-50
Misc : op91532,e2p2491
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 11 22:56:12 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration



M2P2490.M Fri Mar 11 22:56:28 2016 RPT1 Page: 2

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57161.D
Acq On : 11 Mar 2016 8:11 pm
Operator : sarad
Sample : ICv2490-50
Misc : op91532,e2p2491
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 11 21:46:46 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	138772	40.00	ppm	0.00
24) Naphthalene-d8	5.254	136	516149	40.00	ppm	0.00
47) Acenaphthene-d10	6.687	164	281845	40.00	ppm	0.00
69) Phenanthrene-d10	7.906	188	461037	40.00	ppm	0.00
83) Chrysene-d12	10.987	240	418272	40.00	ppm	-0.02
92) Perylene-d12	12.945	264	356368	40.00	ppm	-0.01
102) 1,4-Dichlorobenzene-d4a	4.200	152	138772	40.00	ppm	0.00
104) Naphthalene-d8a	5.254	136	516149	40.00	ppm	0.00
106) Acenaphthene-d10a	6.687	164	281845	40.00	ppm	0.00
109) Chrysene-d12a	10.987	240	418272	40.00	ppm	0.00
111) Phenanthrene-d10a	7.906	188	461037	40.00	ppm	0.00
114) Chrysene-d12b	10.987	240	418272	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.103	112	243053	52.63	ppm	0.00
Spiked Amount 50.000	Range 11 - 58		Recovery = 105.26%#			
8) Phenol-d5	3.964	99	293159	51.89	ppm	-0.01
Spiked Amount 50.000	Range 10 - 59		Recovery = 103.78%#			
25) Nitrobenzene-d5	4.670	82	276368	53.24	ppm	0.00
Spiked Amount 50.000	Range 19 - 61		Recovery = 106.48%#			
51) 2-Fluorobiphenyl	6.147	172	504900	57.87	ppm	0.00
Spiked Amount 50.000	Range 21 - 58		Recovery = 115.74%#			
73) 2,4,6-Tribromophenol	7.334	330	56966	49.52	ppm	-0.01
Spiked Amount 50.000	Range 12 - 68		Recovery = 99.04%#			
85) Terphenyl-d14	9.629	244	479564	61.60	ppm	0.00
Spiked Amount 50.000	Range 16 - 65		Recovery = 123.20%#			
112) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	

Target Compounds Qvalue

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

9.6.22

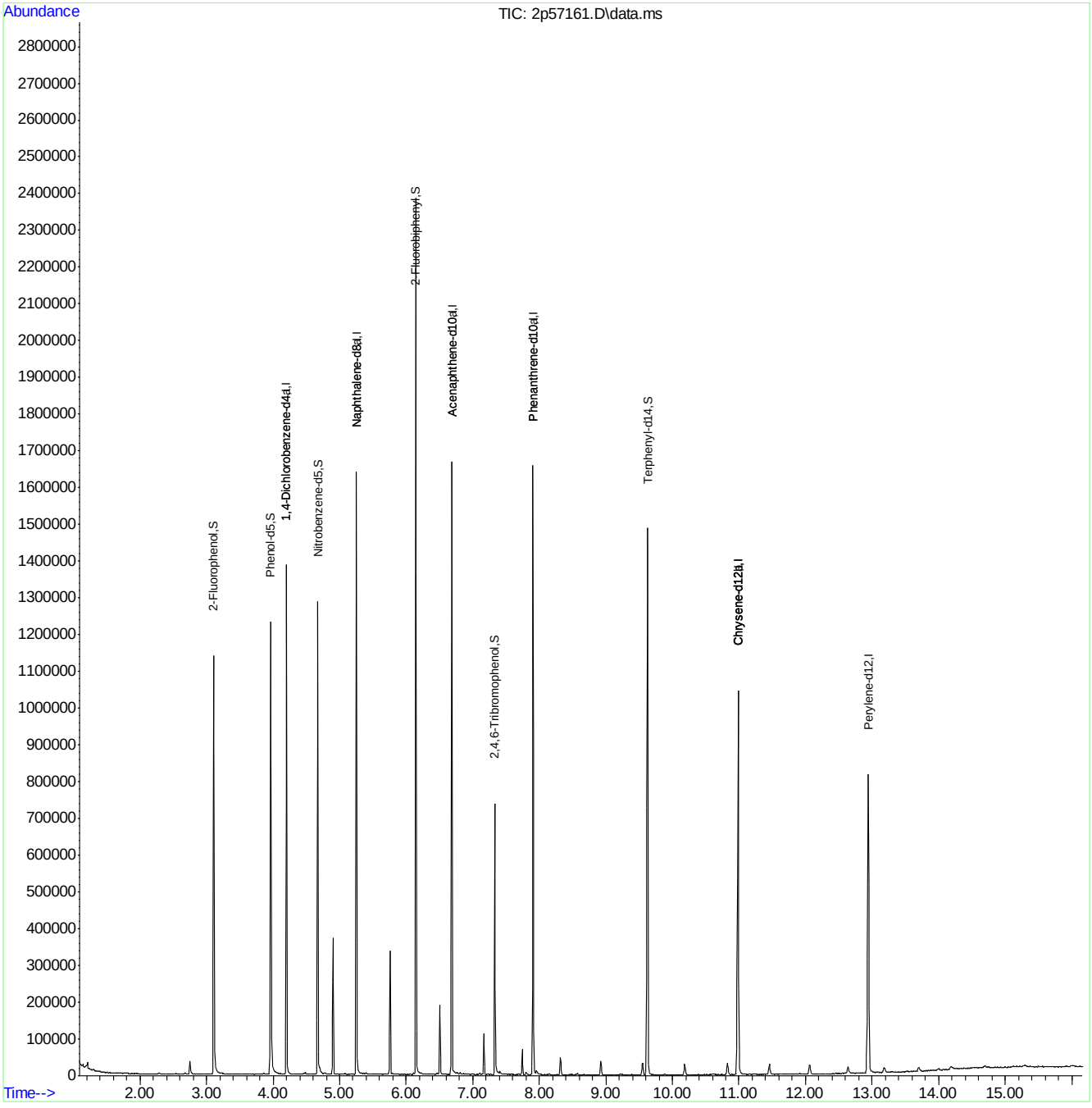
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57161.D
Acq On : 11 Mar 2016 8:11 pm
Operator : sarad
Sample : ICv2490-50
Misc : op91532,e2p2491
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 11 21:46:46 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57163a.D
Acq On : 11 Mar 2016 8:53 pm
Operator : sarad
Sample : ICv2491-50
Misc : op91532,e2p2491
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 11 22:00:59 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	120130	40.00	ppm	0.00
24) Naphthalene-d8	5.253	136	454121	40.00	ppm	0.00
47) Acenaphthene-d10	6.681	164	269566	40.00	ppm	-0.01
69) Phenanthrene-d10	7.906	188	464111	40.00	ppm	0.00
83) Chrysene-d12	10.987	240	448332	40.00	ppm	-0.02
92) Perylene-d12	12.945	264	396476	40.00	ppm	-0.01
102) 1,4-Dichlorobenzene-d4a	4.200	152	120130	40.00	ppm	0.00
104) Naphthalene-d8a	5.253	136	454121	40.00	ppm	0.00
106) Acenaphthene-d10a	6.681	164	269566	40.00	ppm	0.00
109) Chrysene-d12a	10.987	240	448332	40.00	ppm	0.00
111) Phenanthrene-d10a	7.906	188	464111	40.00	ppm	0.00
114) Chrysene-d12b	10.987	240	448332	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery = 0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery = 0.00%#			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery = 0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery = 0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery = 0.00%#			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery = 0.00%#			
112) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
110) Benzidine	9.324	184	379270	70.00	ppm	100

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

9.6.23

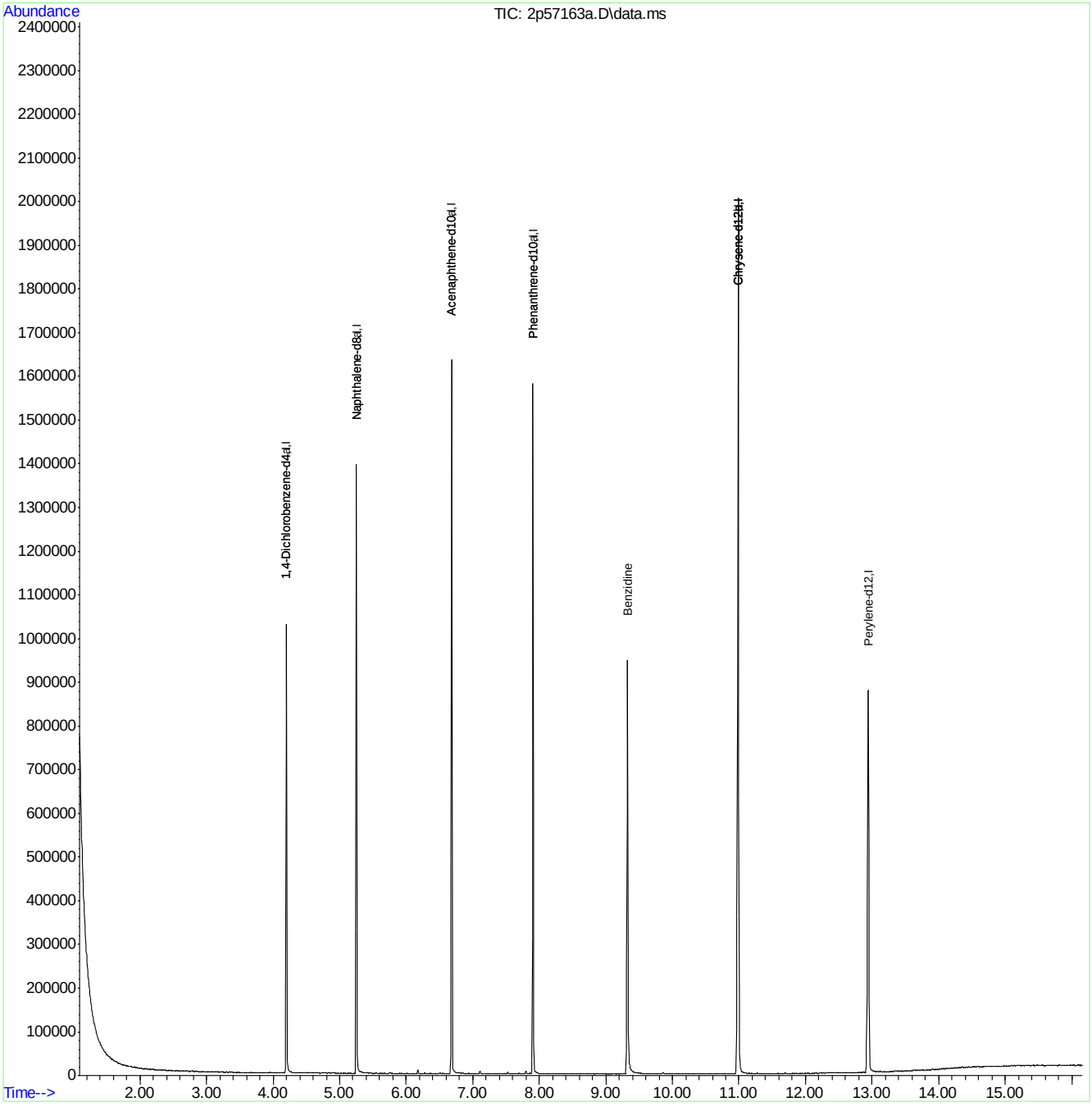
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57163a.D
Acq On : 11 Mar 2016 8:53 pm
Operator : sarad
Sample : ICv2491-50
Misc : op91532,e2p2491
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 11 22:00:59 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57163.D
Acq On : 11 Mar 2016 8:53 pm
Operator : sarad
Sample : ICv2490-50
Misc : op91532,e2p2491
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 11 22:00:46 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.200	152	120130	40.00	ppm	0.00
24) Naphthalene-d8	5.253	136	454121	40.00	ppm	0.00
47) Acenaphthene-d10	6.681	164	269566	40.00	ppm	-0.01
69) Phenanthrene-d10	7.906	188	464111	40.00	ppm	0.00
83) Chrysene-d12	10.987	240	448332	40.00	ppm	-0.02
92) Perylene-d12	12.945	264	396476	40.00	ppm	-0.01
102) 1,4-Dichlorobenzene-d4a	4.200	152	120130	40.00	ppm	0.00
104) Naphthalene-d8a	5.253	136	454121	40.00	ppm	0.00
106) Acenaphthene-d10a	6.681	164	269566	40.00	ppm	0.00
109) Chrysene-d12a	10.987	240	448332	40.00	ppm	0.00
111) Phenanthrene-d10a	7.906	188	464111	40.00	ppm	0.00
114) Chrysene-d12b	10.987	240	448332	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery = 0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery = 0.00%#			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery = 0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery = 0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery = 0.00%#			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery = 0.00%#			
112) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
89) 3,3'-Dichlorobenzidine	10.992	252	220618	48.86	ppm	97

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

9.6.24

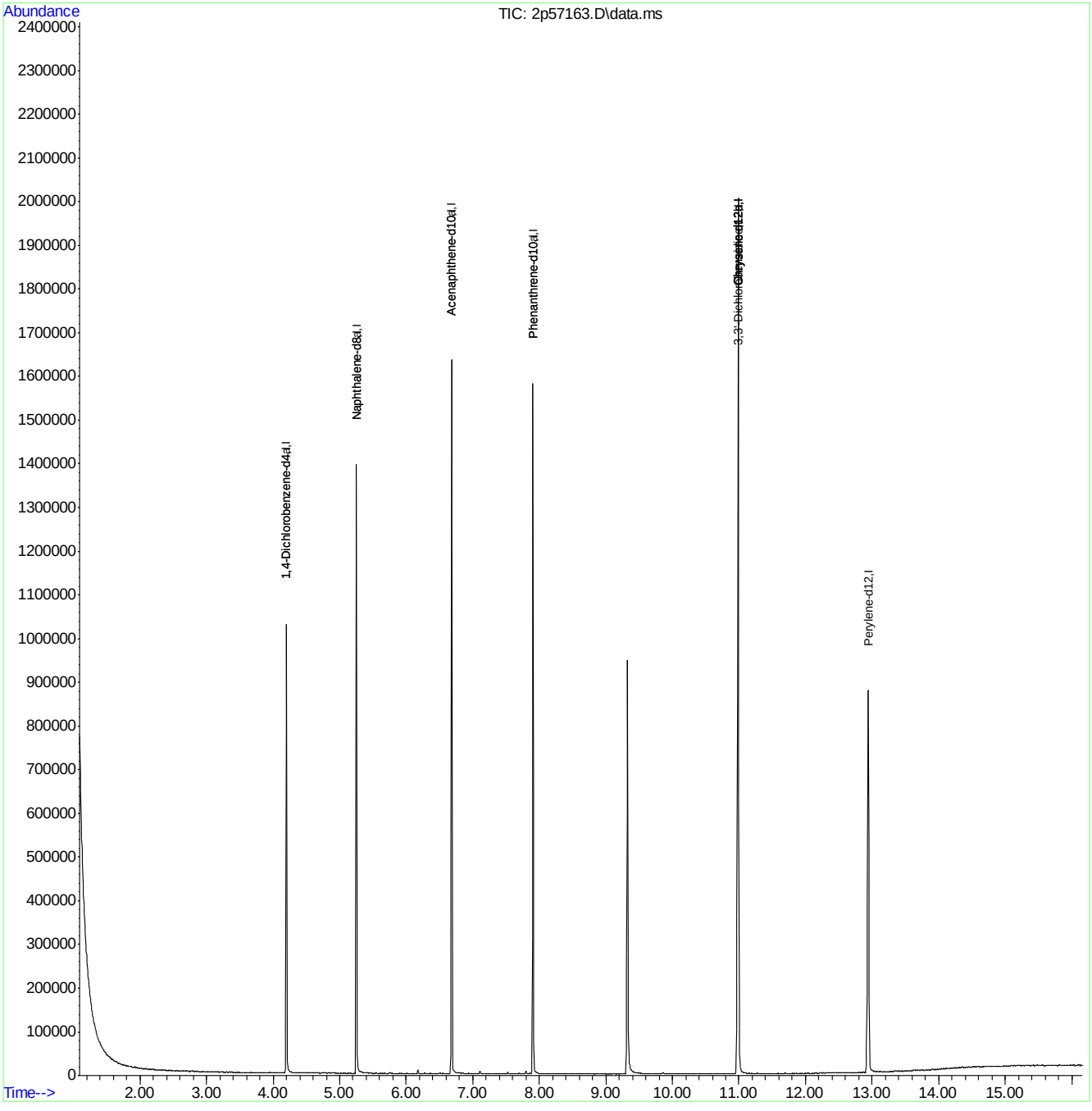
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2491\
Data File : 2p57163.D
Acq On : 11 Mar 2016 8:53 pm
Operator : sarad
Sample : ICv2490-50
Misc : op91532,e2p2491
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 11 22:00:46 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2492\
Data File : 2p57166.D
Acq On : 11 Mar 2016 10:21 pm
Operator : sarad
Sample : icv2491-50
Misc : op91532,e2p2492
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 12 00:11:20 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.189	152	120083	40.00	ppm	-0.01
24) Naphthalene-d8	5.243	136	452284	40.00	ppm	-0.02
47) Acenaphthene-d10	6.671	164	222939	40.00	ppm	-0.02
69) Phenanthrene-d10	7.890	188	412510	40.00	ppm	-0.02
83) Chrysene-d12	10.966	240	420210	40.00	ppm	-0.04
92) Perylene-d12	12.918	264	409968	40.00	ppm	-0.04
102) 1,4-Dichlorobenzene-d4a	4.189	152	120083	40.00	ppm	-0.01
104) Naphthalene-d8a	5.243	136	452284	40.00	ppm	-0.01
106) Acenaphthene-d10a	6.671	164	222939	40.00	ppm	-0.02
109) Chrysene-d12a	10.966	240	420210	40.00	ppm	-0.03
111) Phenanthrene-d10a	7.890	188	412510	40.00	ppm	-0.02
114) Chrysene-d12b	10.966	240	420210	40.00	ppm	-0.03
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery = 0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery = 0.00%#			
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery = 0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery = 0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery = 0.00%#			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery = 0.00%#			
112) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
105) Hydroquinone	5.665	110	204562	65.61	ppm	98

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

9.6.25

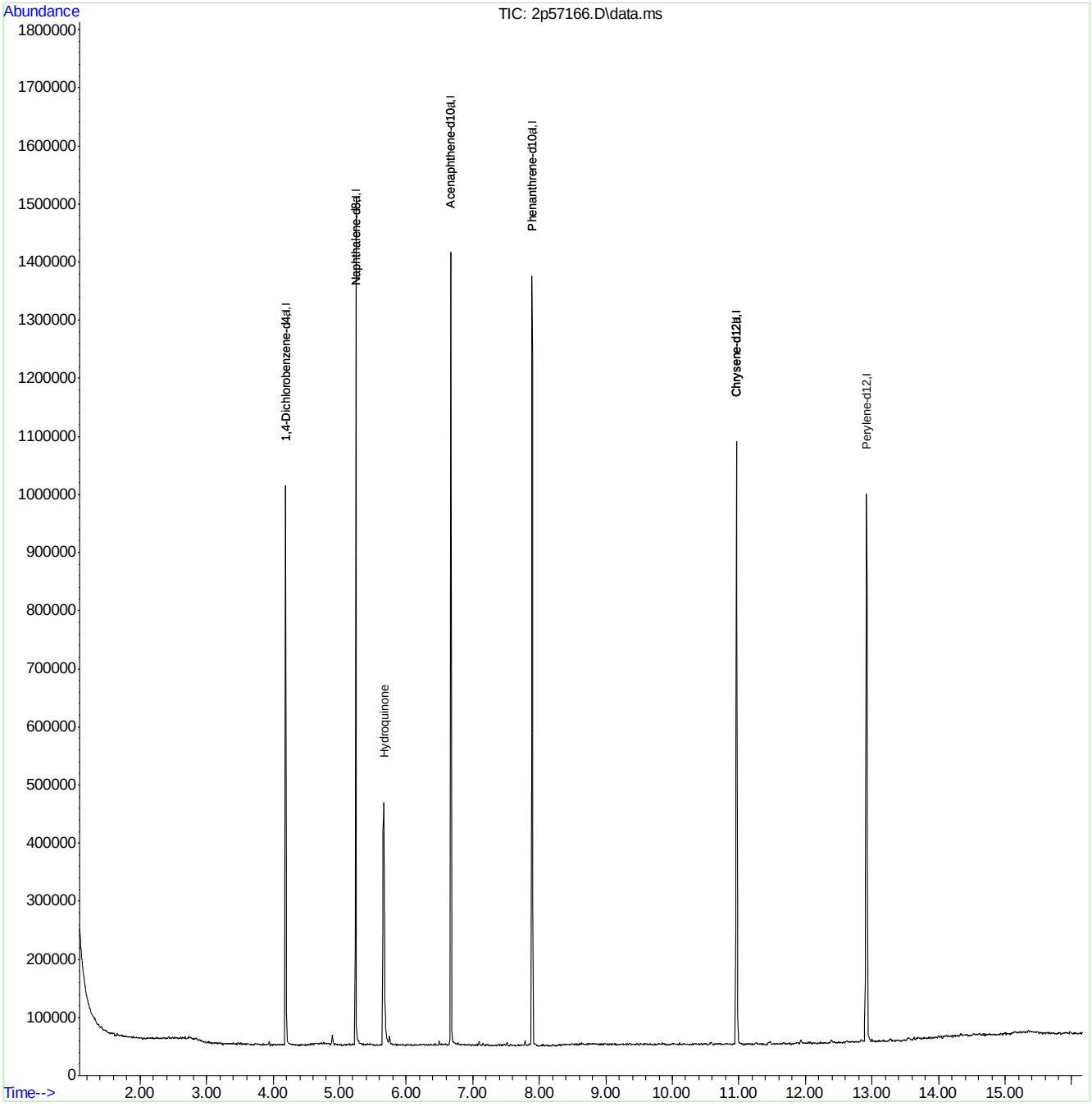
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2492\
Data File : 2p57166.D
Acq On : 11 Mar 2016 10:21 pm
Operator : sarad
Sample : icv2491-50
Misc : op91532,e2p2492
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 12 00:11:20 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration



M2P2490.M Mon Mar 14 08:51:17 2016 RPT1 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2492\
Data File : 2p57167.D
Acq On : 11 Mar 2016 10:41 pm
Operator : sarad
Sample : icv2490-50
Misc : op91532,e2p2492
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 11 23:15:18 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.189	152	114787	40.00	ppm	-0.01
24) Naphthalene-d8	5.243	136	403149	40.00	ppm	-0.02
47) Acenaphthene-d10	6.671	164	236088	40.00	ppm	-0.02
69) Phenanthrene-d10	7.896	188	387798	40.00	ppm	-0.02
83) Chrysene-d12	10.966	240	379555	40.00	ppm	-0.04
92) Perylene-d12	12.918	264	340408	40.00	ppm	-0.04
102) 1,4-Dichlorobenzene-d4a	4.189	152	114787	40.00	ppm	-0.01
104) Naphthalene-d8a	5.243	136	403149	40.00	ppm	-0.01
106) Acenaphthene-d10a	6.671	164	236088	40.00	ppm	-0.02
109) Chrysene-d12a	10.966	240	379555	40.00	ppm	-0.03
111) Phenanthrene-d10a	7.896	188	387798	40.00	ppm	-0.02
114) Chrysene-d12b	10.966	240	379555	40.00	ppm	-0.03
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery = 0.00%#			
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery = 0.00%#			
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery = 0.00%#			
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery = 0.00%#			
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery = 0.00%#			
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery = 0.00%#			
112) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
113) O-terphenyl	0.000	230	0	0.00	ppm	
Target Compounds						Qvalue
9) Phenol	3.964	94	242901	47.78	ppm	96
12) 2-Chlorophenol	4.023	128	198351	48.55	ppm	86
19) 2-Methylphenol	4.457	108	174921	53.58	ppm	95
21) 3&4-Methylphenol	4.590	108	181985	51.45	ppm	92
29) 2-Nitrophenol	4.938	139	102425	50.57	ppm	78
30) 2,4-Dimethylphenol	5.013	107	196824	52.08	ppm	88
31) Benzoic acid	5.168	105	100451	51.42	ppm	95
33) 2,4-Dichlorophenol	5.157	162	154885	51.06	ppm	100
34) 2,6-Dichlorophenol	5.328	162	148712	49.55	ppm	97
43) 4-Chloro-3-methylphenol	5.756	107	161847	50.40	ppm	98
49) 2,4,6-Trichlorophenol	6.083	196	108618	51.18	ppm	99
50) 2,4,5-Trichlorophenol	6.115	196	108987	49.31	ppm	96
60) 2,4-Dinitrophenol	6.762	184	35563	51.59	ppm #	83
61) 4-Nitrophenol	6.853	109	48325	58.31	ppm #	78
64) 2,3,4,6-Tetrachlorophenol	6.960	232	85061	50.93	ppm	87
70) 4,6-Dinitro-2-methylph...	7.195	198	61633	51.87	ppm	84
76) Pentachlorophenol	7.751	266	48028	46.71	ppm	97

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2492\
Data File : 2p57167.D
Acq On : 11 Mar 2016 10:41 pm
Operator : sarad
Sample : icv2490-50
Misc : op91532,e2p2492
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 11 23:15:18 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration

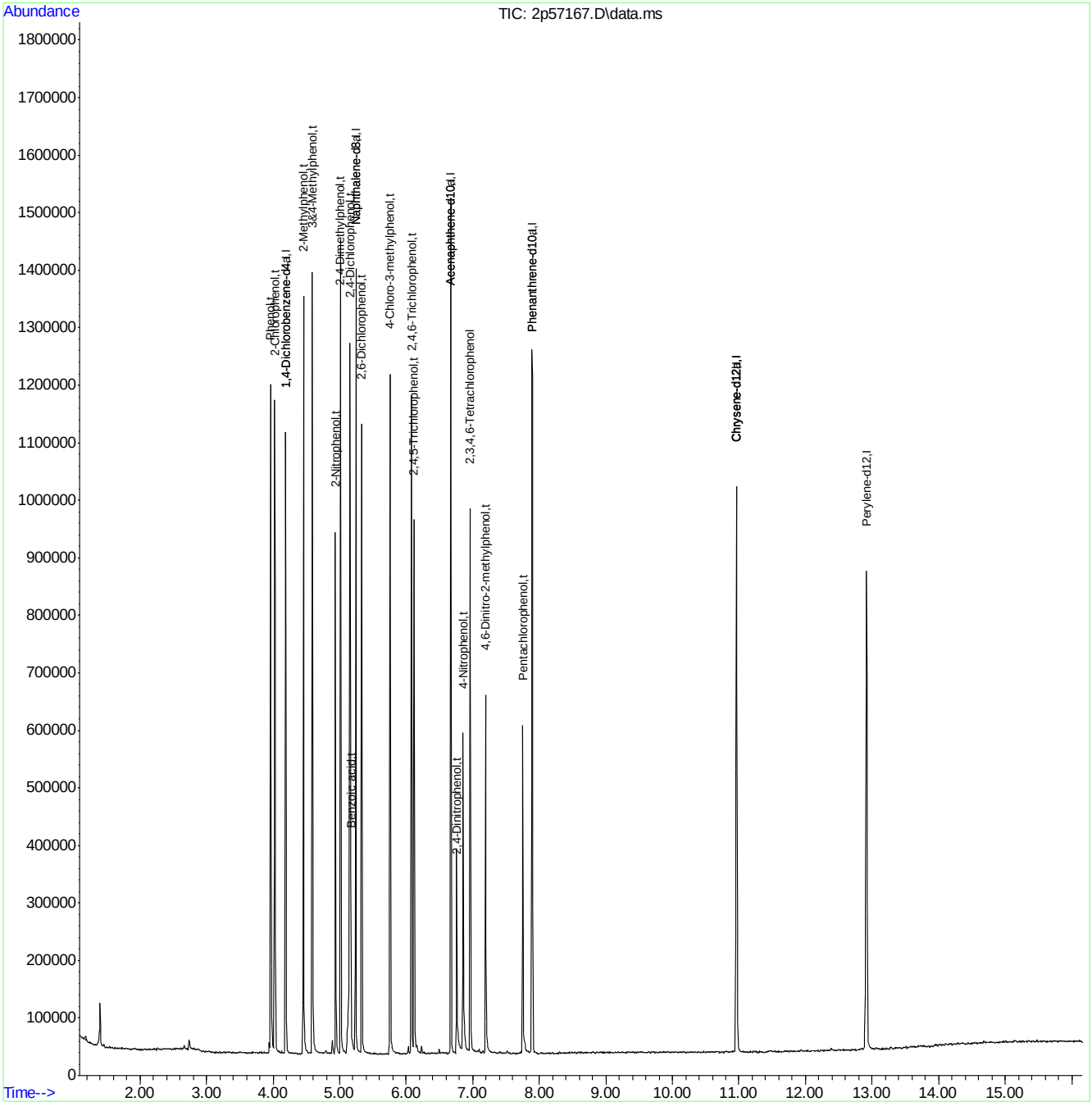
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2492\
Data File : 2p57167.D
Acq On : 11 Mar 2016 10:41 pm
Operator : sarad
Sample : icv2490-50
Misc : op91532,e2p2492
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 11 23:15:18 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Fri Mar 11 20:08:23 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
03/24/16 09:35

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57273.D
Acq On : 16 Mar 2016 7:22 pm
Operator : sarad
Sample : cc2490-50
Misc : op92038,e2p2497
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 16 19:52:15 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.114	152	125750	40.00	ppm	-0.02
24) Naphthalene-d8	5.173	136	452630	40.00	ppm	-0.02
47) Acenaphthene-d10	6.607	164	266660	40.00	ppm	-0.01
69) Phenanthrene-d10	7.826	188	456123	40.00	ppm	-0.01
83) Chrysene-d12	10.885	240	509233	40.00	ppm	0.00
92) Perylene-d12	12.838	264	382229	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.114	152	125750	40.00	ppm	-0.02
104) Naphthalene-d8a	5.173	136	452630	40.00	ppm	-0.02
106) Acenaphthene-d10a	6.607	164	266660	40.00	ppm	-0.01
109) Chrysene-d12a	10.885	240	509233	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.023	112	215830	51.57	ppm	-0.03
Spiked Amount 50.000	Range 11 - 58		Recovery	=	103.14%#	
8) Phenol-d5	3.911	99	275298	53.77	ppm	0.00
Spiked Amount 50.000	Range 10 - 59		Recovery	=	107.54%#	
25) Nitrobenzene-d5	4.590	82	214842	47.19	ppm	-0.02
Spiked Amount 50.000	Range 19 - 61		Recovery	=	94.38%#	
51) 2-Fluorobiphenyl	6.072	172	417387	50.56	ppm	-0.01
Spiked Amount 50.000	Range 21 - 58		Recovery	=	101.12%#	
73) 2,4,6-Tribromophenol	7.264	330	60432	53.09	ppm	-0.01
Spiked Amount 50.000	Range 12 - 68		Recovery	=	106.18%#	
85) Terphenyl-d14	9.522	244	477863	50.42	ppm	0.00
Spiked Amount 50.000	Range 16 - 65		Recovery	=	100.84%#	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.317	88	90155	50.49	ppm	68
3) Pyridine	1.568	79	195621	47.98	ppm #	28
4) N-Nitrosodimethylamine	1.557	74	120988	48.07	ppm #	1
6) Indene	4.328	116	345532	50.23	ppm	95
7) Cumene	3.413	105	527416	49.88	ppm	94
9) Phenol	3.922	94	286302	51.40	ppm	89
10) Aniline	3.852	93	322929	50.81	ppm	90
11) bis(2-Chloroethyl)ether	3.916	93	194926	52.84	ppm #	70
12) 2-Chlorophenol	3.959	128	226442	50.60	ppm	89
13) Decane	4.007	57	283269	47.24	ppm	78
14) 1,3-Dichlorobenzene	4.066	146	245324	49.73	ppm	99
15) 1,4-Dichlorobenzene	4.130	146	246500	49.58	ppm	98
16) Benzyl alcohol	4.275	108	130764	52.90	ppm	97
17) 1,2-Dichlorobenzene	4.253	146	231756	50.63	ppm	99
18) Acetophenone	4.472	105	266624	49.39	ppm	93
19) 2-Methylphenol	4.414	108	177481	49.62	ppm	92
20) 2,2'-oxybis(1-Chloropr...	4.371	121	55004	47.42	ppm #	3
21) 3&4-Methylphenol	4.542	108	192172	49.59	ppm	93
22) n-Nitroso-di-n-propyla...	4.494	70	146711	49.78	ppm #	62
23) Hexachloroethane	4.526	201	83883	48.69	ppm	99
26) Nitrobenzene	4.606	77	210374	47.50	ppm	97
27) Quinoline	5.478	129	383723	50.19	ppm	98
28) Isophorone	4.815	82	360790	48.34	ppm	86

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57273.D
Acq On : 16 Mar 2016 7:22 pm
Operator : sarad
Sample : cc2490-50
Misc : op92038,e2p2497
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 16 19:52:15 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
29) 2-Nitrophenol	4.874	139	118720	52.20	ppm		67
30) 2,4-Dimethylphenol	4.959	107	199029	46.91	ppm		92
31) Benzoic acid	5.130	105	105132	47.94	ppm		93
32) bis(2-Chloroethoxy)met...	5.002	93	211999	49.76	ppm		98
33) 2,4-Dichlorophenol	5.098	162	174239	51.16	ppm		98
34) 2,6-Dichlorophenol	5.269	162	165742	49.19	ppm		98
35) 1,3,5-Trichlorobenzene	4.879	180	199555	49.07	ppm		97
36) 1,2,4-Trichlorobenzene	5.136	180	189334	49.46	ppm		99
37) 1,2,3-Trichlorobenzene	5.317	180	177940	48.84	ppm		97
38) Naphthalene	5.189	128	571009	48.60	ppm		98
39) 4-Chloroaniline	5.264	127	246735	49.81	ppm		91
40) 2,3-Dichloroaniline	6.002	161	206991	49.90	ppm		95
41) Caprolactam	5.590	113	57676	52.71	ppm	#	70
42) Hexachlorobutadiene	5.301	225	106083	48.49	ppm		98
43) 4-Chloro-3-methylphenol	5.719	107	182868	50.72	ppm		97
44) 2-Methylnaphthalene	5.761	141	335973	50.12	ppm		97
45) 1-Methylnaphthalene	5.842	141	347731	49.72	ppm		97
46) Dimethylnaphthalene	6.275	156	339503	50.14	ppm		96
48) Hexachlorocyclopentadiene	5.890	237	215919	95.69	ppm		98
49) 2,4,6-Trichlorophenol	6.029	196	121455	50.67	ppm		98
50) 2,4,5-Trichlorophenol	6.072	196	126170	50.54	ppm		97
52) 2-Chloronaphthalene	6.157	162	356572	49.69	ppm		95
53) Biphenyl	6.147	154	473243	49.51	ppm		97
54) 2-Nitroaniline	6.270	65	138947	50.58	ppm		90
55) Dimethylphthalate	6.414	163	412739	49.82	ppm		100
56) Acenaphthylene	6.489	152	595366	49.81	ppm		99
57) 2,6-Dinitrotoluene	6.467	165	95861	52.95	ppm		89
58) 3-Nitroaniline	6.607	138	112348	53.02	ppm		97
59) Acenaphthene	6.633	153	382574	50.12	ppm		96
60) 2,4-Dinitrophenol	6.708	184	102760	113.83	ppm	#	74
61) 4-Nitrophenol	6.826	109	45181	48.27	ppm		89
62) Dibenzofuran	6.778	168	518532	50.25	ppm		99
63) 2,4-Dinitrotoluene	6.804	165	128620	53.02	ppm		86
64) 2,3,4,6-Tetrachlorophenol	6.906	232	90741	48.10	ppm		93
65) Diethylphthalate	6.992	149	416205	49.50	ppm		100
66) Fluorene	7.056	166	420255	50.07	ppm		94
67) 4-Chlorophenyl-phenyle...	7.061	204	200781	50.27	ppm		92
68) 4-Nitroaniline	7.115	138	103841	53.54	ppm		90
70) 4,6-Dinitro-2-methylph...	7.147	198	75713	53.97	ppm		89
71) n-Nitrosodiphenylamine	7.173	169	295748	49.73	ppm		100
72) 1,2-Diphenylhydrazine	7.195	77	434987	51.94	ppm		89
74) 4-Bromophenyl-phenylether	7.457	248	125740	51.33	ppm		97
75) Hexachlorobenzene	7.510	284	136505	52.09	ppm		84
76) Pentachlorophenol	7.698	266	108616	81.84	ppm		98
77) Phenanthrene	7.847	178	610817	49.82	ppm		98
78) Anthracene	7.890	178	627485	50.72	ppm		98
79) Carbazole	8.061	167	578687	50.52	ppm		99
80) Di-n-butylphthalate	8.414	149	771836	52.05	ppm		99
81) Fluoranthene	9.040	202	735385	52.97	ppm		94
82) Octadecane	7.773	43	290279	48.96	ppm	#	58

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57273.D
Acq On : 16 Mar 2016 7:22 pm
Operator : sarad
Sample : cc2490-50
Misc : op92038,e2p2497
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 16 19:52:15 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
84)	Pyrene	9.297	202	753182	48.85 ppm	99
86)	Butylbenzylphthalate	10.201	149	361775	50.69 ppm	99
87)	Butyl stearate	10.356	56	271435	49.37 ppm	87
88)	Benzo[a]anthracene	10.869	228	694398	48.89 ppm	100
89)	3,3'-Dichlorobenzidine	10.885	252	258316	50.37 ppm	99
90)	Chrysene	10.923	228	619173	47.90 ppm	98
91)	bis(2-Ethylhexyl)phtha...	11.057	149	471613	49.87 ppm	99
93)	Di-n-octylphthalate	11.982	149	796142	53.31 ppm	93
94)	Benzo[b]fluoranthene	12.362	252	646091	52.33 ppm	98
95)	Benzo[k]fluoranthene	12.394	252	546043	50.35 ppm	97
96)	Benzo[a]pyrene	12.763	252	527185	51.03 ppm	95
97)	Indeno[1,2,3-cd]pyrene	14.132	276	485319m	55.91 ppm	
98)	Dibenz(a,h)acridine	13.875	279	409369	52.04 ppm	100
99)	Dibenz[a,h]anthracene	14.159	278	474835	54.51 ppm	90
100)	7,12-Dimethylbenz(a)an...	12.346	256	285993	52.87 ppm	92
101)	Benzo[g,h,i]perylene	14.421	276	467911	54.64 ppm	88

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

9.6.27

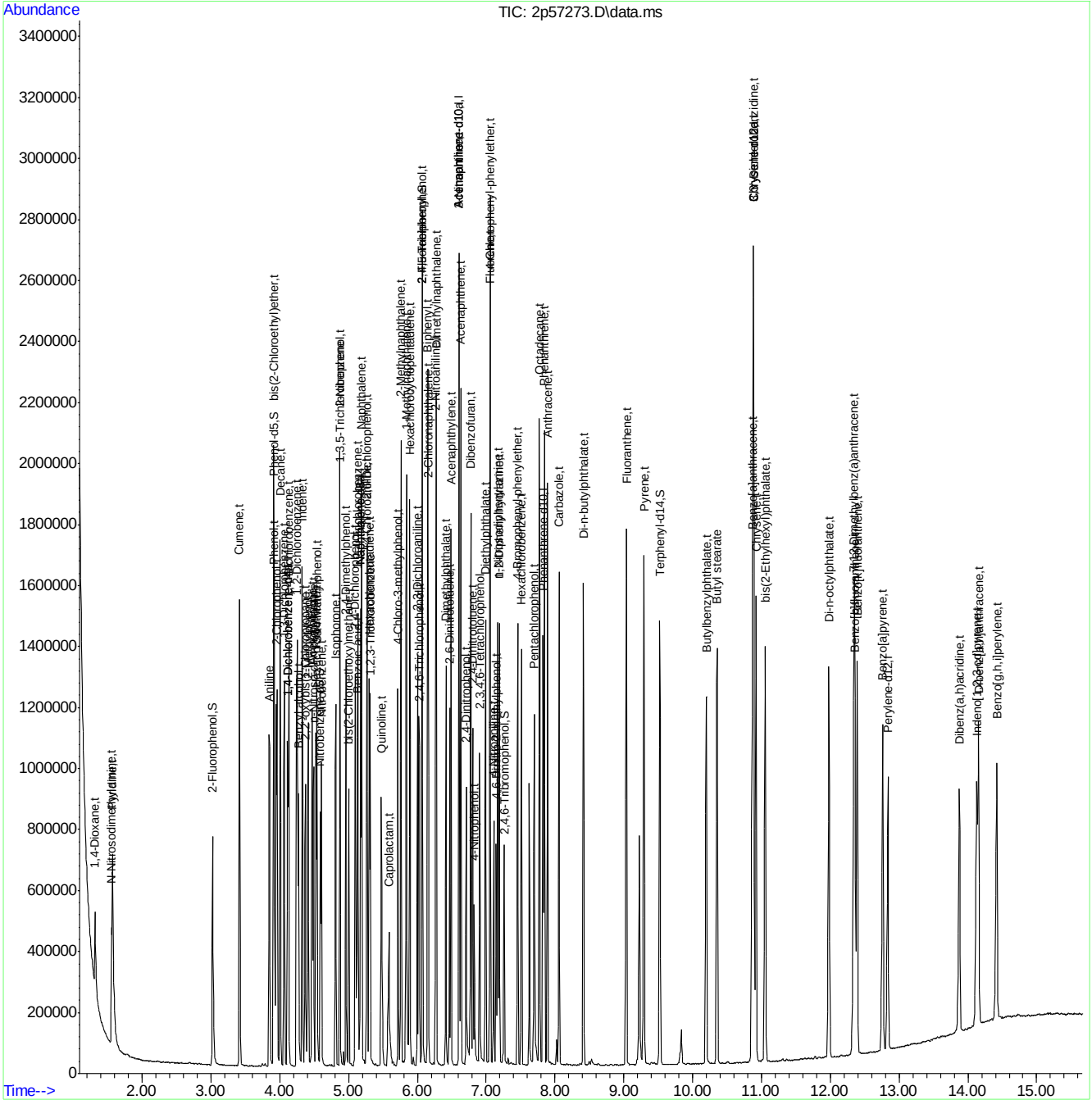
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57273.D
Acq On : 16 Mar 2016 7:22 pm
Operator : sarad
Sample : cc2490-50
Misc : op92038,e2p2497
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 16 19:52:15 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration



Manual Integration Approval Summary

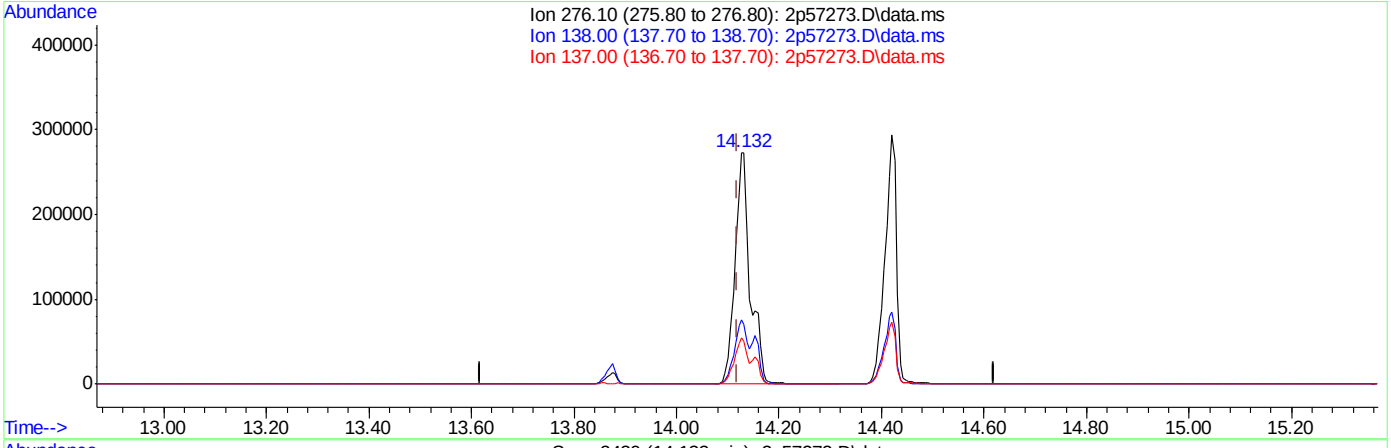
Sample Number:	E2P2497-CC2490	**Method:**	SW846 8270D
Lab FileID:	2P57273.D	**Analyst approved:**	03/16/16 19:53 Sara Davis
Injection Time:	03/16/16 19:22	**Supervisor approved:**	03/24/16 09:35 Nina Pandya

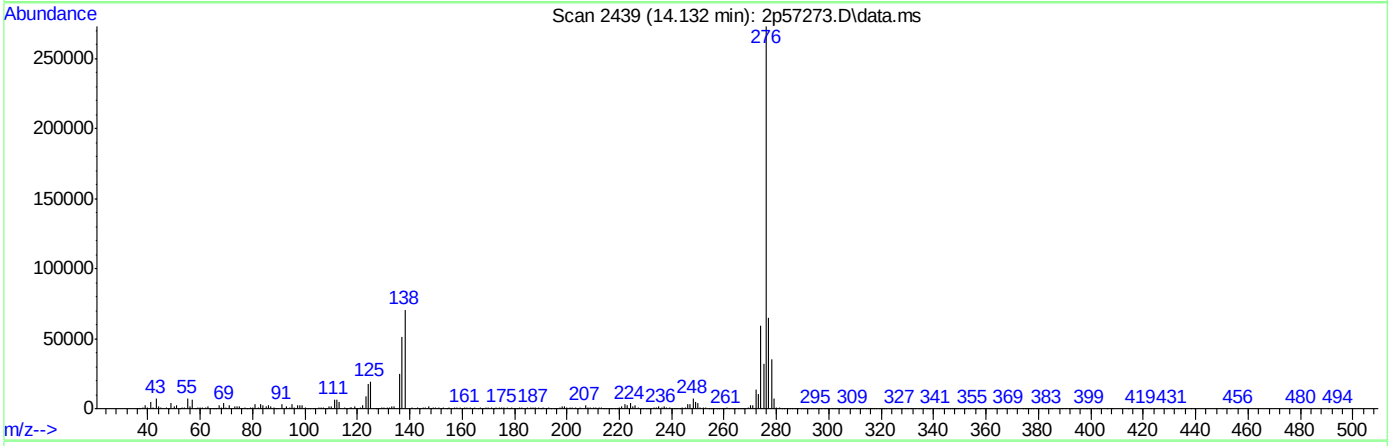
Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5		14.13	Overlapping peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57273.D
Acq On : 16 Mar 2016 7:22 pm
Operator : sarad
Sample : cc2490-50
Misc : op92038,e2p2497
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 16 19:37:28 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration





TIC: 2p57273.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.132min (+0.013) 65.14ppm

response 565410

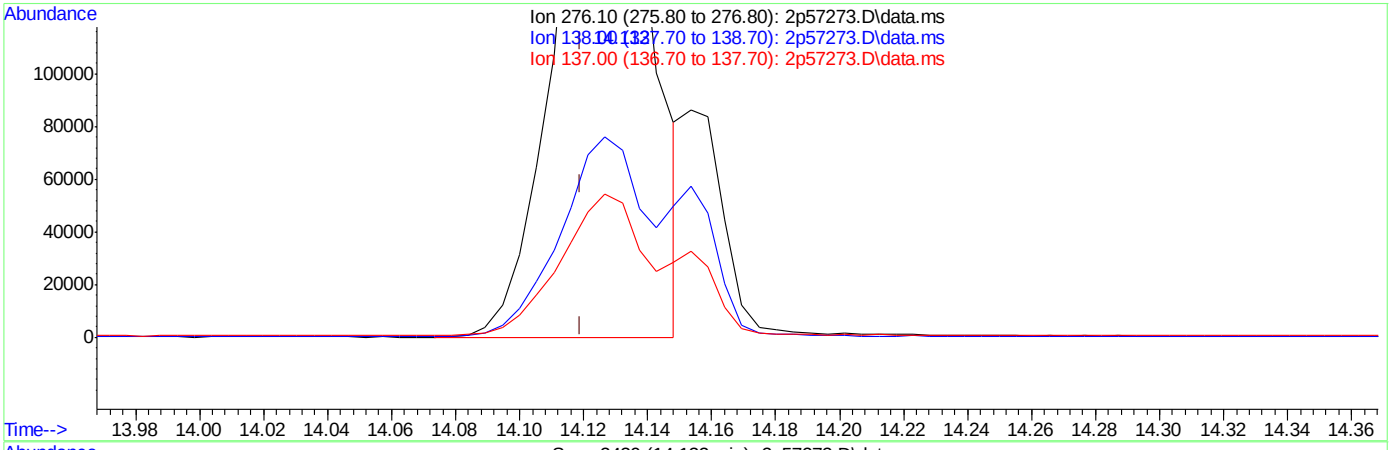
Ion	Exp%	Act%
276.10	100	100
138.00	37.80	25.85
137.00	28.00	18.44
0.00	0.00	0.00

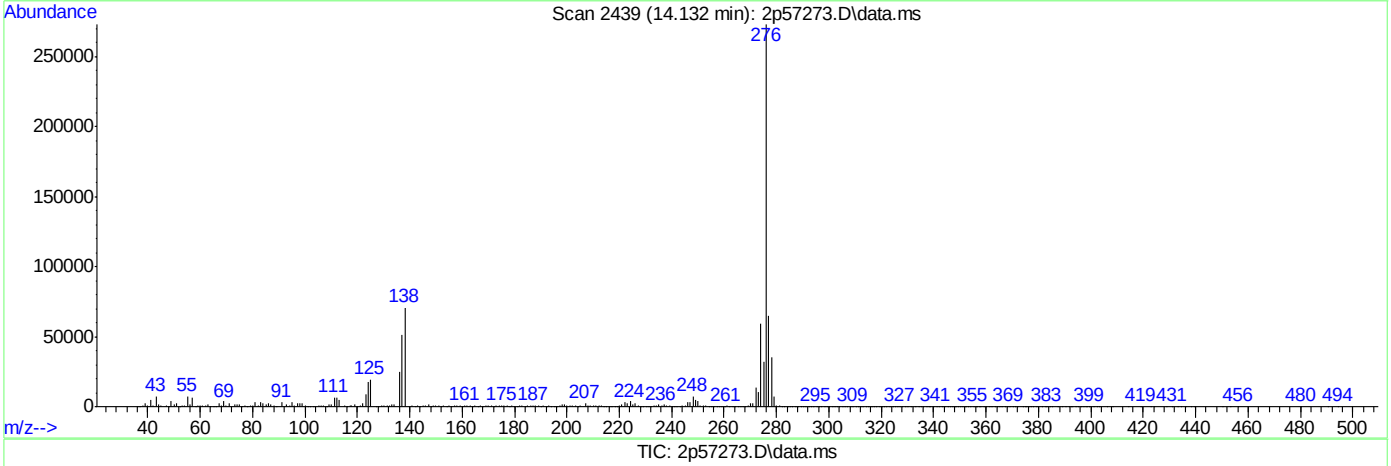
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57273.D
Acq On : 16 Mar 2016 7:22 pm
Operator : sarad
Sample : cc2490-50
Misc : op92038,e2p2497
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 16 19:37:28 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration





TIC: 2p57273.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.132min (+0.013) 55.91ppm m

response 485319

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	25.93
137.00	28.00	18.67
0.00	0.00	0.00

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57274.D
Acq On : 16 Mar 2016 7:43 pm
Operator : sarad
Sample : cc2491-50
Misc : op92038,e2p2497
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 17 16:10:37 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.114	152	122940	40.00	ppm	-0.02
24) Naphthalene-d8	5.168	136	459627	40.00	ppm	-0.02
47) Acenaphthene-d10	6.601	164	263214	40.00	ppm	-0.02
69) Phenanthrene-d10	7.821	188	446086	40.00	ppm	-0.02
83) Chrysene-d12	10.875	240	442762	40.00	ppm	-0.01
92) Perylene-d12	12.827	264	333367	40.00	ppm	0.00
102) 1,4-Dichlorobenzene-d4a	4.114	152	122940	40.00	ppm	-0.02
104) Naphthalene-d8a	5.168	136	459627	40.00	ppm	#-0.02
106) Acenaphthene-d10a	6.601	164	263214	40.00	ppm	-0.02
109) Chrysene-d12a	10.875	240	442762	40.00	ppm	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery	=	0.00%#	
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery	=	0.00%#	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery	=	0.00%#	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery	=	0.00%#	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery	=	0.00%#	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery	=	0.00%#	
Target Compounds						Qvalue
103) Benzaldehyde	3.740	105	149212	49.51	ppm	97
105) Hydroquinone	5.612	110	189616	59.84	ppm	98
107) Atrazine	7.628	215	53572	46.99	ppm #	74
108) 1,2,4,5-Tetrachloroben...	5.901	216	180493	45.34	ppm	98
110) Benzidine	9.222	184	166295	31.08	ppm	97

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

9.6.28

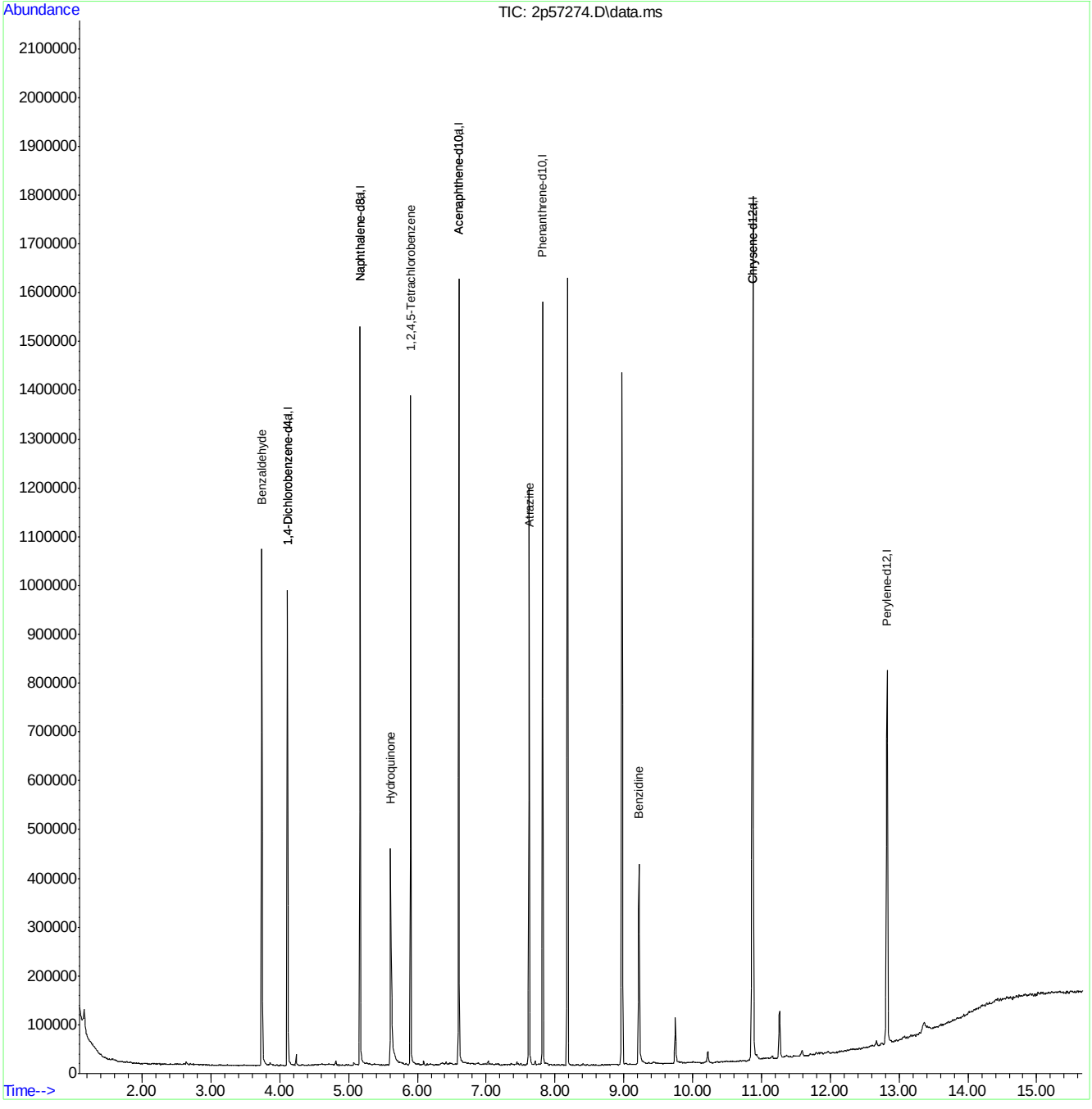
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2497\
Data File : 2p57274.D
Acq On : 16 Mar 2016 7:43 pm
Operator : sarad
Sample : cc2491-50
Misc : op92038,e2p2497
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 17 16:10:37 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration



M2P2490.M Thu Mar 17 16:10:46 2016 RPT1 Page: 2

SGS ACCUTEST JC16204

Manual Integrations APPROVED (compounds with "m" flag)
Nina Pandya
03/24/16 09:59

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2498\
Data File : 2p57300.D
Acq On : 17 Mar 2016 9:42 am
Operator : robertl1
Sample : CC2490-25
Misc : op92038,e2p2498
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 17 10:06:59 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.087	152	136153	40.00 ppm	-0.05
24) Naphthalene-d8	5.147	136	484463	40.00 ppm	-0.04
47) Acenaphthene-d10	6.575	164	282474	40.00 ppm	-0.04
69) Phenanthrene-d10	7.783	188	476562	40.00 ppm	-0.05
83) Chrysene-d12	10.816	240	517165	40.00 ppm	-0.07
92) Perylene-d12	12.758	264	439140	40.00 ppm	-0.07
102) 1,4-Dichlorobenzene-d4a	4.087	152	136153	40.00 ppm	-0.05
104) Naphthalene-d8a	5.147	136	484463	40.00 ppm	-0.04
106) Acenaphthene-d10a	6.575	164	282474	40.00 ppm	-0.04
109) Chrysene-d12a	10.816	240	517165	40.00 ppm	-0.07
System Monitoring Compounds					
5) 2-Fluorophenol	3.002	112	107216	23.66 ppm	-0.05
Spiked Amount 50.000	Range 11 - 58		Recovery = 47.32%		
8) Phenol-d5	3.884	99	137913	24.88 ppm	-0.03
Spiked Amount 50.000	Range 10 - 59		Recovery = 49.76%		
25) Nitrobenzene-d5	4.564	82	119558	24.54 ppm	-0.05
Spiked Amount 50.000	Range 19 - 61		Recovery = 49.08%		
51) 2-Fluorobiphenyl	6.040	172	223388	25.55 ppm	-0.04
Spiked Amount 50.000	Range 21 - 58		Recovery = 51.10%		
73) 2,4,6-Tribromophenol	7.222	330	28066	23.60 ppm	-0.05
Spiked Amount 50.000	Range 12 - 68		Recovery = 47.20%		
85) Terphenyl-d14	9.463	244	241641	25.10 ppm	-0.07
Spiked Amount 50.000	Range 16 - 65		Recovery = 50.20%		
Target Compounds					Qvalue
2) 1,4-Dioxane	1.301	88	43440	22.47 ppm	# 59
3) Pyridine	1.552	79	98683	22.36 ppm	# 29
4) N-Nitrosodimethylamine	1.536	74	59901	21.98 ppm	# 1
6) Indene	4.301	116	190016	25.51 ppm	94
7) Cumene	3.392	105	275230	24.04 ppm	94
9) Phenol	3.895	94	149862	24.85 ppm	86
10) Aniline	3.825	93	136880	19.89 ppm	94
11) bis(2-Chloroethyl)ether	3.890	93	99703	24.96 ppm	74
12) 2-Chlorophenol	3.938	128	117887	24.33 ppm	93
13) Decane	3.981	57	156703	24.14 ppm	75
14) 1,3-Dichlorobenzene	4.039	146	127776	23.92 ppm	99
15) 1,4-Dichlorobenzene	4.104	146	129846	24.12 ppm	99
16) Benzyl alcohol	4.248	108	68200	25.48 ppm	85
17) 1,2-Dichlorobenzene	4.232	146	120422	24.30 ppm	100
18) Acetophenone	4.446	105	144381	24.70 ppm	87
19) 2-Methylphenol	4.387	108	93340	24.10 ppm	93
20) 2,2'-oxybis(1-Chloropr...	4.350	121	29263	23.30 ppm	# 3
21) 3&4-Methylphenol	4.515	108	101775	24.26 ppm	93
22) n-Nitroso-di-n-propyla...	4.462	70	76717	24.04 ppm	# 53
23) Hexachloroethane	4.499	201	44428	23.82 ppm	88
26) Nitrobenzene	4.580	77	113248	23.89 ppm	93
27) Quinoline	5.446	129	202913	24.80 ppm	97
28) Isophorone	4.783	82	191494	23.97 ppm	79

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2498\
Data File : 2p57300.D
Acq On : 17 Mar 2016 9:42 am
Operator : robertl1
Sample : CC2490-25
Misc : op92038,e2p2498
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 17 10:06:59 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
29) 2-Nitrophenol	4.847	139	60532	24.87	ppm	#	56
30) 2,4-Dimethylphenol	4.933	107	91770	20.21	ppm		91
31) Benzoic acid	5.082	105	59573	25.38	ppm		95
32) bis(2-Chloroethoxy)met...	4.981	93	109248	23.96	ppm		99
33) 2,4-Dichlorophenol	5.072	162	91535	25.11	ppm		98
34) 2,6-Dichlorophenol	5.243	162	84730	23.49	ppm		96
35) 1,3,5-Trichlorobenzene	4.847	180	106352	24.44	ppm		96
36) 1,2,4-Trichlorobenzene	5.109	180	98416	24.02	ppm		98
37) 1,2,3-Trichlorobenzene	5.286	180	93629	24.01	ppm		98
38) Naphthalene	5.163	128	301947	24.01	ppm		98
39) 4-Chloroaniline	5.237	127	121204	22.86	ppm		91
40) 2,3-Dichloroaniline	5.976	161	111189	25.04	ppm		97
41) Caprolactam	5.537	113	29870	25.51	ppm	#	58
42) Hexachlorobutadiene	5.275	225	56948	24.32	ppm		98
43) 4-Chloro-3-methylphenol	5.687	107	97298	25.21	ppm		99
44) 2-Methylnaphthalene	5.730	141	172798	24.08	ppm		96
45) 1-Methylnaphthalene	5.810	141	183929	24.57	ppm		96
46) Dimethylnaphthalene	6.243	156	179970	24.83	ppm		95
48) Hexachlorocyclopentadiene	5.863	237	100349	44.64	ppm		98
49) 2,4,6-Trichlorophenol	5.992	196	63996	25.20	ppm		98
50) 2,4,5-Trichlorophenol	6.040	196	66584	25.18	ppm		97
52) 2-Chloronaphthalene	6.125	162	184895	24.32	ppm		95
53) Biphenyl	6.115	154	253628	25.05	ppm		100
54) 2-Nitroaniline	6.232	65	76583	26.32	ppm	#	74
55) Dimethylphthalate	6.382	163	207983	23.70	ppm		100
56) Acenaphthylene	6.457	152	307614	24.29	ppm		99
57) 2,6-Dinitrotoluene	6.436	165	47984	25.02	ppm		86
58) 3-Nitroaniline	6.575	138	57530	25.63	ppm		92
59) Acenaphthene	6.596	153	196633	24.32	ppm		96
60) 2,4-Dinitrophenol	6.671	184	47146	56.11	ppm	#	81
61) 4-Nitrophenol	6.789	109	25493	25.71	ppm	#	77
62) Dibenzofuran	6.740	168	267777	24.50	ppm		96
63) 2,4-Dinitrotoluene	6.767	165	65520	25.50	ppm		77
64) 2,3,4,6-Tetrachlorophenol	6.869	232	47005	23.52	ppm		92
65) Diethylphthalate	6.960	149	212760	23.89	ppm		99
66) Fluorene	7.019	166	219021	24.63	ppm		95
67) 4-Chlorophenyl-phenyle...	7.029	204	99597	23.54	ppm		93
68) 4-Nitroaniline	7.072	138	49121	23.91	ppm		80
70) 4,6-Dinitro-2-methylph...	7.104	198	34741	25.70	ppm		91
71) n-Nitrosodiphenylamine	7.131	169	153529	24.71	ppm		100
72) 1,2-Diphenylhydrazine	7.158	77	237582	27.15	ppm		89
74) 4-Bromophenyl-phenylether	7.420	248	60779	23.75	ppm		95
75) Hexachlorobenzene	7.468	284	66596	24.32	ppm		76
76) Pentachlorophenol	7.655	266	46293	37.88	ppm		99
77) Phenanthrene	7.805	178	309481	24.16	ppm		98
78) Anthracene	7.848	178	313565	24.26	ppm		98
79) Carbazole	8.013	167	292412	24.43	ppm		99
80) Di-n-butylphthalate	8.372	149	375102	24.21	ppm		99
81) Fluoranthene	8.981	202	361220	24.90	ppm		95
82) Octadecane	7.735	43	161281	26.03	ppm	#	57

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2498\
Data File : 2p57300.D
Acq On : 17 Mar 2016 9:42 am
Operator : robertl1
Sample : CC2490-25
Misc : op92038,e2p2498
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 17 10:06:59 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
84)	Pyrene	9.233	202	381447	24.36 ppm	100
86)	Butylbenzylphthalate	10.137	149	176226	24.31 ppm	93
87)	Butyl stearate	10.292	56	135451	24.26 ppm	88
88)	Benzo[a]anthracene	10.795	228	346119	23.99 ppm	97
89)	3,3'-Dichlorobenzidine	10.816	252	124682	23.94 ppm	99
90)	Chrysene	10.848	228	320827	24.44 ppm	98
91)	bis(2-Ethylhexyl)phtha...	10.993	149	232809	24.24 ppm	98
93)	Di-n-octylphthalate	11.913	149	409251	23.85 ppm	92
94)	Benzo[b]fluoranthene	12.271	252	358412m	25.27 ppm	
95)	Benzo[k]fluoranthene	12.303	252	291861	23.42 ppm	98
96)	Benzo[a]pyrene	12.677	252	288323	24.29 ppm	94
97)	Indeno[1,2,3-cd]pyrene	14.031	276	258785m	25.95 ppm	
98)	Dibenz(a,h)acridine	13.785	279	239831	26.54 ppm	99
99)	Dibenz[a,h]anthracene	14.063	278	260103	25.99 ppm	92
100)	7,12-Dimethylbenz(a)an...	12.266	256	136026	21.89 ppm	92
101)	Benzo[g,h,i]perylene	14.319	276	255295	25.95 ppm	87

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

9.6.29

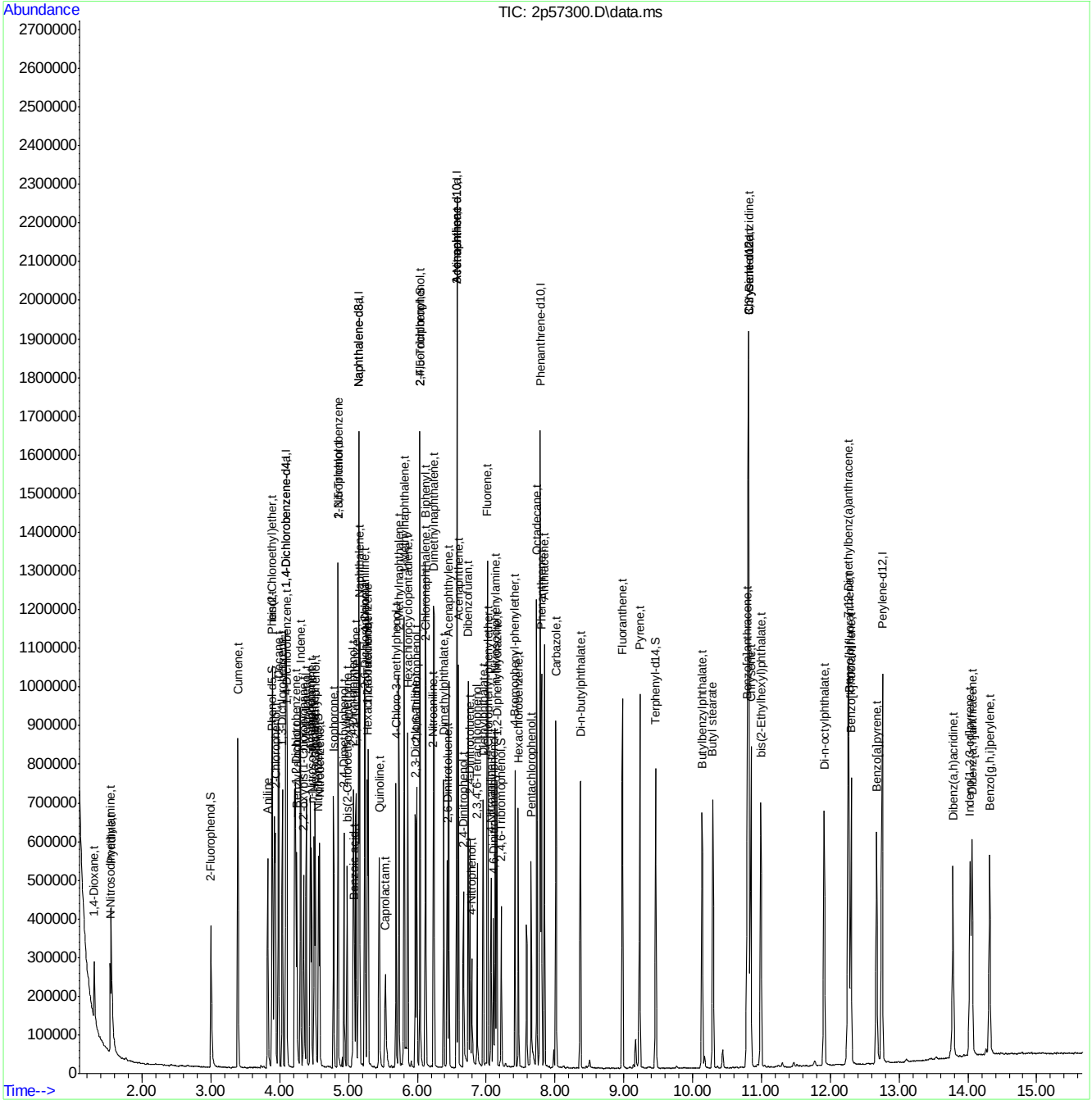
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2498\
Data File : 2p57300.D
Acq On : 17 Mar 2016 9:42 am
Operator : robertl1
Sample : CC2490-25
Misc : op92038,e2p2498
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 17 10:06:59 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Manual Integration Approval Summary

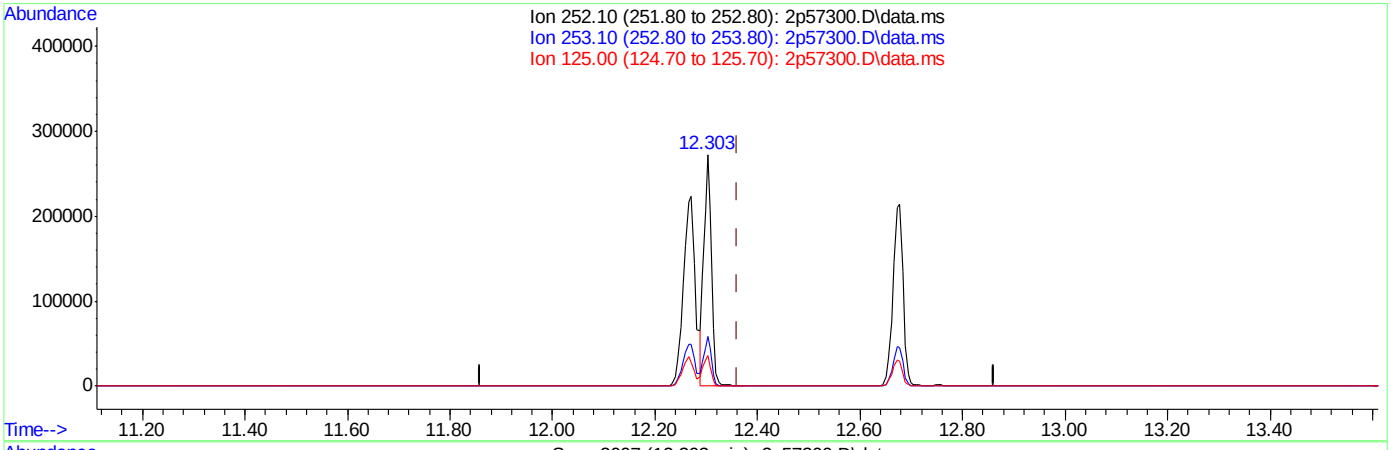
Sample Number:	E2P2498-CC2490	**Method:**	SW846 8270D
Lab FileID:	2P57300.D	**Analyst approved:**	03/24/16 08:29 Robert LaPosta
Injection Time:	03/17/16 09:42	**Supervisor approved:**	03/24/16 09:59 Nina Pandya

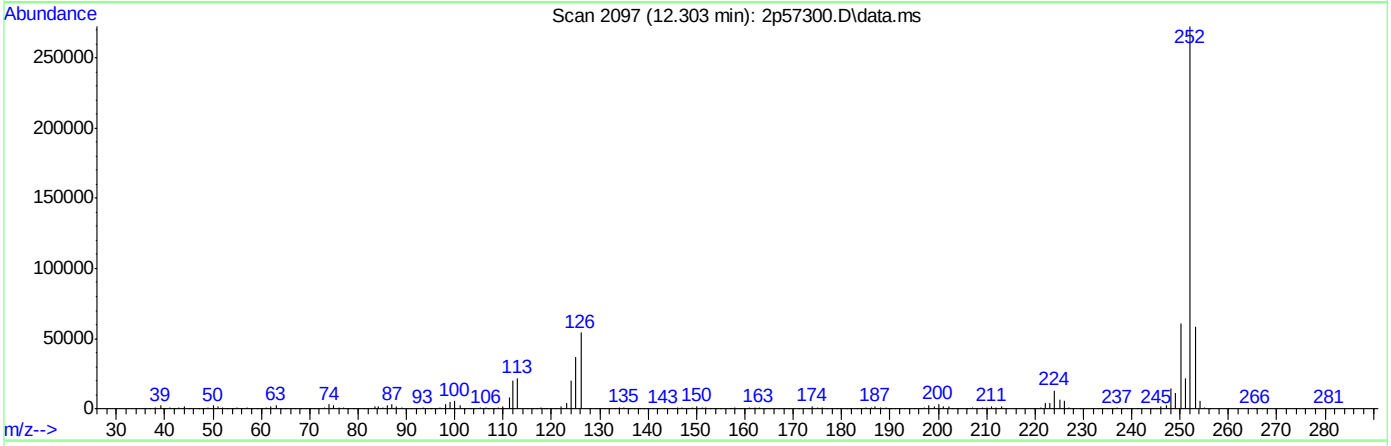
Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(b)fluoranthene	205-99-2		12.27	Overlapping peak
Indeno(1,2,3-cd)pyrene	193-39-5		14.03	Overlapping peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2498\
Data File : 2p57300.D
Acq On : 17 Mar 2016 9:42 am
Operator : robertl1
Sample : CC2490-25
Misc : op92038,e2p2498
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 17 10:05:07 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration





TIC: 2p57300.D\data.ms

(94) Benzo[b]fluoranthene (t)

12.303min (-0.058) 20.57ppm

response 291861

Ion	Exp%	Act%
252.10	100	100
253.10	23.30	21.18
125.00	14.00	12.84
0.00	0.00	0.00

9.6.29.2

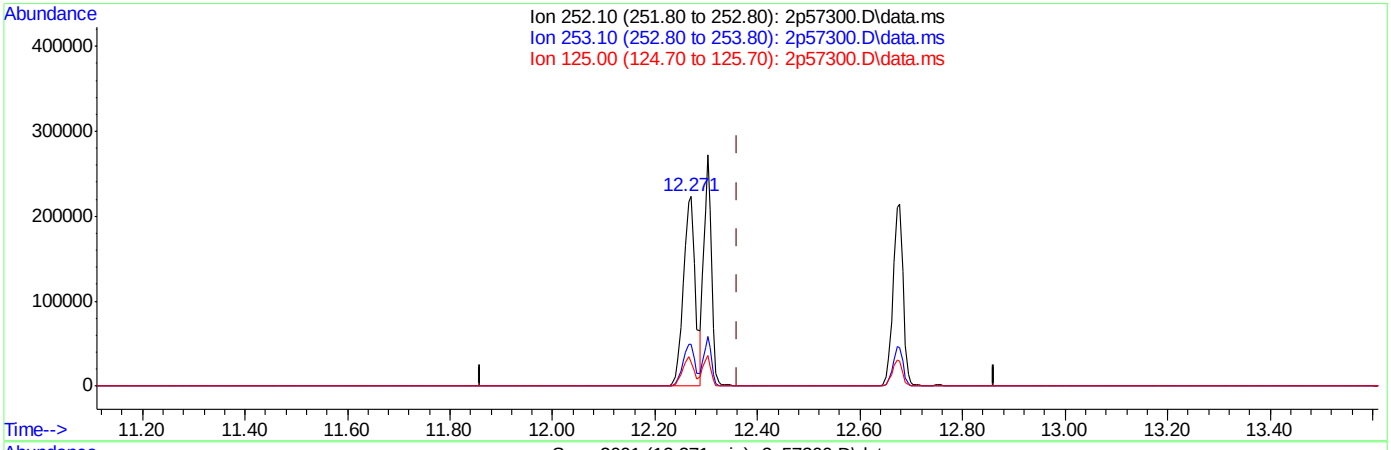
9

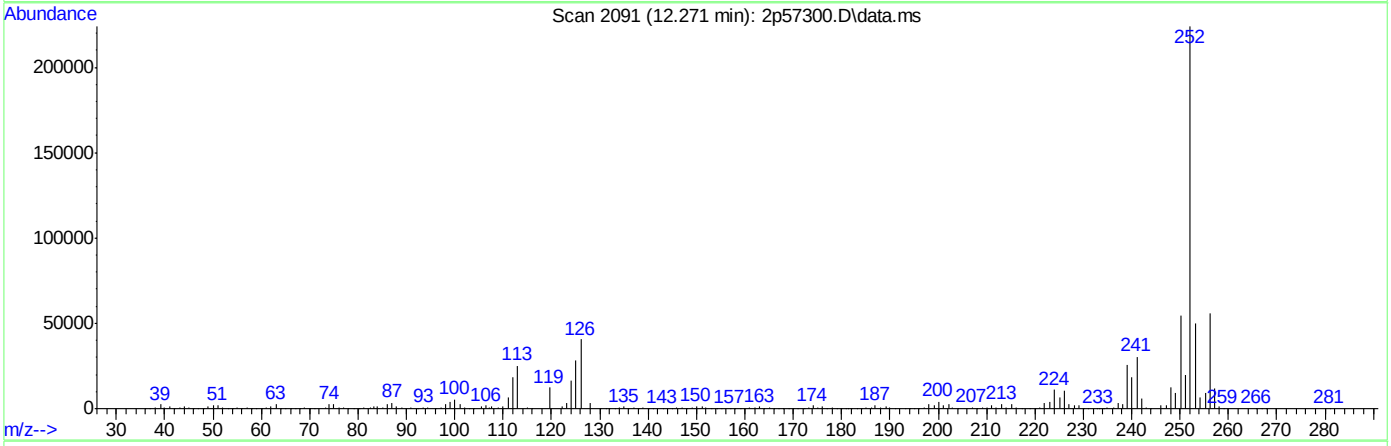
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2498\
Data File : 2p57300.D
Acq On : 17 Mar 2016 9:42 am
Operator : robertl1
Sample : CC2490-25
Misc : op92038,e2p2498
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 17 10:05:07 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration





TIC: 2p57300.D\data.ms

(94) Benzo[b]fluoranthene (t)

12.271min (-0.090) 25.27ppm m

response 358412

Ion	Exp%	Act%
252.10	100	100
253.10	23.30	22.29
125.00	14.00	12.72
0.00	0.00	0.00

9.6.29.3

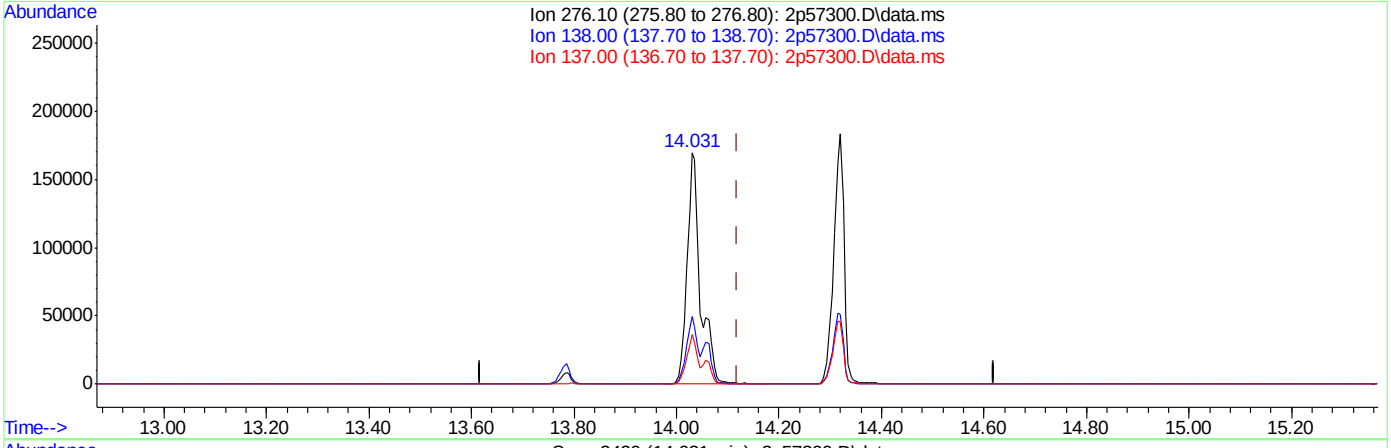
9

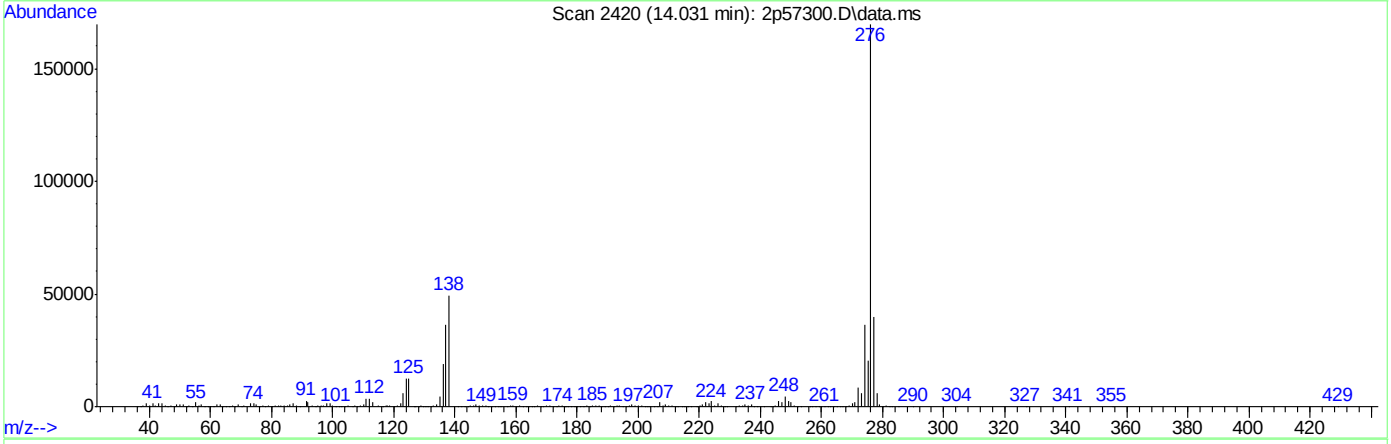
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2498\
Data File : 2p57300.D
Acq On : 17 Mar 2016 9:42 am
Operator : robertl1
Sample : CC2490-25
Misc : op92038,e2p2498
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 17 10:05:07 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration





TIC: 2p57300.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.031min (-0.089) 31.11ppm

response 310215

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	29.02
137.00	28.00	21.47
0.00	0.00	0.00

9.6.29.4

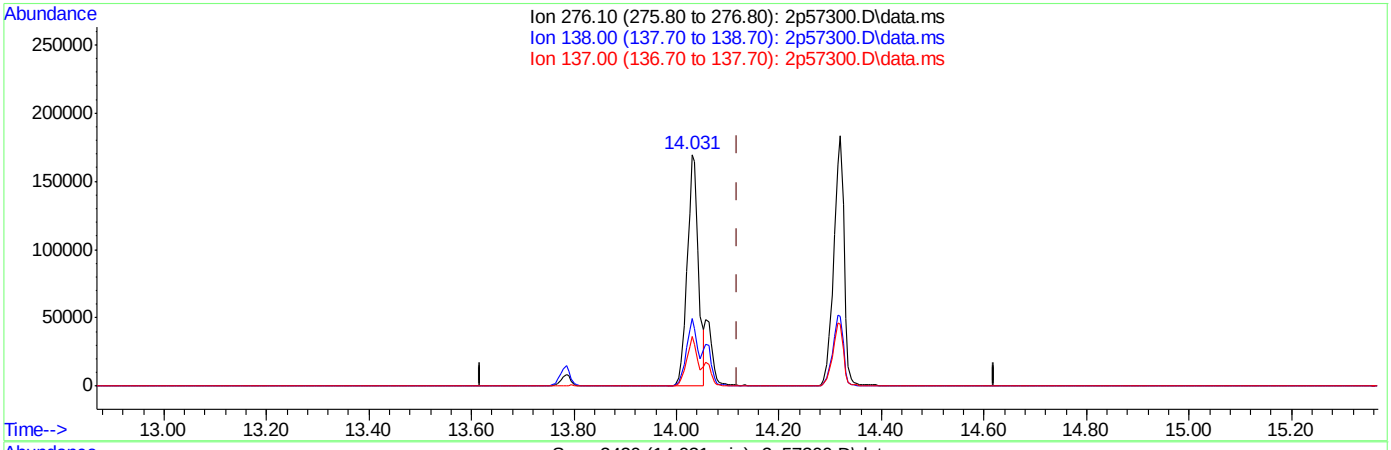
9

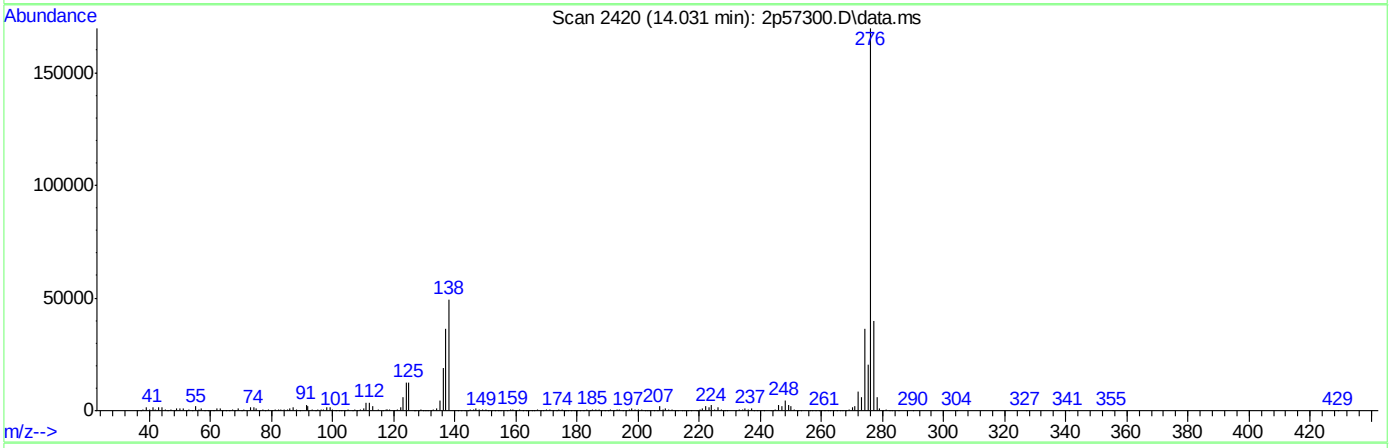
SGS ACCUTEST JC16204

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2P2498\
Data File : 2p57300.D
Acq On : 17 Mar 2016 9:42 am
Operator : robertl1
Sample : CC2490-25
Misc : op92038,e2p2498
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 17 10:05:07 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Mar 15 11:31:47 2016
Response via : Initial Calibration





TIC: 2p57300.D\data.ms

(97) Indeno[1,2,3-cd]pyrene (t)

14.031min (-0.089) 25.95ppm m

response 258785

Ion	Exp%	Act%
276.10	100	100
138.00	37.80	29.09
137.00	28.00	21.54
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2498\
Data File : 2p57301.D
Acq On : 17 Mar 2016 10:12 am
Operator : robertl1
Sample : CC2491-25
Misc : op92038,e2p2498
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 24 08:27:55 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490eph.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Mar 23 14:34:48 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.088	152	158284	40.00	ppm	0.10
24) Naphthalene-d8	5.141	136	580876	40.00	ppm	0.09
47) Acenaphthene-d10	6.569	164	324500	40.00	ppm	0.09
69) Phenanthrene-d10	7.783	188	527978	40.00	ppm	0.11
83) Chrysene-d12	10.811	240	532150	40.00	ppm	0.16
92) Perylene-d12	12.752	264	482555	40.00	ppm	0.18
102) 1,4-Dichlorobenzene-d4a	4.088	152	158284	40.00	ppm	0.10
104) Naphthalene-d8a	5.141	136	580876	40.00	ppm	0.09
106) Acenaphthene-d10a	6.569	164	324500	40.00	ppm	0.09
109) Chrysene-d12a	10.811	240	532150	40.00	ppm	0.16
111) Phenanthrene-d10a	7.783	188	527978	40.00	ppm	0.11
114) Chrysene-d12b	10.811	240	532150	40.00	ppm	0.16
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000	Range 11 - 58		Recovery	=	0.00%#	
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 50.000	Range 10 - 59		Recovery	=	0.00%#	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000	Range 19 - 61		Recovery	=	0.00%#	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000	Range 21 - 58		Recovery	=	0.00%#	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000	Range 12 - 68		Recovery	=	0.00%#	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount 50.000	Range 16 - 65		Recovery	=	0.00%#	
112) 1-chlorooctadecane	8.928	57	121765	21.14	ppm	0.12
113) O-terphenyl	8.142	230	157228	20.68	ppm	0.11
Target Compounds						Qvalue
103) Benzaldehyde	3.713	105	92210	23.76	ppm	98
105) Hydroquinone	5.585	110	107967	26.96	ppm	98
107) Atrazine	7.591	215	29465	20.96	ppm #	85
108) 1,2,4,5-Tetrachloroben...	5.869	216	102312	20.85	ppm	95
110) Benzidine	9.174	184	91525	14.23	ppm	99

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

9.6.30

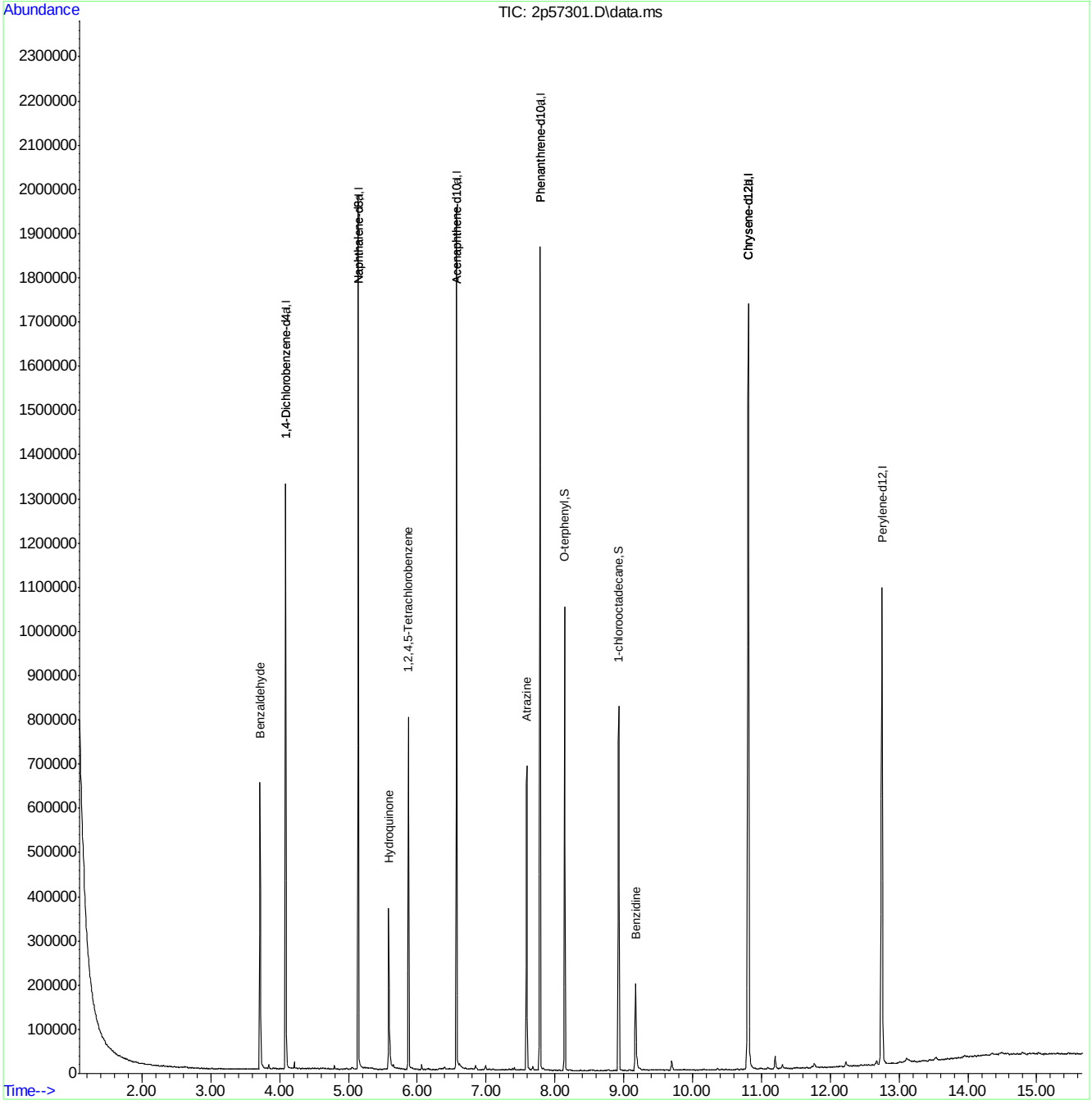
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2P2498\
Data File : 2p57301.D
Acq On : 17 Mar 2016 10:12 am
Operator : robertl1
Sample : CC2491-25
Misc : op92038,e2p2498
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 24 08:27:55 2016
Quant Method : C:\MSDCHEM\1\METHODS\M2P2490eph.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Wed Mar 23 14:34:48 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14948.D
Acq On : 1 Feb 2016 5:52 pm
Operator : juliusj
Sample : ic767-0.5
Misc : op90759a,e4p767
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 02 08:36:04 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:35:53 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.752	150	116866	4.00	ppm	0.00
13) Fluorene-d10	11.741	176	171703	4.00	ppm	0.00
23) Fluoranthene-d10	15.949	212	243157	4.00	ppm	0.00
33) Benzo(a)pyrene-d12	20.569	264	190560	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.317	112	208877	10.00	ppm	0.00
Spiked Amount 50.000			Recovery = 20.00%			
4) Phenol-d5	4.527	99	354969	10.00	ppm	0.00
Spiked Amount 50.000			Recovery = 20.00%			
7) Nitrobenzene-d5	5.965	82	330070	10.00	ppm	0.00
Spiked Amount 50.000			Recovery = 20.00%			
14) 2-Fluorobiphenyl	9.403	172	520728	10.00	ppm	0.00
Spiked Amount 50.000			Recovery = 20.00%			
22) 2,4,6-Tribromophenol	12.296	330	67870	10.00	ppm	0.00
Spiked Amount 50.000			Recovery = 20.00%			
30) Terphenyl-d14	16.757	244	383901	10.00	ppm	0.00
Spiked Amount 50.000			Recovery = 20.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.936	88	6758	0.46	ppm	99
5) Phenol	4.544	94	103891	2.50	ppm	100
6) bis(2-Chloroethyl)ether	4.665	93	16449	0.50	ppm	100
8) Naphthalene	7.292	128	36286	0.50	ppm	100
9) Hexachlorobutadiene	7.587	225	8392	0.50	ppm	100
10) 2-Methylnaphthalene	8.626	141	19058	0.50	ppm	100
11) 1-Methylnaphthalene	8.815	141	20892	0.50	ppm	100
12) Hexachlorocyclopentadiene	8.983	237	14992	1.00	ppm #	100
15) Acenaphthylene	10.379	152	29013	0.50	ppm	100
16) Acenaphthene	10.746	153	22588	0.50	ppm	100
17) Dibenzofuran	11.113	168	31827	0.50	ppm	100
18) Fluorene	11.790	166	28317	0.50	ppm	100
19) 4,6-dinitro-2-methylph...	11.964	198	10508	2.50	ppm	100
20) n-nitrosodiphenylamine	12.113	169	14064	0.50	ppm	100
21) 1,2-Diphenylhydrazine	12.163	77	25432	0.50	ppm	100
24) Hexachlorobenzene	12.919	284	9739	0.50	ppm	100
25) Pentachlorophenol	13.333	266	18835	2.50	ppm	100
26) Phenanthrene	13.711	178	37619	0.50	ppm	100
27) Anthracene	13.814	178	34857	0.50	ppm	100
28) Fluoranthene	15.983	202	40284	0.50	ppm	100
29) Pyrene	16.379	202	40512	0.50	ppm	100
31) Benzo[a]anthracene	18.476	228	35675	0.50	ppm	100
32) Chrysene	18.533	228	39954	0.50	ppm	100
34) Benzo[b]fluoranthene	20.143	252	39767	0.50	ppm	100
35) Benzo[k]fluoranthene	20.178	252	35752	0.50	ppm	100
36) Benzo[a]pyrene	20.603	252	37547	0.50	ppm	100
37) Indeno[1,2,3-cd]pyrene	22.141	276	40972	0.50	ppm	100
38) Dibenz[a,h]anthracene	22.170	278	34054	0.50	ppm	100
39) Benzo[g,h,i]perylene	22.535	276	36070	0.50	ppm	100

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14948.D
Acq On : 1 Feb 2016 5:52 pm
Operator : juliusj
Sample : ic767-0.5
Misc : op90759a,e4p767
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 02 08:36:04 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:35:53 2016
Response via : Initial Calibration

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

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

9.6.31

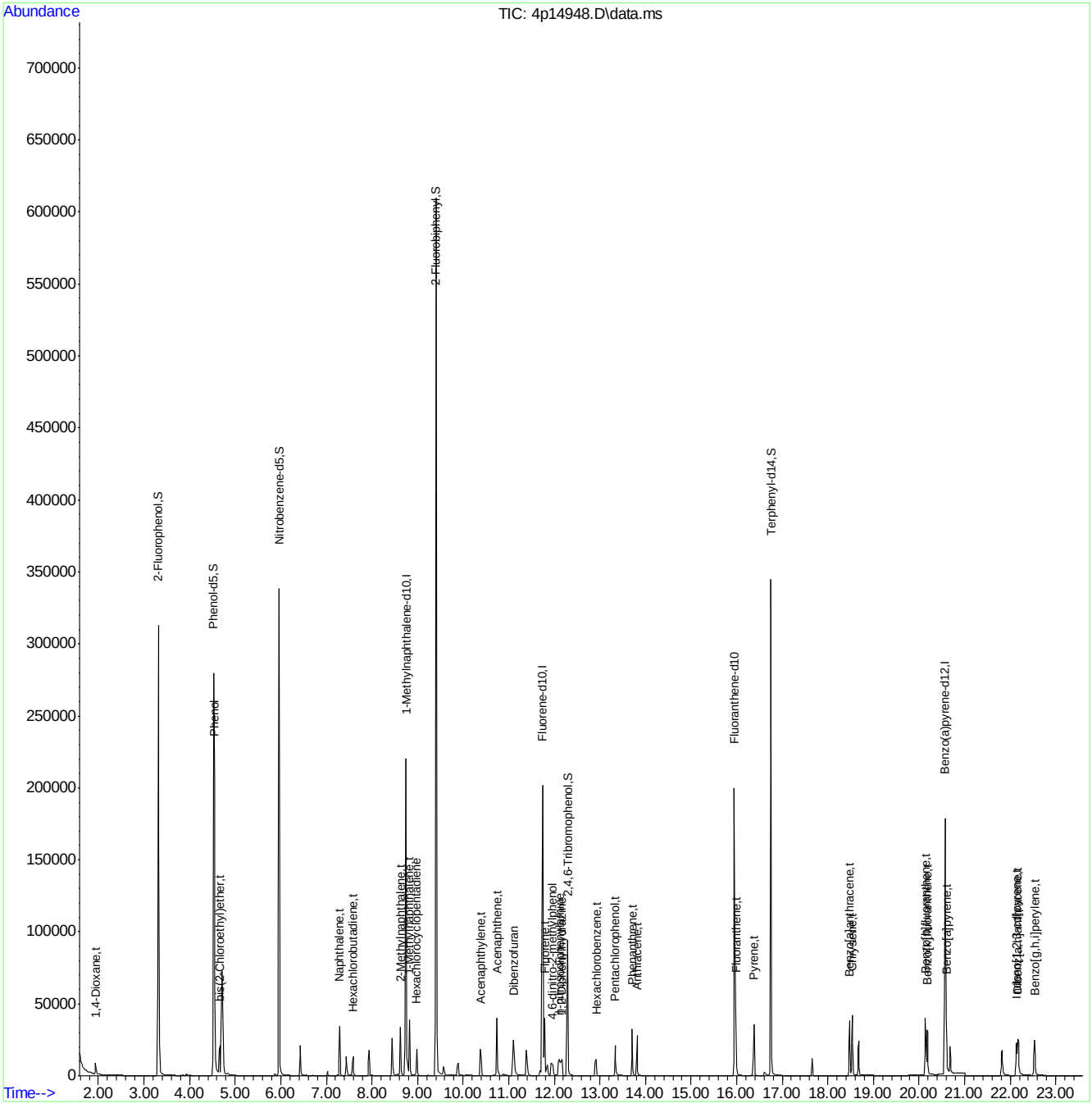
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14948.D
Acq On : 1 Feb 2016 5:52 pm
Operator : juliusj
Sample : ic767-0.5
Misc : op90759a,e4p767
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 02 08:36:04 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:35:53 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14949.D
Acq On : 1 Feb 2016 6:22 pm
Operator : juliusj
Sample : icc767-1.0
Misc : op90759a,e4p767
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 02 08:36:43 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:36:36 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.752	150	123313	4.00	ppm	0.00
13) Fluorene-d10	11.741	176	202458	4.00	ppm	0.00
23) Fluoranthene-d10	15.948	212	279533	4.00	ppm	0.00
33) Benzo(a)pyrene-d12	20.565	264	213575	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.317	112	433572	19.67	ppm	0.00
Spiked Amount 50.000			Recovery = 39.34%			
4) Phenol-d5	4.527	99	743457	19.85	ppm	0.00
Spiked Amount 50.000			Recovery = 39.70%			
7) Nitrobenzene-d5	5.964	82	704063	20.22	ppm	0.00
Spiked Amount 50.000			Recovery = 40.44%			
14) 2-Fluorobiphenyl	9.403	172	1043332	16.99	ppm	0.00
Spiked Amount 50.000			Recovery = 33.98%			
22) 2,4,6-Tribromophenol	12.275	330	155533	19.44	ppm	-0.02
Spiked Amount 50.000			Recovery = 38.88%			
30) Terphenyl-d14	16.757	244	830925	18.83	ppm	0.00
Spiked Amount 50.000			Recovery = 37.66%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.936	88	12999	0.91	ppm	94
5) Phenol	4.544	94	219708	5.01	ppm #	84
6) bis(2-Chloroethyl)ether	4.664	93	34645	1.00	ppm	85
8) Naphthalene	7.292	128	79992	1.04	ppm	97
9) Hexachlorobutadiene	7.574	225	18376	1.04	ppm	78
10) 2-Methylnaphthalene	8.626	141	40846	1.02	ppm	87
11) 1-Methylnaphthalene	8.815	141	43358	0.98	ppm	86
12) Hexachlorocyclopentadiene	8.983	237	33435	2.11	ppm #	94
15) Acenaphthylene	10.379	152	70406	1.03	ppm	96
16) Acenaphthene	10.746	153	50772	0.95	ppm	91
17) Dibenzofuran	11.112	168	61228	0.82	ppm	93
18) Fluorene	11.790	166	61619	0.92	ppm	92
19) 4,6-dinitro-2-methylph...	11.964	198	24140	4.87	ppm	99
20) n-nitrosodiphenylamine	12.088	169	29972	0.90	ppm #	42
21) 1,2-Diphenylhydrazine	12.138	77	66593	1.11	ppm	81
24) Hexachlorobenzene	12.902	284	21342	0.95	ppm	74
25) Pentachlorophenol	13.332	266	41539	4.80	ppm	89
26) Phenanthrene	13.711	178	82435	0.95	ppm	97
27) Anthracene	13.814	178	73436	0.92	ppm	97
28) Fluoranthene	15.983	202	86066	0.93	ppm	97
29) Pyrene	16.379	202	85996	0.92	ppm	96
31) Benzo[a]anthracene	18.474	228	76647	0.93	ppm	99
32) Chrysene	18.531	228	89812	0.98	ppm	99
34) Benzo[b]fluoranthene	20.139	252	85494	0.96	ppm	98
35) Benzo[k]fluoranthene	20.185	252	78934	0.98	ppm	88
36) Benzo[a]pyrene	20.599	252	79356	0.94	ppm	100
37) Indeno[1,2,3-cd]pyrene	22.137	276	88350	0.96	ppm	100
38) Dibenz[a,h]anthracene	22.176	278	72890	0.95	ppm	93
39) Benzo[g,h,i]perylene	22.531	276	78035	0.97	ppm	100

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14949.D
Acq On : 1 Feb 2016 6:22 pm
Operator : juliusj
Sample : icc767-1.0
Misc : op90759a,e4p767
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 02 08:36:43 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:36:36 2016
Response via : Initial Calibration

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

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

9.6.32

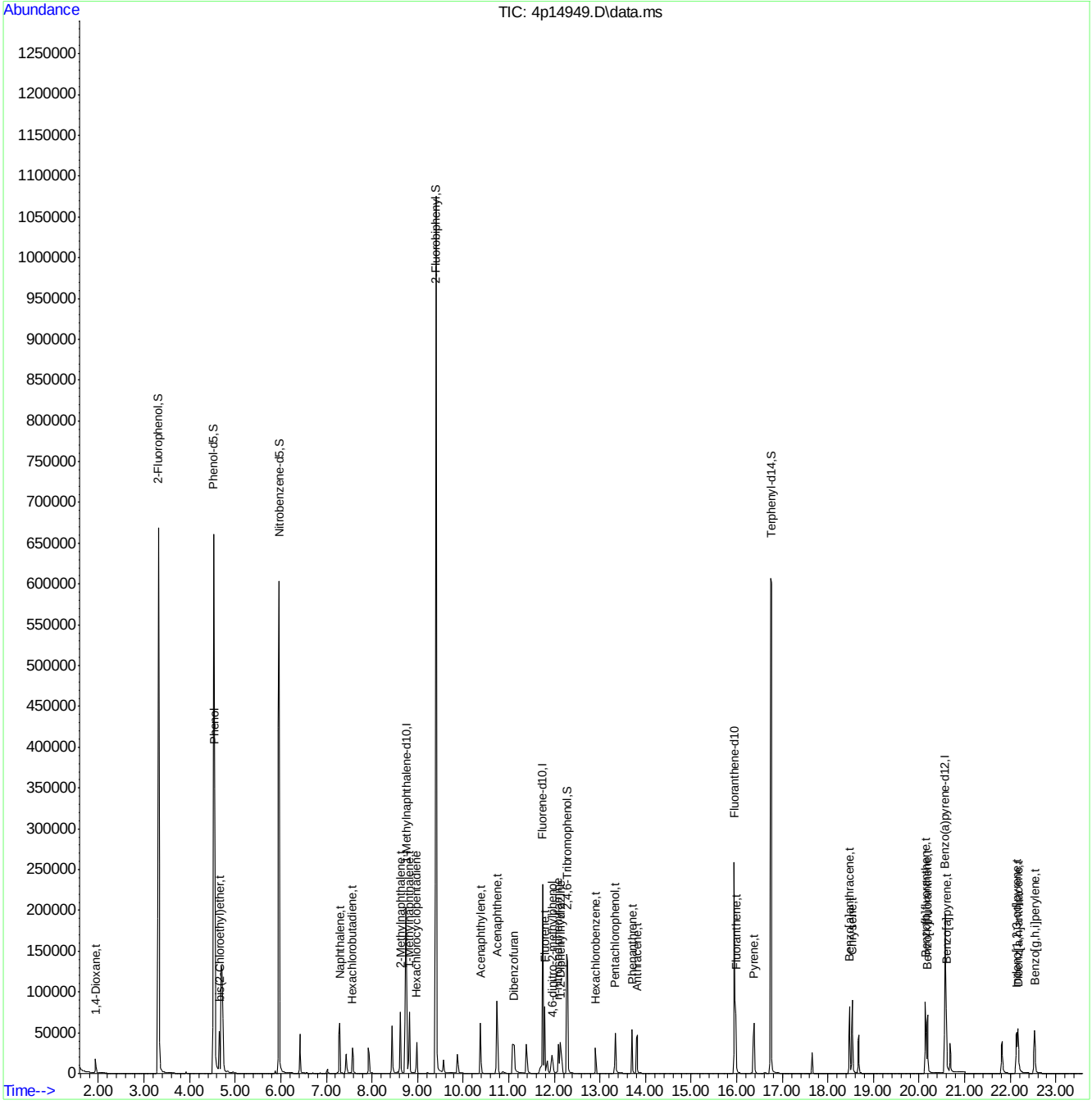
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14949.D
Acq On : 1 Feb 2016 6:22 pm
Operator : juliusj
Sample : icc767-1.0
Misc : op90759a,e4p767
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 02 08:36:43 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:36:36 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14950.D
Acq On : 1 Feb 2016 6:52 pm
Operator : juliusj
Sample : ic767-0.2
Misc : op90759a,e4p767
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 02 08:37:34 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:37:27 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.748	150	145085	4.00	ppm	0.00
13) Fluorene-d10	11.737	176	205337	4.00	ppm	0.00
23) Fluoranthene-d10	15.948	212	295085	4.00	ppm	0.00
33) Benzo(a)pyrene-d12	20.569	264	219556	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.317	112	121045	4.71	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.42%	
4) Phenol-d5	4.527	99	196549	4.48	ppm	0.00
Spiked Amount 50.000			Recovery	=	8.96%	
7) Nitrobenzene-d5	5.961	82	190624	4.63	ppm	0.00
Spiked Amount 50.000			Recovery	=	9.26%	
14) 2-Fluorobiphenyl	9.399	172	303209	5.26	ppm	0.00
Spiked Amount 50.000			Recovery	=	10.52%	
22) 2,4,6-Tribromophenol	12.292	330	35599	4.45	ppm	0.02
Spiked Amount 50.000			Recovery	=	8.90%	
30) Terphenyl-d14	16.740	244	215346	4.76	ppm	-0.02
Spiked Amount 50.000			Recovery	=	9.52%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.936	88	3945	0.25	ppm	95
5) Phenol	4.544	94	56008	1.08	ppm #	90
6) bis(2-Chloroethyl)ether	4.664	93	9525	0.23	ppm	97
8) Naphthalene	7.288	128	21877	0.24	ppm	97
9) Hexachlorobutadiene	7.583	225	5059	0.24	ppm	76
10) 2-Methylnaphthalene	8.622	141	11017	0.23	ppm	89
11) 1-Methylnaphthalene	8.811	141	12331	0.24	ppm	91
12) Hexachlorocyclopentadiene	8.979	237	7356	0.38	ppm #	96
15) Acenaphthylene	10.375	152	15718	0.22	ppm	96
16) Acenaphthene	10.742	153	13206	0.25	ppm	93
17) Dibenzofuran	11.109	168	16808	0.24	ppm #	59
18) Fluorene	11.786	166	15550	0.24	ppm	93
19) 4,6-dinitro-2-methylph...	11.960	198	4410	0.89	ppm	77
20) n-nitrosodiphenylamine	12.109	169	7432	0.23	ppm #	59
21) 1,2-Diphenylhydrazine	12.134	77	13964	0.22	ppm	98
24) Hexachlorobenzene	12.902	284	5548	0.24	ppm	99
25) Pentachlorophenol	13.332	266	8078	0.90	ppm	92
26) Phenanthrene	13.711	178	20754	0.23	ppm	99
27) Anthracene	13.814	178	18553	0.23	ppm	98
28) Fluoranthene	15.983	202	22071	0.23	ppm	98
29) Pyrene	16.379	202	21140	0.22	ppm	98
31) Benzo[a]anthracene	18.476	228	18242	0.22	ppm	98
32) Chrysene	18.533	228	22239	0.23	ppm	99
34) Benzo[b]fluoranthene	20.143	252	22094	0.25	ppm	94
35) Benzo[k]fluoranthene	20.178	252	18051	0.22	ppm	92
36) Benzo[a]pyrene	20.592	252	20902	0.25	ppm	92
37) Indeno[1,2,3-cd]pyrene	22.139	276	22157	0.24	ppm	100
38) Dibenz[a,h]anthracene	22.178	278	18223	0.24	ppm	97
39) Benzo[g,h,i]perylene	22.533	276	19966	0.24	ppm	100

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14950.D
Acq On : 1 Feb 2016 6:52 pm
Operator : juliusj
Sample : ic767-0.2
Misc : op90759a,e4p767
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 02 08:37:34 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:37:27 2016
Response via : Initial Calibration

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

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

9.6.33

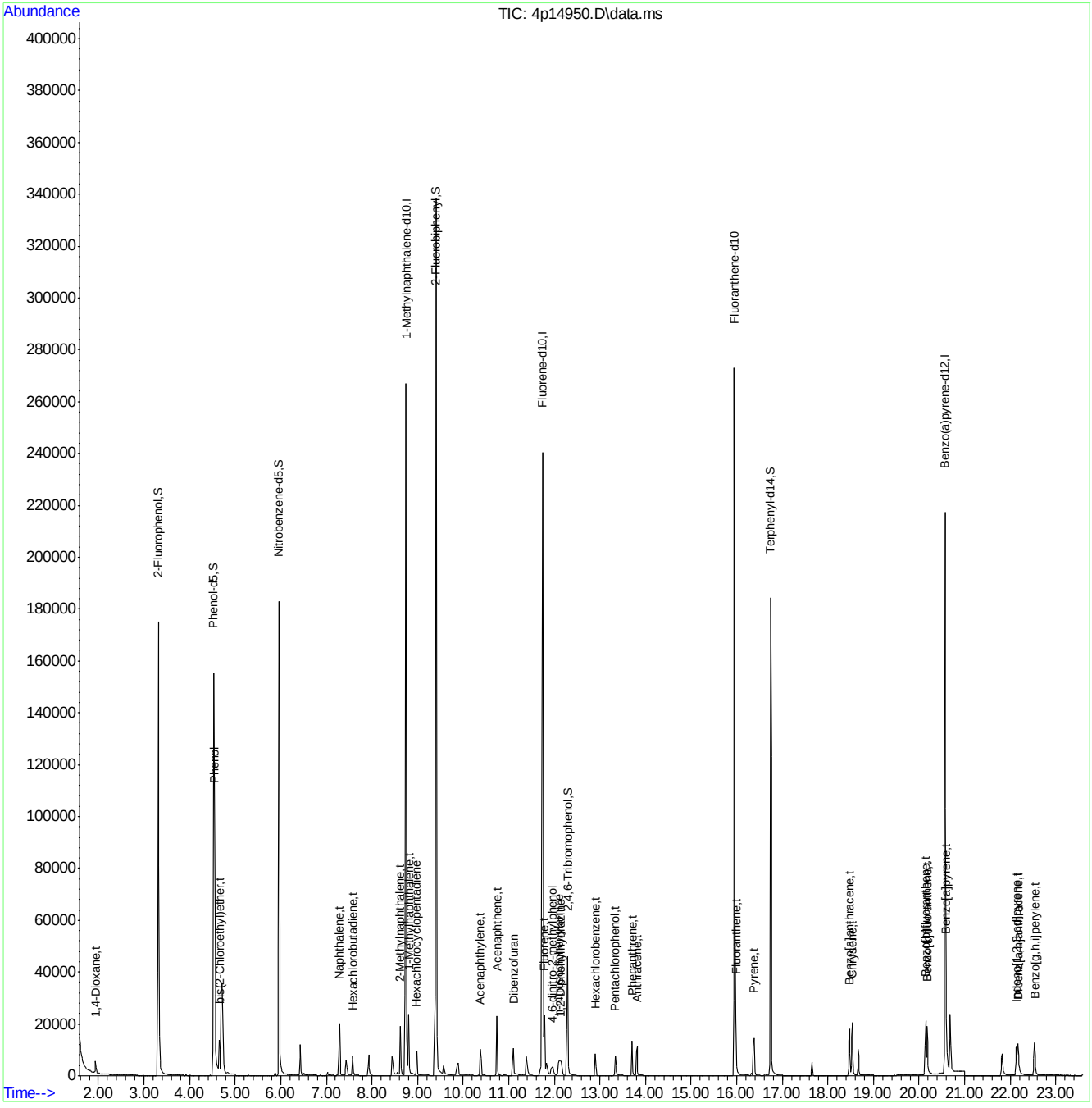
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14950.D
Acq On : 1 Feb 2016 6:52 pm
Operator : juliusj
Sample : ic767-0.2
Misc : op90759a,e4p767
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 02 08:37:34 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:37:27 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14951.D
Acq On : 1 Feb 2016 7:22 pm
Operator : juliusj
Sample : ic767-0.1
Misc : op90759a,e4p767
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 02 08:38:02 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:37:56 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.752	150	132054	4.00	ppm	0.00
13) Fluorene-d10	11.741	176	209961	4.00	ppm	0.00
23) Fluoranthene-d10	15.948	212	305759	4.00	ppm	0.00
33) Benzo(a)pyrene-d12	20.569	264	232454	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.317	112	47888	1.93	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.86%	
4) Phenol-d5	4.527	99	70492	1.70	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.40%	
7) Nitrobenzene-d5	5.965	82	73864	1.87	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.74%	
14) 2-Fluorobiphenyl	9.403	172	114140	1.75	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.50%	
22) 2,4,6-Tribromophenol	12.275	330	14159	1.67	ppm	-0.02
Spiked Amount 50.000			Recovery	=	3.34%	
30) Terphenyl-d14	16.740	244	95651	1.92	ppm	0.00
Spiked Amount 50.000			Recovery	=	3.84%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.936	88	2122	0.14	ppm	89
5) Phenol	4.544	94	21748	0.45	ppm	92
6) bis(2-Chloroethyl)ether	4.664	93	3770	0.10	ppm	98
8) Naphthalene	7.292	128	9014	0.10	ppm	97
9) Hexachlorobutadiene	7.574	225	2096	0.10	ppm	79
10) 2-Methylnaphthalene	8.626	141	4365	0.10	ppm	87
11) 1-Methylnaphthalene	8.815	141	4709	0.09	ppm	87
12) Hexachlorocyclopentadiene	8.983	237	2385	0.14	ppm #	94
15) Acenaphthylene	10.379	152	7582	0.10	ppm	96
16) Acenaphthene	10.746	153	5375	0.09	ppm	90
17) Dibenzofuran	11.112	168	6986	0.09	ppm	96
18) Fluorene	11.790	166	6161	0.09	ppm	95
19) 4,6-dinitro-2-methylph...	11.964	198	1392	0.28	ppm	95
20) n-nitrosodiphenylamine	12.113	169	3000	0.09	ppm	98
21) 1,2-Diphenylhydrazine	12.138	77	6136	0.09	ppm	98
24) Hexachlorobenzene	12.902	284	2427	0.10	ppm	98
25) Pentachlorophenol	13.332	266	2979	0.33	ppm	98
26) Phenanthrene	13.711	178	8866	0.09	ppm	100
27) Anthracene	13.814	178	7716	0.09	ppm	98
28) Fluoranthene	15.983	202	9503	0.09	ppm	99
29) Pyrene	16.379	202	9526	0.09	ppm	99
31) Benzo[a]anthracene	18.476	228	8236	0.09	ppm	99
32) Chrysene	18.533	228	10118	0.10	ppm	100
34) Benzo[b]fluoranthene	20.143	252	9717	0.09	ppm	99
35) Benzo[k]fluoranthene	20.178	252	7667	0.09	ppm	99
36) Benzo[a]pyrene	20.592	252	9527	0.10	ppm	100
37) Indeno[1,2,3-cd]pyrene	22.132	276	9916	0.09	ppm	95
38) Dibenz[a,h]anthracene	22.180	278	8164	0.09	ppm	97
39) Benzo[g,h,i]perylene	22.525	276	9060	0.10	ppm	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14951.D
Acq On : 1 Feb 2016 7:22 pm
Operator : juliusj
Sample : ic767-0.1
Misc : op90759a,e4p767
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 02 08:38:02 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:37:56 2016
Response via : Initial Calibration

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

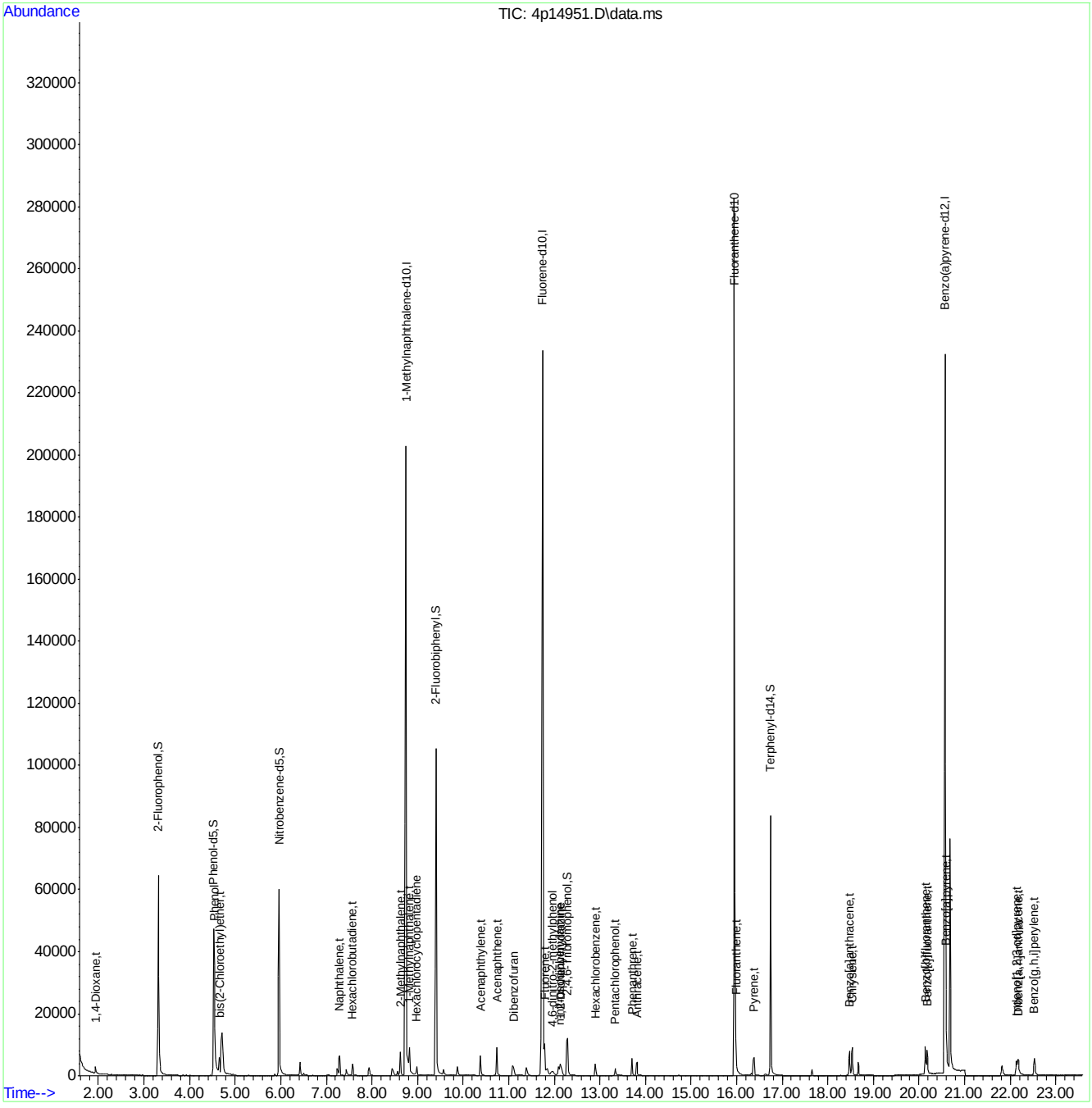
(#) = qualifier out of range (m) = manual integration (+) = signals summed

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14951.D
Acq On : 1 Feb 2016 7:22 pm
Operator : juliusj
Sample : ic767-0.1
Misc : op90759a,e4p767
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 02 08:38:02 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:37:56 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14952.D
Acq On : 1 Feb 2016 7:53 pm
Operator : juliusj
Sample : ic767-0.05
Misc : op90759a,e4p767
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 02 08:38:46 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:38:22 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.748	150	136992	4.00	ppm	0.00
13) Fluorene-d10	11.737	176	216131	4.00	ppm	0.00
23) Fluoranthene-d10	15.948	212	316972	4.00	ppm	0.00
33) Benzo(a)pyrene-d12	20.569	264	227941	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.317	112	22318	0.88	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.76%	
4) Phenol-d5	4.527	99	33544	0.81	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.62%	
7) Nitrobenzene-d5	5.961	82	33652	0.84	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.68%	
14) 2-Fluorobiphenyl	9.399	172	57575	0.89	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.78%	
22) 2,4,6-Tribromophenol	12.292	330	6297	0.75	ppm	0.02
Spiked Amount 50.000			Recovery	=	1.50%	
30) Terphenyl-d14	16.740	244	44624	0.87	ppm	0.00
Spiked Amount 50.000			Recovery	=	1.74%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.936	88	1363	0.08	ppm	99
5) Phenol	4.544	94	9585	0.20	ppm	92
6) bis(2-Chloroethyl)ether	4.664	93	1756	0.04	ppm	97
8) Naphthalene	7.288	128	4261	0.05	ppm	99
9) Hexachlorobutadiene	7.570	225	982	0.05	ppm	95
10) 2-Methylnaphthalene	8.622	141	2189	0.05	ppm	90
11) 1-Methylnaphthalene	8.811	141	2330	0.05	ppm	96
12) Hexachlorocyclopentadiene	8.979	237	867	0.05	ppm #	97
15) Acenaphthylene	10.375	152	3477	0.05	ppm	99
16) Acenaphthene	10.742	153	2565	0.04	ppm	94
17) Dibenzofuran	11.109	168	3527	0.05	ppm	94
18) Fluorene	11.786	166	3019	0.04	ppm	97
19) 4,6-dinitro-2-methylph...	11.960	198	564	0.13	ppm #	52
20) n-nitrosodiphenylamine	12.109	169	1405	0.04	ppm	94
21) 1,2-Diphenylhydrazine	12.134	77	2649	0.04	ppm	99
24) Hexachlorobenzene	12.902	284	1154	0.04	ppm	99
25) Pentachlorophenol	13.332	266	1326	0.16	ppm	99
26) Phenanthrene	13.694	178	4209	0.04	ppm	88
27) Anthracene	13.797	178	3720	0.04	ppm	88
28) Fluoranthene	15.983	202	4623	0.04	ppm	100
29) Pyrene	16.361	202	4438	0.04	ppm	86
31) Benzo[a]anthracene	18.476	228	3634	0.04	ppm	99
32) Chrysene	18.533	228	4782	0.04	ppm	97
34) Benzo[b]fluoranthene	20.143	252	3809	0.04	ppm	98
35) Benzo[k]fluoranthene	20.178	252	4112	0.05	ppm	97
36) Benzo[a]pyrene	20.592	252	5408	0.06	ppm	98
37) Indeno[1,2,3-cd]pyrene	22.139	276	4688	0.05	ppm	94
38) Dibenz[a,h]anthracene	22.178	278	3737	0.04	ppm	94
39) Benzo[g,h,i]perylene	22.523	276	4314	0.05	ppm	99

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14952.D
Acq On : 1 Feb 2016 7:53 pm
Operator : juliusj
Sample : ic767-0.05
Misc : op90759a,e4p767
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 02 08:38:46 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:38:22 2016
Response via : Initial Calibration

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

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

9.6.35

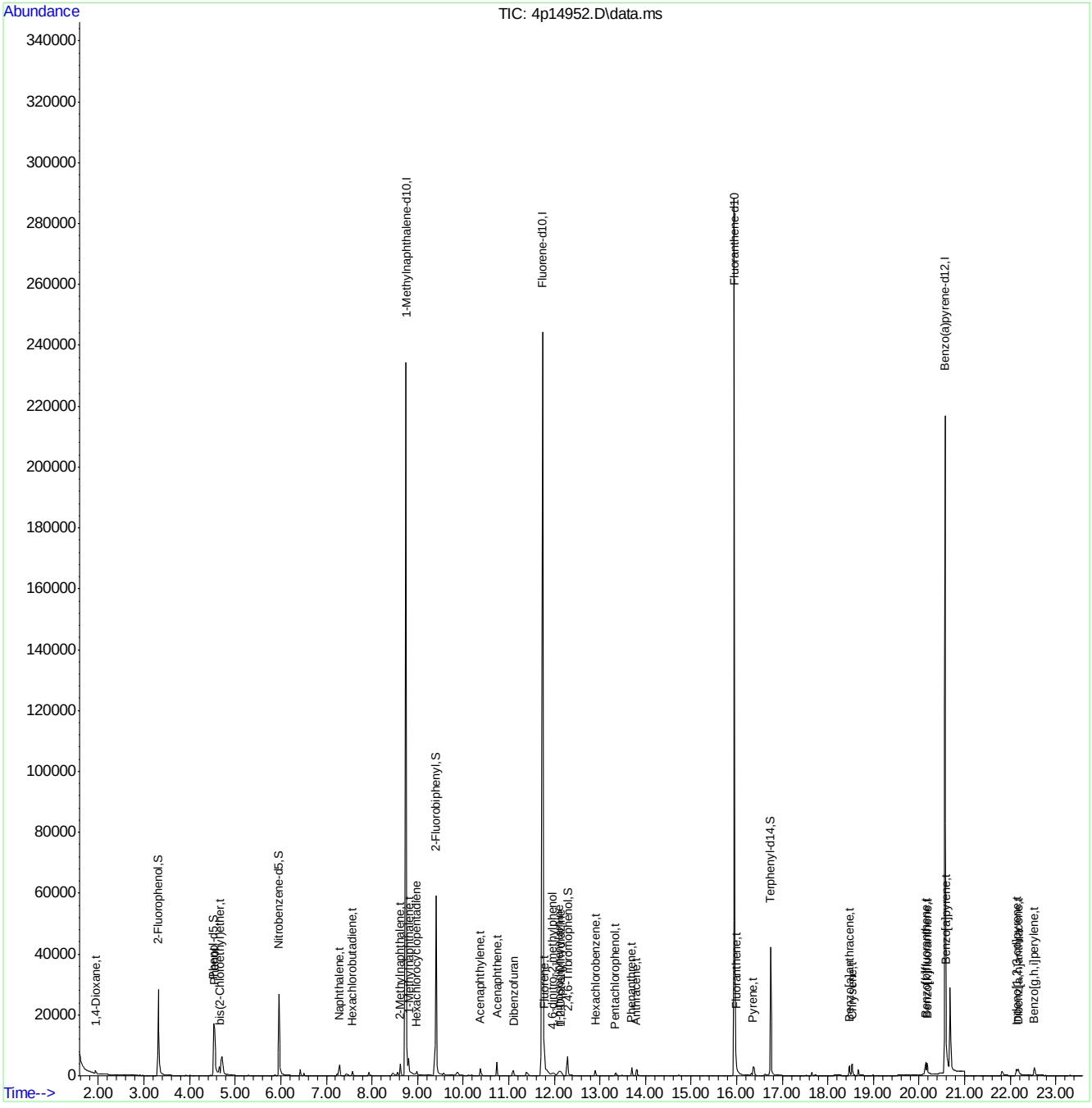
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14952.D
Acq On : 1 Feb 2016 7:53 pm
Operator : juliusj
Sample : ic767-0.05
Misc : op90759a,e4p767
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 02 08:38:46 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:38:22 2016
Response via : Initial Calibration



M4P767SIM.M Tue Feb 02 08:39:23 2016 Page: 3

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14953.D
Acq On : 1 Feb 2016 8:23 pm
Operator : juliusj
Sample : ic767-0.02
Misc : op90759a,e4p767
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 02 08:40:07 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:39:25 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.752	150	120159	4.00	ppm	0.00
13) Fluorene-d10	11.741	176	182801	4.00	ppm	0.00
23) Fluoranthene-d10	15.949	212	292186	4.00	ppm	0.00
33) Benzo(a)pyrene-d12	20.569	264	207117	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.331	112	8478	0.39	ppm	0.01
Spiked Amount 50.000			Recovery	=	0.78%	
4) Phenol-d5	4.527	99	11659	0.33	ppm	0.00
Spiked Amount 50.000			Recovery	=	0.66%	
7) Nitrobenzene-d5	5.965	82	12369	0.36	ppm	0.00
Spiked Amount 50.000			Recovery	=	0.72%	
14) 2-Fluorobiphenyl	9.403	172	19721	0.37	ppm	0.00
Spiked Amount 50.000			Recovery	=	0.74%	
22) 2,4,6-Tribromophenol	12.275	330	2315	0.33	ppm	-0.02
Spiked Amount 50.000			Recovery	=	0.66%	
30) Terphenyl-d14	16.740	244	17335	0.38	ppm	0.00
Spiked Amount 50.000			Recovery	=	0.76%	
Target Compounds						Qvalue
5) Phenol	4.544	94	3336	0.08	ppm #	86
6) bis(2-Chloroethyl)ether	4.665	93	1026	0.03	ppm	93
8) Naphthalene	7.279	128	1706	0.02	ppm	93
9) Hexachlorobutadiene	7.574	225	404	0.02	ppm	88
10) 2-Methylnaphthalene	8.626	141	718	0.02	ppm	84
11) 1-Methylnaphthalene	8.815	141	811	0.02	ppm	89
12) Hexachlorocyclopentadiene	8.983	237	213	0.01	ppm #	89
15) Acenaphthylene	10.379	152	1602	0.03	ppm	96
16) Acenaphthene	10.746	153	927	0.02	ppm	88
17) Dibenzofuran	11.113	168	1314	0.02	ppm	94
18) Fluorene	11.790	166	959	0.02	ppm	87
19) 4,6-dinitro-2-methylph...	11.964	198	207	0.06	ppm	92
20) n-nitrosodiphenylamine	12.113	169	561	0.02	ppm	98
21) 1,2-Diphenylhydrazine	12.138	77	1074	0.02	ppm	97
24) Hexachlorobenzene	12.902	284	472	0.02	ppm	95
25) Pentachlorophenol	13.350	266	526	0.07	ppm	90
26) Phenanthrene	13.694	178	1651	0.02	ppm	97
27) Anthracene	13.797	178	1451	0.02	ppm	96
28) Fluoranthene	15.966	202	2202	0.02	ppm	90
29) Pyrene	16.362	202	1837	0.02	ppm	99
31) Benzo[a]anthracene	18.476	228	1464	0.02	ppm	97
32) Chrysene	18.524	228	1859	0.02	ppm	89
34) Benzo[b]fluoranthene	20.143	252	1474	0.02	ppm	100
35) Benzo[k]fluoranthene	20.178	252	1590	0.02	ppm	96
36) Benzo[a]pyrene	20.592	252	1700	0.02	ppm	95
37) Indeno[1,2,3-cd]pyrene	22.132	276	1903	0.02	ppm	94
38) Dibenz[a,h]anthracene	22.180	278	1551	0.02	ppm	97
39) Benzo[g,h,i]perylene	22.525	276	1757	0.02	ppm	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14953.D
Acq On : 1 Feb 2016 8:23 pm
Operator : juliusj
Sample : ic767-0.02
Misc : op90759a,e4p767
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 02 08:40:07 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:39:25 2016
Response via : Initial Calibration

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

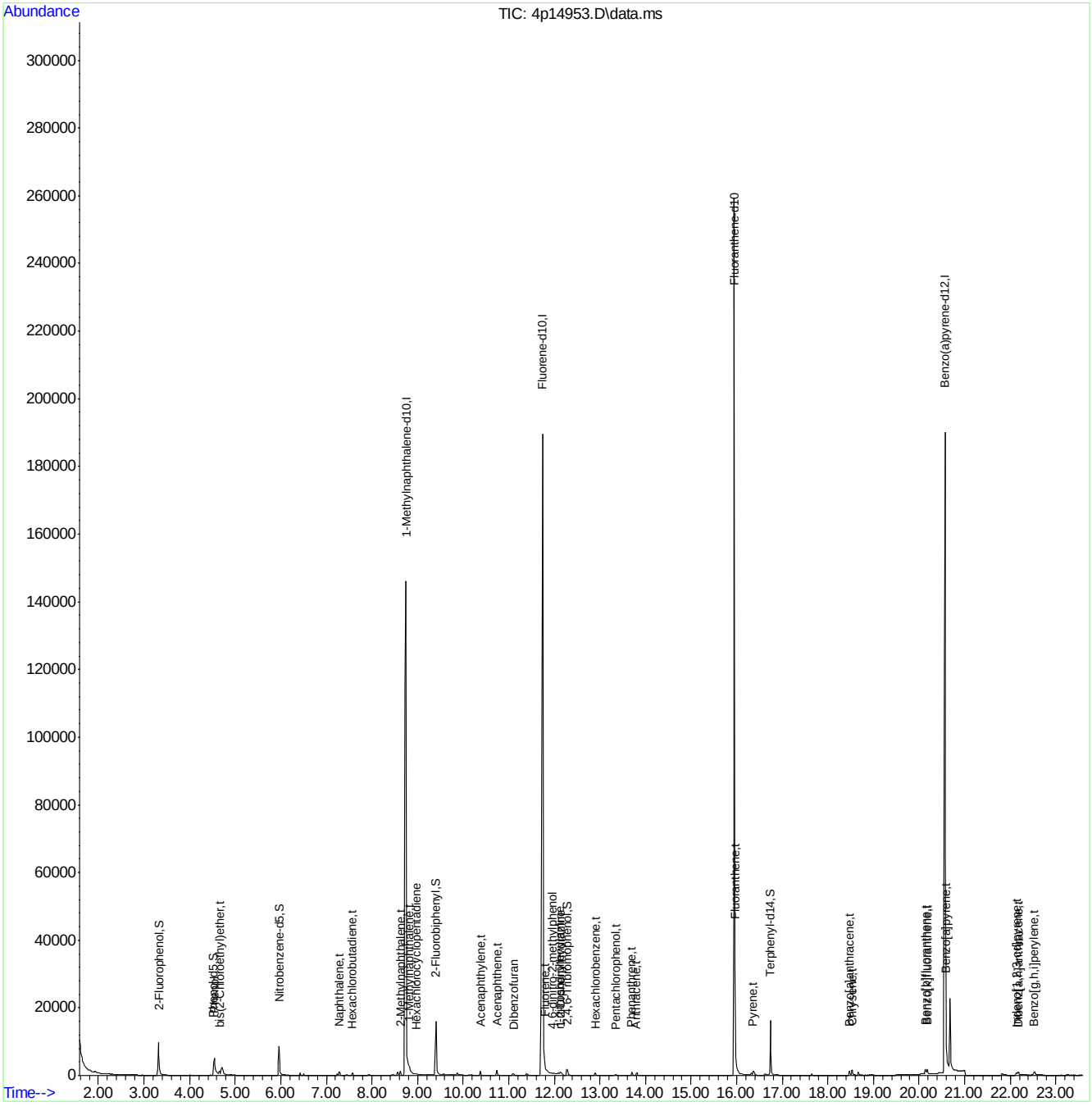
(#) = qualifier out of range (m) = manual integration (+) = signals summed

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14953.D
Acq On : 1 Feb 2016 8:23 pm
Operator : juliusj
Sample : ic767-0.02
Misc : op90759a,e4p767
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 02 08:40:07 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:39:25 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14954.D
Acq On : 1 Feb 2016 8:53 pm
Operator : juliusj
Sample : ic767-0.01
Misc : op90759a,e4p767
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 02 08:40:51 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:40:24 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1-Methylnaphthalene-d10	8.752	150	104757	4.00 ppm	0.00
13) Fluorene-d10	11.740	176	158214	4.00 ppm	0.00
23) Fluoranthene-d10	15.948	212	254166	4.00 ppm	0.00
33) Benzo(a)pyrene-d12	20.569	264	185992	4.00 ppm	0.00
System Monitoring Compounds					
3) 2-Fluorophenol	3.330	112	3607	0.19 ppm	0.00
Spiked Amount 50.000			Recovery	= 0.38%	
4) Phenol-d5	4.544	99	4128	0.14 ppm	0.02
Spiked Amount 50.000			Recovery	= 0.28%	
7) Nitrobenzene-d5	5.964	82	4995	0.17 ppm	0.00
Spiked Amount 50.000			Recovery	= 0.34%	
14) 2-Fluorobiphenyl	9.403	172	8607	0.19 ppm	0.00
Spiked Amount 50.000			Recovery	= 0.38%	
22) 2,4,6-Tribromophenol	12.275	330	1045	0.17 ppm	0.00
Spiked Amount 50.000			Recovery	= 0.34%	
30) Terphenyl-d14	16.740	244	7255	0.18 ppm	0.00
Spiked Amount 50.000			Recovery	= 0.36%	
Target Compounds					Qvalue
5) Phenol	4.544	94	1217	0.04 ppm #	60
6) bis(2-Chloroethyl)ether	4.664	93	248	0.01 ppm	95
8) Naphthalene	7.279	128	699	0.01 ppm	98
9) Hexachlorobutadiene	7.574	225	177	0.01 ppm	95
10) 2-Methylnaphthalene	8.626	141	333	0.01 ppm	99
11) 1-Methylnaphthalene	8.815	141	379	0.01 ppm	97
15) Acenaphthylene	10.379	152	646	0.01 ppm	97
16) Acenaphthene	10.746	153	422	0.01 ppm	94
17) Dibenzofuran	11.112	168	564	0.01 ppm	92
18) Fluorene	11.790	166	415	0.01 ppm	99
20) n-nitrosodiphenylamine	12.113	169	225	0.01 ppm	85
21) 1,2-Diphenylhydrazine	12.138	77	503	0.01 ppm	94
24) Hexachlorobenzene	12.902	284	211	0.01 ppm	96
25) Pentachlorophenol	13.350	266	236	0.04 ppm	93
26) Phenanthrene	13.694	178	747	0.01 ppm	97
27) Anthracene	13.797	178	562	0.01 ppm	97
28) Fluoranthene	15.966	202	1153	0.01 ppm	97
29) Pyrene	16.361	202	833	0.01 ppm	99
31) Benzo[a]anthracene	18.476	228	694	0.01 ppm	95
32) Chrysene	18.533	228	876	0.01 ppm	90
34) Benzo[b]fluoranthene	20.143	252	741	0.01 ppm	97
35) Benzo[k]fluoranthene	20.177	252	765	0.01 ppm	98
36) Benzo[a]pyrene	20.592	252	681	0.01 ppm	91
37) Indeno[1,2,3-cd]pyrene	22.139	276	776	0.01 ppm	96
38) Dibenz[a,h]anthracene	22.178	278	574	0.01 ppm	80
39) Benzo[g,h,i]perylene	22.533	276	756	0.01 ppm	87

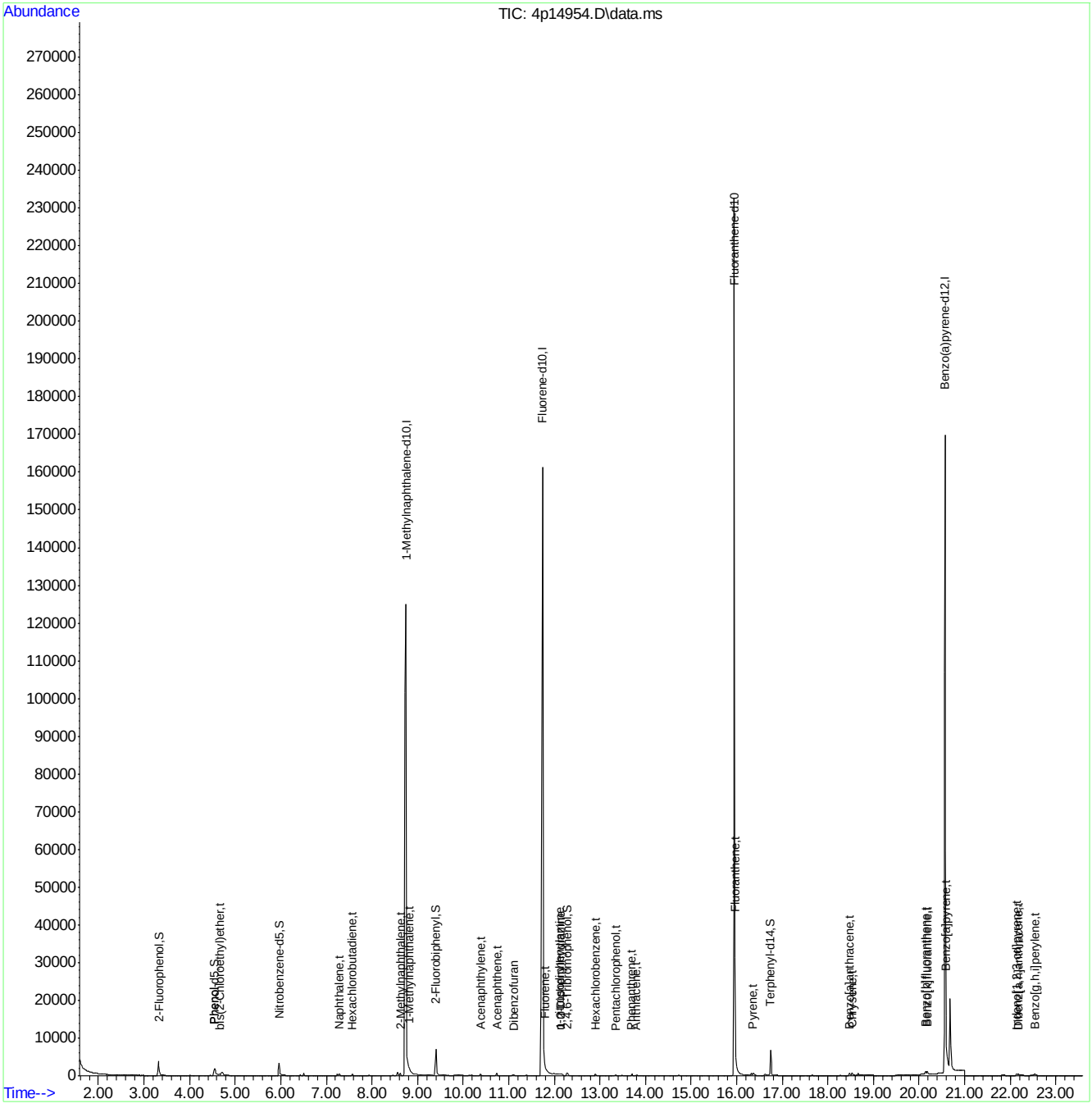
(#) = qualifier out of range (m) = manual integration (+) = signals summed

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14954.D
Acq On : 1 Feb 2016 8:53 pm
Operator : juliusj
Sample : ic767-0.01
Misc : op90759a,e4p767
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 02 08:40:51 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:40:24 2016
Response via : Initial Calibration



M4P767SIM.M Tue Feb 02 08:41:06 2016 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14955.D
Acq On : 1 Feb 2016 9:23 pm
Operator : juliusj
Sample : ic767-5
Misc : op90759a,e4p767
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 02 08:41:32 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:41:29 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.748	150	147959	4.00	ppm	0.00
13) Fluorene-d10	11.737	176	258328	4.00	ppm	0.00
23) Fluoranthene-d10	15.948	212	320902	4.00	ppm	0.00
33) Benzo(a)pyrene-d12	20.565	264	243905	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.317	112	2265128	84.76	ppm	-0.01
Spiked Amount 50.000			Recovery = 169.52%			
4) Phenol-d5	4.527	99	3935833	93.98	ppm	-0.02
Spiked Amount 50.000			Recovery = 187.96%			
7) Nitrobenzene-d5	5.961	82	3896890	94.12	ppm	0.00
Spiked Amount 50.000			Recovery = 188.24%			
14) 2-Fluorobiphenyl	9.399	172	5148616	68.80	ppm	0.00
Spiked Amount 50.000			Recovery = 137.60%			
22) 2,4,6-Tribromophenol	12.292	330	954779	95.38	ppm	0.02
Spiked Amount 50.000			Recovery = 190.76%			
30) Terphenyl-d14	16.757	244	4662020	94.41	ppm	0.02
Spiked Amount 50.000			Recovery = 188.82%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.936	88	66645	3.14	ppm	83
5) Phenol	4.544	94	1328137	27.13	ppm #	68
6) bis(2-Chloroethyl)ether	4.647	93	192097	4.34	ppm #	1
8) Naphthalene	7.288	128	442742	4.45	ppm	90
9) Hexachlorobutadiene	7.570	225	104259	4.46	ppm	95
10) 2-Methylnaphthalene	8.622	141	231667	4.76	ppm	97
11) 1-Methylnaphthalene	8.811	141	236764	4.43	ppm	97
12) Hexachlorocyclopentadiene	8.979	237	233903	13.15	ppm #	90
15) Acenaphthylene	10.375	152	429863	4.75	ppm	98
16) Acenaphthene	10.742	153	286318	4.20	ppm	98
17) Dibenzofuran	11.109	168	353260	3.93	ppm	59
18) Fluorene	11.786	166	359666	4.39	ppm	90
19) 4,6-dinitro-2-methylph...	11.960	198	229380	47.48	ppm #	43
20) n-nitrosodiphenylamine	12.084	169	175918	4.45	ppm #	33
21) 1,2-Diphenylhydrazine	12.134	77	393374	5.07	ppm	96
24) Hexachlorobenzene	12.902	284	123053	4.74	ppm	99
25) Pentachlorophenol	13.332	266	299383	37.53	ppm	90
26) Phenanthrene	13.694	178	467876	4.89	ppm	97
27) Anthracene	13.797	178	460331	5.52	ppm	95
28) Fluoranthene	15.966	202	476251	4.59	ppm	96
29) Pyrene	16.361	202	498486	4.89	ppm	99
31) Benzo[a]anthracene	18.474	228	450888	5.11	ppm	97
32) Chrysene	18.531	228	499873	4.69	ppm	97
34) Benzo[b]fluoranthene	20.139	252	515074	4.86	ppm	97
35) Benzo[k]fluoranthene	20.174	252	437947	4.83	ppm	93
36) Benzo[a]pyrene	20.588	252	435724	4.20	ppm	90
37) Indeno[1,2,3-cd]pyrene	22.128	276	491748	4.54	ppm	97
38) Dibenz[a,h]anthracene	22.166	278	414126	4.64	ppm	82
39) Benzo[g,h,i]perylene	22.521	276	430681	4.45	ppm	95

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14955.D
Acq On : 1 Feb 2016 9:23 pm
Operator : juliusj
Sample : ic767-5
Misc : op90759a,e4p767
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 02 08:41:32 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:41:29 2016
Response via : Initial Calibration

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

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

9.6.38

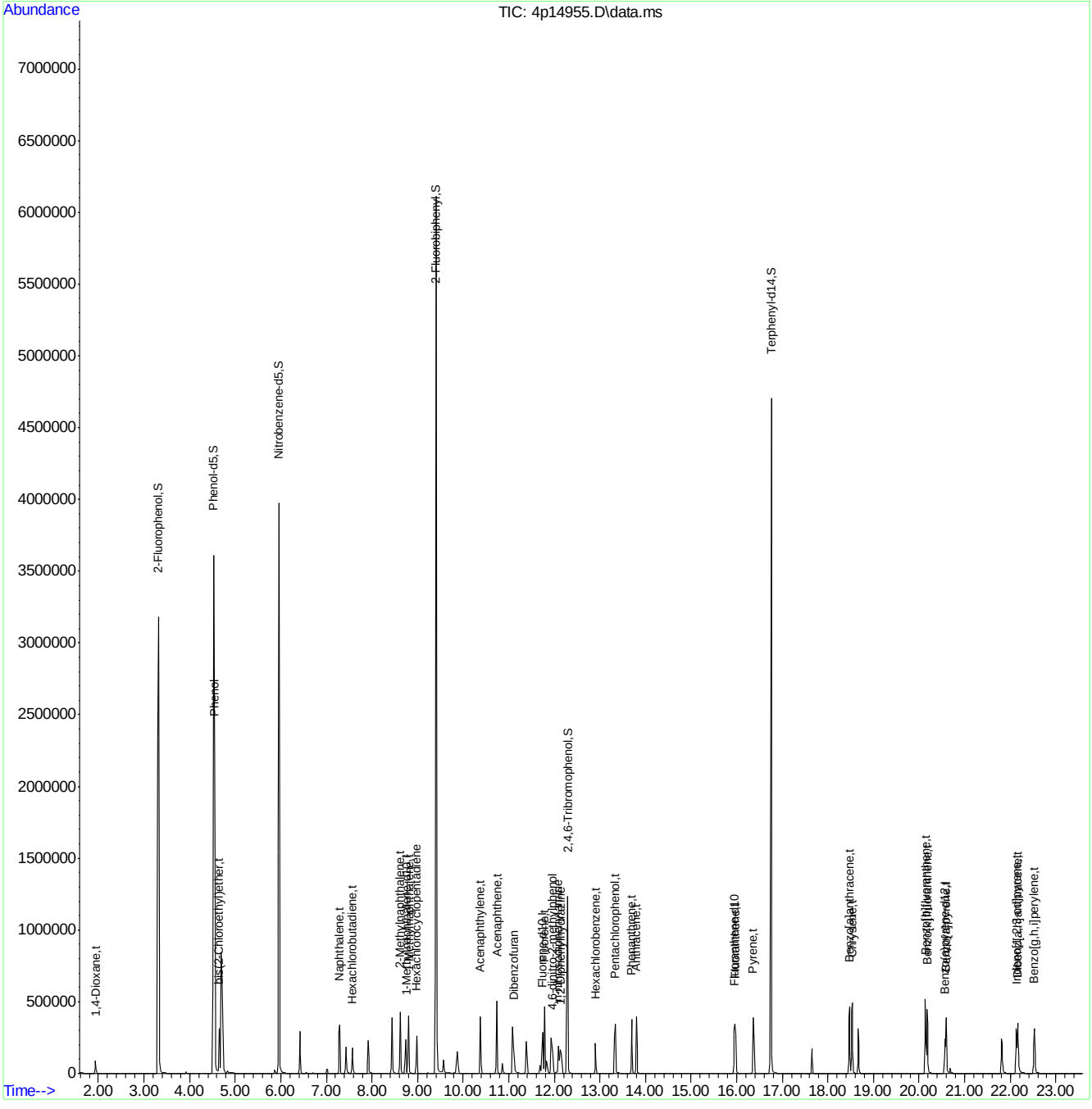
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14955.D
Acq On : 1 Feb 2016 9:23 pm
Operator : juliusj
Sample : ic767-5
Misc : op90759a,e4p767
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 02 08:41:32 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:41:29 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14956.D
Acq On : 1 Feb 2016 9:54 pm
Operator : juliusj
Sample : ic767-2.5
Misc : op90759a,e4p767
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 02 08:42:01 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:41:54 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.748	150	131488	4.00	ppm	0.00
13) Fluorene-d10	11.737	176	217765	4.00	ppm	0.00
23) Fluoranthene-d10	15.949	212	289783	4.00	ppm	0.00
33) Benzo(a)pyrene-d12	20.569	264	214983	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.317	112	1104808	47.55	ppm	0.00
Spiked Amount 50.000			Recovery = 95.10%			
4) Phenol-d5	4.527	99	1968442	53.35	ppm	0.00
Spiked Amount 50.000			Recovery = 106.70%			
7) Nitrobenzene-d5	5.961	82	1874633	51.38	ppm	0.00
Spiked Amount 50.000			Recovery = 102.76%			
14) 2-Fluorobiphenyl	9.400	172	2773421	43.97	ppm	0.00
Spiked Amount 50.000			Recovery = 87.94%			
22) 2,4,6-Tribromophenol	12.271	330	428301	51.23	ppm	-0.02
Spiked Amount 50.000			Recovery = 102.46%			
30) Terphenyl-d14	16.740	244	2198427	49.65	ppm	-0.02
Spiked Amount 50.000			Recovery = 99.30%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.936	88	32589	1.84	ppm	97
5) Phenol	4.544	94	560303	12.73	ppm	95
6) bis(2-Chloroethyl)ether	4.647	93	98416	2.54	ppm #	60
8) Naphthalene	7.289	128	210646	2.42	ppm	100
9) Hexachlorobutadiene	7.570	225	49897	2.43	ppm	100
10) 2-Methylnaphthalene	8.622	141	110885	2.58	ppm	99
11) 1-Methylnaphthalene	8.811	141	112725	2.41	ppm	99
12) Hexachlorocyclopentadiene	8.979	237	103176	6.14	ppm #	100
15) Acenaphthylene	10.376	152	198788	2.63	ppm	99
16) Acenaphthene	10.742	153	133042	2.36	ppm	98
17) Dibenzofuran	11.109	168	168366	2.30	ppm	88
18) Fluorene	11.787	166	165961	2.45	ppm	100
19) 4,6-dinitro-2-methylph...	11.960	198	84461	18.04	ppm	90
20) n-nitrosodiphenylamine	12.084	169	85054	2.60	ppm	96
21) 1,2-Diphenylhydrazine	12.134	77	189225	2.89	ppm	99
24) Hexachlorobenzene	12.902	284	58915	2.53	ppm	99
25) Pentachlorophenol	13.333	266	133535	17.11	ppm	99
26) Phenanthrene	13.694	178	224887	2.61	ppm	99
27) Anthracene	13.797	178	209233	2.74	ppm	100
28) Fluoranthene	15.966	202	228787	2.48	ppm	99
29) Pyrene	16.362	202	230938	2.52	ppm	99
31) Benzo[a]anthracene	18.466	228	205091	2.56	ppm	92
32) Chrysene	18.524	228	232864	2.45	ppm	90
34) Benzo[b]fluoranthene	20.143	252	216289	2.33	ppm	97
35) Benzo[k]fluoranthene	20.178	252	225992	2.85	ppm	98
36) Benzo[a]pyrene	20.592	252	205121	2.31	ppm	95
37) Indeno[1,2,3-cd]pyrene	22.130	276	230288	2.46	ppm	98
38) Dibenz[a,h]anthracene	22.168	278	191422	2.47	ppm	99
39) Benzo[g,h,i]perylene	22.524	276	204234	2.45	ppm	100

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14956.D
Acq On : 1 Feb 2016 9:54 pm
Operator : juliusj
Sample : ic767-2.5
Misc : op90759a,e4p767
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 02 08:42:01 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:41:54 2016
Response via : Initial Calibration

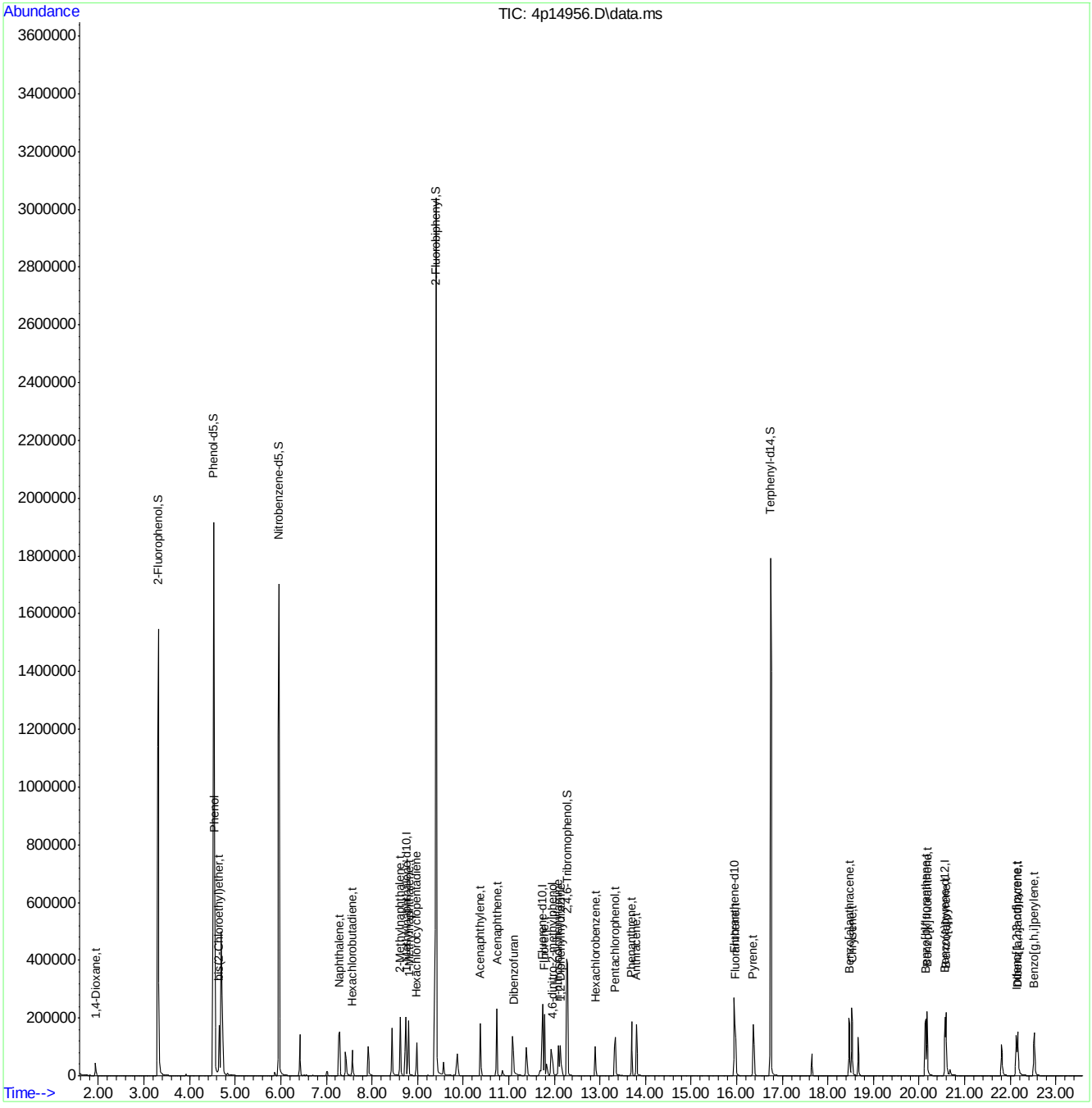
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14956.D
Acq On : 1 Feb 2016 9:54 pm
Operator : juliusj
Sample : ic767-2.5
Misc : op90759a,e4p767
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 02 08:42:01 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:41:54 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14957.D
Acq On : 1 Feb 2016 10:24 pm
Operator : juliusj
Sample : icv767-1.0
Misc : op90759a,e4p767
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 02 08:46:49 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:46:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1-Methylnaphthalene-d10	8.748	150	119320	4.00	ppm		0.00
13) Fluorene-d10	11.737	176	186403	4.00	ppm		0.00
23) Fluoranthene-d10	15.948	212	280630	4.00	ppm		0.00
33) Benzo(a)pyrene-d12	20.569	264	195953	4.00	ppm		0.00
System Monitoring Compounds							
3) 2-Fluorophenol	0.000	112	0d	0.00	ppm		
Spiked Amount 50.000			Recovery	=	0.00%		
4) Phenol-d5	0.000	99	0d	0.00	ppm		
Spiked Amount 50.000			Recovery	=	0.00%		
7) Nitrobenzene-d5	0.000	82	0d	0.00	ppm		
Spiked Amount 50.000			Recovery	=	0.00%		
14) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm		
Spiked Amount 50.000			Recovery	=	0.00%		
22) 2,4,6-Tribromophenol	0.000	330	0d	0.00	ppm		
Spiked Amount 50.000			Recovery	=	0.00%		
30) Terphenyl-d14	0.000	244	0d	0.00	ppm		
Spiked Amount 50.000			Recovery	=	0.00%		
Target Compounds							Qvalue
6) bis(2-Chloroethyl)ether	4.647	93	39800	1.13	ppm	#	60
8) Naphthalene	7.275	128	75350	0.96	ppm		92
9) Hexachlorobutadiene	7.570	225	18394	0.99	ppm		94
10) 2-Methylnaphthalene	8.622	141	37200	0.95	ppm		94
15) Acenaphthylene	10.375	152	66208	1.02	ppm		99
16) Acenaphthene	10.742	153	47469	0.99	ppm		94
17) Dibenzofuran	11.109	168	60050	0.97	ppm	#	60
18) Fluorene	11.786	166	54825	0.95	ppm		96
20) n-nitrosodiphenylamine	12.084	169	27511	0.98	ppm		97
21) 1,2-Diphenylhydrazine	12.134	77	59973	1.05	ppm		99
24) Hexachlorobenzene	12.902	284	21121	0.94	ppm		86
26) Phenanthrene	13.694	178	84406	1.01	ppm		91
27) Anthracene	13.797	178	66501	0.89	ppm		90
28) Fluoranthene	15.966	202	86423	0.97	ppm		90
29) Pyrene	16.361	202	81576	0.92	ppm		88
31) Benzo[a]anthracene	18.466	228	71319	0.92	ppm		97
32) Chrysene	18.524	228	92171	1.00	ppm		96
34) Benzo[b]fluoranthene	20.132	252	69078	0.85	ppm		95
35) Benzo[k]fluoranthene	20.178	252	76748	1.04	ppm		96
36) Benzo[a]pyrene	20.592	252	69102	0.86	ppm		97
37) Indeno[1,2,3-cd]pyrene	22.130	276	77075	0.91	ppm		98
38) Dibenz[a,h]anthracene	22.168	278	64176	0.92	ppm		94
39) Benzo[g,h,i]perylene	22.523	276	71534	0.95	ppm		99

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

9.6.40

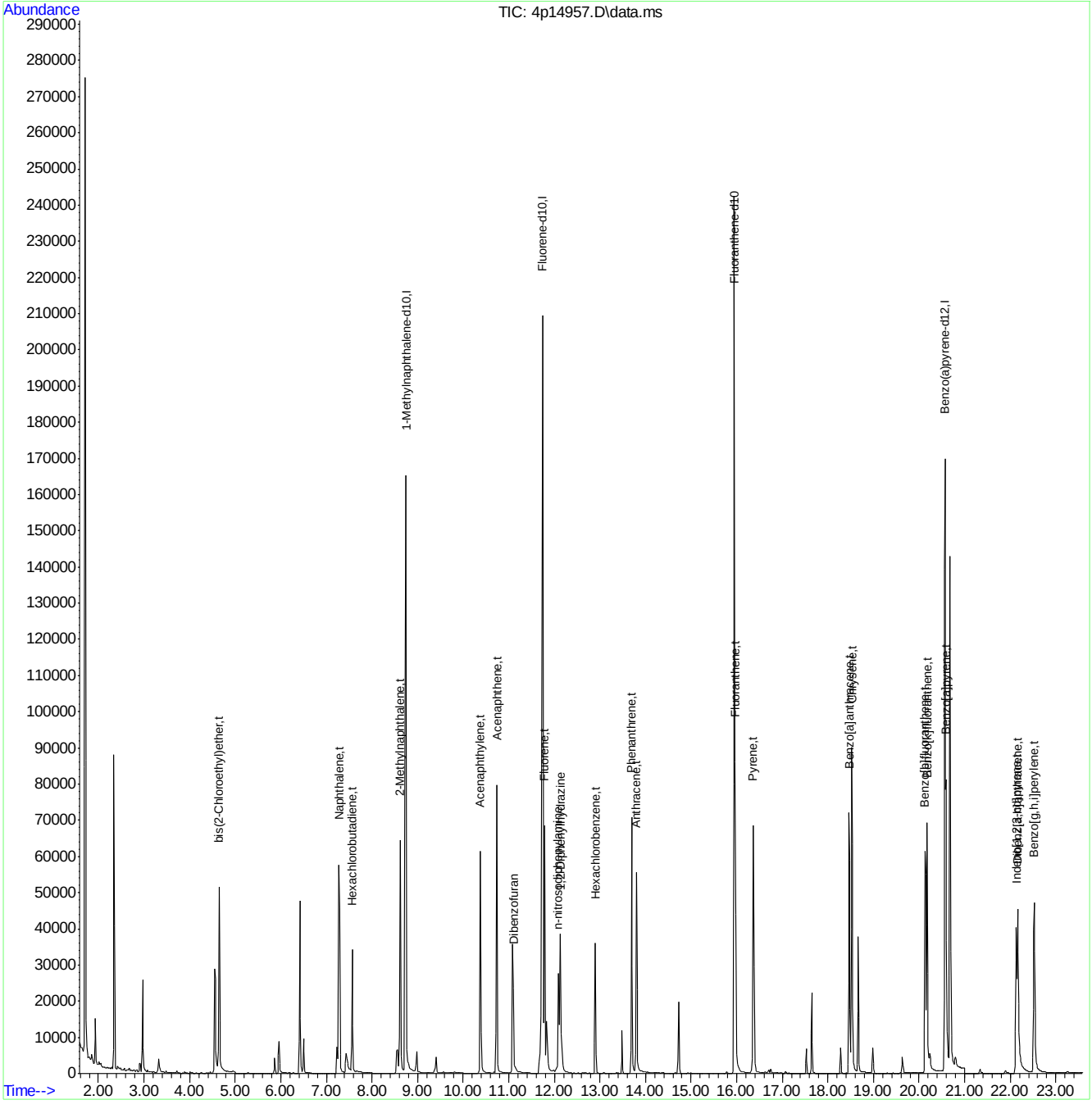
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14957.D
Acq On : 1 Feb 2016 10:24 pm
Operator : juliusj
Sample : icv767-1.0
Misc : op90759a,e4p767
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 02 08:46:49 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:46:07 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14958.D
Acq On : 1 Feb 2016 10:54 pm
Operator : juliusj
Sample : icv767-1.0
Misc : op90759a,e4p767
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 02 08:51:35 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:47:59 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.731	150	99683	4.00	ppm	-0.02
13) Fluorene-d10	11.741	176	128179	4.00	ppm	0.00
23) Fluoranthene-d10	15.949	212	220510	4.00	ppm	0.00
33) Benzo(a)pyrene-d12	20.565	264	158253	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
4) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
7) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
14) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
22) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
30) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 50.000			Recovery	=	0.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.936	88	10074	0.94	ppm	# 63
11) 1-Methylnaphthalene	8.794	141	32115	0.91	ppm	# 62

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

9.6.41

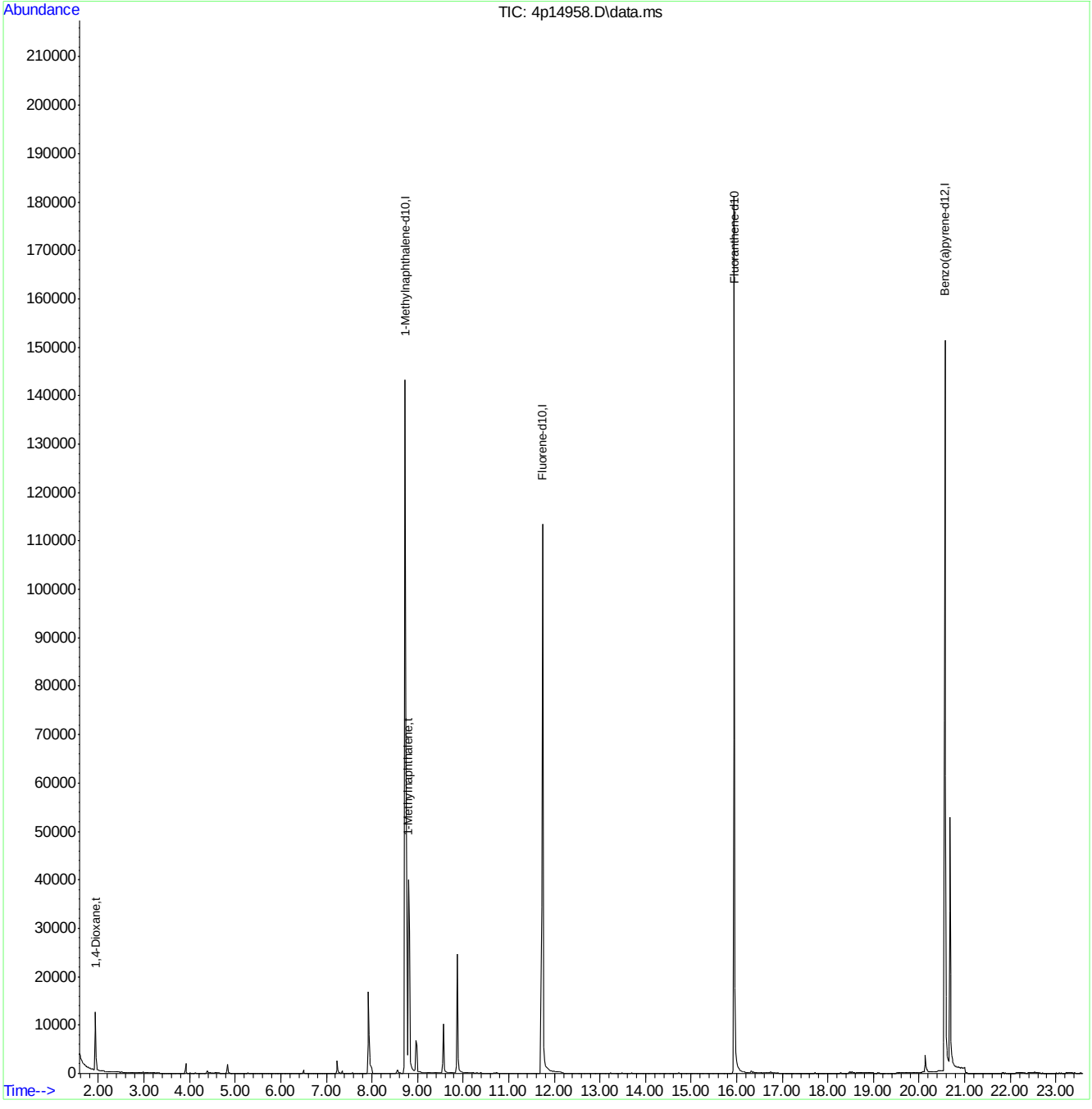
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14958.D
Acq On : 1 Feb 2016 10:54 pm
Operator : juliusj
Sample : icv767-1.0
Misc : op90759a,e4p767
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 02 08:51:35 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:47:59 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14959.D
Acq On : 1 Feb 2016 11:24 pm
Operator : juliusj
Sample : icv767-1.0
Misc : op90759a,e4p767
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 02 08:55:33 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:55:09 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1-Methylnaphthalene-d10	8.731	150	158470	4.00 ppm	-0.02
13) Fluorene-d10	11.741	176	199519	4.00 ppm	0.00
23) Fluoranthene-d10	15.949	212	338174	4.00 ppm	0.00
33) Benzo(a)pyrene-d12	20.557	264	247357	4.00 ppm	0.00
System Monitoring Compounds					
3) 2-Fluorophenol	0.000	112	0d	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
4) Phenol-d5	0.000	99	0d	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
7) Nitrobenzene-d5	0.000	82	0d	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
14) 2-Fluorobiphenyl	0.000	172	0d	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
22) 2,4,6-Tribromophenol	0.000	330	0d	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
30) Terphenyl-d14	0.000	244	0d	0.00 ppm	
Spiked Amount 50.000			Recovery	= 0.00%	
Target Compounds					Qvalue
5) Phenol	4.544	94	266757	5.02 ppm	# 86
19) 4,6-dinitro-2-methylph...	11.939	198	33982	6.23 ppm	49
25) Pentachlorophenol	13.315	266	61434	5.34 ppm	82

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

9.6.42

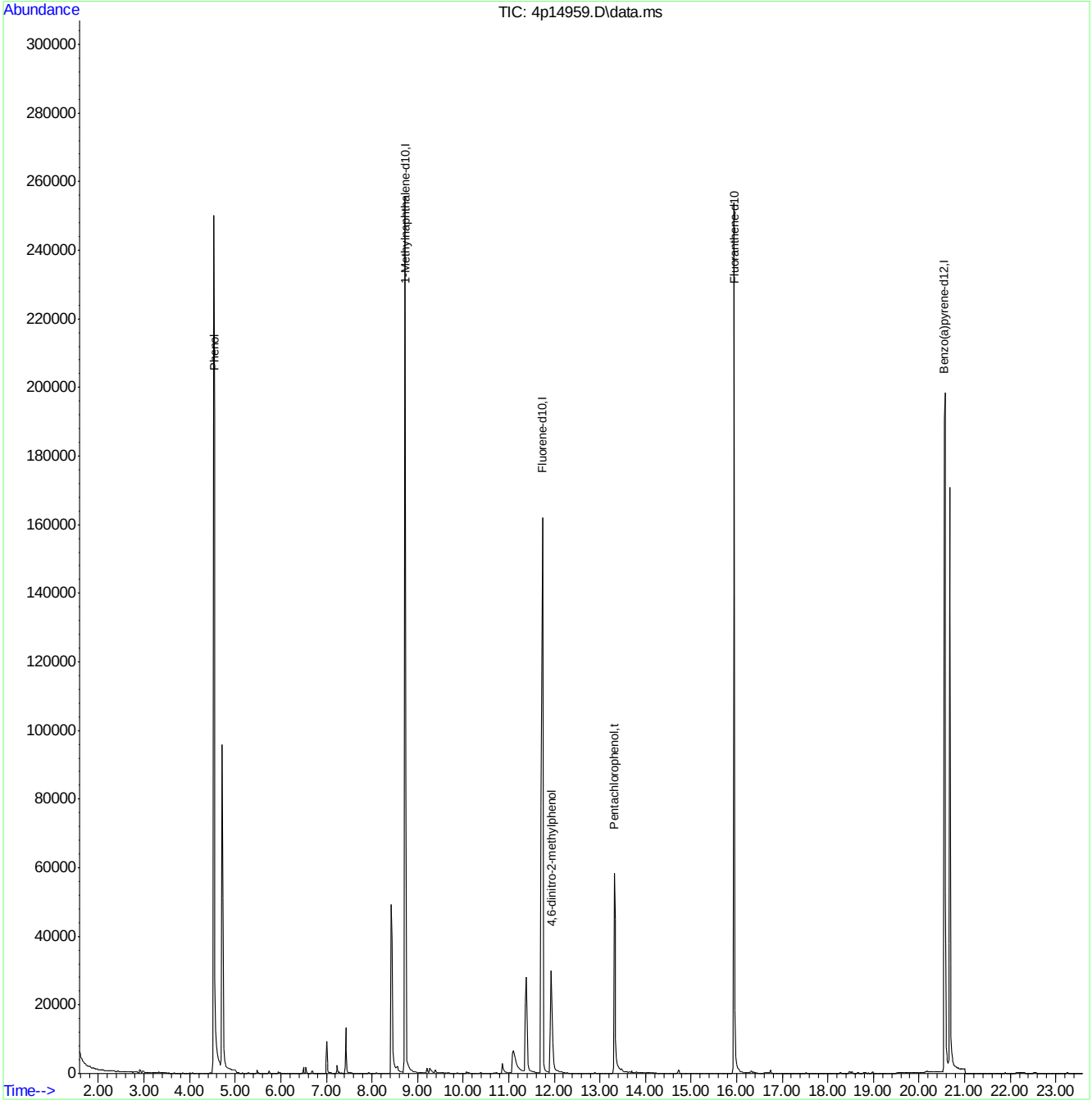
9

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p767\
Data File : 4p14959.D
Acq On : 1 Feb 2016 11:24 pm
Operator : juliusj
Sample : icv767-1.0
Misc : op90759a,e4p767
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 02 08:55:33 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Tue Feb 02 08:55:09 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15648.D
Acq On : 17 Mar 2016 4:13 pm
Operator : juliusj
Sample : cc767-0.5
Misc : op91877a,e4p805
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 17 16:37:26 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1-Methylnaphthalene-d10	8.470	150	127005	4.00	ppm	-0.02
13) Fluorene-d10	11.457	176	171195	4.00	ppm	-0.02
23) Fluoranthene-d10	15.718	212	302289	4.00	ppm	0.00
33) Benzo(a)pyrene-d12	20.365	264	254150	4.00	ppm	0.00
System Monitoring Compounds						
3) 2-Fluorophenol	3.089	112	225742	10.12	ppm	-0.09
Spiked Amount 50.000			Recovery = 20.24%			
4) Phenol-d5	4.286	99	389933	10.85	ppm	-0.08
Spiked Amount 50.000			Recovery = 21.70%			
7) Nitrobenzene-d5	5.695	82	348251	9.85	ppm	-0.02
Spiked Amount 50.000			Recovery = 19.70%			
14) 2-Fluorobiphenyl	9.121	172	545978	11.20	ppm	-0.04
Spiked Amount 50.000			Recovery = 22.40%			
22) 2,4,6-Tribromophenol	12.012	330	88159	13.84	ppm	-0.07
Spiked Amount 50.000			Recovery = 27.68%			
30) Terphenyl-d14	16.527	244	502986	10.90	ppm	0.02
Spiked Amount 50.000			Recovery = 21.80%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.762	88	7261	0.50	ppm #	76
5) Phenol	4.303	94	111492	2.62	ppm #	55
6) bis(2-Chloroethyl)ether	4.406	93	16722	0.45	ppm #	39
8) Naphthalene	7.014	128	40056	0.48	ppm	99
9) Hexachlorobutadiene	7.300	225	9275	0.47	ppm	77
10) 2-Methylnaphthalene	8.344	141	21030	0.50	ppm	93
11) 1-Methylnaphthalene	8.533	141	22299	0.49	ppm	94
12) Hexachlorocyclopentadiene	8.701	237	5627	0.33	ppm #	98
15) Acenaphthylene	10.116	152	38731	0.65	ppm	89
16) Acenaphthene	10.460	153	24858	0.56	ppm	85
17) Dibenzofuran	10.827	168	38691	0.68	ppm	75
18) Fluorene	11.507	166	27223	0.51	ppm	75
19) 4,6-dinitro-2-methylph...	11.705	198	11437	2.73	ppm #	30
20) n-nitrosodiphenylamine	11.829	169	17921	0.69	ppm	90
21) 1,2-Diphenylhydrazine	11.879	77	48829	0.93	ppm	91
24) Hexachlorobenzene	12.637	284	11105	0.46	ppm	92
25) Pentachlorophenol	13.085	266	22927	2.42	ppm	96
26) Phenanthrene	13.446	178	47446	0.53	ppm	94
27) Anthracene	13.550	178	47571	0.59	ppm	95
28) Fluoranthene	15.735	202	48431	0.50	ppm	96
29) Pyrene	16.148	202	51060	0.53	ppm	94
31) Benzo[a]anthracene	18.267	228	51421	0.61	ppm	99
32) Chrysene	18.325	228	51926	0.52	ppm	99
34) Benzo[b]fluoranthene	19.939	252	53907	0.51	ppm	95
35) Benzo[k]fluoranthene	19.985	252	51236	0.54	ppm	95
36) Benzo[a]pyrene	20.399	252	49148	0.47	ppm	97
37) Indeno[1,2,3-cd]pyrene	21.902	276	55969	0.51	ppm	99
38) Dibenz[a,h]anthracene	21.941	278	46540	0.52	ppm	99
39) Benzo[g,h,i]perylene	22.277	276	48019	0.49	ppm	98

SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15648.D
Acq On : 17 Mar 2016 4:13 pm
Operator : juliusj
Sample : cc767-0.5
Misc : op91877a,e4p805
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 17 16:37:26 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration

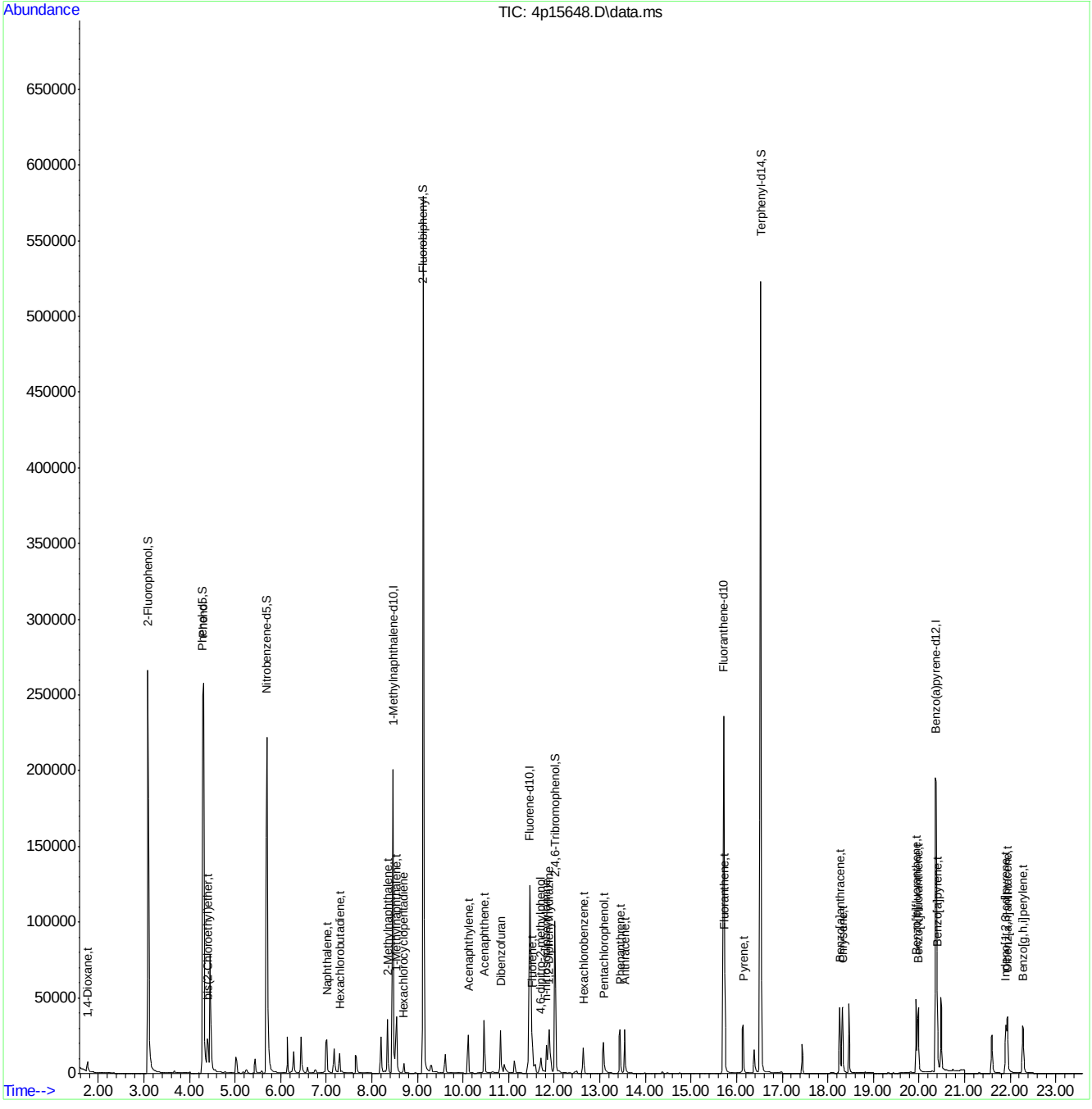
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e4p805\
Data File : 4p15648.D
Acq On : 17 Mar 2016 4:13 pm
Operator : juliusj
Sample : cc767-0.5
Misc : op91877a,e4p805
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 17 16:37:26 2016
Quant Method : C:\MSDCHEM\1\METHODS\M4P767SIM.M
Quant Title : Semi Volatile Extractables by GC/MS
QLast Update : Mon Mar 14 09:09:23 2016
Response via : Initial Calibration



SGS ACCUTEST JC16204

SEMI-VOLATILE by GCMS ANALYSIS LOG

SGS ACCUTEST

Batch ID E2P2490

Print Analyst Name: ROBERT LA ROSTA

Analyst Signature: [signature]

Date: 3/11/16

Columns: Rtx-5Silms 30m X 0.25mm X 0.25µ

Method 8270D/625

Initial Cal. Method M2P2417 90

Injection Volume: 1µL

AMC 3/11/16

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
SV151914W	DF Lot 8	50ppm
SV151827-62C	BNA 6	7ppm
CM-5732	Internal Std	4000 ppm
160906	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: AMC

Date: 3/14/16

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	L+	IS	SU	Status (Data)	Comments
	2P57135	~~1 7 VA~~				1					OK	0.50Am
	2P57136	CCM57-50		BNA	W	2					not using	B=[illegible], B=[illegible] [illegible]
	57137	CCM5750		BNA	W	2					I	SV151824-61A recalibrate
	57138A	IC2490-100		BNA	W	3					OK	SV151824-60A karen as "A" file
	57139	-80				4					OK	B
	57140	IC2490-50				5					OK	C
	57141	IC2490-25				6					OK	D
	57142	-10				7					OK	E
	57143	-5				8					OK	~~F~~ G AMC 3/11/16
	57144	-2				9					OK	H
	57145	-1				10					OK	I 12:46 pm
												AMC

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: OR015-07

Rev. Date: 1/19/16

SEMI-VOLATILE by GCMS ANALYSIS LOG

SGS ACCUTEST

Batch ID E2P2491

Print Analyst Name: Sara Davis

Analyst Signature: SED

Date: 3/11/16.

Columns: Rxi-5sil ms 30 m x .25 mm x .25 um

Method 8270 D/625

Initial Cal. Method M2P2490

Injection Volume: 1 ul

Standard Data

Lot #	Description	Conc.
SV151829-90A	TCL42	100 ppm
-90B	↓	80 ppm
-90K		50 ppm
-90N		25 ppm
-90E		10 ppm
-90G	↓	5 ppm

Standard Data

Lot #	Description	Conc.
SV151829-108	DFTPP	50 ppm
-90H	TCL42	2 ppm
-90I	↓	1 ppm
CM-5732	Internal Std	4000 ppm
160906	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: AMO

Date: 3/14/16

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	L+	IS	SU	Status (Data)	Comments
	2P57146	DFTPP				1					NG	51↑ reinject
	57147	DFTPP				1					↓	ABN ↑ Tailing P. Neg.
	57148	DFTPP				1					OK	3:37 pm
	57149	ICM91-100		TCL42		2					OK	
	57150	-80				3					OK	
	57151	ICCM91-50				4					OK	
	57152	ICM91-25				5					OK	
	57153	-10				6					OK	
	57154	-5				7					OK	
	57155	-2				8					OK	
	57156	-1				9					OK	
	57157	ICV2490-50		Acids		10					RR	SV151829-79 2HDUP, BAcid ↓
	57158	-50		Aniline		11					OK	-129
	57159	-50		~~ABN SOIL~~ BN1		12					OK	50 ② 3/11/16 SV151829-80 ~~OP# 1516242O~~
	57160	-50	50 ② 3/11/16	~~BN1~~ BN2		13					OK	SV151829-~~80~~ 85
	57161	-50		ABN SOIL ~~BN2~~		14					OK	OP151624 20 ~~85~~
	57162	ICV2491-50		HQ		15					RR	SV151829-64C HQ↑

50 ② 3/11/16

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: OR015-07
Rev. Date: 1/19/16

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SEMI-VOLATILE by GCMS ANALYSIS LOG

SGS ACCUTEST

Batch ID E2P2491

Print Analyst Name: Sara Davis

Date: 3/11/2016

Analyst Signature: SED

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
	see page 47	

Columns: Rxi-5silms 30m x .25mm x .25um

Method 8270 D/625

Initial Cal. Method M2P2490

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: AMW

Date: 3/14/16

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution.	L+	IS	SU	Status (Data)	Comments
	2P57163	ICV2491-50		Benzidine 3rd		16					OK	SV151527-38C 8:53pm

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: OR015-07

Rev. Date: 1/19/16

SEMI-VOLATILE by GCMS ANALYSIS LOG

SGS ACCUTEST

Batch ID E2P2492

Print Analyst Name: Sara Davis

Date: 3/11/2016

Analyst Signature: SED

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
SV151829-108	DFTPP	50 ppm
CM-5732	Internal Std	4000 ppm
160906	DCM (Fisher)	—

Columns: Rx:-5sil ms 30m x .25mm x .25um

Method 8270D/625

Initial Cal. Method M2P2490

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: AMO

Date: 3/14/16

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution.	L+	IS	SU	Status (Data)	Comments
	2P57164	DFTPP			W	1					NG	51.68 ↑ reinject
	57165	DFTPP			W	1					OK	10:12 pm
	57166	ICV2491-50		HQ	W	2					OK	SV151829-64D HQ ↑
	57167	ICV2490-50		Acids	W	3					OK	SV151827-67 10:41 pm

AMO

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: OR015-07

Rev. Date: 1/19/16

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SEMI-VOLATILE by GCMS ANALYSIS LOG

SGS ACCUTEST

Batch ID E2P2497

Print Analyst Name: Sara Davis

Analyst Signature: SED

Date: 3/16/2016

Columns: Rx:-5sil ms 30m x .25mm x .25um

Method 8270 D/625

Initial Cal. Method M2P2490

Injection Volume: 1 ul

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
SV151829-108	DFTPP	50 ppm
SV151827-61A	BNA	50 ppm
-23D	TCL42	50 ppm
CM3749	Internal Std	4000 ppm
161592	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: AMO Date: 3/23/16

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution.	L+	IS	SU	Status (Data)	Comments
	2P57269	DFTPP			W	1					Not Using	rising baseline, rebake + reinject
	57270	DFTPP			W	1					NG	PCP ↑, reinject
	57271	DFTPP			W	1					↓	68 ↑, reinject
	57272	DFTPP			W	1					OK	7:11 pm
	57273	CC2490-50		BNA	W	2					OK	
	57274	CC2491-50		TCL42	W	3					OK	Benzidine ↓
	57275	BS1A Test				4			✓	✓	OK	
	57276	BS1B Test				5			✓	✓	OK	
	57277	OP92132-MB1	92132	AB8270+	W	6			✓	✓	OK	
	57278	-BS1				7			✓	✓	OK	
	57279	JC16204-6		ABTCL20-14Dx		8			✓	✓	OK	
	57280	-5				9			✓	✓	OK	
	57281	-1				10			✓	✓	OK	~~AB2x~~ ~~SD 3/17 #4~~ RAB2x SD 3/17 #4
	57282	-2				11			✓	✓	OK	
	57283	-3				12			✓	✓	OK	
	57284	-4				13			✓	✓	OK	
	57285	JC16106-10		BNJTCL20+		14			✓	✓	OK	

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: OR015-07
Rev. Date: 1/19/16

SEMI-VOLATILE by GCMS ANALYSIS LOG

SGS ACCUTEST

Batch ID E2P2497

Print Analyst Name: Julius Johnson

Date: 3/16/16

Analyst Signature: JMJ

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
	See Page 69	

Columns: Rxi5Silms 30m x 25mm x 25 µm

Method 8270D/625

Initial Cal. Method M2P2490

Injection Volume: 1 µl

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: AMO

Date: 3/23/16

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution.	L+	IS	SU	Status (Data)	Comments
	2P27286	JC16170-1	92132	ABTCL11	W	15			V	V		
	5P27287	-2				16			V	V		RR 20X RX
	5P27288	-3				17			V	V		RR 20X
	5P27289	-5				18			V	V		RR 10X
	5P27290	-6				19			V	V		RR 10X
	5P27291	-7				20			V	V		RR 2X
	5P27292	-8				21			V	V		RR 25X
	5P27293	-9				22			V	V		RR 20X
	5P27294	-10				23			V	V		
	5P27295	-4				24			V	V		RR 5X for MTX / Chl / Cfo - #25
	5P27296	JC16106-9		ABTCL 20X		25		+	V	V		
	5P27297	OP92132-MS		AB8270		26			V	V		
	5P27298	-MSD				27			V	V		

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: OR015-07
Rev. Date: 1/19/16

SEMI-VOLATILE by GCMS ANALYSIS LOG

SGS ACCUTEST

Batch ID: E2P2498

Print Analyst Name: Robert LaPosta

Analyst Signature: [signature]

Date: 3/17/16

Columns: Rx-5ms 30m x 0.25mm x 0.25µ

Method: 8270D/625

Initial Cal. Method: M2P2490

Injection Volume: 1µl

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
[illegible]	DP 1&P	100mg
[illegible]	BNA	25mg
[illegible]	TCL-2	25mg
112315	ITD	400mg
161592	DCM (EPA)	—

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: AMO. Date: 3/23/16

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution.	L+	IS	SU	Status (Data)	Comments
	2P57299	DP 1&P				1					OK	
	57300	CCM90-25		BNA	W	2					OK	
	57301	CCM91-25		TCL2	W	3					OK	
	57302	BNA-1&P-100		BNA	W	4					OK	
	57303	Istd test		test	W	5					OK	
	57304A	ABNSURR		ABNSURR	W	6					OK	
	57305	SC161702	94132	ABTCL1	W	7	20				OK	RL 2x=40x
	57306	-3				8	20				OK	RL 2x=40x
	57307	-5				9	10				OK	
	57308	-6				10	10				OK	RL 2x=20x
	57309	-7				11	2				OK	
	57310	-8				12	5				OK	
	57311	-9				13	20				OK	
	57312	-9				14	5				OK	RL 20x=100x
	57313	SC162014-1		ABTCL20-100x		15	2				OK	
	57314	SC5226-8	94274A	[illegible]	S	16					Rerun	RL for 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: OR015-07
Rev. Date: 1/19/16

ACCUTEST

SEMI-VOLATILE by GCMS ANALYSIS LOG

Batch ID: E4P767

Date: 2/1/16

Analyst Signature: [illegible]

Columns: Rtx5silms 30m x .25mm x .25µm

Method 8270D/625

Initial Cal. Method M4P744 Sim 2/1/16

Injection Volume: 1µL

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
SV151769121	DFTPP	50ppm
SV151829113A	Sim std	1ppm
~~SV151829113A~~		
AMO 2/2/16		
58933	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: AMO Date: 2/2/16

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	L+	IS	SU	Status (Data)	Comments
	4P14945	DFTPP				1					OK	4:06pm
	14946	CC741-1.0				2					Not Using	Repeatedly benzene low. Re-injecting different lot #
	14947	CC741-1.0				2					↓	
	14948	ic767-0.5 (AMO 2/1/16)		BNA Sim		3					OK	SV151829113B
	14949	icc767-1.0				4					OK	SV151829113A
	14950	ic767-0.2				5					OK	SV151769992E
	14951	ic767-0.1				6					OK	SV151769992F
	14952	ic767-0.05				7					OK	SV151769992G
	14953	ic767-0.02				8					OK	SV151769992H
	14954	ic767-0.01				9					OK	SV151769992I
	14955	ic767-5				10					OK	SV151769992A
	14956	ic767-2.5				11					OK	SV151769992B
	14957	icv767-1.0		BSim		12					OK	OP15162430
	14958	icv767-1.0		BN2 2nd		13					OK	SV15182985
	14959	icv767-1.0		Acid 2nd		14					OK	SV15176906

AMO

TX = Matrix. Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.

ample volume/weight used and final volumes refer to extraction log.

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ll strikeouts must be initialed, dated and reason code applied as follows:
= reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

rm: OR015-05
v. Date: 1/16/2006

9.7.6

ACCUTEST

SEMI-VOLATILE by GCMS ANALYSIS LOG

Batch ID: E4P805

Date: 3/17/16

Analyst Signature: AMW.

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
SV151829108	DFTPP	50 ppm
SV151827620	Sim Std	0.5 ppm
SV151827753	Sim IS	400 ppm
161592	Dim (fisher)	—

Columns: Rtx5Sil MS 30m x 25mm x 0.5 µm

Method 8270D/625

Initial Cal. Method M4P767(SIM)

Injection Volume: µL

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: 3/24/16

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	L+	IS	SU	Status (Data)	Comments
	4P5645	DFTPP				1					ng/sing	1102am.
	15646	CC767-.5		BUASIM	W	2					J	leak - rainfall.
	15647	DFTPP				~~3~~ 1 @pm 3/17/16					ok	4:01pm
	15648	CC767-0.5				~~2~~					ok	
	15649	OP92139a-MBI	92139	B8270		3		✓	✓		ok	
	15650	-BS12				4		✓	✓		ok	
	15651	-LB4				5		✓	✓		ok	inserted after MBI in the sequence.
	15652	-BSD12				6		✓	✓		ok	
	15653	JC15401-4		SimPah SPLP		7		✓	✓		ok	
	15654	OP92132a-MBI	92132	B8270		8		✓	✓		ok	
	15655	-BS12				9		✓	✓		ok	
	15656	-MS				10		✓	✓		ok	
	15657	-MSD				11		✓	✓		ok	
	15658	JC16204-2		BSimNAP+ 1,4 Dox		12		✓	✓		ok	
	15659	-3				13		✓	✓		ok	
	15660 @pm 3/17/16	-4				14		✓	✓		ok	
	15661	-5				15		✓	✓		ok	

MTX = Matrix . Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.

Sample volume/weight used and final volumes refer to extraction log.

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All strikeouts must be initialed, dated and reason code applied as follows:
1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR015-05
Rev. Date: 1/16/2006

ACCUTEST

SEMI-VOLATILE by GCMS ANALYSIS LOG

Batch ID: E4P805

Date: 3/17/16

Analyst Signature: dmj

Standard Data		
Lot #	Description	Conc.

Standard Data		
Lot #	Description	Conc.
	See Page 171	

Columns: Rx15silms 30m x.25mm x.25µm

Method 8270D/625

Initial Cal. Method M4P764sim

Injection Volume: 1µl

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: 3/24/16

R	Data File	Sample ID	Ext. Batch	Test	MTX	ALS #	Dilution	L+	IS	SU	Status (Data)	Comments
	4P15662	JC16204-6	92132	BSimNAP + 1,4 Diox		16			✓	✓	OK	
	15663	JC16106-9		BSimNAP + 1,4 Diox		17			✓	✓	OK	RRC hit in sample.
	15664	-10		↓		18			✓	✓	OK	
	15665	JC16204-1		BSimNAP + 1,4 Diox		19			✓	✓	OK	10gm

MTX = Matrix. Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.

Sample volume/weight used and final volumes refer to extraction log.

All strike-outs must be initialed, dated and reason code applied as follows:
1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

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Form: OR 015-05
Rev. Date: 1/16/2006

9.7.7

9

LOGBOOK ID: 6-17-7 6-1727

Date Started: 3/16/16 Time Started: 1000

Date Finished: 3/16/16 Time Finished: 1700

ABN Aqueous Extraction Logbook

Extract Method (CHECK OFF "√" /DO NOT CIRCLE):

Separatory Funnel: SW846 3510C/CLP/other ✓ - 3510C SIM_____

Continuous Liquid Liquid: SW846 3520C/CLP/other_____

BATCH # MS 92132	RACK# A-9
Extracted by:	YB, ENC, BOJ
Concentrated by:	FA
Vialed by:	YB, VP, FA
Relinquished by:	
Accepted by:	
Supervisor Review:	3/16/16

Special Client Spike Instructions

QC ID# for Special Spike	Amt to Spike	Spike ID	Lot #	Conc.	Amt. Spiked

WITNESS SIGN: SPIKE SIGN:

Manager/Supervisor/Team Lead Approval:

SPECIAL PROCESSING INSTRUCTIONS

Rx Reason:

Spiking:

Weights/Volumes:

Required MS/MSD: JC16170-8

Final Volume:

Other:

	Sample #	Analysis Type	Sample Bottle #	Sample Description	Sample Volume (mL)	pH Adjust (mL) <2 H2SO4	pH Adjust (mL) >11 NaOH	Final Extract Color	Final Extract Vol (mL)	Misc. GPC Cleanup	Misc. Comments
	MB1	ABN		DI H2O	1000	1	4	Clear	1		
	BS1			DI H2O	1000	1	4	Yellow	1		
	JC16170-8 MS		3	Yellow	500	1	4	Brown	1		
	MSD		3	Yellow	500	1	4	Brown	1		
	BS	12SIM		DI H2O	1000	1	4	Lt Yellow	1		
	JC16106-9 MS		2	Lt Yellow	500	1	4	Brown	1		
	MSD		2	Lt Yellow	500	1	4	Brown	1		
1	JC16106-9	ABN	1	Lt Yellow	1000	1	4	Brown	1		
2	-10		1	Yellow	1000	1	4	Yellow	1		
3	JC16204-1		2	Lt Yellow	1000	1	4	Lt Yellow	1		
4	-2		2	Lt Yellow	1000	1	4	Clear	1		
5	-3		2	Lt Yellow	1000	1	4	Clear	1		
6	-4		2	Lt Yellow	1000	1	4	Clear	1		
7	-5		2	Clear	1000	1	4	Clear	1		
8	-6		2	Clear	1000	1	4	Clear	1		
9	JC16170-1		2	Lt Yellow	1000	1	4	Yellow	1		
10	-2		1	Yellow	1000	1	4	Yellow	1		
11	-3		2	Gold	1000	1	4	Brown	1		
12	-4		1	Gold	1000	1	4	Brown	1		
13	-5		1	Gold	950	1	4	Brown	1		
14	-6		2	Gold	1000	1	4	Lt Yellow	1		
15	-7		2	Yellowish	1000	1	4	Brown	1		
16	-8		4	Gold	1000	1	4	Brown	1		
17	-9		1	Yellow	1000	1	4	Brown	1		
18	-10		2	Clear	1000	1	4	Clear	1		
19											
20											

Comments: Okay to split sim ms/msd not enough bottles

Equipment/ Range	ID	Observed Temp (°C)	Correction Factor (°C)	Corrected Temp (°C)	Pressure/ Flowrate
Buchi (65-71°C)					
Buchi Chiller					
Waterbath (70-80°C)	6,7	75,75	1.6, 1.2	77, 76	N/A
Waterbath Chiller (GPM)	F3	-6	—	—	2
NEVAP (32-38°C; LPM)					

SURROGATE	LOT #	CONC (ppm)	AMT (mL)
ABN	16171216	50ppm	1mL

WITNESS SIGN: YB SPIKE SIGN: BOJ

MATRIX SPIKE	LOT #	CONC (ppm)	AMT (mL)
Acid	15182769	50ppm	Acid: 1.0mL
Acid (for SIM)			A(SIM): 0.1mL
Base #1	15182463	50ppm	1mL
Base #2	15182745	50ppm	1mL
Anilines	17772766	50ppm	1mL
BSIM	15162412	1ppm	1mL

WITNESS SIGN: YB SPIKE SIGN: BOJ

SOLVENT	LOT #	BRAND	AMT (mL)
METH CHLOR	160906	Fisher	60mL x 6

REAGENT	LOT #	BRAND
NaOH	153803	Fisher
H2SO4	2511607	Fisher
Sodium Sulfate	153159	Fisher
Glass Wool	0P29-2	Lab
Filter Paper		
pH strips	212713	Hydrion

SGS ACCUTEST INC.
Form: OP022A-08
Rev Date: 1/13/16

3

LOGBOOK ID: 6-17-7 6-1727

Date Started: 3/16/16 Time Started: 1000

Date Finished: 3/16/16 Time Finished: 1700

ABN Aqueous Extraction Logbook

Extract Method (CHECK OFF "√" /DO NOT CIRCLE):

Separatory Funnel: SW846 3510C/CLP/other ✓ - 3510C SIM_____

Continuous Liquid Liquid: SW846 3520C/CLP/other_____

BATCH # MS 92132	RACK# A-9
Extracted by:	YB, ENC, BOJ
Concentrated by:	FA
Vialed by:	YB, VP, FA
Relinquished by:	
Accepted by:	
Supervisor Review:	3/16/16

Special Client Spike Instructions

QC ID# for Special Spike	Amt to Spike	Spike ID	Lot #	Conc.	Amt. Spiked

WITNESS SIGN: SPIKE SIGN:

Manager/Supervisor/Team Lead Approval:

SPECIAL PROCESSING INSTRUCTIONS

Rx Reason:

Spiking:

Weights/Volumes:

Required MS/MSD: JC16170-8

Final Volume:

Other:

	Sample #	Analysis Type	Sample Bottle #	Sample Description	Sample Volume (mL)	pH Adjust (mL) <2 H2SO4	pH Adjust (mL) >11 NaOH	Final Extract Color	Final Extract Vol (mL)	Misc. GPC Cleanup	Misc. Comments
	MB1	ABN		DI H2O	1000	1	4	Clear	1		
	BS1			DI H2O	1000	1	4	Yellow	1		
	JC16170-8 MS		3	Yellow	500	1	4	Brown	1		
	MSD		3	Yellow	500	1	4	Brown	1		
	BS	12SIM		DI H2O	1000	1	4	Lt Yellow	1		
	JC16106-9 MS		2	Lt Yellow	500	1	4	Brown	1		
	MSD		2	Lt Yellow	500	1	4	Brown	1		
1	JC16106-9	ABN	1	Lt Yellow	1000	1	4	Brown	1		
2	-10		1	Yellow	1000	1	4	Yellow	1		
3	JC16204-1		2	Lt Yellow	1000	1	4	Lt Yellow	1		
4	-2		2	Lt Yellow	1000	1	4	Clear	1		
5	-3		2	Lt Yellow	1000	1	4	Clear	1		
6	-4		2	Lt Yellow	1000	1	4	Clear	1		
7	-5		2	Clear	1000	1	4	Clear	1		
8	-6		2	Clear	1000	1	4	Clear	1		
9	JC16170-1		2	Lt Yellow	1000	1	4	Yellow	1		
10	-2		1	Yellow	1000	1	4	Yellow	1		
11	-3		2	Gold	1000	1	4	Brown	1		
12	-4		1	Gold	1000	1	4	Brown	1		
13	-5		1	Gold	950	1	4	Brown	1		
14	-6		2	Gold	1000	1	4	Yellow	1		
15	-7		2	Yellowish	1000	1	4	Brown	1		
16	-8		4	Gold	1000	1	4	Brown	1		
17	-9		1	Yellow	1000	1	4	Brown	1		
18	-10		2	Clear	1000	1	4	Clear	1		
19											
20											

Comments: Okay to split sim ms/msd not enough bottles

Equipment/ Range	ID	Observed Temp (°C)	Correction Factor (°C)	Corrected Temp (°C)	Pressure/ Flowrate
Buchi (65-71°C)					
Buchi Chiller					
Waterbath (70-80°C)	6,7	75,75	1.6, 1.2	77, 76	N/A
Waterbath Chiller (GPM)	F3	-6	—	—	2
NEVAP (32-38°C; LPM)					

SURROGATE	LOT #	CONC (ppm)	AMT (mL)
ABN	16171216	50ppm	1mL

WITNESS SIGN: YB SPIKE SIGN: BOJ

MATRIX SPIKE	LOT #	CONC (ppm)	AMT (mL)
Acid	15182769	50ppm	Acid: 1.0mL
Acid (for SIM)			A(SIM): 0.1mL
Base #1	15182463	50ppm	1mL
Base #2	15182745	50ppm	1mL
Anilines	11772766	50ppm	1mL
BSIM	15162412	1ppm	1mL

WITNESS SIGN: YB SPIKE SIGN: BOJ

SOLVENT	LOT #	BRAND	AMT (mL)
METH CHLOR	160906	Fisher	60mL x 6

REAGENT	LOT #	BRAND
NaOH	153803	Fisher
H2SO4	2511607	Fisher
Sodium Sulfate	153159	Fisher
Glass Wool	0P29-2	Lab
Filter Paper		
pH strips	212713	Hydrion

SGS ACCUTEST INC.
Form: OP022A-08
Rev Date: 1/13/16

3

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- GC Identification Summaries (Hits)
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGH5211-MB2	GH103785.D	1	03/17/16	XPL	n/a	n/a	GGH5211

The QC reported here applies to the following samples: **Method:** SW846-8015C (DAI)

JC16204-7

CAS No.	Compound	Result	RL	MDL	Units	Q
64-17-5	Ethanol	ND	100	55	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	36	ug/l	
67-63-0	Isopropyl Alcohol	ND	100	68	ug/l	
71-23-8	n-Propyl Alcohol	ND	100	43	ug/l	
71-36-3	n-Butyl Alcohol	ND	100	87	ug/l	
78-92-2	sec-Butyl Alcohol	ND	100	66	ug/l	
67-56-1	Methanol	ND	200	71	ug/l	

CAS No.	Surrogate Recoveries		Limits
111-27-3	Hexanol	96%	56-145%
111-27-3	Hexanol	90%	56-145%

Method Blank Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGH5211-MB3	GH103792.D	1	03/17/16	XPL	n/a	n/a	GGH5211

The QC reported here applies to the following samples: **Method:** SW846-8015C (DAI)

JC16204-1, JC16204-2, JC16204-3, JC16204-4, JC16204-5, JC16204-6

CAS No.	Compound	Result	RL	MDL	Units	Q
64-17-5	Ethanol	ND	100	55	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	36	ug/l	
67-63-0	Isopropyl Alcohol	ND	100	68	ug/l	
71-23-8	n-Propyl Alcohol	ND	100	43	ug/l	
71-36-3	n-Butyl Alcohol	ND	100	87	ug/l	
78-92-2	sec-Butyl Alcohol	ND	100	66	ug/l	
67-56-1	Methanol	ND	200	71	ug/l	

CAS No.	Surrogate Recoveries		Limits
111-27-3	Hexanol	95%	56-145%
111-27-3	Hexanol	85%	56-145%

Method Blank Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGH5211-MB1	GH103775.D	1	03/17/16	XPL	n/a	n/a	GGH5211

The QC reported here applies to the following samples: **Method:** SW846-8015C (DAI)

GGH5211-BS, JC15796-1MS, JC15796-1MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
64-17-5	Ethanol	ND	100	55	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	36	ug/l	
67-63-0	Isopropyl Alcohol	ND	100	68	ug/l	
71-23-8	n-Propyl Alcohol	ND	100	43	ug/l	
71-36-3	n-Butyl Alcohol	ND	100	87	ug/l	
78-92-2	sec-Butyl Alcohol	ND	100	66	ug/l	
67-56-1	Methanol	ND	200	71	ug/l	

CAS No.	Surrogate Recoveries		Limits
111-27-3	Hexanol	99%	56-145%
111-27-3	Hexanol	96%	56-145%

Blank Spike Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGH5211-BS	GH103776.D	1	03/17/16	XPL	n/a	n/a	GGH5211

The QC reported here applies to the following samples: **Method:** SW846-8015C (DAI)

JC16204-1, JC16204-2, JC16204-3, JC16204-4, JC16204-5, JC16204-6, JC16204-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
64-17-5	Ethanol	5000	4970	99	74-123
78-83-1	Isobutyl Alcohol	5000	4740	95	70-124
67-63-0	Isopropyl Alcohol	5000	4450	89	76-121
71-23-8	n-Propyl Alcohol	5000	4680	94	73-122
71-36-3	n-Butyl Alcohol	5000	4390	88	67-116
78-92-2	sec-Butyl Alcohol	5000	4470	89	74-118
67-56-1	Methanol	5000	3360	67	67-121

CAS No.	Surrogate Recoveries	BSP	Limits
111-27-3	Hexanol	98%	56-145%
111-27-3	Hexanol	90%	56-145%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC15796-1MS	GH103778.D	1	03/17/16	XPL	n/a	n/a	GGH5211
JC15796-1MSD	GH103779.D	1	03/17/16	XPL	n/a	n/a	GGH5211
JC15796-1	GH103777.D	1	03/17/16	XPL	n/a	n/a	GGH5211

The QC reported here applies to the following samples: **Method:** SW846-8015C (DAI)

JC16204-1, JC16204-2, JC16204-3, JC16204-4, JC16204-5, JC16204-6, JC16204-7

CAS No.	Compound	JC15796-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	ND		5000	5200	104	5000	5310	106	2	58-145/27
78-83-1	Isobutyl Alcohol	ND		5000	5290	106	5000	5230	105	1	69-131/25
67-63-0	Isopropyl Alcohol	ND		5000	5300	106	5000	5330	107	1	70-133/28
71-23-8	n-Propyl Alcohol	ND		5000	5290	106	5000	5020	100	5	66-137/29
71-36-3	n-Butyl Alcohol	ND		5000	4850	97	5000	4750	95	2	63-131/25
78-92-2	sec-Butyl Alcohol	ND		5000	5270	105	5000	5190	104	2	64-136/25
67-56-1	Methanol	ND		5000	4940	99	5000	5040	101	2	48-148/34

CAS No.	Surrogate Recoveries	MS	MSD	JC15796-1	Limits
111-27-3	Hexanol	100%	96%	93%	56-145%
111-27-3	Hexanol	91%	90%	86%	56-145%

* = Outside of Control Limits.

GC Identification Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Check Std:	GGH5211-CC5193	**Injection Date:**	03/17/16
Lab File ID:	GH103791.D	**Injection Time:**	16:08
Instrument ID:	GCGH	**Method:**	SW846-8015C (DAI)

Sample ID:	JC16204-5	**Injection Date:**	03/17/16
Lab File ID:	GH103794.D	**Injection Time:**	16:52
Client ID:	EB031116		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Isopropyl Alcohol	1 [a]	2.20	2.21	258		ug/l	15.7
Isopropyl Alcohol	2	1.22	1.22	302		ug/l	

(a) Final result reported from this column.

GC Identification Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Check Std:	GGH5211-CC5193	**Injection Date:**	03/17/16
Lab File ID:	GH103774.D	**Injection Time:**	10:39
Instrument ID:	GCGH	**Method:**	SW846-8015C (DAI)

Sample ID:	GGH5211-BS	**Injection Date:**	03/17/16
Lab File ID:	GH103776.D	**Injection Time:**	11:08
Client ID:	Blank Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Ethanol	1	1.83	1.83	5080		ug/l	2.2
Ethanol	2 [a]	1.00	1.00	4970		ug/l	
Isobutyl Alcohol	1 [a]	3.79	3.79	4740		ug/l	11.3
Isobutyl Alcohol	2	2.65	2.65	5310		ug/l	
Isopropyl Alcohol	1 [a]	2.21	2.21	4450		ug/l	13.6
Isopropyl Alcohol	2	1.22	1.22	5100		ug/l	
n-Propyl Alcohol	1 [a]	2.97	2.97	4680		ug/l	5.2
n-Propyl Alcohol	2	1.74	1.74	4930		ug/l	
n-Butyl Alcohol	1 [a]	4.21	4.21	4390		ug/l	3.4
n-Butyl Alcohol	2	3.14	3.14	4540		ug/l	
sec-Butyl Alcohol	1 [a]	3.40	3.41	4470		ug/l	11.8
sec-Butyl Alcohol	2	2.27	2.27	5030		ug/l	
Methanol	1 [a]	1.40	1.40	3360		ug/l	21.0
Methanol	2	0.78	0.78	4150		ug/l	

(a) QC results reported from this column.

GC Identification Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Check Std:	GGH5211-CC5193	**Injection Date:**	03/17/16
Lab File ID:	GH103774.D	**Injection Time:**	10:39
Instrument ID:	GCGH	**Method:**	SW846-8015C (DAI)

Sample ID:	JC15796-1MS	**Injection Date:**	03/17/16
Lab File ID:	GH103778.D	**Injection Time:**	12:03
Client ID:	Matrix Spike		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Ethanol	1	1.83	1.83	4570		ug/l	12.9
Ethanol	2 [a]	1.00	1.00	5200		ug/l	
Isobutyl Alcohol	1	3.79	3.79	4950		ug/l	6.6
Isobutyl Alcohol	2 [a]	2.65	2.65	5290		ug/l	
Isopropyl Alcohol	1	2.21	2.21	4540		ug/l	15.4
Isopropyl Alcohol	2 [a]	1.22	1.22	5300		ug/l	
n-Propyl Alcohol	1	2.97	2.97	4640		ug/l	13.1
n-Propyl Alcohol	2 [a]	1.74	1.74	5290		ug/l	
n-Butyl Alcohol	1	4.21	4.21	4830		ug/l	0.4
n-Butyl Alcohol	2 [a]	3.14	3.14	4850		ug/l	
sec-Butyl Alcohol	1	3.40	3.41	4540		ug/l	14.9
sec-Butyl Alcohol	2 [a]	2.28	2.27	5270		ug/l	
Methanol	1	1.40	1.40	4500		ug/l	9.3
Methanol	2 [a]	0.78	0.78	4940		ug/l	

(a) QC results reported from this column.

GC Identification Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Check Std:	GGH5211-CC5193	**Injection Date:**	03/17/16
Lab File ID:	GH103774.D	**Injection Time:**	10:39
Instrument ID:	GCGH	**Method:**	SW846-8015C (DAI)

Sample ID:	JC15796-1MSD	**Injection Date:**	03/17/16
Lab File ID:	GH103779.D	**Injection Time:**	12:17
Client ID:	Matrix Spike Duplicate		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Ethanol	1	1.84	1.83	5470		ug/l	3.0
Ethanol	2 [a]	1.00	1.00	5310		ug/l	
Isobutyl Alcohol	1	3.79	3.79	5120		ug/l	2.1
Isobutyl Alcohol	2 [a]	2.65	2.65	5230		ug/l	
Isopropyl Alcohol	1	2.21	2.21	5350		ug/l	0.4
Isopropyl Alcohol	2 [a]	1.22	1.22	5330		ug/l	
n-Propyl Alcohol	1	2.98	2.97	4970		ug/l	1.0
n-Propyl Alcohol	2 [a]	1.73	1.74	5020		ug/l	
n-Butyl Alcohol	1	4.21	4.21	5240		ug/l	9.8
n-Butyl Alcohol	2 [a]	3.13	3.14	4750		ug/l	
sec-Butyl Alcohol	1	3.41	3.41	4860		ug/l	6.6
sec-Butyl Alcohol	2 [a]	2.27	2.27	5190		ug/l	
Methanol	1	1.40	1.40	4700		ug/l	7.0
Methanol	2 [a]	0.78	0.78	5040		ug/l	

(a) QC results reported from this column.

Volatile Surrogate Recovery Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Method: SW846-8015C (DAI) **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
JC16204-1	GH103798.D	89	84
JC16204-2	GH103797.D	104	95
JC16204-3	GH103796.D	104	96
JC16204-4	GH103795.D	102	94
JC16204-5	GH103794.D	104	98
JC16204-6	GH103793.D	102	94
JC16204-7	GH103790.D	101	93
GGH5211-BS	GH103776.D	98	90
GGH5211-MB2	GH103785.D	96	90
GGH5211-MB3	GH103792.D	95	85
JC15796-1MS	GH103778.D	100	91
JC15796-1MSD	GH103779.D	96	90
GGH5211-MB1	GH103775.D	99	96

Surrogate Compounds	Recovery Limits
S1 = Hexanol	56-145%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Check Std:	GGH5211-CC5193	**Injection Date:**	03/17/16
Lab File ID:	GH103774.D	**Injection Time:**	10:39
Instrument ID:	GCGH	**Method:**	SW846-8015C (DAI)

	S1 [a] RT	S1 [b] RT
Check Std	5.29	5.87

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
GGH5211-MB1	GH103775.D	03/17/16	10:54	5.29	5.87
GGH5211-BS	GH103776.D	03/17/16	11:08	5.30	5.87
JC15796-1	GH103777.D	03/17/16	11:48	5.29	5.87
JC15796-1MS	GH103778.D	03/17/16	12:03	5.30	5.87
JC15796-1MSD	GH103779.D	03/17/16	12:17	5.29	5.87
ZZZZZZ	GH103780.D	03/17/16	12:32	5.30	5.87
ZZZZZZ	GH103781.D	03/17/16	12:46	5.29	5.87
ZZZZZZ	GH103782.D	03/17/16	13:03	5.29	5.87
ZZZZZZ	GH103783.D	03/17/16	13:20	5.29	5.87

Surrogate Compounds

S1 = Hexanol

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Check Std:	GGH5211-CC5193	**Injection Date:**	03/17/16
Lab File ID:	GH103784.D	**Injection Time:**	13:56
Instrument ID:	GCGH	**Method:**	SW846-8015C (DAI)

	S1 [a] RT	S1 [b] RT
Check Std	5.29	5.86

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
GGH5211-MB2	GH103785.D	03/17/16	14:11	5.29	5.87
ZZZZZZ	GH103786.D	03/17/16	14:29	5.29	5.86
ZZZZZZ	GH103787.D	03/17/16	14:44	5.29	5.87
ZZZZZZ	GH103788.D	03/17/16	14:58	5.29	5.87
ZZZZZZ	GH103789.D	03/17/16	15:13	5.29	5.87
JC16204-7	GH103790.D	03/17/16	15:27	5.29	5.87

Surrogate Compounds

S1 = Hexanol

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: JC16204
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMS, Former Brule Area, PR

Check Std:	GGH5211-CC5193	**Injection Date:**	03/17/16
Lab File ID:	GH103791.D	**Injection Time:**	16:08
Instrument ID:	GCGH	**Method:**	SW846-8015C (DAI)

	S1 [a] RT	S1 [b] RT
Check Std	5.29	5.86

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
GGH5211-MB3	GH103792.D	03/17/16	16:23	5.29	5.87
JC16204-6	GH103793.D	03/17/16	16:37	5.29	5.86
JC16204-5	GH103794.D	03/17/16	16:52	5.29	5.86
JC16204-4	GH103795.D	03/17/16	17:06	5.29	5.87
JC16204-3	GH103796.D	03/17/16	17:21	5.29	5.87
JC16204-2	GH103797.D	03/17/16	17:35	5.29	5.87
JC16204-1	GH103798.D	03/17/16	17:50	5.29	5.86
ZZZZZZ	GH103799.D	03/17/16	18:04	5.29	5.87

Surrogate Compounds

S1 = Hexanol

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

Initial Calibration Summary

Job Number: JC16204 **Sample:** GGH5193-ICC5193
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** GH103541.D
Project: BMS, Former Brule Area, PR

Response Factor Report GCGH

Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Tue Mar 01 12:10:59 2016
Response via : Initial Calibration

Calibration Files
0.5 =GH103543.D 1 =GH103536.D 5 =GH103541.D 10 =GH103538.D
50 =GH103539.D 100 =GH103540.D 0.1 =GH103544.D =

Compound	0.5	1	5	10	50	100	0.1	Avg		%RSD
1) Methanol	1.426	1.841	1.852	1.703	1.663	1.780	1.952	1.745	E1	9.79
2) Ethanol	2.194	2.249	2.373	2.356	2.184	2.349	2.002	2.244	E1	5.89
3) Tert-Butyl A	2.774	3.753	3.616	3.510	3.237	3.492	3.482	3.409	E1	9.40
4) 1-Propanol	2.092	3.059	3.087	2.991	2.821	3.030	3.265	2.907	E1	13.16
5) 2-Propanol	1.682	2.949	2.637	2.504	2.346	2.529	2.559	2.458	E1	15.80
6) Propionitril										
7) Isobutanol	2.896	3.485	3.556	3.505	3.219	3.484	3.542	3.384	E1	7.18
8) 1-Butanol	2.743	3.627	3.420	3.389	3.054	3.265	3.899	3.343	E1	11.25
9) 2-Butanol	2.347	3.176	3.154	3.122	2.873	3.066	3.756	3.071	E1	13.64
10) Hexanol	1.693	1.305	1.255	1.265	1.256	0.953	1.202	1.275	E2	17.09

Signal #2

1) Methanol	1.818	1.614	1.723	1.711	1.573	1.708	2.010	1.736	E1	8.31
2) Ethanol	2.024	2.267	2.294	2.284	2.092	2.288	2.194	2.206	E1	4.91
3) Tert-Butyl A	2.906	3.370	3.219	3.317	3.054	3.303	3.221	3.198	E1	5.13
4) 1-Propanol	2.365	2.891	3.042	2.928	2.683	2.894	3.320	2.875	E1	10.31
5) 2-Propanol	2.053	2.413	2.353	2.406	2.218	2.413	2.475	2.333	E1	6.33
6) Propionitril										
7) Isobutanol	2.864	3.107	3.214	3.374	3.059	3.290	3.670	3.226	E1	7.97
8) 1-Butanol	** This compound does not meet initial calibration criteria.									
	3.431	3.074	3.191	3.268	2.937	3.245	5.688	3.548	E1	26.96
9) 2-Butanol	2.452	2.996	2.918	2.985	2.721	2.924	3.049	2.864	E1	7.31
10) Hexanol	1.783	1.289	1.223	1.238	1.230	0.945	1.219	1.275	E2	19.65

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

MGH5193.M Tue Mar 01 12:19:45 2016 GCGH

Initial Calibration Verification

Job Number: JC16204 **Sample:** GGH5193-ICV5193
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** GH103545.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\1\DATA\DATA1035\GH103545.D\FID1A.CH Vial: 20
Acq On    : 29 Feb 2016   1:20 pm                    Operator: XULIU
Sample    : ICV5193-5000                             Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\DATA1035\GH103545.D\FID2B.CH Vial: 20
Acq On    : 29 Feb 2016   1:36 pm                    Operator: XULIU
Sample    : ICV5193-5000                             Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint2.e

Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 12:10:59 2016
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	Methanol	17.453	17.951	-2.9	97	0.00	1.33- 1.50
2	Ethanol	22.440	23.663	-5.5	100	0.00	1.80- 1.89
3	Tert-Butyl Alcohol	34.092	35.190	-3.2	97	0.00	2.47- 2.56
4	1-Propanol	29.066	30.968	-6.5	100	0.00	2.96- 3.03
5	2-Propanol	24.580	25.257	-2.8	96	0.00	2.18- 2.27
6	Propionitrile		----------NA----------				
7	Isobutanol	33.839	34.562	-2.1	97	0.00	3.76- 3.85
8	1-Butanol	33.426	33.817	-1.2	99	0.00	4.18- 4.27
9	2-Butanol	30.706	31.208	-1.6	99	0.00	3.37- 3.47
10 S	Hexanol	127.542	124.268	2.6	99	0.00	5.85- 5.91

***** Signal #2 *****

1	Methanol	17.364	17.370	-0.0	101	0.00	0.77- 0.83
2	Ethanol	22.062	22.926	-3.9	100	0.00	0.99- 1.05
3	Tert-Butyl Alcohol	31.985	33.340	-4.2	104	0.00	1.44- 1.50
4	1-Propanol	28.748	29.155	-1.4	96	0.00	1.74- 1.80
5	2-Propanol	23.330	24.634	-5.6	105	0.00	1.22- 1.28
6	Propionitrile		----------NA----------				
7	Isobutanol	32.255	33.041	-2.4	103	0.00	2.67- 2.73
8	1-Butanol	35.477	32.815	7.5	103	0.00	3.16- 3.22
9	2-Butanol	28.637	29.520	-3.1	101	0.00	2.29- 2.35
10 S	Hexanol	127.519	121.131	5.0	99	0.00	5.29- 5.39

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GH103541.D MGH5193.M Tue Mar 01 12:26:43 2016 GCGH

Continuing Calibration Summary

Job Number: JC16204 **Sample:** GGH5211-CC5193
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** GH103774.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\1\DATA\GH103774.D\FID1A.CH        Vial: 92
Acq On    : 17 Mar 2016  10:39 am                   Operator: XULIU
Sample    : CC5193-5000                             Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103774.D\FID2B.CH        Vial: 92
Acq On    : 17 Mar 2016  10:54 am                   Operator: XULIU
Sample    : CC5193-5000                             Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                Multiplr: 1.00
IntFile   : autoint2.e

Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 12:10:59 2016
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	Methanol	17.453	15.660	10.3	85	0.00	1.31- 1.49
2	Ethanol	22.440	22.702	-1.2	96	0.00	1.79- 1.88
3	Tert-Butyl Alcohol	34.092	36.852	-8.1	102	0.00	2.45- 2.54
4	1-Propanol	29.066	31.171	-7.2	101	0.00	2.94- 3.01
5	2-Propanol	24.580	25.641	-4.3	97	0.00	2.17- 2.26
6	Propionitrile		----------NA----------				
7	Isobutanol	33.839	36.787	-8.7	103	0.00	3.75- 3.84
8	1-Butanol	33.426	32.720	2.1	96	0.00	4.17- 4.26
9	2-Butanol	30.706	33.330	-8.5	106	0.00	3.36- 3.45
10 S	Hexanol	127.542	122.573	3.9	98	0.00	5.84- 5.90

***** Signal #2 *****

1	Methanol	17.364	15.656	9.8	91	0.00	0.75- 0.81
2	Ethanol	22.062	24.115	-9.3	105	0.00	0.97- 1.03
3	Tert-Butyl Alcohol	31.985	37.406	-16.9	116	0.00	1.40- 1.46
4	1-Propanol	28.748	32.420	-12.8	107	0.00	1.71- 1.77
5	2-Propanol	23.330	26.641	-14.2	113	0.00	1.19- 1.25
6	Propionitrile		----------NA----------				
7	Isobutanol	32.255	39.197	-21.5#	122	0.00	2.62- 2.68
8	1-Butanol	35.477	35.472	0.0	111	0.00	3.11- 3.17
9	2-Butanol	28.637	33.141	-15.7	114	0.00	2.24- 2.30
10 S	Hexanol	127.519	129.238	-1.3	106	0.00	5.24- 5.34

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GH103541.D MGH5193.M Thu Mar 17 13:06:17 2016 GCGH

Continuing Calibration Summary

Job Number: JC16204 **Sample:** GGH5211-CC5193
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** GH103784.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\1\DATA\GH103784.D\FID1A.CH        Vial: 95
Acq On    : 17 Mar 2016   1:56 pm                   Operator: XULIU
Sample    : CC5193-10000                            Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103784.D\FID2B.CH        Vial: 95
Acq On    : 17 Mar 2016   2:11 pm                   Operator: XULIU
Sample    : CC5193-10000                            Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                Multiplr: 1.00
IntFile   : autoint2.e

Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 12:10:59 2016
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		Methanol	17.453	15.256	12.6	90	0.00	1.32- 1.49
2		Ethanol	22.440	20.526	8.5	87	0.00	1.79- 1.88
3		Tert-Butyl Alcohol	34.092	31.434	7.8	90	0.00	2.45- 2.54
4		1-Propanol	29.066	28.039	3.5	94	0.00	2.94- 3.01
5		2-Propanol	24.580	21.580	12.2	86	0.00	2.17- 2.26
6		Propionitrile		----------NA----------				
7		Isobutanol	33.839	34.781	-2.8	99	0.00	3.74- 3.84
8		1-Butanol	33.426	32.180	3.7	95	0.00	4.16- 4.26
9		2-Butanol	30.706	29.883	2.7	96	0.00	3.36- 3.45
10	S	Hexanol	127.542	125.961	1.2	100	0.00	5.83- 5.89

***** Signal #2 *****

1		Methanol	17.364	15.317	11.8	90	0.00	0.75- 0.81
2		Ethanol	22.062	22.326	-1.2	98	0.00	0.97- 1.03
3		Tert-Butyl Alcohol	31.985	34.045	-6.4	103	0.00	1.40- 1.46
4		1-Propanol	28.748	31.231	-8.6	107	0.00	1.70- 1.76
5		2-Propanol	23.330	24.191	-3.7	101	0.00	1.19- 1.25
6		Propionitrile		----------NA----------				
7		Isobutanol	32.255	34.713	-7.6	103	0.00	2.62- 2.68
8		1-Butanol	35.477	32.773	7.6	100	0.00	3.11- 3.17
9		2-Butanol	28.637	29.555	-3.2	99	0.00	2.24- 2.30
10	S	Hexanol	127.519	132.252	-3.7	107	0.00	5.24- 5.34

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GH103538.D MGH5193.M Fri Mar 18 08:10:02 2016 GCGH

10.7.4 10

Continuing Calibration Summary

Job Number: JC16204 **Sample:** GGH5211-CC5193
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** GH103791.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\1\DATA\GH103791.D\FID1A.CH        Vial: 95
Acq On    : 17 Mar 2016   4:08 pm                   Operator: XULIU
Sample    : CC5193-5000                             Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103791.D\FID2B.CH        Vial: 95
Acq On    : 17 Mar 2016   4:23 pm                   Operator: XULIU
Sample    : CC5193-5000                             Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                Multiplr: 1.00
IntFile   : autoint2.e

Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 12:10:59 2016
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	Methanol	17.453	14.077	19.3	76	0.00	1.32- 1.49
2	Ethanol	22.440	21.445	4.4	90	0.00	1.79- 1.88
3	Tert-Butyl Alcohol	34.092	36.207	-6.2	100	0.00	2.45- 2.54
4	1-Propanol	29.066	32.783	-12.8	106	0.00	2.94- 3.01
5	2-Propanol	24.580	23.529	4.3	89	0.00	2.17- 2.26
6	Propionitrile		----------NA----------				
7	Isobutanol	33.839	43.601	-28.8#	123	0.00	3.74- 3.84
8	1-Butanol	33.426	33.021	1.2	97	0.00	4.16- 4.26
9	2-Butanol	30.706	29.296	4.6	93	0.00	3.36- 3.45
10 S	Hexanol	127.542	116.052	9.0	92	0.00	5.83- 5.89

***** Signal #2 *****

1	Methanol	17.364	17.661	-1.7	103	0.00	0.75- 0.81
2	Ethanol	22.062	25.277	-14.6	110	0.00	0.97- 1.03
3	Tert-Butyl Alcohol	31.985	37.300	-16.6	116	0.00	1.40- 1.46
4	1-Propanol	28.748	32.743	-13.9	108	0.00	1.70- 1.76
5	2-Propanol	23.330	27.041	-15.9	115	0.00	1.19- 1.25
6	Propionitrile		----------NA----------				
7	Isobutanol	32.255	37.273	-15.6	116	0.00	2.62- 2.68
8	1-Butanol	35.477	37.665	-6.2	118	0.00	3.10- 3.16
9	2-Butanol	28.637	34.006	-18.7	117	0.00	2.24- 2.30
10 S	Hexanol	127.519	126.456	0.8	103	0.00	5.24- 5.34

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GH103541.D MGH5193.M Fri Mar 18 09:05:29 2016 GCGH

Continuing Calibration Summary

Job Number: JC16204 **Sample:** GGH5211-CC5193
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** GH103800.D
Project: BMS, Former Brule Area, PR

Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\1\DATA\GH103800.D\FID1A.CH        Vial: 8
Acq On    : 17 Mar 2016   6:26 pm                   Operator: XULIU
Sample    : CC5193-10000                            Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103800.D\FID2B.CH        Vial: 8
Acq On    : 17 Mar 2016   6:40 pm                   Operator: XULIU
Sample    : CC5193-10000                            Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                Multiplr: 1.00
IntFile   : autoint2.e

Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 12:10:59 2016
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		Methanol	17.453	15.283	12.4	90	0.00	1.32- 1.49
2		Ethanol	22.440	21.959	2.1	93	0.00	1.79- 1.88
3		Tert-Butyl Alcohol	34.092	33.388	2.1	95	0.00	2.45- 2.55
4		1-Propanol	29.066	29.305	-0.8	98	0.00	2.94- 3.01
5		2-Propanol	24.580	23.199	5.6	93	0.00	2.17- 2.26
6		Propionitrile		----------NA----------				
7		Isobutanol	33.839	35.942	-6.2	103	0.00	3.75- 3.84
8		1-Butanol	33.426	33.319	0.3	98	0.00	4.17- 4.26
9		2-Butanol	30.706	30.618	0.3	98	0.00	3.36- 3.45
10	S	Hexanol	127.542	119.275	6.5	94	0.00	5.83- 5.89

***** Signal #2 *****

1		Methanol	17.364	16.998	2.1	99	0.00	0.74- 0.80
2		Ethanol	22.062	24.227	-9.8	106	0.00	0.96- 1.02
3		Tert-Butyl Alcohol	31.985	35.361	-10.6	107	0.00	1.40- 1.46
4		1-Propanol	28.748	31.472	-9.5	107	0.00	1.70- 1.76
5		2-Propanol	23.330	25.893	-11.0	108	0.00	1.19- 1.25
6		Propionitrile		----------NA----------				
7		Isobutanol	32.255	37.329	-15.7	111	0.00	2.61- 2.67
8		1-Butanol	35.477	34.660	2.3	106	0.00	3.11- 3.17
9		2-Butanol	28.637	31.704	-10.7	106	0.00	2.24- 2.30
10	S	Hexanol	127.519	129.056	-1.2	104	0.00	5.24- 5.34

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GH103538.D MGH5193.M Fri Mar 18 09:03:52 2016 GCGH

GC Volatiles

Raw Data

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103798.D\FID1A.CH          Vial: 6
Acq On    : 17 Mar 2016   5:50 pm                     Operator: XULIU
Sample    : JC16204-1                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103798.D\FID2B.CH          Vial: 6
Acq On    : 17 Mar 2016   6:04 pm                     Operator: XULIU
Sample    : JC16204-1                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  8:43 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um

 Compound          RT#1   RT#2    Resp#1   Resp#2     PPB       PPB
---------------------------------------------------------------------

System Monitoring Compounds
10) S   Hexanol           5.86   5.29    537144   568850 4211.516  4460.895
  Spiked Amount   5000.000                  Recovery     =   84.23%    89.22%

Target Compounds
```

11.1.1

11

```
---------------------------------------------------------------------------
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40%  (m)=manual int.
GH103798.D  MGH5193.M      Fri Mar 18 09:12:07 2016      GCGH
```


SGS ACCUTEST JC16204

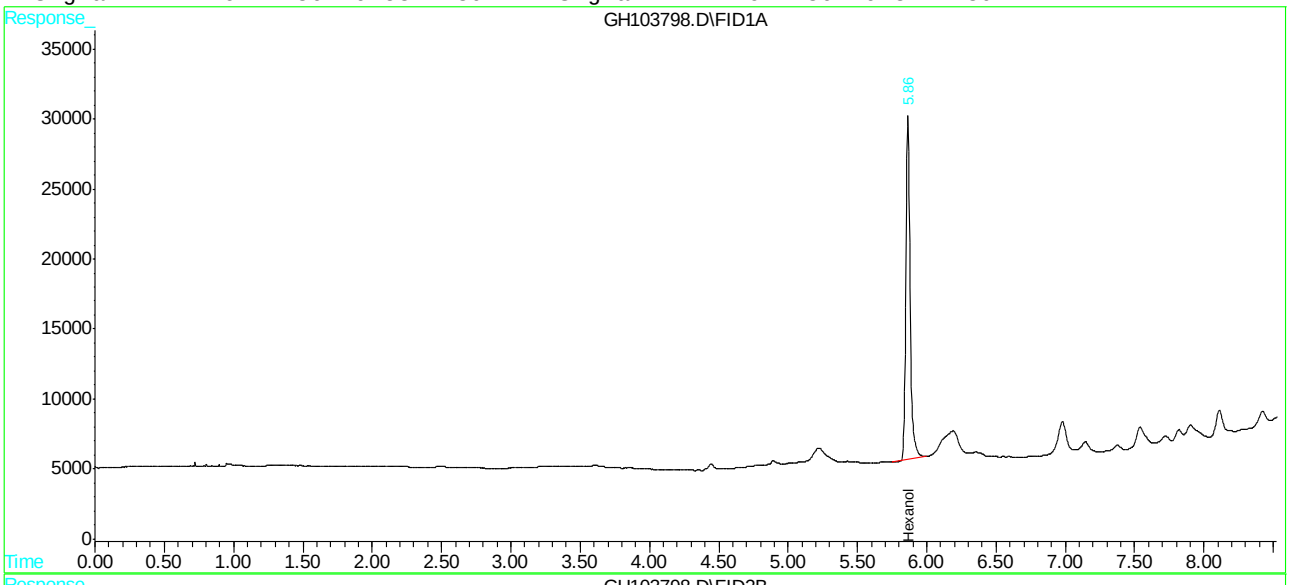
Quantitation Report (QT Reviewed)

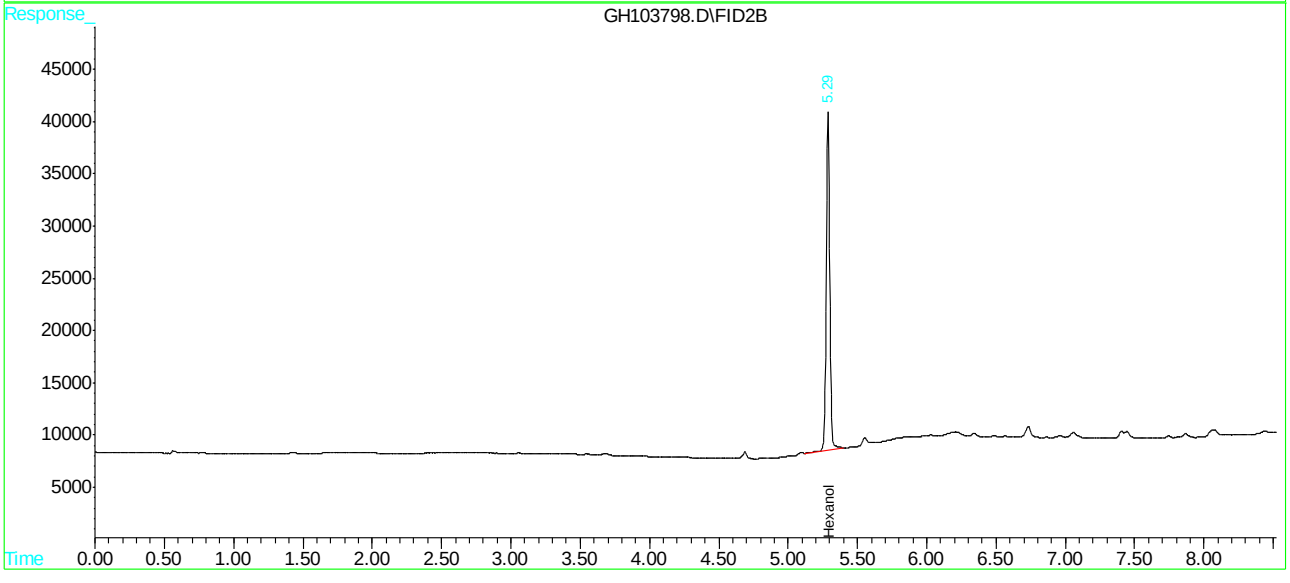
```
Data File : C:\HPCHEM\1\DATA\GH103798.D\FID1A.CH          Vial: 6
Acq On    : 17 Mar 2016   5:50 pm                     Operator: XULIU
Sample    : JC16204-1                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103798.D\FID2B.CH          Vial: 6
Acq On    : 17 Mar 2016   6:04 pm                     Operator: XULIU
Sample    : JC16204-1                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  8:43 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```





Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103797.D\FID1A.CH          Vial: 5
Acq On    : 17 Mar 2016   5:35 pm                     Operator: XULIU
Sample    : JC16204-2                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103797.D\FID2B.CH          Vial: 5
Acq On    : 17 Mar 2016   5:50 pm                     Operator: XULIU
Sample    : JC16204-2                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  8:43 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um

 Compound          RT#1   RT#2    Resp#1   Resp#2     PPB       PPB
---------------------------------------------------------------------

System Monitoring Compounds
10) S   Hexanol           5.87   5.29    606837   660474 4757.951  5179.403
  Spiked Amount   5000.000                  Recovery     =   95.16%   103.59%

Target Compounds
```

11.1.2

11

```
---------------------------------------------------------------------------
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40%  (m)=manual int.
GH103797.D  MGH5193.M      Fri Mar 18 09:12:04 2016      GCGH
```

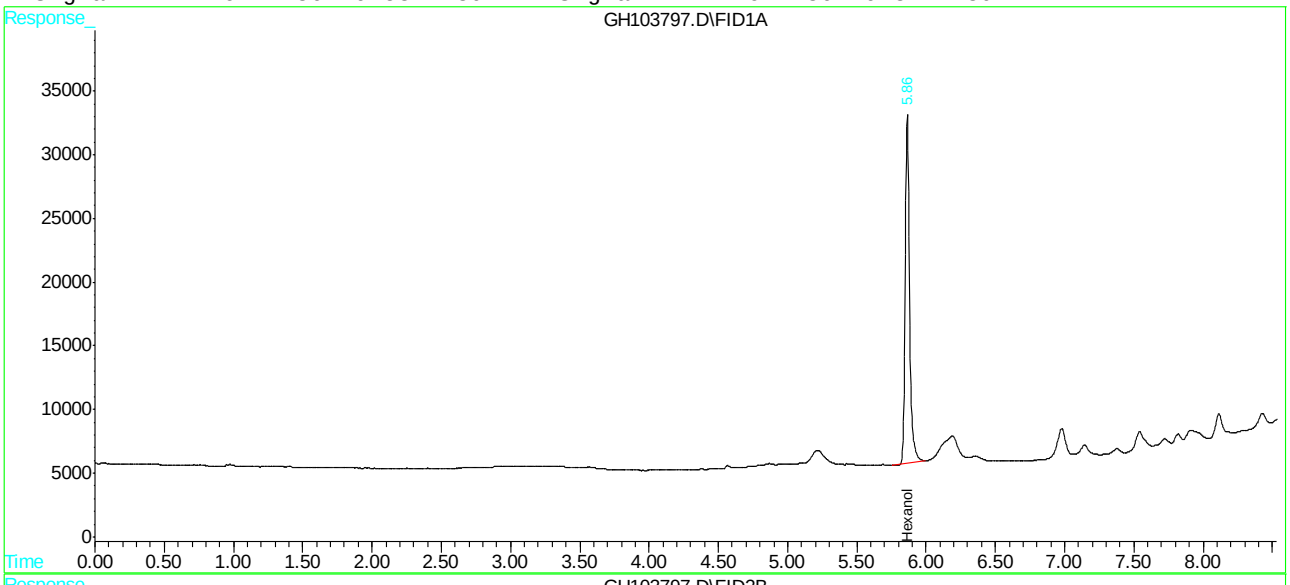
Quantitation Report (QT Reviewed)

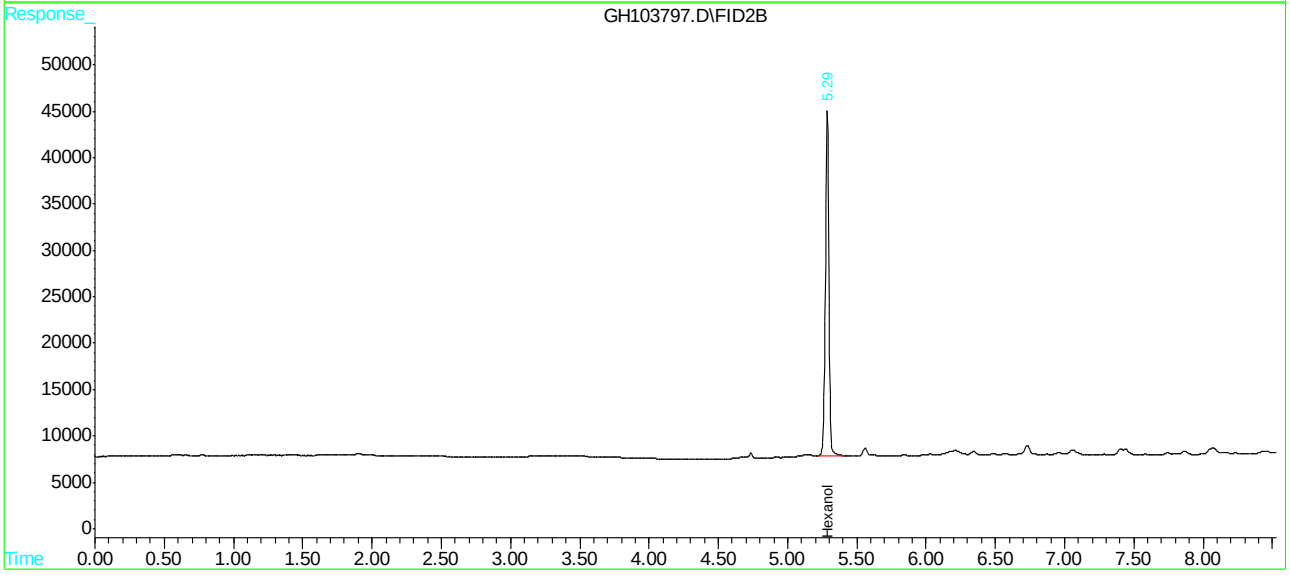
```
Data File : C:\HPCHEM\1\DATA\GH103797.D\FID1A.CH          Vial: 5
Acq On    : 17 Mar 2016   5:35 pm                     Operator: XULIU
Sample    : JC16204-2                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103797.D\FID2B.CH          Vial: 5
Acq On    : 17 Mar 2016   5:50 pm                     Operator: XULIU
Sample    : JC16204-2                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  8:43 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```





Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103796.D\FID1A.CH          Vial: 4
Acq On    : 17 Mar 2016   5:21 pm                     Operator: XULIU
Sample    : JC16204-3                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103796.D\FID2B.CH          Vial: 4
Acq On    : 17 Mar 2016   5:35 pm                     Operator: XULIU
Sample    : JC16204-3                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  8:42 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um

 Compound          RT#1   RT#2    Resp#1   Resp#2     PPB       PPB
---------------------------------------------------------------------

System Monitoring Compounds
10) S   Hexanol           5.87   5.29    613624   662970 4811.161  5198.978
  Spiked Amount   5000.000                  Recovery     =   96.22%   103.98%

Target Compounds
```

11.1.3

11

```
---------------------------------------------------------------------------
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40%  (m)=manual int.
GH103796.D  MGH5193.M      Fri Mar 18 09:12:00 2016      GCGH
```

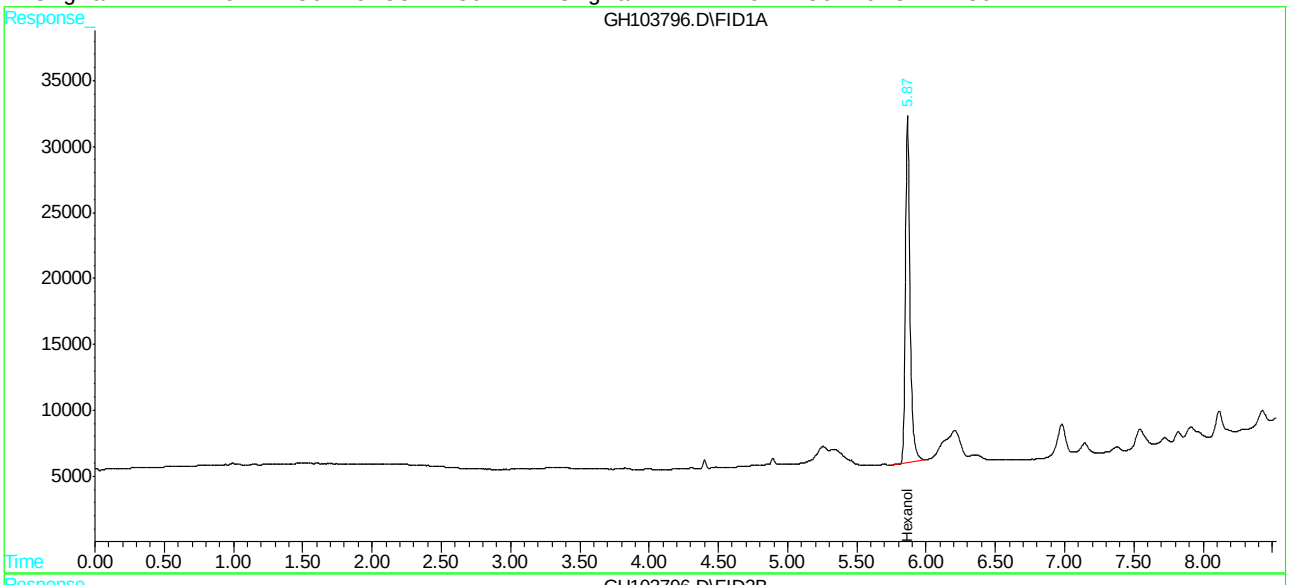
Quantitation Report (QT Reviewed)

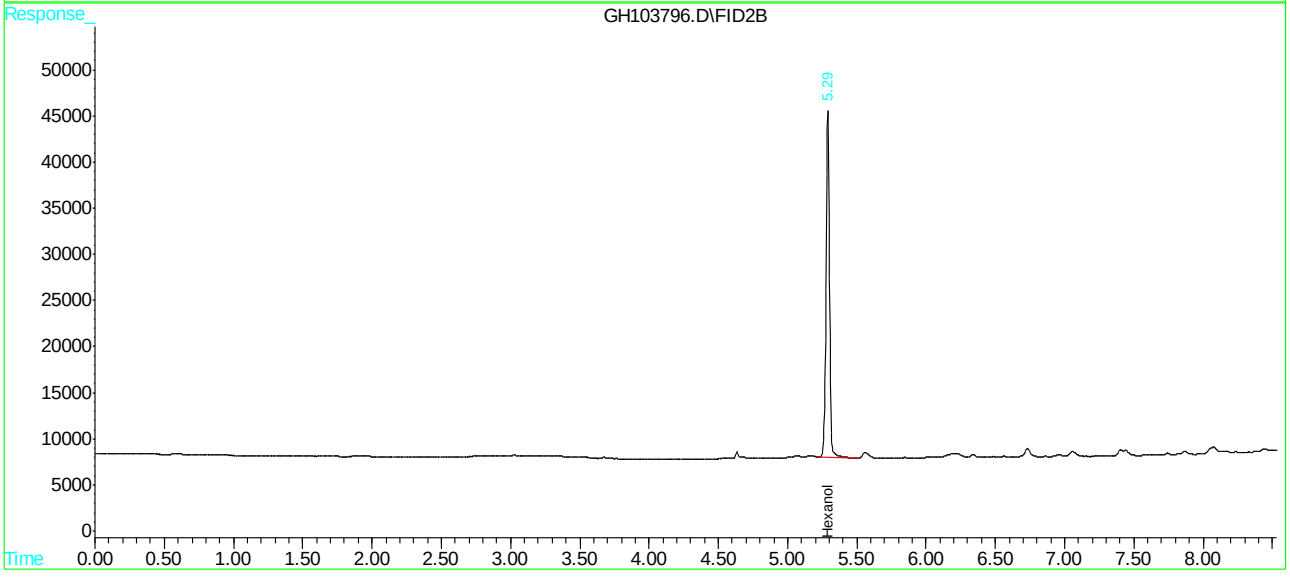
```
Data File : C:\HPCHEM\1\DATA\GH103796.D\FID1A.CH          Vial: 4
Acq On    : 17 Mar 2016   5:21 pm                     Operator: XULIU
Sample    : JC16204-3                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103796.D\FID2B.CH          Vial: 4
Acq On    : 17 Mar 2016   5:35 pm                     Operator: XULIU
Sample    : JC16204-3                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  8:42 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```





Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103795.D\FID1A.CH          Vial: 3
Acq On    : 17 Mar 2016   5:06 pm                     Operator: XULIU
Sample    : JC16204-4                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103795.D\FID2B.CH          Vial: 3
Acq On    : 17 Mar 2016   5:21 pm                     Operator: XULIU
Sample    : JC16204-4                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  8:42 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um

 Compound          RT#1   RT#2    Resp#1   Resp#2     PPB       PPB
---------------------------------------------------------------------

System Monitoring Compounds
10) S   Hexanol           5.87   5.29    599785   651665 4702.655  5110.326
  Spiked Amount   5000.000                  Recovery     =   94.05%   102.21%

Target Compounds
```

11.1.4

11

```
---------------------------------------------------------------------------
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40%  (m)=manual int.
GH103795.D  MGH5193.M      Fri Mar 18 09:11:56 2016      GCGH
```


SGS ACCUTEST JC16204

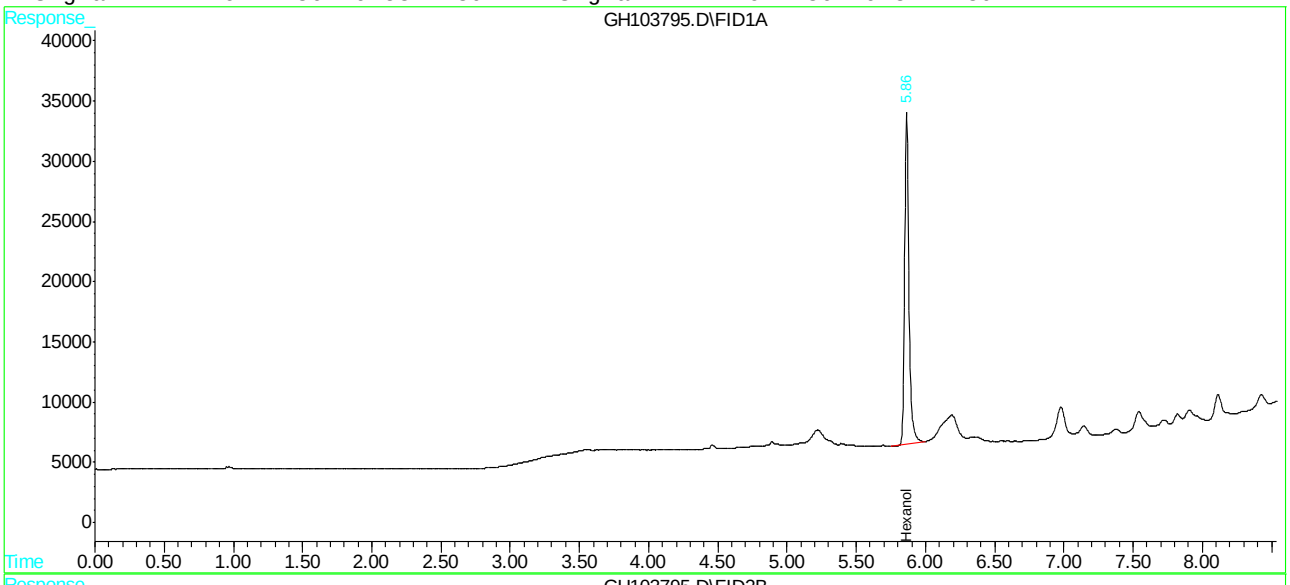
Quantitation Report (QT Reviewed)

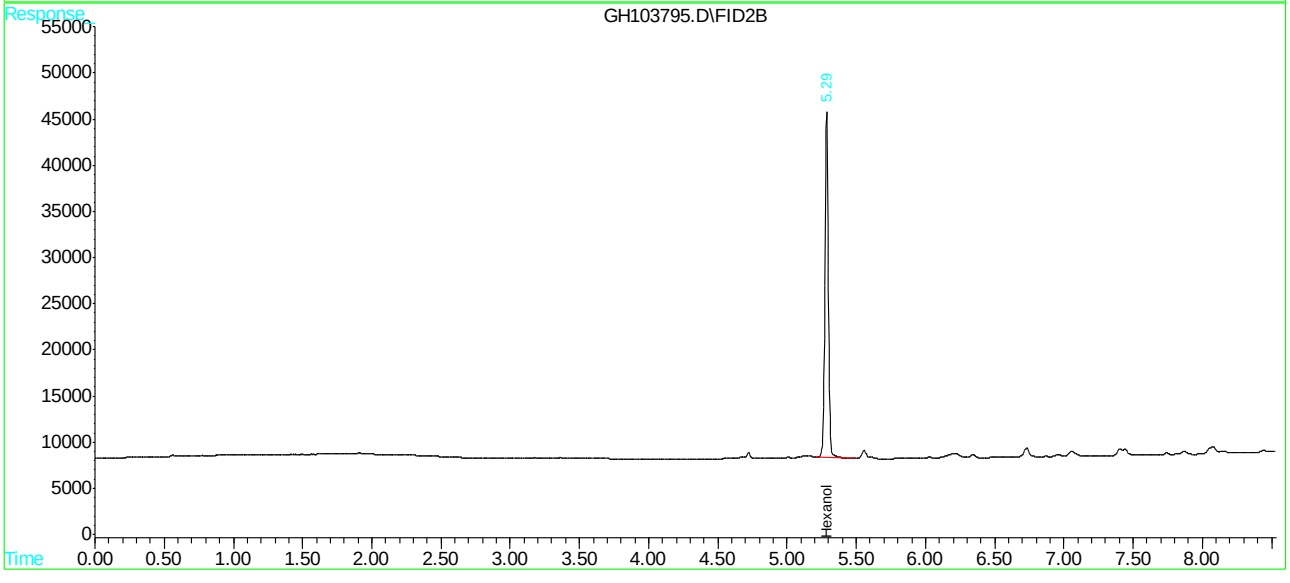
Data File : C:\HPCHEM\1\DATA\GH103795.D\FID1A.CH Vial: 3
Acq On : 17 Mar 2016 5:06 pm Operator: XULIU
Sample : JC16204-4 Inst : GCGH
Misc : GC47941,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103795.D\FID2B.CH Vial: 3
Acq On : 17 Mar 2016 5:21 pm Operator: XULIU
Sample : JC16204-4 Inst : GCGH
Misc : GC47941,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Mar 18 8:42 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Thu Mar 17 15:47:14 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um





Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103794.D\FID1A.CH          Vial: 2
Acq On    : 17 Mar 2016   4:52 pm                     Operator: XULIU
Sample    : JC16204-5                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103794.D\FID2B.CH          Vial: 2
Acq On    : 17 Mar 2016   5:06 pm                     Operator: XULIU
Sample    : JC16204-5                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  8:40 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
10) S Hexanol	5.86	5.29	622023	663764	4877.019	5205.205
Spiked Amount 5000.000			Recovery =		97.54%	104.10%
Target Compounds						
5) 2-Propanol	2.20	1.22	6342	7057	258.025	302.481

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

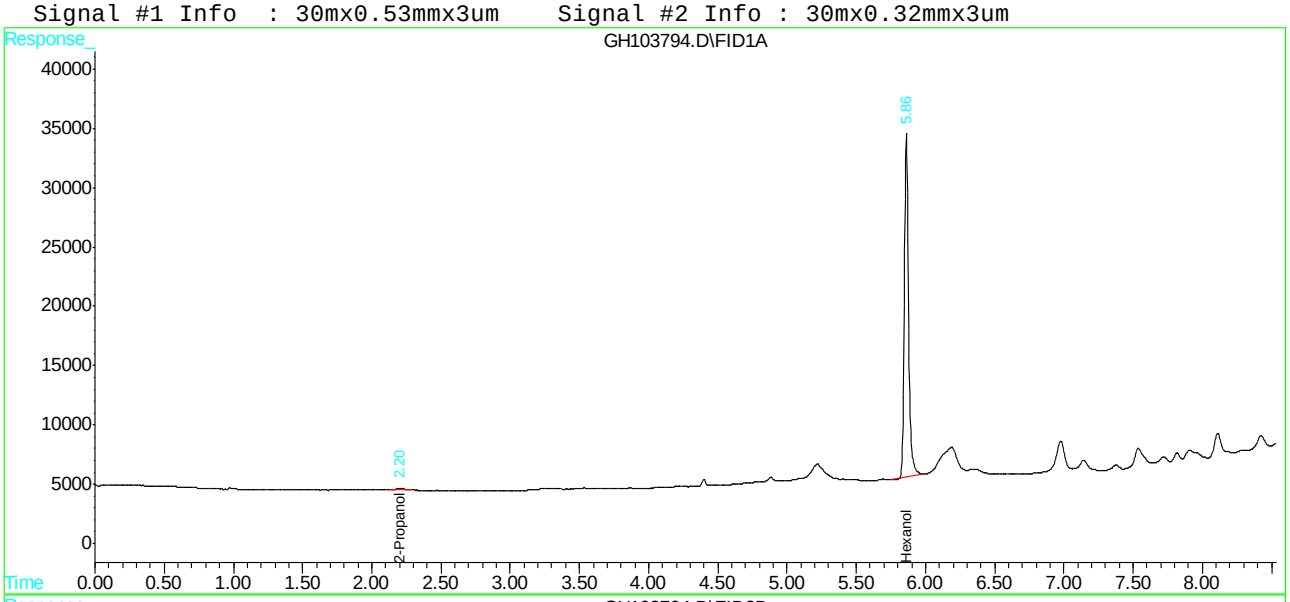
Quantitation Report (QT Reviewed)

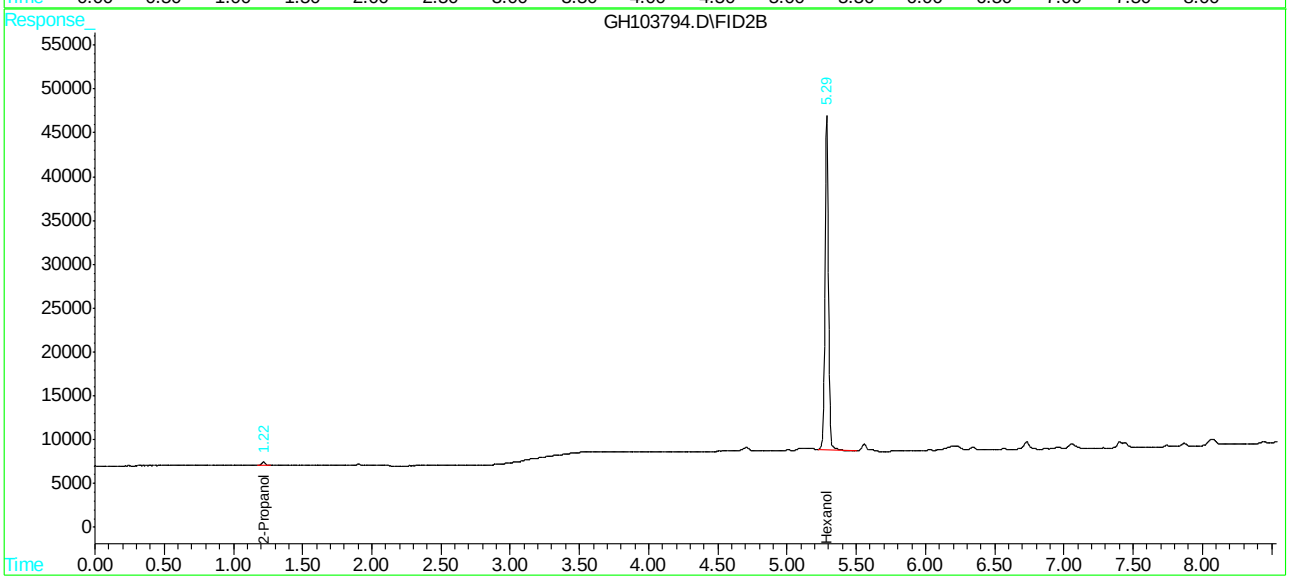
```
Data File : C:\HPCHEM\1\DATA\GH103794.D\FID1A.CH          Vial: 2
Acq On    : 17 Mar 2016   4:52 pm                     Operator: XULIU
Sample    : JC16204-5                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103794.D\FID2B.CH          Vial: 2
Acq On    : 17 Mar 2016   5:06 pm                     Operator: XULIU
Sample    : JC16204-5                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  8:40 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```





Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103793.D\FID1A.CH          Vial: 1
Acq On    : 17 Mar 2016   4:37 pm                     Operator: XULIU
Sample    : JC16204-6                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103793.D\FID2B.CH          Vial: 1
Acq On    : 17 Mar 2016   4:52 pm                     Operator: XULIU
Sample    : JC16204-6                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  8:39 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um

 Compound          RT#1   RT#2    Resp#1   Resp#2     PPB       PPB
---------------------------------------------------------------------

System Monitoring Compounds
10) S   Hexanol           5.86   5.29    599514   652176 4700.532  5114.329
  Spiked Amount   5000.000                  Recovery     =   94.01%   102.29%

Target Compounds
```

11.1.6

11

```
---------------------------------------------------------------------------
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40%  (m)=manual int.
GH103793.D  MGH5193.M      Fri Mar 18 09:11:46 2016      GCGH
```

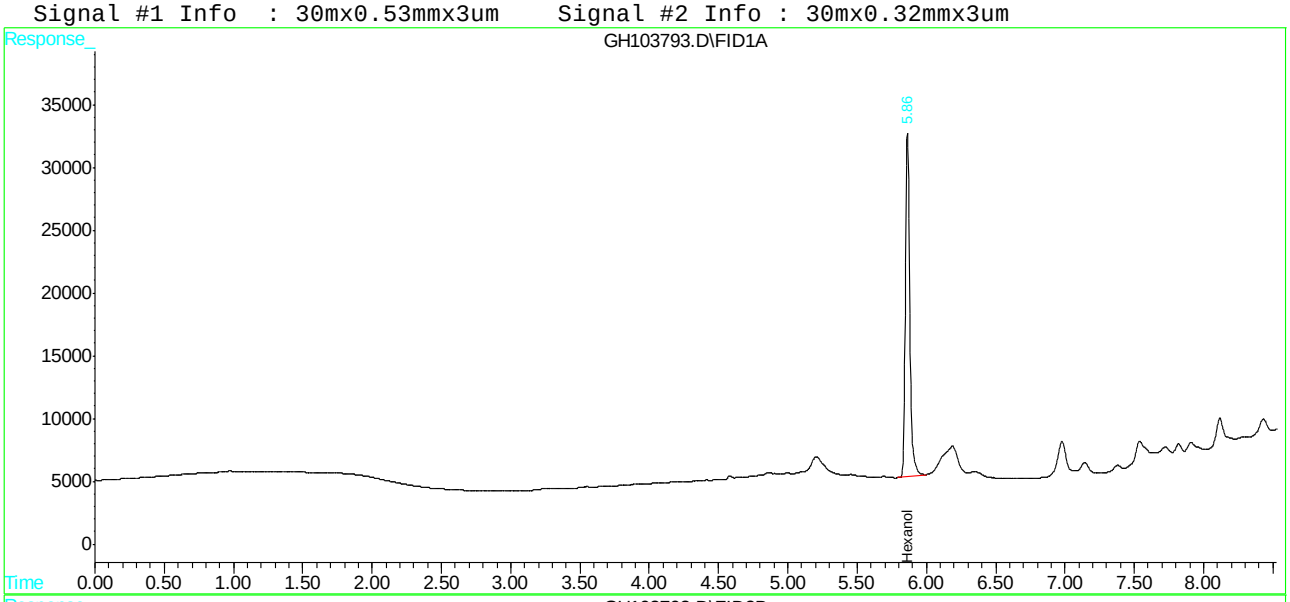
Quantitation Report (QT Reviewed)

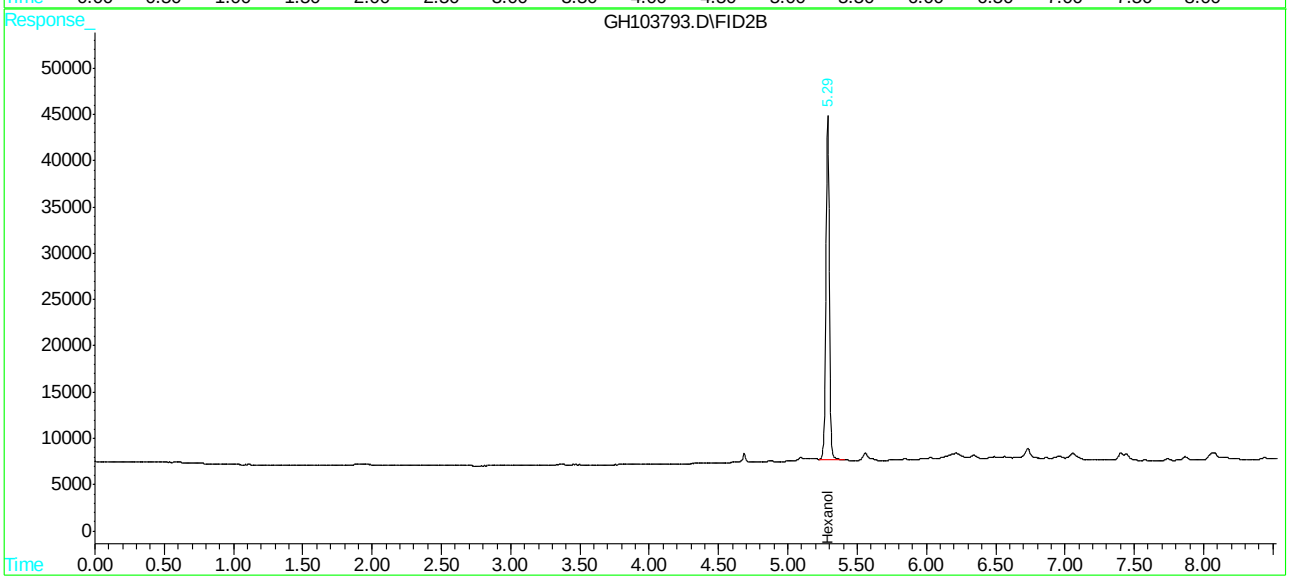
```
Data File : C:\HPCHEM\1\DATA\GH103793.D\FID1A.CH          Vial: 1
Acq On    : 17 Mar 2016   4:37 pm                     Operator: XULIU
Sample    : JC16204-6                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103793.D\FID2B.CH          Vial: 1
Acq On    : 17 Mar 2016   4:52 pm                     Operator: XULIU
Sample    : JC16204-6                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  8:39 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```





Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103790.D\FID1A.CH          Vial: 29
Acq On    : 17 Mar 2016   3:27 pm                     Operator: XULIU
Sample    : JC16204-7                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103790.D\FID2B.CH          Vial: 29
Acq On    : 17 Mar 2016   3:49 pm                     Operator: XULIU
Sample    : JC16204-7                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  7:50 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um

 Compound          RT#1   RT#2    Resp#1   Resp#2     PPB       PPB
---------------------------------------------------------------------

System Monitoring Compounds
10) S   Hexanol           5.87   5.29    592879   644939 4648.511  5057.580
  Spiked Amount   5000.000                  Recovery     =   92.97%   101.15%

Target Compounds
```

11.1.7

11

```
---------------------------------------------------------------------------
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40%  (m)=manual int.
GH103790.D  MGH5193.M      Fri Mar 18 09:25:49 2016      GCGH
```


SGS ACCUTEST JC16204

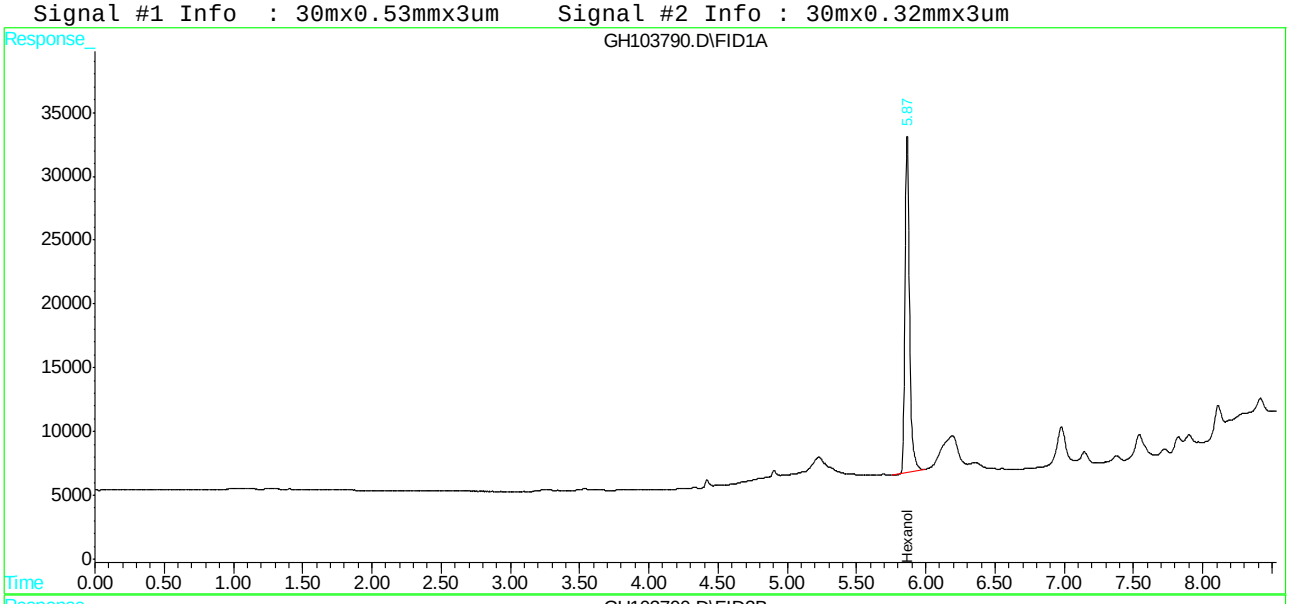
Quantitation Report (QT Reviewed)

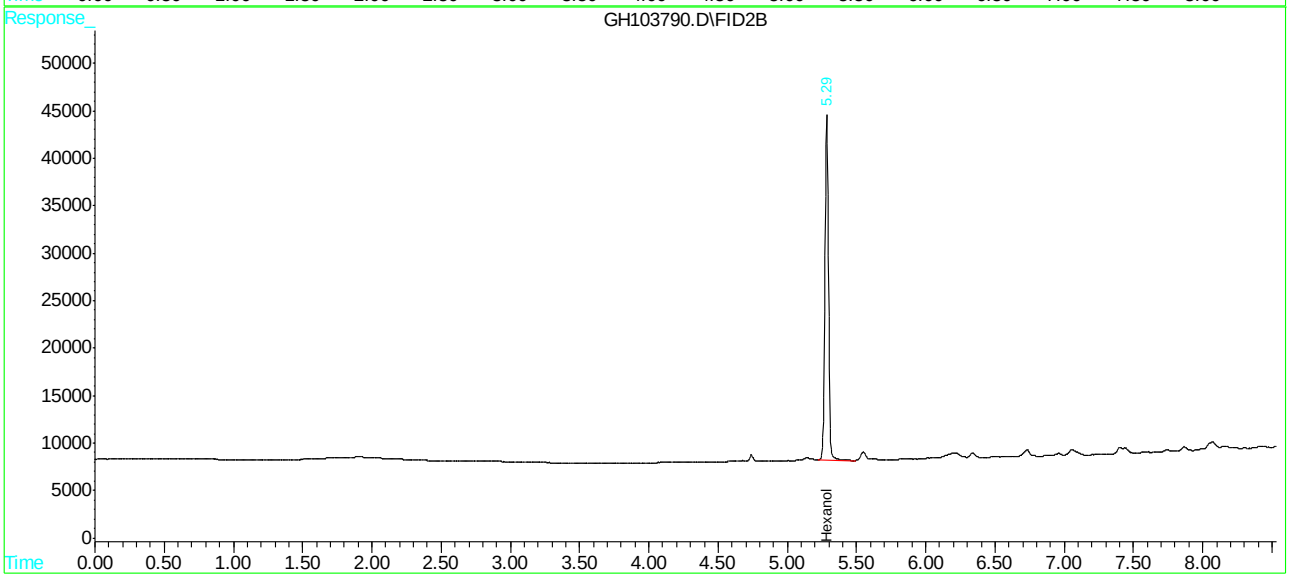
```
Data File : C:\HPCHEM\1\DATA\GH103790.D\FID1A.CH          Vial: 29
Acq On    : 17 Mar 2016   3:27 pm                     Operator: XULIU
Sample    : JC16204-7                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103790.D\FID2B.CH          Vial: 29
Acq On    : 17 Mar 2016   3:49 pm                     Operator: XULIU
Sample    : JC16204-7                                 Inst    : GCGH
Misc      : GC47941,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  7:50 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```





Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103785.D\FID1A.CH          Vial: 91
Acq On    : 17 Mar 2016   2:11 pm                     Operator: XULIU
Sample    : MB2                                       Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103785.D\FID2B.CH          Vial: 91
Acq On    : 17 Mar 2016   2:29 pm                     Operator: XULIU
Sample    : MB2                                       Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  7:38 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um

 Compound          RT#1   RT#2    Resp#1   Resp#2     PPB       PPB
---------------------------------------------------------------------

System Monitoring Compounds
10) S   Hexanol           5.87   5.29    571458   610194 4480.562  4785.110
  Spiked Amount   5000.000                  Recovery     =   89.61%    95.70%

Target Compounds
```

11.2.1

11

```
---------------------------------------------------------------------------
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40%  (m)=manual int.
GH103785.D  MGH5193.M      Fri Mar 18 08:36:15 2016      GCGH
```


SGS ACCUTEST JC16204

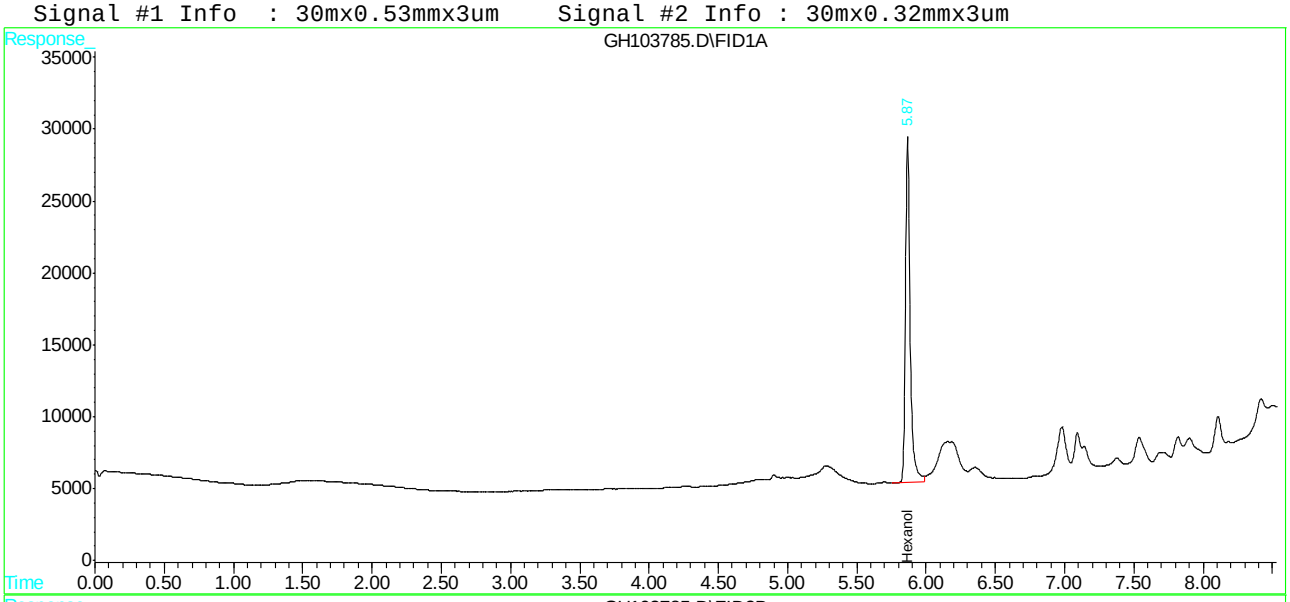
Quantitation Report (QT Reviewed)

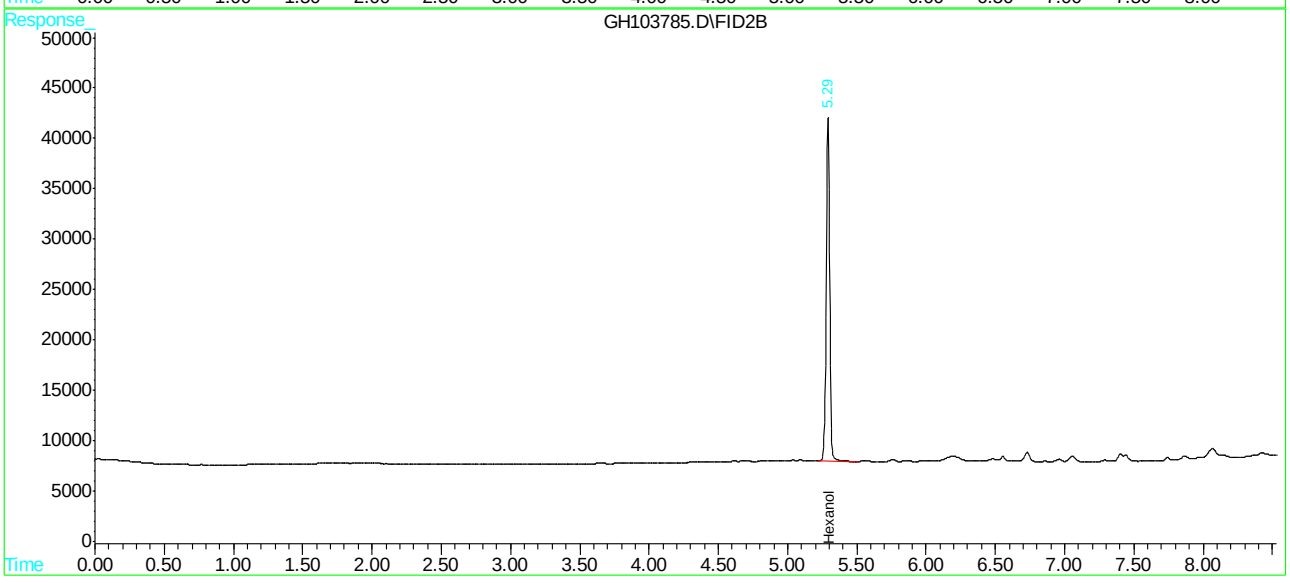
```
Data File : C:\HPCHEM\1\DATA\GH103785.D\FID1A.CH          Vial: 91
Acq On    : 17 Mar 2016   2:11 pm                     Operator: XULIU
Sample    : MB2                                       Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103785.D\FID2B.CH          Vial: 91
Acq On    : 17 Mar 2016   2:29 pm                     Operator: XULIU
Sample    : MB2                                       Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  7:38 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```





Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103792.D\FID1A.CH          Vial: 91
Acq On    : 17 Mar 2016   4:23 pm                     Operator: XULIU
Sample    : MB3                                       Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103792.D\FID2B.CH          Vial: 91
Acq On    : 17 Mar 2016   4:37 pm                     Operator: XULIU
Sample    : MB3                                       Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  7:39 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um

 Compound          RT#1   RT#2    Resp#1   Resp#2     PPB       PPB
---------------------------------------------------------------------

System Monitoring Compounds
10) S   Hexanol           5.87   5.29    542499   604519 4253.500  4740.606
  Spiked Amount   5000.000                  Recovery     =   85.07%    94.81%

Target Compounds
```

11.2.2

11

```
---------------------------------------------------------------------------
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40%  (m)=manual int.
GH103792.D  MGH5193.M      Fri Mar 18 08:38:22 2016      GCGH
```


SGS ACCUTEST JC16204

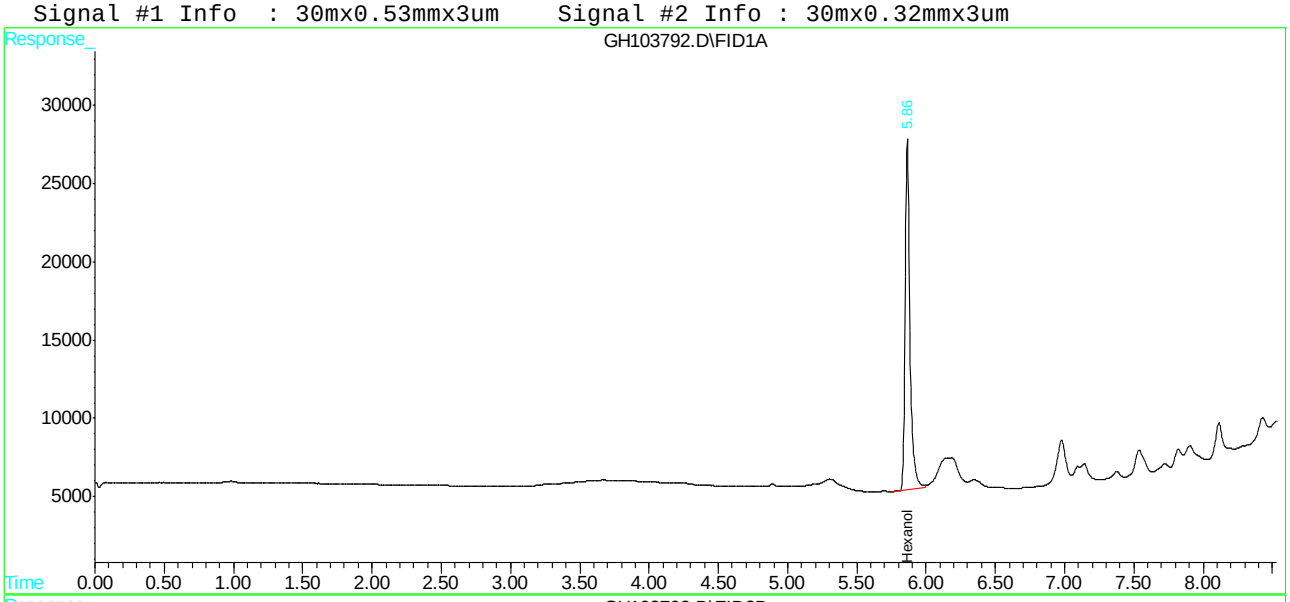
Quantitation Report (QT Reviewed)

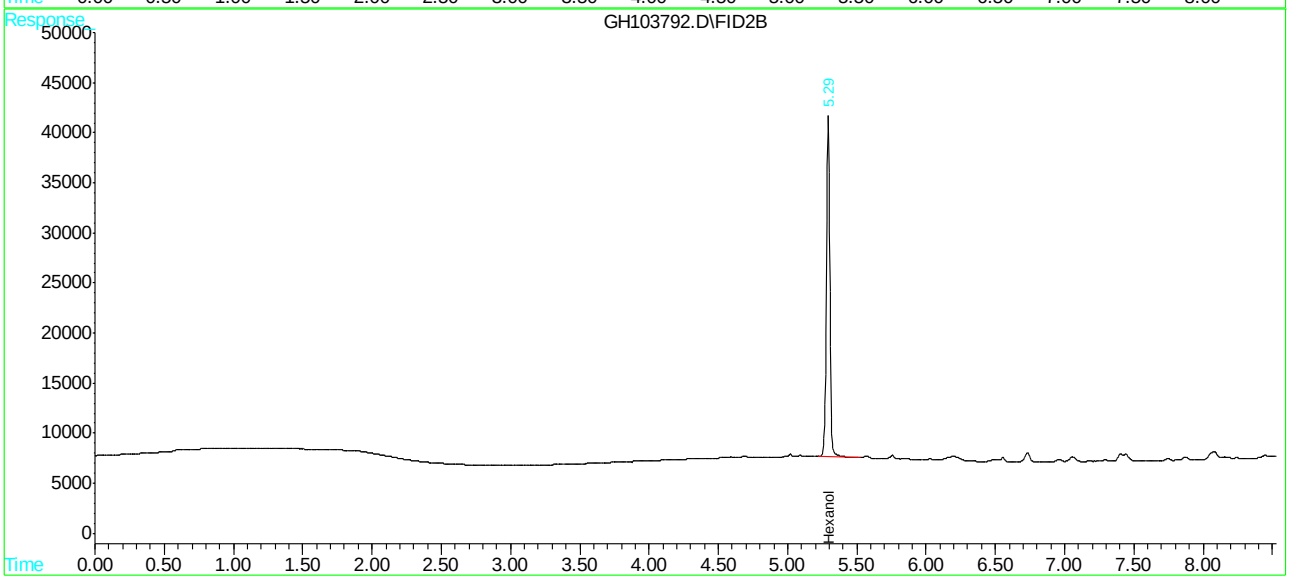
```
Data File : C:\HPCHEM\1\DATA\GH103792.D\FID1A.CH          Vial: 91
Acq On    : 17 Mar 2016   4:23 pm                     Operator: XULIU
Sample    : MB3                                       Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103792.D\FID2B.CH          Vial: 91
Acq On    : 17 Mar 2016   4:37 pm                     Operator: XULIU
Sample    : MB3                                       Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  7:39 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```





SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103775.D\FID1A.CH          Vial: 93
Acq On    : 17 Mar 2016  10:54 am                     Operator: XULIU
Sample    : MB1                                       Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103775.D\FID2B.CH          Vial: 93
Acq On    : 17 Mar 2016  11:08 am                     Operator: XULIU
Sample    : MB1                                       Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 17 12:52 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 12:48:46 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```

Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
System Monitoring Compounds						
10) S Hexanol	5.87	5.29	610713	628642	4788.340	4929.778
Spiked Amount 5000.000			Recovery	=	95.77%	98.60%
Target Compounds						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

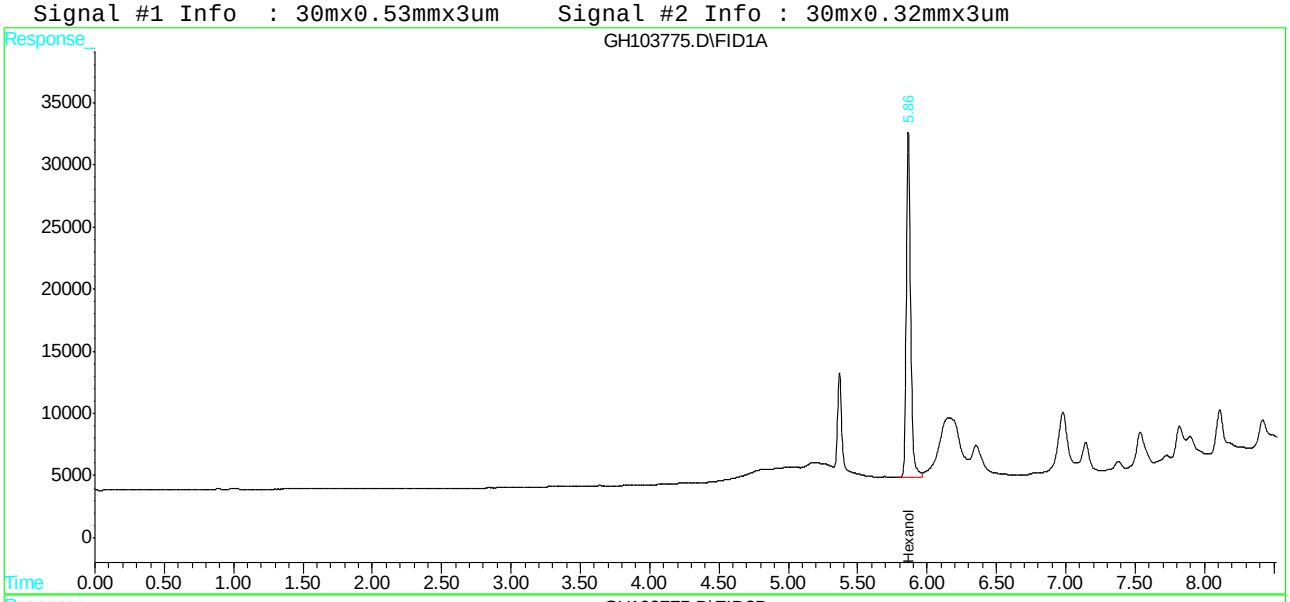
Quantitation Report (QT Reviewed)

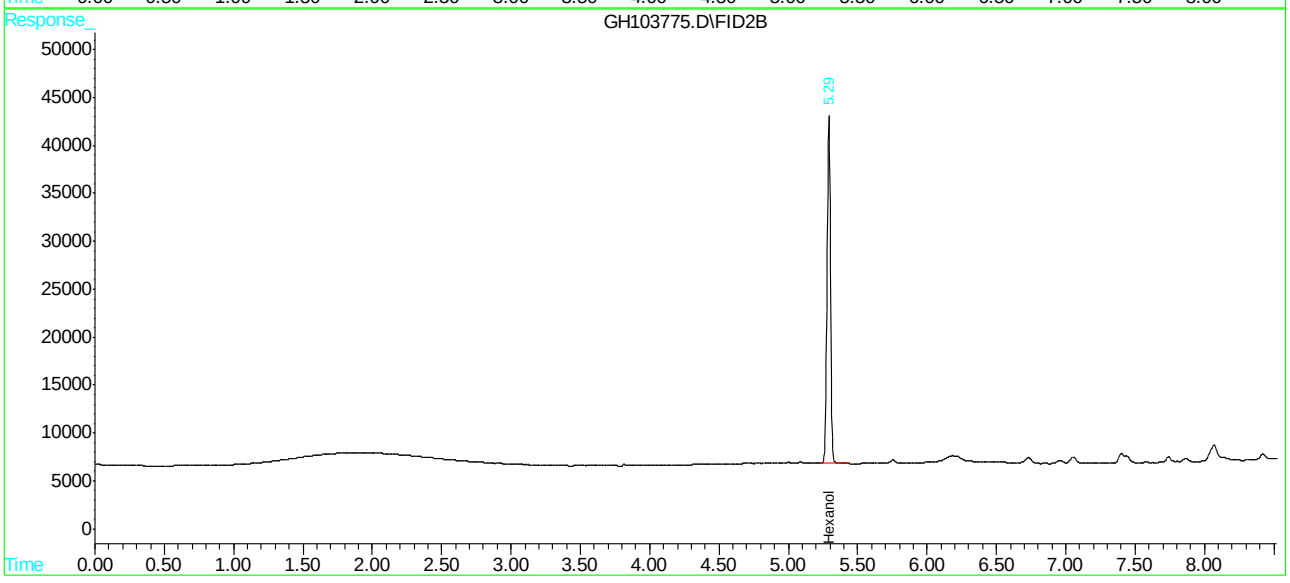
```
Data File : C:\HPCHEM\1\DATA\GH103775.D\FID1A.CH          Vial: 93
Acq On    : 17 Mar 2016  10:54 am                     Operator: XULIU
Sample    : MB1                                       Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103775.D\FID2B.CH          Vial: 93
Acq On    : 17 Mar 2016  11:08 am                     Operator: XULIU
Sample    : MB1                                       Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 17 12:52 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 12:48:46 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```





SGS ACCUTEST JC16204

Manual Integrations
APPROVED
(compounds with "m" flag)
Dana Tryon
03/21/16 10:38

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103776.D\FID1A.CH          Vial: 94
Acq On    : 17 Mar 2016  11:08 am                     Operator: XULIU
Sample    : BS                                        Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103776.D\FID2B.CH          Vial: 94
Acq On    : 17 Mar 2016  11:23 am                     Operator: XULIU
Sample    : BS                                        Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 17 13:01 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 12:55:32 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
10) S	Hexanol	5.87	5.30	576512	622119	4520.181	4878.625
	Spiked Amount 5000.000			Recovery	=	90.40%	97.57%
	Target Compounds						
1)	Methanol	1.40	0.78	58590	72090	3357.055m	4151.672
2)	Ethanol	1.83	1.00	114105	109673	5084.881m	4971.209
3)	Tert-Butyl Alcoh	2.50	1.43	153607	164870	4505.641	5154.645
4)	1-Propanol	2.97	1.74	135918	141739	4676.229	4930.465
5)	2-Propanol	2.21	1.22	109490	118997	4454.459	5100.696
7)	Isobutanol	3.79	2.65	160357	171127	4738.784	5305.368
8)	1-Butanol	4.21	3.14	146884	161229	4394.352	4544.630
9)	2-Butanol	3.40	2.27	137254	143932	4469.958	5026.034

11.3.1

11

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

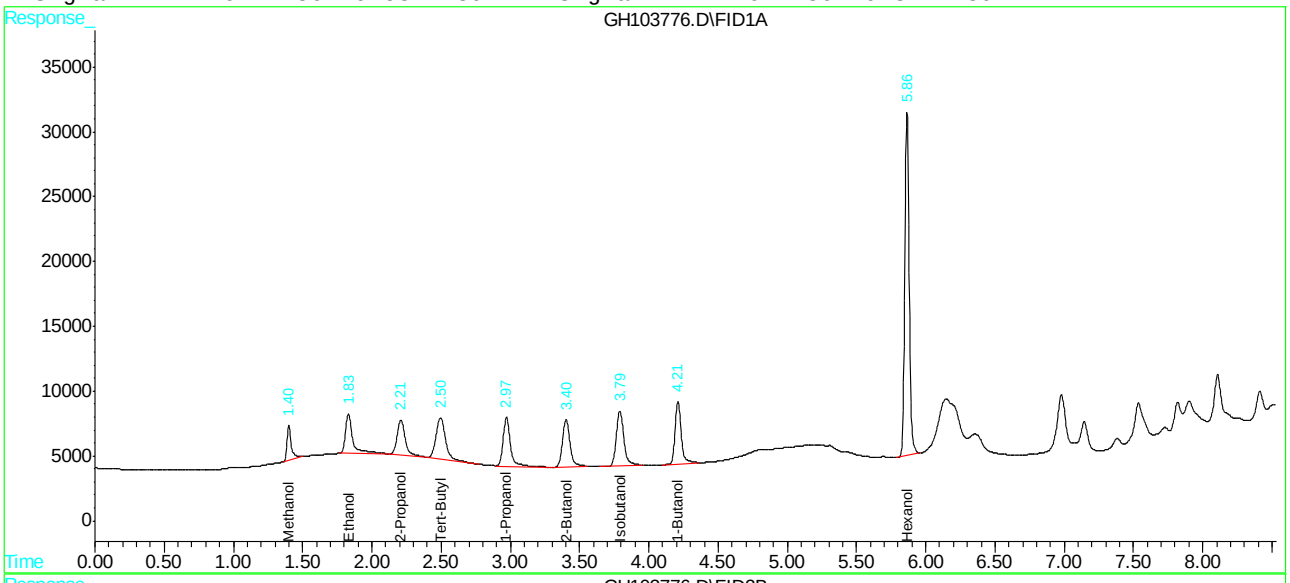
Quantitation Report (QT Reviewed)

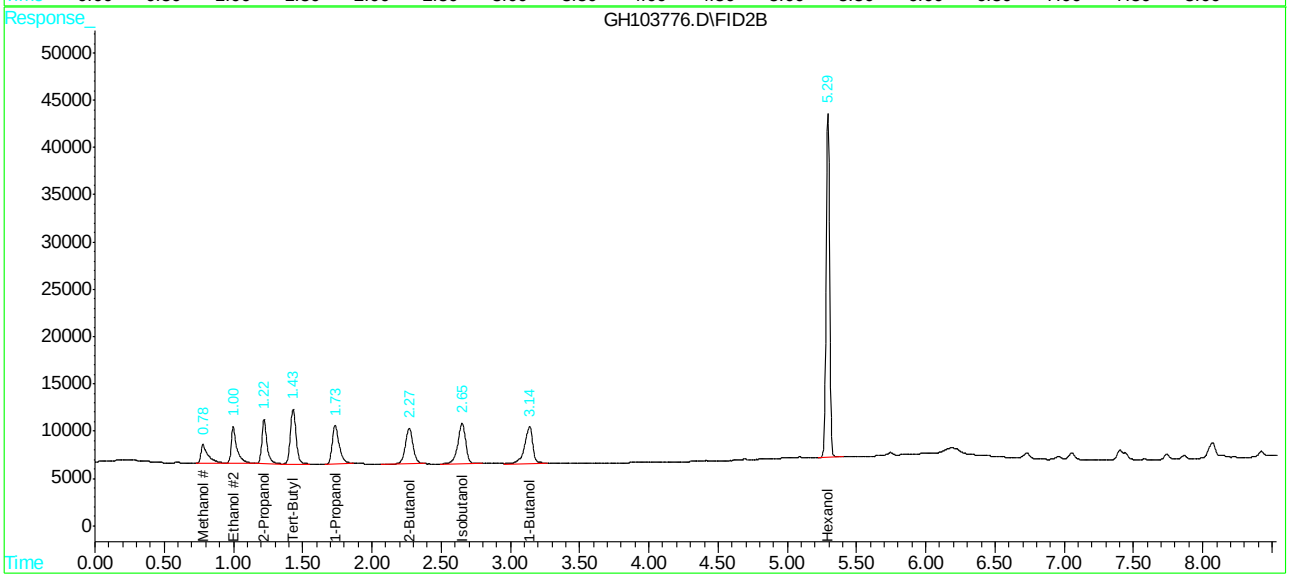
```
Data File : C:\HPCHEM\1\DATA\GH103776.D\FID1A.CH          Vial: 94
Acq On    : 17 Mar 2016  11:08 am                     Operator: XULIU
Sample    : BS                                        Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103776.D\FID2B.CH          Vial: 94
Acq On    : 17 Mar 2016  11:23 am                     Operator: XULIU
Sample    : BS                                        Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 17 13:01 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 12:55:32 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```





SGS ACCUTEST JC16204

Manual Integration Approval Summary

Sample Number:	GGH5211-BS	**Method:**	SW846-8015C (DAI)
Lab FileID:	GH103776.D	**Analyst approved:**	03/18/16 08:52 Xu Liu
Injection Time:	03/17/16 11:08	**Supervisor approved:**	03/21/16 10:38 Dana Tryon

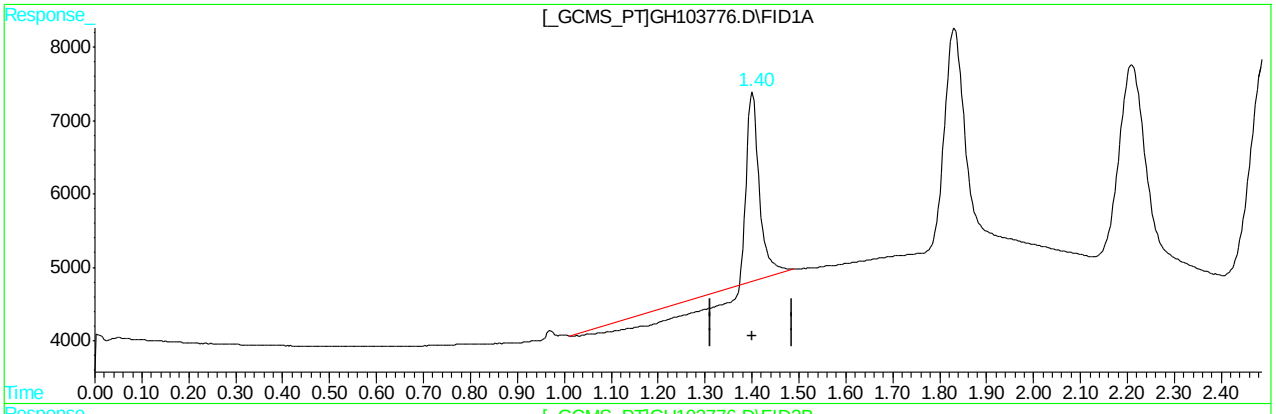
Parameter	CAS	Sig#	R.T. (min.)	Reason
Methanol	67-56-1	1	1.40	Poor instrument integration
Ethanol	64-17-5	1	1.83	Poor instrument integration

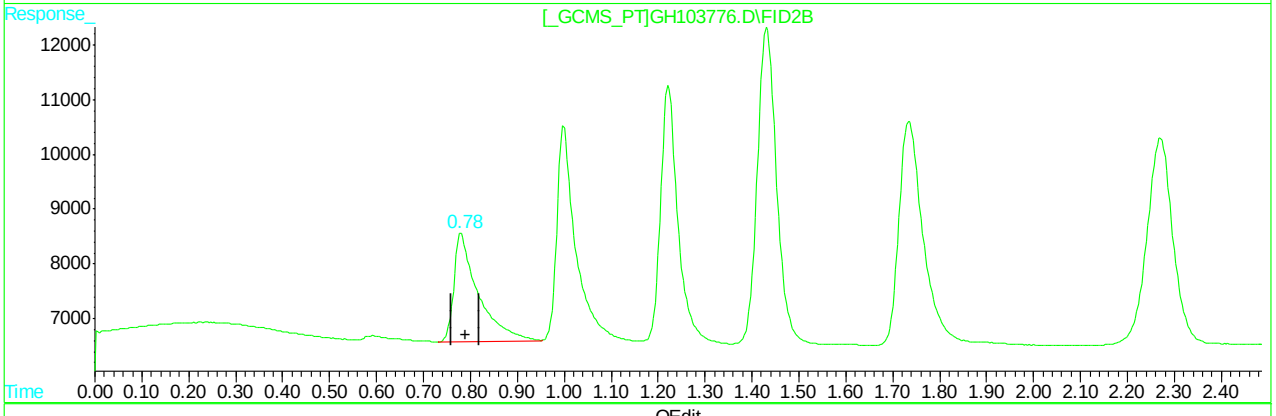
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\GH103776.D\FID1A.CH          Vial: 94
Acq On    : 17 Mar 2016  11:08 am                     Operator: XULIU
Sample    : BS                                        Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103776.D\FID2B.CH          Vial: 94
Acq On    : 17 Mar 2016  11:23 am                     Operator: XULIU
Sample    : BS                                        Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 17 12:56 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 12:55:32 2016
Response via : Multiple Level Calibration
```





QEdit

(1) Methanol

1.40min 1065.509PPB

response 18596

(1) Methanol #2

0.78min 4151.672PPB

response 72090

(+) = Expected Retention Time

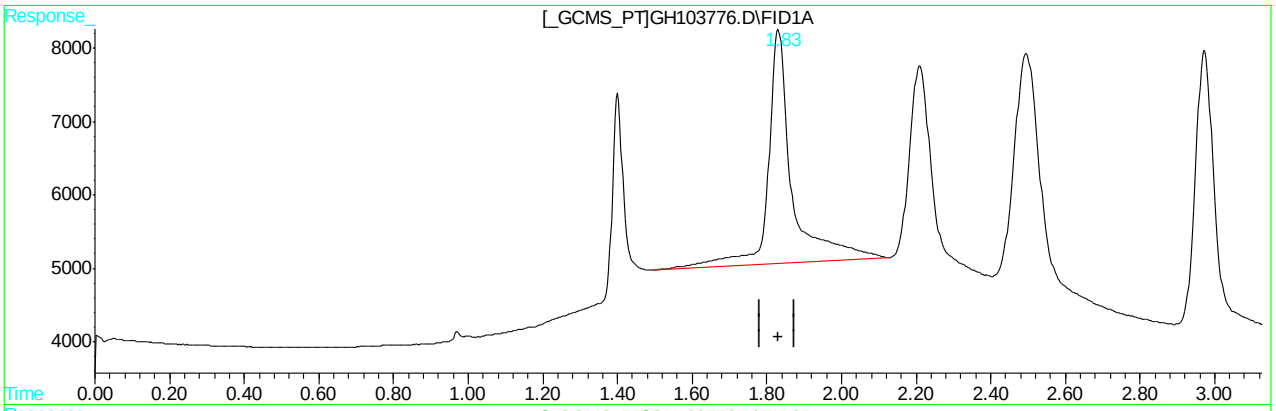
GH103776.D MGH5193.M Thu Mar 17 12:59:52 2016 GCGH

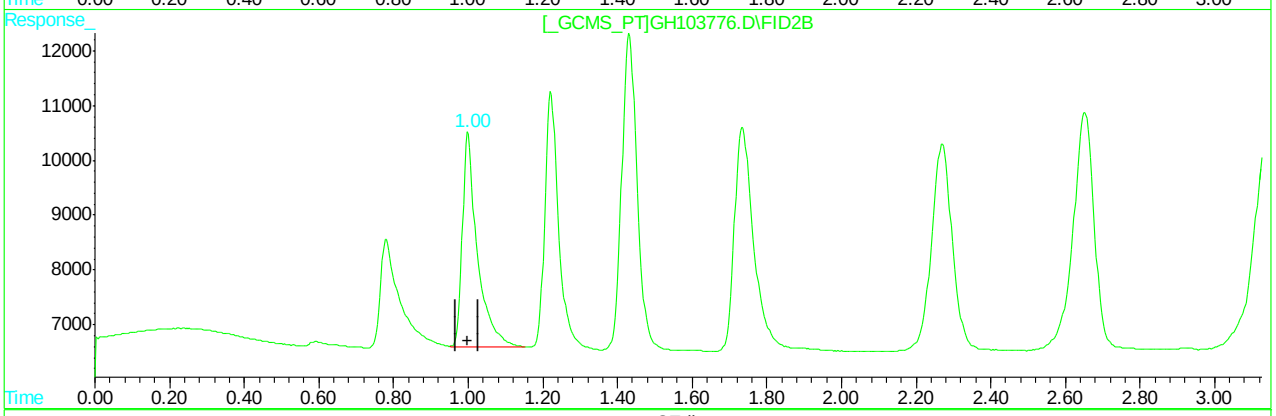
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\GH103776.D\FID1A.CH          Vial: 94
Acq On    : 17 Mar 2016  11:08 am                     Operator: XULIU
Sample    : BS                                        Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103776.D\FID2B.CH          Vial: 94
Acq On    : 17 Mar 2016  11:23 am                     Operator: XULIU
Sample    : BS                                        Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 17 12:56 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 12:55:32 2016
Response via : Multiple Level Calibration
```





QEdit

(2) Ethanol

1.83min 6321.842PPB

response 141862

(2) Ethanol #2

1.00min 4971.209PPB

response 109673

(+) = Expected Retention Time

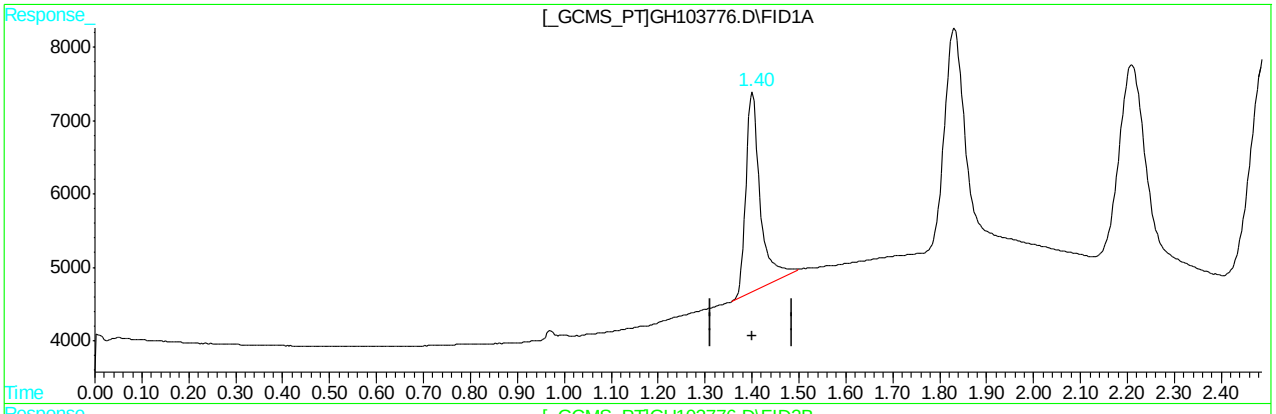
GH103776.D MGH5193.M Thu Mar 17 12:59:58 2016 GCGH

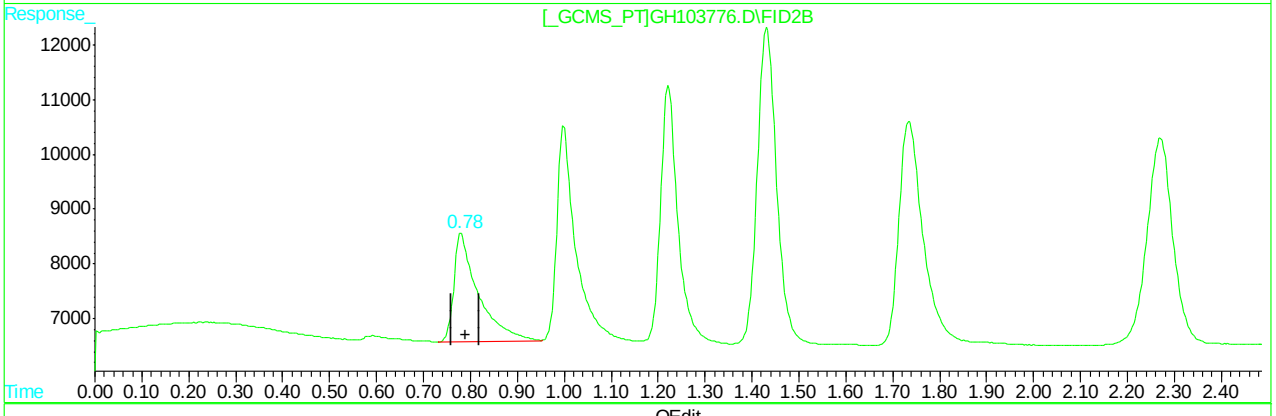
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\GH103776.D\FID1A.CH          Vial: 94
Acq On    : 17 Mar 2016  11:08 am                     Operator: XULIU
Sample    : BS                                        Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103776.D\FID2B.CH          Vial: 94
Acq On    : 17 Mar 2016  11:23 am                     Operator: XULIU
Sample    : BS                                        Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 17 12:56 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 12:55:32 2016
Response via : Multiple Level Calibration
```





QEdit

(1) Methanol

1.40min 3357.055PPB m

response 58590

(1) Methanol #2

0.78min 4151.672PPB

response 72090

(+) = Expected Retention Time

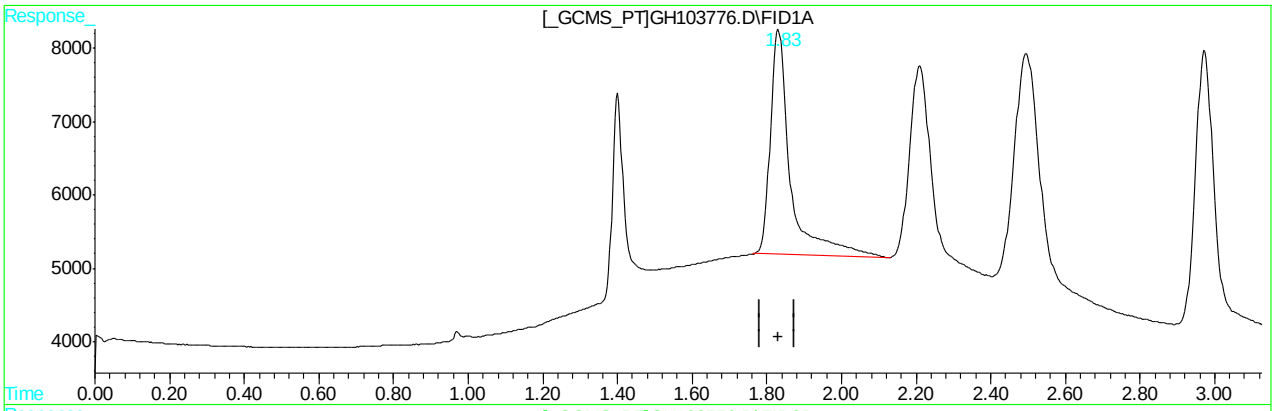
GH103776.D MGH5193.M Thu Mar 17 13:01:16 2016 GCGH

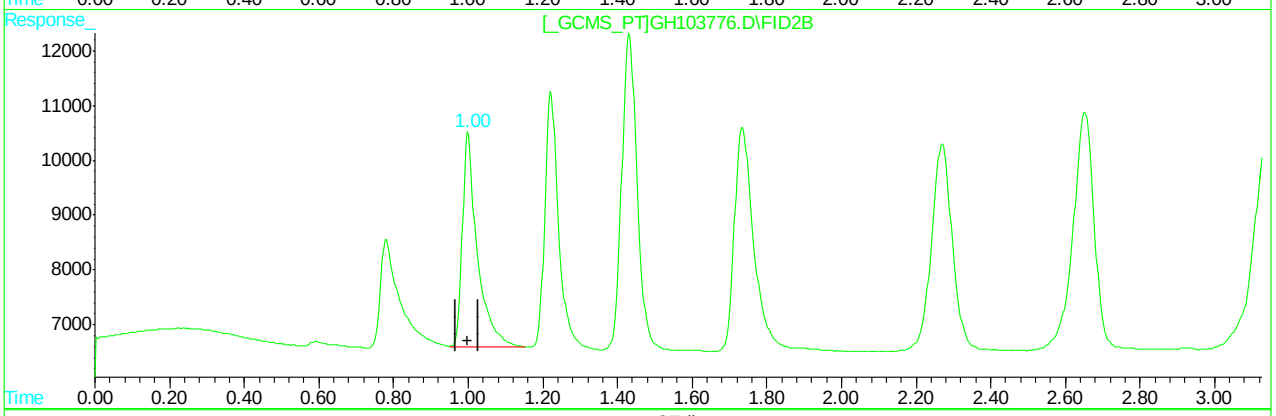
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\GH103776.D\FID1A.CH          Vial: 94
Acq On    : 17 Mar 2016  11:08 am                     Operator: XULIU
Sample    : BS                                        Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103776.D\FID2B.CH          Vial: 94
Acq On    : 17 Mar 2016  11:23 am                     Operator: XULIU
Sample    : BS                                        Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 17 12:56 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 12:55:32 2016
Response via : Multiple Level Calibration
```





QEdit

(2) Ethanol

1.83min 5084.881PPB m

response 114105

(2) Ethanol #2

1.00min 4971.209PPB

response 109673

(+) = Expected Retention Time

GH103776.D MGH5193.M Thu Mar 17 13:01:49 2016 GCGH

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\GH103778.D\FID1A.CH Vial: 16
Acq On : 17 Mar 2016 12:03 pm Operator: XULIU
Sample : JC15796-1MS Inst : GCGH
Misc : GC47904,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103778.D\FID2B.CH Vial: 16
Acq On : 17 Mar 2016 12:17 pm Operator: XULIU
Sample : JC15796-1MS Inst : GCGH
Misc : GC47904,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Mar 18 7:59 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Thu Mar 17 15:45:36 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
10) S	Hexanol	5.87	5.30	580397	636112	4550.649	4988.355
Spiked Amount	5000.000			Recovery	=	91.01%	99.77%
	Target Compounds						
1)	Methanol	1.40	0.78	78456	85773	4495.341	4939.679
2)	Ethanol	1.83	1.00	102574	114781	4571.040	5202.732
3)	Tert-Butyl Alcoh	2.50	1.43	161373	170756	4733.412	5338.666
4)	1-Propanol	2.97	1.74	134809	152026	4638.079	5288.319
5)	2-Propanol	2.21	1.22	111525	123731	4537.255	5303.596
7)	Isobutanol	3.79	2.65	167638	170515	4953.951	5286.406
8)	1-Butanol	4.21	3.14	161452	171971	4830.206	4847.408
9)	2-Butanol	3.40	2.28	139371	150894	4538.898	5269.134

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GH103778.D MGH5193.M Fri Mar 18 07:59:55 2016 GCGH

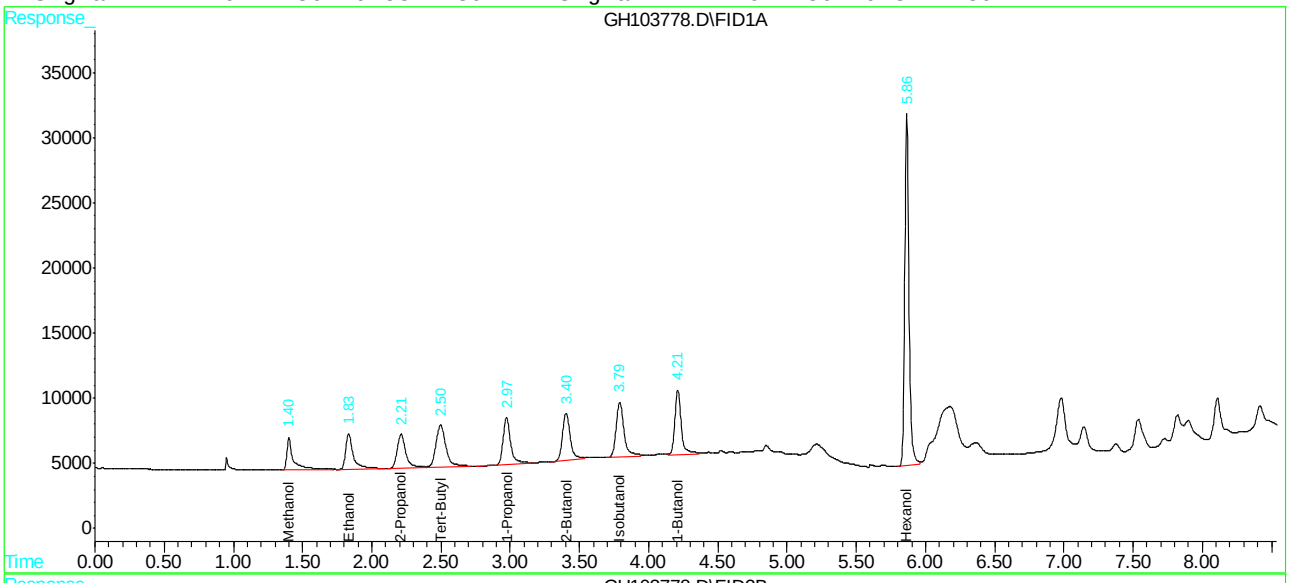
Quantitation Report (QT Reviewed)

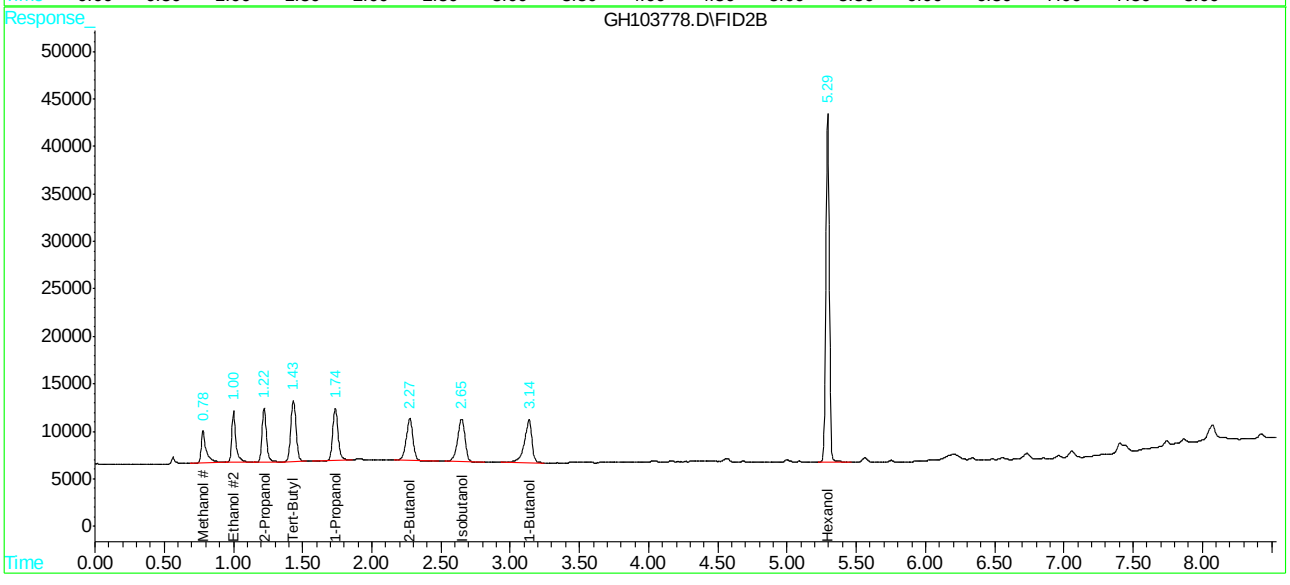
Data File : C:\HPCHEM\1\DATA\GH103778.D\FID1A.CH Vial: 16
Acq On : 17 Mar 2016 12:03 pm Operator: XULIU
Sample : JC15796-1MS Inst : GCGH
Misc : GC47904,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103778.D\FID2B.CH Vial: 16
Acq On : 17 Mar 2016 12:17 pm Operator: XULIU
Sample : JC15796-1MS Inst : GCGH
Misc : GC47904,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Mar 18 7:59 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Thu Mar 17 15:45:36 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um





SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103779.D\FID1A.CH          Vial: 17
Acq On    : 17 Mar 2016  12:17 pm                     Operator: XULIU
Sample    : JC15796-1MSD                              Inst    : GCGH
Misc      : GC47904,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103779.D\FID2B.CH          Vial: 17
Acq On    : 17 Mar 2016  12:32 pm                     Operator: XULIU
Sample    : JC15796-1MSD                              Inst    : GCGH
Misc      : GC47904,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  8:00 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:47:14 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
10) S	Hexanol	5.87	5.29	572920	609303	4492.020	4778.127
	Spiked Amount 5000.000			Recovery	=	89.84%	95.56%
	Target Compounds						
1)	Methanol	1.40	0.78	82029	87576	4700.075	5043.502
2)	Ethanol	1.84	1.00	122692	117175	5467.569	5311.238
3)	Tert-Butyl Alcoh	2.50	1.43	175658	170308	5152.448	5324.668
4)	1-Propanol	2.98	1.73	144353	144220	4966.428	5016.792
5)	2-Propanol	2.21	1.22	131509	124402	5350.250	5332.367
7)	Isobutanol	3.79	2.65	173143	168805	5116.610	5233.388
8)	1-Butanol	4.21	3.13	175241	168365	5242.716	4745.755
9)	2-Butanol	3.41	2.27	149213	148651	4859.409	5190.831

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

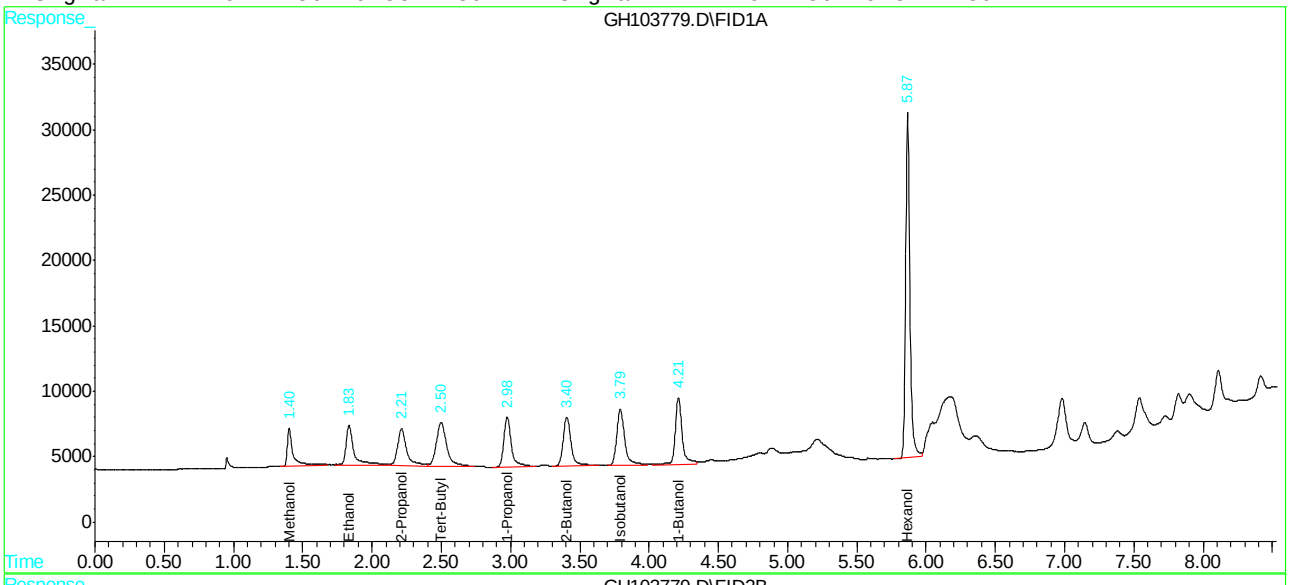
Quantitation Report (QT Reviewed)

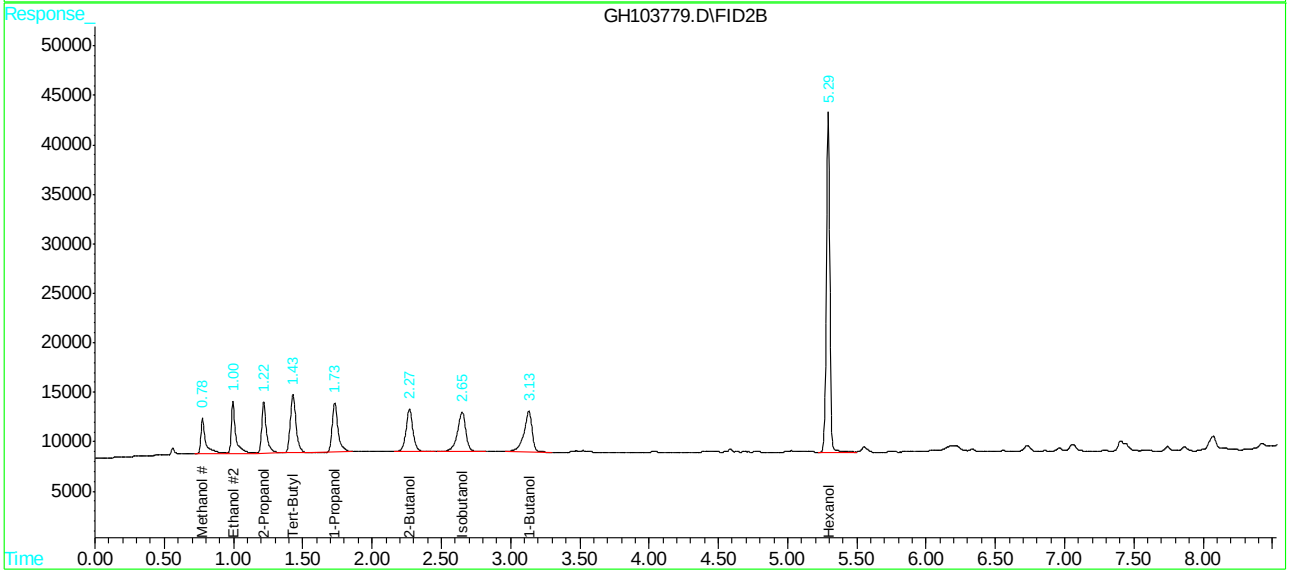
Data File : C:\HPCHEM\1\DATA\GH103779.D\FID1A.CH Vial: 17
Acq On : 17 Mar 2016 12:17 pm Operator: XULIU
Sample : JC15796-1MSD Inst : GCGH
Misc : GC47904,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103779.D\FID2B.CH Vial: 17
Acq On : 17 Mar 2016 12:32 pm Operator: XULIU
Sample : JC15796-1MSD Inst : GCGH
Misc : GC47904,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Mar 18 8:00 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Thu Mar 17 15:47:14 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um





Manual Integrations APPROVED (compounds with "m" flag)
Jessica Reitan-Chu
03/01/16 14:34

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103536.D\FID1A.CH          Vial: 17
Acq On    : 29 Feb 2016   9:41 am                     Operator: XULIU
Sample    : IC5193-1000                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103536.D\FID2B.CH          Vial: 17
Acq On    : 29 Feb 2016   9:56 am                     Operator: XULIU
Sample    : IC5193-1000                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Feb 29 13:41 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Mon Feb 29 13:34:22 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
10) S	Hexanol	5.89	5.34	521870	515664	4414.308	4449.995
	Spiked Amount 5000.000			Recovery	=	88.29%	89.00%
	Target Compounds						
1)	Methanol	1.43	0.80	18411	16136	1052.348	961.397
2)	Ethanol	1.86	1.02	22490	22670	971.203	1012.320
3)	Tert-Butyl Alcoh	2.52	1.47	37533	33699	1083.596	1045.494
4)	1-Propanol	3.00	1.78	30594	28909	1025.859	1001.376m
5)	2-Propanol	2.24	1.25	29488	24128	1177.659	1027.831
7)	Isobutanol	3.82	2.71	34848	31069	1012.693	960.595
8)	1-Butanol	4.24	3.19	36273	30738	1105.147	972.642
9)	2-Butanol	3.43	2.33	31759	29963	1039.954	1037.836

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

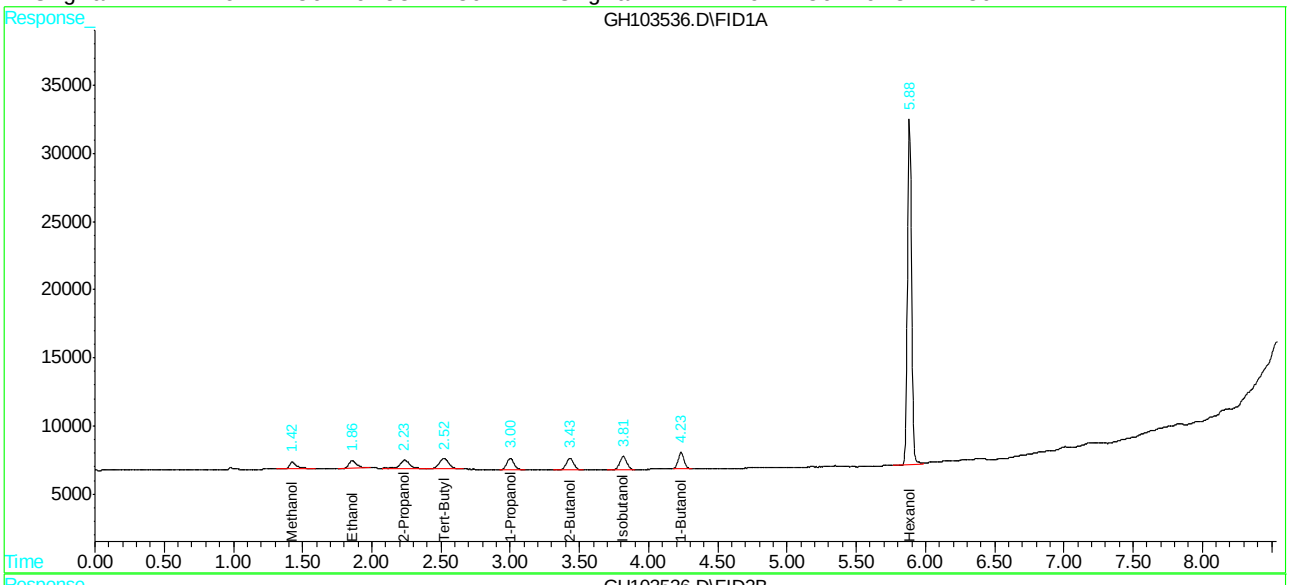
Quantitation Report (QT Reviewed)

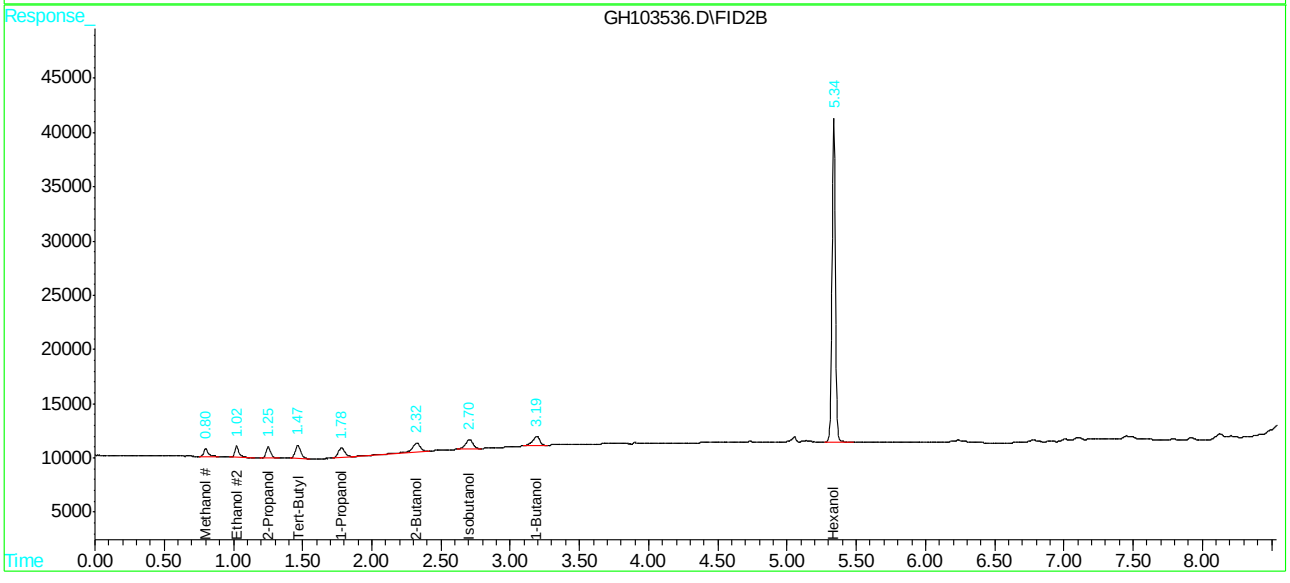
```
Data File : C:\HPCHEM\1\DATA\GH103536.D\FID1A.CH          Vial: 17
Acq On    : 29 Feb 2016   9:41 am                     Operator: XULIU
Sample    : IC5193-1000                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103536.D\FID2B.CH          Vial: 17
Acq On    : 29 Feb 2016   9:56 am                     Operator: XULIU
Sample    : IC5193-1000                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Feb 29 13:41 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Mon Feb 29 13:34:22 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```





Manual Integration Approval Summary

Sample Number:	GGH5193-IC5193	**Method:**	SW846-8015C (DAI)
Lab FileID:	GH103536.D	**Analyst approved:**	03/01/16 13:28 Xu Liu
Injection Time:	02/29/16 09:41	**Supervisor approved:**	03/01/16 14:34 Jessica Reitan-Chu

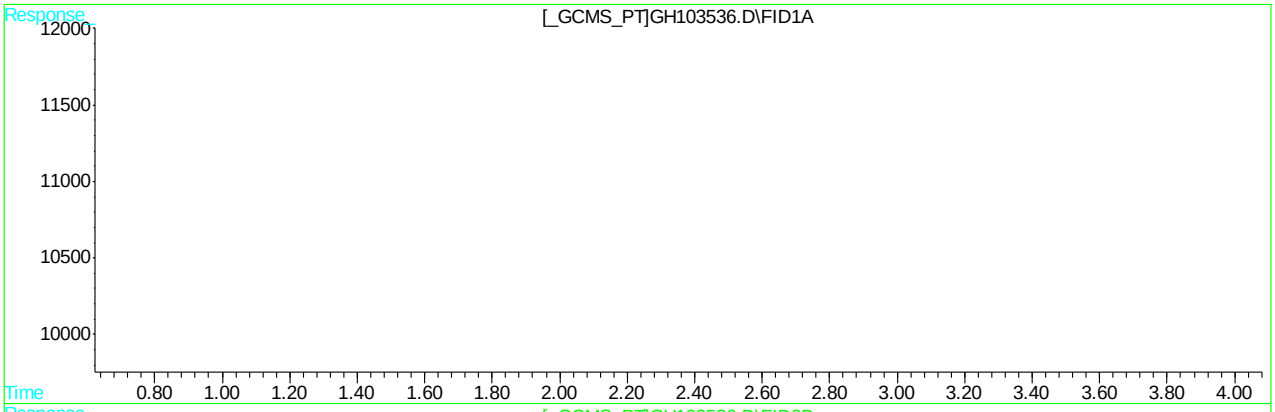
Parameter	CAS	Sig#	R.T. (min.)	Reason
n-Propyl Alcohol	71-23-8	2	1.78	Poorly defined baseline

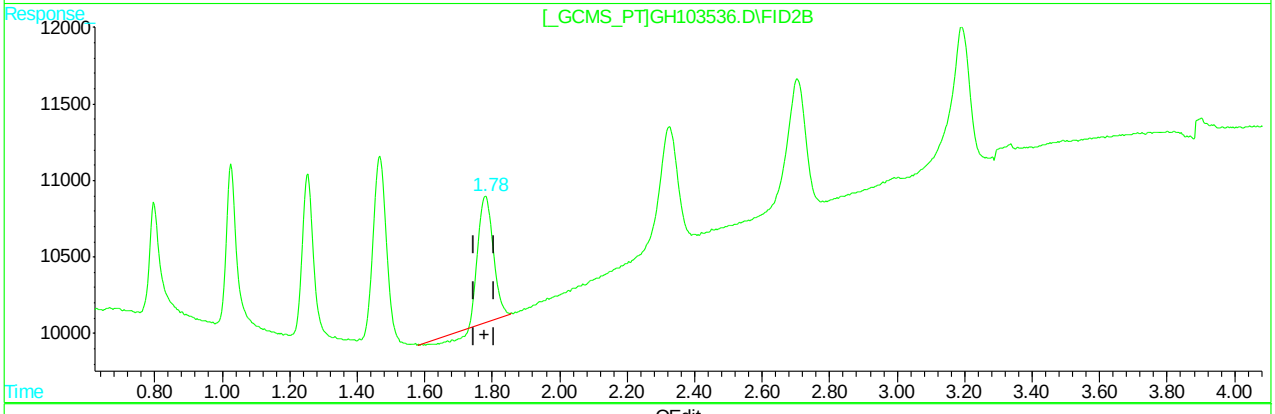
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\GH103536.D\FID1A.CH          Vial: 17
Acq On    : 29 Feb 2016   9:41 am                     Operator: XULIU
Sample    : IC5193-1000                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103536.D\FID2B.CH          Vial: 17
Acq On    : 29 Feb 2016   9:56 am                     Operator: XULIU
Sample    : IC5193-1000                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Feb 29 13:39 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Mon Feb 29 13:39:43 2016
Response via : Multiple Level Calibration
```





QEdit

(4) 1-Propanol

3.00min 1025.859PPB

response 30594

(4) 1-Propanol #2

1.78min 805.984PPB

response 23268

(+) = Expected Retention Time

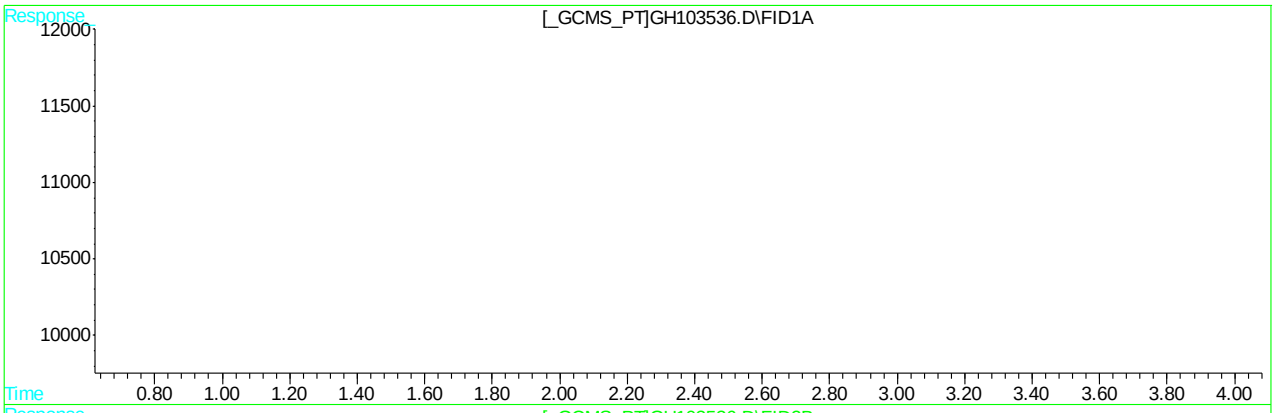
GH103536.D MGH5193.M Mon Feb 29 13:40:46 2016 GCGH

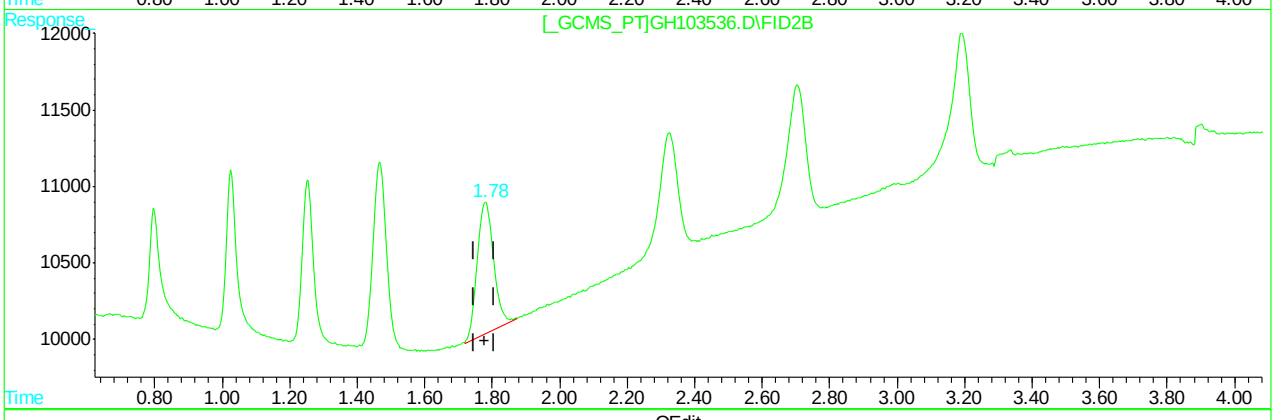
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\GH103536.D\FID1A.CH          Vial: 17
Acq On    : 29 Feb 2016   9:41 am                     Operator: XULIU
Sample    : IC5193-1000                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103536.D\FID2B.CH          Vial: 17
Acq On    : 29 Feb 2016   9:56 am                     Operator: XULIU
Sample    : IC5193-1000                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Feb 29 13:39 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Mon Feb 29 13:39:43 2016
Response via : Multiple Level Calibration
```





QEdit

(4) 1-Propanol

3.00min 1025.859PPB

response 30594

(4) 1-Propanol #2

1.78min 1001.376PPB m

response 28909

(+) = Expected Retention Time

GH103536.D MGH5193.M Mon Feb 29 13:41:35 2016 GCGH

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103538.D\FID1A.CH          Vial: 19
Acq On    : 29 Feb 2016  10:10 am                     Operator: XULIU
Sample    : IC5193-10000                              Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103538.D\FID2B.CH          Vial: 19
Acq On    : 29 Feb 2016  10:25 am                     Operator: XULIU
Sample    : IC5193-10000                              Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Feb 29 13:24 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Mon Feb 29 10:49:38 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
10) S	Hexanol	5.88	5.34	632380	618892	5290.958	5011.876
	Spiked Amount 5000.000			Recovery	=	105.82%	100.24%
	Target Compounds						
1)	Methanol	1.42	0.80	170293	171065	11684.918	11628.082
2)	Ethanol	1.85	1.02	235648	228413	11443.732	11055.620
3)	Tert-Butyl Alcoh	2.52	1.47	350977	331750	10799.667	10330.810
4)	1-Propanol	2.99	1.78	299088	292838	10599.555	10839.016
5)	2-Propanol	2.23	1.25	250373	240597	11170.240	10725.872
7)	Isobutanol	3.81	2.70	350529	337406	10985.588	10485.575
8)	1-Butanol	4.23	3.19	338910	326780	10764.220	10083.368
9)	2-Butanol	3.43	2.33	312227	298461	10912.214	11064.895

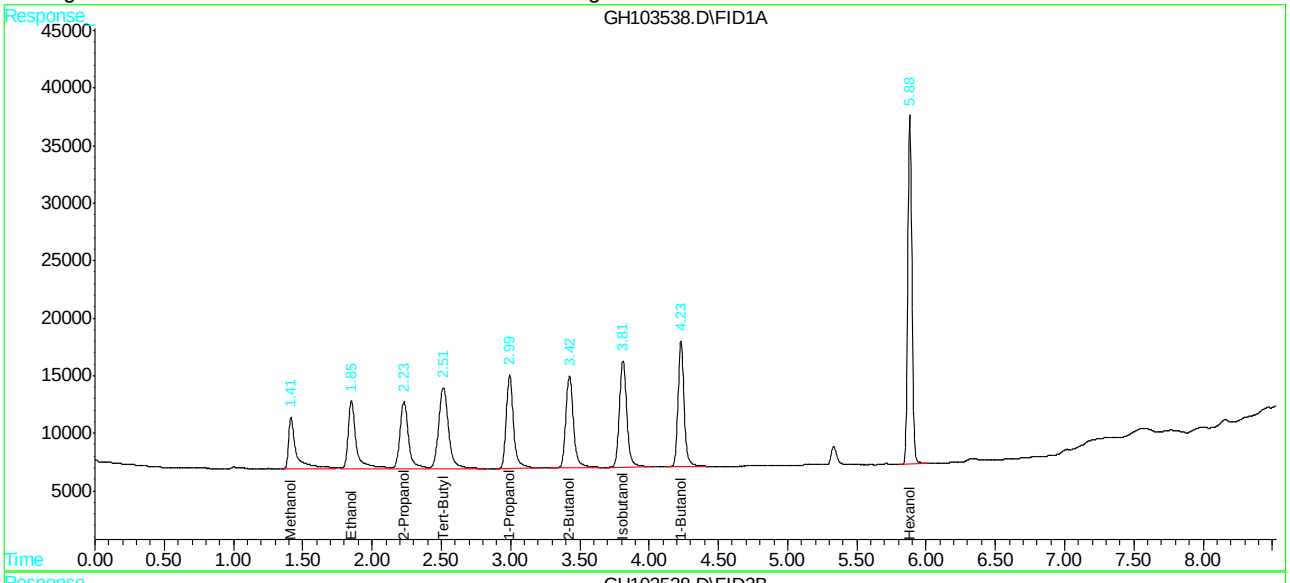
Quantitation Report (QT Reviewed)

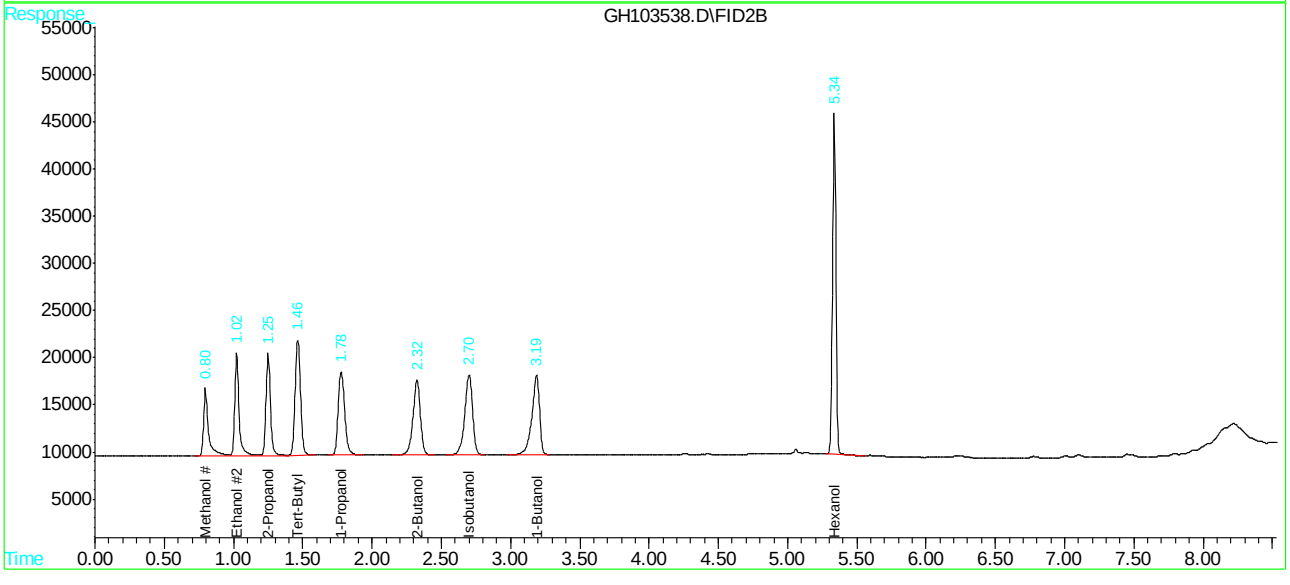
Data File : C:\HPCHEM\1\DATA\GH103538.D\FID1A.CH Vial: 19
Acq On : 29 Feb 2016 10:10 am Operator: XULIU
Sample : IC5193-10000 Inst : GCGH
Misc : GC47719,GGH5193,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103538.D\FID2B.CH Vial: 19
Acq On : 29 Feb 2016 10:25 am Operator: XULIU
Sample : IC5193-10000 Inst : GCGH
Misc : GC47719,GGH5193,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Feb 29 13:24 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Mon Feb 29 10:49:38 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um





Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\GH103539.D\FID1A.CH Vial: 20
Acq On : 29 Feb 2016 10:25 am Operator: XULIU
Sample : IC5193-50000 Inst : GCGH
Misc : GC47719,GGH5193,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103539.D\FID2B.CH Vial: 20
Acq On : 29 Feb 2016 10:39 am Operator: XULIU
Sample : IC5193-50000 Inst : GCGH
Misc : GC47719,GGH5193,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Feb 29 13:25 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Mon Feb 29 10:49:38 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
10) S	Hexanol	5.89	5.34	753846	737708	6307.224	5974.064
Spiked Amount	5000.000			Recovery	=	126.14%	119.48%
	Target Compounds						
1)	Methanol	1.42	0.80	831725	786308	57070.044	53449.149
2)	Ethanol	1.85	1.02	1091869	1046013	53024.163	50628.896
3)	Tert-Butyl Alcoh	2.51	1.47	1618405	1527069	49798.786	47553.501
4)	1-Propanol	2.99	1.78	1410633	1341483	49992.231	49653.259
5)	2-Propanol	2.23	1.25	1173173	1108753	52340.302	49428.497
7)	Isobutanol	3.82	2.70	1609558	1529443	50443.618	47530.526
8)	1-Butanol	4.23	3.20	1527185	1468644	48505.323	45317.541
9)	2-Butanol	3.43	2.32	1436581	1360726	50207.941	50446.386

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GH103539.D MGH5193.M Mon Feb 29 13:25:15 2016 GCGH

SGS ACCUTEST JC16204

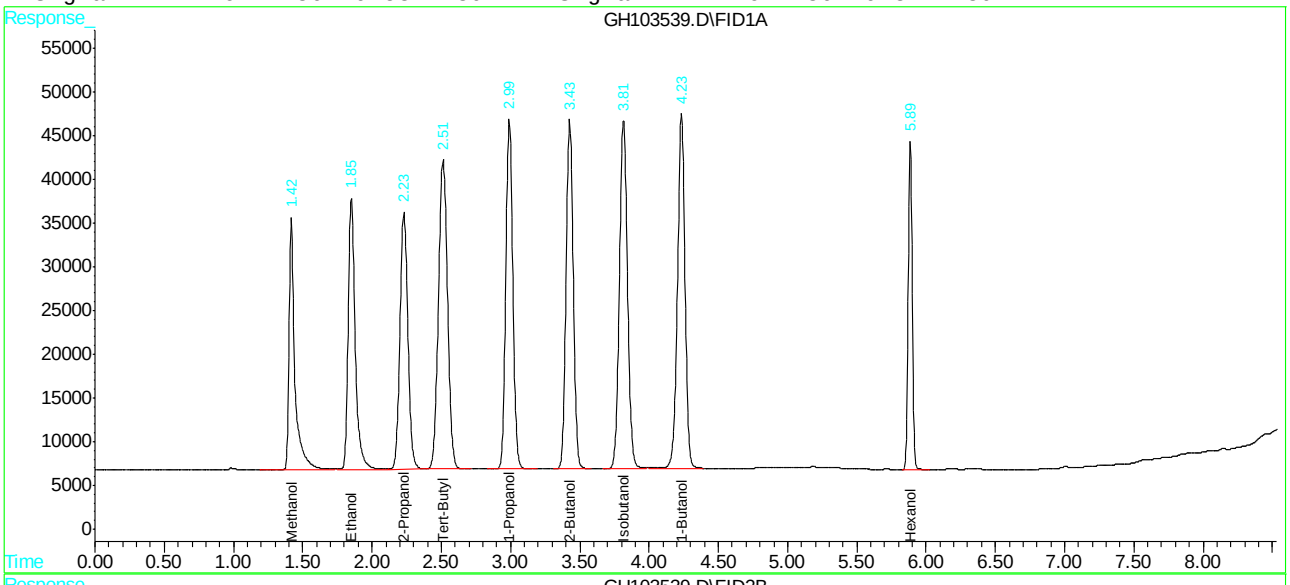
Quantitation Report (QT Reviewed)

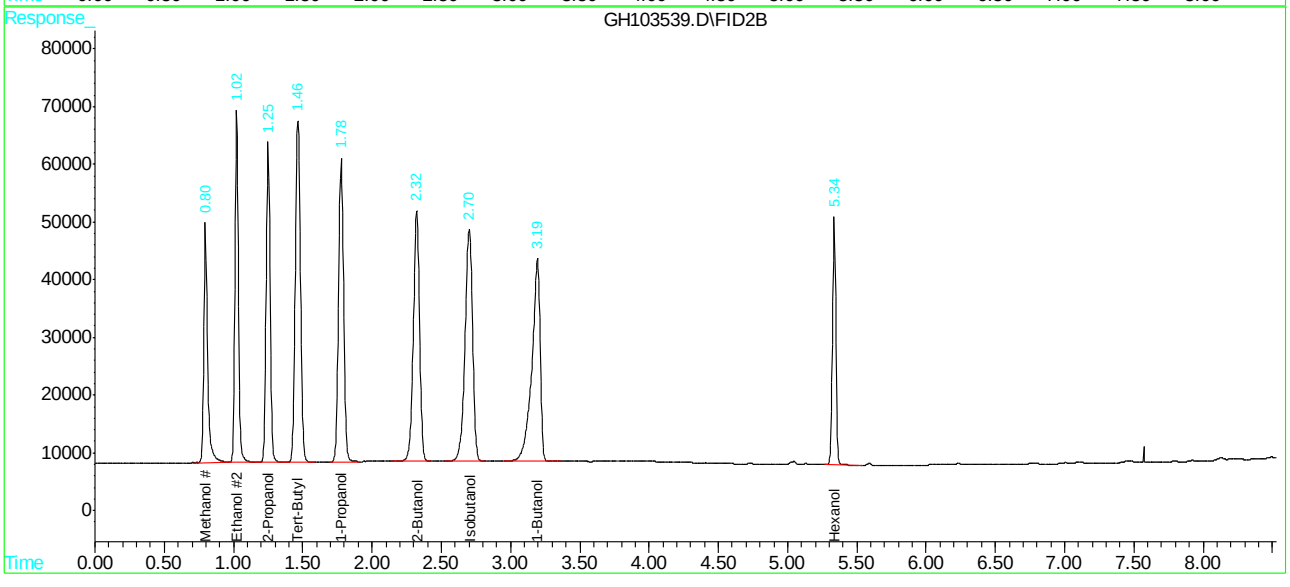
Data File : C:\HPCHEM\1\DATA\GH103539.D\FID1A.CH Vial: 20
Acq On : 29 Feb 2016 10:25 am Operator: XULIU
Sample : IC5193-50000 Inst : GCGH
Misc : GC47719,GGH5193,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103539.D\FID2B.CH Vial: 20
Acq On : 29 Feb 2016 10:39 am Operator: XULIU
Sample : IC5193-50000 Inst : GCGH
Misc : GC47719,GGH5193,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Feb 29 13:25 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Mon Feb 29 10:49:38 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um





SGS ACCUTEST JC16204

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\GH103540.D\FID1A.CH Vial: 21
Acq On : 29 Feb 2016 10:39 am Operator: XULIU
Sample : IC5193-100000 Inst : GCGH
Misc : GC47719,GGH5193,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103540.D\FID2B.CH Vial: 21
Acq On : 29 Feb 2016 10:57 am Operator: XULIU
Sample : IC5193-100000 Inst : GCGH
Misc : GC47719,GGH5193,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Feb 29 13:25 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Mon Feb 29 10:49:38 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
10) S	Hexanol	5.89	5.34	762379	756038	6378.624	6122.502
Spiked Amount	5000.000			Recovery	=	127.57%	122.45%
	Target Compounds						
1)	Methanol	1.42	0.80	1779651	1707777	122113.328	116085.808
2)	Ethanol	1.85	1.02	2349319	2287965	114089.375	110741.557
3)	Tert-Butyl Alcoh	2.51	1.46	3492408	3302691	107462.375	102847.039
4)	1-Propanol	2.99	1.78	3029689	2893990	107370.879	107117.291
5)	2-Propanol	2.23	1.25	2529033	2413432	112831.064	107591.432
7)	Isobutanol	3.82	2.70	3484319	3290247	109198.681	102251.057
8)	1-Butanol	4.23	3.19	3265181	3245269	103706.261	100138.368
9)	2-Butanol	3.43	2.32	3066220	2923878	107163.152	108397.288

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GH103540.D MGH5193.M Mon Feb 29 13:25:30 2016 GCGH

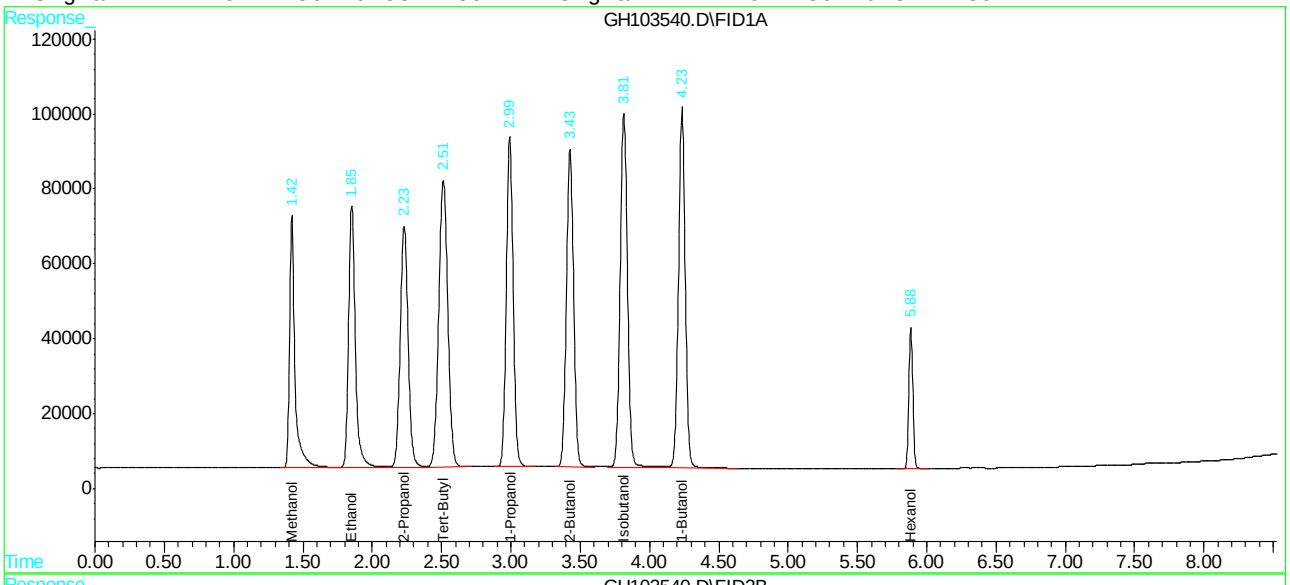
Quantitation Report (QT Reviewed)

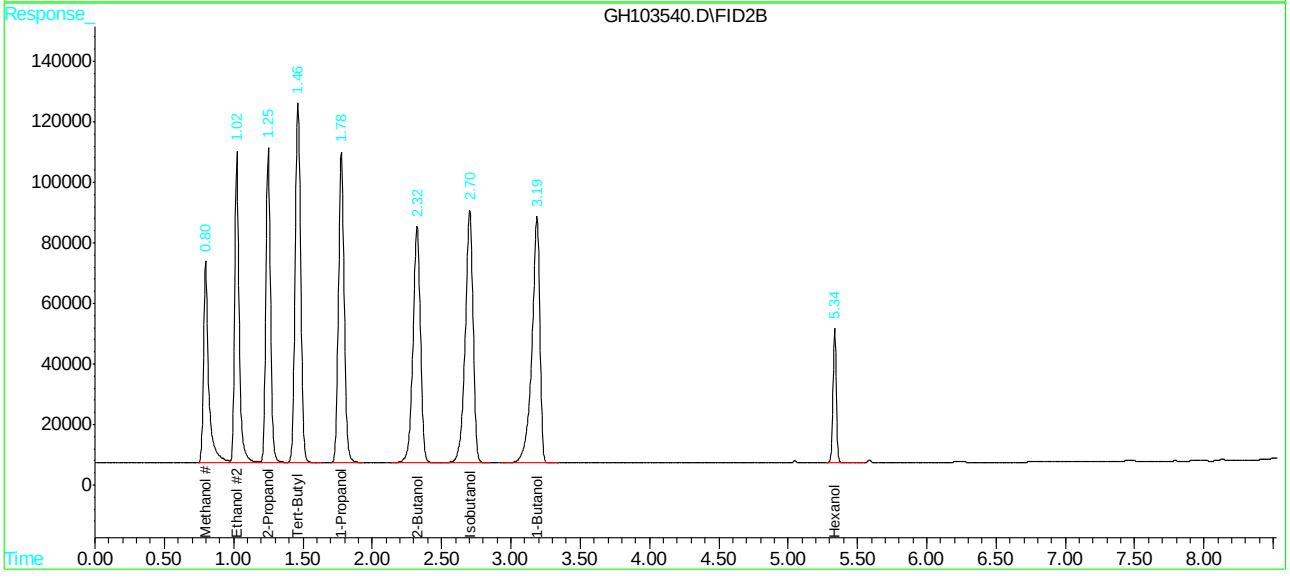
Data File : C:\HPCHEM\1\DATA\GH103540.D\FID1A.CH Vial: 21
Acq On : 29 Feb 2016 10:39 am Operator: XULIU
Sample : IC5193-100000 Inst : GCGH
Misc : GC47719,GGH5193,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103540.D\FID2B.CH Vial: 21
Acq On : 29 Feb 2016 10:57 am Operator: XULIU
Sample : IC5193-100000 Inst : GCGH
Misc : GC47719,GGH5193,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Feb 29 13:25 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Mon Feb 29 10:49:38 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um





Manual Integrations APPROVED (compounds with "m" flag)
Jessica Reitan-Chu 03/01/16 14:34

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103541.D\FID1A.CH          Vial: 22
Acq On    : 29 Feb 2016  10:57 am                     Operator: XULIU
Sample    : ICC5193-5000                              Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103541.D\FID2B.CH          Vial: 22
Acq On    : 29 Feb 2016  11:10 am                     Operator: XULIU
Sample    : ICC5193-5000                              Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Feb 29 13:34 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Mon Feb 29 13:27:39 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
10) S	Hexanol	5.88	5.34	627374	611421	5306.730	5276.343
Spiked Amount	5000.000			Recovery	=	106.13%	105.53%
	Target Compounds						
1)	Methanol	1.42	0.80	92609	86129	5293.274	5131.587
2)	Ethanol	1.85	1.03	118659	114677	5124.160	5120.833
3)	Tert-Butyl Alcoh	2.51	1.47	180800	160931	5219.790	4965.652
4)	1-Propanol	2.99	1.78	154372	152110	5176.241	5084.369
5)	2-Propanol	2.23	1.25	131831	117651	5264.955	5011.800
7)	Isobutanol	3.81	2.70	177787	160719	5166.554	4673.557
8)	1-Butanol	4.23	3.19	171004	159534	5210.074	5016.629
9)	2-Butanol	3.42	2.33	157688	145917	5163.577	4269.357m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

SGS ACCUTEST JC16204

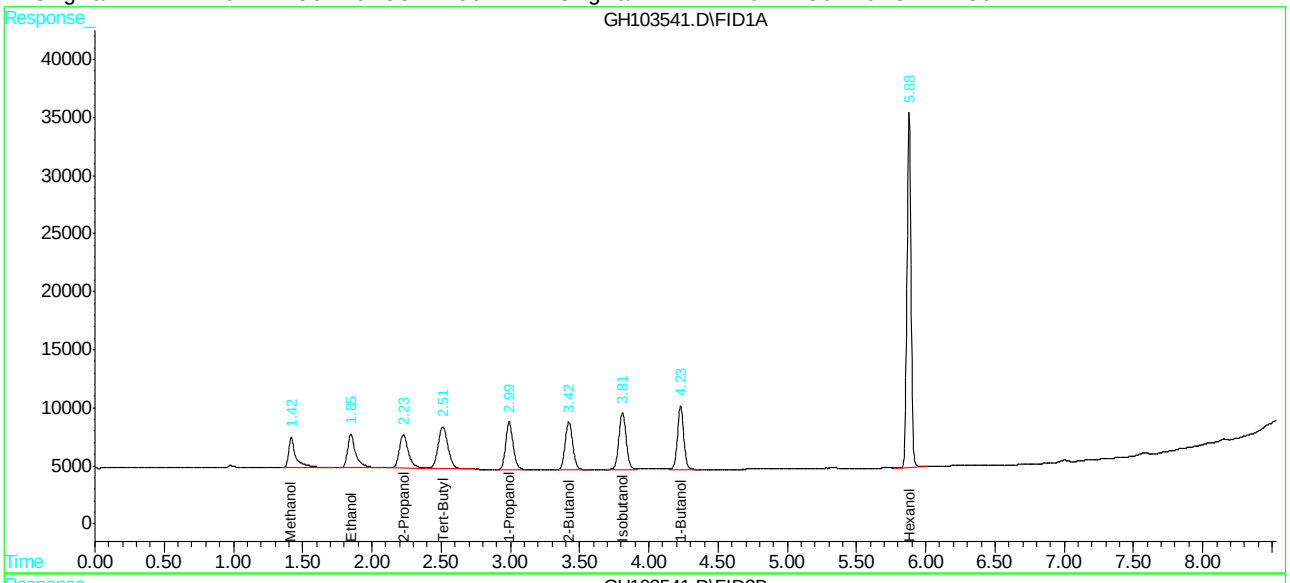
Quantitation Report (QT Reviewed)

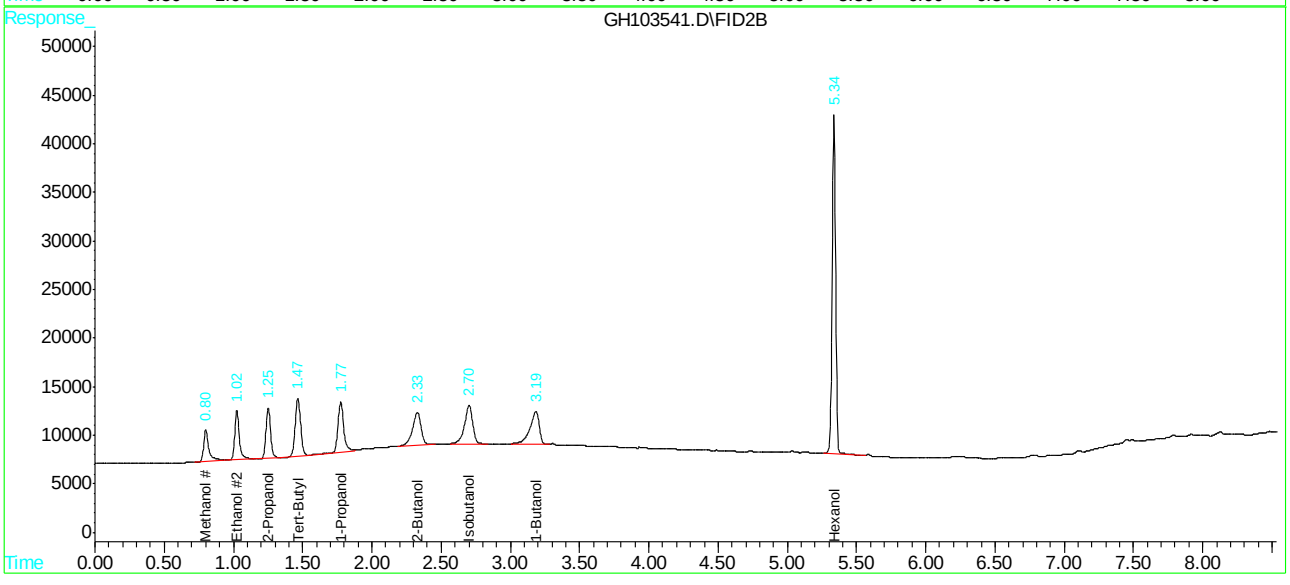
Data File : C:\HPCHEM\1\DATA\GH103541.D\FID1A.CH Vial: 22
Acq On : 29 Feb 2016 10:57 am Operator: XULIU
Sample : ICC5193-5000 Inst : GCGH
Misc : GC47719,GGH5193,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103541.D\FID2B.CH Vial: 22
Acq On : 29 Feb 2016 11:10 am Operator: XULIU
Sample : ICC5193-5000 Inst : GCGH
Misc : GC47719,GGH5193,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Feb 29 13:34 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Mon Feb 29 13:27:39 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um





Manual Integration Approval Summary

Sample Number:	GGH5193-ICC5193	**Method:**	SW846-8015C (DAI)
Lab FileID:	GH103541.D	**Analyst approved:**	03/01/16 13:28 Xu Liu
Injection Time:	02/29/16 10:57	**Supervisor approved:**	03/01/16 14:34 Jessica Reitan-Chu

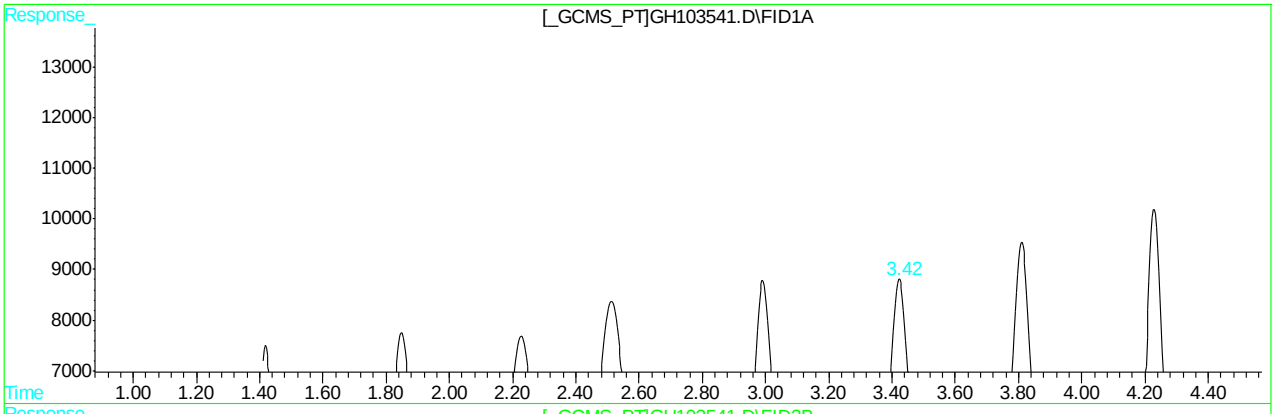
Parameter	CAS	Sig#	R.T. (min.)	Reason
sec-Butyl Alcohol	78-92-2	2	2.33	Poorly defined baseline

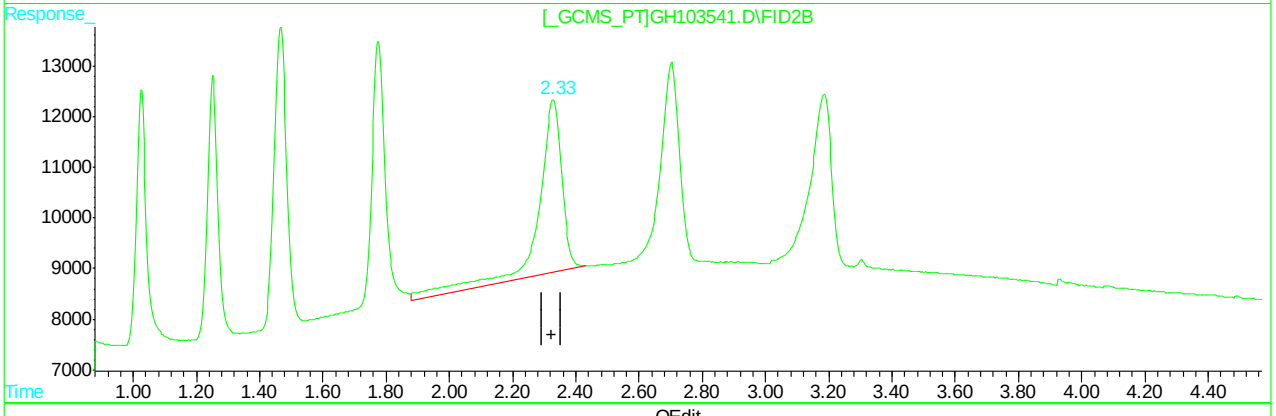
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\GH103541.D\FID1A.CH          Vial: 22
Acq On    : 29 Feb 2016  10:57 am                     Operator: XULIU
Sample    : ICC5193-5000                              Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103541.D\FID2B.CH          Vial: 22
Acq On    : 29 Feb 2016  11:10 am                     Operator: XULIU
Sample    : ICC5193-5000                              Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Feb 29 13:32 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Mon Feb 29 13:32:26 2016
Response via : Multiple Level Calibration
```





QEdit

(9) 2-Butanol

3.42min 5163.577PPB

response 157688

(9) 2-Butanol #2

2.33min 5176.951PPB

response 176936

(+) = Expected Retention Time

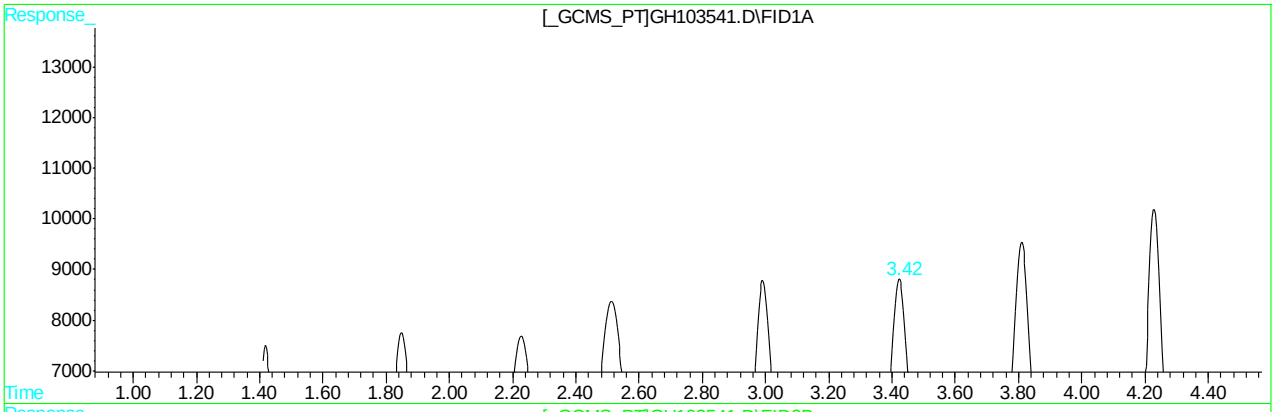
GH103541.D MGH5193.M Mon Feb 29 13:33:18 2016 GCGH

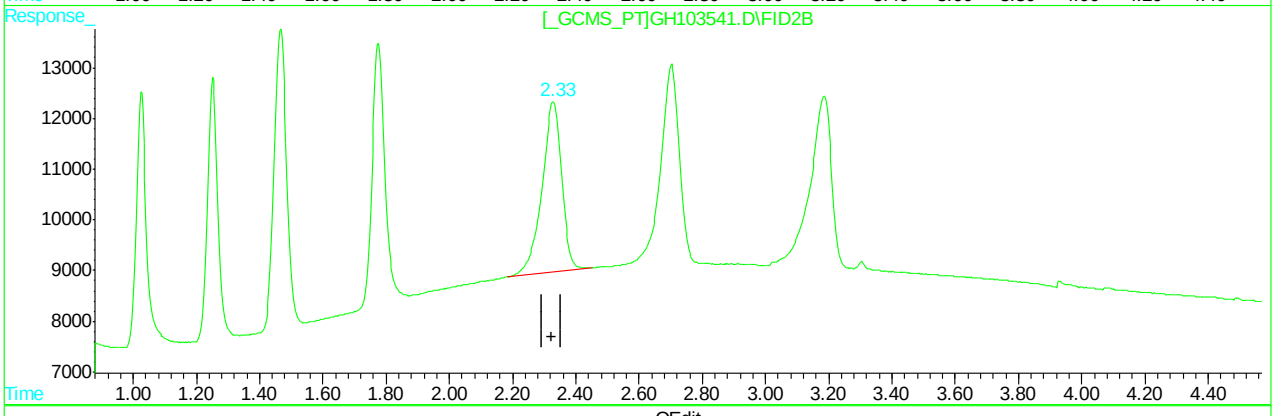
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\GH103541.D\FID1A.CH          Vial: 22
Acq On    : 29 Feb 2016  10:57 am                     Operator: XULIU
Sample    : ICC5193-5000                              Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103541.D\FID2B.CH          Vial: 22
Acq On    : 29 Feb 2016  11:10 am                     Operator: XULIU
Sample    : ICC5193-5000                              Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Feb 29 13:32 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Mon Feb 29 13:32:26 2016
Response via : Multiple Level Calibration
```





QEdit

(9) 2-Butanol

3.42min 5163.577PPB

response 157688

(9) 2-Butanol #2

2.33min 4269.357PPB m

response 145917

(+) = Expected Retention Time

GH103541.D MGH5193.M Mon Feb 29 13:34:08 2016 GCGH

Manual Integrations APPROVED (compounds with "m" flag)
Jessica Reitan-Chu 03/01/16 14:34

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\DATA1035\GH103543.D\FID1A.CH Vial: 10
Acq On    : 29 Feb 2016  12:05 pm                    Operator: XULIU
Sample    : IC5193-500                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\DATA1035\GH103543.D\FID2B.CH Vial: 10
Acq On    : 29 Feb 2016  12:23 pm                    Operator: XULIU
Sample    : IC5193-500                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1 12:07 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 07:54:41 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
10) S	Hexanol	5.88	5.34	338506	356649	2628.802	2776.345
	Spiked Amount 5000.000			Recovery	=	52.58%	55.53%
	Target Compounds						
1)	Methanol	1.45f	0.80	7128	9089	416.617	502.554m
2)	Ethanol	1.87f	1.03	10970	10120	480.229	458.322
3)	Tert-Butyl Alcoh	2.52	1.47	13871	14529	388.904m	454.774
4)	1-Propanol	3.01f	1.78	10460	11823	355.989m	422.185
5)	2-Propanol	2.24	1.25	8410	10264	318.255m	444.470
7)	Isobutanol	3.82	2.70	14482	14321	431.331	454.428
8)	1-Butanol	4.23	3.19	13713	17157	421.970	537.665
9)	2-Butanol	3.45f	2.33	11734	12260	396.922	432.808

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

SGS ACCUTEST JC16204

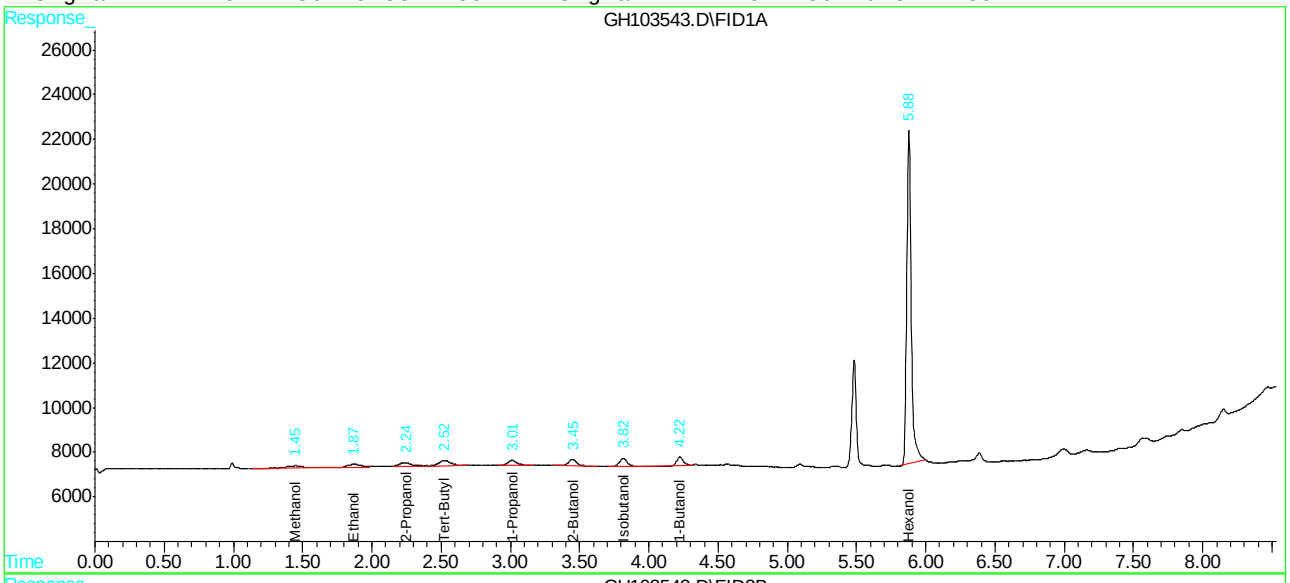
Quantitation Report (QT Reviewed)

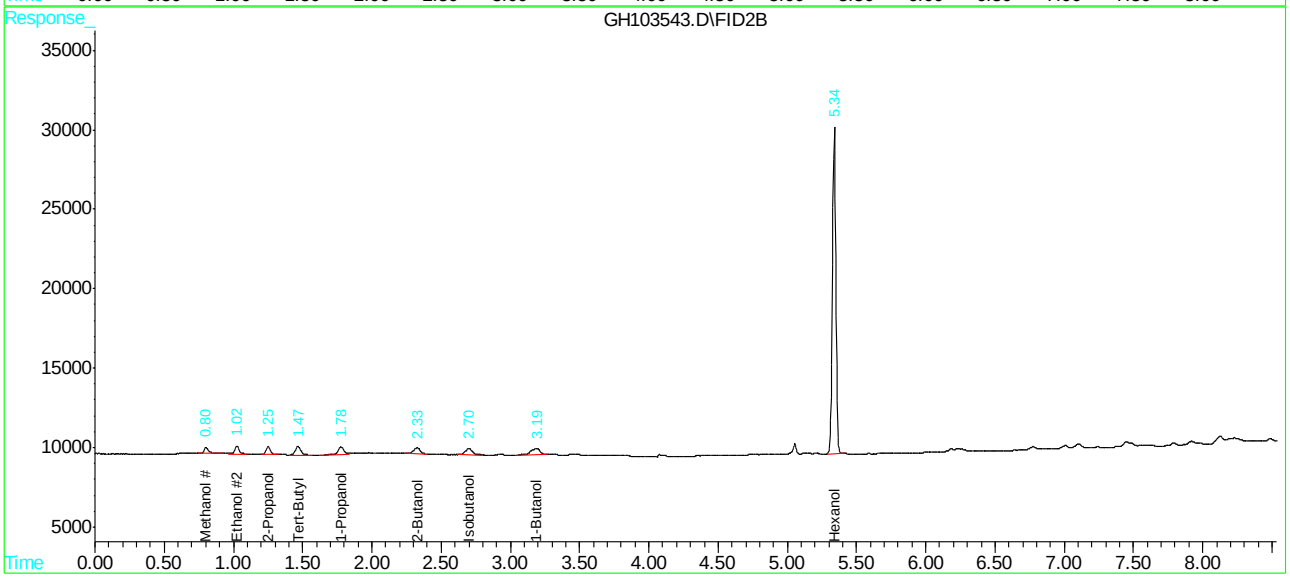
Data File : C:\HPCHEM\1\DATA\DATA1035\GH103543.D\FID1A.CH Vial: 10
Acq On : 29 Feb 2016 12:05 pm Operator: XULIU
Sample : IC5193-500 Inst : GCGH
Misc : GC47719,GGH5193,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\DATA1035\GH103543.D\FID2B.CH Vial: 10
Acq On : 29 Feb 2016 12:23 pm Operator: XULIU
Sample : IC5193-500 Inst : GCGH
Misc : GC47719,GGH5193,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Mar 1 12:07 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Tue Mar 01 07:54:41 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um





Manual Integration Approval Summary

Sample Number:	GGH5193-IC5193	**Method:**	SW846-8015C (DAI)
Lab FileID:	GH103543.D	**Analyst approved:**	03/01/16 13:28 Xu Liu
Injection Time:	02/29/16 12:05	**Supervisor approved:**	03/01/16 14:34 Jessica Reitan-Chu

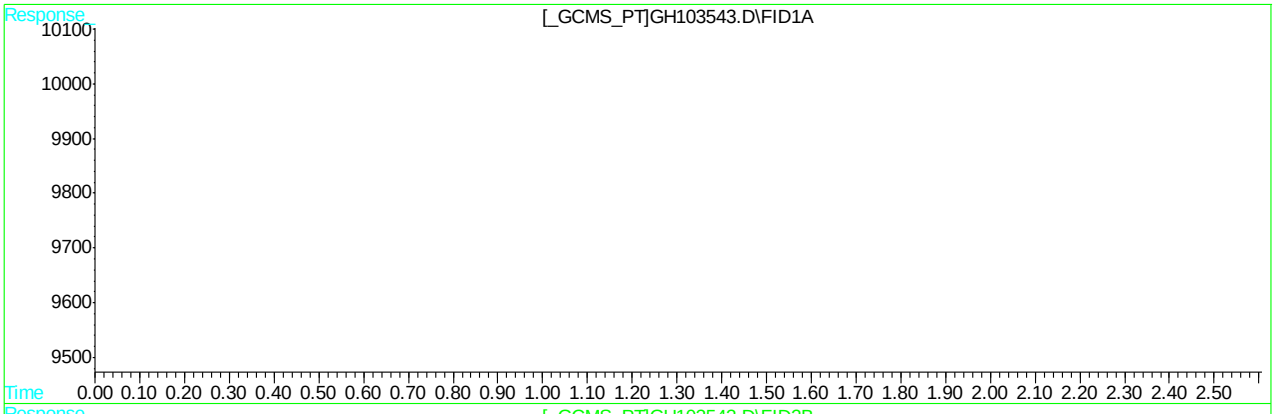
Parameter	CAS	Sig#	R.T. (min.)	Reason
Methanol	67-56-1	2	0.80	Poorly defined baseline
Isopropyl Alcohol	67-63-0	1	2.24	Poorly defined baseline
Tertiary Butyl Alcohol	75-65-0	1	2.52	Poorly defined baseline
n-Propyl Alcohol	71-23-8	1	3.01	Poorly defined baseline

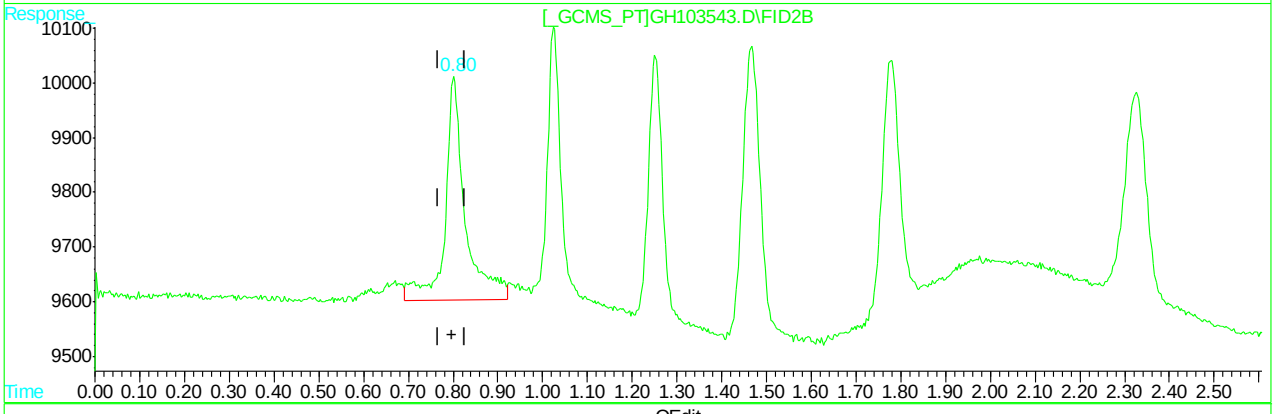
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\GH103543.D\FID1A.CH          Vial: 10
Acq On    : 29 Feb 2016  12:05 pm                     Operator: XULIU
Sample    : IC5193-500                                Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103543.D\FID2B.CH          Vial: 10
Acq On    : 29 Feb 2016  12:23 pm                     Operator: XULIU
Sample    : IC5193-500                                Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1  7:57 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 08:12:38 2016
Response via : Multiple Level Calibration
```





QEdit

(1) Methanol

1.45min 416.617PPB

response 7128

(1) Methanol #2

0.80min 697.836PPB

response 12621

(+) = Expected Retention Time

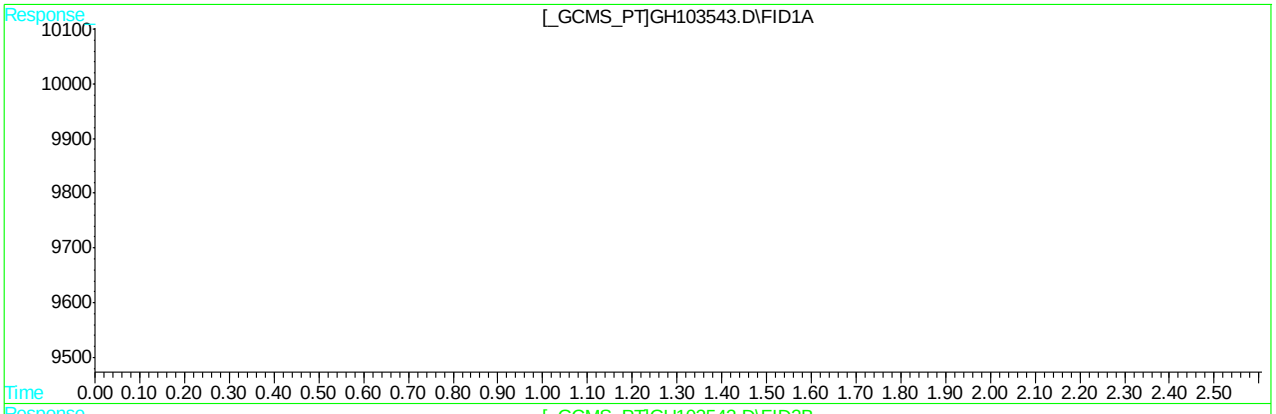
GH103543.D MGH5193.M Tue Mar 01 08:16:04 2016 GCGH

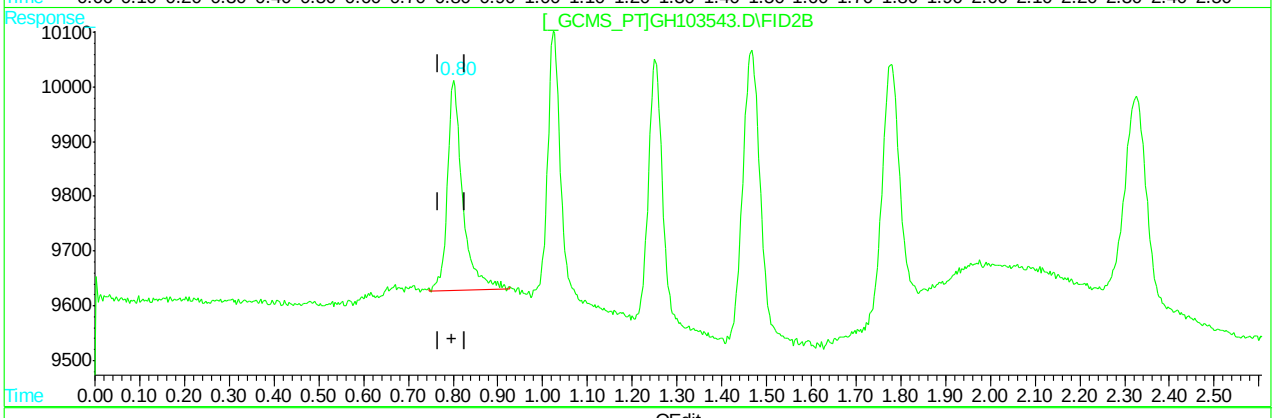
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\GH103543.D\FID1A.CH          Vial: 10
Acq On    : 29 Feb 2016  12:05 pm                     Operator: XULIU
Sample    : IC5193-500                                Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103543.D\FID2B.CH          Vial: 10
Acq On    : 29 Feb 2016  12:23 pm                     Operator: XULIU
Sample    : IC5193-500                                Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1  7:57 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 08:12:38 2016
Response via : Multiple Level Calibration
```





QEdit

(1) Methanol

1.45min 416.617PPB

response 7128

(1) Methanol #2

0.80min 502.554PPB m

response 9089

(+) = Expected Retention Time

GH103543.D MGH5193.M Tue Mar 01 08:16:50 2016 GCGH

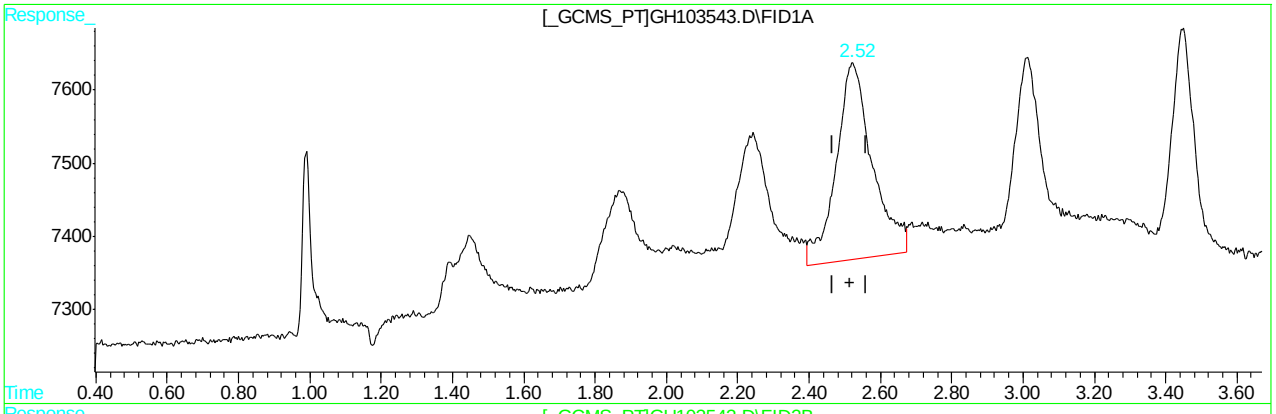
SGS ACCUTEST JC16204

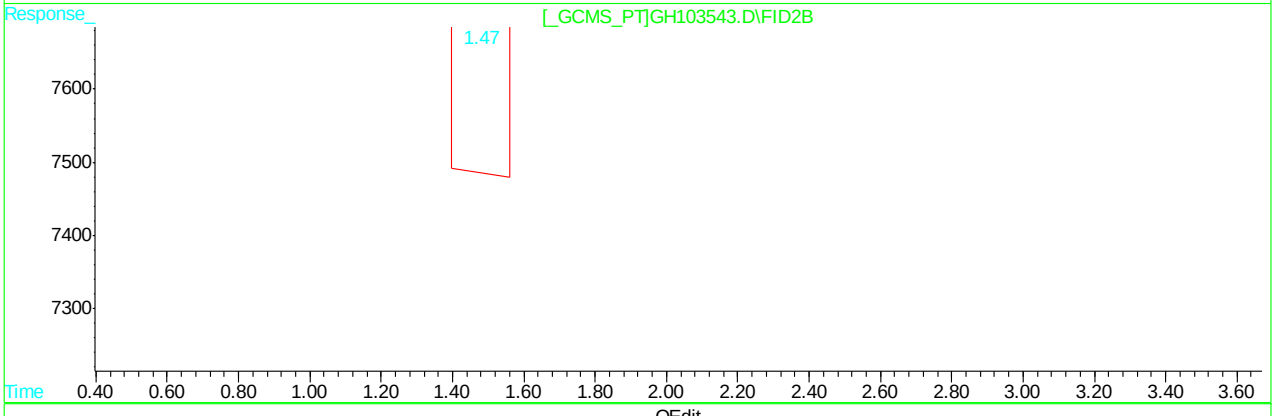
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\DATA1035\GH103543.D\FID1A.CH Vial: 10
Acq On    : 29 Feb 2016  12:05 pm                    Operator: XULIU
Sample    : IC5193-500                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\DATA1035\GH103543.D\FID2B.CH Vial: 10
Acq On    : 29 Feb 2016  12:23 pm                    Operator: XULIU
Sample    : IC5193-500                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1  8:16 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 08:26:22 2016
Response via : Multiple Level Calibration
```





QEdit

(3) Tert-Butyl Alcohol

2.52min 531.527PPB

response 18958

(3) Tert-Butyl Alcohol #2

1.47min 454.774PPB

response 14529

(+) = Expected Retention Time

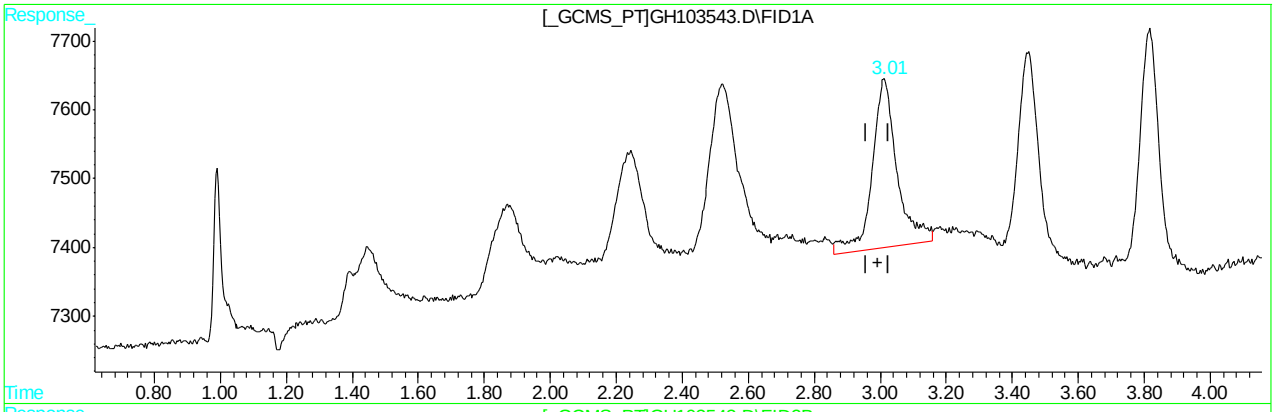
GH103543.D MGH5193.M Tue Mar 01 10:16:49 2016 GCGH

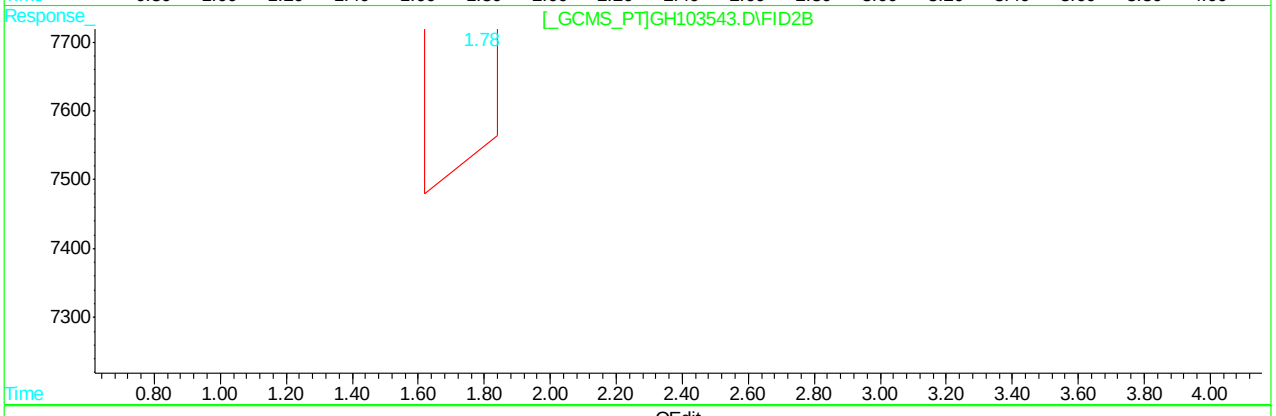
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\DATA1035\GH103543.D\FID1A.CH Vial: 10
Acq On    : 29 Feb 2016  12:05 pm                    Operator: XULIU
Sample    : IC5193-500                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\DATA1035\GH103543.D\FID2B.CH Vial: 10
Acq On    : 29 Feb 2016  12:23 pm                    Operator: XULIU
Sample    : IC5193-500                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1  8:16 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 08:26:22 2016
Response via : Multiple Level Calibration
```





QEdit

(4) 1-Propanol

3.01min 449.441PPB

response 13206

(4) 1-Propanol #2

1.78min 422.185PPB

response 11823

(+) = Expected Retention Time

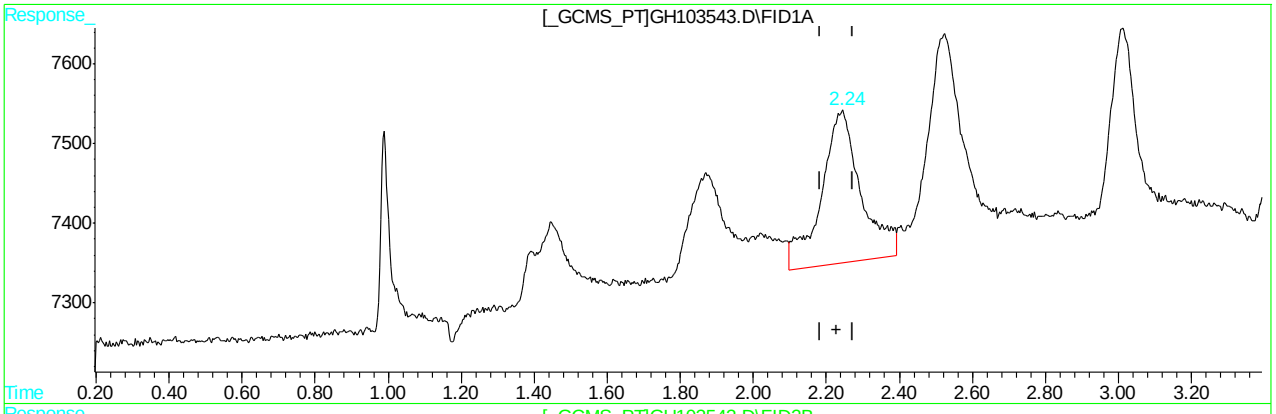
GH103543.D MGH5193.M Tue Mar 01 10:17:11 2016 GCGH

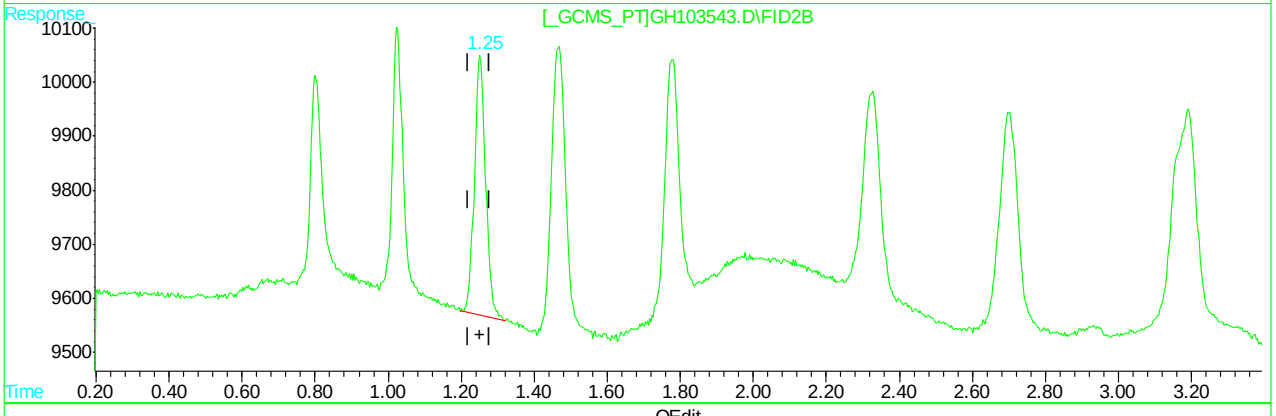
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\DATA1035\GH103543.D\FID1A.CH Vial: 10
Acq On    : 29 Feb 2016  12:05 pm                    Operator: XULIU
Sample    : IC5193-500                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\DATA1035\GH103543.D\FID2B.CH Vial: 10
Acq On    : 29 Feb 2016  12:23 pm                    Operator: XULIU
Sample    : IC5193-500                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1  8:16 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 08:26:22 2016
Response via : Multiple Level Calibration
```





QEdit

(5) 2-Propanol

2.24min 546.957PPB

response 14454

(5) 2-Propanol #2

1.25min 444.470PPB

response 10264

(+) = Expected Retention Time

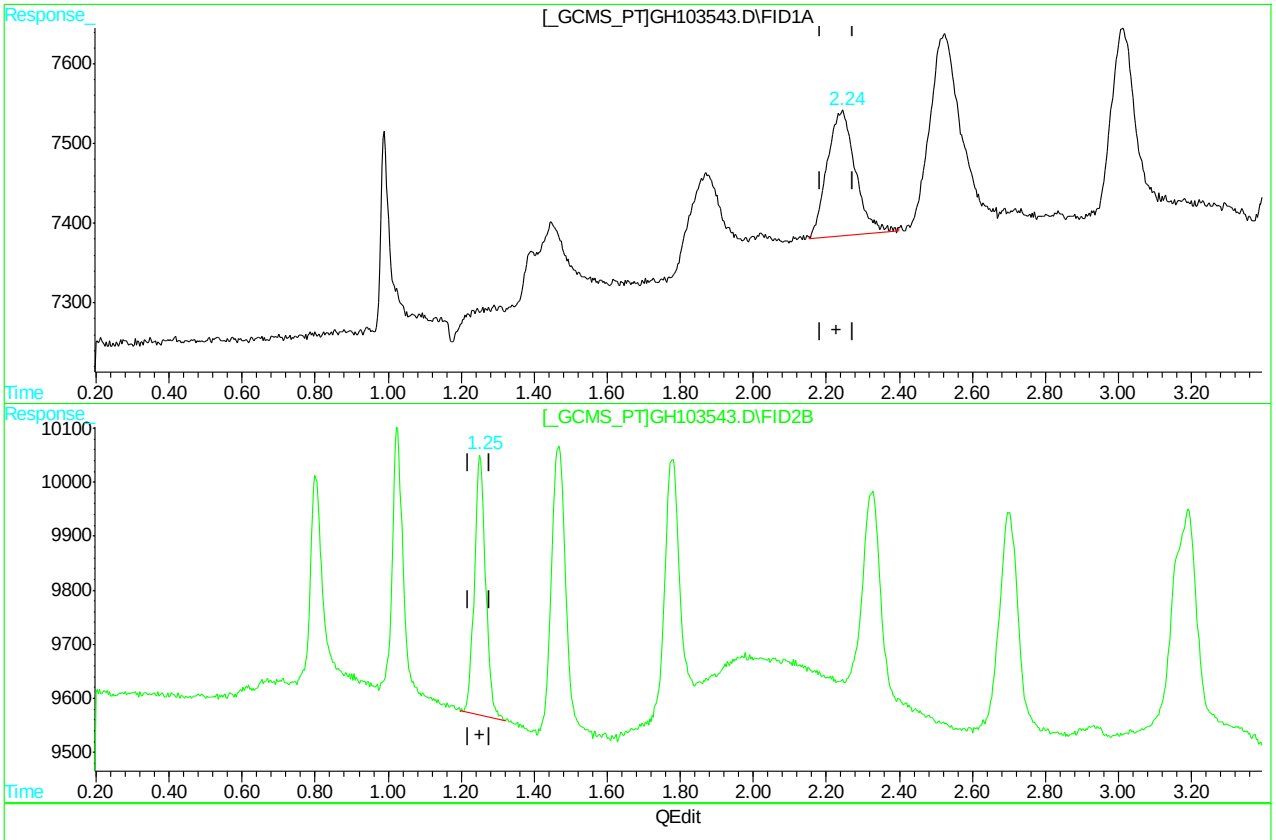
GH103543.D MGH5193.M Tue Mar 01 10:17:42 2016 GCGH

Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\DATA1035\GH103543.D\FID1A.CH Vial: 10
Acq On    : 29 Feb 2016  12:05 pm                    Operator: XULIU
Sample    : IC5193-500                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\DATA1035\GH103543.D\FID2B.CH Vial: 10
Acq On    : 29 Feb 2016  12:23 pm                    Operator: XULIU
Sample    : IC5193-500                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1  8:16 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 08:26:22 2016
Response via : Multiple Level Calibration
```



(5) 2-Propanol

2.24min 318.255PPB m

response 8410

(5) 2-Propanol #2

1.25min 444.470PPB

response 10264

(+) = Expected Retention Time

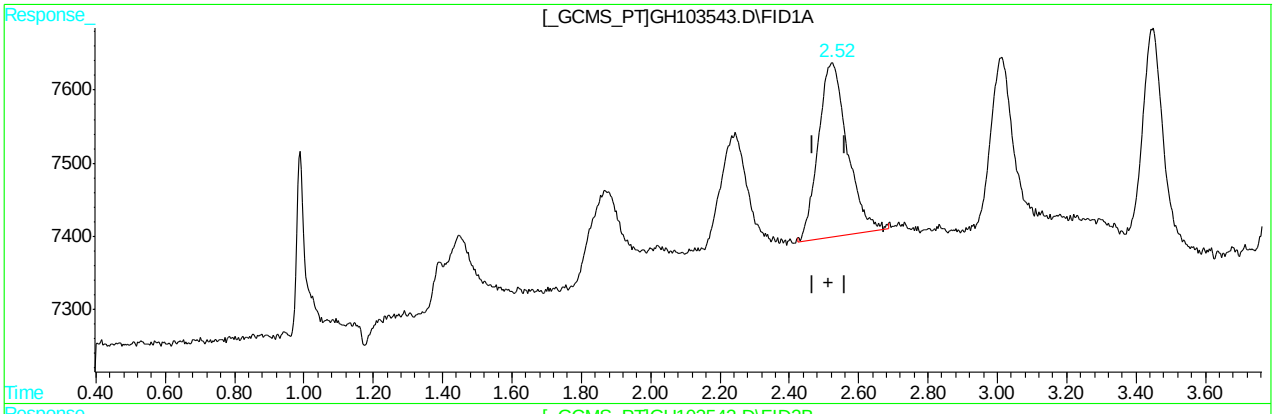
GH103543.D MGH5193.M Tue Mar 01 10:18:02 2016 GCGH

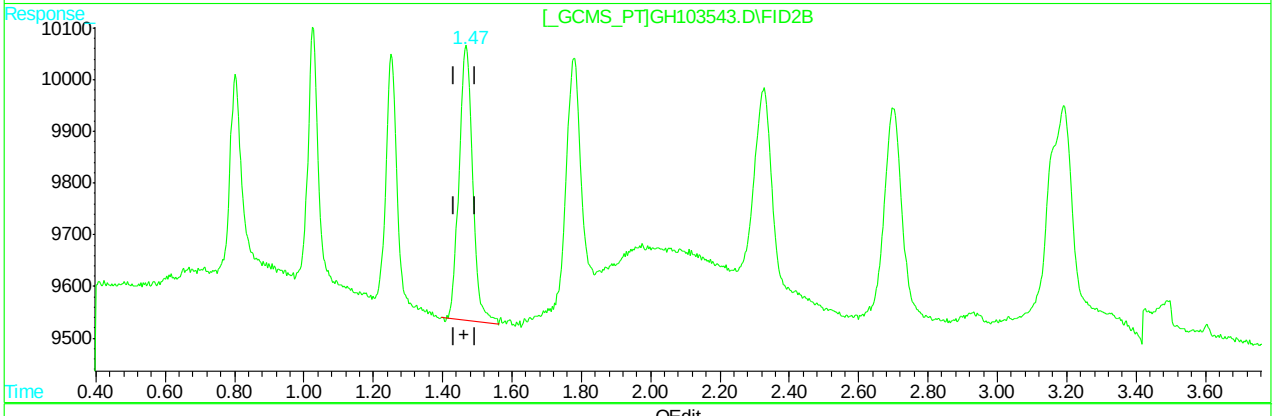
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\DATA1035\GH103543.D\FID1A.CH Vial: 10
Acq On    : 29 Feb 2016  12:05 pm                    Operator: XULIU
Sample    : IC5193-500                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\DATA1035\GH103543.D\FID2B.CH Vial: 10
Acq On    : 29 Feb 2016  12:23 pm                    Operator: XULIU
Sample    : IC5193-500                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1 10:17 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 11:02:24 2016
Response via : Multiple Level Calibration
```





QEdit

(3) Tert-Butyl Alcohol

2.52min 388.904PPB m

response 13871

(3) Tert-Butyl Alcohol #2

1.47min 454.774PPB

response 14529

(+) = Expected Retention Time

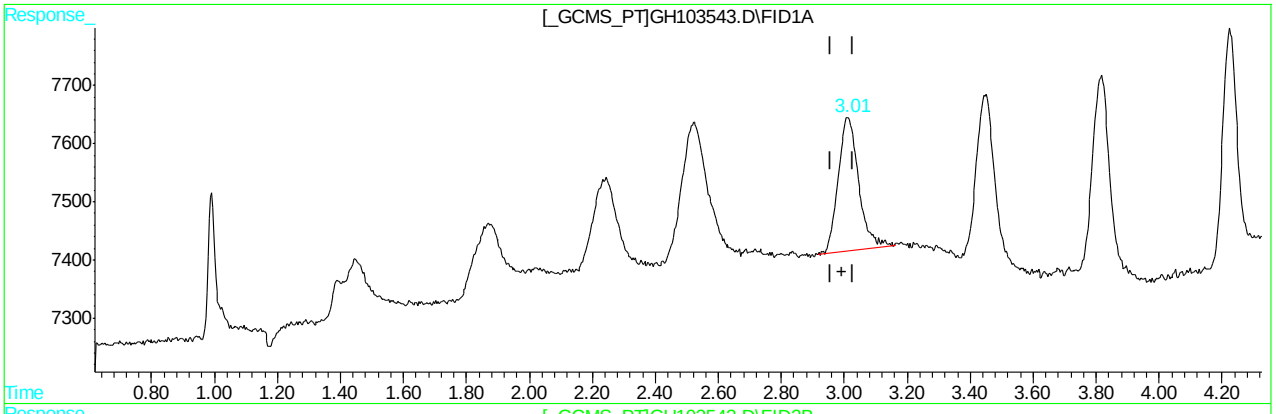
GH103543.D MGH5193.M Tue Mar 01 12:06:57 2016 GCGH

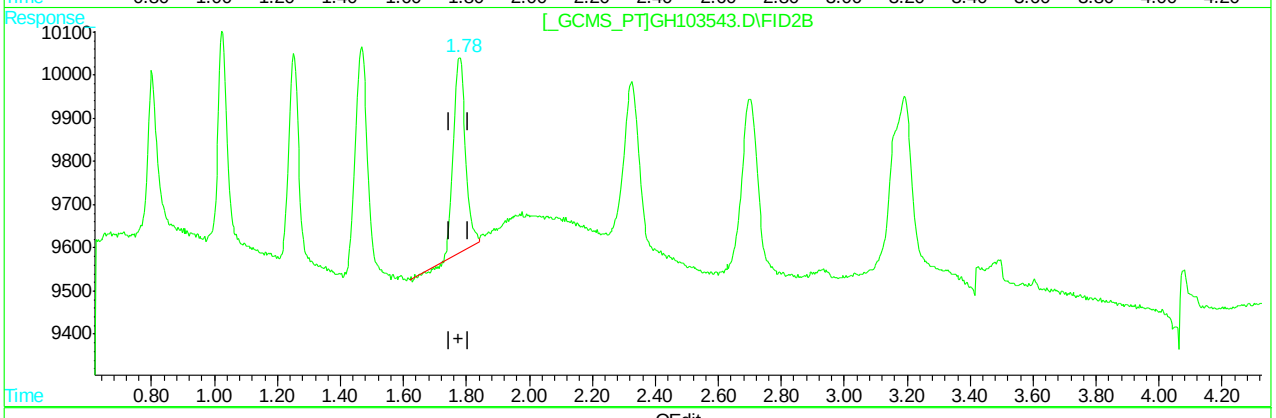
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\DATA1035\GH103543.D\FID1A.CH Vial: 10
Acq On    : 29 Feb 2016  12:05 pm                    Operator: XULIU
Sample    : IC5193-500                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\DATA1035\GH103543.D\FID2B.CH Vial: 10
Acq On    : 29 Feb 2016  12:23 pm                    Operator: XULIU
Sample    : IC5193-500                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1 10:17 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 11:02:24 2016
Response via : Multiple Level Calibration
```





QEdit

(4) 1-Propanol

3.01min 355.989PPB m

response 10460

(4) 1-Propanol #2

1.78min 422.185PPB

response 11823

(+) = Expected Retention Time

GH103543.D MGH5193.M Tue Mar 01 12:07:11 2016 GCGH

11.5.6.9 11

GH103544.D

Manual Integrations APPROVED (compounds with "m" flag)

Jessica Reitan-Chu 03/01/16 14:34

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\DATA1035\GH103544.D\FID1A.CH Vial: 5
Acq On    : 29 Feb 2016  12:23 pm                    Operator: XULIU
Sample    : IC5193-100                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\DATA1035\GH103544.D\FID2B.CH Vial: 5
Acq On    : 29 Feb 2016  12:38 pm                    Operator: XULIU
Sample    : IC5193-100                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1 10:15 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 08:10:45 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
10) S	Hexanol	5.88	5.34	96146	97501	753.837	764.597
	Spiked Amount 5000.000			Recovery	=	15.08%	15.29%
	Target Compounds						
1)	Methanol	1.42	0.80	1952	2010	111.847	109.390
2)	Ethanol	1.85	1.02	2002	2194	82.002m	99.470
3)	Tert-Butyl Alcoh	2.51	1.47	3482	3221	97.961	100.694
4)	1-Propanol	2.99	1.78	3265	3320	109.388	115.495
5)	2-Propanol	2.22	1.25	2559	2475	96.011m	106.098
7)	Isobutanol	3.81	2.70	3542	3670	104.664	113.781
8)	1-Butanol	4.23	3.18	3899	5688	116.654	155.884m
9)	2-Butanol	3.42	2.32	3756	3049	122.321	106.484

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

GH103544.D MGH5193.M Tue Mar 01 10:16:01 2016 GCGH

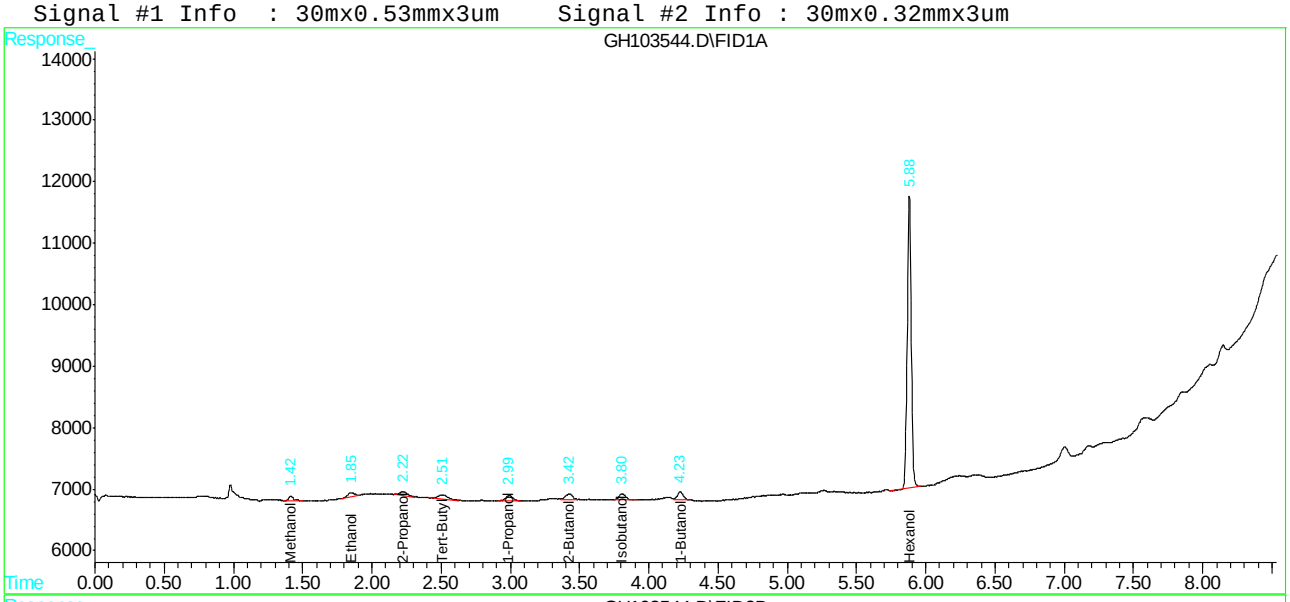
Quantitation Report (QT Reviewed)

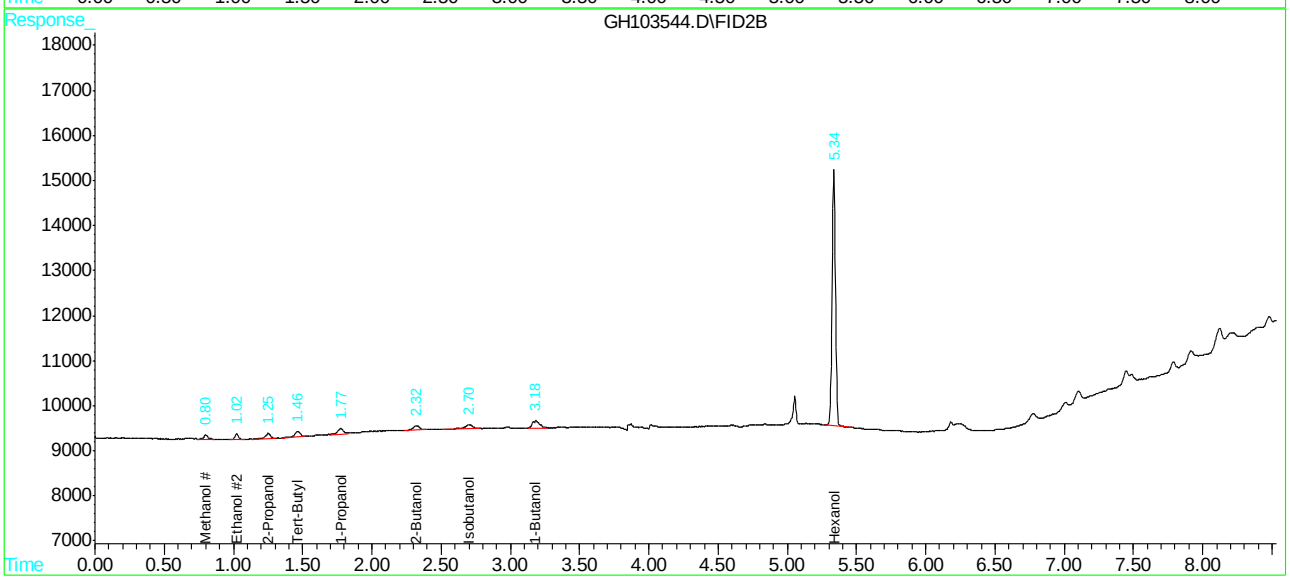
Data File : C:\HPCHEM\1\DATA\DATA1035\GH103544.D\FID1A.CH Vial: 5
Acq On : 29 Feb 2016 12:23 pm Operator: XULIU
Sample : IC5193-100 Inst : GCGH
Misc : GC47719,GGH5193,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\DATA1035\GH103544.D\FID2B.CH Vial: 5
Acq On : 29 Feb 2016 12:38 pm Operator: XULIU
Sample : IC5193-100 Inst : GCGH
Misc : GC47719,GGH5193,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Mar 1 10:15 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Tue Mar 01 08:10:45 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um





Manual Integration Approval Summary

Sample Number:	GGH5193-IC5193	**Method:**	SW846-8015C (DAI)
Lab FileID:	GH103544.D	**Analyst approved:**	03/01/16 13:28 Xu Liu
Injection Time:	02/29/16 12:23	**Supervisor approved:**	03/01/16 14:34 Jessica Reitan-Chu

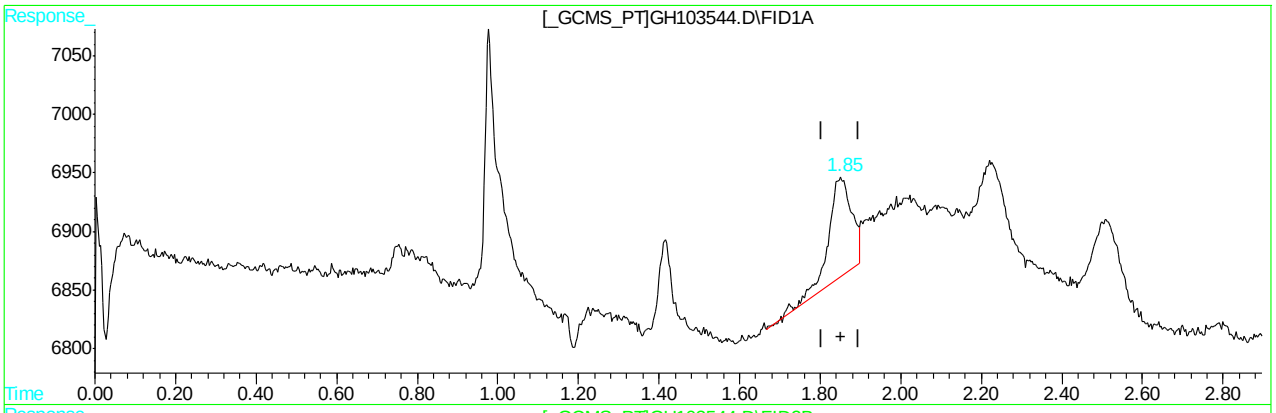
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethanol	64-17-5	1	1.85	Poorly defined baseline
Isopropyl Alcohol	67-63-0	1	2.22	Missed peak
n-Butyl Alcohol	71-36-3	2	3.18	Split peak

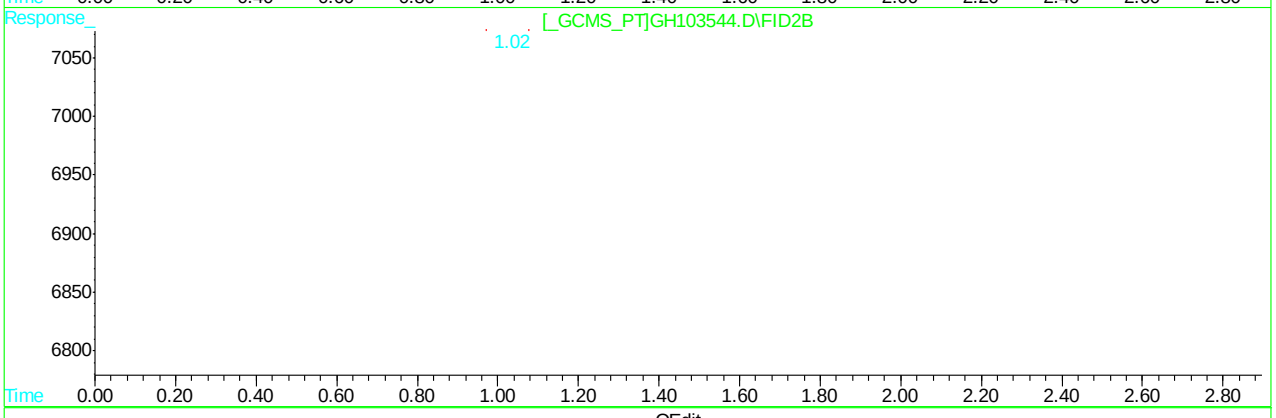
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\GH103544.D\FID1A.CH          Vial: 5
Acq On    : 29 Feb 2016  12:23 pm                     Operator: XULIU
Sample    : IC5193-100                                Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103544.D\FID2B.CH          Vial: 5
Acq On    : 29 Feb 2016  12:38 pm                     Operator: XULIU
Sample    : IC5193-100                                Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1  8:12 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 08:12:38 2016
Response via : Multiple Level Calibration
```





QEdit

(2) Ethanol

1.85min 138.711PPB

response 3387

(2) Ethanol #2

1.02min 99.470PPB

response 2194

(+) = Expected Retention Time

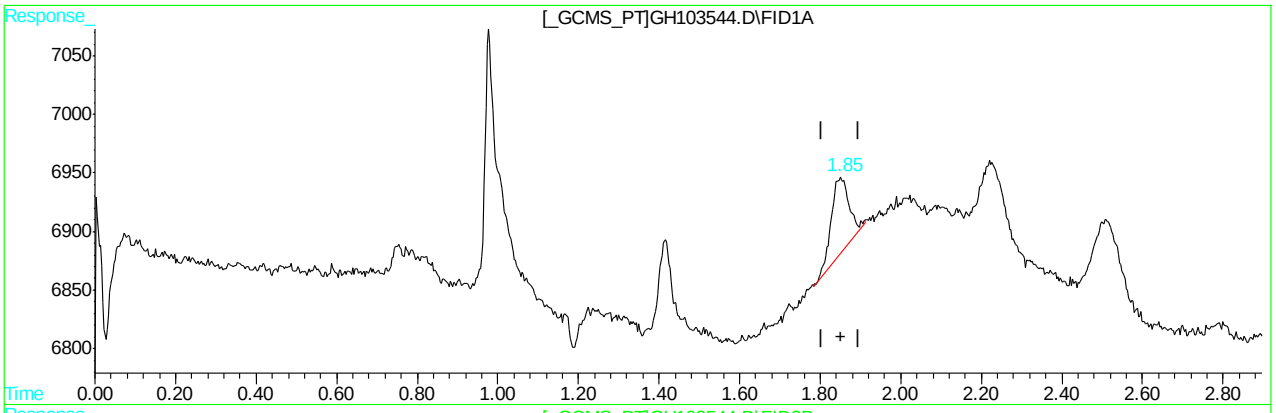
GH103544.D MGH5193.M Tue Mar 01 08:18:52 2016 GCGH

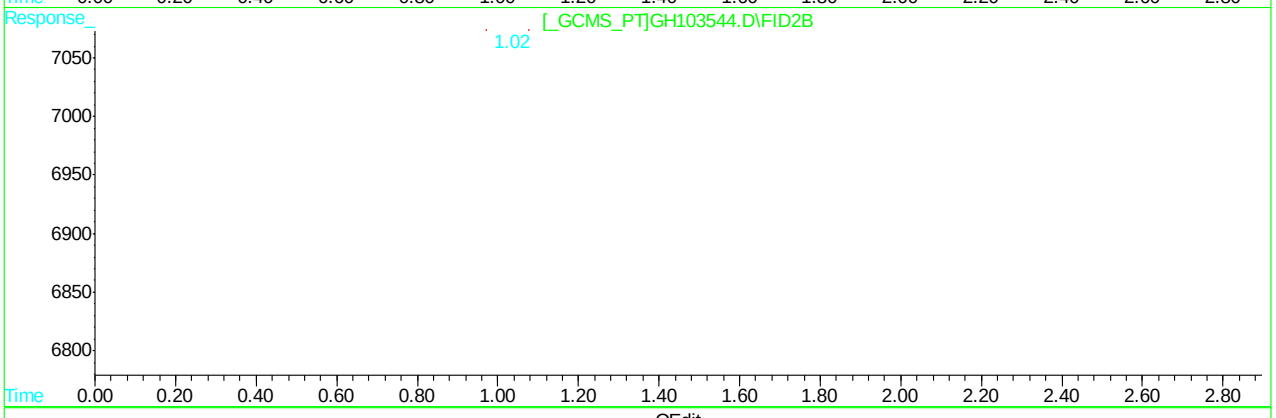
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\GH103544.D\FID1A.CH          Vial: 5
Acq On    : 29 Feb 2016  12:23 pm                     Operator: XULIU
Sample    : IC5193-100                                Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103544.D\FID2B.CH          Vial: 5
Acq On    : 29 Feb 2016  12:38 pm                     Operator: XULIU
Sample    : IC5193-100                                Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1  8:12 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 08:12:38 2016
Response via : Multiple Level Calibration
```





QEdit

(2) Ethanol

1.85min 82.002PPB m

response 2002

(2) Ethanol #2

1.02min 99.470PPB

response 2194

(+) = Expected Retention Time

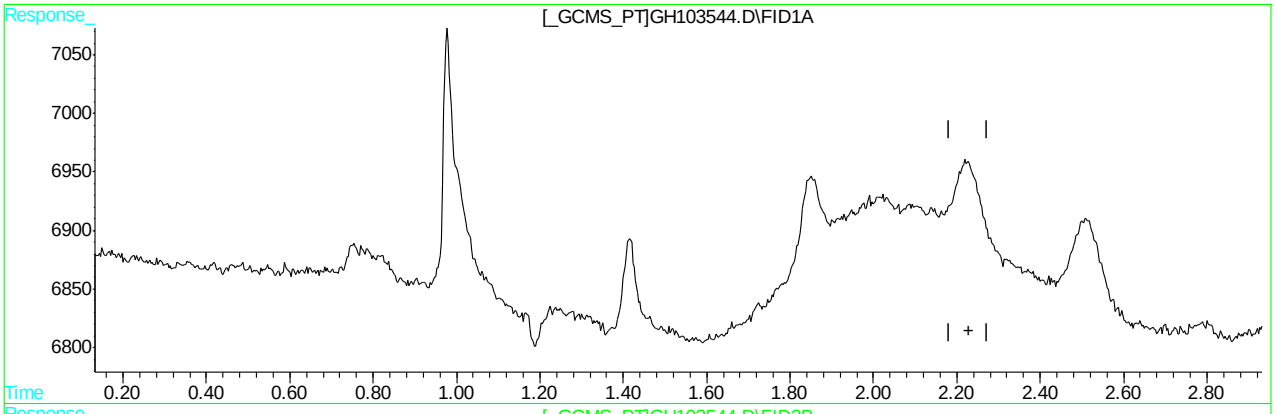
GH103544.D MGH5193.M Tue Mar 01 08:20:10 2016 GCGH

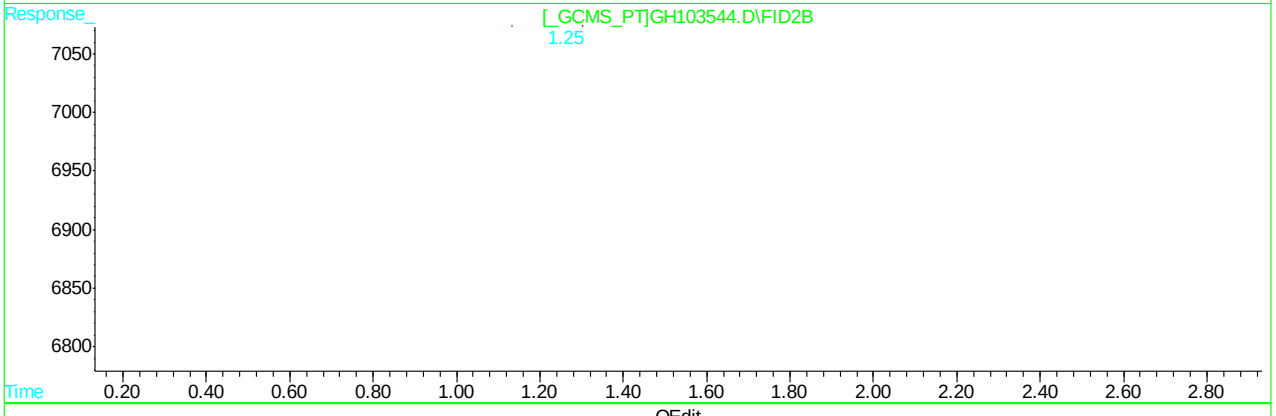
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\GH103544.D\FID1A.CH          Vial: 5
Acq On    : 29 Feb 2016  12:23 pm                     Operator: XULIU
Sample    : IC5193-100                                Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103544.D\FID2B.CH          Vial: 5
Acq On    : 29 Feb 2016  12:38 pm                     Operator: XULIU
Sample    : IC5193-100                                Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1  8:19 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 08:23:36 2016
Response via : Multiple Level Calibration
```





QEdit

(5) 2-Propanol

0.00min 0.000PPB

response 0

(5) 2-Propanol #2

1.25min 106.098PPB

response 2475

(+) = Expected Retention Time

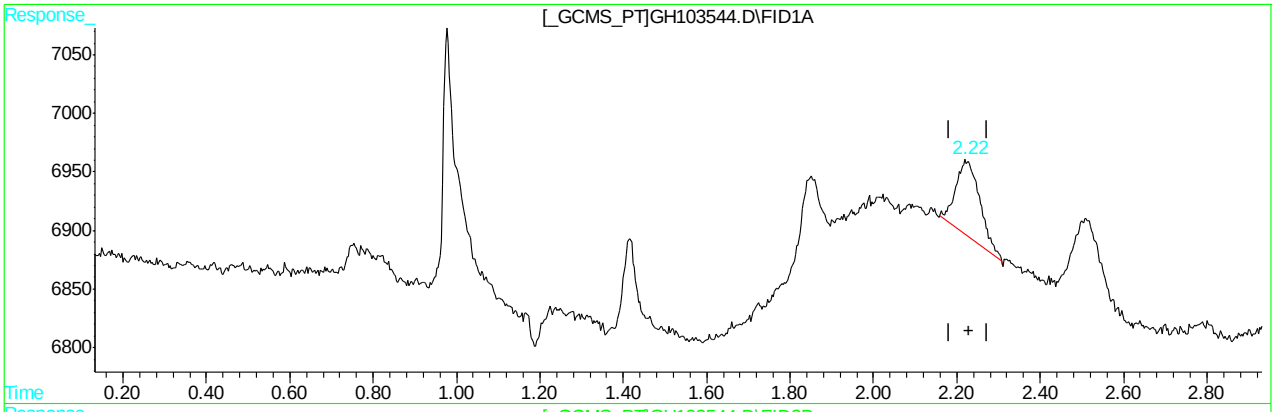
GH103544.D MGH5193.M Tue Mar 01 08:24:02 2016 GCGH

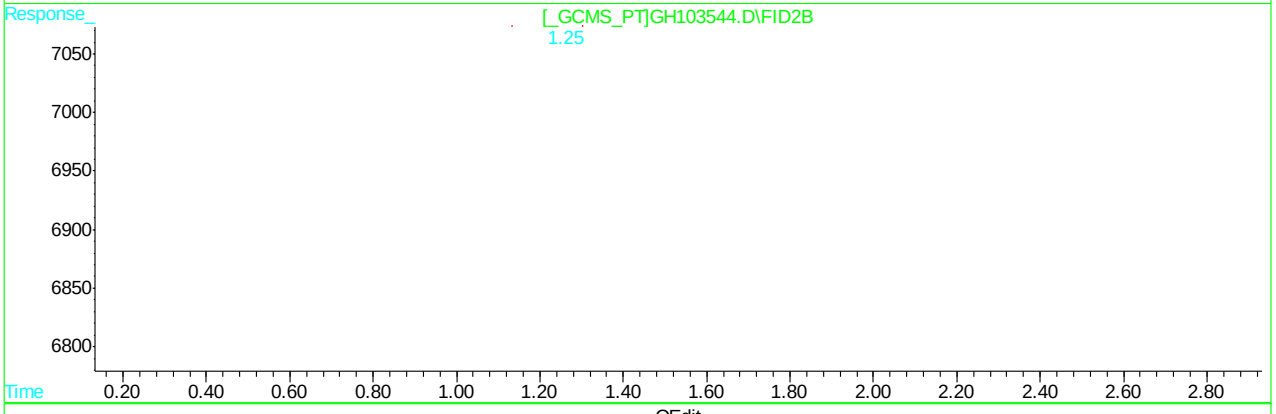
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\GH103544.D\FID1A.CH          Vial: 5
Acq On    : 29 Feb 2016  12:23 pm                     Operator: XULIU
Sample    : IC5193-100                                Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103544.D\FID2B.CH          Vial: 5
Acq On    : 29 Feb 2016  12:38 pm                     Operator: XULIU
Sample    : IC5193-100                                Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1  8:19 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 08:23:36 2016
Response via : Multiple Level Calibration
```





QEdit

(5) 2-Propanol

2.22min 96.011PPB m

response 2559

(5) 2-Propanol #2

1.25min 106.098PPB

response 2475

(+) = Expected Retention Time

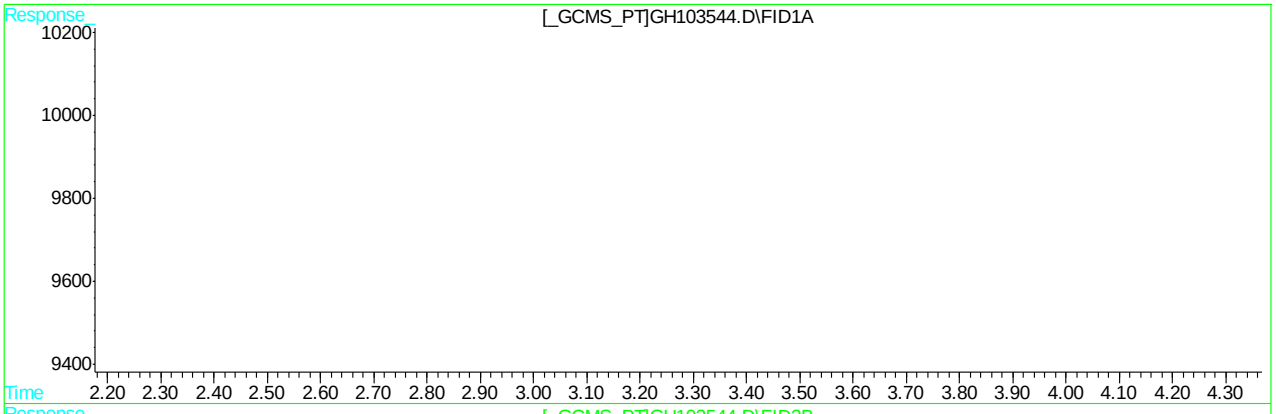
GH103544.D MGH5193.M Tue Mar 01 08:25:29 2016 GCGH

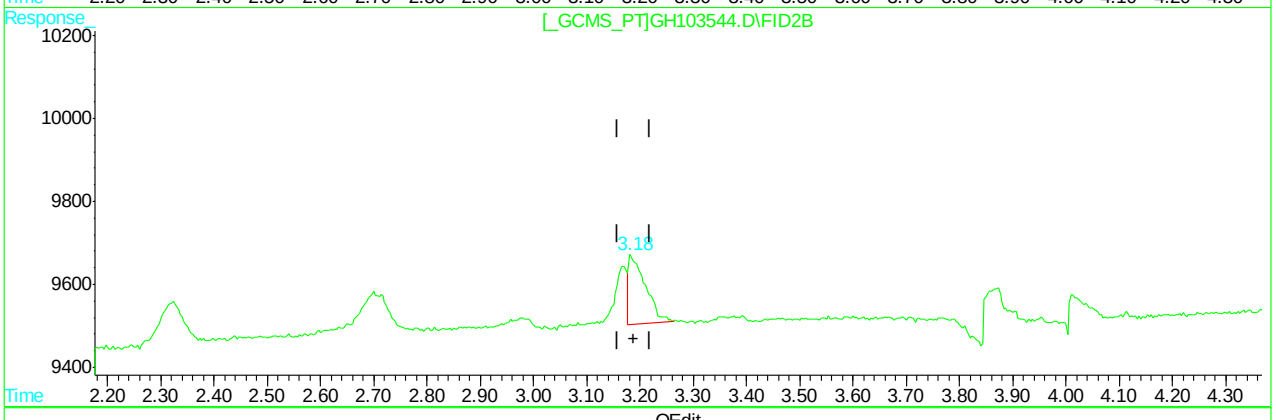
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\DATA1035\GH103544.D\FID1A.CH Vial: 5
Acq On    : 29 Feb 2016  12:23 pm                    Operator: XULIU
Sample    : IC5193-100                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\DATA1035\GH103544.D\FID2B.CH Vial: 5
Acq On    : 29 Feb 2016  12:38 pm                    Operator: XULIU
Sample    : IC5193-100                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1  8:25 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 08:26:22 2016
Response via : Multiple Level Calibration
```





QEdit

(8) 1-Butanol

4.23min 116.654PPB

response 3899

(8) 1-Butanol #2

3.18min 104.373PPB

response 3808

(+) = Expected Retention Time

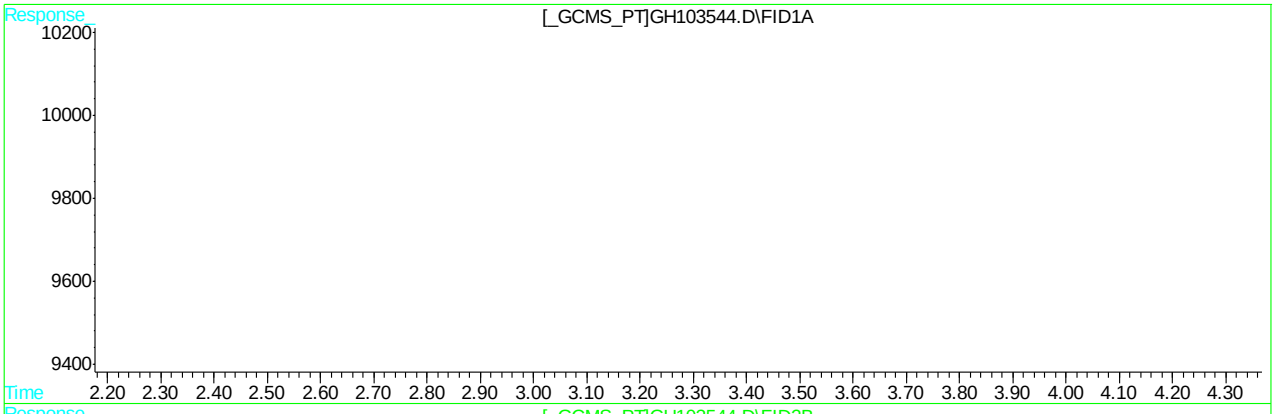
GH103544.D MGH5193.M Tue Mar 01 10:15:45 2016 GCGH

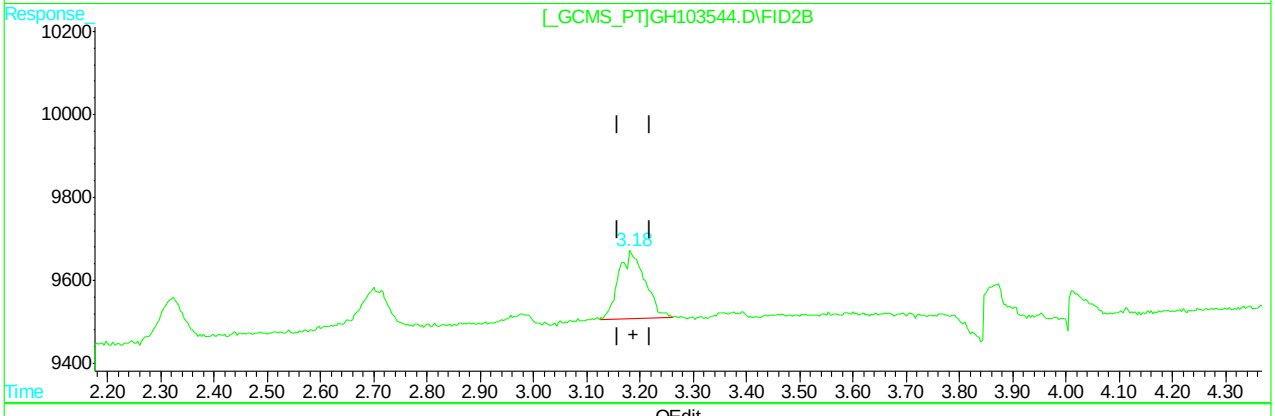
Quantitation Report (Qedit)

```
Data File : C:\HPCHEM\1\DATA\DATA1035\GH103544.D\FID1A.CH Vial: 5
Acq On    : 29 Feb 2016  12:23 pm                    Operator: XULIU
Sample    : IC5193-100                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\DATA1035\GH103544.D\FID2B.CH Vial: 5
Acq On    : 29 Feb 2016  12:38 pm                    Operator: XULIU
Sample    : IC5193-100                               Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1  8:25 2016  Quant Results File: MGH5193.RES


Method       : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 08:26:22 2016
Response via : Multiple Level Calibration
```





QEdit

(8) 1-Butanol

4.23min 116.654PPB

response 3899

(8) 1-Butanol #2

3.18min 155.884PPB m

response 5688

(+) = Expected Retention Time

GH103544.D MGH5193.M Tue Mar 01 10:15:55 2016 GCGH

Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\DATA1035\GH103545.D\FID1A.CH Vial: 20
Acq On    : 29 Feb 2016   1:20 pm                    Operator: XULIU
Sample    : ICV5193-5000                             Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\DATA1035\GH103545.D\FID2B.CH Vial: 20
Acq On    : 29 Feb 2016   1:36 pm                    Operator: XULIU
Sample    : ICV5193-5000                             Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1 12:24 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 12:10:59 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
10) S	Hexanol	5.88	5.34	621339	605656	4871.651	4749.523
	Spiked Amount 5000.000			Recovery	=	97.43%	94.99%
	Target Compounds						
1)	Methanol	1.42	0.80	89753	86850	5142.658	5001.679
2)	Ethanol	1.85	1.02	118314	114631	5272.444	5195.921
3)	Tert-Butyl Alcoh	2.51	1.47	175949	166701	5160.980	5211.888
4)	1-Propanol	2.99	1.77	154839	145777	5327.199	5070.941
5)	2-Propanol	2.23	1.25	126287	123170	5137.821	5279.569
7)	Isobutanol	3.81	2.70	172809	165206	5106.756	5121.827
8)	1-Butanol	4.23	3.19	169085	164075	5058.564	4624.847
9)	2-Butanol	3.42	2.32	156041	147599	5081.800	5154.079

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

SGS ACCUTEST JC16204

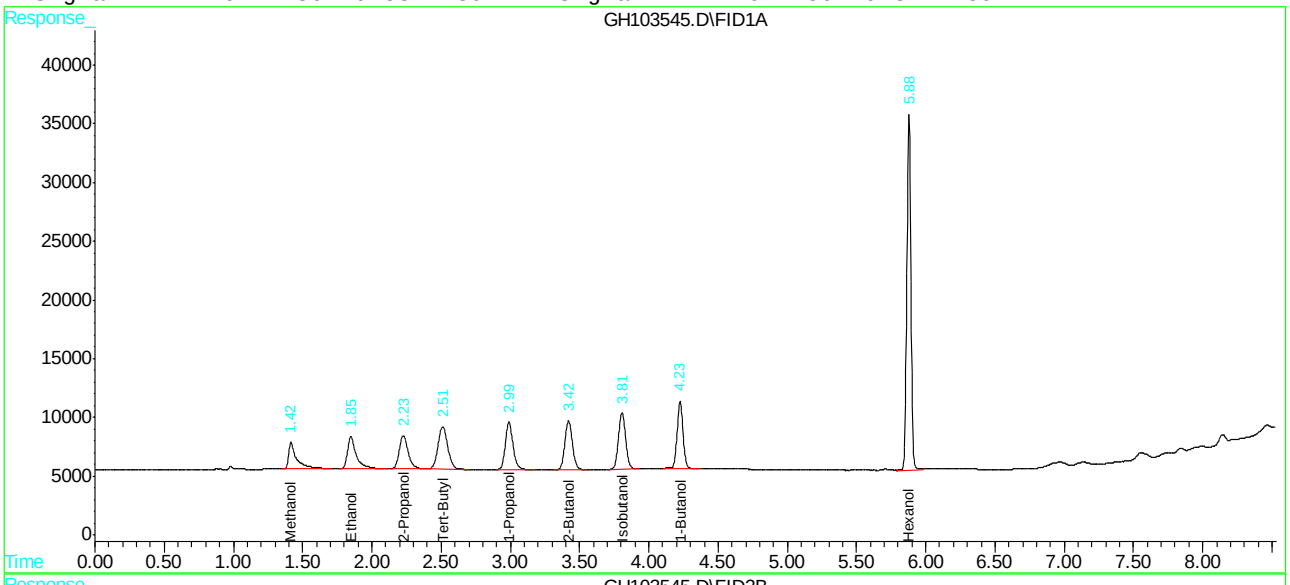
Quantitation Report (QT Reviewed)

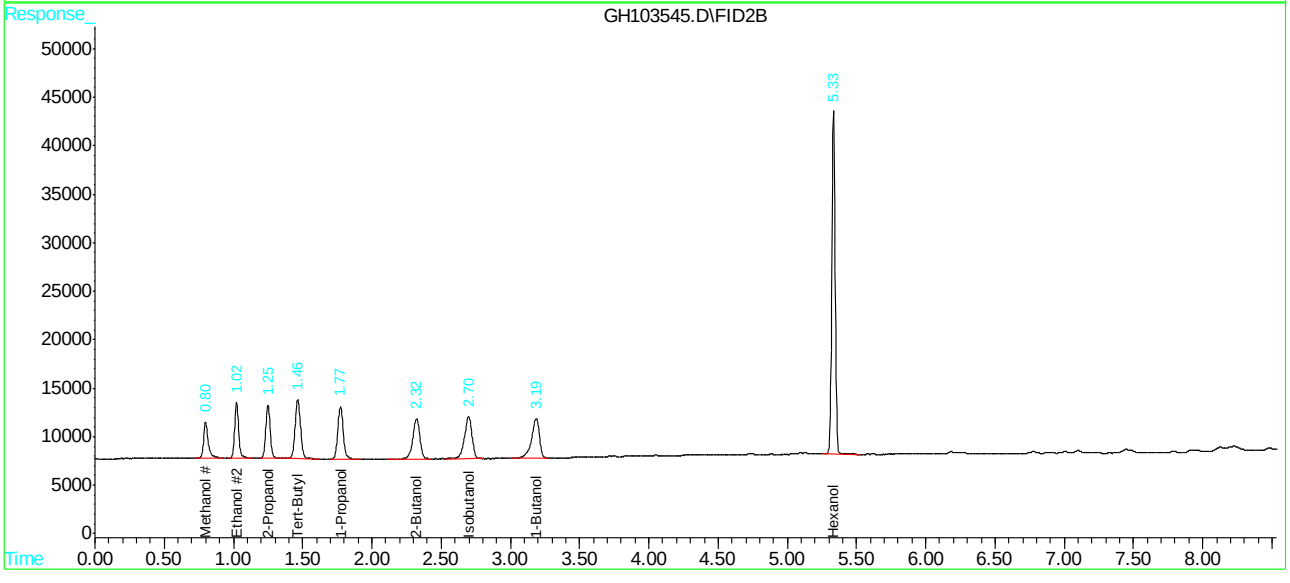
```
Data File : C:\HPCHEM\1\DATA\DATA1035\GH103545.D\FID1A.CH Vial: 20
Acq On    : 29 Feb 2016   1:20 pm                    Operator: XULIU
Sample    : ICV5193-5000                             Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\DATA1035\GH103545.D\FID2B.CH Vial: 20
Acq On    : 29 Feb 2016   1:36 pm                    Operator: XULIU
Sample    : ICV5193-5000                             Inst    : GCGH
Misc      : GC47719,GGH5193,5.0,,,,1                 Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar  1 12:24 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Tue Mar 01 12:10:59 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```





Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\GH103774.D\FID1A.CH Vial: 92
Acq On : 17 Mar 2016 10:39 am Operator: XULIU
Sample : CC5193-5000 Inst : GCGH
Misc : GC47946,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103774.D\FID2B.CH Vial: 92
Acq On : 17 Mar 2016 10:54 am Operator: XULIU
Sample : CC5193-5000 Inst : GCGH
Misc : GC47946,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Mar 17 12:59 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Thu Mar 17 12:48:46 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
10) S	Hexanol	5.87	5.29	612866	646191	4805.221	5067.398
Spiked Amount	5000.000			Recovery	=	96.10%	101.35%
	Target Compounds						
1)	Methanol	1.40	0.78	78302	78281	4486.542	4508.229
2)	Ethanol	1.83	1.00	113509	120573	5058.329	5465.251
3)	Tert-Butyl Alcoh	2.50	1.43	184260	187029	5404.746	5847.439
4)	1-Propanol	2.97	1.74	155855	162099	5362.145	5638.694
5)	2-Propanol	2.21	1.22	128205	133206	5215.824	5709.744
7)	Isobutanol	3.79	2.65	183935	195984	5435.556	6076.002
8)	1-Butanol	4.21	3.14	163599	177360	4894.442	4999.304
9)	2-Butanol	3.41	2.27	166651	165707	5427.326	5786.407

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

SGS ACCUTEST JC16204

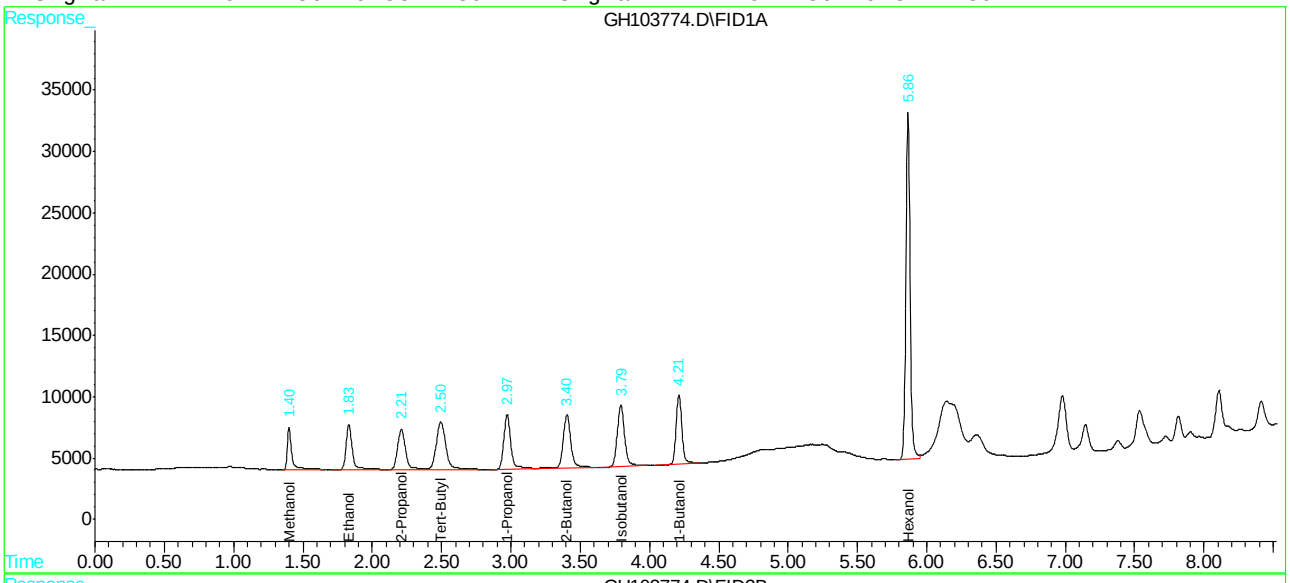
Quantitation Report (QT Reviewed)

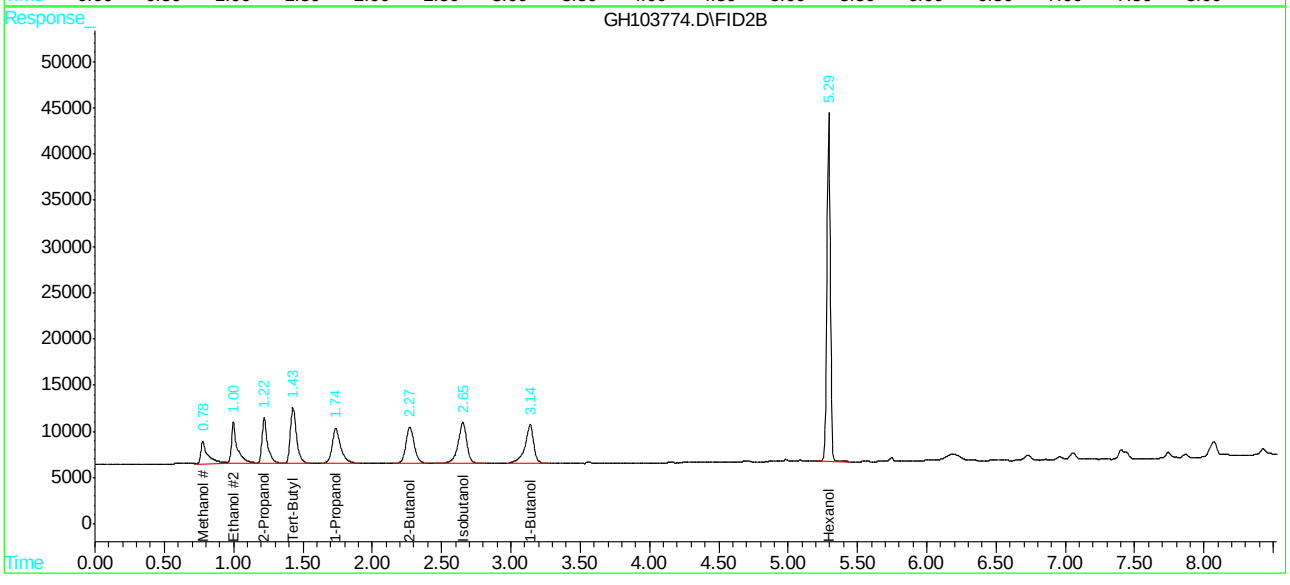
Data File : C:\HPCHEM\1\DATA\GH103774.D\FID1A.CH Vial: 92
Acq On : 17 Mar 2016 10:39 am Operator: XULIU
Sample : CC5193-5000 Inst : GCGH
Misc : GC47946,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103774.D\FID2B.CH Vial: 92
Acq On : 17 Mar 2016 10:54 am Operator: XULIU
Sample : CC5193-5000 Inst : GCGH
Misc : GC47946,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Mar 17 12:59 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Thu Mar 17 12:48:46 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um





Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103784.D\FID1A.CH          Vial: 95
Acq On    : 17 Mar 2016   1:56 pm                     Operator: XULIU
Sample    : CC5193-10000                              Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103784.D\FID2B.CH          Vial: 95
Acq On    : 17 Mar 2016   2:11 pm                     Operator: XULIU
Sample    : CC5193-10000                              Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  8:02 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:45:36 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
10) S	Hexanol	5.86	5.29	629806	661262	4938.039	5185.584
	Spiked Amount 5000.000			Recovery	=	98.76%	103.71%
	Target Compounds						
1)	Methanol	1.40	0.78	152563	153170	8741.553	8821.050
2)	Ethanol	1.83	1.00	205260	223257	9147.047	10119.633
3)	Tert-Butyl Alcoh	2.50	1.43	314338	340447	9220.215	10644.067
4)	1-Propanol	2.97	1.73	280389	312315	9646.721	10864.050
5)	2-Propanol	2.21	1.22	215803	241908	8779.637	10369.142
7)	Isobutanol	3.79	2.65	347810	347134	10278.295	10762.045
8)	1-Butanol	4.21	3.14	321796	327729	9627.266	9237.822
9)	2-Butanol	3.40	2.27	298832	295550	9732.046	10320.476

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

SGS ACCUTEST JC16204

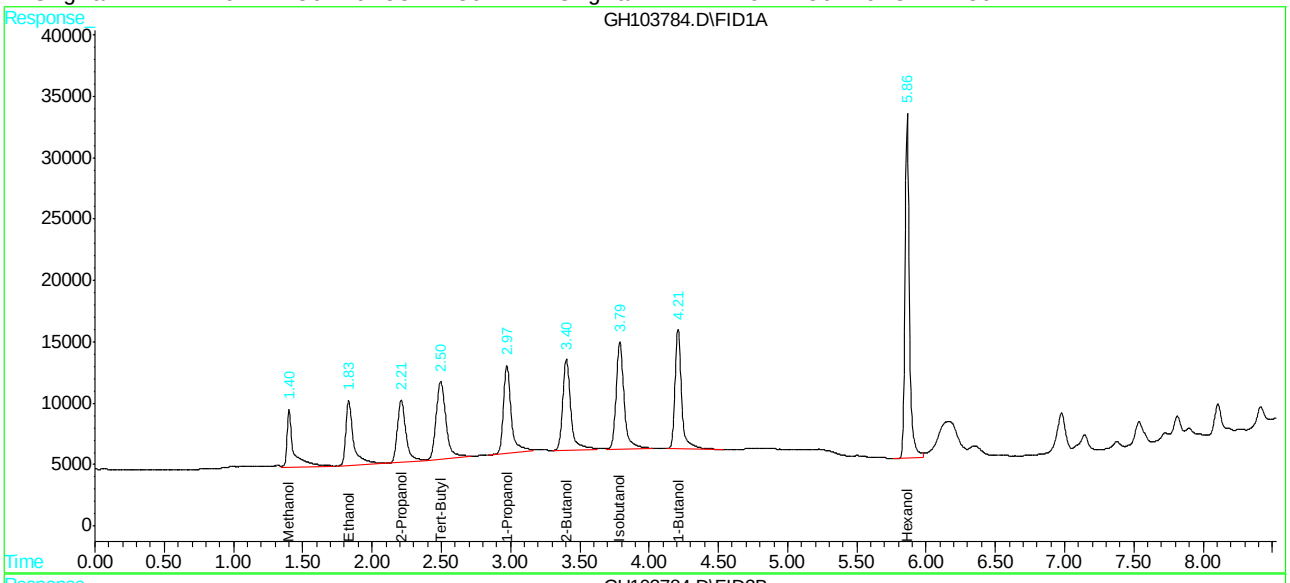
Quantitation Report (QT Reviewed)

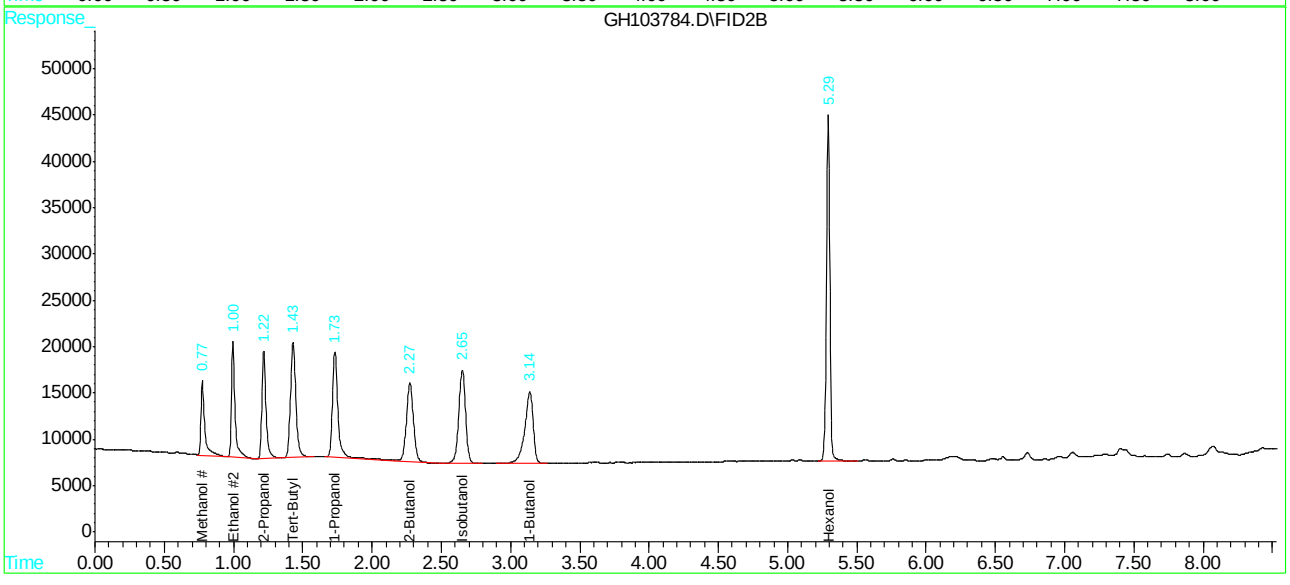
```
Data File : C:\HPCHEM\1\DATA\GH103784.D\FID1A.CH          Vial: 95
Acq On    : 17 Mar 2016   1:56 pm                     Operator: XULIU
Sample    : CC5193-10000                              Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103784.D\FID2B.CH          Vial: 95
Acq On    : 17 Mar 2016   2:11 pm                     Operator: XULIU
Sample    : CC5193-10000                              Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  8:02 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Thu Mar 17 15:45:36 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```





Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\GH103791.D\FID1A.CH Vial: 95
Acq On : 17 Mar 2016 4:08 pm Operator: XULIU
Sample : CC5193-5000 Inst : GCGH
Misc : GC47946,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103791.D\FID2B.CH Vial: 95
Acq On : 17 Mar 2016 4:23 pm Operator: XULIU
Sample : CC5193-5000 Inst : GCGH
Misc : GC47946,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Mar 18 8:38 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Thu Mar 17 15:47:14 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
10) S	Hexanol	5.86	5.29	580261	632281	4549.577	4958.319
Spiked Amount	5000.000			Recovery	=	90.99%	99.17%
	Target Compounds						
1)	Methanol	1.40	0.78	70385	88305	4032.922	5085.511
2)	Ethanol	1.83	1.00	107223	126386	4778.191	5728.742
3)	Tert-Butyl Alcoh	2.50	1.43	181035	186500	5310.155	5830.899
4)	1-Propanol	2.97	1.73	163913	163713	5639.401	5694.859
5)	2-Propanol	2.21	1.22	117644	135207	4786.195	5795.500
7)	Isobutanol	3.79	2.65	218004	186364	6442.336	5777.763
8)	1-Butanol	4.21	3.13	165107	188325	4939.555	5308.373
9)	2-Butanol	3.40	2.27	146481	170031	4770.435	5937.383

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
GH103791.D MGH5193.M Fri Mar 18 08:38:12 2016 GCGH

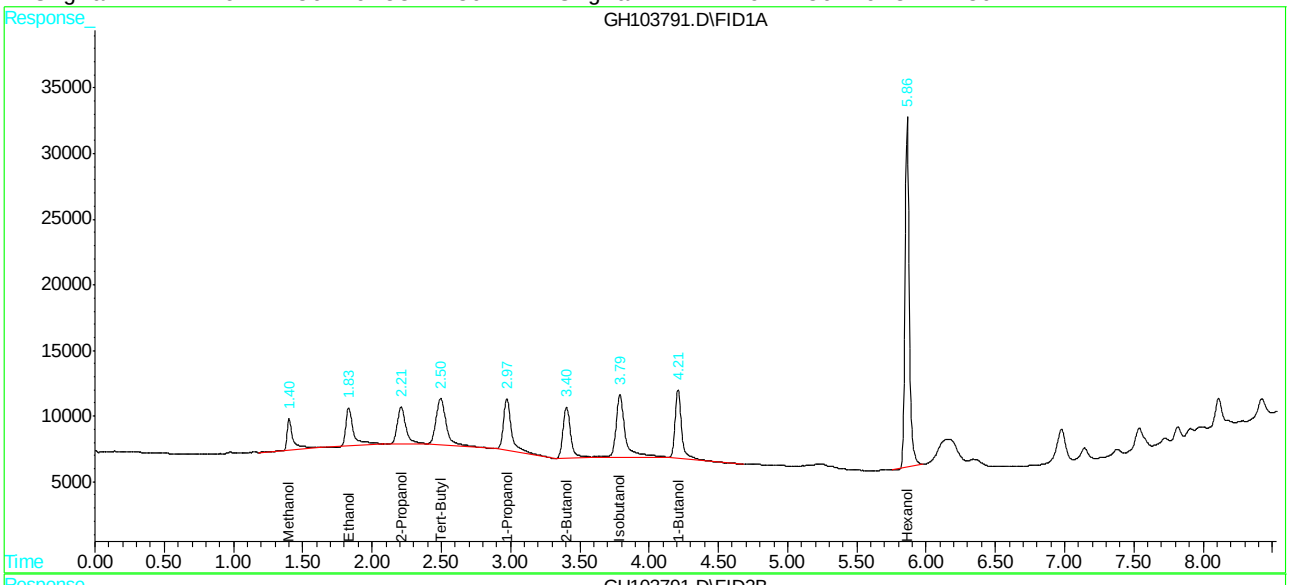
Quantitation Report (QT Reviewed)

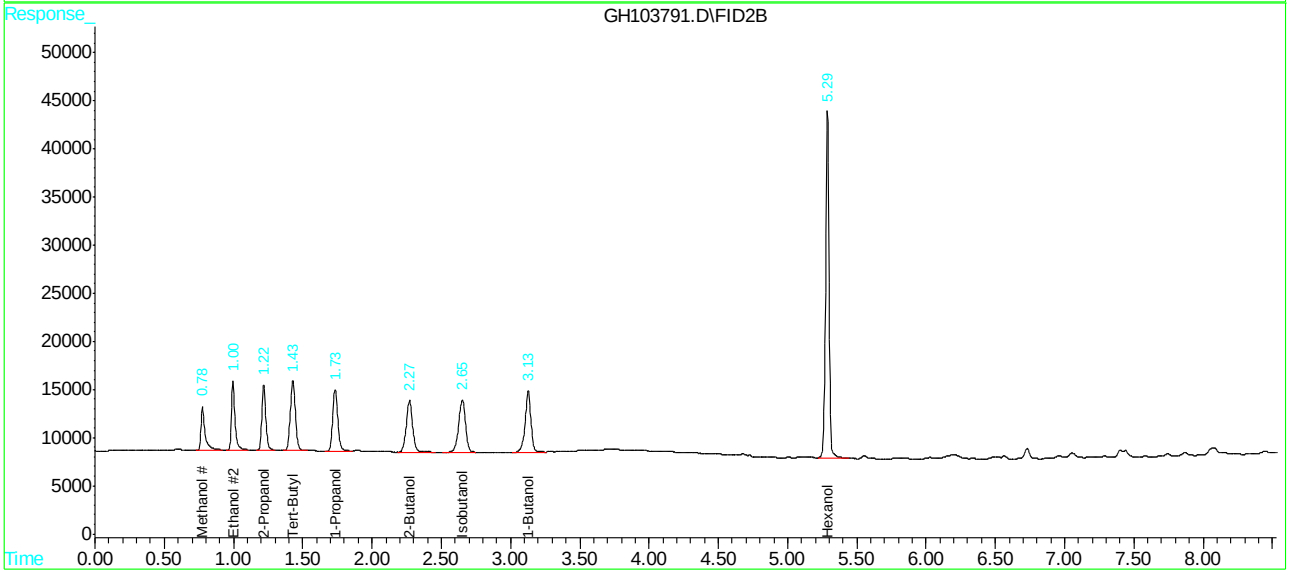
Data File : C:\HPCHEM\1\DATA\GH103791.D\FID1A.CH Vial: 95
Acq On : 17 Mar 2016 4:08 pm Operator: XULIU
Sample : CC5193-5000 Inst : GCGH
Misc : GC47946,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103791.D\FID2B.CH Vial: 95
Acq On : 17 Mar 2016 4:23 pm Operator: XULIU
Sample : CC5193-5000 Inst : GCGH
Misc : GC47946,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Mar 18 8:38 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Thu Mar 17 15:47:14 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um





Quantitation Report (QT Reviewed)

```
Data File : C:\HPCHEM\1\DATA\GH103800.D\FID1A.CH          Vial: 8
Acq On    : 17 Mar 2016   6:26 pm                     Operator: XULIU
Sample    : CC5193-10000                              Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103800.D\FID2B.CH          Vial: 8
Acq On    : 17 Mar 2016   6:40 pm                     Operator: XULIU
Sample    : CC5193-10000                              Inst    : GCGH
Misc      : GC47946,GGH5211,5.0,,,,1                  Multiplr: 1.00
IntFile   : autoint2.e
Quant Time: Mar 18  8:44 2016  Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title        : METHOD SW846-8015C (DAI)
Last Update  : Fri Mar 18 07:56:55 2016
Response via : Initial Calibration
DataAcq Meth : MGH5193.M

Volume Inj.     : 2ul
Signal #1 Phase : ZB-624            Signal #2 Phase: RTX-1
Signal #1 Info  : 30mx0.53mmx3um    Signal #2 Info : 30mx0.32mmx3um
```

	Compound	RT#1	RT#2	Resp#1	Resp#2	PPB	PPB
	System Monitoring Compounds						
10) S	Hexanol	5.86	5.29	596375	645279	4675.923	5060.245
	Spiked Amount 5000.000			Recovery	=	93.52%	101.20%
	Target Compounds						
1)	Methanol	1.40	0.77	152826	169975	8756.585	9788.887
2)	Ethanol	1.84	0.99	219592	242271	9785.742	10981.489
3)	Tert-Butyl Alcoh	2.50	1.43	333878	353607	9793.368	11055.497
4)	1-Propanol	2.98	1.73	293048	314720	10082.265	10947.721
5)	2-Propanol	2.21	1.22	231985	258926	9437.993	11098.570
7)	Isobutanol	3.79	2.64	359422	373291	10621.447	11573.004
8)	1-Butanol	4.21	3.14	333194	346604	9968.255	9769.848
9)	2-Butanol	3.41	2.27	306183	317043	9971.462	11070.983

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

SGS ACCUTEST JC16204

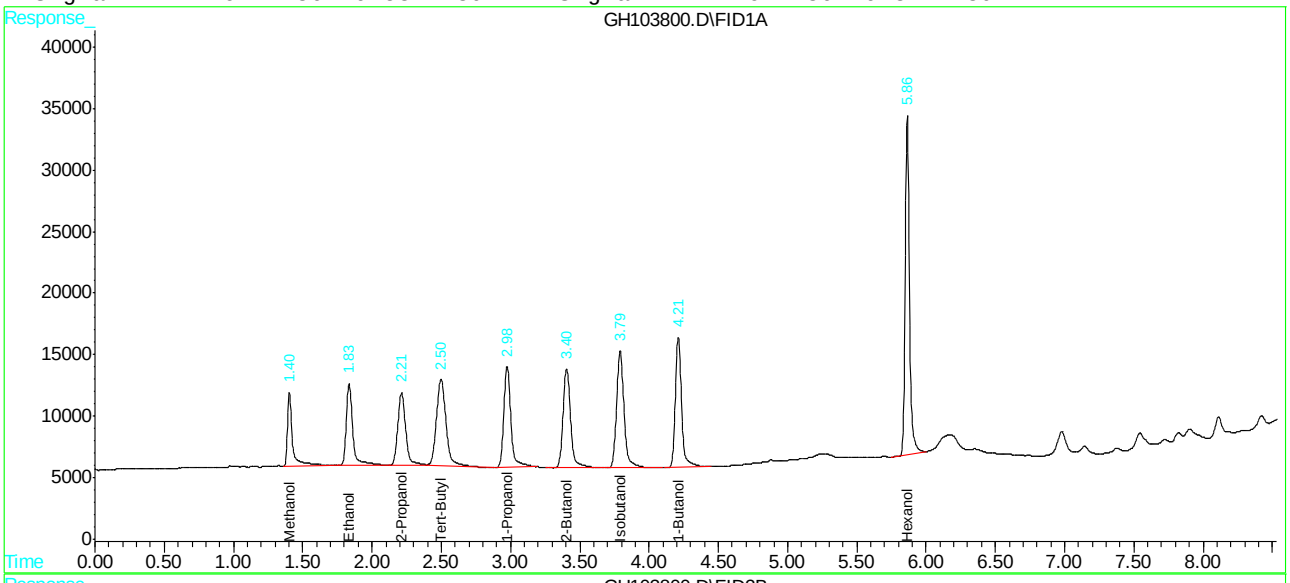
Quantitation Report (QT Reviewed)

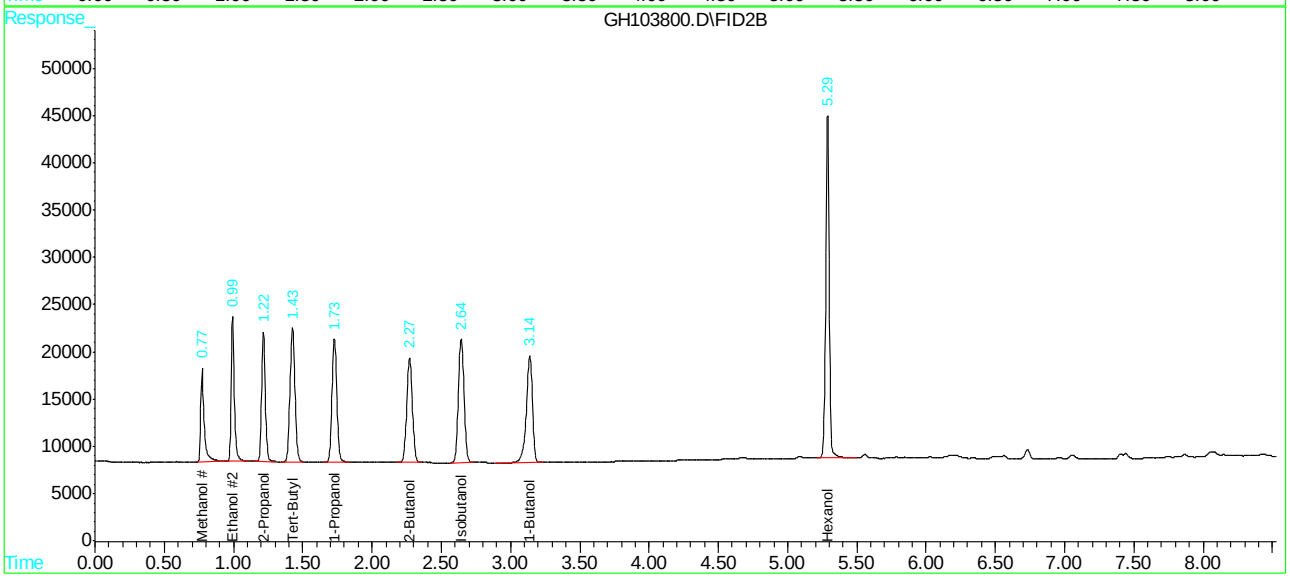
Data File : C:\HPCHEM\1\DATA\GH103800.D\FID1A.CH Vial: 8
Acq On : 17 Mar 2016 6:26 pm Operator: XULIU
Sample : CC5193-10000 Inst : GCGH
Misc : GC47946,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\GH103800.D\FID2B.CH Vial: 8
Acq On : 17 Mar 2016 6:40 pm Operator: XULIU
Sample : CC5193-10000 Inst : GCGH
Misc : GC47946,GGH5211,5.0,,,,1 Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Mar 18 8:44 2016 Quant Results File: MGH5193.RES

Quant Method : C:\HPCHEM\1\METHODS\MGH5193.M (Chemstation Integrator)
Title : METHOD SW846-8015C (DAI)
Last Update : Fri Mar 18 07:56:55 2016
Response via : Multiple Level Calibration
DataAcq Meth : MGH5193.M

Volume Inj. : 2ul
Signal #1 Phase : ZB-624 Signal #2 Phase: RTX-1
Signal #1 Info : 30mx0.53mmx3um Signal #2 Info : 30mx0.32mmx3um





SGS ACCUTEST JC16204

ACCUTEST

VOLATILE ANALYSIS LOG

Batch ID: GGH5193

Print Analyst Name: Xulin

Analyst Signature:

Date: 2/28/16

Columns: 2B6 VO / RTX-1 (30m x0.53 mm x3μm) (30m x0.32mm x3μm)

Method 8015CACC

Initial Cal. Method MGH5193

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
015-2WX415	AEC Sur (3/15)	2000 ppm
215-2WX414	AEC (2U) (3/15)	100 ppm
215-2WX415	AEC MD(2) (3/15)	100 ppm

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:** 3/2/16

R	Data File	Sample ID	Test	MTX	Vial #	ALS #	Samp. Amt (ml or g)	MOH amt. (ul)	Secondary dilution	L+	IS	SU	Status (Data)	Comments	pH* <2
	GH103533	2B					1					✓	OK		
	103534	2C5193-100					1						RR	2nd signal NG	
	103535	2C5193-500					1						RR	1st signal NG	
	103536	2C5193-1000					1					✓	OK	10μl SID, 2μl surr/1ml dw	
	103537	2C5193-5000					1						RR	1st signal NG	
	103538	2C5193-10,000					1					✓	OK	100μl SID, 2.5μl surr/1ml dw	
	103539	2C5193-50,000					1					✓	OK	500μl SID, 3μl surr/1ml dw	
	103540	2C5193-100,000					1					✓	OK	1000μl SID, 4μl surr/1ml dw	
	103541	2C5193-5000					1					✓	OK	50μl SID, 2.5μl surr/1ml dw	
	103542	2C5193-100					1						RR	1st signal NG	
	103543	2C5193-500					1					✓	OK	5μl SID, 1μl surr/1ml dw	
	103544	2C5193-100					1					✓	OK	10μl SID, 4μl surr/10ml dw	
	103545	2C5193-5000					1					✓	OK	50μl SID (2)/1ml dw	

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MTX = Matrix Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt.= volume (ul) extract injected * IF pH > 2, comment on sample result.
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Rev. Date: 2/14/2007

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SGS ACCUTEST JC16204

ACCUTEST

VOLATILE ANALYSIS LOG

Batch ID: GGH 5211

Print Analyst Name: Xu Gu

Analyst Signature:

Date: 3/17/16

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
015W4113	ALL SUR (3/15)	200ppm
015W4118	ALL STD (3/15)	100ppm
015W4115	ALL SURR (3/15)	100ppm

Columns: ZB624 / RTX-1 (30mx0.53mmx3μm) (30mx0.32mmx2μm)

Method AO15ACC

Initial Cal. Method MGH 5193

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:** 3/18/16

R	Data File	Sample ID	Test	MTX	Vial #	ALS #	Samp. Amt (m or g)	MOH amt. (ul)	Secondary dilution	L+	IS	SU	Status (Data)	Comments	pH* < 2
	GH103774	CC5193-5000					1					✓	OK	50µl STD/mL H2O	
	103775	MB1					1					✓	OK		
	103776	BS					1					✓	OK	50µl STD(2)/mL H2O	
	103777	JC15796-1	47904 CMA	GW	22		1					✓	OK		✓
	103778	JC15796-1MS	✓	GW	22		1					✓	OK	50µl STD(2)/mL sample	✓
	103779	JC15796-1MSD	✓	GW	22		1					✓	OK	50µl STD(2)/mL sample	✓
	103780	JC15796-2	✓	GW	17		1					✓	OK		✓
	103781	JC16231-1A	47946 CMA	GW	17		1					✓	OK		✓
	103782	JC16231-2A	TBA ✓	GW	17		1					✓	OK		✓
	103783	JC16231-3A	✓	GW	17		1					✓	OK		✓
	103784	CC5193-10,000					1					✓	OK	100µl STD/mL H2O	
	103785	MB2					1					✓	OK		
	103786	JC15796-3	47904 CMA	GW	8		1					✓	OK		✓
	103787	JC15796-4	✓	GW	3		1					✓	OK		✓
	103788	JC16038-10	47921 CMA	GW	6		1					✓	OK		✓
	103789	JC16038-8	✓	GW	6		1					✓	OK		✓
	103790	~~JC16038-7~~ (cx) 3/18	✓	~~GW~~	~~7~~	(cx) 3/18	1					~~✓~~	~~OK~~	(cx) 3/18	✓
		JC16204-7	47941	GW	1		1					✓	OK		

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Form: OR001-9
Rev. Date: 2/14/2007

ACCUTEST

VOLATILE ANALYSIS LOG

Batch ID: GGH5211

Print Analyst Name: Xu Liu

Date: 3/17/16

Analyst Signature:

Columns: ZB624 / RTX-1 (30m X0.53mm X3um) (30m X0.32mm X3um)

Method: 8015C ACC

Initial Cal. Method: MGH5193

Standard Data		
Lot #	Description	Conc.

Standard Data		
Lot #	Description	Conc.
	Pg 217	

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: 3/18/16

R	Data File	Sample ID	Test	MTX	Vial #	ALS #	Samp. Amt (ml or g)	MOH amt. (ul)	Secondary dilution	L+	IS	SU	Status (Data)	Comments	pH* < 2
	GH103791	CC5193-5000					1					✓	OK	50µl STD/1ml H2O	
	103792	MB3 3/18	3/18				1					✓	OK		
	103793	JC16038-6 204	47921	G W			1					✓	OK		✓
	103794	JC16038-5 204 3/18	✓	G W			1					✓	OK		✓
	103795	JC16038-4 204 3/18	✓	G W			1					✓	OK		✓
	103796	JC16038-3 204 3/18	✓	G W			1					✓	OK		✓
	103797	JC16038-2 204 3/18	✓	G W			1					✓	OK		✓
	103798	JC16038-1 204 3/18	✓	G W			1					✓	OK		✓
	103799	JC16038-9	47921	W F			1					✓	OK		✓
	103800	CC5193-10,000					1					✓	OK	100µl STD/1ml H2O	
													3/17		

MTX = Matrix Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt.= volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

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Rev. Date: 2/14/2007